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**Identifying the Drivers and Barriers of
e-Government Implementations in The Public Sector – Libya as a Case Study.**

Master Thesis

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Abstract

This study aims to identify and analyse the key drivers and barriers associated with the implementation of e-government initiatives in developing countries, focusing specifically on Libya. A comprehensive theoretical framework for the research was built by employing a combined model of the Technology-Organization-Environment (TOE) framework and the Unified Theory of Acceptance and Use of Technology (UTAUT). A mixed-methods research approach was adopted to investigate these complexities. The methodology consists of conducting semi-structured interviews with 23 key informants, including government officials, public sector employees, the private sector, and ICT experts, and administering closed-ended surveys to a broader audience of 419 respondents. The interviews are guided by a set of carefully designed questions to elicit in-depth insights, while the surveys are structured to gauge the perceptions and attitudes towards e-government initiatives quantitatively. Quantitative data are analysed using descriptive and inferential statistics, including regression and correlation analyses, to determine relationships and patterns. Qualitative data from the interviews were subjected to thematic analysis to uncover underlying themes and narratives. Preliminary findings suggest that the implementation of e-government initiatives in Libya's public sector is influenced by several factors, such as technological, organisational, and environmental factors, along with performance expectancy, effort expectancy, social influence, and facilitating conditions impacting user acceptance and use of technology. The study highlights the need for a holistic, centralised approach addressing the strategic and planning aspects. It emphasises the need for a public sector reform to address the institutional and structural issues to successfully implement e-government initiatives in Libya. Finally, this research provides specific recommendations to address the identified barriers to e-government initiatives in Libya and offers insights that may be applicable to other countries with similar contexts.

Keywords Drivers and Barriers, Digital Transformation, e-Government, Public Sector, Developing Countries, Libya, TOE Framework, UTAUT.

Acknowledgement

To those who struggle to achieve.
To those who give a hand.

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Abbreviations

ACA	Libya's Administrative Control Authority
BSC	Bureau of Statistics and Census
CBL	Central Bank of Libya
CPI	Corruption Perceptions Index
EGDI	E-Government Development Index
ESCWA	United Nations Economic and Social Commission for Western Asia
G2B	Government to Business
G2C	Government to Citizens
G2E	Government to Employees
G2G	Government to Government
GDP	Gross domestic product
GECOL	General Electricity Company of Libya
GNA	Government of National Accord
GNC	General National Congress
GNU	Government of National Unity
HCI	Human Capital Index
HDX	Humanitarian Data Exchange
HOR	House of Representatives
ICT	Information, Communication and Technology
ISP	Internet service provider
IT	Information Technology
LAB	Libyan Audit Bureau
LPITC	Libyan Post Telecommunications & Information Technology Company
OSI	Online Services Index
TAM	Technology acceptance model
TAM2	Technology acceptance model version 2
TII	Telecommunication Infrastructure Index
TNC	National Transitional Council
TOE	Technology–organization–environment
UN	United Nations
UNSMIL	United Nations Support Mission in Libya
UTAUT	Unified theory of acceptance and use of technology

1   Introduction

Digital transformation is causing a new world order to emerge due to the rising prevalence of digital technologies (Lanzolla Gianvito and Anderson Jamie 2010), around 60 per cent of the global population has a proper internet connection (World Bank 2023) , and 65 per cent of the same population owns a smartphone ('GSMA Mobile Economy' 2020); these figures represent in a way the transformation of people behaviours toward technology, where technology and society are co-dependent on each other (Surry and Baker 2016). With the rapid development in technology and its use, several terminologies evolved, covering different usages of the technology and its impact on their context. However, digital transformation is considered the last version of the use of technology and its impact on organisations, which is defined by Mergel et al. (2019) – based on 40 expert interviews on digital transformation and public service in 12 different countries – as:

> *"A holistic effort to revise core processes and services of government beyond the traditional digitisation efforts. It evolves along a continuum of transition from analogue to digital to a full stack review of policies, current processes, and user needs and results in a complete revision of the existing and the creation of new digital services. The outcome of digital transformation efforts focuses, among others, on the satisfaction of user needs, new forms of service delivery, and the expansion of the user base."*

Moreover, before entering the digital transformation era and the rise of this phrase, entities were focusing more on both digitisation and digitalisation, where both are defined respectively as the conversation from analogue into a machine-readable format and digital form (Brynjolfsson and McAfee; Hess et al. 2016), where digitalisation goes beyond mere digitisation, as it leverages technology to transform business processes, organisational culture, customer interactions, and provide value to organisations (Legner et al. 2017); both are often used interchangeably and when it comes to practicality, those terms are often used synonymously with little attempts to distinguish their meanings (Mergel et al. 2019).

Furthermore, the rise of the use of theology in several aspects of life led governments to investigate utilising it to enhance their service delivery and increase achieve public value alongside other drivers (Anna Xiong 2006); however, this utilisation confronted several barriers and obstacles to achieving their goals and implement projects related to electronic government (e-government) under any of the aforementioned, evolved phases of digital transformation.

Additionally, the emergence and adaptation of the implementation of e-government initiatives vary from country to country (EGDI 2023) based on several reasons and

multiple factors, such as the governmental structure and economic situation of the government, alongside several macro and micro factors (Samuel et al. 2020). This variation from country to country creates the need to study both the drivers and barriers to e-government implementation, taking into consideration the similarity of contextual factors between the countries and their unique positions, where this research focuses on investigating those drivers and barriers in the 'developing world' by taking the State of Libya as a case study, due to its unique settings as a developed country with a considerably high GDP, a large country with a low population in a post-conflict status.

1.1   Background of E-Government in The Current Era

After the growth of information and communication technologies used in several aspects of life, many governments around the globe have investigated the use of information and communication technologies and how they can utilise these to enhance their public service delivery (Ramli 2017), leading to the increase of services and projects that refer to what is now preserved as e-government.

Electronic government, or e-government, refers to the use of information and communication technologies (ICTs) in government institutions to enhance the delivery of public service, improve transparency, and promote citizen engagement (Heeks and Bailur 2007). Nevertheless, within the literature, many definitions are used to describe the phenomena of e-government; however, all are headed towards serving the same purpose, which is the usage of information and communication technologies to serve citizens better; although technologiesmay differ from country to country, all contain the similar fundamental essence of e-government by maintaining a citizen-centric approach (Shareef et al. 2011). Therefore, the value of focusing on the citizens raises the most critical question regarding the willingness of citizens to adopt and accept these technologies. (Shareef et al. 2011).

In the current era, e-government plays a critical role in modernising public administrations and streamlining bureaucratic processes, ultimately contributing to economic development, social inclusion, and overall government efficiency (Shareef et al. 2011). Advancements in technology, such as the widespread adoption of the internet, mobile devices, and cloud computing, have enabled governments to innovate their service delivery models and provide public services through digital channels (Schuppan 2009). E-government initiatives encompass various domains, including e-services (online services), e-participation (citizen engagement), e-procurement (government

procurement), and e-administration (internal government processes) (Gil-Garcia et al. 2014).

According to Layne, K. & Lee, J. (2001), e-government applications and public e-services may be classified as the complexity on the technological and organisational level in the coordination of the level of integration at the system level, reflecting the level of interaction with the citizens and within the government, and between the used technologies.

Based on the E-Government Survey 2022 marks several trends in e-government development globally, where many countries transitioned their ranking to a higher position in comparison with 2020 due to the emerging Covid-19 response (EGDI 2023).

1.2 Background of E-Government in Developing Countries

E-Government has become a worldwide phenomenon. Developing countries have recognized the potential of e-government in addressing socio-economic challenges and enhancing public service delivery (Dardha and Ndou 2004), leading them to initiate e-government strategies and initiatives in coordination and support from bilateral organizations. These organizations stress the relevance of information and communication technologies in general, and e-government in particular, as a tool to promote development (Schuppan 2009).

However, e-government initiatives in 'developing countries' often face numerous obstacles, such as inadequate infrastructure, low ICT literacy, limited financial resources, and lack of political commitment (Bwalya and Healy 2010; Heeks 2002). E-government concepts were built on institutional concepts of industrialised countries and to contribute to solving administrative problems that allies with the public administration systems in those countries, hence,the implementation of e-government concepts in developing countries needs appropriation to suit the local context of those countries (Schuppan 2009).

Despite these challenges, some developing countries have successfully implemented e-government initiatives, resulting in increased transparency, reduced corruption, and improved citizen satisfaction (Asgarkhani 2005; Kumar and Best 2006). These successes serve as valuable examples for other developing nations as they seek to leverage information and communication technologies to enhance governance and public service delivery.

1.3   Libya as a Case Study

Libya, a developing country in North Africa, has experienced significant political, social, and economic upheaval in recent years following the 2011 uprising and subsequent instability (Pack 2022). Besides the instability, Libya is considered to be one of the highest nominal per capita GDP in Africa (World Bank 2022), with a small population with high literacy rates ('Literacy - The World Factbook' 2023) and a considerably high mobile penetration rate (GSMA 2022), combined with the relatively high number of civil officials in the public sector makes Libya in need of public sector reform (Ates & El Feitori, 2021).

As the country moves towards rebuilding its governance structure and public sector, e-government initiatives present a valuable opportunity to modernise public administration and improve public service delivery (Shareef et al. 2011) due to the benefits and impacts that would result from proper implementation of e-government initiatives with the Libyan public sector.

However, with all governmental investment and spending in the public sector compared to other governmental expenditures (HDX 2023), including their government's digitalisation initiatives, Libya scores a low ranking in the Government Effectiveness index (World Bank 2022). It is considered one of the most corrupt countries globally (CPI 2023) and has a consistent decrease in its ranking on the e-Government Development Index (EGDI 2023).

All these figures reflect a problem within the public sector in Libya that affected its digital transformation journey, which makes studying Libya's public sector digital transformation and looking into the drivers and barriers a crucial matter, as it offers insights into the unique challenges and opportunities that emerging e-government initiatives face in a post-conflict context. The findings from this research can provide valuable lessons for other developing countries undergoing similar political and social transformations.

1.4   Aims and Objectives

This research aims to identify and analyse the drivers, barriers, and challenges associated with e-government implementation in developing countries, using Libya as a case study. Where it will help in building a robust understanding of the current status of the State of Libya's digital transformation and e-government initiatives and strategies, their drivers, and the barriers they face in their journey, in reflection of the moderate decline of the

country's ranking in the e-Government Development Index in the recent years (EGDI 2023). The findings of this research aim to help in shaping critical interventions needed by the stakeholders in the country to overcome the barriers and foster their drivers for successful implementation of the e-government and prepare for their digital transformation strategy.

The specific objectives are as follows:

- To explore the current state of e-government in Libya and its critical factors.

- To identify the main drivers of e-government adoption in the Libyan context.

- To analyse the barriers and challenges the Libyan government faces in implementing e-government initiatives.

- To provide recommendations to overcome the identified barriers and challenges.

1.5   Research Questions

Based on the previous justifications and due to the lack of research and the need for a better understanding of the digital transformation of the public sector in the state of Libya, the following research questions have been formulated:

The main research questions:

- What are the key drivers for e-government implementation in Libya?

- What are the key barriers and challenges to e-government implementation in Libya?

The sub-research question:

- How can these barriers and challenges be addressed to facilitate the successful implementation of e-government initiatives in Libya?

1.6   Scope and Limitations

The scope of this research is limited to e-government initiatives within the Libyan public sector. Although e-government concepts can be applied to various industries, such as

healthcare and education, this study focuses exclusively on public administration. Furthermore, the research is delimited to the drivers, barriers, and challenges of e-government implementation rather than assessing the impact of e-government initiatives on the Libyan society or economy.

The primary limitations of this study stem from potential difficulties in accessing relevant data and research participants due to the ongoing political instability and the government divide in Libya. Additionally, the transferability of findings to other developing countries may be limited by Libya's unique political, social, and economic context.

1.7 Methodology

The research adopts a mixed approach using a case study methodology, where the output of both qualitative and quantitative approaches will help in providing a more comprehensive analysis in investigating the drivers, barriers, and challenges of e-government implementation in Libya. For the qualitative approach, the data collection methods include semi-structured interviews with key stakeholders including government officials, public sector employees and IT experts; a review of relevant policy documents and reports; and observation of e-government initiatives in Libya.

For the quantitative approach, a survey is used to gather data from a larger population sample; this population includes public sector employees and citizens to provide a broader perspective on the drivers, barriers, and challenges of e-government implementation in Libya. Data analysis will employ an inductive thematic analysis approach to identify emerging patterns and themes related to the drivers, barriers, and challenges of e-government implementation in Libya, alongside using statistical analysis to analyse the survey data and identify relationships between variables. The findings will be compared and contrasted with existing literature to validate or extend current knowledge.

1.8 Research Organisation

The organisation of this research provides a structured approach to investigating the drivers, barriers, and challenges of e-government implementation in developing countries, specifically focusing on Libya as a case study. This section outlines the research layout, detailing each chapter's content and the research's logical progression. By presenting the organisation of the thesis, readers will understand the overall research

design and the flow of the argument from the literature review and conceptual framework to the findings, discussion, and conclusion.

The research is organised as follows:

Chapter 1: Introduction – Provides an overview of the research background, the rationale for selecting Libya as a case study, the research aims and objectives, research questions, scope and limitations, methodology, and thesis organisation.

Chapter 2: Literature Review – Reviews the relevant literature on e-government concepts, digital transformation in the public sector, drivers and barriers of e-government adoption, and e-government initiatives in developing countries and Libya.

Chapter 3: Theoretical Framework – Introduces the proposed framework for analysing drivers and barriers of e-government implementation in developing countries, adapted to the Libyan context.

Chapter 4: Methodology – Describes the research philosophy, approach, design, data collection methods, sampling strategy, data analysis, and ethical considerations.

Chapter 5: Case Study – Introduces the State of Libya by providing a brief background on the country, its political history and government structure, and insights on the public sector; this chapter also covers the historical background of the e-government initiatives and emphasize the country's literacy, infrastructure, and telecommunication status.

Chapter 6: Findings – Presents the collected data and its analysis, focusing on drivers, barriers, and challenges in the Libyan context.

Chapter 7: Discussion and Recommendations – Based on the findings, this chapter presents practical recommendations for policy and decision-makers in Libya to address the identified barriers and challenges.

Chapter 8: Conclusion – Summarises the study, highlights contributions to knowledge, acknowledges limitations, and recommends future research directions.

In conclusion, this research aims to provide a comprehensive understanding of the drivers, barriers, and challenges faced by the government in Libya in their e-government initiatives implementation journey. By studying the unique context of Libya, the findings can offer valuable insights and recommendations for other developing countries as they strive to leverage e-government as a tool for enhancing public service delivery, governance, and overall development.

2 Literature Review

2.1 E-Government Definitions and Concepts

Administrative facilities apply the tools of technological advancement, which are believed to enhance the efficiency of providing public service. According to Musa et al. (2019), E-government involves applying online platforms to deliver government services to the public. E-government facilitates providing services such as passport applications, renewal, and applications for birth certificates. The World Bank (2015) defines e-government as the adoption of information technologies, to enhance the nature of associations between public administrative bodies, and the citizens. Digital tools aid in improving the interactions between the government and the people by empowering the citizens' ability to access information (World Bank 2015).

Additionally, using e-government platforms enhances management efficiency, improves transparency and finance generation, and eliminates costs associated with the manual provision of services to the citizens. Malodia et al. similarly define e-government as the application of information and communication technology in providing government services and explain that e-government allows the authorities to serve the public and other stakeholders with improved quality and efficacy services (Malodia et al. 2021). Forti also states the adoption of ICT in administering public service and its role in boosting communication with the citizens. The information in the cited articles forms a foundation for the efficiency levels attained using digital platforms in conducting government activities (Forti 2019). However, the reports do not identify the impact of the adoption of e-government on the levels of satisfaction of citizens with public service.

According to Mohamed Abdulmajid (2017), e-government is a developed tool for modernising managerial systems and encourages citizens' involvement in government and political issues (Mohamed Abdulmajid 2017). However, Mohamed Abdulmajid clarifies that the extent of the application of ICT in the provision of government service depends on the economic development levels of a country and indicates that the available information on the viability of applying e-government strategies is inadequate. Mohamed Abdulmajid explains that some of the critical application of e-government platforms is to address citizens' complaints and for public participation in formulating policies (Mohamed Abdulmajid 2017). Abied (2017) also notes that the nature of the provision of government services has changed over the last three decades in most parts of the world because of the use of ICT for interaction between the government and the people, information extraction, and executing transactions (Abied 2017). However, political interests affect the implementation of e-government systems, which may be the reason

for the relatively slow adoption of robust ICT in government operations. Alsaeh similarly notes challenges in implementing e-government systems but clarifies that public interest and the demand for reformations in providing government services may facilitate the adoption of e-government systems (Alsaeh 2020). Moreover, technological developments in other sectors of the economy and the resultant adoption of electronic styles of providing services may push for the modernisation of public services. However, the cited reports lack information on policies for developing ICT as a government tool in different economies.

2.2   Digital Transformation in The Public Sector

Digital transformation has been one of the critical changes in the public sector that has positively affected the service delivery for citizens and improved administration. Mergel et al. (2019) noted that the purpose of digital transformation in the public sector is based on the need to deliver high-value and real-time digital services (Mergel et al. 2019). Its purpose involves new ways to use technology to work with stakeholders, build a new framework for offering services and create new relationships. Ruud (2017) outlined that digital technology is essential in enhancing productivity, increasing production, improving processes, and focusing on innovation (Ruud 2017). Digitisation in the public sector aims to change how the public sector is organised, produces, and delivers services. The purpose of digital transformation in the public sector is to enhance service delivery and administrative services to ensure that citizens get suitable and appropriate services effectively and efficiently.

Digital transformation in the public sector only makes sense if it serves the citizens' interests and puts the critical mechanisms for improving administration and service delivery in place. Mergel et al. (2018) introduced the concept of citizen-oriented digital transformation, whose purpose is to ensure that citizens and frontline workers have a say in the entire process of digitisation and service delivery (Mergel et al. 2018). The concept of human-centred digitisation and digital transformation of the public sector is essential in creating appropriate systems that incorporate citizens' needs in governance and public services. The operations of digital technologies ought to ensure citizen-centricity by ensuring that the citizens' perspectives through technology in providing seamless services (Špaček et al. 2020). Enhancing usability and considering the demographics of the citizens is paramount in achieving the goal and creating an effective system that appeals to and serves the citizens.

Notably, the concept of knowledge management in digitising the public sector is critical and paramount in enhancing service growth and citizen engagement. Alvarenga et al. outline the importance of knowledge management in the public sector to create awareness and improve competency (Alvarenga Ana et al. 2020). Notably, it acknowledges that knowledge management is more difficult in the public sector than in the private sector due to the diversity. Digital transformation needs to strengthen the concept of knowledge management by utilising available data to improve the effectiveness of service delivery. Al Yami & Ajmal (2019) outline that the public sector requires knowledge management to enhance accountability for the actions of public officers and civil servants and reduce the traditional bureaucracies that have hampered access to services and the manageability of public institutions (Al Yami and Ajmal 2019). Digital transformation in enhancing knowledge management is purposed to enhance operational efficiency in all public services and improve development transparency, trust, reliability, and sustainability.

The institutionalisation of technologies is the most efficient way of enhancing digital transformations in the public sector. Manda utilised the information theory in explaining the adoption of digital technology for improving the e-government by believing that the organisation is influenced by both the internal and external social and cultural contexts where they operate (Manda 2021). Critical issues involving the handling of schemas, rules, norms, practices, routines, and power structures have to be incorporated in rolling out digital transformations. Di Giulio and Vecchi (2023) analysed the case of Italy to determine how digital transformation and institutionalisation of digitisation help restructure the governance and public service (Di Giulio and Vecchi 2023). It outlines the importance of policies on technological innovations in the public sector to govern digitisation and the incorporation of new technologies. The approach enhances the absorption of the technology in the system (Simmonds et al. 2021). This perspective shows that the institutionalisation of digital transformation is key to promoting policies, innovations, and digital technology implementations to serve the public's interest.

Various technologies have been used to enhance digitisation in the public sector to enhance data collection and information technology. Criado and Vilodre noted that incorporating social media in public-sector communication is paramount in enhancing public-sector communication (Criado and Villodre 2022). Virtual communication is critical in improving communication and public relations management. Tapscott and Tapscott (2016) outlined the purpose of using blockchain in transforming the public sector by strengthening proper ledger management in the services offered in the public sector (Tapscott and Tapscott 2016). Besides, Al-Ruithe et al. (2018) outline the role of cloud computing in enhancing service delivery and operations (Al-Ruithe et al. 2018). Cloud computing enhances collaboration and facilitates remote operations and

partnerships on tasks. These technologies are meant to revolutionise the public sector by ensuring efficiency and accountability in public sector operations. The perspectives outline the technologies without underscoring their importance and shortcomings in public sector operations, service delivery, and citizens' engagement.

Notably, there are challenges with digital transformation and adoption. First, Al-Ruithe et al. (2018) note embracing digital technology in the public sector (Al-Ruithe et al. 2018). The problem of politics and interest among the decision-makers influences a government's ability to promote the implementation of digital transformations. The process involves different stakeholders whose views have to be considered, and their interests are considered before approving the changes and pushing them to serve the people's interests. Besides, Sinha et al. found that some government institutions have outdated structures, infrastructures, and policies to govern the digital transformation process. A successful process requires stakeholders' support, approval, and adequate resources and infrastructure (Sinha et al. 2023). The public sector departments lack the infrastructure and the relevant guidelines to support the procedure. The lack of shared understanding hinders public sector digital transformation and innovation (Cinar et al. 2019). The challenges need proper interventions and solutions to enhance the government's ability to adopt digital transformation in its service delivery.

2.3   Drivers of E-Government Adoption

Many countries adopt and embrace e-government to improve their services and ensure that they help the government achieve good governance. Sihotang et al. (2022) determined that the desire to explore opportunities to exploit new opportunities and areas of improving service delivery to the citizens are the primary drivers for e-governance (Sihotang et al. 2022). E-governance is used to enhance the reliability and efficiency of public services and governance by enabling citizens to access government services over the Internet. Samuel et al. outline the notion of the performance expectancy perspective as a key driver based on the fact that the government is trying to use systems that help it attain the desired goals and performance in governance (Samuel et al. 2020). Notably, Sihotang et al. developed the three categories of drivers of the e-governance adoption triangle, which involve Technological, organisational, and environmental (Sihotang et al. 2022).

Behavioural changes in society are considered some of the key drivers of the adoption of e-government. Through research during the covid-19 pandemic, Mensah et al. determined the need for information quality, credibility, and ease of accessibility as the key drivers

for e-governance adoption. This finding outlined the need to access government services even during pandemics and other crises that might make it difficult to access government offices or institutions for service delivery (Mensah, Adams, et al. 2022). Mensah et al. outlined the need to sustain value in the public service as a key factor in pushing the government to adopt e-governance. The desire to make services available remotely for all citizens to access makes it essential to adopt the technology in public service and ensure that it serves the key interests of the public and creates value for them—the government's dedication to creating value through digitising the government's processes (Mensah, et al. 2022).

Technological adoption, especially mobile applications and technologies and access to the internet technology. Tang et al. outline that mobile technology adoption has encouraged the government to digitise public services (Tang et al. 2021). While analysing the smart city mobile apps, citizens' access to mobile applications and the internet is a key driver that creates the need to employ critical strategies for digitising the government system and making the services available for all. In this context, the emergence of APIs and economy-driven digital strategies are critical and enhance the urge to push government services and automatable or routine services online. Trček outlines that the emergence of the digital economy and supported APIs are driving forces that push the government to consider digitising most of its services to catch up with technological development (Trček 2019).

The need to implement systems with the utmost integrity in the public service. Through a systematic review, Khan et al. outlined that government uses digital platforms to offer public services to curb corruption cases (Khan et al. 2021). E-government is seen as an opportunity to avoid abuse and misuse of offices by public officers who strive to offer services. The identified corruption activities that e-government seeks to avoid include bribes, kickbacks, and illegal favours in service delivery (Khan et al. 2021). Adjei-Bamfo et al. gave an example of the procurement process as one of the key areas where e-government helps sort out the issue of corruption and abuse of office (Adjei-Bamfo et al. 2019). Automating as many government services as possible reduces the human intervention, consciousness and biases that can lead to the problem of corruption in the public sector. Beyond just efficiency, any responsible government goes for technology in governance to enhance transparency, integrity, reliability, and accessibility and do away with the cases of corruption and misuse of public offices by civil servants.

However, it is not just about the government and technological factors; factors related to citizens also play an important role in adopting e-governance techniques in service delivery. Gounopoulos et al. acknowledge that an increase in citizens' digital skills and

adoption of ICT technologies such as the Internet and social media has played an important role in encouraging the public sector to go digital and adopt e-government (Gounopoulos et al. 2020). An increase in the number of citizens that use digital media and understand how internet technologies such as social media work promote the desire to have most of their services accessed online or remotely without necessarily visiting the offices (Malodia et al. 2021). Increase in citizen demographics that can follow the exact procedures online to get services they would otherwise require to visit the government offices. Looking at the drivers from this perspective deviates from the organisational aspect of the public sector and technological development.

2.4   Barriers and Challenges of E-Government Implementation

Implementation of e-government requires an ICT-ready infrastructure to roll out the services and ensure that the public has access to all the government services in a digital platform or remotely. Al-Rawahna et al. acknowledged that the Jamaican public sector faces challenges with hardware telecommunication systems, electricity and power grid, and computer networks, which hinder the effective implementation of the e-government (Al-rawahna et al. 2019). The digital gap in most countries, coupled with a lack of infrastructure, are the main barriers governments have to deal with even before thinking of launching the e-governments and digitising the services in the country. Twizeyimana et al. listed the problem of ICT infrastructure in Rwanda as a major setback in the implementation of e-governance (Twizeyimana et al. 2018). However, it noted that the infrastructure challenges could be mitigated and should not be seen as a critical barrier, especially for a dedicated government that aims to digitise its services and processes fully.

The cost of implementation and maintenance is high for some governments. Studies show the initial cost of implementation that governments, especially in developing countries, cannot afford. Dhonju & Shakya describes the high cost of implementation and maintenance as a clear hindrance that makes it nearly impossible for some governments to digitise their operations—the maintenance of the systems, computers and the operational costs attached to running an e-government platform (Dhonju and Shakya 2019). The high cost of setting up an ICT infrastructure and acquiring the exact tools required to set up the platforms is an obstacle to implementation (Uwizeyimana 2022). However, the findings in all these perspectives fail to recognise how government can outsource the platforms as well as the role of existing data in enhancing the efficiency of service delivery. Also, it fails to compare the cost of having salaried civil servants offer the services and technologies that everybody seeks the services regardless of their geographic locations.

Lack of expertise is another barrier or challenge that makes it difficult for countries to implement e-government and digitise their public services. Arief et al. outlined that a lack of skills and expertise makes it difficult to implement e-government services (Arief et al. 2021). Countries without adequate experts in ICT and related fields find it difficult to implement the strategies and end up not succeeding in the implementation and operation of the services. According to Cordella and Bonina's public value perspective an absence of specialized knowledge or expertise within a nation can impede the establishment of a digital platform and the transition of governmental operations and services towards it, potentially compromising their effectiveness in serving the public (Cordella and Bonina 2012). Technical knowledge and expertise are required in implementing and operating the systems. Overseeing the transition process and implementing the strategies require outstanding expertise to ensure the reliability of the services and nurture the public trust in the platforms and the government services in the country, especially the developing nations.

Implementation of e-government requires the utmost political goodwill for it to be successful. The process of implementing e-government and the decisions made are more political than technical. Filgueiras et al. outlined political interferences and forms of patronage and clientelism as key challenges in the implementation (Filgueiras et al. 2019). All the decisions and processes in the public sector are majorly political. The policy-making process is also political. If politicians feel that implementing the platforms and digitising government services will negatively affect them, they sabotage them. For instance, the procurement process might attract key political interests and face sabotage. The politicisation of the process overruns the cost implications of implementing e-government projects (Clarke 2020). E-government implementation cannot be separated from politics since most decision-making in government is political and made by politicians.

E-government is a medium for change in government service delivery and can affect their work or normal operations. Elgohary & Abdelazyz researched the issue of resistance of employees in changing the entire context of the e-government (Elgohary and Abdelazyz 2020). Employees are essential and primary stakeholders in the implementation of e-government whose interests cannot be wished away, and their resistance can affect the implementation and operations of the system. The public sector organisations cannot implement any meaningful change without the contribution of the employees working or attached to it. Resistance comes from the employees' aversion to change and reluctance to adopt the new technology (Al-ma'aitah 2020). Change resistance implies that public sector employees see the status quo as the best compared to what might result from the e-government.

2.5   E-Government in Developing Countries

Many developing countries are adopting e-government technologies to enable them to offer services effectively and ensure that their citizens have access to government services without necessarily visiting public offices or institutions. Mustafa et al. analysed the adoption pattern of e-government among developing countries and the factors that affect the adoption (Mustafa et al. 2020). It presented facts that there has been a significant upward trajectory in adopting or embracing the technologies. The main factors it outlined to facilitate the embracement of e-government technologies include trust, performance expectancy, social influence, effort expectancy, facilitating condition, perceived ease of use and perceived usefulness in the public service, among others. Notably, Adam relates the adoption and the quality of e-government in developing countries with economic development as well as institutions development (Osman Adam 2020). The increase indicates that most countries are adopting e-government as a better alternative for offering government and administrative services.

Yildrim et al. analysed the efficiency of e-government in Turkey, a developing country, since the 2000s (Yıldırım and Bostancı 2021). It determined that any developing country that aims to use e-governance systems effectively must ensure they target the right user type, provide digital platform options, ensure maximum security and accessibility, and provide effective digital service classification. All these perspectives are technological factors that must be considered when rolling the technologies and migrating the government services to digital platforms and environment. Developing countries across the world are allocating a huge percentage of their budgets to implement and operate e-government (Sharma et al. 2021). The belief that e-government can enhance efficiency and effectiveness and trust in the processes encourages the adoption and use by the country's public and citizens. This finding builds on the actual system factors in developing countries that have to be considered in the system to make it acceptable to the people.

Besides enhancing the efficiency of service delivery of government services, it has been noted that e-government in developing countries helps reduce petty corruption cases and significantly reduce the bureaucratic corruption cases witnessed in most government institutions. Sadik-Zada et al. analysed 121 countries to determine that developing countries implementing e-government have streamlined service delivery and removed unnecessary human interaction that paves the way for corrupt deals and transactions involving citizens and government officials (Sadik-Zada et al. 2022). Also, it has enhanced per capita income, political rights, civil rights, and sharing of natural resources

with little or no bribery. E-government removes vital areas exploited for unnecessary kickbacks and bribes and creates opportunities for discrimination against the people. This finding outlines one benefit that countries that have implemented e-government enjoy and its impact on the citizens in terms of government services and other aspects related to integrity.

Despite the benefits, studies have noted that e-government faces significant challenges in developing countries (Meiyanti et al. 2018). Developing countries are known as less developed, with few relevant technologies that can be used to deploy and run e-government platforms successfully. Meiyanti et al. provide a table of challenges from IT infrastructure, managerial issues, digital culture, laws, legislation, and budgeting (Meiyanti et al. 2018). Al Mudawi et al. added security challenges, technology readiness problems, lack of awareness and social influences (Al Mudawi et al. 2020). Developing countries register significant challenges that make it difficult to operate the systems effectively despite the goodwill that the e-government receives from the administration and the citizens. However, there is no information or study on how the challenges can be solved or mitigated to ensure the success of e-government in public service delivery. In this case, the findings on the key challenges expose areas that act as barriers to the effective implementation and of e-government initiatives.

Access to e-government is sometimes difficult in developing countries due to low internet penetration caused by extreme poverties and lack of infrastructural development. Undi-Phiri et al. outlined that people with poor internet use can hardly access e-government services and require effective tools and facilitations to use the services (Undi-Phiri and Phiri 2022). Without points for internet access, most people in developing countries can hardly enjoy these services despite the heavy investment their governments have put in place to digitise government services. To sort out this problem, Namibia is an example of a country that has set up a library where the public can access the government services offered through the e-government platforms (Nengomasha and Shuumbili 2022). Without such initiatives in developing countries, most people, especially in rural areas, find it difficult to access government services. Such findings outline why developing countries should be points of focus during research on e-governance in developing countries.

Bwalya and Healy also state the push for implementing digital and knowledge economies in the African region and identify Zambia and South Africa as some nations that enacted regulatory frameworks for e-government implementation (Bwalya and Healy 2010). Countries such as Afghanistan have a critical political push to ensure that they implement e-government. The belief that the adoption of the technology is the most efficient way to serve the public and the private sector and ensure accountability, efficiency and

transparency for the country makes it to focus on implementing this technology and ensuring that it is used effectively to the best interest of the public (Samsor 2021). Developing economies aim to digitise both their economies and service delivery and ensure that they provide appropriate and necessary services through technology. However, the cited reports or articles fail to acknowledge how the developing countries are trying to implement the technologies and whether they have been able to achieve the goals of implementing and adopting e-government or not and the reasons for the outcome.

2.6 E-Government in WANA Countries.

West Asia and North Africa, WANA- known as the Middle East and North Africa, MENA countries are among those regions where e-government is being adopted to revolutionize the public sector. The countries under this umbrella include Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arabs Emirates, and Yemen (Davoodi and Abed 2003). The region comprises some of the richest and most powerful countries owing to the presence of oil mineral in them, while others are still developing and in bad situations because of the arid nature of the areas. WANA countries are characterised by oil and desert, making most parts rich but unsuitable for economic activities such as Agriculture. Regardless of the challenges and wars that some countries in the region experience, they have tried to implement e-government to ensure sustainability and quality of service delivery. WANA countries are attracted to adopting these technologies to improve control of government effectiveness, curb corruption and ensure regulatory rates (Dhaoui 2022). The articles in this perspective fail to outline how the challenges affect the implementation and adoption of e-government technologies.

Different factors have been identified to influence E-government adoption in WANA countries. Almaiah & Nasereddin carried out research in Jordan on the factors that influence the adoption of e-government in the country and identified social, technological, and political factors. Besides noting the factors that affect the adoption of the technology, it outlines that Jordanians do not enjoy the services from the e-government despite the increase in internet users and improvements in service delivery speed and quality (Almaiah and Nasereddin 2020). In Qatar, social factors determine technology use and adoption in government services. El-Kassem et al. outline that mobile technology is the primary driver that pushes the adoption of e-government(El-Kassem et al. 2020). Other factors outlined involve awareness and perceived usefulness of the technology among the citizens. Despite these findings, the articles cited in this perspective do not summarize the state factors. Besides, they fail to address common or general

factors in all the WANA countries. Instead, they analyse factors for adoption in specific countries, not general regions.

The WANA countries adopt e-government technologies to set up portals that allow them to offer services to the people. Among the Palestinians, E-government is seen as a tool that enhances citizens' trust in the government. Through research that analysed data from 340 valid questionnaires, Alkateeb and Abdalla noted that Palestinians have developed significant confidence in the government services owing to the implementation of e-government portals despite technological and privacy risks it exposes the users as they seek government services over the technology (Alkhateeb and Abdalla 2021). It further noted that e-government adoption had encouraged Palestine citizens to seek government and consume government services because of the efficiency and effectiveness of getting the services. E-government makes it easier for people in West Asia – known as the Middle East – to access government services, which increases the satisfaction and happiness of people in different countries (Canini Derya Baran and Woung Ying Yu 2020). In this case, adoption significantly impacts access to services and satisfaction with government services.

The quality of websites used among the WANA countries show significant weakness in the quality of services offered through e-government. Analysis of 17 services offered by the Kuwait government on its e-government platforms noted that 13 of the 17 services are impossible for citizens to access on the platforms (Doush and Almeraj 2019). This problem reveals a serious weakness with the websites used in Kuwait, an example of a WANA country. Dodeen noted that Jordan's government needs to incorporate the citizens' perspectives and views in the services offered through e-government to enhance effectiveness, efficiency, and public trust (Dodeen 2019). It further noted that the e-government websites should be reviewed to align them with public expectations and make them ideal. Studies on Algeria showed significant weakness in its e-government services with unreliability of services (Ravanos and Karagiannis 2022). However, the cited articles fail to recognize the problems of the e-government portals and provide discrete findings on single countries rather than a region.

Diffusion challenges are one major issue in implementing e-government among WANA countries. Weerakkody et al. outlined that implementation and diffusion challenges range from social to political challenges that affect the adoption and consumption of technology in the countries (Weerakkody et al. 2011). Amin et al. suggest that the Saudi Arabia government has to ensure several meaningful relationships such as security, relative benefits, compatibility, management support, performance expectations, perceived usefulness of e-government, ease of use, and reduced uncertainties to government

services and IT infrastructure (Amin et al. 2022). Notably, Saudi Arabia is one of the member countries that has made significant strides in implementing e-government and achieved critical information success (EGDI 2023). The main observation in the cited articles focuses on using e-government in one country without featuring others. This makes it difficult or impossible to determine the situation in other countries and use the information to arrive at a thorough conclusion on e-government among WANA nations. In this case, the general review of the countries through systematic reviews can help compare and integrate the findings in a single piece of literature that explains the e-government situation in the region.

2.7   Overview of Previous Studies Conducted on the Topic

As observed by e-Government scholars, the use of digital technology in the public sector has intensified during the last decade. Most nations, especially developing ones, struggle to implement e-government due to technical and governance issues (Mensah, et al. 2022). The findings reveal poor implementation of the digital platforms, coupled with low-quality websites, making it difficult for citizens to access government services. The analysis of highly cited papers disclosed that the literature is characterised by a service-dominant logic, with citizens' adoption of government services and Web sites being usable and comprehensive in serving the interests of the citizens. The previous studies have focused on pushing governments to adopt the technologies and the challenges countries face in implementing them. The focus has mainly been on the inspiration and desire to have the technologies in the countries for proper service delivery, for the citizens to access government services remotely.

Previous overviews of e-Government evaluation include analysis of technical aspects such as usability and quality of websites that are constantly used for digitising government services and processes. Studies have noted that e-Government platforms either lack the desired usability or do not effectively contain all the required services to serve the public interest (Heidlund and Sundberg 2022). To overcome this situation, a review of the quality of the website is paramount to ensure the quality of the websites and information on them. It has been proposed that the websites developed from ideas in existing e-government literature should consider society's key aspects and ensure that it facilitates adequate access to public services. Treating website evaluation as a technical problem neglected the importance of political-social factors. E-government evaluation must focus on how it solves the public's problem rather than on quantifying costs and assuming benefits to be qualitative and often intangible. The technologies used and the focus should acknowledge that e-government should satisfy the citizens and address the economic and

political problems. As stated earlier, the portals used have been identified as inappropriate in serving the public due to usability issues.

In the WANA nations, the developed countries, such as United Arabs Emirates and Qatar were the first to embrace the technology. Developing countries struggle to implement e-government and have the citizens adopt it effectively. On the regional level, Libya is considered as one of the few countries that struggles to implement the technology, owing to the cost of implementation and operations and the prevailing political environment (EGDI 2023).The satisfaction rate of people is evenly low because of the poor performance of the technology. The study has focused on the factors that affect technology implementation in WANA and Developing countries. It additionally emphasises on satisfaction rates, and critical aspects such as accessibility of the technologies, political issues, and economic hindrances for countries such as Libya.

Even though e-government was adopted in Africa considerably later, the region is gradually embracing this innovative method of providing governmental services. As a result, the literature review has noted that developing countries have tried to adopt this technology despite the challenges, given various countries and their wide range of income levels. Thus, while countries in the WANA regions adopt the technology and continue to implement e-government initiatives, there is a need for studies that can help improve implementation to ensure that benefits are met.

2.8   Summary of The Literature Review

This literature review notes that E-government is crucial in offering government services and ensuring efficiency and effectiveness in government service delivery. Technology is finding its way into government service delivery, revolutionising how the public or citizens interact with the government and get the desired services. As a technology, the key driver is the need to modernise service delivery and digitise as well as automate service delivery. The need to improve and enhance productivity is one of the key drivers for adopting e-government in most public offices. The focus is to increase citizen satisfaction, strengthen the security of the citizen's data and make access to government services easier and cheaper than always going to government offices. Besides, the need to implement technology to curb corruption and bribery promoted by manual records and physical service delivery offered by government officials to the citizens.

On drivers, most governments focus on incorporating technology to adapt to behavioural, technological, and social changes caused by technological changes and transformations.

The emergence of the digital economy, mobile technologies, and internet-related technologies play a critical role in pushing nations to adopt the technology. The focus is more on aligning with the digital factors besides the government perspectives. However, the finding in most third-world countries is that lack of finances and expertise is a critical barrier and poses significant challenges in adopting the technology. Other barriers include political and leadership aspects that have to be incorporated to enhance the efficiency of implementing the technology. Given this perspective, aligning the technology with the user time makes it easy and essential to adopt e-government in a manner that serves the interests of the citizens and facilitates the digitisation of government services and operations.

The literature review narrowed down to WANA countries and eventually to Libya. This is a unique region in terms of its political and economic stability, which has significantly influenced the adoption and use of e-government. Like other countries, there is a significant increase in internet penetration in this region and subsequent use of government services for the countries that have implemented e-government. However, diffusion challenges are one of the major barriers and challenges where most governments have to satisfy different interests.

In conclusion, the study on e-government needs to focus on the extent of implementation challenges the country faces that have acted as barriers to effective implementation, and opportunities that the country's government can still exploit in digitising its services. The main focus should be on understanding the political, social, and technological aspects that affect the implementation of technology in the country. In this regard, qualitative analysis will help create significant insights that can be relied on to implement and operate e-government in a manner that aligns with the government and citizen factors affecting the implementation and adoption of the technology.

3   Libya as a Case Study

3.1   Brief Political History

The state of Libya is a country located in North Africa, belonging to the Maghreb region and is a part of both the Arab League and the African Union. With an area of approximately 1.760 million square kilometres, the state of Libya is considered the fourth-largest country in Africa and the sixteenth-largest in the world. This large area is considered one of the lowest densely populated countries with an inhabitation of 6.735 million to 8 million (CBL 2022; USAID DECA 2022).Libya was established as one independent, unified country in 1951 under the supervision of the United Nations after suffering from brutal colonialism that carried out ethnic cleansing, genocide, and territorial fragmentation (Ateş and Elfeitori 2021; Vandewalle 2008)

In the last seven decades, the Libyan society and political system were shuffled several times, where the state was established as a federal constitutional kingdom in 1951; in 1963, the federal system was abandoned, leading to an increase in the power of the centralised government day by day, this happened in parallel with the discovery of oil in 1959, where it dramatically changed the prospects of the country's economics. However, the monarchy faced internal discontent due to the unequal distribution of wealth and limited political freedom (Vandewalle Drik 2012).

In 1969, a soft military coup led by some young officers from the Libyan army overthrew the monarchy. They took over the state and led the establishment of the first republic, which abandoned the constitution and followed the cultural revolution in 1973 aimed to repeal all existing laws and enforce an administration cleansing alongside other ideological aims (Vanderwalle 2012). Since then, the administrative structure of the public sector has started suffering where marking the end of the concept of civil servants and the start of the one-party ruling the whole public sector under the new ideology that was launched in 1977 by announcing Libya as a socialist populist state (Sawani 2018).

For more than four decades, the state was run by the one-party, implementing a socialist-inspired political system and a nationalising movement in the oil sector; in the first decade, with the rise of oil exportation, which made the state predominantly dependent on oil and gas sector, that accounts for the majority of the country's revenue and export earnings, alongside the socialist policies, such as shutting down the free market and the privet sector, which led to a huge increase in the number of the public sector employees year after year (Otman Waniss and Karlberg Erling 2007).

At the beginning of the current century, the ruling party worked to normalise relations with the West and rebuild trust and enforce some economic and public sector reforms in the country, which did not last much, as the uprising in 2011 with the help of the international actors marked the end of that era and the start of a new dream, a democratic prosperous country (Pargeter 2010) wring, a popular uprising erupted in Libya in February 2011. With the support of NATO military intervention, the opposition forces managed to overthrow the regime. However, the post-revolution period has been marked by ongoing instability, violence, and the emergence of multiple factions vying for power (ESCWA 2013). Since 2014, the country has been split between rivals, where external parties have compounded Libya's issues by funnelling money and weaponry to proxies who have prioritised their interests over the Libyan people's (Athalia Jasheil 2020), leading to the division of the Government and economy ('On the Road to Peace, Libya Makes Progress but Hits Pitfalls - Libya | ReliefWeb' 2020) and humanitarian crisis (IOM 2020), in addition to separate governments in the east and west, with numerous armed militias and extremist groups also active in the region (Athalia Jasheil 2020).

Moreover, this political instability and conflict have severely impacted the economy and disrupted oil production. Consequently, Libya faces numerous challenges, including ongoing political instability, lack of infrastructure, high unemployment rates, and a struggling public sector (Collombier and Lacher 2023).

The Libyan Political Agreement 2015 established the temporary Government of National Accord after the initial peace negotiations sponsored by the UN Support Mission in Libya (UNSMIL 2021). However, as a result of UN Security Council Resolution 2510 and the UN Support Mission in Libya's peace and reconciliation efforts, conflicting parties elected the Presidential Council and prime minister of the Government of National Unity by the end of 2020. The new government's first responsibility is to coordinate and support the UN Security Council Resolution 2510's political roadmap to credible, inclusive, and democratic national elections on December 24, (UNSMIL 2021). Due to force majeure, the election has not been held, leading to a new division and split of the government and the formation of a parallel government in the east side of the country (UNSMIL 2022)

The complex political history of Libya has shaped its current political landscape, characterised by fragmentation, ongoing conflict, and a struggling public sector. This context presents unique challenges and opportunities for implementing digital transformation and e-government initiatives in the country.

3.2 Public Sector Mentalities and Government Structure

When examining the demographic data and statistics, in addition to the main figures in the labour market and national income rates, it is easy to notice the lack of proportionality between the labour market, public administration and the economy in Libya, where the population of Libya is 8 million (CBL 2022), while the average annual oil income during last decade, amounts to 20 billion dollars a year (CBL 2021), and oil reserves constitute the largest oil reserves in Africa (World Bank 2015), on the other hand, the national income is dependant by approximately 90% on the sale of oil and its derivatives (CBL 2022) and in light of this data, 80% of the labour force works in the civil service (World Bank 2015), making the state spend more than a third of its budget on the salaries of civil servants (CBL 2022), while a large percentage of these employees lack competence and discipline (Libyan Audit Bureau, 2018, 2019, 2020; Libyan Administrative Control Authority 2019). Adding to the fact that Libya has an unemployment rate of 30% (World Bank, 2015), it is among the ten most corrupt countries in the world ('Libya - Transparency.org' 2023)

In brief, the boom in oil production and the huge income of oil revenues helped to finance the development and increase the size of the administrative structure in Libya. Under the monarchy regime (1951-1969), the public sector was much smaller and had fewer departments and civil servants. However, after the military coup in 1969 and then the cultural revolution in 1973, which was followed by the declaration of Libya as a populist socialist state in 1977, the private sector was almost eliminated, and all businesses owned by both foreign and local investors were nationalised. On this basis, the public sector became almost the only way for job seekers to earn an income. With the increase relying on oil revenue with no diversification of the economy, the state has become a rentier state; oil revenue is spent on salaries and subsidised goods in the full absence of a diversified labour market or a free economy (Ateş and Elfeitori 2021).

In addition, the regime focused back in time on establishing informal institutions and actors to support the regime, and empowering the tribes, in all aspects of the state. Their infiltration into the public sector affected the spread of nepotism in recruitment processes in the public sector so that employment became a means of bringing loyalties, not based on actual human resources needs or equal opportunity, competition, and transparency (Vandewalle 2008; Vandewalle Drik 2012).

As a result of these policies, obtaining a job in the public sector has become a goal for all Libyans because of the financial security it provides (World Bank 2015). In the last ten years, prior to the overthrow of the regime in 2011, the government worked on some reform attempts in the public sector by laying off several civil servants, referring some of

them to voluntary retirement, providing some economic incentives, and working to develop the private sector. Still, these reforms were met with strong opposition from informal institutions (World Bank 2015). Which also met with opposition from public sector employees who had come to depend on the job for a steady income. It led to an increase in public sector civil servants by exceeding one million citizens in 2011, which represents more than 70% of the actual labour force (Pargeter 2010).

With the overthrow of the regime in 2011, and in parallel with the outbreak of the armed political conflict at the time, the number of civil servants increased dramatically, the loss of many previously available and potential job opportunities by foreign investment, and the security situation also affected the movement of goods, transportation, and financial transfers, which in turn, had a negative impact on the private job market. As a result of that and the continuation of the armed political struggle, many informal institutions have been empowered, such as tribal leaders and city-based militias. These informal institutions exerted many pressures on successive governments to employ their personnel within the public sector, leading to another increase of the civil servants by exceeding two million. In addition, those pressures also led to the appointment of several high administrative and political positions, such as ministers, heads of departments, and ambassadors. Thus, it can be said that the current state of the public sector civil servants and the labour market has been shaped by the political context from the mid-1970s to the present (Tantoush 2022).

Current Status of Public Administration and Civil Service:

Drawing upon three primary authoritative sources, this subsection endeavours to evaluate the present condition of public administration in Libya, specifically focusing on the civil service and labour market. The principal data, quantitative and qualitative in nature, are derived from the Central Bank of Libya's quarterly expenditure reports and the Libyan Audit Bureau and Libyan Administrative Control Authority's annual publications. Furthermore, this analysis scrutinises facets of fiscal expenditure, adherence to administrative guidelines, and the performance of public administration and civil service personnel.
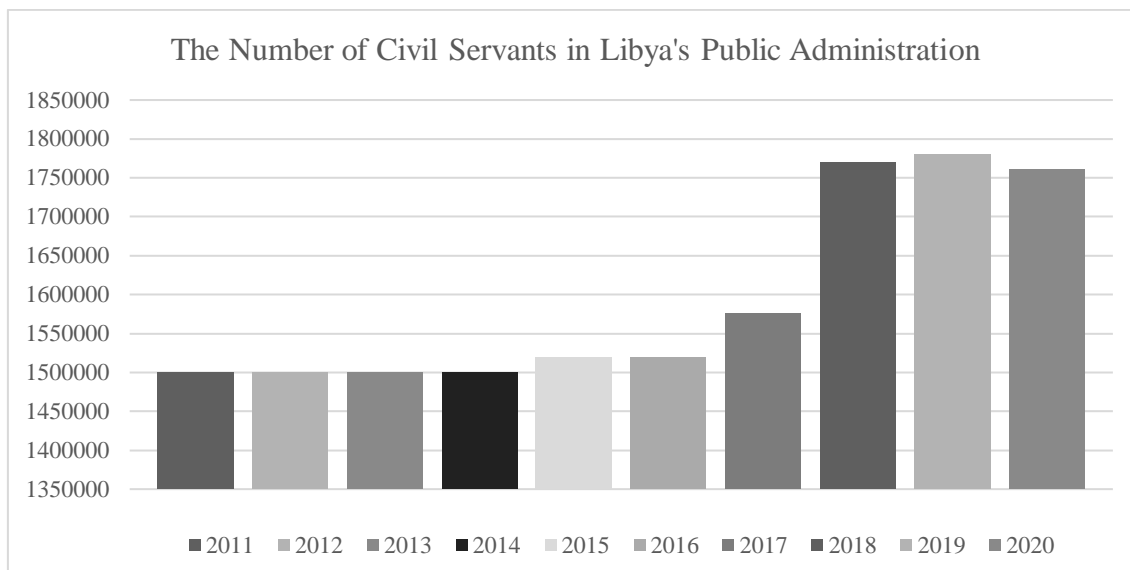
Figure 3-1 The Number of Civil Servants in Libya's Public Administration

Figure 3-1 indicates significant inflation in the number of civil servants in Libya, as the number of workers in the public sector currently reaches 1.776 million employees working in more than 235 central administrative units and more than 114 municipalities (LAB 2020). This percentage represents 27% of the population and more than 84% of the employed citizens (LAB 2020), with a total increase of more than 250 thousand employees in the public sector compared to 2011. The annual increase in the number of employees in the public sector and civil service shows an estimated increase of about 25 thousand employees; however, this number exceeds 2.3 million employees if the non-direct public administration employees were included, such as the government-owned enterprises and banks (LAB 2020).

Suppose the efficiency and effectiveness of civil servants can be assumed quantitatively based on the revenues generated by the government. In that case, it will illustrate that the estimated sixty thousand employees working in the oil sector, which is 2.6% of the total workforce in the public sector, are responsible for 97% of the country's GDP in 2021 and the average of 90% (CBL 2021; LAB 2019, 2020).

On the other hand, Figure 3-2 and Figure 3-3 show the amount of spending on salaries for the public sector workforce, which exceeds 40% of the total annual expenditures for the year 2021 (CBL 2021), with more than 2.3 million people (LAB 2020).

Expenditures of the national budget spent on salaries
In Billion Libyan Dinner
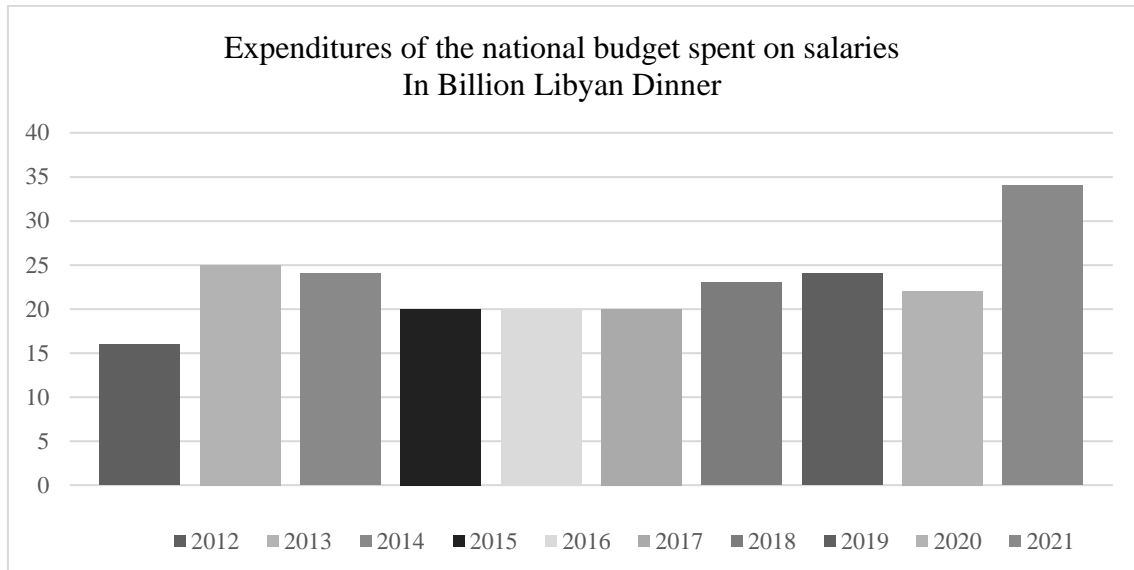
Figure 3-2 Expenditures of the national budget spent on salaries.

Comparative between the number of civil service and the expenditures

The Number of Civil Service in the public administration

Expenitures (In Billion Libyan Dinnar) of the national bidget on the salaries of the civil service
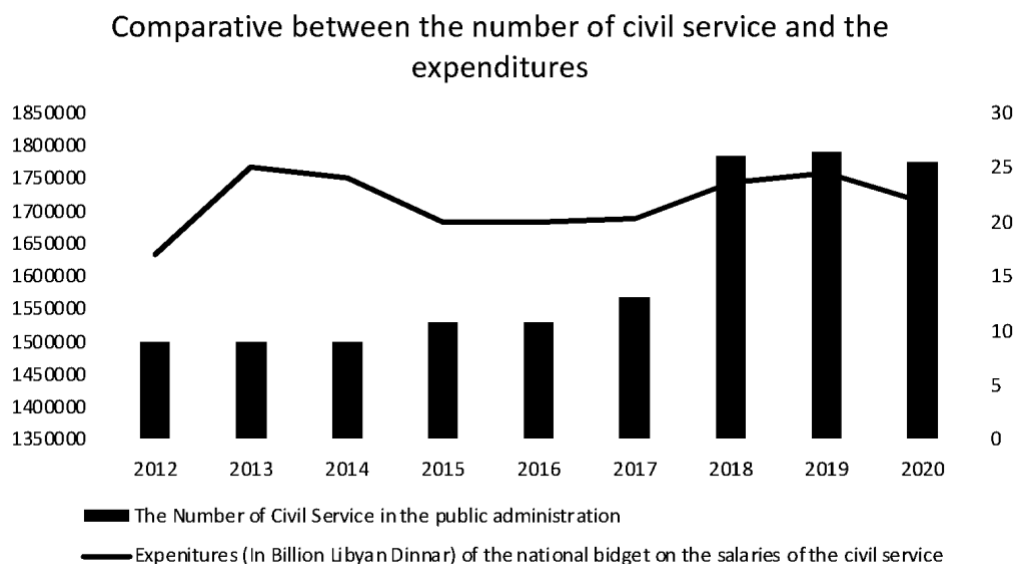
Figure 3-3 Comparison between the number of civil servants and the expenditures

Moreover, according to reports from the Libyan Audit Bureau and the Libyan Administrative Control Authority, all government sectors, including the Council of the Presidency and the Prime Minister, suffer several issues related to administrative laxity, lack of commitment, and poor quality of service provision. In addition, some of those services provided by government institutions are very time-consuming, alongside several issues related to non-compliance with financial laws, labour laws, and administrative contracting policies. In addition to many documented violations of corruption related to procurement and recruitment procedures, misuse of power, misuse of resources and the absence of accountability (ACA 2013, 2014, 2015, 2016, 2017, 2018, 2019; LAB 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020).

3.3   Digital Infrastructure and Adoption in Libya

Digital Infrastructure and Adoption encompasses the array of resources that facilitate the functionality of digital systems, as well as the manner in which individuals and organisations obtain and utilise these resources. Geographic network coverage, network performance, internet capacity, spectrum allocation, as well as the dynamics of the telecommunications industry with regard to security, interoperability, and competitiveness, are key components of digital infrastructure. Additionally, this pillar looks at the potential and behavioural, social, and physical constraints that affect fair adoption, including elements like cost and digital literacy.

The telecommunications sector was primarily government-owned and controlled before 2007 when the government restructured the sector to run commercially as part of the government's liberalisation movement. However, in 2010, the state-owned General Posts and Telecommunications Company was dissolved, and a new entity was established to take over its mandate, LPTIC, the Libyan Post Telecommunications & Information Technology Company, which runs on commercial law and has its independent budget and expenditures with no dependence on the government public treasury (LPTIC 2017). LPTIC owns and monopolises the telecommunication market in Libya by owning the fibre optic network, the main internet provider and the only two mobile network operators in the country (World Bank 2015). While LPTIC largely drives operations for the telecommunications sector, GACI, the General Authority for Communication and Informatics, is considered the telecommunication regulatory body, where it is responsible for policymaking and regulations. Although GACI is affiliated directly with the prime minister's cabinet, still LPTIC's general assembly is chaired by the prime minister (LPTIC 2017).

Nonetheless, the expansion of the telecommunications sector has experienced a sluggish progression, with intermittent indications of enhancement attributable to obstacles within the enabling environment. The advancement of telecommunications infrastructure and policy has encountered a multitude of impediments as a consequence of ongoing political armed conflict. Several laws related to telecommunications are outdated. The amendments or development of the related legislations in technology and the economy have been strictly constrained due to the ongoing political armed conflict and the absence of the legislative body (USAID DECA 2022).

The telecommunication infrastructure is relatively underdeveloped, with limited coverage and connectivity in rural areas, especially those who are settled in the Sahara Desert (USAID DECA 2022). As a result of the ongoing armed conflict since 2011, more than USD 1 billion worth of telecom infrastructure has been destroyed, including 20% of the

mobile network sites (OECD 2016). The fibre backbone network in Libya is predominantly owned and overseen by Hatif Libya, one of LPTIC's companies. This company monopolises the fibre network infrastructure and supplies its services to mobile network operators and private and governmental-owned internet service providers. This network Spans approximately 13,000-14,000 km nationwide and traverses only to populated cities with over 5,000 inhibitors (USAID DECA 2022).

Figure 3-4 Mobile cellular subscriptions in Libya (World Bank 2022)

With all of that, still, Libya is considered a country with a considerably high mobile penetration rate (GSMA 2022), where it gets to around 169.6 per cent as each resident has an average of one and a half mobile devices. Although all circumstances, the mobile network in Libya succeeded in introducing the fourth-generation network services with a penetration rate of 35% and 58% for the third-generation network (GSMA 2021). Based on a different resource, the internet penetration rate is still significantly considered low, approximating 21% (Internet World Stats 2023). Moreover, a report published by Ookla indicates that internet users in Libya may expect an average of 11.34 Mbps for cellular networks and 10.80 Mbps for fixed internet connection (Ookla 2023). Figure 3-4 and Figure 3-5 illustrate the number of mobile cellular subscriptions and fixed broadband subscriptions in the last ten years compared to the aggregation of the West Asia and North African region.

Figure 3-5 Fixed broadband subscriptions (World Bank 2022)

Based on the last publication of the Information and Communication Technology Index in 2013 by the Bureau of Statistics and Census in Libya, around 90% of the technology use is centred in the main cities, around 65% of the householders have at least one mobile device, and 46% of the householders have a computer device, 93% of those devices are laptops. The same index illustrates that the Lack of financial capabilities is the reason behind 45% of householders to not own a personal computer, and 10% do not want to obtain one due to social norms (BSC 2013). Figure 3-6 and Figure 3-7 illustrate the demographic distribution of computer use among Libyans. Figures 3-6 illustrate the demographic distribution of computer use among Libyan based on age, while figures 3-7 show the same based on their educational background (BSC 2013).

As for the digital literacy rate in the country, Libya is considered a country with a low digital literacy rate, with an estimation of 14% (ITU 2014);this rate might not correlate with the classic literacy rate, which approximated 91% ('Literacy - The World Factbook' 2023). However, many internet users in Libya might be considered "Facebook literate", where they are fully capable of using social media platforms but are less familiar with other digital platforms (USAID DECA 2022).
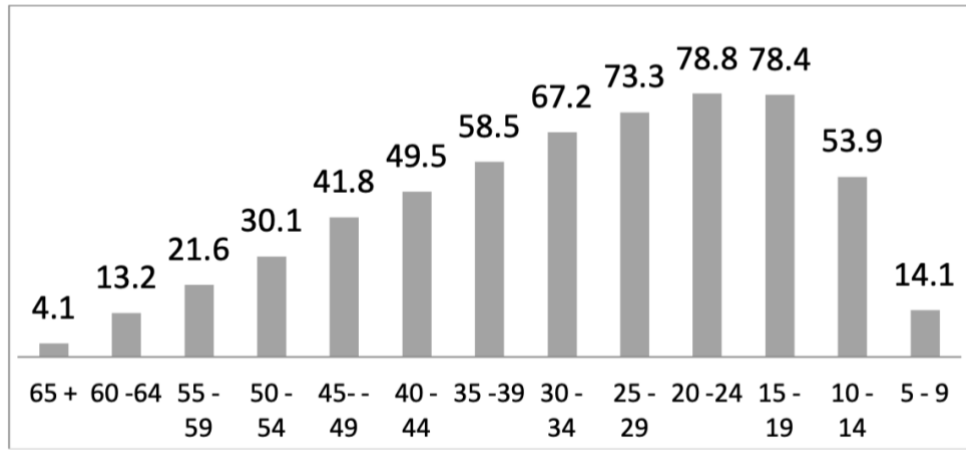
Figure 3-6 The use of computers among Libyan based on age (BSC 2013)**.**
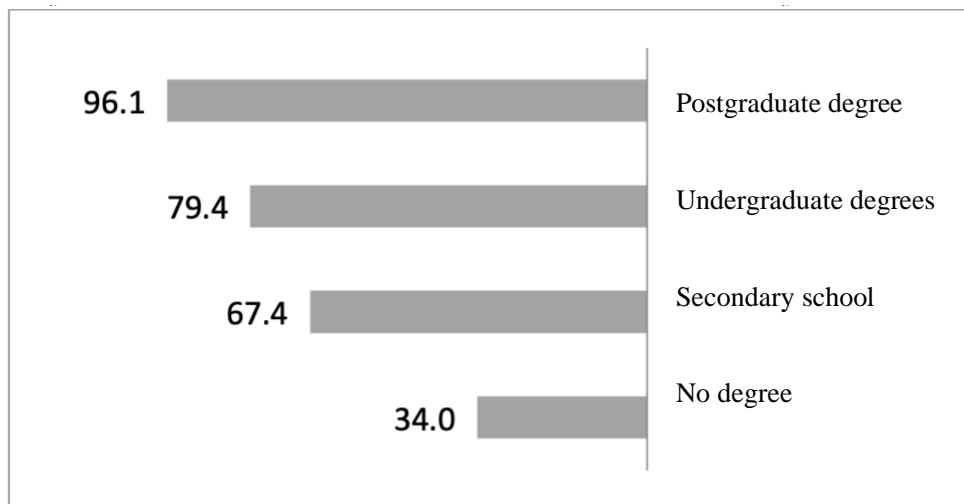
Figure 3-7 The use of computers based on educational background (BSC 2013)**.**

Although the COVID-19 pandemic has accelerated the adoption of digital tools and services in a multitude of sectors within Libya, individuals have demonstrated a hesitancy to adopt these new technologies. This hesitancy includes a lack of familiarity with specific platforms, mistrust, inadequate digital literacy, and the perception that these tools and services are unnecessary (USAID DECA 2022).

3.4   Digitisation in Libya

The terms digital transformation, digitalisation, and digitisation have been trending in Libya for the last few years; however, the journey of adopting technology in Libya's public sector goes deeper back in time. This section will dive into Libya's digital status based on some related international indexes, alongside diving into the history of digital

initiatives and what are the late efforts and updates in this field. Alongside the data from the international indexes, this section relies on the available literature and the government's published policies and press releases.

Based on UN E-Government Development Index, EGDI, Libya ranks 169 out of 189 countries, with an increase of its position in 2022 by seven points, with a value of 0.3375 out of 1, which equals half of the value of its neighbour country Tunisia (EGDI 2023). This score increased in 2022 for the double, after a continued decrease since 2016, which marked the year when the Government of National Accord was appointed.

EGDI is a composition of three elements, covering: the provision of online services, telecommunication connectivity and human capacity, wherein the Online Service Index, OSI, Libya scores 0.0990 in total with a minimum of 0.0341 points for e-participation and 0.0800 for the service provision. For the Telecommunication Infrastructure Index, TII, Libya scores 42.5200 points out of 50 in mobile cellular subscription; however, the overall score is 0.1601 out of 1, with 0.5 points difference from the region leader, Morocco. In contrast to the previous scores, Libya leads its sub-region with an overall of 0.7534 points; however, Human Capital Index, HCI, 2022 reflects a significant decrease of 0.1 points from Libya's score in 2011 (EGDI 2023). Figure 3-8, Figure 3-9, and Figure 3-10 illustrate more details on Libya's overall score and history in the last twenty years.

Online Service Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Libya (Value)	0.09900	0.04120	0.09720	0.10870	0.01574	0.00000	0.13650	0.08026	0.00000	0.00000	0.00000
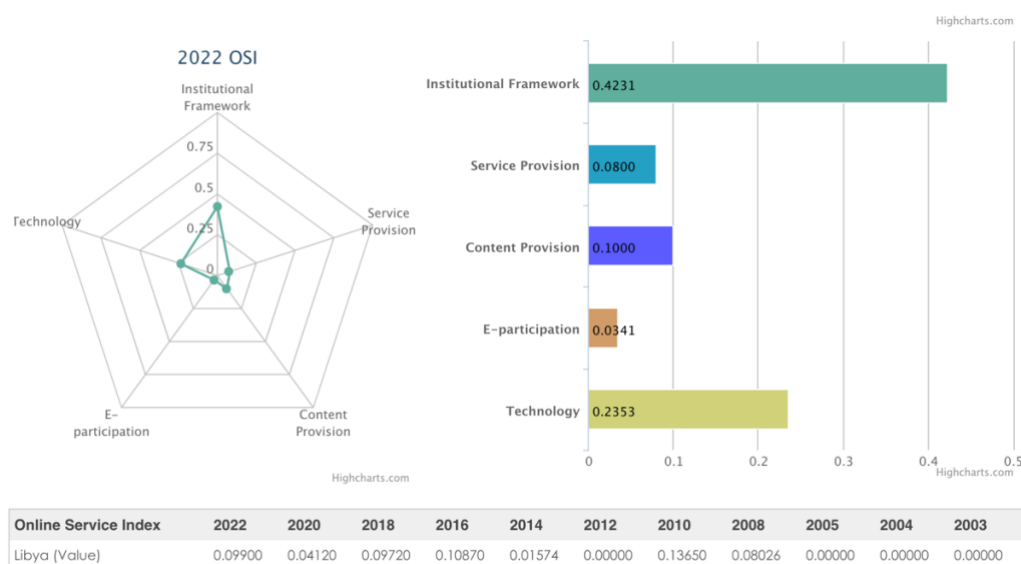
Figure 3-8 Online Service Index Libya (EGDI 2023)

2022 TII

Telecommunication Infrastructure Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Libya (Value)	0.16010	0.34590	0.33530	0.42912	0.32809	0.37433	0.11255	0.11702	0.05731	0.05192	0.04306
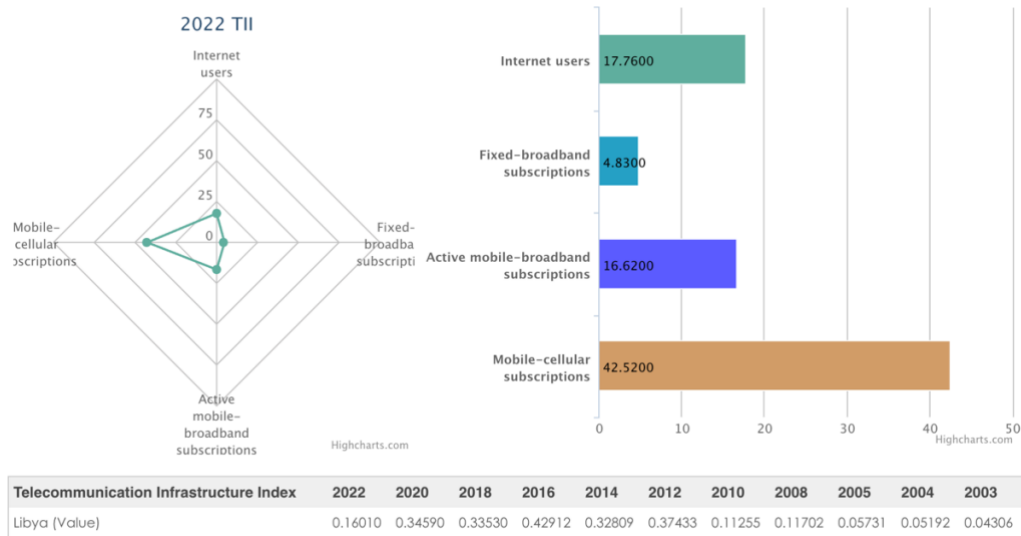
Figure 3-9 Telecommunication Infrastructure Index Libya (EGDI 2023)

Human Capital Index	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
Libya (Value)	0.75340	0.73570	0.71730	0.75878	0.78210	0.85018	0.89786	0.87487	0.87000	0.84000	0.84000
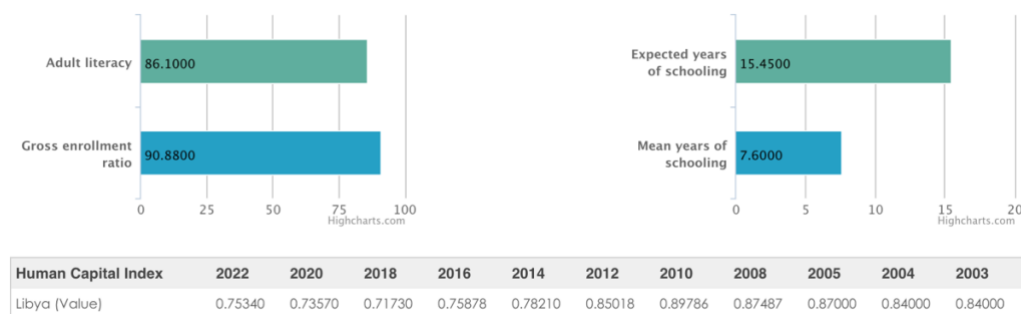
Figure 3-10 Human Capital Index Libya (EGDI 2023)

In 2022, for the first time, Libya took part in the Government Electronic and Mobile Services Index, GEMS, which is a tool developed by the UN ESCWA to measure the maturity of government services provided in the West Asia and North African region, which is also known for some as the Arab countries. In this index, Libya is ranked as the penultimate in the region, with a score of 0.0300 points out of 1 for the availability of the service provision, 0.01500 points for the use of the service and user satisfaction, and 0.0380 points for accessibility of those services to the public (ESCWA 2022). Figure 3-11 illustrates Libya's overall scores in the GEMS index in relation to the average and maximum scores in the region.
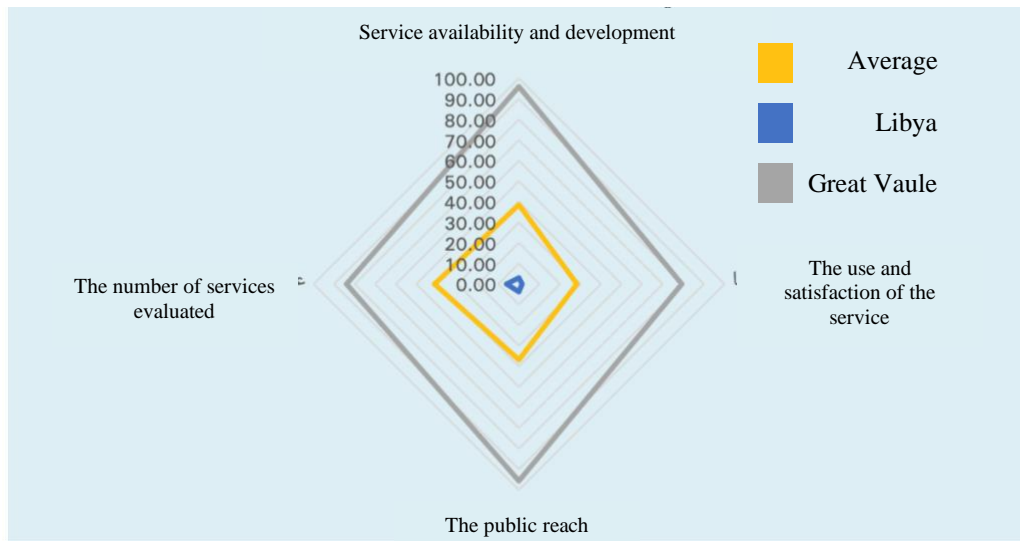
Figure 3-11 Libya in compression with the region (ESCWA 2022)
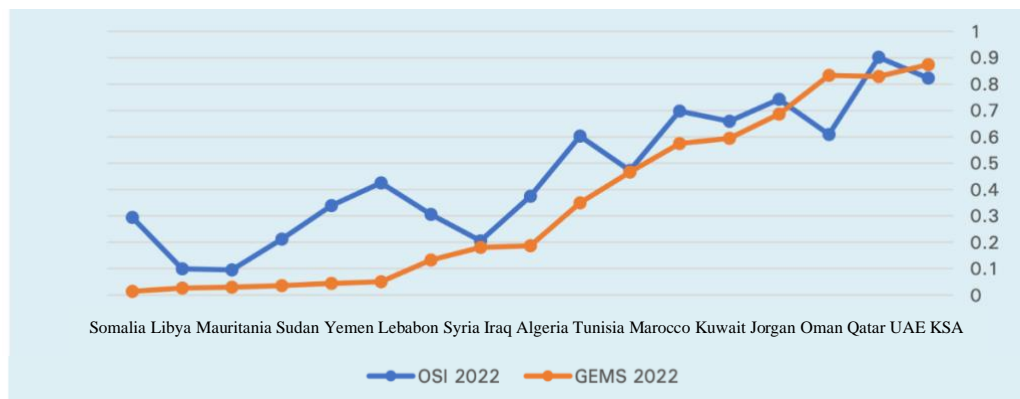
Figure 3-12 EGDI OSI and GESM Comparison in the region (ESCWA 2022)

Figure 3-12 illustrates Libya and the regional countries' score in the Government Electronic and Mobile Services Index in reflection of the EGDI Online Service Index, where contrast is clear for both indexes' scores for several countries; however, Libya's score does not variate much.

3.5   E-Government in Libya

The e-government initiatives in Libya may date back to the early 2000s; however, nothing much is documented neither in academia nor other publications; and the available academic literature that covers the history of e-government in Libya in many cases contradicts the common knowledge on the field and the news published back on time. However, according to Ahmed et al. the government of Libya launched its first official website in June 2005 (Ahmed et al. 2013), which aimed to provide the public with information on the legislation and the news of the prime minister's office.

Since 2012, the Libyan government started the implementation of limited e-government projects. The Libyan e-government research scene was initially focused on the need to initiate e-government services. Then, the shift toward the acceptance of e-government services was also evident in the literature along with some framework suggestions (Shanneb 2021).

In the first newsletter of the eLibya initiative by the Ministry of Communications and Informatics in July 2013, the editor states that the government mandated the ministry to work on developing an e-government strategy of the Libya Government to enhance the provided governmental services utilising technology for this purpose ('eLibya Newsletter Issue 1' 2013). Although those efforts were welcomed as a significant attempt to enhance the services in Libya and take it to the digital era, this project was suspended after 2014 and the political developments in the country (Wynn et al. 2021). Alathalia states that the political insecurity and many other issues faced by the country are the reason behind Libya's lack of e-government goals. Establishing strong institutions needs to provide a peaceful environment and control of its territory (Athalia Jasheil 2020).

In 2012 the UK Government website stated that both governments, Libya and the UK, will collaborate in developing and spreading the practice of open government. This was a desire from the UK government to support the eLibya initiative in enhancing the quality of life by utilizing technology alongside catalysing the development of its economy ('UK and Libya agreement on open government - GOV.UK' 2012).

The eLibya Initiative was in partnership with PricewaterhouseCoopers, and it was built on three main pillars, 1) Use of Technology to Deliver Services, 2) Increased Efficiency & Effectiveness of Government Services, and 3) Develop Libya Knowledge Economy and Private Sector Participation ('eLibya Newsletter Issue 1' 2013). The newsletter also stated that this initiative will be developed in 9 months, where the e-Libya Initiatives requested for proposal development phase will start at the beginning of 2014.

In the third issue of the newsletter in February 2014, the name of the initiative was changed to eLibya Program, and by that time, e-government strategy development phases got decent development in some phases and no development at all in others, as shown in figure 3.13.

Activity	Completion
Phase 0: Mobilization	100%
Phase 1: Assessment & Benchmarking	98%
Phase 2: eLibya Strategy Framework Development	90%
Phase 3: Integrated Architectures Development	40%
Phase 4: eLibya Strategy Formulation & Roadmap Development	0%
Phase 5: eLibya Governance Development	65%
Phase 6: eLibya Initiatives RFP Development	22%
Phase 7: eCommerce Strategy Framework Development	75%
Phase 8: eEducation Strategy Framework Development	25%
Phase 9: eHealth Strategy Framework Development	75%
Project Management and Change Management	70%

Figure 3-13 Strategy Development ('eLibya Newsletter Issue 3' 2014)

The whole period from 2015 to 2020 did not see a huge development in the e-government projects in the country; however, several governmental-owned enterprises worked on digitising their internal process. Nonetheless, the scene changed after the formation of the new government at the end of 2020.

One of those organisations was the Ministry of Economy and Trade which worked on the 'Ejraat Portal', the all-in-one portal that aims to provide information to citizens and foreign investors about all administrative and commercial procedures. This project was launched a year later in collaboration with several international partners and funded by the European Union ('Ministry of Economy and Trade: Launching the Libyan electronic procedures platform').

Subsequently, Musa et al. claim that e-government has had more advantages for Libyans than previous governments (Musa et al. 2019). It further outlined that technology has the potential to enhance Libyans' satisfaction with the services, which indicates that the Ministry of Communication and Informatics has made significant strides in improving the technology and ensuring that it serves the public's interest and gives them the best experience when accessing government services. In spite of that, the sources here fail to outline the critical services the Libyan government has managed to automate and how the citizens interact with them.

Libya is proposing the use of a cloud system in offering e-government services. This perspective is an opportunity that the country can explore to improve and facilitate proper infrastructure that enhances service delivery. Moussa et al. noted that Libya has the least developed e-government in the WANA region, which needs orthodoxic enhancement using appropriate technology (Mousa et al. 2020). Despite implementing the website, it has not enhanced the services effectively to guarantee effective and adequate service delivery. Abied et al. also noted the importance of incorporating cloud computing in e-government services by enhancing the technologies through cloud computing. Notably, this perspective remains at the proposal level, allowing more research on its opportunities and the key technologies that can be used together (Abied et al. 2021). In this regard, studies on the possible impacts of cloud computing could be necessary for exploring the benefits.

After utilising the technology for several national projects, the government, in September 2022, issued resolution No. 394 of 2022 regarding the formation of the National Committee for Digital Transformation in Libya (GNU 394 2022). The main mandate of this committee is to 1) supervise the national program for digital transformation, 2) prepare the digital transformation strategies and related implementation plans, 3) prepare the data strategy for the public and private sectors, 4) adopt national and sectoral digital transformation initiatives, 5) coordinate between all stakeholders concerned with to the digital transformation program, 6) set the priorities of digital transformation in Libya, update it periodically, and supervise its implementation, and 7) develop the key performance indicators for the digital transformation program in line with international practices (GNU 394 2022).

In December of the same year, the General Authority for Information, the head of the National Committee for Digital Transformation as mandated by the resolution, published a new proposal for the digital transformation strategy for the Libyan Government in collaboration with United Nations Economic and Social Commission for Western Asia. The vision of the new proposal centres on smooth, easy and secure access to all government services from anywhere, at any time and by any available means of communication; this vision sets 2030 as a target date (GIA 2022).

The new strategy proposal was built on eleven pillars, 1) regulations and policies, 2) capacity building, 3) Encouraging the transformation towards a smart digital society, 4) the ICT infrastructure, 5) open data transactions, 6) the localisation of innovation, entrepreneurship, and technology, 7) awareness, 8) citizen participation, 9) privacy and information security, 10) education and research, and 11) sustainability. Few months of publication and to the date of this research, no published news or resolution show that the

prime minister's office adopted to ensure transparency in public contracting and reduce any possible corruption (Alwasat 2023); aside from that, the government and its initiations from time to time launch a new temporary digitalised solutions to suit a certain purpose.

3.6 Challenges and Factors of E-Government in Libya

Despite all current initiatives, the Libyan government and public sector has faced more challenges in implementing this technology, which has made it one of the African and Arab countries that falls behind in enhancing the efficiency and effectiveness of this technology. A SWOT analysis study (Benzaghta et al. 2021) of the Libyan e-government social, political, economic, and technical aspects was conducted to highlight weaknesses and challenges in the ICT infrastructure as well as ICT knowledge and awareness among citizens. The findings noted shortfalls in ICT technical and governance aspects, making it difficult to roll it out appropriately. The main challenge is the research gap to outline how the technology has impacted service delivery in the country more than 11 years after the beginning of the process to enhance the technology.

Forti classified the main factors that impact the e-government projects at the local level in Libya in three dimensions (Forti Yousef 2019). The first one is technology bases, where he emphasises the impact of the lack of information sharing among processes on those projects, alongside the importance of strong industry/private partners supporting the whole digitalisation process. The second dimension of Forti's classification is organisational capability, where any change in the power distribution within the organisation might affect the process. Adding to that, favouritism and corruption play a huge factor in hindering the implementation of e-government projects, which goes in alignment with the importance of having laws and legislation to facilitate these processes. The third dimension here is the business process re-design, where implementing e-government projects requires revisiting those processes and workflows, according to Forti (Forti Yousef 2019).

From a more general point of view, Busoud and Živković suggest a wide range of factors that impact e-government in Libya (Busoud and Živković 2016); those factors vary from the human aspect, legal and technology.

From another perspective, Ahmed et al. mention that the lack of awareness of new technologies is one of the main factors that affect the implementation of e-government in Libya, alongside the issue of the lack of regulations that might facilitate the adaptation of

those technologies, such as the regulations to incorporating digital signatures. Adding to that, the infrastructure plays a huge role in hindering the implementation of e-government in the country, mainly the connectivity issues (Ahmed et al. 2013). Ahmed et al. also emphasise the importance of considering the cultural and social aspects in designing e-government initiatives alongside the political and demographic factors to build the citizens' trust and ensure their participation, where the resistance to change is a challenge for the development of e-government alongside the several social factors (Ahmed et al. 2013).

3.7   Analysis of Key Findings and Themes from Previous Studies

Even though using technology to offer government services is now a regular practise, early studies often saw the efficient use of technology in government as a side issue rather than a primary management role. For instance, the findings note that e-government brings public services closer to the people by enabling access without necessarily going into government offices. In essence, technology in the government was often considered as a tool of enhancing administrative efficiency and productivity before to the arrival of the Internet and the mass usage of personal computers. E-government enhances government transactions' efficiency and facilitates mass transactions (Cropf 2016). The focus is to implement technology to bring services closer to the people and make them cheaper and accessible to all. Due to the increased adoption of personal computers, this view of technology use in government significantly impacted the early adoption of e-government as technology increasingly became a central part of government agencies. The introduction of personal computers enhances the use of technology and pushes its adoption in different countries.

In addition to e-governance becoming a central part of modern governments, it is essential in enhancing transactions and service delivery to citizens. Researchers have also expressed safety concerns associated with increased information sharing through e-governance. Security of the systems touches on the availability of the services, information protection, and data integrity (Joseph 2012). This perspective used to understand that the idea of regulation was significant because it integrates technology and other government functions. Implementing e-government requires understanding the country's context and facilitating effective technology adjustment to serve their interests. Public satisfaction with the e-government depends on how best it suits the people's interests, which is only achievable when it aligns with the demands and demographics of the citizens.

Findings showed that global south countries face both resource and financial challenges. But also political and social problems. This is a significant concern for emerging economies such as Libya - transitioning from the previous regime to a regime that acknowledges the importance of technology and is ready to invest in it effectively. Specifically, the increased sharing of information by e-governance could potentially decrease corruption and political instability, which are major systemic issues in Developing countries such as Libya (Kettani and Moulin 2014). Hence, this in turn, may affect the satisfaction level of the people with the government's services. A vital strength of the study is the generalisability of findings, as the data collection was geared towards the international community rather than a specific country.

Most governments now work to advance the development of information and communication technologies to improve service delivery and increase the economy due to the efficacy and affordability of information technology. However, implementing e-government projects requires using tried and tested models because how E-Governance is implemented will profoundly affect the benefits that emerge from such projects. In particular, governments need to select a suitable model when implementing e-governance projects since this will determine the level of benefits realised by the end-users and cost, in addition to other vital factors.

In Libya, the findings note that the country has just several suggestions on technologies that it can implement without any meaningful implementation. The technology can be implemented to enhance it and make it citizen-centric (Andreea 2018). For instance, the government development model is a foreign concept in countries such as Libya and must be advanced to suit the context. Based on this perspective, the findings have noted a significant need for implementing e-government, which is critical in enhancing access to services. Without proper technology and alignment with the target users, it becomes useless to implement the e-government.

3.8 Identification of Gaps from the Literature

Despite the available research on the implementation of e-government, a research gap still needs to be analysed and studied effectively. One gap is exploring why it is not easy for most nations to implement E-government initiatives given the resource and technology. This gap aims to determine those countries' resources, technology, and political constraints. In Libya, the country has been transitioning from a dictatorial government to a democratic nation. As a result, it makes it difficult for the government to provide public services. Studies that can analyse e-governance projects and provide

suggestions on how to enhance them in order to improve service delivery are required. E-governance efforts encounter a number of challenges, including a difficult political environment, a lack of funding, a lack of knowledge among stakeholders, and a dearth of critical information on official websites. The project is also hampered by government websites that are difficult to use and badly designed, by a lack of current data, and, more crucially, by a slow reaction from the government to user complaints.

For a country to achieve optimal use and adoption of e-governments services, it is necessary to explore the factors influencing the public acceptance of online services to identify ways to do this (Shareef et al. 2011). Research is needed on how e-government interfaces, websites, and contents can be aligned to suit people's demands, expectations, and demographics. Specifically, despite the increased opportunities for adopting and using e-governance, the current literature on Libya is insufficient to provide context-specific issues that the government's efforts towards enhancing its ability to be more effective and efficient through e-governance. Based on this perspective, it is essential to have deep research that explores crucial perspectives that can be used to enhance the development of the technologies and adoption. It is vital to investigate the factors that affect the current e-government service model and help the government improve service delivery. To achieve this, the researcher used available data on the Internet to gauge the rate of internet accessibility and sharing of information on the Internet in Libya.

The study's results can help policymakers, public administrators, those interested in public administration and governance, and other Libyan stakeholders understand how e-government initiatives can be improved to ensure better control and public service delivery. While Libya, like most WANA nations, has shown a willingness to adopt e-governance to enhance serviced delivery, they are limited by late adoption and poor infrastructure that still requires significant investments. However, despite these issues, the United Arabs Emirates government was one of the earliest e-government adopters in the WANA region. It has achieved impressive results compared to its neighbours and ranks first among the WANA region (EGDI 2023). The lack of understanding of the notion of e-government is one of the major problems that governments face when putting e-governance programmes into action. Examining how government projects are implemented and the problems that arise from them is important, but more in-depth thought needs to be given to e-governance, especially in terms of its political components and a broader understanding of the institutional and political environments. The results show that while e-government has garnered significant attention from researchers over the years and is crucial for understanding the relationship between administrative aspects of the government and technology, the political processes behind such initiatives are not well understood. This study should report and outcomes of various governance

symposiums. Based on this, research in the Libyan context can help understand this concept effectively.

3.9   Summary

This chapter dives into the political history of the modern State of Libya, covering the last seventy years, the milestones that affected the country's development, and its economic sense. The chapter also covered the situation of the public sector in Libya, its structure and the unique circumstances that affected its deliverables and its ranking in the international indexes.

Subsequently, the digital infrastructure of Libya and the adaptation of information and communication technologies were covered, the statutes of digitisation in Libya and the history of e-government initiatives implementation in the last thirteen years and the challenges and factors that affected this process based on the available literature.

The development of e-government initiatives began in the early 2000s, followed by a steady increase in the government's utilisation of technology since 2012; however, the political instability after 2014 and other factors have affected those projects. After 2020, significant advancement was seen in the digitisation of public services.

The key findings and themes from the literature were analysed in the context of Libya, followed by identifying the main gaps found in the literature to help build a better understanding of the purpose of this research and foster its conclusion for the next chapters.

A country like Libya faces several challenges that implementing e-governance initiatives might help solve, especially in reducing corruption and political instability. Even though Libya has the potential for e-governance, it still needs more investment in meaningful implementation. In general, and in Libya specifically, a research gap exists in understanding the struggle of implementing e-government initiatives, where more studies are needed to examine current initiatives.

4   Theoretical Framework

Citizens' expectations of public administrations' need to supply high-value, real-time digital services are evolving as a result of digital transformation techniques outside the public sector (Mergel. et al., 2019); these disruptive digital technologies are affecting every area of society and life as a whole, digital transformation in the public sector is becoming a strategic requirement for governments all over the world. Organisations hope to restructure their processes, establish new methods of interacting with stakeholders, and unleash new connections with citizens growing more aware and demanding more efficiency and transparency through digital transformation (Nachit et al. 2021).

Moreover, the effective and practical implementation of e-government initiatives is essential for driving digital transformation in the public sector, improving the overall efficiency of public sector delivery, and helping deliver public values. This study aims to investigate the factors influencing and impeding the adoption of e-government in Libya, a developing country facing unique challenges with particular difficulties in becoming digital. To better understand these factors, this research looked into several frameworks that are used to study similar factors in the public sector, such as:

The diffusion of Innovations Theory by Rogers et al., which provides insights into the context it is applied to and reflects on how technologies and their practices are adopted by focusing on the adoption rate factors and the characteristics of the innovation itself. Applying this framework to this study can help identify the main factors driving the adoption of e-government initiatives in Libya, focusing on the role of stakeholders, communication channels, and how these technologies are perceived (Rogers et al. 2014).

The Institutional Theory by Scott, where this framework examines the power of regulatory, normative, and cultural-cognitive institutions on organisations; where in the e-government implementation context, this framework can help discover the institutional factors that support or hinder this implementation offering insights on the obstacles to the adoption of e-government and possible solutions by looking at the formal regulations, social norms, and cultural beliefs that influence how government institutions behave (Scott 2008).

Technology-Organisation-Environment (TOE) Framework by Tornatzky & Fleischer, where this framework offers a thorough understanding of the organizational, technical, and environmental aspects that affect how new technologies are adopted. These factors include technological ones (such as infrastructure and ICT literacy), organisational ones (such as leadership and organisational culture), and environmental ones (such as political stability and legal framework); this framework can also be used in this study to analyse

the factors that influence the adoption of e-government in Libya (Tornatzky Louis G. et al. 1990).

Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh, Morris, Davis, & Davis, in this framework, the performance expectation, effort expectancy, social influence, and enabling circumstances are the four main factors that the model identifies as influencing the adoption and usage of technology, where it may help in investigating how these characteristics affect the adoption and utilisation of e-government initiatives by governmental organisations, staff members of the public sector, and citizens (Venkatesh et al. 2003).

Technology Enactment Framework (TEF) is a theoretical model that emphasises the understanding of the interactions of both individuals and organisations with technology and how they adopt and utilise it for a particular context and environment. The Technology Enactment Framework is centric on the idea of the influence of individual, organisational, and contextual factors on the adoption of technology, as it shares some similarities with other mentioned frameworks, such as the Technology-Organization-Environment (TOE) Framework and Unified Theory of Acceptance and Use of Technology (UTAUT)(Lamb and Davidson 2005).

However, after investigating each model and how it can be employed in this study to understand these factors and help in answering the research questions, this research employs a combined model of the Technology-Organisation-Environment (TOE) Framework and the Unified Theory of Acceptance and Use of Technology (UTAUT), where both together covers several aspects and factors mentioned in the other frameworks. However, the following sections will provide an overview of these theories and frameworks, discuss their relevance and significance, go through the supporting research, and list the research questions they aid in answering.

4.1   Technology-Organisation-Environment (TOE) Framework

The Technology-Organisation-Environment framework was developed in 1990 by Tornatzky and Fleischer to help understand the innovation's adoption in organisations by focusing on the power of three main contextual factors, technological, organisational, and environmental. Where the technological factor covers the accessibility and features of the technology itself, the organisational factors relate to the internal qualities of the organisation, whereas the environmental variables refer to the external environment in which the organisation functions. (Tornatzky Louis G. et al. 1990)

The relevance of the TOE framework to this study is that it helps in understanding the influence of those factors in the adaptation of e-government initiatives, where the TOE provides a clear interpretation of the opportunities and challenges faced by the implementer organisation, as it has been commonly used in different research on e-government implementation (Shareef et al. 2011b), proving its applicability and value in researching technology uptake in the public sector. However, the majority of these studies concentrate on developed countries, and there is little research that addresses the particular difficulties developing countries like Libya confront. Additionally, current research often isolates technical, organisational, and environmental aspects without taking into account their interdependencies and complex relationships.

4.2   Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT is a thorough model created by Venkatesh et al. that aims to explain user acceptance and utilisation of technology. The Technology Acceptance Model and Theory of Planned Behaviour are two of the eight earlier models and ideas combined in the model. According to the UTAUT, technology adoption and usage are influenced by four fundamental constructs: performance expectation, effort expectancy, social influence, and enabling factors (Venkatesh et al. 2003).

The UTAUT offers an insightful lens for examining e-government adoption from the viewpoint of particular users. The approach aids in the identification of elements that may encourage or inhibit public sector staff and residents from utilising e-government by concentrating on user perceptions and attitudes. The UTAUT has been effectively used in many studies to examine the adoption of e-government (Weerakkody et al. 2011), highlighting its usefulness and importance in this area.

The UTAUT has been used extensively in e-government research (Weerakkody et al. 2011); however, the majority of studies concentrate on developed countries and certain user groups, such as citizens or public sector employees. The adoption of e-government in developing countries like Libya has received little investigation, and few studies have sought to combine the UTAUT with other theoretical frameworks to gain a more thorough knowledge of the adoption of e-government.

4.3 Combined Model: TOE and UTAUT Integration

After a deep look into both frameworks, TOE and UTAUT, and their relevance to the research questions and the gaps in each one, integrating both frameworks help in offering a clear interpretation and more comprehensive understanding of e-government initiatives adoption by considering both organizational and human aspects.

This combined model can represent both the macro-level factors that influence the adoption of e-government initiatives (as represented by the TOE framework) and the micro-level factors that affect the acceptance and use of technology by individuals (as represented by the UTAUT model). The application of a combined model of the Technology-Organization-Environment (TOE) framework and the Unified Theory of Acceptance and Use of Technology (UTAUT) in research is supported by a wealth of academic literature.

The detailed exposition you provided on the use of a combined model, incorporating both the Technology-Organization-Environment (TOE) Framework and the Unified Theory of Acceptance and Use of Technology (UTAUT), for the study of e-government adoption in Libya, offers a profound and comprehensive view of the subject. The decision to integrate these two frameworks can be justified on multiple grounds:

Comprehensive Coverage: The TOE framework mainly covers technological, organizational, and environmental factors, while UTAUT primarily focuses on individual attributes. By combining these two, the model captures both macro-level (organizational) and micro-level (individual) determinants, offering a thorough understanding of both systemic influences and personal behavior.

Enhanced Predictive Power: Both frameworks have their strengths in predicting technology adoption. TOE's focus on broader influencing factors is complemented by UTAUT's insight into individual user acceptance. This integration increases the model's predictive and explanatory power, as evidenced by previous studies (Awa et al. 2017; Alatawi et al. 2012).

Context Relevance: In the context of Libya, considering both organizational and individual aspects is vital. The combined model accommodates the complexities of a developing country facing unique challenges in digitalization. It considers not only technological barriers and organizational readiness but also individual acceptance, social influence, and cultural aspects, all of which are crucial in the Libyan context.

Filling the Gaps: TOE in isolation may overlook the characteristics of individual adopters, which are crucial in understanding actual usage patterns. UTAUT fills this gap by

focusing on performance expectancy, effort expectancy, social influence, and facilitating conditions, thus offering a more nuanced view of how and why technology is accepted and used by individuals.

Theoretical Synergy: By building upon existing, well-validated theories, the combined model leverages the strengths of each, enhancing both robustness and relevance. It allows for a more nuanced analysis by aligning with multiple theoretical traditions and reflects the multifaceted nature of technology adoption.

Empirical Support: The integration of TOE with models like UTAUT has been supported by various scholars (Baker 2012; Alatawi et al. 2012) and has been successfully applied in different domains. This empirical backing adds credence to the decision to use this combined model.

Alignment with Research Objectives: The research aims to investigate multifaceted factors influencing e-government adoption in Libya. The combined model aligns perfectly with these objectives, allowing for an in-depth investigation into organizational, technological, environmental, and individual determinants.

Customization: The ability to customize and tailor the combined model to fit the specific needs of the study – in terms of context, technology, and research objectives – enhances its applicability and relevance. It allows for a richer and more context-sensitive analysis.

Ethical Considerations: This approach ensures that the research is inclusive and considers all relevant stakeholders and influencing factors, adhering to research ethics by minimizing biases and maximizing the validity and reliability of the findings.

Awa et al. (2017) and Premkumar (2003) both contend that the adoption of TOE in isolation is inadequate as the model's predictive and explanatory capabilities are enriched by the integration of individual contexts (Awa et al. 2017; Premkumar 2003). TOE accounts for the technological, organizational, and environmental factors influencing technology adoption, but it doesn't take into account individual adopter's characteristics. This shortcoming is addressed by integrating TOE with UTAUT, a model that captures the individual attributes of technology adopters (Awa et al. 2017; Venkatesh et al. 2003).

Moreover, various studies have demonstrated the combined model's efficacy in predicting technology adoption. For instance, validated this integrated model in understanding the adoption of VR safety experience training in construction companies (Alatawi et al. 2012). Furthermore, Haag & Eckhardt (2014) propose the integration of TOE, UTAUT, and other relevant theories like Task-Technology Fit and Institutional Theory to provide

a more comprehensive understanding of technology adoption, accounting for factors such as task context and the interrelationship between institutions (Haag and Eckhardt 2014).

The UTAUT model is chosen for integration due to its wide acceptance and usage in information systems adoption research, second only to the Technology Acceptance Model (TAM) (Alatawi et al. 2012). Additionally, UTAUT's application in organizational adoption investigations attests to its utility in this domain.

Finally, Baker (2012) advocates for a synthesis of TOE with models like TAM, TAM2, and UTAUT to leverage their strengths in understanding individual behaviour while using TOE to elucidate organizational behaviour (Baker 2012). This is further exemplified by Alatawi et al (2012), who used UTAUT in the technological context of TOE and Institutional Theory in the environmental context, resulting in a novel and useful combination (Alatawi et al. 2012).

This aligns with the added value of combining both models, where the TOE framework (Tornatzky Louis G. et al. 1990) provides an understanding of the technological, organizational, and environmental characteristics that influence technology adoption at an organizational level. However, the adoption of a technology is not just an organizational decision; it's also crucial to examine how individual users within the organization accept and use the technology. Where the UTAUT model (Venkatesh et al. 2003) serves to fill this gap by focusing on individual user acceptance and usage. It encapsulates performance expectancy, effort expectancy, social influence, and facilitating conditions as determinants of user acceptance and usage.

In summary, the choice for the combined model of TOE and UTAUT is methodologically sound and aligns seamlessly with the research's context, objectives, and complexities. It allows for a nuanced, comprehensive, and context-sensitive analysis, drawing on the strengths of both frameworks and enabling a multi-dimensional view of e-government adoption in Libya.

In the process of combining both the TOE and UTAUT frameworks, the following steps were considered:

- Identifying the commonalities and differences between the two frameworks by examining their factors and variables to ensure their relevance to the research context and guarantee that the contributions of each framework and how both complement each other in helping answer the research question.

- Developing the conceptual model by creating new one incorporating elements from the TOE and UTAUT frameworks. This model includes organizational

and environmental factors that influence the adoption of e-government initiatives (from the TOE framework) and the determinants of user acceptance and use of technology (from the UTAUT model).

The combined model could include the following factors:

I. Technological factors (TOE): Infrastructure, ICT literacy, technological compatibility, and innovation characteristics.

II. Organisational factors (TOE): Leadership, organizational culture, resources, and readiness.

III. Environmental factors (TOE): Political stability, legal framework, and external pressures.

IV. Performance expectancy (UTAUT): Perceived usefulness and benefits of e-government initiatives.

V. Effort expectancy (UTAUT): Perceived ease of use and accessibility of e-government services.

VI. Social influence (UTAUT): Influence of peers, superiors, and societal norms on the adoption of e-government initiatives.

VII. Facilitating conditions (UTAUT): Availability of resources, training, and support for using e-government services.

In conclusion, the integration of the TOE and UTAUT models allows for a comprehensive understanding of both the organizational and individual factors influencing technology adoption. By combining these two models, researchers can investigate both the organizational-level decision to adopt a technology (via the TOE framework) and the individual-level acceptance and use of that technology (via the UTAUT model), thus providing a more holistic understanding of the technology adoption process.

4.4 Adaptation of the Combined Framework to The Libyan Context

To tailor the combined model to the Libyan context, the unique challenges and opportunities faced by the country should be taken into consideration, such as political instability, lack of ICT infrastructure, and cultural factors.

This adaptation involves identifying relevant factors within the combined model of the TOE and UTAUT constructs and ensuring that the study questions and data-collecting tools reflect the unique characteristics of the Libyan environment. Where the combined model will help address the following research questions:

- What are the key drivers for e-government implementation in Libya?

- What are the key barriers and challenges to e-government implementation in Libya?

- How can these barriers and challenges be addressed to facilitate the successful implementation of e-government initiatives in Libya?

Adding to the aspects developed based on the combined TOE and UTAUT model, an extra survey question was added based on Busoud and Živković suggest a wide range of factors that impact e-government in Libya (Busoud and Živković 2016); those factors vary from the human aspect, legal and technology.

Finally, the combined TOE and UTAUT model provides a thorough theoretical framework for comprehending the adoption of e-government in the Libyan setting. This study will provide valuable insights for policymakers and stakeholders looking to improve the implementation of e-government and promote digital transformation in Libya's public sector by taking into account the interdependencies between technical, organisational, environmental, and personal aspects.

4.5   Summary

This chapter explores several frameworks that have been used to answer similar research questions and indefinity the barriers and drivers of the implementation of e-government initiatives and how they can be used in the Libyan context. Moreover, the chapter also dived into the selected frameworks, the Technology-Organization-Environment (TOE) Framework and the Unified Theory of Acceptance and Use of Technology (UTAUT), and explored how both can be combined, what factors can be kept from each framework to help answer the research question 'What are the key drivers and barriers to e-government implementation in the State of Libya'?

5 Methodology

This chapter narrates the adopted research approach, elaborating on the research design, its philosophy and the method used for the data collection and analysis to answer the research question. This chapter also elaborates on ethical considerations for the research, followed by the data's limitations and validity.

5.1 Research Design

Based on the research context and the unique status of Libya, the research is considered more interpretive. In this inductive way, the aim is to understand the context of the e-government implementation in the country and theories that might be derived from the findings, where a combination of data will be derivative from both qualitative and quantitative data collection and analysis methods. This design help to have a comprehensive examination of the complex factors that are affecting the implementation of e-government initiatives in Libya. Moreover, this research utilises an integrated theoretical framework combining the Technology-Organization-Environment (TOE) Framework and the Unified Theory of Acceptance and Use of Technology (UTAUT) to facilitate the research design and the data collection and analysis.

The mixed-methods approach provides strength to the research by empowering the researcher to understand the complex phenomena or contexts from different perspectives, as the mixed-methods approach helps validate the results from different resources that increase the credibility of the findings (Creswell and Vicki L. Plano Clark. 2017). This aligns with (Onwuegbuzie and Leech 2005) as they claim that this approach helps capture a wider range of perspectives that enhance understanding of the research topic. Moreover, Bryman states that the mixed-methods approach can help researchers find unexpected results (Bryman 2012).

5.2 Data Collection Methods

The data collection process for this research has been done by two main methods, crosscutting with the theoretical framework and the research design approach by implementing in-depth structured interviews and structured surveys to cover both qualitative and quantitative parts of the mixed-methods approach. A highlight of the research was the significant response rate to the survey, which garnered as many as 419 responders, and 23 key informative interviews.

Semi-Structured Interviews were conducted with various experts and stakeholders involved in the country's digital scene and e-government implementation. Twenty-three interviews were conducted in the period ofresearch. The Interviewees include government officials, public sector employees, and IT experts to help build an in-depth understanding of the drivers and barriers to digital transformation in Libya's public sector. The Interviewees were approached due to their sold background and involvement in the field, covering different point of views and perspectives.

The semi-structured nature of the interviews provides the flexibility to enrich the discussions while covering all key topics. The interviews are invaluable for the insights, opinions, and experiences interviewee shares, (Jiménez 2014). The interview questions were built based on the combined model of TOE and UTAUT and covered the seven factors with nineteen questions. Appendix A for the interview questions.

The interviews were semi-structured with open-ended questions following the best practices on research methods in public administration and public management of Van Thiel (van Thiel Sandra 2014). Furthermore, according to Bryman, semi-structured interviews empower the interviewer with the flexibility to delve deeper into specific areas and follow up or explore any unexpected areas that arise during the discussions (Bryman 2012), where it offers the opportunity to respond and investigate motives, feelings, and perceptions behind those answers (DiCicco-Bloom and Crabtree 2006). Additionally, semi-structured interviews allow the interviewer to adapt and change how the conversation flows and personalise the conversation (Galletta 2013).

Alongside the semi-structured interviews, the research has published a survey question to collect quantitative data from a broad range of stakeholders in the public sector in Libya, including the country's residents. The survey is built of several questions to explore participants' perceptions of the key drivers and barriers to e-government implementation and the current state of digital transformation in Libya. The survey was built using the official surveying tool of KU Leuven 'Qualtrics.com' under the privacy regulations and published and distributed through the official channels in partnership with the General Information Authority in Libya and via social media platforms publicly and through the closed groups for the public sector employees to maximise reach and response rates.

The survey questions were closed-ended, built of forty-three questions divided into ten sections based on the adapted combined model of TOE and UTAUT. The survey used a scale from 1 to 5 for the responses. The survey was published online for a month and had 415 interaction. Appendix B for the survey questions. Bryman states that one of the main benefits of closed-ended surveys is answers' standardisation, where each participant has the same option of answers, which makes it easier to compare across participants (Bryman

2012). This also increases efficiency by enabling the researcher to collect large sets of data in a relatively short period (de Vaus 2013), alongside the easier accessibility and wider reach of the audience using digital tools (Wright 2005).

5.3   Data Analysis Methods

Given the mixed-methods approach in the research, the data analysis process will combine two different data analysis strategies to cover both qualitative and quantitative data.

To analyse the qualitative data obtained from the semi-structured interviews, the interviews will be transcribed in the mother language of the interviewees and then translated into English to be ready for the thematic analysis. Using MAXQDA2022, the coding and categorising process for data was done to identify patterns or themes using a hybrid approach of deductive and indicative coding. Furthermore, based on the research questions and the interviews outputs, table 1 represents the codes used for the qualitative data analysis:

Table 1 The codes used for the qualitative data analysis.

A. Drivers of Digital Transformation	B. Addressing Challenges
- Political support - Technological infrastructure - Financial resources - Skilled workforce - Public demand - International collaboration - Innovation culture	- Capacity building - Public-private partnerships - Regulatory reform - Cybersecurity measures - Change management - Awareness campaigns - International assistance
C. Barriers to Digital Transformation	D. Current State of E-government
- Political instability - Leadership - Corruption - Planning and Strategy - Inadequate infrastructure - Lack of funding - Insufficient skills and expertise - Resistance to change - Security concerns - Legal and regulatory constraints	- Politics\Administration Issues - ICT Infrastructure - Stakeholders - Government Support - Digital Literacy - Human Resource - E-services availability - Citizen engagement - Interoperability and integration - Digital identity and authentication - Accessibility and the digital divide.

For the quantitative data gathered through the survey, Excel software used descriptive and inferential statistics to help identify relationships between variables. This aims to support the qualitative analysis, where integrating these two methods comprehensively analyses the research questions. Qualitative analysis provides a deeper understanding of the context, and quantitative analysis offers a broad overview participants (Bryman 2012).

5.4   Subjects

As mentioned in the previous sections, the research subject includes government officials, public sector employees, IT experts and the residents of Libya. Those subjects have been selected to provide diverse points of view and perspectives on the state of e-government implementation in Libya, including its drivers and barriers.

The interviewees come from diverse backgrounds, from a former technology minister who was leading the digitalisation efforts, to several experts who were involved in those efforts from the government side, also covered interviewees' population including members of parliament who work in the ICT sector, alongside several experts from the private sector who are cotracted implementers for the digital transformation projects for the government. Also, the interviewees' population included actors from civil society, academia, telecom and banking sectors to cover different organisations' perspectives on the topic. Appendix C for the list of interviewees. The selection of the interviewees was guided by a purposeful and strategic approach to ensure a comprehensive understanding of the drivers and barriers to digital transformation in Libya's public sector. This selection was based on the following ciriteria:

Expertise in the Field: The interviewees were chosen based on their solid background, expertise, and direct involvement in the country's digital scene and e-government implementation. Their practical experience and insights are invaluable to the research, as they can provide first-hand information and contextual understanding.

Diverse Perspectives: By including a variety of stakeholders, the research ensured a broad and diverse perspective on the subject. This diversity helped in capturing a more holistic view of the challenges and opportunities in implementing e-government in Libya.

Relevance to the Research Objectives: The selection was also guided by the specific research objectives and questions. The individuals were selected for their ability to provide insights that directly relate to the core areas of investigation, such as the political

landscape, technological readiness, organizational challenges, and societal factors affecting e-government implementation.

Snowball Sampling: In some cases, the selection might have employed a snowball sampling technique, where one interviewee refers to another potential participant. This method can be useful in accessing hard-to-reach experts or insiders within the field.

Accessibility and Willingness to Participate: Practical considerations were also taken into account, such as the willingness and availability of the interviewees to participate in the study. Their accessibility and readiness to share information played a role in the selection process.

By employing these selection criteria, the research ensured that the interviews were conducted with individuals who have substantial knowledge and a vested interest in the digital transformation in Libya. This approach contributed to the richness of the data collected and supported the robustness of the findings.

On the other side, the survey data was drawn from a more diverse and larger sample to help broader insights into the drivers and barriers to e-government implementation in Libya; the survey participants include both public sector employees and the residents of Libya. The data collection method used worked to ensure the representation of different age groups, genders, and levels of education. The selection of the target group for the survey in the study was vital to gather broad insights into the drivers and barriers to e-government implementation in Libya. This selection was based on the following ciriteria:

Inclusive Perspective: By including both public sector employees and the general residents of Libya, the survey aimed to capture a comprehensive view. Public sector employees could provide insights from the inside of the government, understanding systemic and procedural challenges, while residents offered a user's perspective, reflecting the public's perception and acceptance of e-government initiatives.

Representation of Different Demographics: Ensuring the representation of various age groups, genders, and education levels added depth to the findings. Different age groups might have varying levels of digital literacy and trust in technology. Gender representation ensured that any gender-specific biases or preferences were captured. Including various education levels helped in understanding how education might affect the perception and usage of e-government services.

Enhanced Generalizability: By targeting a diverse and larger sample, the survey results become more generalizable to the broader population. This enhances the external validity

of the findings, making them more applicable and reflective of the overall societal stance on e-government in Libya.

Alignment with Research Objectives: The selection aligned with the research's overarching aim to explore the multifaceted factors affecting e-government implementation. By targeting a wide and diverse audience, the research could delve into both macro and micro-level factors, including technological barriers, social acceptance, policy challenges, and individual behavioral factors.

Ethical Consideration: By adopting an inclusive approach, the research also adhered to ethical principles, ensuring that various segments of the society had an opportunity to contribute their views, thereby minimizing biases and enhancing the credibility of the findings.

In summary, the target group selection was methodologically sound and strategically aligned with the research objectives, ensuring that the survey data was not only rich and insightful but also reflective of the complexity and diversity of the subject being investigated.

5.5   Ethical Considerations

In this research, all participants were informed about the purpose of the research and the involved parties. The interviewees granted their consent to record the interviews, and all data was anonymised to ensure their confidentiality. No personal data was collected for the survey, and the surveying platform obeyed the European Union General Data Protection Regulation. This research will adhere to the ethical guidelines set by universities involved in the Pioneer Master Program regarding the local context of the State of Libya.

5.6   Limitations

Each research faces several limitations and challenges during all phases; however, the unique context of Libya limits the generalisability of the findings to other contexts, where the findings of this research may provide useful insights for similar contexts in general. Still, it mainly may help the efforts of the government in Libya in its digital transformation journey.

A possible inherent bias during the data collection might exist, as Moncef Ouannes emphasises the effect of the tribalism culture on the general Libya mindset, making defeat abhorrent (Ouannes Moncef 2014). This may apply more to the public sector employee, who may respond in a way they perceive to be socially desirable or acceptable, particularly given the nature of some questions related to government services.

The language may also create some limitations to the research, where the whole research design and literature review were conducted in English, and the data collected in Arabic, then translated to English for the analysis; this process might affect the quality of the findings, where some parts might be fallen apart.

The complex situation of the country and the fragile stability also affected the data collection process, where some interviews were canaled, and others were pushed to dates out of the timeframe, causing delays in the whole research. Moreover, some interviewees demanded that the interview be conducted in person. For the quantitative data, the distribution of the survey might limit its inputs to certain societies with access to the Internet. Moreover, the data collection period coincided with several religious holidays, making many interviewees and survey participants hesitant or uninterested in joining.

Acknowledging these limitations aims to ensure the credibility of the findings and mitigate potential bias, as they might help contextualise the interpretations of the results and increase the understanding of the research outcomes.

5.7   Validity

To ensure data validity, both the interview questions and the survey questionnaire were developed based on the combined model of the TOE and UTAUT and reviewed by experts in the field. Moreover, a pilot test was conducted to ensure the clarity and relevance of the questions.

6   Findings

This chapter covers the main findings of the mixed method data collection, divided into two sections, one for the quantitative and one for the qualitative results. The two sections are followed by a summary of the findings and the correlation between the results of the two methods.

6.1   Analysis of Quantitative Data

Using MAXQDA2022, twenty-three interviews were analysed, and this section summarises the findings as follows:

6.1.1   Administration Aspect

The public sector in Libya faces many administration and structural issues; those issues increased with the current political conflict. The conflict caused more obstacles when coupled with governmental divide.

The Libyan public administration still lags in traditional management practices, which makes it hard to adopt and implement digital transformation projects. The expert states that Libya has gone beyond the idea that the public sector can reform itself, as it resulted from the assessments of some international consulting firms in 2007 and 2008. That led to establishing a supreme institution to oversee the reform in coordination with reform at of legislative level. After fifteen years, the status of the public sector did not improve, and all circumstances made it more complex.

> *"Since the public system is distorted, adopting digital transformation strategies is kind of impossible". – one of the participants.*

The issue is rooted in the public sector mentalities, the government, and employees. Adding to the absence of a procedural guide within most of the institutions, and in many cases, the same procedure differs from one branch to another. The absence of a procedural guide makes it harder for the public sector to serve the people or to be digitalized in the first place.

> *"Sometimes there are clear laws and procedures, but the government is a chaos; a never-ending cycle of chaos". – one of the participants.*

When you dive into the mandate of many public sector institutions, you may find a pattern of similarity and overlap in many cases. The duplication of public sector institutions and the lack of coordination and communication weaken the public sector and its services.

Therefore, you may find many institutions with overlapping mandates managing the same e-government project, with no execution or results, but all fighting on the budget and struggling for personal benefit.

This overlap in mandate creates another conflict on the ownership of the e-government initiatives and who are the stakeholders of such initiatives. Several committees of different key players were established. Different backgrounds and agendas and no clear bounders have created complex issues; however, the current national committee's digital transformation success came from appointing the same leader for the two main key players, the General Information Authority and the General Authority of Communications and Informatics. If the status quo changes, the outcomes of this committee and the harmony between its members might change accordingly. However, lately, other institutions have also started fighting to gain a share of the cake.

The absence of an effective legislative authority that supervises the government and understands and approves the long-term strategic plans for digital transformation is also an issue, where adding digital transformation to the agenda will help finance it from clear expenditure lines.

The experts also emphasised the need for the central government to handle the implementation of the e-government initiatives to help attract expertise and facilitate the development of those projects where it is hard to find technology-specific competencies for all these public sector institutions.

In summary, as long as the legislation keeps changing and there is no understanding from the legislative authority on the necessity of reforming the public sector, it would be hard to have a holistic and integrated approach towards digital transformation or implement proper e-government initiatives in Libya.

6.1.2   ICT Infrastructures

In general, the telecommunication infrastructure in Libya was initially considered reasonable, which makes it fairly good for any e-government implementation. However, it got affected, and many parts were destroyed due to the armed conflict in several parts of the country. Moreover, the telecommunication network gets easily disrupted by the other circumstances that face the country, such as long power outages and the vandalism of fibre optics cables. Those circumstances, alongside some internet shutdown orders, affect the stability of the network and the reliability of services provided to the citizens in both sectors, private and public.

"I am afraid of participating in online meetings or training, as it requires a good internet connection" – one of the participants.

The telecommunication coverage might vary from city to city, where the big cities such as Tripoli, the capital, might have a strong connection; however, other cities far in the south are more likely to have no quality connection at all; this builds on the fact that Libya's large size and low population density limits the feasibility to invest in proper telecommunication infrastructure that covers the whole country.

Some experts emphasise that the current telecommunication infrastructure lags behind in comparison with countries with similar GDP, especially with the absence of the communication backbone and the weakness of used fibre optic network. However, Libya has a vast fibre optic network that covers all of the country, 18 thousand kilometres owned by LPITC, the government-owned telecommunication holding company, and 30 thousand kilometres owned by GECOL, the government general electricity company. Due to the current regulations, the GECOL part of the fibre optic network remained inaccessible for telecommunication purposes.

On the other side, the government monopoly on the infrastructure sector hinders its development, where regulations clearly state that the government should own all fibre optic networks used for telecommunication through Hatif Libya Company, one of the LPITC companies; this monopoly made it too expensive to get fibre optics connection.

On a different layer, the government lacks a centralised database or interoperability standards to integrate all available systems. This increases the requested data from the citizens that require bigger storage capacity year after year due to the lack of policies that regulate data deletion and management. Moreover, the lack of coordination between the government institutions on managing the data and the lack of regulations on data ownership make the public sector institutions compete to build more data centres to justify asking for a larger share of the governmental budgets.

Lately, LPITC's company, Al-Madar Al-Jadeed, started providing nearly free clouding solutions for government institutions. However, the unfair competition affected other private-sector running projects. Even though Al-Madar Al-Jadeed, in many cases, failed to provide reliable services. The same can be amplified on Libya Telecom and Technology, an ISP and Data Centre owned by LPITC, where the company servers are compromised and hacked on a periodic basis, affects all governmental digital services hosted in their data centres.

For the software aspect of the e-government implementations, Libya's private sector is quite weak in developing software solutions; no significant companies can be trusted as

there is no genuine investment in this area. Importing ready-to-use solutions might not succeed, as the local aspect needs to be integrated into the design.

Furthermore, for the hardware aspect of the e-government implementations, the provision of hardware is not considered an issue at all, where all institutions always ask for the newest technology with the higher standards, which made all international providers heavily exist in the Libyan market to cover the demand.

In summary, the experts do not see telecommunication or other technology infrastructure as one of the main obstacles to implementing e-government in Libya; whenever the budget and the political will are there, the infrastructure will meet the expectations and the needed requirements. Both software and hardware can be imported and implemented by joint ventures between local and international providers.

6.1.3   Human Resources

The human resources and their capacities to lead and contribute to the e-government implementation were one of the main issues pointed out by the experts. With the current public administration structure, the number of qualified IT human resources working for the public sector does not correlate with the number of government institutions, making it illogical for all government institutions to have technology-specific competencies that help them to implement e-government projects.

The experts emphasised that employees might arrive on time, but their productivity might equal nothing. Regarding IT human resources, they might handle the basic need of running those projects and maintaining the network; however, they work on a haphazard basis, with no regard for policies or standards, leading to bad execution of any e-government projects.

Public sector employees' perception of using technology varies due to several factors within the sector; back then, employees used to damage the technology as they perceived it as a threat to their jobs, but that is no longer the case, especially with today's high reliance on it.

> *"I saw no reluctance to use technology among employees; everyone understands that it is a tool to make life easier and boost productivity. Moreover, as a result of our project, productivity was increased from roughly 600 transactions per working day to 6000 transactions per working day and the employees were pleased" – Public Sector Contractor.*

In many other cases, employees stay reluctant to adopt new technologies, where some employees value themselves by the amount of people who ask them to handle their

requests; having technological solutions as an intermediary makes them lose the bargaining power and the prestige that comes with it. Corrupt employees will not endorse using technology as they do not see any personal benefits.

> *"The financial auditor, 64 years who is about to retire, was one of the*
> *most employees happy with the system we implemented, and he*
> *became one of the staunchest supporters, keeping in mind that this*
> *was his first dealing with such a system" – Public Sector Contractor.*

The lack of qualified IT human resources might result from different factors, and one of them is the high wage difference between the public and private sectors, which makes qualified employees more interested in working for the private sector. Alongside that, the lack of capacity building within the public sector for niche skills, which makes fresh graduates and employees in the same status of knowledge for an extended period of time, unless they take the initiative by themselves to develop their skills. Moreover, the lack of governance and accountability within those institutions changed how employees perceive the training from developing their skills to an opportunity to get a per diem allowance or travel outside the country with no real focus on the training itself. In some cases, once those employees build their capacities, the public sector starts draining towards the private sector.

In Libya, the focus is only on technology, with no real interest in building the employees' capacities in this field. Furthermore, the education sector outcomes do not cover the real demand for digital transformation projects.

The absence of consultants and experts at the government level contributes to the passage of technology-related contracts and projects without proper scrutiny; this also makes it unfair to blame the employees, especially with the lack of guidance and the absence of any knowledge-sharing or strategies in the government level, where some employees have sufficient knowledge, but managing these services needs more than knowledge.

6.1.4   Digital Literacy and Citizens Adaptation

Digital literacy accords in several interviews, where the experts agreed that most Libyans are Facebook-Literate and know how to use social media platforms such as Facebook and TikTok. Still, they are unaware of the internet's capacity and how to use it to the maximum. This phenomenon has led many public sector institutions to abandon their websites and move their communications focus to using social media platforms.

However, this argument paved the way for the idea that citizens, as long as they are able to use social media platforms, they can deal with any digital environment, especially government platforms, where they require much less knowledge in comparison with how

complex social media platforms are if the services are provided with respect to the user interface and user experience standards that are already developed by Big Tech companies.

A country with such a young population, like Libya, suffers less from digital illiteracy, even though in elderly groups, the last five years have changed their perception and rate of adaptation. Dealing with electronic services implemented by the banking sector forced them to develop their skills to save time and increase comfort.

Another issue, as pointed is digital illiteracy among decision-makers; according to the experts, many decision-makers are not aware of how to use technology or how technology can help improve their institutions' productivity, leading them to focus their plans and budget on the classic approaches of running these public sector institutions.

In general, the acceptance of digital services increased due to the Covid 19 pandemic as they were forced to use them and motivated by hope. Many citizens found themselves in need of adopting these services. This made them welcome new digital services as they are thirsty for those services, and they started demanding the government for more digital services.

With this satisfaction, citizens, in the beginning, are hesitated to fully trust those services due to unfortunate previous experiences related to digital services. This also can be reflected in the general lack of trust in the government due to its proven corrupted reputation. Adding to that, the political and administration division in the country increases the lack of confidence in those services.

Regarding social norms, experts agree that digital transformation generally has nothing to do with the citizens' acceptance of the digital services, where those services do not contradict social norms.

Implementing e-government initiatives without the citizen's trust is useless, and this started by providing high-quality, reliable services backed by the needed legislation and polices and marketed in a good way to the citizens. Moreover, providing customer support to the citizens a crucial for building trust.

6.1.5   Digital Service Availability

In general, Libya still lacks the minimum governmental digital services, and the demand is high for any service, however simple it is. Many of our experts did not recall any available digital services, where all current or previous systems do not complete the whole

cycle, and they are limited either to collecting data from citizens or notifying them of a scheduled appointment via SMS.

However, one of the public sector experts pointed out that they surveyed all digital services provided by the government, and they are 84 e-government services; unfortunately, those services lack the minimum level of standards that create poor outcomes and decrease citizens' satisfaction, pushing people to complain and ask to return to the paper-based process.

Many services have been launched in the last few years, but most failed, such as the Covid-19 Vaccine Scheduling System, e-Vaccine App, Passport Scheduling System, Criminal Record Extract, and many others. The experts point out those services suffered from internal change resistance and many administration obstacles.

Most of the launched services have some complexity in their use. While a specific example cannot be evoked, it is yet worth pointing towards a governmental initiative platform launched by the present government called "Our Government" which implies a sense of digital transformation, while it is merely a mailing feedback service where the user sends an e-mail to a specific entity and this entity responds to them, although the majority of people have good experiences with it, it remains a complicated process and lacks straightforwardness needed in such services.

One of the exceptions and the outstanding digital services in the last few years is the Marriage Facilitation Fund. This system was dedicated to receiving the citizens' applications, verifying them and preparing a cheque for eligible citizens. This system was developed and managed for the whole period in partnership with the private sector, and it did not face any time-out; designed with an up-to-date user interface and experience standards, covering the whole work cycle of the process. This system was linked with the national identity database, which validates the data in real-time. However, this success is not reflected in the whole work environment of the Marriage Facilitation Fund, where they have up-to-date systems for archiving, social surveying, and enterprise resource planning, and all are not in use.

In general, one of the issues that face all current and potential projects is the absence of digital identity and the ways for authentication. The only available method is ran by the Central Bank of Libya, and it is based on Linking each mobile number with a dedicated national identity and the verification mad viae one-time password codes; The digital identity project has been suspended due to political reasons.

From a wider perspective, most of the running of digital services in public sector institutions results from the individuals' initiatives; the absence of those individuals results in the failure of those services. Moreover, this individual base makes those services isolated from each other's.

6.1.6   Integration and Competencies

The current state of e-government initiatives in Libya faces an issue with the lack of integration or interoperability between most of the government institutions and the governmental digital services. Where there is no integrated system that provides the provision of these services properly, most of them are limited to the data collection features.

The absence of integration and interoperability between government institutions plays a huge role in hindering the implementation of more complex services. Some experts claim that this is due to the issue of data ownership between different institutions.

6.1.7   Partnership with the Private Sector

Due to the State's history of treating the private sector, and the monopoly implemented by the government in owning and running nearly all sectors, the private sector did not have the chance to get maturity and organic growth, making the private sector the largest, and in many cases, the only customer for the private sector.

> *"Do not ask me to provide large services where I am not protected*
> *from the government and the monopoly" – Participant from the*
> *Private Sector.*

Contributing to the development of the private sector in the areas such as communications and information technology helps strengthen the economy. This private sector development starts by providing opportunities to join and participate in developing technologies needed for e-government implementation; higher demand and fair opportunities will motivate the capital to invest more into the sector; otherwise, the private sector in terms of providing software solutions will keep in its weak statues.

Even with the limited opportunities and experience, the experts claim that the Libyan private sector has the ability to implement digital transformation projects, mainly when it comes to building and providing communication and hardware infrastructure.

However, for the software part, no significant institutions can be trusted, which takes us back to the lack of investment in this sector, adding to the lack of opportunities provided by the government.

In general, the private sector in Libya has succeeded in its internal digitalisation journey, where many institutions, such as hospitals, factories, and some banks, all have implemented different systems to manage their human resources, procurement, and supply chains and at the same time manage their relationships with their clients and customers in an efficient way.

The experts claim that the success stories achieved by the private sector can be easily reflected in the public sector. Even though some governmental projects that were previously in partnership with the private sector failed, this failure cannot be linked to the weakness of the private sector but to other reasons, such as the failure in the policy development behind the project and its design, as many projects were designed to fail from the beginning, or designed to for financial corruption purposes, followed up with the lack of monitoring and the absence of sustainability.

> *"For example, two years ago, the Government of National Unity*
> *signed a contract with a private partner to launch the government's*
> *national data centre under the supervision of the General Authority*
> *for Information. Unfortunately, a contract was signed with a company*
> *without experience in the field, and until today, nothing has been*
> *implemented" – Participant from the Public Sector.*

The experts pointed out another issue is that the public sector does not trust the private sector in terms of information security and privacy; this goes to the issue of lacking the regulatory framework and the capabilities to monitor those projects, alongside the general mindset of the public sector employees that resulted from the government polices the previous decades.

The partnership between the public and private sectors may work and can help in implementing the e-government initiatives if it is built fairly, in sharing the profit and clear governance structure to manage those projects. Without guarantees against the monopoly, the private sector will not be able to contribute to the government's digital transformation journey.

6.1.8   Political instability

One of the interviewed expert states that Libya is one of the first countries in the WANA region to engage in e-government as a concept, given the many seminars and conferences held on this topic, yet the government does consider those projects a high priority. Some rely on the political and economic situation and how the government is stuck with the political conflict and limited only to facilitate the day-to-day tasks.

The political conflict also has affected the availability of financial resources. The government expenditure must be linked to a specific budget, making it harder to justify spending on digital transformation projects, as it needs to be spent only for business conduct, while the transformation requires larger budgets. In general, even if the needed budget gets allocated, the lack of political will, governance and general political instability remain obstacles to implementation. In fact, many projects got suspended due to the conflict in 2011 and then in 2014, and the e-government scene remained off until the formulation of the new government in late 2021.

6.1.9 Leadership

The quality of the public sector institutions in Libya relies completely on the person in charge and the leadership of those institutions. Most of the institutions' leadership are promoting adopting e-government projects as a part of the national trend, with many stops at this level.

Many of those in power are digitally illiterate and unaware of the relevance of technology to their institutions and how it can be utilised to deliver their tasks, and one of the main motives for digital transformation is political.

If you convince the leadership, this will facilitate a smooth project implementation, where the stakeholders will help and support the process. Nevertheless, convincing them is a challenge. Even though, due to their lack of knowledge on how technology projects get implemented, many projects end up messy, as their leadership does not take time element into consideration, and demands that works are done on short notice for political reasons.

Most leaders do not have a vision for their institutions and do not see how technology can be involved. Some do, but with more than 300 public sector institutions, it is challenging and significantly hard to find qualified leadership for those institutions. Furthermore, in most instances, whenever a new person is appointed in a leadership position in a public sector institution, they tend to erase previous legacy of work and starts all over.

6.1.10 Planning and Strategy

The digital transformation and e-government implementation scene in Libya lacks a clear governmental vision and strategy. Several strategies have been initiated in order to be developed, but all have been suspended for undeclared reasons. Each new leader takes over, and a new strategy appears. The lack of proper planning and strategy leads to several issues, where most of the current projects are based on individual initiatives, and each one flows on its way.

"A strategy was developed by an international consultancy in 2013; it ended up in the cupboard; they did not build on it" - one of the participants.

Lately, the General Information Authority, in partnership with UN ESCWA, launched a new digital transformation strategy, but the government did not pass it yet and kept launching random projects with no proper planning. The new strategy project is full of loose slogans and unrealistic initiatives that the public sector employees cannot implement or supervise. In general, this strategy and all of the digital transformation and e-government projects running in Libya are not built based on the best practices nor the lessons learnt from the globe in the way of reinventing the wheel from a local perspective.

6.1.11   Legal and Regulatory Constraints

In general, the Libya legislation is not technology-friendly, and many laws need to be amended to meet up the needs of the digital era, as the current legislations are full of defects and deficiencies. There might not be a clear law that hinders digital transformation; however, the legislation does not recognise electronic transactions and digital martial; some experts say that the current laws can lay the foundations for digital transformation.

"for example, the marriage fund, despite the existence of a system, but in the end, they had to request files from each person and print them all" – one of the participants.

In the last year, the government just passed a policy to recognise the use of emails, but it is not clear that the judiciary will recognise it due to the lack legislations. Alongside that, different entities are working on developing and amending the laws. However, the outcomes lack several technical and human rights aspects, and an example is the cybercrime law, which is full of vague terminologies open for interpretation and easily manipulated.

The whole legislation system is designed in favour of the public sector, which makes it risky for the private sector to get involved, especially with innovation and digital transformation projects.

For example, the famous "M.H.5" \ 5.ح.م" policy was pointed out several times in the experts' interviews. The "M.H.5" regulates all financial transactions transferred to the public treasury to receive an official payment receipt, and a copy of it gets sent to the Ministry of Finance to record it; the regulations state that the "M.H.5" payment receipt should be written only by hand and on a paper base, creating a huge obstacle to digitizing this process and making the payment online.

6.1.12   Corruption

Corruption is one of the primary diseases that the public sector in Libya suffers from. As a result, there is a huge chance that all e-government or any technology implementations in the sector suffer from the same issue. Some experts claim that procuring information technology is considered one of the big doors for corruption, especially with the lack of specific regulations regulating innovation technology procurement.

However, corruption might be one of the obstacles to digital transformation from a contracting perspective. Still, it is also an obstacle as adopting technology solutions increases transparency and might help the detection of corruption in the first place. Experts also insist on involving civil society and applying the multistakeholder approach in the digital transformation plans and implementation to help build a more transparent environment.

6.1.13   International Collaboration

More after the fall of the regime in 2011, international organisations got involved in Libya in several ways, one of them helping the government and its institutions. This involvement and the help are built on incentives basis more than political pressures, and some of this support is pushing the wheel of digital transformation.

At the beginning of the last decade, the Central Bank of Libya adopted several internal governance policies to help to change the classification of Libya in money laundering and terrorist financing; in the same way, the Central Bank of Libya worked to digitise its systems and increase the internal monitoring and accountability using technology.

The same happened within the Ministry of Interior, where several systems took place with the support of the U.S. and its affiliated organizations. The U.S. Agency for International Development also supports the Audit Bureau in developing its internal digitalisation strategy; as a result, all documents in the Audit Bureau were digitised.

In a different capacity, the United Nations Economic and Social Commission for Western Asia provided support to the General Information Authority to develop the draft of the new digital transformation strategy of the government, where Expertise France worked with their governmental partners to digitise some public sector services.

However, with the number of involved organisations and the open collaboration with the public sector, it is hard to follow all these initiatives, and due to the lack of a national strategy, those initiatives stay fragmented.

6.1.14   Drivers and Motives

Based on the experts, the drivers and motives of implementing e-government initiatives in Libya vary from one institution to another and from leadership to another. However, the political aspect and agenda were presented heavily when the experts were analysing the current government efforts in this field. Moreover, the understanding that e-government may increase the citizens' trust and help decentralise the government services and unify the country, especially with current circumstances, by providing the same services to all of Libya, wherever they are. Facilitating those services to the citizens is also one of the motives, where some institutions have issues with long waiting lines and queues. Other institutions are interested in increasing transparency, accountability and fighting bureaucracy and corruption.

6.2   Analysis Of Qualitative Data

For the qualitative data analysis, Excel was used to analyse the 419 survey responses to find the correlations and figure out the aggregations between the factors and the responses. Excel is also used to visualize the data. This section gives a snapshot of the qualitative data analysis, and Appendix E illustrates all results and visualisations. The results are classified based on the used framework.

6.2.1   Technological Factors

The technological factor is one of the main factors adopted by the TOE framework that covers the Infrastructure, ICT literacy, technological compatibility, and innovation characteristics. The responders to the survey think that the local ICT infrastructure is below the average. Moreover, they think that the available technology in Libya barely covers the needed requirement to support e-government initiatives. However, the results state that the responders have a considerable confidence in themselves to use the ICT and any e-government services. Figure 6-1 illustrate the average score of the technological factors.

6.2.2   Organisational Factors

The organisational factor is also of the factors adopted by the TOE framework, where it covers the aspects of Leadership, organisational culture, resources, and readiness. The survey's responders see that the leadership of their institutions is not effective enough in promoting e-government, and they think that their institutions are in favour of supporting the adoption of e-government initiatives. However, resource availability to support

suchinitiatives is moderate. Figure 6-2 illustrate the average score of the organisational factors.

6.2.3 Environmental Factors

The environmental factor is anotherfactor adopted by the TOE framework, which covers the aspects of Political stability, legal framework, and external pressures. In these terms , respondents think that political instability affects the adoption of e-government initiatives by 77%. Adding to the notion, only 48% claim that they are aware the existence of the needed legal framework and regulations to support e-government implications in Libya. Figure 6-3 illustrate the average score of the environmental factors.
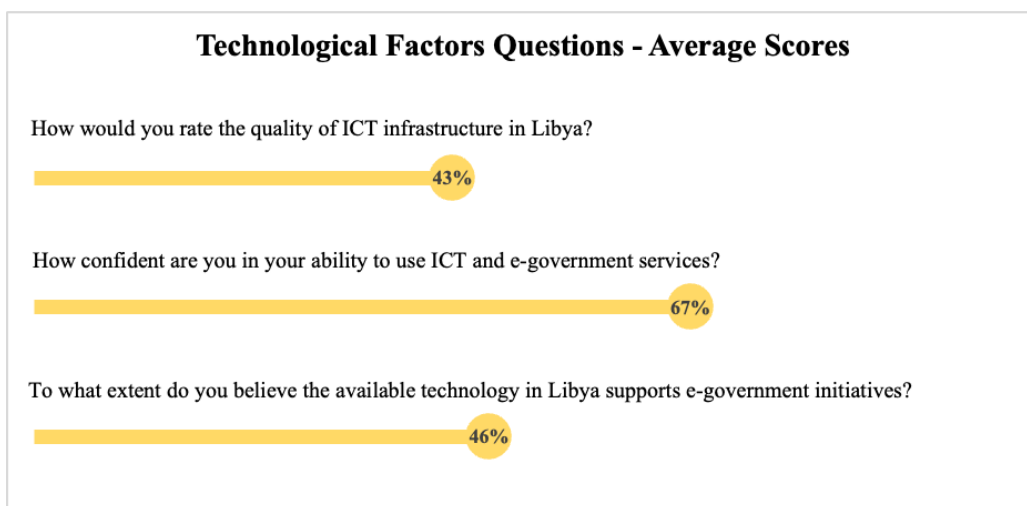
Figure 6-1 Technological Factors average scores of 419 respondents

Figure 6-2 Organizational Factors average scores of 419 respondents
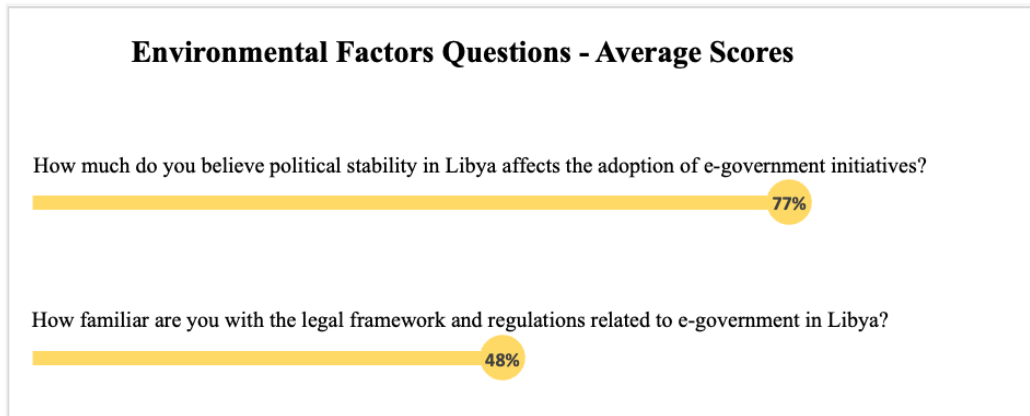
Figure 6-3 Environmental Factors average scores of 419 respondents

6.2.4 Performance Expectancy

The performance expectancy is yet another factor adopted by the UTAUT framework to measure how usefulness is perceived, in additionto the benefits of e-government initiatives. The responders think that e-government services are way beneficial and substantial in improving efficiency, transparency, and the quality of service. They subsequently think that e-government services provide considerable accurate and up-to-date information compared to traditional methods, up to 83% of respondents agree with the idea of e-government services reducing errors in government-related processes. Moreover, 87% of respondents think that e-government services will improve communication between citizens and the government. Figure 6-4 illustrate the average score of the performance factors.

6.2.5 Effort Expectancy

Furthermore, effort expectancy is afactor adopted by the UTAUT framework to determine the use and accessibility of e-government services. For the ease of use and accessibility, the responders think that it is scarcely accessible or easy to use, and they think that it is somewhat easy to learn and use e-government services; yet, in general, they think that the e-government platform is not quite user-friendly. Moreover, they think that these services do not fully cater to the levels of technical expertise of the users, with a score of 52%. Figure 6-5 illustrate the average score of the effort expectancy.
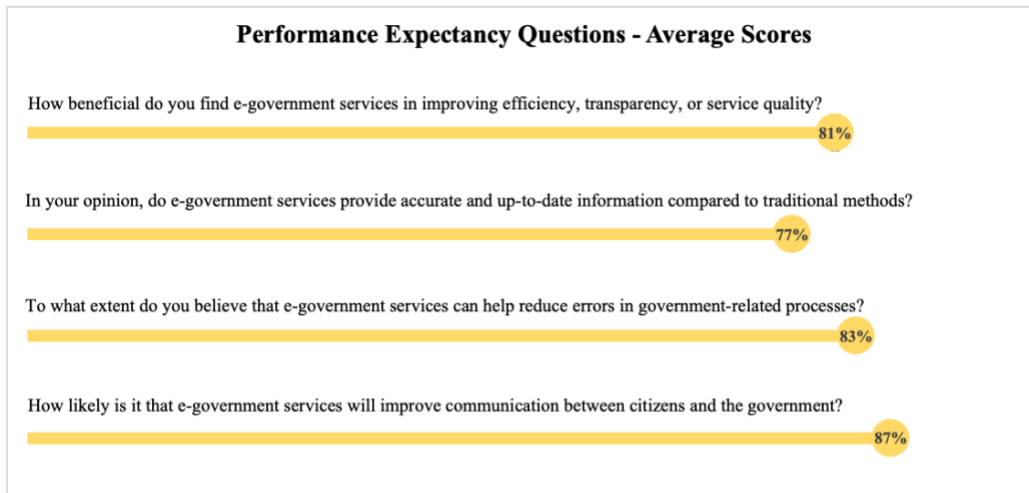
Figure 6-4 Performance Expectancy average scores of 419 respondents
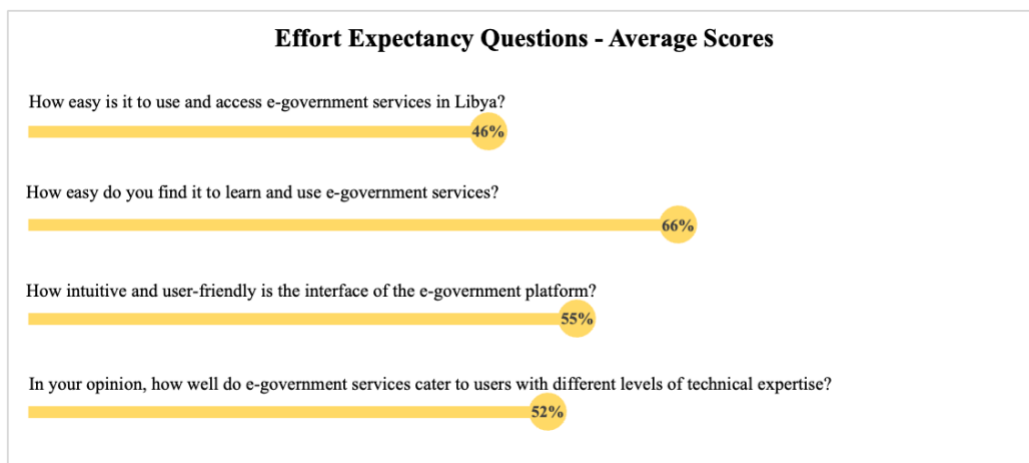
Figure 6-5 Effort Expectancy average scores of 419 respondents

6.2.6   Social Influence

The social influence is one more factor adopted by the UTAUT framework to determine the peers' and superiors' influence and societal norms on the adoption of e-government initiatives. The responders think that peers and superiors have a 60% influence oncitizens' adoption and use of e-government services. In contrast, they responded that their friends, family, or colleagues encourage them to use those services. 53% of respondents have observed others using e-government services in their social and professional network, and they do not see that social pressure has a huge role in this adaptation. Figure 6-6 illustrate the average score of the social influence.
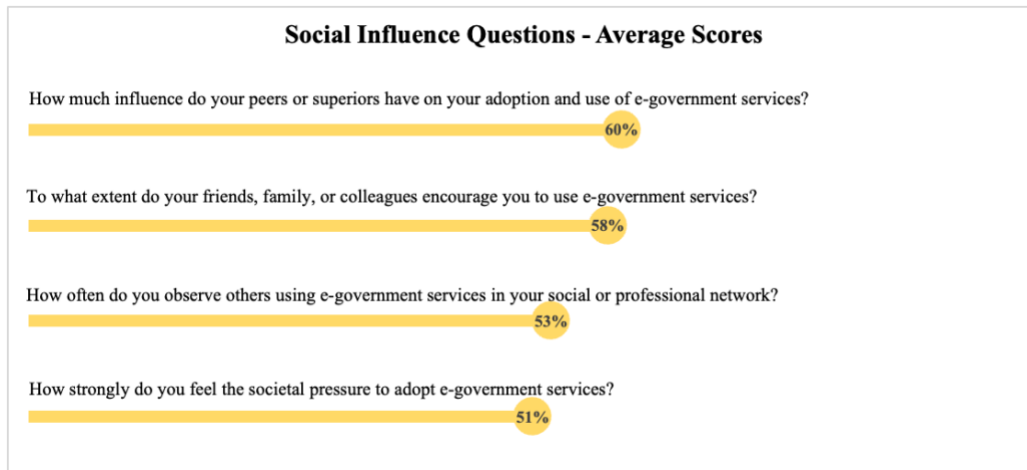
Figure 6-6 Social Influence average scores of 419 respondents

6.2.7 Facilitating Conditions

Finally, facilitating conditions conclude the factors adopted by the UTAUT framework in this paper, to determine the availability of resources, training, and support for using e-government services. The respondents think that the availability of resources, training, and support for using e-government services in Libya is low, the same as the available and reliable technical support of these services. However, they think that the current services are fairly accessible through various devices, and the resources sufficiently are low. Figure 6-7 illustrate the average score of the facilitating conditions.
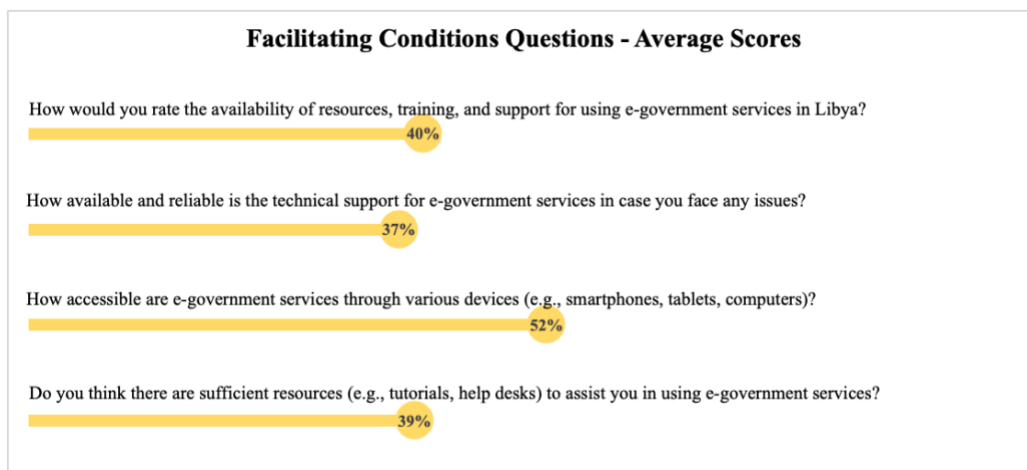
Figure 6-7 Facilitating Conditions average scores of 419 respondents

6.2.8 Expected Barriers

Based on the literature, several expected barriers were presented to the respondents, as shown in Figure 6.8. The leadership quality and strategic management go at the top of the

selections, whereas financial resources go as the less crucial expected barriers. Then comes the institutional and structural infrastructure as high expected barriers, followed by the data and technology infrastructure.

6.2.9   Expected Drivers

Based on the literature, several expected drivers were presented to the responders, as shown in Figure 6-9. At the top of the drivers' list, three factors share close percentages, reducing corruption, increasing transparency and accountability and quality of service, respectively, where the responders think that social public pressure goes to the bottom of the expected drivers' list.
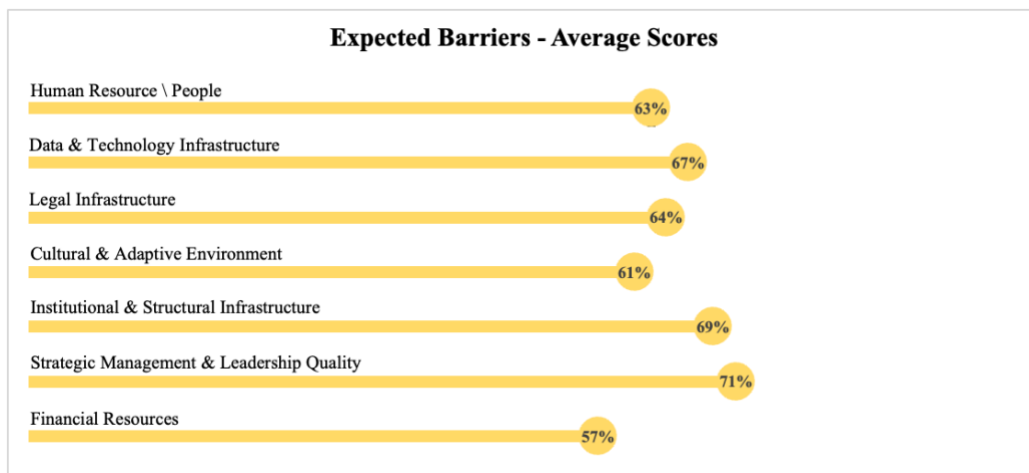
Figure 6-8 Expected Barriers average scores of 419 respondents

Figure 6-9 Expected Drivers average scores of 419 respondents

6.3   Summary

In essence, the findings of the survey are in close alignment with the findings of the interviews, with some differences that reflect the differences between the experts' involvement and the general audience of the survey.

For the administration aspect, the survey findings support the experts' claim that the government provide moderate support to e-government initiatives, especially when it comes to financial resources, as the respondents put it in the least of the barrier list; Moreover, the human resources capacity building in the survey findings does not align as much with the experts' opinion. High percentage of the respondents think that the current institutional structure is one of the main barriers to e-government implementations in Libya. They also think that their institutions' leadership is hardly promoting any e-government initiatives, hence, the notion is thatplanning, strategic management and leadership play a huge role in hindering those initiatives.

Experts and the survey respondents have the same opinion when it comes to the ICT infrastructure, its readiness and the ability to cover the requirements of e-government implementations, as they evaluated it as a fairly moderate infrastructure; however, it might be considered as a barrier if no upgrades are conducted in the upcoming years.

Respondents also support that the legal framework and regulations put considerable constraints on e-government initiatives. And agree with the experts that political instability plays a huge role in hindering those implementations, alongside their agreement that human resources may play a large barrier too.

For the availability of digital service, on average, the respondents agree that the current service are easy to use, user-friendly, user-centric, and accessible from several devices, which is in alignment with the experts' point of view. Even with the respondents' high support in favour of the e-government and the quality of the information gained through its services, still they see it as unreliable, especially with the lack of learning resources and technical support, as pointed out by the experts.

For the drivers and motives, the respondents had close answers for all options making the priority of communication and trust building than fighting corruption and increasing good governance; however, they put the political will and the social pressure at the bottom of the list, which contradicts with the experts' point of view that the political will plays a huge role driving the current e-government initiatives.

7 Discussion and Recommendations

The research aimed to identify and examine the main drivers and barriers to the implementation of e-government initiatives in Libya and how these barriers could be addressed for effective and efficient implementation. Through the combined model of the Technology-Organization-Environment (TOE) framework and the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, factors affecting e-government initiatives in the Libyan context were explored, and the results presented in the previous chapter contribute to understanding these, and contribute to a nuanced understanding of these multilayer factors.

This chapter offers a detailed discussion of these findings, interpreting them in relation to the used theoretical framework, and comparing them with the results from the literature on e-government in developing countries. Furthermore, this chapter assesses how the findings address the research questions in the Libyan context while providing insights potentially applicable to other similar contexts.

The objective is to clearly state the consequences of our findings for theory, policy, and practice while also taking into account their drawbacks and outlining potential directions for further investigation. The conversation will be organised around the key topics that came out of the data analysis, each of which relates to an essential component of the public sector's digital transformation in Libya.

The administration aspect of the Libyan public sector was one of the main issues discussed by the experts and supported by the survey outcomes, where the current **traditional management practices**, hierarchy and control may hinder the innovation and the implementation of e-government initiatives (Yildiz 2007). Moreover, traditional management practices rely more on stability which can stifle innovation and adaptation of these transformative initiatives (Berman 2012). This can be reflected in several previous initiatives where the restricted hierarchy and fear of unexpected outcomes were the reason for shutting down the projects from the beginning. Besides the need for a whole sector reform, the management can help tackle this by promoting a digital culture within the institution and fostering an environment of risk-taking and innovation (Mergel et al. 2019).

The absence of a procedural guidance is considered one of the main issues, where several services have no clear procedural guidelines, and the employees add extra requirements based on their beliefs and shared knowledge, which makes the same service from the same institution vary from one branch to another. The lack of a procedural guide might create inconsistencies in the process of digitising services for e-government,

creating a disjointed and inefficient system (Rorissa et al. 2011) and waste for resources by incorrect or inefficient use of the system. The development of procedural guidelines,or otherwise, operational procedures standards is a necessary step to achieving desired e-government goals, which can promote clarity and consistency in the used systems (Cordella and Iannacci 2010; Dada 2006).

This takes us to **the mandate overlap and similarity** of different public sector institutions in Libya; this was presented as a barrier to the current efforts of e-government initiatives. The literature tackles this from positive and negative sides, where Bannister & Connolly claim that overlapping mandates can lead to integrated service delivery as these similar services can be provided through a single platform in a way that they share resources and knowledge (Bannister and Connolly 2014). However, this overlapping can lead to competition for resources (Klievink & Janssen, 2014) and more confusion about who is responsible for what, leading to potential gaps or duplications in service provision (Bannister and Connolly 2015). This can be mitigated by establishing a coordination framework to reduce redundancy and improve user experience (Bannister and Connolly 2014).

The findings also advocate for creating one **central executive entity to drive the digital transformation** and oversee, monitor and guild the implementation of e-government initiatives in a central structure, where it is hard to find the needed staff for all 300 public sector institutions. The centralisation in implementing e-government initiatives may ensure a unified approach and prevent the duplication of efforts (Margetts and Dunleavy 2013); this also may help the allocation of budgets and resources for e-Government initiatives (Savoldelli et al. 2014) alongside setting the needed standards, investments and policies (Margetts and Dunleavy 2013). A central approach may provide the holistic vision and ensure that all e-Government initiatives are under the same umbrella, with no fragmentation or institutions pushing their digital agenda in isolation (Mofleh et al. 2009).

One issue that is significantly hindering the implementation of e-government initiatives is **political instability** and the ongoing armed conflict, which also affects the availability of financial resources. Where political instability may lead to policy discontinuity and shifts in priorities that affect the implementation plans of e-government initiatives (Shareef et al. 2011b). Adding to that, it might lead to constraints on the financial resources for those initiatives (Alshehri et al. 2012). Those instabilities in the political scene can diminish the citizens' trust in the government and its initiatives (Savoldelli, et al, 2014). Alongside its effect on the legal and regulatory development needed to pave the way for e-government initiatives (Almarabeh and Abuali 2010).

Addressing the impacts of political instability on e-government might be complex, taking into consideration the dynamics of the situation. Shareef et al. emphasise that government may continue working on e-government policies regardless of the political situation (Shareef et al. 2011b). For financing these initiatives, the government can rely on public-private partnerships and profit-sharing models to ensure the sustainability of those projects regardless of the economic challenges (Klievink and Janssen 2014). By ensuring transparency and civil society participation in e-government initiatives, the government can maintain the citizens (Savoldelli et al. 2014). Furthermore, the involvement of international organisations and cooperation may play a crucial role in supporting e-government initiatives and offering global technical expertise (Schuppan 2009).

The **absence of effective legislation** may also hinder the implementation of e-government initiatives, where the laws act as the legal framework needed to authorise and facilitate the provision of these services, especially to cover aspects such as accepting digital signatures, privacy and identity verification (Alpar and Olbrich 2005). Due to Libya's unique position with an inactive legislative body, the support of civil society and the international community in developing these legislations is needed (Dardha and Ndou 2004); however, some enforced policies from the government might cover the basics until the legislations issues get resolved.

Consequrntly, legal and regulatory framwork is negatively impacted, making the Libyan legislation lag behind, being not technology-friendly and not yet recognising the digital era, with many restrictions that hinder the private sector involvement in the innovation development. As legal and regulatory constraints may also impact the implementation of e-government initiatives influencing the design, development, and use. Laws such as data protection and privacy are desperately needed to protect the citizens and limit the possibilities for data sharing and integration across different institutions (Dunleavy 2005). A concept such as accessibility is a necessary requirement to increase their adaptation by all citizens, applying such a concept does not require significant effort and resources,but requires a law to ensure its implementation and leave no one behind (Jaeger 2006). With no legal framework, also the interoperability and integration between the public sector systems might be an issue, especially when it comes to data sharing, which makes it difficult to achieve seamless e-government services (Gil-Garcia 2012). The lack of legal recognition for digital signatures and electronic transactions may hinder the real implementation of e-government initiatives. Where most of the services require digital signatures or identity validation. This can only be facilitated by the right legal framework (Kunstelj Mateja and Vintar Mirko 2004). This also goes on the cybersecurity aspect of the e-government, where it is crucial to ensure robust cybersecurity measures to protect data and maintain trust (Conklin and White 2006).

The evidence in the literature, alongside the experts, confirms that **leadership plays a fundamental role** in the successful implementation of e-government initiatives, whereas in the Libyan context, these initiatives rely completely on the person in charge, as they are responsible for mobilising resources and managing the change for the technology adaptation (Al-Hujran et al. 2015). Eventually, leaders may inspire their employees and build their capacity to feel ownership and increase overall performance and reduce the chance of any resistance (Naranjo-Valencia et al. 2016). Leadership is also critical for success as they set the work direction, where vision-driven e-government initiatives can increase the success of the implementation (C.P and Susanto 2019); this can be paced by the general sense of leadership's political will, where their commitment and willingness plays a significant role in implementation success (Sarantis et al. 2011).

The need for **a strategy and proper planning** is crutial for the success of e-goverment implimentations; the the lack of clear governmental vision and strategy may cause a fragmented and inconsistant implimentation which can hamper the overall progress and effectiveness (Gil-García and Pardo 2005). The strategy development needs the engagement of all all relevant stakeholders, including private sector, civil society and citizens. Where their inputs can help overcome potential challenges (Rowley 2011).

The findings present that the current strategy draft of Libya'a Digital Transformation has many gaps and full loose technologies, where such strategy should have clear objectives that may be specific, measurable, achievable, relevant, and time-bound that align with the vision (Bwalya and Healy 2010). Moreover, the strategy should include a detailed action plan to achieve its objectives (Gil-García and Pardo 2005). The strategy should also define governance and the relationships between the main stakeholders and their responsibilities (Bannister and Connolly 2014). Both are not included in the current draft. Adding to that, the current strategy draft is not built based on the best practices from countries with similar public sector structures but built as a layer on top of the current situation. This can be done by taking similar countries with a successful e-government as a case study to understand what challenges encountered, and how these challenges were addressed. And this also can be part of the international bilateral collaboration, where collaborating internationaly can also provide opportunities for capacity building and technical assistance.

ICT infrastructure plays a crucial for the successful implementation of e-government initiatives (Bannister and Connolly 2014); this goes in alignment with the finding of this research; however, even with the current status of the telecommunication networks, the experts claim that it provides the needed capacity for the information flow and access to the services (Anthopoulos et al. 2016). However, the government may invest in building

and upgrading the ICT infrastructure to cover the whole country and not leave no individual disconnected and ensure accessibility of e-government services (Margetts and Dunleavy 2013). Besides that, the government may leverage partnerships with the private sector to develop the required infrastructure, as this might reduce the cost and bring in the needed technical expertise (Almarabeh and Abuali 2010).

The **integration and interoperability** are brought in several aspects for the studies findings, where the public sector institutions work in isolated silos, where the lack of integration and interoperability may lead to inefficiencies in service delivery and may lower the quality of services (Janowski 2015), in addition to making an increase in the complexity of e-Government systems, making them more costly to develop, maintain, and use.

Some experts emphasise that the **local private sector is quite weak** in developing the needed software solutions for e-government initiatives, for that Anthopoulos capitalises on the need for public-private partnerships, where this involvement can help improve the overall capacity of the private sector, especially with the outsourcing to international companies (Anthopoulos et al. 2016). Where international companies can cover the gap in the market by providing high-quality software and transferring the knowledge to local partners (Heeks 2010). Open-source software also can be considered as an option (Mergel 2012).

The impact of corruption can be significant, and experts agree that **corruption** is one of the main diseases the country suffers from. The vast majority of experts agree that ICT and innovation procurements are one of the main targets for corruption due to the lack of qualified ICT employees to manage these procurements or transfer the policies to a technology-related request for proposal that in favour of the success of the policy and the institute. Moreover, the lack of dedicated regulations for ICT and innovation procurements creates the venue for corruption too. Ndoe empathise that corruption might lead to the misallocation of procurements that harm the implimentation of e-government initiatives. Which may alsolead to inefficient e-government services and affect their quality (Bertot et al. 2010; Ndou Dardha 2004). All of this falls under the often complexity that involves these projects and the number of stakeholders, which makes it difficult to monitor and control (Rowley 2011).

Besides the corruption in implementing those initiatives, the corrupted employees within the public sector may work to hinder these implementations out of fear of transparency and accountability. Moreover, some systems might be developed in a way to hinder transparency in e-government systems (Bertot et al. 2010).

Another crucial finding was the role of **human resources** in driving the e-government initiatives, starting from the lack of qualified employees and the correlation between the qualified employees and the high demand for IT roles in the public sector, while the current level might be able handle the basic need of running those projects, however would struggle withthe whole operation. Also, in many cases, employees stay reluctant to join these transformations and changes, especially with the lack of proper capacity building and change management and the absence of consultants and experts in the government to supervise the implementation.

The employees' acceptance plays a critical element in e-government initiatives' implementations and success, and their resistance may hinder the whole project (Zheng et al. 2013). This can be tackled by the implementation of proper change management techniques, which may help in smoothing the transition towards e-government (Klievink and Janssen 2014). Adding to that, employees need to trust the process and be involved from early inception stages, to have an answer to all their concerns and carry a senseof ownership towards the initiative (Carter and Bélanger 2005).

Furthermore, being digitally illiterate also may increase the employees' reluctance to use technology, and this struggle also may lead to inefficienct use of these systems and errors (van Deursen and van Dijk 2010). For that, Meiyanti emphasises the importance of investing in human resources, with regular training and development programmes, to keep them up-to-date towards changes and ready to use and drive the e-government initiatives (Meiyanti et al. 2018). Adding to the internal experts, external consultancy might be used to fill the gap and provide needed expertise, alongside fostering them to help build the capacity of the institution's employees (Bannister and Connolly 2015).

Moreover, the public sector employees' mindset and their perception to digital transformation and e-government was one of the findings, which goes in alignment with Shareef et al. (Shareef et al. 2011b), where the employees' attitudes and perceptions are critical factors affecting the acceptance and adaptation of e-government services. In some cases, institutions install new technologies; however, the employees resist using them, leading to the failure of the project. This can be facilitated in several options, starting by involving employees in the early stages of planning and working on changing the organizational culture (Al-Hujran et al. 2015).

In the aspect of **citizens' adaptation** to e-government services and their level of digital literacy, the findings characterise the citizens as Facebook-Literate, where the use of the internet is limited to the social media platforms; the findings capitalise on the idea that as long as citizens knew how to use social media platforms, they can use e-government services if felt the need. Adding to the idea of previous experiences with poor services

may make them hesitant to trust those services. For that, the e-government initiatives may consider learning from social media platforms by providing user-friendly and User-Centric services that make the citizens' journey easier and smoother (Warschauer et al. 2010).

The findings also emphasise that social norms have nothing to do with citizens' acceptance of e-government services, but peer pressure and general acceptance may increase the use. However, citizens' trust is crucial to ensure the success of these initiatives. Shareef et al. claim that citizens' perception of the use of e-Government influences their adoption (Shareef et al. 2011b). This goes side by side with the social influence of culture, reference groups, and opinion leaders in the adoption of e-Government services based on Al-Hujran et al. (Al-Hujran et al. 2015). Weerakkody et al also emphasise the importance of the social influence on trust in e-Government, which impacts the acceptance and use of these services (Weerakkody et al. 2013).

The importance of **public-private partnerships** was part of the findings, alongside the importance of international collaboration. Even though the private sector is not mature enough to handle all the implementation of these initiatives, however, establishing a partnership between public and private sectors in this field may help the development of the sector and maintain the sustainability of these initiatives. Alongside fighting the current monopoly when it comes to implementing these initiatives, higher demand and fair opportunities will motivate the capital to invest more into the sector. A government monopoly could potentially limit competition resulting in lower quality and higher costs (Bannister and Connolly 2015).

In general, public-private partnerships enable sharing of resources and risks between both parties, and help in transferring knowledge and innovation from the private to the public sector (Bannister and Connolly 2015; Savoldelli et al. 2014). Moreover, these kinds of partnerships might help the increase in quality, efficiency, and effectiveness of e-Government service delivery (Sarantis et al. 2011).

The finding of this research illustrates that **the drivers of e-government initiatives'** implementations vary from one institution to another, and it is more linked to the leadership personal agenda either for the institutional level or the governmental level.

For that, **the political will** plays a big substantial factor in the success of these implementations. This starts from the process of policy-making supporting e-government, laws and regulations, and resource allocation, including budgetary support and human resources (Heeks and Bailur 2007). One of the main findings is that the political will influences the relationships and collaboration between different public sector institutions,

where a strong political will can encourage different entities to work together (Klievink and Janssen 2014). Adding to that, the stability in the political sphere provides an environment for more sustainability of e-government initiatives (Samsor 2021).

One of the other factors driving e-government initiatives found in this research was the **citizens' trust**, where the government may invest more in the adaptation of e-government just to increase the citizens' certainty, especially with its impact on **increasing transparency and accountability**. E-government initiatives may provide better access to information to the public in a timely manner making its actions and decisions more transparent (Bertot et al. 2010). These initiatives may also create the venue for better governance and accountability (Relly and Sabharwal 2009), which can also be done where it provides channels for citizens' engagement and feedback (Charalabidis and Loukis 2012). For mitigating corruption, these initiatives may play a critical factor in combating corruption by increasing transparency and accountability and fostering a culture of openness (Bhatnagar 2003). Adding to that, **fighting bureaucracy and corruption** was part of the findings, where e-government has been highlighted as an effective way to combat bureaucracy and corruption. The proper implementation of e-government initiatives may smooth and simplify governmental processes and cut back on bureaucratic procedures (Bertot et al. 2010). Furthermore, e-government creates the venue and the potential to increase transparency and accountability and fight bureaucracy, but these benefits are not automatic and are usually linked to political will and proper legal support.

In alignment with the goals of **decentralisation the government services** in Libya, achieving decentralisation was perceived as one of the main drivers for the adaptation of e-government initiatives in the country. As it allows more efficient and flexible tasks and processes administration and may help facilitate the delegation of responsibilities from the central to local government levels. E-government services can be time and geolocation independent; this accessibility of government services may improve the life of those in remote or rural areas (Margetts and Dunleavy 2013). This accessibility promotes decentralisation and empowers local governments to manage. By leveraging this, citizen engagement and participation has a potential to increase, which is key to a decentralised system -where digital platforms create the venue for citizens to participate in public discussion and decision-making processes (Charalabidis and Loukis 2012).

Ultimately, based on these findings, the implementation of e-government has **profound implications for national unification**, where the e-government may provide equal access to government services for all citizens, which can potentially bridge the gap between urban and rural areas helping to foster a sense of unity among citizens from

diverse regions (Saranto and Hovenga 2004).It can alsoprovide an opportunity for cultural integration and a shared national identity by offering services in multiple languages and being sensitive to cultural differences (Shareef et al. 2011b). However, the relationship between e-government and decentralisation depends on several factors, including the ICT infrastructure and the readiness of public administration and citizens to adopt digital services.

The discussion and recommendations chapter facilitates a comprehensive analysis of the challenges and facilitators of e-government initiatives implementation in Libya. It suggests improvements in ICT infrastructure and interoperability among public institutions, emphasising the significance of public-private partnerships for technical proficiency and resource sharing. The chapter underlines the need to address corruption and enhance skill sets within public sector IT roles, proposing capacity-building and change management strategies. It accentuates citizens' digital literacy and adoption of e-services, recommending a user-centric design inspired by social media platforms. Further, the role of political will in driving policy-making and resource allocation, fostering inter-institutional collaboration, and providing political stability is highlighted. The potential of e-government initiatives to enhance transparency, accountability, and citizen engagement and combat bureaucracy and corruption is explored. Finally, it positions e-government as a medium for achieving decentralisation, fostering national unification, and bridging urban-rural divides, thereby enhancing the overall governance landscape in Libya. The chapter underscores the importance of understanding these factors to execute and sustain e-government initiatives in Libya effectively.

8   Conclusion

In conclusion, this research interprets a multilayered perspective on the barriers and drivers of implementing e-government initiatives in Libya, presenting insightful reflections and implications for policymakers, stakeholders, and future research. This research aims to dive in and explore the current state of e-government in Libya. This includes identification of the key drivers and barriers faced by the government and the public sector in implementing e-government initiatives, and how these key barriers and challenges can be addressed to a successful implementation. The study's findings highlight the intricate interplay of factors that influence the effectiveness of e-government initiatives.

Addressing the main research questions, this study identifies several influential factors. The primary barriers and challenges encompass the internal structure of public sector institutions, the absence of a clear mandate and procedural guidance, political instability, and leadership issues. There is also a marked lack of governmental strategy and proper planning, an inadequate legal framework, and a deficient ICT infrastructure. Furthermore, the need for more qualified human resources, a weak local private sector, and prevalent corruption contribute to difficulties implementing e-government initiatives. On the other hand, the key drivers facilitating the advancement of e-government include a burgeoning political will to implement change, the decentralisation of government services, and the profound implications of these efforts for national unification.

The fight against bureaucracy and corruption and the drive to increase transparency and accountability are also significant contributors. Moreover, the prospect of augmenting citizens' trust in government through these digital initiatives serves as a strong motivator for e-government implementation.

The internal structure of public sector institutions, along with a clear mandate and procedural guidance, presents challenging factors in the implementation of e-government initiatives. These elements serve as crucial foundations for understanding and digitising services, highlighting the significance of integration throughout the public sector to streamline processes. Consequently, a holistic approach to public sector reform in Libya becomes imperative.

One centralised agency backed by the prime minister might help plan and drive the implementation of e-government initiatives, where a strategic approach and proper planning are indispensable for successful e-government implementation. This includes a clear vision, actionable steps, adequate resource allocation, and proper mentoring and evaluation.

Political instability, leadership and the lack of governmental strategy are significant factors influencing the success of e-government initiatives implementations. Political will and stability can expedite inter-institutional collaborations and the allocation of resources for e-government initiatives, and strong qualified leadership can chart a clear direction and ensure the implementation of these initiatives as planned in the strategy.

The legal framework, ICT infrastructure, and human resources emerge as challenging factors too. The absence of effective legislation and framework for e-government plays a critical role in the trustworthiness of these initiatives. Reliable infrastructure provides the backbone for information flow and service access. Human resources, including employees' readiness and adaptability to e-government initiatives, underline the importance of ongoing training and change management.

The role of public-private partnerships and international collaborations is heavily highlighted. These partnerships can help build a robust ecosystem by bringing in necessary resources and skills and fostering competition, thus improving service quality and cost-effectiveness even though the research indicates the weak local private sector as a substantial challenge. Encouraging the capabilities of the local private sector through targeted policies and investments can enhance its ability to support e-government initiatives.

Corruption remains a significant barrier to e-government initiatives. Therefore, robust measures to mitigate corruption are needed, such as enhancing transparency, fostering a culture of integrity, and increasing accountability. These initiatives may also be critical in combating corruption and bureaucracy, leading to streamlined government processes. Citizens' trust also plays a central role in public acceptance and use of e-government services. Trust can be bolstered through transparent processes, effective communication, and demonstrations of the benefits of these services.

The research indicates decentralising government services is a major driver of e-government implementation in Libya. The accessibility of e-government services independent of time and location can improve the lives of those in remote or rural areas, promoting decentralisation and empowering local governments. National unification can be significantly impacted by the implementation of e-government. It can provide equal access to government services for all citizens, bridging the gap between urban and rural areas, fostering a sense of unity among citizens from diverse regions, and facilitating cultural integration and a shared national identity.

The research's unique focus on Libya may limit the generalisability of its findings, which may be most beneficial for aiding the government in Libya's digital transformation

journey. The country's complex situation and fragile stability presented challenges to the data collection process. Unforeseen delays, cancelled or rescheduled interviews. Moreover, the distribution of the quantitative survey may have limited its reach to certain societies with internet access. Further, the data collection period coincided with numerous religious holidays, which could have affected the willingness of prospective interviewees and survey participants to participate.

While this research effectively sheds light on various facets of e-government implementation in Libya, it recognizses the dynamic and ever-changing nature of this field, prompting future studies to further build upon these findings. It is recommended that these future investigations focus on studying each institution independently, employing the same framework, and assessing the progress made in the implementation process. The results of this research contribute significantly to our understanding of the complexities involved in implementing e-government initiatives, providing a springboard for future research and development in the context of Libya and beyond.

This research is considered one of the first empirical studies on Libya's e-government journey, with a considerably high number of respondents and many informative interviews. The research's findings and recommendations provide a pathway towards more effective e-government implementation in the country, with potential implications for similar contexts globally. Harnessing the potential of e-government, despite significant challenges like political instability, corruption, and inadequate local private sector capability, can lead to notable improvements in governance, transparency, service delivery, and citizen engagement. This necessitates a strategic and holistic approach, strong political will, visionary leadership, and considerable investment in infrastructure, human resources, and anti-corruption measures.

References

Abied, A. 2017. 'Factors affecting citizens' adoption of E-Government services in Libya', F. Shiratuddin and K. Wong (eds.).

Abied, O., Ibrahim, O., and Mat Kamal, S. N. I. 2021. 'Proposing a Conceptual Model for Cloud Computing Adoption in the Libyan E-Government', in *International Conference on Research and Innovation in Information Systems, ICRIIS*, IEEE Computer Society.

ACA 2013. *Administrative Control Authority Report 2013*.

ACA 2014. *Administrative Control Authority Report 2014*.

ACA 2015. *Administrative Control Authority Report 2015*.

ACA 2016. *Administrative Control Authority Report 2016*.

ACA 2017. *Administrative Control Authority Report 2017*.

ACA 2018. *Administrative Control Authority Report 2018*.

ACA 2019. *Administrative Control Authority Report 2019*.

Adjei-Bamfo, P., Maloreh-Nyamekye, T., and Ahenkan, A. 2019. 'The role of e-government in sustainable public procurement in developing countries: A systematic literature review', *Resources, Conservation and Recycling* (142), pp. 189–203.

Ahmed, A. M., Moreton, R., Mehdi, Q. H., and Elmaghraby, A. 2013. 'E-government services challenges and opportunities for developing countries: The case of Libya', in *2013 2nd International Conference on Informatics and Applications, ICIA 2013*, IEEE Computer Society, pp. 133–137.

Alan Bryman. *Social Research Methods*.

Alatawi, F. M. H., Dwivedi, Y. K., Williams, M. D., and Rana, N. P. 2012. *Conceptual model for examining knowledge management system (KMS) adoption in public sector organizations in Saudi Arabia*.

Al-Hujran, O., Al-Debei, M. M., Chatfield, A., and Migdadi, M. 2015. 'The imperative of influencing citizen attitude toward e-government adoption and use', *Computers in Human Behavior* (53), pp. 189–203.

Alkhateeb, M. A., and Abdalla, R. A. 2021. 'Antecedents of Trust in E-Government: Palestinian Citizens' Perspective', *Studies of Applied Economics* (39:7).

Al-ma'aitah Mohammad Atwah 2020. 'THE IMPACT OF EMPLOYEES' RESISTANCE TO CHANGE ON E-GOVERNMENT INNOVATION AND VALUE CREATION', *INTERNATIONAL JOURNAL OF eBUSINESS AND eGOVERNMENT STUDIES* (14:2), pp. 166–198.

Almaiah, M. A., and Nasereddin, Y. 2020. 'Factors influencing the adoption of e-government services among Jordanian citizens', *Electronic Government, an International Journal* (16:3), p. 236.

Almarabeh, T., and Abuali, A. 2010. *A General Framework for E-Government: Definition Maturity Challenges, Opportunities, and Success*.

Alpar, P., and Olbrich, S. 2005. 'Legal Requirements and Modelling of Processes in e-Government', *University at Marburg, Germany*.

Al-rawahna, A. S. M., Chen, S.-C., and Hung, C.-W. 2019. 'The Barriers of E-Government Success: An Empirical Study from Jordan', *SSRN Electronic Journal*.

Al-Ruithe, M., Benkhelifa, E., and Hameed, K. 2018. 'Key Issues for Embracing the Cloud Computing to Adopt a Digital Transformation: A study of Saudi Public Sector', *Procedia Computer Science* (130), pp. 1037–1043.

Alsaeh, S. 2020. 'Challenges Facing the Implementation of E-Government in Libya and their potential solutions', *International Journal for Research in Applied Science & Engineering Technology (IJRASET)* (8(11)), pp. 132–136.

Alshehri, M., Drew, S., Alhussain, T., and Alghamdi, R. 2012. 'The Effects of Website Quality on Adoption of E-Government Service: An Empirical Study Applying UTAUT Model Using SEM'.

Alvarenga Ana, Florinda Matos, Radu Godina, and João CO Matias 2020. 'Digital transformation and knowledge management in the public sector', *Sustainability* (12:14), p. 5824.

Alwasat 2023. 'The "unity government" launches the local contracting platform', in *Alwasat*.

Amin, S. F., Saad, A. B., and Lajis, A. 2022. 'Technology Acceptance Factors for Implementing the E-Government Systems in Saudi Arabia', *Advances in Internet of Things* (12:04), pp. 125–141.

Andreea, M. 2018. *Strategic Management and Innovative Applications of E-Government*, IGI Global.

Anna Xiong, J. 2006. 'Current status and needs of Chinese e-government users', *The Electronic Library* (24:6), pp. 747–762.

Anthopoulos, L., Reddick, C. G., Giannakidou, I., and Mavridis, N. 2016. 'Why e-government projects fail? An analysis of the Healthcare.gov website', *Government Information Quarterly* (33:1), pp. 161–173.

Arief, A., Ayub Wahab, I. H., and Muhammad, M. 2021. 'Barriers and Challenges of e-Government Services: A Systematic Literature Review and Meta-Analyses', *IOP Conference Series: Materials Science and Engineering* (1125:1), p. 012027.

Asgarkhani, M. 2005. *The Effectiveness of e-Service in Local Government: A Case Study*.

Ateş, H., and Elfeitori, A. 2021. *Reforming Public Administration in Libya*.

Athalia Jasheil 2020. *A Critical Analysis of Libya's State-Building Challenges Post-Revolution Written by Jasheil Athalia A Critical Analysis of Libya's State-Building Challenges Post-Revolution*.

Awa, H. O., Ukoha, O., and Igwe, S. R. 2017. 'Revisiting technology-organization-environment (T-O-E) theory for enriched applicability', *The Bottom Line* (30:01), pp. 2–22.

Baker, J. 2012. 'The Technology–Organization–Environment Framework', pp. 231–245.

Bannister, F., and Connolly, R. 2014. 'ICT, public values and transformative government: A framework and programme for research', *Government Information Quarterly* (31:1), pp. 119–128.

Bannister, F., and Connolly, R. 2015. 'The great theory hunt: Does e-government really have a problem?', *Government Information Quarterly* (32:1), pp. 1–11.

Benzaghta, M. A., Elwalda, A., Mousa, M., Erkan, I., and Rahman, M. 2021. 'SWOT analysis applications: An integrative literature review', *Journal of Global Business Insights* (6:1), pp. 55–73.

Berman, S. J. 2012. 'Digital transformation: opportunities to create new business models', *Strategy & Leadership* (40:2), pp. 16–24.

Bertot, J. C., Jaeger, P. T., and Grimes, J. M. 2010. 'Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies', *Government Information Quarterly* (27:3), pp. 264–271.

Bhatnagar, S. 2003. 'Transparency and Corruption: Does E-Government Help?'

Brynjolfsson, E., and McAfee, A. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*, W. W. Norton & Company.

BSC 2013. *Information and Communication Technology Index*.

Busoud, A., and Živković, D. 2016. 'E-Government in Libya', in *Proceedings of the International Scientific Conference - Sinteza 2016*, Belgrade, Serbia: Singidunum University, pp. 513–517.

Bwalya, K., and Healy, M. 2010a. 'Harnessing e-Government Adoption in the SADC Region: a Conceptual Underpinning', *Electronic Journal of e-Government* (8(1)), pp. 23–32.

Bwalya, K. J., and Healy, M. 2010b. *Harnessing e-Government Adoption in the SADC Region: a Conceptual Underpinning*.

Canini Derya Baran, and Woung Ying Yu 2020. 'Influence of E-Government Adoption and Political Stability–An Detailed review'.

Carter, L., and Bélanger, F. 2005. 'The utilization of e-government services: citizen trust, innovation and acceptance factors', *Information Systems Journal* (15:1), pp. 5–25.

CBL 2022. *Economic Bulletin Central Bank of Libya first quarter of the year 2022*.

CBL 2021. *Economic Bulletin Central Bank of Libya last quarter of the year 2021*.

Charalabidis, Y., and Loukis, E. 2012. 'Participative Public Policy Making Through Multiple Social Media Platforms Utilization', *International Journal of Electronic Government Research* (8:3), pp. 78–97.

Charbaji El-Kassem, R., Selham, A., Research, A.-K., Al, M. M., Senior, N., Assistant, R., et al. 2020. 'Path Analytic Investigation of the Intention to Adopt E-government Services through Mobile Applications in Qatar (Tam Revisited)', *International Journal of Advanced Research in Engineering and Technology* (11:6), pp. 127–142.

Cinar, E., Trott, P., and Simms, C. 2019. 'A systematic review of barriers to public sector innovation process', *Public Management Review* (21:2), pp. 264–290.

Clarke, A. 2020. 'Digital government units: what are they, and what do they mean for digital era public management renewal?', *International Public Management Journal* (23:3), pp. 358–379.

Collombier, V., and Lacher, W. 2023. *Violence and Social Transformation in Libya*, Oxford University Press.

Conklin, A., and White, G. B. 2006. 'e-Government and Cyber Security: The Role of Cyber Security Exercises', in *Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06)*, pp. 79b–79b.

Cordella, A., and Bonina, C. M. 2012. 'A public value perspective for ICT enabled public sector reforms: A theoretical reflection', *Government Information Quarterly* (29:4), pp. 512–520.

Cordella, A., and Iannacci, F. 2010. 'Information systems in the public sector: The e-Government enactment framework', *The Journal of Strategic Information Systems* (19:1), pp. 52–66.

C.P, Y. H., and Susanto, T. D. 2019. 'E-Leadership: The Effect of E-Government Success in Indonesia', *Journal of Physics: Conference Series* (1201), p. 012025.

CPI 2023. '2022 Corruption Perceptions Index: Explore the results', in *Transparency.org*.

Creswell, J. W., and Vicki L. Plano Clark. 2017. 'Designing and conducting mixed methods research', *Sage*.

Criado, J. I., and Villodre, J. 2022. 'Revisiting social media institutionalization in government. An empirical analysis of barriers', *Government Information Quarterly* (39:2), p. 101643.

Cropf, R. A. 2016. *E-Government for Public Managers: Administering the Virtual Public Sphere*, Rowman & Littlefield.

Dada, D. 2006. 'The Failure of E-Government in Developing Countries: A Literature Review', *The Electronic Journal of Information Systems in Developing Countries* (26:1), pp. 1–10.

Dardha, V. (, and Ndou,) 2004a. *E-GOVERNMENT FOR DEVELOPING COUNTRIES: OPPORTUNITIES AND CHALLENGES*.

Dardha, V. (, and Ndou,) 2004b. *E-GOVERNMENT FOR DEVELOPING COUNTRIES: OPPORTUNITIES AND CHALLENGES*.

Davoodi, M. H. R., and Abed, M. G. T. 2003. *Challenges of Growth and Globalization in the Middle East and North Africa*, International Monetary Fund.

van Deursen, A., and van Dijk, J. 2010. 'Internet skills and the digital divide', *New Media & Society* (13:6), pp. 893–911.

Dhaoui, I. 2022. 'E-Government for Sustainable Development: Evidence from MENA Countries', *Journal of the Knowledge Economy* (13:3), pp. 2070–2099.

Dhonju, G. R., and Shakya, S. 2019. 'Analyzing Challenges for the Implementation of E-Government in Municipalities within Kathmandu Valley', *Journal of Science and Engineering* (7), pp. 70–78.

DiCicco-Bloom, B., and Crabtree, B. F. 2006. 'The qualitative research interview', *Medical Education* (40:4), pp. 314–321.

Dodeen, W. 2019. 'Exploring the quality of e-government service from citizens' perspectives'.

Doush, I. A., and Almeraj, Z. 2019. 'Evaluating the accessibility of Kuwaiti e-government websites', *Jordanian Journal of Computers and Information Technology* (5:3), pp. 152–169.

Dunleavy, P. 2005. 'New Public Management Is Dead--Long Live Digital-Era Governance', *Journal of Public Administration Research and Theory* (16:3), pp. 467–494.

2022. 'EGDI'.

EGDI 2023. 'E-Government Development Index', in *EGOVKB United Nations Data Country Information*.

'e-Government', in *World Bank*.

Elgohary, E., and Abdelazyz, R. 2020. 'The impact of employees' resistance to change on implementing e-government systems: An empirical study in Egypt', *The Electronic Journal of Information Systems in Developing Countries* (86:6).

2013. 'eLibya Newsletter Issue 1', in *Ministry of Communication and Informatics*.

2014. 'eLibya Newsletter Issue 3', in *Ministry of Communication and Informatics*.

ESCWA 2013. *ESCWA Country Brief*.

ESCWA 2022. *Government Electronic and Mobile Services (GEMS-2022) Maturity Index*.

Filgueiras, F., Flávio, C., and Palotti, P. 2019. 'Digital Transformation and Public Service Delivery in Brazil', *Latin American Policy* (10:2), pp. 195–219.

Forti, Y. 2019. *A new model fo e-Government in local level administration in Libya*, The University of Gloucestershire.

Forti Yousef 2019. 'A New Model for eGovernment in Local Level Administrations in Libya'.

Galletta, Anne. 2013. 'Mastering the semi-structured interview and beyond: From research design to analysis and publication', *NYU press* (18).

GIA 2022. *The Draft of Libya's Digital Transformation Strategy.*

Gil-Garcia, J. R., Helbig, N., and Ojo, A. 2014. 'Being smart: Emerging technologies and innovation in the public sector', *Government Information Quarterly* (31:S1), pp. I1–I8.

Gil-García, J. R., and Pardo, T. A. 2005. 'E-government success factors: Mapping practical tools to theoretical foundations', *Government Information Quarterly* (22:2), pp. 187–216.

Gil-Garcia, J. R. 2012. *Enacting electronic government success: An integrative study of government-wide websites, organizational capabilities, and institutions* .

Di Giulio, M., and Vecchi, G. 2023. 'How "institutionalization" can work. Structuring governance for digital transformation in Italy', *Review of Policy Research* (40:3), pp. 406–432.

GNU 394 2022. 'Resolution No. 394 of 2022 regarding the formation of the National Committee for Digital Transformation'.

Gounopoulos, E., Kontogiannis, S., Kazanidis, I., and Valsamidis, S. 2020. 'The Impact of the Digital Divide on the Adoption of e-Government in Greece', *KnE Social Sciences*.

2020. 'GSMA Mobile Economy'.

GSMA 2021. 'GSMA Research & analysis', in *GSMA Intelligence*.

GSMA 2022. 'Internet Speeds in North Africa are Rapidly Improving, but Still Lag Behind Much of the World'.

Haag, S., and Eckhardt, A. 2014. 'Organizational cloud service adoption: a scientometric and content-based literature analysis', *Journal of Business Economics* (84:3), pp. 407–440.

HDX 2023. 'Libya Humanitarian Data Exchange', in *The World Bank*.

Heeks, R., and Bailur, S. 2007a. 'Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice', *Government Information Quarterly* (24:2), pp. 243–265.

Heeks, R., and Bailur, S. 2007b. 'Analyzing e-government research: Perspectives, philosophies, theories, methods, and practice', *Government Information Quarterly* (24:2), pp. 243–265.

Heeks, R. 2010. 'Do information and communication technologies (ICTs) contribute to development?', *Journal of International Development* (22:5), pp. 625–640.

Heeks, R. 2002. 'Information systems and developing countries: Failure, success, and local improvisations', *Information Society* (18:2), pp. 101–112.

Heidlund, M., and Sundberg, L. 2022. 'Evaluating e-Government: Themes, trends, and directions for future research', *First Monday*.

Hess, T., Matt, C., Benlian, A., and Wiesböck, F. 2016. 'Options for Formulating a Digital Transformation Strategy.', *MIS Quarterly Executive* (15:2), pp. 123–139.

Internet World Stats 2023. 'Africa Internet User Stats and Population by Country'.

IOM 2020. *Timeline of IOM Libya's Humanitarian Assistance in 2020.*

ITU 2014. *Measuring the Information Society Report 2014 Executive Summary*.

Jaeger, P. T. 2006. 'Assessing Section 508 compliance on federal e-government Web sites: A multi-method, user-centered evaluation of accessibility for persons with disabilities', *Government Information Quarterly* (23:2), pp. 169–190.

Janowski, T. 2015. 'Digital government evolution: From transformation to contextualization', *Government Information Quarterly* (32:3), pp. 221–236.

Jiménez, M. A. O. 2014. 'Seidman, I. (2013). Interviewing as qualitative research: A guide for researchers in education & the social sciences. New York: Teachers College.', *Revista Fuentes* (14), pp. 235–236.

Joseph, B. K. 2012. *Handbook of Research on E-Government in Emerging Economies: Adoption, E-Participation, and Legal Frameworks: Adoption, E-Participation, and Legal Frameworks*.

Kettani, D., and Moulin, B. 2014. *E-Government for Good Governance in Developing Countries: Empirical Evidence from the eFez Project*.

Khan, A., Krishnan, S., and Dhir, A. 2021. 'Electronic government and corruption: Systematic literature review, framework, and agenda for future research', *Technological Forecasting and Social Change* (167), p. 120737.

Klievink, B., and Janssen, M. 2014. 'Developing Multi-Layer Information Infrastructures: Advancing Social Innovation through Public–Private Governance', *Information Systems Management* (31:3), pp. 240–249.

Kumar, R., and Best, M. L. 2006. 'Impact and sustainability of E-government services in developing countries: Lessons learned from Tamil Nadu, India', *Information Society* (22:1), pp. 1–12.

Kunstelj Mateja, and Vintar Mirko 2004. 'Evaluating the progress of e-government development: A critical analysis', *Information polity*, pp. 131–148.

LAB 2012. *Libyan Audit Bureau Report 2012*.

LAB 2013. *Libyan Audit Bureau Report 2013*.

LAB 2014. *Libyan Audit Bureau Report 2014*.

LAB 2015. *Libyan Audit Bureau Report 2015*.

LAB 2016. *Libyan Audit Bureau Report 2016*.

LAB 2017. *Libyan Audit Bureau Report 2017*.

LAB 2018. *Libyan Audit Bureau Report 2018*.

LAB 2019. *Libyan Audit Bureau Report 2019*.

LAB 2020. *Libyan Audit Bureau Report 2020*.

Lamb, R., and Davidson, E. 2005. 'Understanding intranets in the context of end-user computing', *ACM SIGMIS Database: the DATABASE for Advances in Information Systems* (36:1), pp. 64–85.

Lanzolla Gianvito, and Anderson Jamie 2010. 'The digital revolution is over. Long live the digital'.

Legner, C., Eymann, T., Hess, T., Matt, C., Böhmann, T., Drews, P., et al. 2017. 'Digitalization: Opportunity and Challenge for the Business and Information Systems Engineering Community', *Business & Information Systems Engineering* (59:4), pp. 301–308.

'Libya - Transparency.org'.

2023. 'Literacy - The World Factbook'.

LPTIC 2017. 'Overview | LPTIC', in *LPTIC*.

Malodia, S., Dhir, A., Mishra, M., and Bhatti, Z. A. 2021. 'Future of e-Government: An integrated conceptual framework', *Technological Forecasting and Social Change* (173).

Manda, M. I. 2021. 'Power, politics, and the institutionalisation of information systems for promoting digital transformation in the public sector: A case of the South African's government digital transformation journey', *Information Polity* (27:3), pp. 311–329.

Margetts, H., and Dunleavy, P. 2013. 'The second wave of digital-era governance: a quasi-paradigm for government on the Web', *Philosophical Transactions of the*

Royal Society A: Mathematical, Physical and Engineering Sciences (371:1987), p. 20120382.

Meiyanti, R., Utomo, B., Sensuse, D. I., and Wahyuni, R. 2018. 'e-Government Challenges in Developing Countries: A Literature Review', in *2018 6th International Conference on Cyber and IT Service Management (CITSM)*, pp. 1–6.

Mensah, I. K., Adams, S., Adjei, J. K., and Mwakapesa, D. S. 2022. 'Drivers of egovernment adoption amidst COVID-19 pandemic: The Information Adoption Model (IAM) approach', *Information Development* (38:4), pp. 494–509.

Mensah, I. K., Zeng, G., and Mwakapesa, D. S. 2022. 'Understanding the drivers of the public value of e-government: Validation of a public value e-government adoption model', *Frontiers in Psychology* (13).

Mergel, I., Edelmann, N., and Haug, N. 2019. 'Defining digital transformation: Results from expert interviews', *Government Information Quarterly* (36:4).

Mergel, I., Kattel, R., Lember, V., and McBride, K. 2018. 'Citizen-oriented digital transformation in the public sector', in *Proceedings of the 19th Annual International Conference on Digital Government Research: Governance in the Data Age*, New York, NY, USA: ACM, pp. 1–3.

Mergel, I. 2012. 'The social media innovation challenge in the public sector', *Information Polity* (17:3,4), pp. 281–292.

'Ministry of Economy and Trade: Launching the Libyan electronic procedures platform', in *alsaaa24*.

Mofleh, S., Wanous, M., and Strachan, P. 2009. 'Understanding national e-government: the role of central government', *Electronic Government, an International Journal* (6:1), pp. 1–18.

Mohamed, A. H., and Hissen Mohamed, A. 2017. *E-Government as a Tool for Stability and Socio-Economic development in Post-Conflict Libya.*

Mousa, M., Atiya, M., and Mousa, S. 2020. *Journal of Critical Reviews Determinants of Cloud Based e-Government in Libya.*

Al Mudawi, N., Beloff, N., and White, M. 2020. *Issues and challenges: cloud computing e-Government in developing countries.*

Musa, O. Bin, Abuwdn, F., Aini, I., Zolkifly, B., and Almasri, A. 2019. *Factors Affecting Libyan Citizens Satisfaction with E-Government Services.*

Mustafa, A., Ibrahim, O., and Mohammed, F. 2020. 'E-GOVERNMENT ADOPTION: A SYSTEMATIC REVIEW IN THE CONTEXT OF DEVELOPING NATIONS', *International Journal of Innovation* (8:1), pp. 59–76.

Nachit, H., Belhcen, L., Fikri, I. El, and Jaafari, M. 2021. *Digital Transformation in the Moroccan Public Sector: Drivers and Barriers.*

Naranjo-Valencia, J. C., Jiménez-Jiménez, D., and Sanz-Valle, R. 2016. 'Studying the links between organizational culture, innovation, and performance in Spanish companies', *Revista Latinoamericana de Psicología* (48:1), pp. 30–41.

Ndou Dardha 2004. *E – Government for Developing Countries: Opportunities and Challenges.*

Nengomasha, C. T., and Shuumbili, T. N. 2022. 'Access to e-government services by citizens through public/community libraries in Namibia', *Information Development* (38:1), pp. 68–82.

OECD 2016. *African Economic Outlook 2016 - Libya*, OECD.

'On the Road to Peace, Libya Makes Progress but Hits Pitfalls - Libya | ReliefWeb'.

Onwuegbuzie, A. J., and Leech, N. L. 2005. 'On Becoming a Pragmatic Researcher: The Importance of Combining Quantitative and Qualitative Research

Methodologies', *International Journal of Social Research Methodology* (8:5), pp. 375–387.

Ookla 2023. 'Libya's Mobile and Broadband Internet Speeds - Speedtest Global Index', in *Speedtest by Ookla*.

Osman Adam, I. 2020. 'ICT Development, E-government Development, and Economic Development: Does Institutional Quality Matter?', *USC Annenberg School for Communication & Journalism* (16).

Otman Waniss, and Karlberg Erling 2007. 'The Libyan Economy'.

Ouannes Moncef 2014. *Libyan character; The trinity of booty, tribe and victory*.

Pack, J. 2022. *Libya and the Global Enduring Disorder*, Oxford University Press.

Pargeter, A. 2010. *Mediterranean PaPer SerieS 2010 - reFOrM in LiBYa: CHiMera Or reaLitY?*, Italy: Istituto Affari Internazionali.

Premkumar, G. 2003. 'A Meta-Analysis of Research on Information Technology Implementation in Small Business', *Journal of Organizational Computing and Electronic Commerce* (13:2), pp. 91–121.

Ramli, R. M. 2017. 'E-government implementation challenges in malaysia and south korea: A comparative study', *Electronic Journal of Information Systems in Developing Countries* (80:1), pp. 1–26.

Ravanos, P., and Karagiannis, G. 2022. 'Tricks with the BoD model and an application to the e-Government Development Index', *Socio-Economic Planning Sciences* (81), p. 100955.

Relly, J. E., and Sabharwal, M. 2009. 'Perceptions of transparency of government policymaking: A cross-national study', *Government Information Quarterly* (26:1), pp. 148–157.

Rogers, E. M., Margaret M. Quinlan., and Arvind Singhal 2014. '"Diffusion of innovations." An integrated approach to communication theory and research.', *Routledge*, pp. 432–448.

Rorissa, A., Demissie, D., and Pardo, T. 2011. 'Benchmarking e-Government: A comparison of frameworks for computing e-Government index and ranking', *Government Information Quarterly* (28:3), pp. 354–362.

Rowley, J. 2011. 'e-Government stakeholders—Who are they and what do they want?', *International Journal of Information Management* (31:1), pp. 53–62.

Ruud, O. 2017. *Successful digital transformation projects in public sector with focus on municipalities (research in progress)*.

Sadik-Zada, E. R., Gatto, A., and Niftiyev, I. 2022. 'E-government and petty corruption in public sector service delivery', *Technology Analysis & Strategic Management*, pp. 1–17.

Samsor, A. M. 2021. 'Challenges and Prospects of e-Government implementation in Afghanistan', *International Trade, Politics and Development* (5:1), pp. 51–70.

Samuel, M., Doctor, G., Christian, P., and Baradi, M. 2020. 'Drivers and barriers to e-government adoption in Indian cities', *Journal of Urban Management* (9:4), pp. 408–417.

Sarantis, D., Charalabidis, Y., and Askounis, D. 2011. 'A goal-driven management framework for electronic government transformation projects implementation', *Government Information Quarterly* (28:1), pp. 117–128.

Saranto, K., and Hovenga, E. J. S. 2004. 'Information literacy—what it is about?', *International Journal of Medical Informatics* (73:6), pp. 503–513.

Savoldelli, A., Codagnone, C., and Misuraca, G. 2014. 'Understanding the e-government paradox: Learning from literature and practice on barriers to adoption', *Government Information Quarterly* (31), pp. S63–S71.

Sawani, Y. M. 2018. 'Public Administration in Libya: Continuity and Change', *International Journal of Public Administration* (41:10), pp. 807–819.

Schuppan, T. 2009. 'E-Government in developing countries: Experiences from sub-Saharan Africa', *Government Information Quarterly* (26:1), pp. 118–127.

Scott, W. Richard. 2008. *Institutions and organizations: Ideas and interests.*, Sage.

Shanneb, A. 2021. *Libyan E-Government Research Landscape*.

Shareef, M. A., Kumar, V., Kumar, U., and Dwivedi, Y. K. 2011a. 'E-Government Adoption Model (GAM): Differing service maturity levels', *Government Information Quarterly* (28:1), pp. 17–35.

Shareef, M. A., Kumar, V., Kumar, U., and Dwivedi, Y. K. 2011b. 'E-Government Adoption Model (GAM): Differing service maturity levels', *Government Information Quarterly* (28:1), pp. 17–35.

Sharma, S. K., Metri, B., Dwivedi, Y. K., and Rana, N. P. 2021. 'Challenges common service centers (CSCs) face in delivering e-government services in rural India', *Government Information Quarterly* (38:2), p. 101573.

Sihotang, D. M., Yudhistira, B. A., Solikin, Nugroho, W. S., Wibowo, W. C., Sensuse, D. I., et al. 2022. 'A Systematic Literature Review of Barriers and Drivers E-Government in Developing Countries: TOE Framework Perspective', in *2022 7th International Conference on Informatics and Computing, ICIC 2022*, Institute of Electrical and Electronics Engineers Inc.

Simmonds, H., Gazley, A., Kaartemo, V., Renton, M., and Hooper, V. 2021. 'Mechanisms of service ecosystem emergence: Exploring the case of public sector digital transformation', *Journal of Business Research* (137), pp. 100–115.

Sinha, S. K., Mukhopadhyay, S., Upadhyay, P., Dwivedi, Y. K., Bhattacharyya, S., Paul, M., et al. 2023. 'Challenges and opportunities in IT transformation of public service delivery: case of India Post', *Transforming Government: People, Process and Policy* (17:1), pp. 134–146.

Špaček, D., Csótó, M., and Urs, N. 2020. 'Questioning the Real Citizen-Centricity of e-Government Development: Digitalization of G2C Services in Selected CEE Countries', *NISPAcee Journal of Public Administration and Policy* (13:1), pp. 213–243.

Surry, D. W., and Baker, F. W. 2016. 'The co-dependent relationship of technology and communities', *British Journal of Educational Technology* (47:1), pp. 13–28.

Tang, T., Hou, J. (Jove), Fay, D. L., and Annis, C. 2021. 'Revisit the drivers and barriers to e-governance in the mobile age: A case study on the adoption of city management mobile apps for smart urban governance', *Journal of Urban Affairs* (43:4), pp. 563–585.

Tantoush, M. (2022). P. A. and civil service reform in L. F. or success? M. Tantoush. 2022. *Public Administration and civil service reform in Libya Failure or success?*

Tapscott, D., and Tapscott, A. 2016. *Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World*, Penguin.

The World Bank 2022. 'GDP (current US$) - Libya | Data', in *The World Bank*.

van Thiel Sandra 2014. 'Research Methods in Public Administration and Public Management'.

Tornatzky Louis G., Mitchell Fleischer, and Alok K. Chakrabarti 1990. 'The processes of technological innovation'.

Trček, D. 2019. 'APIs and emerging economy-driving digital transformation through e-government', *In SHS Web of Conferences, EDP Science* (65), p. 04009.

Twizeyimana, J. D., Larsson, H., and Grönlund, Å. 2018. 'E-government in Rwanda: Implementation, challenges and reflections', *Electronic Journal of e-Government* (16:19).

'UK and Libya agreement on open government - GOV.UK'.

Undi-Phiri, B., and Phiri, J. 2022. 'Assessing Factors Affecting the Adoption of E-Government Services in Developing Countries for Transport Sector, amidst the Covid-19 Pandemic', *Communications and Network* (14:02), pp. 69–90.

UNSMIL. 'Libyan Political Dialogue Forum', in *2021*.

UNSMIL 2022. *UNSMIL Report of the Secretary-General S/2022/409*.

USAID DECA 2022. *DIGITAL ECOSYSTEM COUNTRY ASSESSMENT (DECA) Libya NOVEMBER 2022*.

Uwizeyimana, D. E. 2022. 'Analysing the importance of e-government in times of disruption: The case of public education in Rwanda during Covid-19 lockdown', *Evaluation and Program Planning* (91), p. 102064.

Vanderwalle, D. 2012. *A History of Modern Libya*.

Vandewalle, D. 2008. *Libya's Revolution in Perspective 1969–2000." In Libya since 1969: Qadhafi's Revolution Revisited*, New York: Palgrave Macmillan US.

Vandewalle Drik 2012. *A History of Modern Libya*.

De Vaus, D., and David de Vaus 2013. 'Surveys in social research', *Routledge*.

Venkatesh, Morris, Davis, and Davis 2003. 'User Acceptance of Information Technology: Toward a Unified View', *MIS Quarterly* (27:3), p. 425.

Warschauer, M., Matuchniak, T., Pinkard, N., and Gadsden, V. 2010. 'New Technology and Digital Worlds: Analyzing Evidence of Equity in Access, Use, and Outcomes', *Review of Research in Education* (34), pp. 179–225.

Weerakkody, V., El-Haddadeh, R., and Al-Shafi, S. 2011. 'Exploring the complexities of e-government implementation and diffusion in a developing country: Some lessons from the State of Qatar', in *Journal of Enterprise Information Management* (24:2), pp. 172–196.

Weerakkody, V., El-Haddadeh, R., Al-Sobhi, F., Shareef, M. A., and Dwivedi, Y. K. 2013. 'Examining the influence of intermediaries in facilitating e-government adoption: An empirical investigation', *International Journal of Information Management* (33:5), pp. 716–725.

World Bank 2015. *Labor Market Dynamics in Libya: Reintegration for Recovery*, The World Bank.

World Bank 2023. 'The World Bank in Libya', in *The World Bank Group*.

World Bank 2022. 'WGI 2022 Interactive Interactive Data Access', in *The World Bank Group*.

Wright, K. B. 2005. 'Researching Internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services." ', *Journal of computer-mediated communication* (10:3).

Wynn, M., Bakeer, A., and Forti, Y. 2021. 'E-government and digital transformation in Libyan local authorities', *International Journal of Teaching and Case Studies* (12:2), p. 119.

Al Yami, M., and Ajmal, M. M. 2019. 'Pursuing sustainable development with knowledge management in public sector', *VINE Journal of Information and Knowledge Management Systems* (49:4), pp. 568–593.

Yildiz, M. 2007. 'E-government research: Reviewing the literature, limitations, and ways forward', *Government Information Quarterly* (24:3), pp. 646–665.

Yıldırım, S., and Bostancı, S. H. 2021. 'The efficiency of e-government portal management from a citizen perspective: evidences from Turkey', *World Journal of Science, Technology and Sustainable Development* (18:3), pp. 259–273.

Zheng, D., Chen, J., Huang, L., and Zhang, C. 2013. 'E-government adoption in public administration organizations: integrating institutional theory perspective and resource-based view', *European Journal of Information Systems* (22:2), pp. 221–234.

Appendix

A. Interview Questions

I. Technological Factors:
1. How would you assess the current state of ICT infrastructure in Libya, particularly in relation to e-government initiatives?
2. How does the level of ICT literacy among public sector employees and citizens impact the adoption of e-government services?
3. In your opinion, how compatible are the existing technologies in Libya with the requirements of e-government initiatives?
4. Are there any specific technological innovations or solutions that have been particularly successful or challenging in the context of e-government in Libya?

II. Organizational Factors:
5. How would you describe the role of leadership and management in promoting e-government adoption in Libya?
6. Can you discuss the organizational culture within government agencies regarding the acceptance and implementation of e-government initiatives?
7. What resources and support are available to government agencies and employees for implementing and using e-government services?
8. How would you assess the readiness of government agencies in Libya to adopt e-government initiatives?

III. Environmental Factors:
9. How much How does the political stability or instability in Libya affect the adoption and implementation of e-government initiatives?
10. Can you discuss the legal framework and regulations related to e-government in Libya? Are there any specific laws or policies that promote or hinder e-government adoption?
11. Are there any external pressures, such as international or regional initiatives, that influence the adoption of e-government services in Libya?

IV. Performance Expectancy:
12. What are the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya?
13. Can you provide examples of e-government services that have been particularly effective in improving efficiency, transparency, or service quality?

V. Effort Expectancy:

14. How user-friendly and accessible are the current e-government services in Libya? What challenges do users face when accessing these services?

15. Are there any specific efforts to improve the usability and accessibility of e-government services in Libya?

VI.   Social Influence:

16. How do societal norms, peers, and superiors influence the adoption and use of e-government services among public sector employees and citizens?

17. Are there any specific groups or individuals within the government or society that act as champions for e-government initiatives in Libya?

VII.   Facilitating Conditions:

18. What resources, training, and support are available for public sector employees and citizens to use e-government services effectively?

19. Are there any initiatives or plans to improve the facilitating conditions for e-government adoption in Libya?

B. Survey Questions

I. Technological Factors:
1. How would you rate the quality of ICT infrastructure in Libya? (1: Very poor, 5: Excellent)
2. How confident are you in your ability to use ICT and e-government services? (1: Not confident at all, 5: Very confident)
3. To what extent do you believe the available technology in Libya supports e-government initiatives? (1: Not at all, 5: Completely)

II. Organizational Factors:
4. How effective is the leadership in promoting e-government adoption in your organization? (1: Not effective at all, 5: Very effective)
5. How supportive is your organizational culture towards the adoption of e-government initiatives? (1: Not supportive at all, 5: Very supportive)
6. How would you rate the availability of resources and support for implementing e-government services in your organization? (1: Very poor, 5: Excellent)

III. Environmental Factors:
7. How much do you believe political stability in Libya affects the adoption of e-government initiatives? (1: No impact, 5: Significant impact)
8. How familiar are you with the legal framework and regulations related to e-government in Libya? (1: Not familiar at all, 5: Very familiar)

IV. Performance Expectancy:
9. How beneficial do you find e-government services in improving efficiency, transparency, or service quality? (1: Not beneficial at all, 5: Very beneficial)
10. In your opinion, do e-government services provide accurate and up-to-date information compared to traditional methods? (1: Not beneficial at all, 5: Very beneficial)
11. To what extent do you believe that e-government services can help reduce errors in government-related processes? (1: Not beneficial at all, 5: Very beneficial)
12. How likely is it that e-government services will improve communication between citizens and the government? (1: Not beneficial at all, 5: Very beneficial)

V. Effort Expectancy:
13. How easy is it to use and access e-government services in Libya? (1: Very difficult, 5: Very easy)
14. How easy do you find it to learn and use e-government services? (1: Very difficult, 5: Very easy)

15. How intuitive and user-friendly is the interface of the e-government platform? (1: Not friendly at all, 5: Very friendly)

16. In your opinion, how well do e-government services cater to users with different levels of technical expertise? (1: Very poor, 5: Excellent)

VI. Social Influence:

17. How much influence do your peers or superiors have on your adoption and use of e-government services? (1: No influence, 5: Significant influence)

18. To what extent do your friends, family, or colleagues encourage you to use e-government services? (1: Very poor, 5: Excellent)

19. How often do you observe others using e-government services in your social or professional network? (1: Not at all, 5: Completely)

20. How strongly do you feel the societal pressure to adopt e-government services? (1: No influence, 5: Significant influence)

VII. Facilitating Conditions:

21. How would you rate the availability of resources, training, and support for using e-government services in Libya? (1: Very poor, 5: Excellent)

22. How available and reliable is the technical support for e-government services in case you face any issues? (1: Very poor, 5: Excellent)

23. How accessible are e-government services through various devices (e.g., smartphones, tablets, computers)? (1: Very poor, 5: Excellent)

24. Do you think there are sufficient resources (e.g., tutorials, help desks) to assist you in using e-government services? (1: Very poor, 5: Excellent)

VIII. Expected Barriers (1: Very poor, 5: Excellent)

25. Human Resource \ People
26. Data & Technology Infrastructure
27. Legal Infrastructure
28. Cultural & Adaptive Environment
29. Institutional & Structural Infrastructure
30. Strategic Management & Leadership Quality
31. Financial Resources

IX. Expected Drivers (1: Very poor, 5: Excellent)

32. Reducing Cost.
33. Increase quality of service
34. Political Will \ Election
35. Social public pressure
36. Public sector reform
37. Increase transparency and accountability.
38. Reduces corruption.

X. Demographic Information:

39. What is your age? (Options: Age range categories)

40. What is your gender? (Options: Male, Female, Prefer not to say)

41. What is your occupation? (Options: List of occupations or open-ended question)

42. What is your level of education? (Options: List of education levels)

43. In which sector do you work? (Options: Public Sector, Government owned Enterprise, Academia, Private Sector, International Organisations \ Company, Not for-profit organization, Not working)

C. The Interviewees

The interviewees are sorted alphabetically based on their first name.

1 **Dr Abdulrahman Abudabra**

General Manager of the General Administration of Electronic Services, General Authority of Communications, and Informatics, is responsible for Libya Initiative 2014, its applications, and the development of all policies and strategies.

2 **Dr Abdul Raouf Al Bibas**

The former Chairperson of the General Information Authority - GIA, 2011 to 2021, Dr Al Bibas is a professor at the University of Tripoli and ICT expert information technology background. GIA is responsible for implementing the Government's informatic policies, developing and following the national information strategy and developing its procedures and electronic services.

3 **Mr Abdulwahab Shauish**

Mr Abdulwahab Shauish is a commercial expert in strategy management at Libyana Mobile Phone Company. Mr. Shauish is responsible for overseeing the company's commercial operations, including the development and implementation of marketing and sales strategies. He has a deep understanding of the Libyan telecommunications market and is skilled at identifying and capitalizing on market opportunities. He served as the former Commercial Director of the company, and his contributions have helped to establish Libyana as one of the leading telecommunications companies in the country.

4 **Mr Ahmad Hussain**

An independent senior software engineer who led several digitisation efforts within the public and private sectors, Mr Hussain worked as a digital transformation consultant for several government officials in the Government of National Unity.

5 **Mr Amin Saleh**

Mr. Amin Saleh is the Chair of the Libyan Organization for Information Technology and Communications (LOTIC). He is a prominent figure in the Libyan technology industry, with extensive experience in the field of information technology and communications. He works closely with government agencies, private sector companies, and international organizations to foster a supportive environment for the growth and development of the technology industry in the country.

6 **Mr Eiad Baba**

Mr. Eiad Baba is responsible for the Testing Unit under the UNDP Libya organization. In addition to this, he serves as an advocate for the use of technology in the organization's work environment. Mr. Baba has extensive experience in project management, with a focus on developing and implementing innovative solutions to address complex challenges. His work in the Testing Unit involves designing and executing tests to evaluate the effectiveness of various projects and initiatives.

7   Mr Hussain Sa'afi

Mr. Hussain Sa'afi is an advisor for libraries, information, and archiving at the National Oil Corporation in Libya. He is a seasoned professional with a wealth of experience in library and information science and is skilled in developing and implementing information management systems. He is skilled at identifying opportunities for improving the organization's information management practices, and works closely with stakeholders to develop and implement effective solutions

8   MP Khaled Elosta

A computer engineer and ICT expert who worked for the private sectors, led a coalition of ICT companies advocating for digitalisation in Libya; MP Elosta got elected to the Libyan House of Representatives in 2014.

9   Mr Khaled Imbark

Mr. Khaled Imbark is the Director of the Systems and Applications Security and Safety Department at the National Information Security & Safety Authority in Libya. He is an experienced cybersecurity professional with extensive knowledge of information security best practices and industry standards. In his role, Mr. Imbark is responsible for ensuring the security and safety of the organization's systems and applications, protecting against cyber threats, and ensuring compliance with regulations and standards.

10   Mr Magdi Elshebani

Mr Magdi Elshebani is a digital transformation expert and consultant. He has served as a consultant to several official organizations, including the Central Bank of Libya, and is a member of several government committees related to digital transformation. Mr. Elshebani is also the Chairman of the Board of Directors of the Libyan Holding Company for Telecommunications and the current Director of the Libyan Academy for Developing the Technical Skills of Public Sector Employees. His extensive experience in the field of digital transformation has made him a sought-after expert in Libya and beyond. Mr. Elshebani's contributions to the advancement of the technology industry in Libya have been significant, and his leadership and expertise have helped to shape the future of the sector.

11 Mr Mohammed Abdulhadi

Mr Mohammed Abdulhadi is a co-founder and Business Development Manager of Libyan Spider, the leading provider of technology solutions and cloud services in Libya. Mr. Abdulhadi is a highly skilled business professional with extensive experience in sales, marketing, and strategic planning. Under his leadership, Libyan Spider has established itself as the go-to provider of technology solutions and cloud services in Libya, serving clients across various industries

12 Mr Mohammed Elhadi Hassan

Mr. Mohammed Elhadi Hassan is a digital transformation consultant to the Prime Minister's office in Libya. Additionally, he is a business management advisor for Al-Madar Al-Jadeed Mobile Operator and was formerly the Executive Director of the same company. His leadership and expertise have been instrumental in driving the success of Al-Madar Al-Jadeed, and he is widely respected as a thought leader in the industry. Mr. Hassan's contributions to the technology sector in Libya have been significant, and his expertise in digital transformation has helped to shape the future of the industry in the country.

13 Mr Mohammed Tantoush

Mr Mohammed Tantoush is a researcher specializing in public administration and policy. He has written several research papers in this field and is recognized as an expert in his area of expertise. Additionally, Mr. Tantoush has served as a consultant to the Libyan Ministry of Interior, where he advised on policy matters related to the public administration and security sectors. His experience and expertise have made him a valuable asset to the ministry, and his contributions have helped to shape policy decisions and improve public services.

14 Mr Muhammed Tellesy

Mr. Muhammed Tellesy is the Deputy Director of the Electronic Payments Department at the Libyan Islamic Bank. He is a seasoned professional with a wealth of experience in electronic payments and financial technology. Mr. Tellesy's leadership and expertise have been instrumental in driving the success of the Libyan Islamic Bank, and his contributions have helped to establish the bank as a leader in the electronic payments sector in Libya.

15 Mr Musadig Nattah

Mr Musadig Nattah is an Executive Director and Engineer at a leading technology company in Libya. He has extensive experience in providing innovative technology solutions to clients across various industries, including the public sector. Mr. Nattah is a representative of many international leading technology companies, and his expertise in the field has earned him a reputation as a respected professionaly. Mr. Nattah's contributions to the technology industry in Libya have

been significant, and his leadership and technical expertise have played a crucial role in driving the success of his company.

16 **Mr Musa Zoubik**

Mr. Musa Zoubik is the Director of the Private Sector Development and Investment Department at the Ministry of Economy in the Libyan government. In this role, he is responsible for developing policies and programs that promote private sector growth and attract investment to the country. Additionally, he is responsible of many digitalization projects at the ministry.

17 **Mr Munir Eladl**

Mr. Munir Eladl is the Director of the Planning and Projects Department at the General Authority for Information in his home country. He is a seasoned professional with a wealth of experience in strategic planning, project management, and information technology. Mr. Eladl has spent many years working in the public sector, and his expertise has helped to drive the development and implementation of numerous successful IT projects.

18 **Dr Othman Gajiji**

A professor at the University of Tripoli and ICT expert computer engineering background, who worked for both the private and public sectors, and an ICT consultant for several governments, Dr Othman was the first chairperson of the National High Elections Commission after the regime change in 2011.

19 **Mr Usama Siala**

The former Minister of Communications and Information Technology, January 2013 to August 2014. Mr Siala is a telecommunication engineer with 20 years of experience working for international companies in Libya, Schlumberger, Ericsson, and Cisco.

20 **Mr Yaarub F Milad**

Mr. Yaarub F Milad is an experienced professional in the field of information technology with over 12 years of experience in both government and private sectors. He currently works as a project manager at a technology company, where he has been for the past five years. Prior to this, he worked for several years at Al-Madar Al-Jadeed company and has had multiple contracts with the public sector. Throughout his career, Mr. Milad has honed his skills in project management and has gained valuable experience in various aspects of the IT industry.

D. Interviews Transcription

Interview Code 01

الخدمات الحكومية متواضعة جدا، والقطاع الحكومي يمكن وصفه بأنه قطاع يفتقد لرؤية التحول الرقمي، اما بالنسبة للخدمات الرقمية، فجميع الخدمات ليست مبنية على خطط وانما هي خدمات وليدة اللحظة وتتسبب في الكثير من الفساد، والغرض منها ليس بغرض واضح هي فقط خدمات عشوائية تقدّم وتختفي، وبالحديث عن المواطنين فالمواطن سعيد نسبياً، فيمكنه الحصول على المعلومات التي يحتاجها بكل سهولة الان "اون لاين" ولكن وتيرة التطور في بطء شديد، قمت بافتتاح شركة في الولايات المتحدة الامريكية خلال اسبوع واحد فقط، ولم اتعرض لاي مشاكل، في ليبيا اما ان تلجأ للرشوة او ان تستغرق وقت طويل جداً، و هنا نجد الفرق الشاسع، ومثالاً على بطء الوتيرة وضياع الوقت في ليبيا، قطاع تقنية المعلومات لازال يعمل على نفس المشاريع والمقترحات والمبادرات دون كلل او مل وبشكل متكرر ومستمر.

بخصوص تقيم الوضع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا البنية التحتية، من الخطأ ان نتحدث عن ضعف البنية التحتية في عام 2023 خاصةً في الاماكن التي تتواجد فيها الحكومة، فجميعها يتوفر فيها اتصال قوي وخدمات سحابية شبه مجانية، فالجهات الحكومية التي تتحدث عن البنية التحتية فهي تستخدمها كحجة فقط لا غير، القطاع الخاص يسبق القطاع العام من هذه الناحية وحقق تقدم لم تقدمه الجهات الحكومية التي تتحجج بالإمكانيات والميزانيات، القطاع الخاص لديه رؤية واضحة، فالإجابة على سؤالك، البنية التحتية تكفي لتحول المؤسسات رقمياً.

بخصوص مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين، وجهة نظري الشخصية المواطن طالما استطاع ان يستخدم مواقع التواصل الاجتماعي كفيسبوك وإنستغرام فيستطيع ان يتعامل مع البيئة الرقمية، المهم في تقديم الخدمات الرقمية هو التوازن بين اجبار المواطن على استخدام هذه الخدمات وفي ذات الوقت تكون فعلاً تسهّل عليه حياته وتقلل من مشاويره في ابسط الاشياء حتى وإن كان معرفة نتيجة الشهادة الثانوية للطالب، ومثالاً على ذلك تجاوب المواطنين مع الخدمات الرقمية التي تقدمها شركات الاتصالات مثل كيفية الاشتراك وانواع الباقات وغيرها.. وانا ارى ان المواطن طالما استطاع التعامل مع فيسبوك فالخدمات الحكومية تتطلب دراية اقل بكثير فهي محددة وسهلة، ولكن فيسبوك معقد جداً ويوجد به تفاصيل كثيرة أكثر تعقيداً.

بخصوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، لدينا كوادر وقدرات نعم، يوجد قدرات محلية وقدرات مشتركة محلياً ودولياً فيما يتعلق بجانب السوفتوير، ولدينا امثلة على القدرات المشتركة مثل سحابة المدار التي كانت خليط بين كوادر محلية واخرى خارجية وحققت انجاز كبير، جانب الهاردوير لا يوجد به مشاكل ابداً ويعتبر متقدم في ليبيا، ولكن بالنسبة السوفتوير حتى وان تمت الاستعانة بكوادر خارجية فيجب تطوير هذا الجانب محلياً لان دائماً ما يوجد مشاكل مختلفة في كل بلد ولن يستطيع التعامل معها خارجياً مهما كانت مشاكل ليبيا محددة ولكن تبقى دائما هناك مشاكل كل بلد تنفرد بها عن الاخرى، ويجب تحفيز القطاع الخاص واعطائه الثقة للعمل على المشاريع التقنية، فالان اصبح اكبر زبون للقطاع الخاص هو القطاع العام بسبب التعقيدات التي يواجهها موظفي القطاع العام، فالعمل في القطاع الخاص أسهل واسرع، على عكس القطاع العام.

بخصوص الحلو التكنلوجية الناجحة، بعيداً عن خدمات القطاع المصرفي، خدمات الشؤون الاجتماعية "منحة الزوجة والابناء" ولكنها تجارب فردية لا اذكر تجربة كاملة لتقديم شيء من الالف الى الياء اون لاين.

بخصوص وصف دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، تقريباً لأن تجد اي وزارة في ليبيا لا تتحدث عن رغبتها في تقديم مبادرات وخدمات رقمية، ولكن من حيث العمل والتنفيذ لن تجد شيء حقيقي، فجميعها تفتقد الى الرؤية، لا يوجد رؤية واضحة، يطلقون مبادرات عشوائية ليست مبنية على السابق ولا يمكن ان يُبنى عليها مستقبلاً، كل مدير يأتي لا ينظر الى عمل الذي يسبقه وهكذا، تُصرف ميزانيات كبيرة لهذه المبادرات

ولكن دون جدوى لان المشكلة في ليبيا ليست تقنيّة بل ادارية، وللفساد دور اساسي في هذا الشيء فتُصرف ميزانيات هائلة وضخمة لمشاريع مؤقتة.

بخصوص تقيم جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، لا يوجد من يدير التكنولوجيا في هذه المؤسسات، فحتى وان وفرت امكانيات تقنية عالية لا يوجد من يُديرها، وفي حالة أنك وجدت شخصاً يديرها فإن مرض يتوقف كل شيء، قدرة الفريق لدينا لن تستطيع تشغيل مشاريع عملاقة، لذا لا ارى اي موارد والامر لا يتعلق بالمال ابدا.

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، انا لا ارى الوضع السياسي عائق كبير، هو عائق نسبي عند الحديث عن مشاريع توقفت بسبب الحرب او كانت ناقصة لعدم تنفيذها في مناطق النزاعات، ولكن يوجد الكثير من التحجج بهذا الموضوع، والشركات العامة لا تتأثر بالوضع السياسي لان ميزانياتها تُصرف في كل الاحوال، بعض الجهات تستطيع العمل خاصةً الجهات التي تقدم مشاريع استراتيجية "طويلة المدى" ولكن يوجد مشاريع متوقفة لأسباب اعتقد انها سياسية مثل الهوية الليبية الالكترونية، والعائق خاصةً في الجزء الشرقي من البلاد لكثرة الفساد هناك مع احترامي، ويوجد لغط في البيانات لذلك المشروع متوقف الى يومنا هذا.

بخصوص القوانين والتشريعات المتعلقة بالحكومة الالكترونية في ليبيا، يوجد مبادرات ومحاولات سابقة وصلت الى انه تم اصدار لوائح للاعتراف بالبريد الالكتروني، ولكن عند الوصول للقضاء فلا اعتقد ان القضاء سيعترف بأي شيء عدا القانون ولا اعتقد ان القوانين الليبية تم تعديلها على ما اظن، وليست لدي دراية بهذا الجانب، لدينا فجوة كبيرة في القوانين الالكترونية حتى فيما يخص الجرائم الالكترونية، لذلك يوجد تأخر قانوني فيما يخص الجانب التقني والرقمي.

بخصوص، ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، انا على اطلاع بعمل GIZ في مجال التحول الرقمي في ناحية عمل البلديات، كتمكين المواطن من اجراء اجراءاته خارج طرابلس دون الحاجة للقدوم اليها "محاربة اللامركزية"، وايضاً فرنسا لديها مبادرة، ولكنها غير واضحة الى حد الان.

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فليبيا مفتقدة لأصغر الخدمات الالكترونية، لذا فهي ستستفيد من ابسط الخدمات والمبادرات الالكترونية، ليبيا لازالت ورقية 100% لذلك أصبحنا متأخرين حتى عن أصغر الدول العربية، لذلك الخدمات الالكترونية ستوفر الوقت والجهد والكثير من الفوائد غيرها حتى من الناحية الاقتصادية.

بخصوص سهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، ارى ان الوصول لهذه الخدمات سهل، وانا ضد من يدّعي ان المواطنين يواجهون تحديات للوصول او استعمال التكنولوجيا، ليبيا غالبيتها شباب، وحتى المسنين قلة قليلة جداً منهم تعاني من الأميّة، على الصعيد الشخصي والداي يستعملان الخدمات الحكومية الالكترونية ولا يواجهون صعوبة بها، ولكن الفكرة هي انه لا يوجد خدمة الالكترونية متكاملة حتى الان.

انا اعترض مع من يدّعون ان المواطنين يواجهون صعوبة في استخدام التقنية لأنه ان لم تُقدم من قبل اي خدمة الكترونية 100% فلن تستطيع معرفة مدى سهولة وصول المواطنين لهذه الخدمات الى ان تقدم.

بخصوص أثر الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين وثقة المواطنين في الخدمات الحكومية، في طرابلس وبنغازي هؤلاء اساساً يستخدمون التكنولوجيا، الادارة والموظفين هم من ينفّرون الناس من التقنية، مثال "المنظومة متوقفة" وفي غالبية الوقت المنظومة تعمل بشكل طبيعي، ولكن لكي ينفّروا الناس من التقنية بشكل عام وتفضل المعاملات الورقية.

بخصوص اصحاب المصلحة، يوجد في كل مؤسسة اشخاص تريد ان تحدث تغيير وتقدم شيء، ولكن لا يتمكنون من احداث شيء غير العمل بجد وبنية خالصة فقط، هذا ما يستطيعون تقديمه، فلا يوجد سطوة ادارية، بمعنى انه لا يوجد قدرة تأثيرية من الادارية على الموظفين.

في ليبيا يوجد مال وكوادر وكل الامكانيات، ولكن لا يوجد ادارة موحدة تغطي هذه المشاريع، يوجد مبادرات قائمة كمبادرة الهيئة العامة للمعلومات في قيامها بمشروع الهوية الليبية الالكترونية، ويوجد عدة محاولات في عدة جهات اخرى، ولكنها مشاريع وخدمات متفرقة وعشوائية دون ادارة موحدة.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، الحكومة ليس لديها ارقام، لكي ترى اي دولة بصورة كاملة يجب ان يكون لديك معلومات دقيقة، والهوية الالكترونية ليست ميزة عشوائية، هي عبارة عن مجموعة من المعلومات عن الشخص على ضوءها يمكن الحصول على استفادة كبيرة جدا، وتمكنك من التأكد من تعداد المواطنين وتسهّل لهم اي اجراء الكتروني، اما العوائق فأنا لا ارى اي عوائق حقيقية، ولكن غياب الارادة يعتبر عائق، وايضاً لا يوجد رؤية موحدة وثابتة وواضحة.

انا ارى ان الرؤية شيء مهم جداً في تحقيق التطور التقني، والادارة المستقرة ايضاً تساعد على التخطيط الواضح دون العمل بطريقة تراكمية .

Interview Code 02

بخصوص تقيم الوضع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا البنية التحتية من ناحية فنية تعتبر معقولة خاصــه من تجربتنا في الهيئة العامة للمعلومات، في اخر ســنة عندما بدأنا العمل على التحول الرقمي، الموضـــوع جديد في ليبيا، لذلك قمنا بمقارنة ليبيا مع دولة اخرى ووجدنا ان البنية التحتية جيدة الى حد ما ويمكننا البدء في التحول الرقمي في ليبيا.

كمثال قاعدة البيانات الوطنية التابعة للهيئة العامة للمعلومات، مربوطة مع عدة قواعد بيانات وان كانت غير مباشرة، فهي مربوطة مع خدمات كمنحة الزوجة، منحة الابناء ومنحة الزواج، الاشــكال يكمن في القيادات الموجودة في الهيئة العامة للمعلومات خاصــة فيما يتعلق بالميزانيات اللازمة للتحول الرقمي وتطوير البنية التحتية، لان التطوير ضروري بشكل دوري مع ضمان الاستمرارية، وهذا ما نفتقر في ليبيا خاصه بما يتعلق بتنظيم الاولويات.

الامر لا ينحصــر فقط في الهيئة العامة للمعلومات، فهو امر تكاملي فنحن في حاجة لتكافل كافة المؤســســات للعمل سويا لتوفير ببيئة تكنولوجية مناسبة لتوفير الخدمات.

بخصــوص مســتوى الإلمام بتكنولوجيا المعلومات والاتصــالات بين موظفي القطاع العام والمواطنين، في بعض الامور فرضت على الموظفين فرض من ناحية التكنولوجيا، فالكثير من التكنولوجيا تعلمناها بدون رؤية مؤسستيه، فكلها للتماشـي مع لوازم العصــر والخدمات الموفرة. نحن في عام 2023، معارف كثيره معنيه بالتكنولوجية واستخدام الحاسـوب من المفترض اننا متجاوزيها منذ سـنين، لكن للأسـف القصـور موجود من ناحية اسـتخدام التكنولوجيا خاصــه منها من ناحية الموظفين، لكن نحن في الهيئة العامة للمعلومات نقوم بتوعية وتدريب الموظفين للتماشي مع متطلبات العصر.

بالنسـبة للمواطنين، نحن حاليا في حالة التخطيط للمسـح الوطني الرقمي لقياس محوي الامية الوطنية على الصـعيد الوطني. اما بالنسبة للمؤسسات الاخرى قد تجد قصور في الالمام بالتكنولوجيا من ناحية القيادات والموظفين، وهذا جزء من مسارات مقترح الاستراتيجية الوطنية للتحول الرقمي للعمل على محي الامية الرقمية.

بخصــوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، في مســتوى البرمجيات على الصعيد الحكومي، تجد عبثية من ناحية تراخيص البرمجيات وتحديثها وامكانية الربط مع المؤسسات الاخرى، مما يعكس عدم اهتمام هذه المؤسســات بالتكنولوجيا، خاصــه المؤسسات ذات التخصص لا التكنولوجي. في 2023 مع توجه حكومة الوحدة الوطنية مع الهيئة العامة للمعلومات تم الفرض على بعض الجهات المهمة بالربط مع الهيئة العامة للمعلومات لتحديث بنيتها التحتية، لكن فقط وفقط الطلب وليس ضمن استراتيجية وطنية.

بخصوص الحلو التكنولوجية الناجحة فعلى سبيل المثال، منحة الزوجة والبنات، تعتبر من الخدمات الناجحة خاصـه كونها بالشراكة مع القطاع الخاص، في السابق خدمة مشابهة تحتاج لأيام لإتمام المعاملات، اما اليوم فهي فورية عن طريق الرسـائل القصـيرة، بإرسـال بعض البيانات، حيث يقتصـر دور المواطن فقط للذهاب للبلدية لاستلام المنحة. كذلك انتخابات برلمان الشباب تمت عن طريق الرسائل القصيرة .

نجاح هذه الخدمات كان بســبب ربطها بقاعدة الرقم الوطني، والهوية الوطنية الرقمية للمواطن، وجود شــبه هوية رقمية للمواطن، صــحيح انها غير متكاملة بعد، لكن من خلالها نحاول تقديم بهندســة بعض الاجراءات لتوفير الخدمات مع الجهات ذات العلاقة. حيث قمنا بالربط مع عدد 21 مؤسسة وطنية او وزارة لتقديم الخدمات للمواطنين بمختلف القطاعات.

في سنة 2022 عملنا على قياس مؤشـر نضـوج الخدمات الحكومية الالكترونية والنقالة من قبل لجنة الأمم المتحدة الاقتصـادية والاجتماعية لغرب آسـيا لتقيم التحول الرقمي في العالم العربي، حيث كانت اول تجربة لتقيم دولة ليبيا، وكان ترتيب ليبيا الترتيب ما قبل الاخير، لإجحافنا في التقييم الذاتي، كونها تجربة جديدة، كذلك واجهنا اشـكال في عدم تعاون بعض المؤسسات المستهدفة في القياس، الان نعمل على تحسين القياس لسنة 2023.

بخصوص وصف دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، أكبر تحدي للإصلاح والتطوير هو اقتناع القيادات داخل المؤسسـات. فور اقتناع القيادة يسـهل تطوير وتنفيذ المشـاريع المختلفة. فاقتناع اصحاب المصلحة والقيادات العليا يساعد في تسهيل ودعم تبني التحول الرقمي في القطاعات والادارات الوسطى .

مثال على دعم القيادات، فبسبب الانقسام السياسي في دولة ليبيا وغياب الجسم التشريعي والتشريعات اللازمة لدعم التحول الرقمي، قامت قيادة الجديدة الهيئة العامة للمعلومات بالمبادرة بتغطية الفجوة بإصـدار سـياسـات تنظيمية واعداد اتفاقيات بين المؤسسـات المختلفة لتأطير العمل. وهذا الامر يحسب لقيادة الهيئة العامة للمعلومات. ومنها سياسـة البيانات الحكومية، قانون المعاملات الإلكترونية، قانون الجرائم الالكترونية. هذا فقط داخل المؤسسات ذات العلاقة بالتكنولوجيا.

لكن خارج المؤسسـات ذات العلاقة بالتكنولوجيا، فالأمر أصـعب ويحتاج الكثير من الاقناع، للقيادات وضـرورة ايمانهم بفائدة التكنولوجيا لتطوير خدماتها وتسهيل الامر للمواطنين.

بخصـوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية، فقط الميزانيات البسـيطة، لكن الاشـكال كبير وذلك في تأخر الميزانيات، في الهيئة العامة للمعلومات 25 مشـروع ذو علاقة للتحول الرقمي لسنة 2023، متوقفة بسبب تأخر تسيل الميزانيات اللازمة. خاصة نحن في بداية التحول، لأننا في حاجه لتوفير العديد من الموارد البشرية والتكنولوجي.

للأسف لا يوجد عدد كافي من الموارد البشرية في ليبيا لتلبية متطلبات التحول الرقمي، خاصة في القطاع العام وذلك لضـعف المردود المالي. فعند قياس التحول الرقمي ومقارنته بين القطاع العام والخاص، تجد ان القطاع الخاص متقدم، لأدارته لموارده المالية بشكل حسن. فأحدى الاشكاليات المتعلقة بالموارد البشرية هو تسرب الموظفين للقطاع الخاص بسبب الحوافز المقدمة من القطاع الخاص. فعلى الحكومة معاملة الفنيين وذوي الاختصـاصات الدقيقة بشكل خاصة من ناحية المكافأة المالية لضمان تواجدهم واستمراريتهم في القطاع العام.

بخصـوص تقيم جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، فالجاهزية نفسـية فقط، الرغبة موجودة، لكن لا مشاريع حقيقية، خاصة من ناحية تدريب الموظفين وتهيئتهم للتحول الرقمي. فكل التدريبات الحالية تدريبات كلاسـيكية غير مختصـة ولا تناسـب متطلبات التحول الرقمي، ناهيك عن كونها قديمة وتركز فقط على الجانب الفني ولا تعير اهتمام للجانب السلوكي. بالإضافة لنقص المعرفة الذاتية والتنمية الذاتية للموظفين.

بخصوص تأثير الاسـتقرار السـياسـي أو عدم الاسـتقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، فنحن لم نعمل جديا على مشاريع التحول الرقمي حتى سنة 2022، بعد الاتفاق السياسي وحكومة الوحدة الوطنية، فكل هذه المفاهيم لم تكن اولوية سابقا خاصة مع غياب القوانين والتشريعات.

سنة 2022 اصدرت الحكومة عدت سياسات تدفع نحو التحول الرقمي، خاصه مع الاستقرار السياسي وانعكاسه على المؤسسات الحكومية، ومع استمرار الاستقرار ستحسن الوضع على مدى طويل.

بخصــوص القوانين والتشــريعات المتعلقة بالحكومة الالكترونية في ليبيا، فالاســتراتيجية الوطنية للتحول الرقمي المقترحة من قبل الهيئة العامة للمعلومات مع اصحاب المصلحة، بالإضافة لدفع الحكومة لمشــاريع التحول الرقمي الذي نلمســه في قبول الحكومة للمشــاريع التي نقوم بالمبادرة بها وتعاونها. في الاستراتيجية تجد مقترح للتشــريعات الناقصة والتي سيتم العمل عليها خلال الاعوام القادمة.

ومن المشاريع الحالية التي نعمل عليها حاليا هو مشروع اكس رود المطبق في استونيا، فنحن اقترحنا هذا المشروع للتبادل البيني للبيانات الحكومية في ليبيا، مما يعززه هو الاســتراتيجية الوطنية للتحول الرقمي وســياســات تبادل البيانات.

بخصوص، ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فلدينا شــراكات مع لجنة الأمم المتحدة الاقتصــادية والاجتماعية لغرب آسيا، خبراء فرنسا، ووكالة تايكس التابعة للاتحاد الاوروبي، بالإضــافة لعدة وكالات اخرى تابعة للأمم المتحدة في ليبيا. اهم هذه المؤســسات هي لجنة الأمم المتحدة الاقتصــادية والاجتماعية لغرب آسيا التي اصدرنا معها مقترح الاستراتيجية الوطنية وعدة سياسات اخرى. كما قمنا بالتعرف زيارات تعليمية لعدة دول رائدة في مجال التحول الرقمي.

بخصــوص الفوائد المتصــورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فالموظف ضــروري يقتنع بفوائد التحول الرقمي وعكس هذه الفائدة على الموظفين بشــكل مباشــر، فقمنا داخل الهيئة العامة للمعلومات على ســبيل المثال على العمل لتطوير تجربة أفضــل للموظفين وكانت البداية بربط المنظومات الحالية وتطوير ERP System وحاليا نقوم بالعمل على تبني هذا النظام. فبمجرد استفادة الموظف من التحول الرقمي، فهذا ينعكس على تبنيه التحول الرقمي.

اما بخصــوص المواطن، فالمواطن ســعيد بتســهيل الخدمات واتاحتها بأكثر من طريقة. حاليا الخدمات الحكومية الإلكترونية عددها 84 خدمة، ومقدمة بعدة طرق، للمواطنين، ومتابعة تعليقات المواطنين ورضــاهم على هذه الخدمات.

بخصوص سهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، فالإنترنت متاح في المدن الاساسية، بعض المناطق قد تعاني من الوصــول للأنترنت، وفي بعض الاحيان هو عدم درايتهم بإمكانية الوصــول للخدمة الكترونيا، مما يدفع المؤســسات على تقديم هذه الخدمات بشــكل يواكب معايير التحول الرقمي والوصــول للجميع. المواطن متلقي ويتمنى دايما توفر هذه الخدمات.

بخصــوص أثر الأعراف المجتمعية والاقران والرؤســاء على تبني واســتخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين وثقة المواطنين في الخدمات الحكومية، فعندما تبدأ الخدمة من المواطن وتنهي عند المواطن فسيثق بها، قبل 2020 المواطن لا يثق ابدا في هذه الخدمات، لكن بعد توفر الخدمات ورضاه عليها زادت ثقته فيها. ولا اعتقد ان العرف الاجتماعي يؤثر ابدا على تبني هذه الخدمات من المواطنين.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال، فداخل الهيئة العامة للمعلومات لدينا تدريبات تتماشى مع مقترح الاستراتيجية الوطنية للتحول الرقمي، لأدراج العديد من التدريبات ذات العلاقة بالتحول الرقمي، وكذلك الجوانب الفنية المتخصــصــة، كذلك في مجال التدقيق المختص للتحول الرقمي. التمكين القانوني والتكنولوجي امر مهم لضمان التحول الرقمي .

بخصوص مبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا، فبالتنسيق مع عدد من اصحاب المصلحة قمنا بأطلاق منصة المشتريات الحكومية ونعم على تمكينها مع نهاية العام الحالي.

بخصوص تقاطع الاختصاصات بين الهيئات في ليبيا، ولما له علاقة باستراتيجية التحول الرقمي، تمثيل الصفات داخل اللجنة الوطنية للتحول الرقمي ممتاز، لكن الانسجام بين اعضاء اللجنة مع اختلاف خلفياتهم قد يسبب اشكالية، ونجاح اللجنة الحالية ميسرة بسبب وجودة القيادات الحالية، مستقبلا لو تم تغير الاشخاص مستقبلا قد يسبب اشكاليات، فلهذا يجب الاسراع في اعتماد الاستراتيجية الوطنية للتحول الرقمي لضمان التوافق بين المؤسسات خاصة مع غياب المؤسسة الوطنية المختصة بالقانون في مجال التحول الرقمي. اشكال تقاطع الاختصاصات بين الهيئات في ليبيا، هذا امر كلاسيكي وفي جل المؤسسات الحكومية في ليبيا للأسف.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدوافع، فهي كثيره اهمها مواكبة التحول الرقمي في العالم، كون التحول الرقمي يعتبر السهل الممكن، خاصه مع الاطلاع على تجارب دول الجوار. اما الدافع الاهم حاليا هو التوجه السياسي للحكومة وهدفها اكتساب ود وثقة المواطنين لدواعي انتخابية، ايضا الواقع يتطلب تبني الخدمات الإلكترونية.

اما بخصوص العوائق، هو غياب التكاملية بين المؤسسات الحكومية، الاستحواذ وملكية البيانات بين المؤسسات وامكانية تداولها بين المؤسسات. بالإضافة لمهارات الموظفين وخاصة القيادات منها في مجال التحول الرقمي، بالإضافة لتأثير الاستقرار السياسي وانعكاسه على استقرار المؤسسات. بالإضافة لتضارب الاختصاصات وتقاطعها بين اصحاب المصلحة.

Interview Code 03

بخصـــوص تقيم الوضـــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـــالات في ليبيا، لا ســـيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فبصـــفة عامة يكون اسـتخدام التقنية للمواطن البسـيط اسـتخدام طبيعي مع وجود عراقيل كثيرة، والتي ربما أن تكون من الأسـباب التي تسـاهم في عرقلة العمل بشـكل كبير وتؤثر حتى على العامل النفسي، ذلك لوجود العديد من المشاكل منها صعوبة الحصول على إشارة الشبكة في كل مكان، أيضًا انقطاع التيار الكهربائي والذي بدوره يسـاهم في تذبذب الخدمة، وحتى في ظل وجود إشـارة الشـبكة بشـكل كامل إلا أنه ينتابني الخوف من ممارسـة بعض الانشـطة مثل "الاجتماع أو التدريب عن بعد" والتي تتطلب اتصـال جيد بالإنترنت ذلك خوفًا من أن يحدث اي انقطاع مفاجئ. وبالتالي نجد هنا أن المشـــكلة تكمن في الثقة في الشـــبكة والبنية التحتية بحد ذاتها وأنها تعتبر إحدى العراقيل الأساسية التي تعيق قطاع التكنولوجيا بشكل كامل.

أما فيما يتعلق باسـتخدام التكنولوجيا في تقديم الخدمات والإدارة العامة نجد أن القطاع المصرفي يواجه تحديات كبيرة رغم وجود البنوك التي واكبت التطور في هذا المجال وسـاهمت في تقديم خدمـات وتطبيقات للمواطنين تلبي الاحتياج، لكن وفي نفس التوقيت نجد ان هناك مجموعة من البنوك تعاني من انقطاع الخدمات ذلك نتيجة لانقطاع الإنترنت ووجود اشكاليات في البنية التحتية.

نجد أيضًا أن الخدمات العامة التي تقدم من قبل الدولة ويتعامل معها المواطن بشـكل يومي مثل الخدمات المصـرفية سـالفة الذكر أو الخدمات المقدمة من قبل البلديات مثل الأوراق المدنية وغيرها فيما يتعلق بخدمات الضـرائب والتسـجيل، أيضًـا الخدمات المتعلقة بالنظام التعليمي أو الخدمات الصـحية نجد ان العامل المشـترك الذي يعيق تقديم هذه الخدمات هو غياب البنية التحتية بحيث لا يوجد نظام متكامل يوفر تقديم هذه الخدمات بشـكل صـحيح، وحتى في ظل وجود بعض الانظمة الرقمية في بعض الجهات إلا أن هذه الانظمة لا تسـتطيع تقديم الخدمات بشـكل متكامل بل أن بعضـها مقتصـر بداية العملية لا غير، وبحكم خبرتي ومعرفتي بهذا الجانب أعرف أنهم يواجهون إشـكالية كبيرة ذلك لقلة معرفتهم ودرايتهم بالأمن السـيبراني وقلة الخبرة والمعرفة في التعامل مع البنية التحتية المنصـبة مثل نظم أرشفة المعلومات ومراكز البيانات، وبحكم عملي سابقًا مع الهيئة العامة للمعلومات وهيئة الإحصاء والتعداد وغيرها من المؤسسات وجدت أن بعض منها لا يملك البنية التحتية التي تلبي عمل هذه المؤسسات.

ومن هنا أعتقد أن التعبير المناسب بخصوص البنية التحتية أنها منهارة وتعاني من قلة التنظيم وحتى المؤسسات التي يوجد بها بعض الأنظمة فما هيا إلا نتيجة مبادرات شـخصـية من قبل بعض الأفراد، دون وجود عمل منظم من قبل الدولة للتوجه إلى الحوكمة الإلكترونية وبالتالي يكون الموجود ماهية إلا عبارة عن طفرات غير منظمة ومتكاملة وبنقصها البنية التحتية السليمة والتشريع الحكومي.

بخصـــوص مسـتوى الإلمام بتكنولوجيا المعلومات والاتصـــالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فهناك جانبين للخوض في هذا الموضوع:

مقارنة المجتمع على مواقع التواصـل الاجتماعي مع العمل في القطاع الخاص، وهذا بدوره يوضــح لنا أنه لدينا ما يكفي من الموارد البشرية التي تحتاج للتطوير لكنها تكفي للانطلاق والبدء في العمل.

الأمية الرقمية لدى صــناع القرار وقلة وعيهم بأهمية التحول الرقمي، أما فيما يتعلق بالمواطنين نجد أنه وفقًا لتقدير الجهات الرسـمية في الدولة أن من 30% إلى 40% من عامة الناس لديهم القابلية والقدرة على اسـتخدام التكنولوجيا، لتكون المشكلة في الفئات الأكبر سنًا وغياب الوعي التقني لديهم وهذا بدوره يمكن استدراكه ومعالجته لتبقى الصعوبة في استدراك ومعالجة غياب الوعي لدى صناع القرار وهذا من أكبر التحديات التي نواجهها.

بخصــوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، ففكرة تبني القطاع العام اساسـا للخدمات الالكترونية تحتاج أكثر من الجانب التقني، لكن عند الاطلاع لمؤسـسـات القطاع الخاص من مستشفيات ومصـانع وبعض المصـارف، فجميعا يستخدم البرمجيات الخاصـة بتنظيم الموارد البشرية، المشتريات وسـلاسـل التوريد، وقصـص النجاح حققها القطاع الخاص وهذه يمكن ان تنعكس في القطاع العام بسـهولة. وللقطاع العام القدرة لاستعانة بخبرات القطاع الخاص وخدماته بما لديه من كفاءات محلية او اجنبية.

الاشكال الرئيس في القطاع العام هو المشكل الاداري، والتعقيدات الادارية كون النظام العام مشوه مما يجعل تبني اسـتراتيجيات التحول الرقمي مسـتحيلة. كون فكرة الادارة التقليدية وعدم التحلي بمبادي الادارة العامة الجديدة، فالقطاع العام لا يمكنه تنفيذ هذه المشـاريع، بسـبب ضـعف الموارد البشـرية والكفاءات، مع غياب السـياسـات والاجراءات الداخلية، فبشكل عام نحن في ليبيا تجاوزنا فكرة ان القطاع العام يمكنه ان يصلح نفسه بنفسه. وهذا ما اكدته تقارير الشركات الاستشارية الدولية سنوات 2007 و 2008 الاستعانة بمايكل بورتر وشركة مونيتر قروب وشركة ادم سميث وماكينزي، حيث كان التوجه لخلق مؤسـسـة جديدة عليا تشـرف على الاصـلاح في القطاع العام، ومن هنا اتت فكرة انشاء مجلس تطوير اقتصادي والاجتماعي، وايضـا الاشكال ان ارتباط اصـالح القطاع العام في ليبيا مربوط بإصـلاح الانظمة العليا كالأجهزة التشـريعية، كل هذا كان سـنة 2008، واليوم في سـنة 2023، عدد موظفي القطاع العام تزايد بشكل مضاعف والمؤسسات ايضا، مما يصعب عملية الاصلاح بشكل عام ويجعله اكثر تعقيدا. لهذا القطاع العام لا يمكن اصـلاح نفسه، ولهذا يحتاج الى تشـريعات مواكبه والى جهات استشارية والتعاون مع القطاع الخاص بالإضافة لجهات من القطاع الخاص لبناء البنية التحتية الصلبة والبرمجية .

بخصـوص عملية outsourcing من عدمها وتأثيراتها طويلة المدى، فانا من أنصـار فكرة ان كل دولة في العادة يكون لها سـياقها الخاص، وعليها تقيم ذاتها البحث عن الانسـب لها، لكن بشـكل عام ان الخدمات باختلافها وتنوعاه وتعقيدها هي التي تحكم بخصـوصoutsourcing ، وفي وجهة نظري ان القطاع العام لا يمكنه تنفيذ اي من هذه البرامج، خاصـة بلقة الموارد البشرية وانتشـار الفسـاد. اما المشـاريع التي كانت بالشـراكة مع القطاع الخاص سابقا وفشـلت فلا يمكن ربط الفشـل فقط في ضـعف القطاع الخاص، بل اكيد لأسـباب اخرى منها ضـعف اجراءات المشتريات، او في فكرة تصميم المشروع ذاته، والعديد من المشاريع من البداية تصمم لتفشل او تصمم لأجل الفساد المالي مع ضـعف في المتابعة وغياب الاسـتدامة خاصـة مع لائحة التعاقدات الحكومية الليبي فهي بالكامل لصـالح القطاع العام.

مبدئيا القانون لا يختلف بخصـوص عمليات توريد التكنولوجيا وغيرها من عمليات التوريد الكلاسـيكية، وللأسـف السياسات واللوائح غير مواكبة لتطورات العصر، والمضحك ان فقط من سنتين تم اعتماد استخدام البريد الإلكتروني كدليل في التعاملات الادارية الحكومية. فالتشـريعات بشـكل عام غير صـــديقة للتقنية، مما يعدينا لفكر لو كانت المشاريع مصممة بشكل حسن من قبل القطاع العام، لتمكن القطاع الخاص من النجاح في تنفيذها. فعلى سبيل المثال من سنتين قامة حكومة الوحدة الوطنية بتوقيع عقد لأطلاق مركز بيانات وطني للحكومة الليبية بإشراف الهيئة العامة للمعلومات، للأسف تم التعاقد مع شركة لا تملك اي خبرة في المجال ولليوم لم يتم تنفيذ اي جزء من هذا المشرع.

بخصوص الابتكارات الحكومية الناجحة، اعتقد ان في مؤسسات مختلفة مثل بعض الجامعات العامة، كان لها بعض الانظمة المعقولة، مؤخرا لدي بعض التواصل مع الجامعة المفتوحة التي تمتلك المنظومة بسيطة وربما اذ كان هناك شخصية متخصصة لتقيمها ستجد العديد من الاخطاء والاشكاليات من ناحية الامن السيراني، لكن انا كمستخدم اجدها سهله وسلسة في الاستخدام وناجحة في توفير الخدمة المطلوبة منها. وحليا ضمن تجربتي مع السفارة الليبية في لندن في بعض المنظومات الموفرة من قبل الحكومة جيدة كالاستعلام عن بيانات السجل المدني ومنظومة الرقم الوطني، للأسف الاستعانة بالورق موجود في هذه المنظومات فهي غير متكامل.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، مشكلة القيادات مشكلة عامة خاصه مع انتشار الفساد في البلاد وهذا يعتبر من اهم العوائق اتجاه التحول الرقمي كون استخدام التكنولوجيا يساهم في رفع الشفافية والمتابعة والمحاسبة مما يقفل ابواب الفساد لعدد من هذه القيادات. رغم ذلك هناك بعض المبادرات التي يتم العمل عليها على صـــعيد الحكومة مثل منظومة العطاءات العمومية بقيادة حكومة الوحدة الوطنية ودفع من ديوان المحاسبة، إطلاق هكذا منصة يعني وعي القيادات بأهمية التكنولوجيا وضرورة تبني هذه الخدمات. ايضا بدافع من ديوان المحاسبة، يتم العمل حاليا على منظومة الامداد الطبي، كونه من أكبر ابواب الفساد في قطاع الصحة،

حيث يتم اسـتيراد المعدات الطبية والادوية باعتمادات مسـتندية تصـل للمليارات ثم تختفي، ولا تجد لها اي أثر في المراكز الصحية او المستشفيات. وهنا نجد ان المبادرة كانت من قبل المؤسسة الرقابية الرسمية المتمثل في ديوان المحاسبة وتفاعلت معها الحكومة.

بشكل عام الكثير من المشاريع نجاحها او فشلها مربوط في السياسات القائمة عليها، فهي مبنية في العادة على ثلاث جوانب، جانب السياسة كفكرة، السياسة كالبرنامج، وتنفيذ هذه السياسة، وكل مرحلة قد تتعرض لمشاكل في التصميم مما يؤثر على المخرج العام مرفقة بعمليات للتبع والمراجعة وهذا يعتبر من اهم المشاكل في عمليات التحول الرقمي في القطاع العام في ليبيا.

في تجربة اخرى نجد ان المؤسسـات الامنية لديها تسـتخدم التكنولوجيا بشكل كبير، فمنها مثلا النائب العام ووزارة الداخلية، رغم أن بعض الانظمة التي اشتغلت عليها بصـفتي مستشـارا في وزارة الداخلية، لم تكلل بالنجاح، حينها كان لدينا مشـروعان حيز التنفيذ، نظام تتبع المركبات وتطبيق بوابة الداخلية، فالتطبيق فشـل ذريع من ناحية تجربة المستعد، اما بخصوص نظام تتبع المركبات فكان جيد لكنهم اوقفوه بعد تغير القيادة بالوزارة.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، طالما ما تتغير التشريعات التنظيمية، ولم يستفق صناع القرار من السلطة تنفيذية حاليا أو مستقبلا وايضا السلطة التشريعية لضرورة اصلاح القطاع العام عموما، فلن يكون هناك تجوه كلي متكامل نحو التحول الرقمي او استخدام الحوكمة الكترونية.

وبالتالي سيستمر الامر بالوضع الحالي ومرتبط فقط ببعض الطفرات المرتبطة بالمبادرات الداخلية، او الناتجة عن سبب صفقة معينة، وفي بعض الاحيان تنجح هذه المبادرات بسبب وجود منظمة دولية خلفها التي تلزم الدولة ببعض الاصـلاحات مثل ما حدث في القطاعات الامنية والعدل او القطاعات المصرفية، او افي احيان اخرى تدعمها جهات دولية ماليا وفنيا.

كل هذا لن يسـاعد في الاصلاح العام، وذلك بسبب غياب الاسـاسـات التنظيمية للإدارة العامة في ليبيا، فبعد الانتهاء من ذلك يمكنك استخدام افكار التحول الرقمي، او يمكن العمل بشكل متوازي، او في بعض الاحيان استخدام الحوكمة الالكترونية كأداة الإصـلاح او التوجه الرئيسـي للإصـلاح، مثلا Reforming Public Administration بعد الاطلاع على الانظمة الادارة المخلفة، مثل الادارة العامة الجديدة و New Liberal State او الحوكمة الالكترونية، وهي تأتي كمثال لواحدة من نظريات اصلاح القطاع العام أو التوجهات او انواع الادارة.

بخصـوص لموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكتروني، طبعا، الموارد المالية موجودة وهذا اهم شيء، وبخصوص الموارد البشرية فيوجد ما يكفي منها كذلك بخصوص امكانيات القطاع الخاص، التي يمكنها اتمام الشراكات مع القطاع العام والشركات الدولية لإتمام هذا التحول. ومثال على ذلك

هو ارباح قطاع الاتصالات التي يمكنها تغطية كل هذه المشاريع، ولكن للأسف يتم استخدامها لتمويل مشاريع ليست ذات جدوى، ما ينقصنا هو الارادة والقرار.

بخصوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، الوضع الحالي، الوضع السياسي غير مستقر، فالحكومة تشعر بالتهديد في استمراريتها ولديها حالة من عدم اليقين بخصوص مستقبلها وبالتالي تتمركز اولوياتها حاليا حول الجانب السياسي، من دون الاكتراث للمخططات طويلة المدى غير المرئية وتعمل أكثر فيما يعزز مصداقيتها

ويحسن صورتها لأجل الانتخابات، مشاريع مثل مشاريع الطرق او المنح المالية، وان كانت المشروع له علاقة بالتحول الرقمي فهو يقف في حلفة الاطلاق والضجة الاعلامية.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، نعم.

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، لا يمكنني الاجابة بإجابة كاملة لان احيانا التشريع الليبي يبهرك، ولكن بعض الدراسات التي قرأتها، تفيد ان التشريع الحالي مليء بالعيوب والنواقص، وكما اردفت سالفا، ففكرة استخدام البريد الالكتروني في المراسلات لم تدخل حيز التنفيذ قانونيا الا مؤخرا. تخيل ان لأرسال مراسلة لسفارة ليبية في الخارج، يتم الاستعانة بحامل حقيبة دبلوماسية، الامر مثله بخصوص التوقيع الإلكتروني.

لكن من معرفتي بخصوص السياق الحوكمة الالكترونية فالإطار التشريعي تنقصه الكثير من الجوانب، سواء ما يتعلق بحماية الأمن السيبراني، وحماية المستخدم وحماية مقدم الخدمة وحماية ما يتعلق بالعطاءات المتعلقة بالمشاريع التقنية.

بخصوص اذ كانت هناك أي ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فمثل هذه المبادرات التي كنت جزء منها كانت مبادرة دارتها ال IOM مع وزارة العمل الليبية بدايتها كانت في سنة 2019 كانت تقريبا تحت اسم نظام معلومات السوق العمل الليبي وكان المشروع نتيجة دراسة من قبل Think Tanks الدولية، واعتقد انها دخلت في حيز التنفيذ.

المبادرات الثانية، عندي دراية ان جزء من مبادرات التحول التي تبناها مصرف ليبيا المركزي من 2011 او 2010 كانت بضغط دولي يتعلق بضرورة تبني دليل حوكمة داخلي والامر ذاته كان له علاقة بمسألة تصنيف ليبيا في القوائم الرمادية الخاصة بغسيل الأموال وتمويل الارهاب، اعتقد ان جزء منه كان في منظومات موجودة ليها علاقة بمشاريع قديمة.

مثلا في القطاع الامني، عندما انتشر تنظيم داعش في ليبيا، تم فرض بعض المنظومات حيز التنفيذ بضغط أمريكي وزادت نقطة تفتيش في مطار معيتيقة ومصراته، حيث تم تزويد هذه المنظومات من قبل الخارجية الامريكية بالتنسيق مع الإنتربول والامر ذاته مع وزارة العدل بخصوص المطلوبين الدوليين وجرائم حرب.

ايضا عند الاطلاع على الخطة الاستراتيجية ل ديوان المحاسبة، تجده في المجمل استجابة والتزام للتماشي مع هذه الضغوطات الدولية.

بخصــوص تأثير الأعراف المجتمعية والاقران والرؤســاء على تبني واســتخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، فالقاعدة الاجتماعية تأثر على الادارة العامة ككل، ســواء فيما يتعلق بالمؤســسات غير الرســمية مثل القبائل والعلاقات الاجتماعية أو المليشــيات، بشــكل عام لو كانت هناك خدمات ملزمة، فاغلب المواطنين يســتخدمونها، الاثر الاجتماعي الوحيد هنا هو توجه البعض لأقربائهم العاملين في هذه الجهات بشــكل تقليدي لإتمام المعاملة، واعتقد ان هذا التجاوز الوحيد الذي قد يؤثر على التحول الرقمي.

بخصــوص اذ كان هناك مجموعات أو أفراد معينون داخل الحكومة أو المجتمع يعملون كمدافعين عن مبادرات الحكومة الإلكترونية في ليبيا، حاليا اعتقد ان الجهة المكلفة اخيرا بموضــوع التحول الرقمي هي الشــركة القابضــة للاتصالات واستراتيجيتها المعنية بالدولة الذكية، اما الهيئة العامة للمعلومات مهمشة بشكل او اخر.

اي مبادرة في ليبيا، لها علاقة بالتحول الرقمي او اصــلاح الادارة العامة لم تســتوعب فكرة اشــراك المجتمع المدني وكافة اصــحاب المصــلحة في بيئة بها الكثير من الفساد مثل ليبيا ستفشل. بخصــوص تقاطع الاختصــاصــات بين المؤسسات والهيئات، فعلميا وتقنيا لا اشكال حقيقي، خاصة مع كبر المشاريع وصعوبة وضعها جميعا تحت مؤسسة واحدة. ومثلا على ذلك هو الجانب الامني، طبيعي ان تكون في أكثر من مؤســســة، تعمل في ذات المجال وتتقاطع اعمالها في مستويات مختلفة من ذات المجال.

في ليبيا اشكالية الازدواجية المؤسسات تتمحور على ضعف التنسيق الداخلي والتنسيق بين هذه المؤسسات، بالتالي كثرة المؤسسات المعنية بمجال واحد بدون وجود تنسيق حقيقي، سيصنع عرقلة في اي مشروع. خاصة ان الصراع بين هذه المؤســسات ليس على تنفيذ المشــاريع، اغلب الاشكاليات تكمن في الصــراع على الميزانية وصــراع على الفساد والاستفادة الشخصية.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال، فاغلب التدريبات الناجحة يتم توفيرها من قبل المنظمات الدولية.

بخصــوص اذ كان هناك أي مبادرات أو خطط لتحســين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا فلا دراي لدي الا عن اســتراتيجية الشــركة القابضــة للاتصــالات بالتوازي مع مشــروع بوابة العطاءات الحكومية، ومنظومة سلسلة الامدادات متاع الامداد الطبي .

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فاهم العوائق: فالأشكال السياسي اهم العوائق، بالتوازي مع غياب الســلطة التشــريعية وســلطة تنفيذية مســتقرة، التي تملك الوقت والبراح للاهتمام بالمشــاكل الحقيقية والعمل على اصــلاح الادارة العامة ومن ثم مشــاريع التحول الرقمي. بالإضــافة لغياب الارادة وصناع القرار.

اما بخصــوص الدوافع: منها الالزام الدولي، مع وجود الموارد البشــرية والكفاءات من المجتمع المدني وقطاع الاتصــالات، كذلك الضــغط الشــعبي يدفع في احيان كثيرة نحو التحول الرقمي. احيانا في رغبة للظهور بمظهر حسن امام مواطنين.

Interview Code 04

بخصـــوص تقيم الوضـــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـــالات في ليبيا، لا ســـيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فهذا الموضـــوع ينقســـم لثلاث محاور، المحور الاول وهو جانب الاتصـــالات، وانا اراه جيد جداً فتستطيع الوصـــول بكل ســـهولة للمواطنين، المحور الثاني وهو الهارد وير، وهذا المحور عبارة عن ســـوق مفتوح تســـتطيع اســـترادة من الخارج ولكن فقط يحتاج الى ضـــخ اموال وميزانيات وهذا هو العائق في رأيي للقطاع العام في هذا الموضـــوع، المحور الثالث هو تطوير البرامج والمنظومات وهذا ما ارى به بعض النقص رغم وجود كوادر ولكن نفتقد لشركات جاهزة لتطوير تطبيقات وتقديم خدمات في هذا الإطار.

بخصوص تأثير مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، يوجد اختلاف كبير من قبل خمس ســنوات الى هذا اليوم، فاســتخدام مواقع التواصـل الاجتماعي ساهمت بشكل كبير في رفع الوعي لدى المواطنين وزادت في عدد المستخدمين بشكل كبير، وسهلت لهم التعامل مع الخدمات الالكترونية كمنظومات المصـــارف، وايضـــاً الهواتف الذكية المتاحة للجميع تقريباً تفتح باب لتطوير برامج خدمية متطورة.

بخصـــوص أي ابتكارات أو حلول تكنولوجية محددة كانت ناجحة أو صـــعبة بشـــكل خاص في ســـياق الحكومة الإلكترونية في ليبيا، لم ار الى حد الان تطبيقات متاحة للمواطن كحجوزات المواعيد او تجديد رخصـــة.. الخ، لازلنا في الخدمات الاولية مثل خدمات التوصيل والمنظومات المصرفية وما الى ذلك، ولكن قطاع الصـحة والمواصـلات والداخلية ... الخ لم نرى فيهم اي منظومات عدا منظومات آلية السداد، اما بالنسبة للخدمات المتدنية بحسب تجاربي الشخصية كاستخراج شهادة البراءة وما الى ذلك فهي وجودها مثل عدمه، قد تكون موجودة ولكنها متدنية جداً وانا لا الوم وزارة الداخلية في ذلك، المشـــكلة في الكوادر الداخلية وعدم خبرتها وتدريبها، هناك خدمات اخرى عدة واتمنى ان تتطور لأننا متأخرين وبعيدين جداً، فالتقنية تجعل حياتنا اسهل وتجعلنا نتخلى عن مبدأ الوســاطة، بالنسبة لاســـتخدام التكنولوجيا في الانتخابات في الجولة الاولى عام 2012 في انتخابات المؤتمر الوطني لم يكن هناك تقنية الكترونية، ولكن عندما تعلمنا من تجربة 2012 في انتخابات البلديات عام 2013 استخدمنا التسجيل الالكتروني عن طريق SMS. ولكن بعد ذلك في الســنوات التي تليها تطور موضـــوع التسجيل الالكتروني واستخدام التقنية البسيط يعتبر أحدث ثورة اثارها موجودة حتى الان.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، هذا هو الموضوع المهم والاهم وشديد الأهمية، وجود رؤية طويلة الأمد والتعرف على العالم الى اين ســيتوجه هذا ما نفتقده في ليبيا، اصـــحاب السلطة في ليبيا ليســـوا على دراية حتى بـالتطبيقات الخدمية التي يمكنهم ان يقدموهـا للمواطنين عن طريق التقنية، حتى المؤســـســـات التي قدمت خدمات مثل شـــركة الاجنحة للطيران فيما يخص حجز التذاكر، قامت لتفعيل خدمة حجز التذاكر اون لاين ولكن الاســـتلام من مطار معيتيقة، ولكن انا اعتبرها مرحلة جيدة، فأنا أؤمن بمرحلة التنفيذ، ولكن يجب ان يكون هناك رؤية مستقبلية وكذلك ارادة سياسية وفنية لتنفيذ هذه المواضيع، بالنسبة للحكومات واهتمامها بهذا الموضـــوع حتى حكومة الوفاق الوطني لم يكن هناك اي اهتمام بالموضـــوع، ولكن الان بحكومة الوحدة الوطنية لاحظنا اهتمام كبير بالموضـــوع، وهناك مشـــاريع تطوير، كإعداد قانون المعلومات الجديد الذي قامت بإعداده لجنة كنتِ من ضـمنها، وبقيادة هذه الحكومة هناك العديد من المؤسسات تفكر في ميكنة العديد من الاعمال الداخلية، وهذا الامر جيد جداً، لذلك فالآن نشـــهد تغيّر كبير، وهذا الامر لا يتعلق برغبة المواطن لذا هو لا يُلام على التأخر التقني فهذه مسؤولية الدولة، فالمواطن ســيكون جداً ســعيد بســهولة معاملاته الكترونياً، بدليل قابلية المواطنين للمعاملات المصرفية المالية الالكترونية كالبطاقات.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، فالثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، نعم، يفترض ان تكون هناك خطة استراتيجية طويلة الأمد تقدمها الحكومة ويعتمدها البرلمان ويعطي الضوء الاخضـر لتخصيص ميزانية، للقيام بأبحاث وتطوير هذا الموضـــوع، ولكن في ليبيا التقنية في حالة فوضـــوية غير منظمة وغير متبعة لخطة معينة

منذ عهد النظام السابق، هناك موضوع محوري جداً موضوع الرقم الوطني الذي مرّ بمجموعة مراحل، ولكن الان شركتي المدار و ليبيانا يستطيعان التراسل مع المصرف مباشرةً واخذ جميع المعلومات المطلوبة البسيطة، لذلك ربط القطاعات مطلوبة ولكنها مرحلة متقدمة.

بخصوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية فالموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، فبصفة عامة الموارد متاحة إذا وُجد التشريع المناسب ووُجدت الارادة السياسية.

بخصوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، تقيم جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، هذه الحكومة افضل من اي حكومة سابقة في هذا الموضوع، وهناك عمل في الهيئة العامة للمعلومات والهيئة العامة للاتصالات، وهناك تنسيق كامل بينهم، ولكن المسؤولية الان مسؤولية قطاعية، تحتاج رؤية واستراتيجية على مستوى الدولة ولكن ايضاً على مستوى المصرف المركزي ومستوى وزارة الاتصالات ومصلحة الضرائب، ومصلحة الجمارك، ووزارة المالية فقط لان العاملين فيها اصبح عددهم كبير ليس لغرض ان تقدم خدمات قاموا بتحويلها رقمياً نوعاً ما، الحكومة ترحب ولكن هناك غياب للرؤية وغياب الاهداف الموضوعية للوزراء.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، نعم، الاستقرار السياسي والامني مهم جداً، اسلاك شركات الاتصالات كانت تُسرق الى ان وضعت كاميرات وتم القضاء على هذا الموضوع، ولكن المرحلية دائماً مهمة، بشكل عام الموجودين الان في قمة المؤسسات أفضل بكثير في الوعي الرقمي من الذين سبقوهم.

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا؟ هل هناك أي قوانين أو سياسات محددة تعزز أو تعيق تبني الحكومة الإلكترونية، الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، في عام 94 صدر قانون رقم 4، اعطى كل الصلاحيات وقدمهم وجئنا نحن العام السابق وقدمنا قانون المعلومات الجديد، التقنية تطورت لذلك يجب ان يكون هناك مركز اعتماد للتوقيع الرقمي... الخ، وساعدت الحكومة في تسريع عملية اعتماد القانون، الجهات العامة لم تقدّم رؤية، انا اتحدى اي جهة عامة قدمت رؤية وتم عرقلتها، الدولة تهتم بالأوليات، التشريعات كانت كلها لغتها قديمة ولكن تعزز التحول الرقمي والخدمات الإلكترونية، يوجد من التشريعات ما يُقدم ولكن بتطور التقنية اعاقت العمل بهذه التشريعات.

بخصوص اذ كانت هناك أي ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية ، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية ، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، موضوع الاجراءات المالية واجراءات صندوق النقد الدولي وهذه اجراءات مفروضة على العالم اجمع، بالنسبة للنائب العام الشباب يقومون بشغل جبار، يقدمون عمل ممتاز جداً، انا لا اراها نقاط سلبية، اراها تشجيع للولوج الى العالم، نعم رأيت مبادرات اخرى لمبادرات خارجية مع قطاعات عامة اخرى لذا الموضوع يمشي ببطء ولكن الوفرة المالية والمقابل المادي يجعل هذه الشركات تتحمل هذا الضغط والتأخير، فأنا لا اتفق معك انها ضغوطات، فهي مساندة من اطراف لدعم التحول الرقمي ونعم هي موجودة.

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، الموظفين نوعين: نوع من الموظفين في القطاع العام الذي يخشى على وظيفته من استخدام التقنية، وهذا النوع كان سابقاً بنسبة 100%، والان انا ارى ان 56-60% غير داعم للتقنية كقطاع عام، لأنه سيخسر منافع هذه الوظيفة، اما الباقية يشجعون ويؤيدون باعتبار ان حتى دراستهم معتمدة على التقنية وعادةً هؤلاء صغار في السن، المواطنين: يرحبوا جداً بالتحول الرقمّي وتقديم الخدمات وتوفير الوقت، فالخدمات مأساة حقيقية بدون تحول رقمي.

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، المواطن لديه قبول حتى في المبادرات التي قُدمت، كمنحة الزواج ومنحة الزوجة والابناء، فأنا ارى ان المواطن لديه قبول جداً في هذا الموضوع.

بخصوص اذ كانت هناك أي جهود محددة لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا، اما بالنسبة لوجود اي جهود محددة لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا، لا للأسف انا اتمنى ان اي جهة قبل ان تقدم مبادرتها ان تدرّب الموظفين على كيفية الاستخدام وكيفية التعامل معه ولكني لم ارى ذلك للأسف.

بخصوص تأثير الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، فيما يخص تأثير الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين؟، لا يتعارض، لا يوجد ضوابط او قيود اجتماعية لرفض استخدام هذه التطبيقات، لا يوجد تفرقة على اساس الجنس في هذه الجزئية، الرفض المجتمعي في البداية لأي شيء جديد هذه ظاهرة مجتمعية طبيعية وفي ليبيا تعمل بقوة، والشكاوى من المواطنين موجودة، والضعف التقني ايضاً موجود ولا نستطيع انكاره فالمواطن لديه الحق نوعاً ما، فلا ارى اي قيود اجتماعية حقيقةً.

بخصوص اصحاب المصالح فيما يتعلق بالحكومة الإلكترونية في ليبيا، فلا علم لدي، واصحاب المصلحة يفترض ان يكونوا جميع اصحاب المؤسسات، لم يحدد القانون اي جهة مركزية معنية بالتعريف بالأنظمة الالكترونية، لا يوجد قسم مساعدة للمواطنين عند حدوث خطأ في الخدمات، هذا الجانب ايضاً يعاني من نقص لدينا، بالنسبة للجهات التي تقدم مبادرات رقمية، يجب ان تعلم انك تحارب ليس في اجراءات ولكن تحارب في ثقافة غير واعية بهذه التطورات، والجانب الاخر انت تحتاج لجانب تشريعي قانوني، لان المجموعات المقاومة ستبدأ بالتلكؤ قانونياً لذلك عند ضمان القانون والمال والدعم عندها يمكن ان تصل ولكن ستواجه الكثير من العراقيل التي لا تعد ولا تحصى.

الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدوافع هي ضغط المواطن خاصةً عندما يسافر لدول اخرى ويتحصل على خدمات ويشعر انه يريد ذلك في بلده ايضاً، العوائق هي عدم وجود الرؤية الاستراتيجية في هذا الموضوع وهذا الذي اريد ان اتحدث فيه، ارى ان هذا الموضوع يجب ان يضعوا فيه الحكومة والبرلمان والخبراء خطة استراتيجية، توضح الخدمات التي ستقدمها، والوعاء الزمني ثابت بالجهات المعنية، وغياب هذه الفكرة مكتوبة اراها اكبر العوائق، والبرلمان لا يقوم بعمله لذلك يجب الاهتمام بهذه النقطة لكي يتم تسهيل الاجراءات التي تتماشى مع العالم، لأنه تخطانا، ومع حكومة الوحدة الوطنية لدي امل كبير خاصةً مع الشباب الصاعد لبناء جيل التكنولوجيا، ارى العائق في هذا الموضوع هو توفر الموارد المادية وليس التقنية، هناك اختلاط في التخصصات كبيرة وغير واضحة، وتشابك القوانين ايضاً عامل كبير لنشر الفساد، ولكن بصفة عامة الوضع تتفاءلي جداً الان.

Interview Code 05

بخصـــوص تقيم الوضـــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـــالات في ليبيا، لا ســـيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فقد عملت في وزارة الاتصـالات في السـابق ثم انتقلت الى القطاع الخاص، لا اعلم مقصـدك بالبنية التحتية، ولكن إذا تحدثنا عن البنية التحتية للدولة كحكومة الكترونية فأنا ارى ان المجال التشـــريعي في بداياته من ناحية القرارات، فلا يوجد قانون رغم ان في عام 2012 كان يوجد مبادرة ســمّيت ''E Libya'' ويتحدث هذا المشروع عن عدة ابعاد منها: الابعاد التشريعية والبُعد الفني. حيث قامت به وزارة الاتصالات بالشراكة مع عدة وزارات اخرى، وبالرجوع للموضوع من جانب التشريعات لا يوجد الا مبادرات محدودة الى حد الان.

لا يوجد ديتا سينتر تدعم اطلاق خدمات الحكومة الالكترونية خاصةً الخدمات الحساسة، يوجد فقط ديتا سنتر واحدة في البلاد وهي التي تقدمها شركة LTT شركة ليبيا للاتصالات والتقنية، وهي ضعيفة جداً، لذلك الاساس غير متوفر ومتهالك جداً، ايضاً شركة المدار الجديد قدمت خدماتها كداتا سنتر ولكنها فشلت ايضـاً، حيث عمل معها مشروع معين وتأخرت في تقديم الخدمات اكثر من 8 اشهر وايضـاً التكلفة كانت جداً مرتفعة حوالي 120.000 رغم ان هذه الخدمات تكلفتها اقل بكثير، شركة Libyan spider العنكبوت الليبي تقدّم هذه الخدمات ولكن دائماً ما يوجد تخوّف من شركات القطاع الخاص، لان البيانات تكون حساسة جداً وهذا من ناحية البنية التحتية التقنية .

من ناحية البنية التحتية للاتصالات فأنا اراها غير ناضجة، يوجد لدينا تأخر كبير من جانب الاتصالات بدليل سرعة الانترنت الضـــعيفة جداً، لدينا عجز في الامكانيات التي تمكننا من توفير انترنت قوي رغم تنافس الشـــركات على توفير خدمات جيدة خاصـــةً الخاصـــة منها، ولكن امكانياتهم محدودة من الناحية التقنية، فلن تسـتطيع ان تطلب مني الدخول لأي منظومة لأنشاء معاملة رقمية وسرعة الانترنت منخفضة والاتصالات بصفة عامة ليست جيدة.

اما من ناحية الموارد البشـــرية جداً جيدة في ليبيا، لدينا مشـــاكل فقط في صُـــناع القرار، ولكن من الجانب الابداعي والتقني فأنا اعرف اشـــخاص قابلوني في مجال عملي لديهم قدرات جيدة جداً، ولكن لم تتوفر لهم الظروف الملائمة ولا الامكانيات.

بخصوص يؤثر مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، بالنسـبة للمواطنين فهم ليسـوا على دراية تقنية كبيرة، ولكنهم يسـتخدمون مواقع التواصـل الاجتماعي كفيسـبوك وانسـتغرام، وهذا يعني ان لديهم قابلية للتطور التقني، وخاصـةً ان كان هذا التطور يدعم احتياجاتهم فأنا ارى انهم بالطبع جاهزون ولديهم إلمام تقني لا بأس به.

اما بالنسـبة لموظفين القطاع العام فهم ليسـوا بهذه الدرجة من الوعي، حيث انه لديهم نوع من الرفض التقني، لأنهم يسـلبهم بعض من صـلاحياتهم وامتيازاتهم العملية عندما يصـبح السـيستم هو الذي يقدم كل الخدمات بدل القرارات الشخصية والنفوذ والسلطة الشخصية، ولكن ارى ايضاً ان كان يوجد تنظيم جيد وادارة جيدة فسوف يُقبِل الموضوع ويتطور شيئاً فشيء.

بخصـوص الحلول التكنولوجية الناجحة المقدمة من الحكومة الإلكترونية، فقد عاصـرت تجربة مع السـجل التجاري العام التي اطلقت منذ شهرين، بالطبع قابلت نوع من الرفض في البداية ولكن بعد ذلك فرضت نفسها، فحتى محررين العقود يريدون العمل بطريقة اسـهل واكثر سـلاسـة ولذلك دعموا هذه المبادرة، هذه تجربة حديثة ولا اعلم اين ستذهب.

بخصـــوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، انا ارى انها تندرج من الاعلى الى اسـفل، بمعنى ان لم يضـــع القادة في البلاد الاولوية لهذا الشــي وكل الدعم المادي والمعنوي وايضـــاً مؤســـســـات كمؤسســات المجتمع المدني لم تروّج لهذه المبادرة فلن نصـــل لنتائج جيدة.. انت ترغب في تقديم خدمة للناس انت تملكها، إذا انت تحدد طريقة التقديم هذه، إذا اردت تسـتطيع تقديم خدماتك عن طريق الموظفين والبقاء على حالك كمكاتب مكتظة بالموظفين وبلا فائدة احياناً او ترغب في توفير فرص اخرى لهؤلاء الموظفين وتغيير آلية تقديم الخدمات فتصبح "أون لاين" فتسـبب في تطور ورفاهية ورخاء لشـعبي ومكافحة الفساد ايضـاً ولهذا فأنا ارى ان التحول الرقمي او الحكومة الالكترونية بالتحديد هو شـيء تنازلي من الاعلى الى أسـفل صـراحةً. وبالطبع لا ننسى دور مؤسسات المجتمع المدني للتوعية وخلق رؤية واضحة عند المواطنين ومحاربة الفساد.

بخصـــوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، انا ارى ان المركزية مهمة جداً في وضع السياسات والاحكام والقوانين وآلية العمل، ولكن ليس في التحول رقمياً، بمعنى ان القطاعين سواء العام او حتى الخاص يجب على الدولة لكي تدعم المؤسسات للتحول الرقمي ان توفر لها كل السبل وأن تضـــع لها آلية وقيود معينة تعمل فيها لكي تُريها كيفية التحول دون التدخل في عملية التحول، هي فقط للإرشـاد ثم تدع الهيئة او المؤسـسـة تتحول رقمياً وحدها بعمل داخلي دون التدخل المباشـر من القيادة.. فالمركزية تكون فقط في التشريعات والاحكام والآلية وليس في التنفيذ.

بخصـــوص لموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية؟ هل تعتقد أن ليبيا لديها الموارد اللازمة لبدء التحول الرقمي، لا، لا يوجد دعم نهائياً للتقنيين، فأنت كانسـان تقني ان اردت العمل في اي جهة حكومية سـوف تتلقى مرتب حوالي 1500 د.ل وفي البنك وسـتقف في طوابير طويلة للحصول عليه، بينما من الممكن ان تعمل في شركة من شركات القطاع الخاص وتتلقى اضعاف هذا المبلغ، لا يوجد اي دعم للتقنيين ولا اعطاءهم حقهم من التكلفة مما يجعلهم في حالة عزوف ولا يوجد اي جاهزية.

بخصـــوص تقيم جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، ابداً لا يوجد جاهزية لتبني المبادرات، لقد عملت مع قطاع الصـــحة في عدة مشـــاريع، سـبق وان عملنا على مبادرة العطاء العام، وعملنا على نظام كامل لهذا المشـــروع وتلقى اعجاب من اكثر من جهة خارجية ولكن عندما ارسـلناه للحكومة للموافقة عليه اختارت ان ارجع للنظام اليدوي ووضعته جانباً.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، نعم مؤثر، بطريقة مباشرة او حتى غير مباشرة، فالسياسيون في ليبيا في حالة صراع على السلطة وكل مشاغلهم في كيفية اقصاء الآخر وهذا رأيي الشخصي وليس رأيي سياسي، او عن طريق الفساد الاداري لكي يحافظ على مكانته السياسية، لذلك الاستقرار السياسي جداً مهم.

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، يوجد قانون في الدولة يسمى قانون "م ح 5" عند القيام بأي مخالفة قانونية او مرورية ... الخ، يجب الذهاب لدفع قيمة المخالفة مالياً، واسـتلام واصـل يسـمى ب م ح 5 يُرسـل الى وزارة المالية لكي يدخل في الخزينة العامة للدولة، فكيف يمكنك ان تبدأ في حكومة الكترونية وتحول رقمي وعندما تريد دفع مخالفة يجب ان تقضـيها بهذه الطريقة. لا يوجد شـــيء اسـمه الدفع الالكتروني في القوانين الليبية، لا يعترف القانون الليبي الا بالكاش "الدفع نقداً"، ولا يعترف القانون الليبي ســابقاً حتى عام سابق بالبريد الالكتروني، والى الان لم يحدد شكل هذا البريد المسموح به والمعترف به بشكل دقيق.

بخصـوص ضـغوط خارجية، والمبادرات الدولية أو الإقليمية لا خلفية لدي، فأنا انسـان تقني لسـت سـياسياً فبالتالي لست الى دراية بالمواضيع المتعلقة بالضغوطات وما الى ذلك.

بخصـوص الفوائد المتصـورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، انا ليس لدي مقياس ولكن في رأيي الشخصي ان المواطن الليبي يشعر بالفرح عندما تذكر له كلمة منظومة، على سـبيل المثال عندما فُعّلت منظومة الرقم الوطني رأينا اسـتجابة كبيرة لذلك وكل المواطنين اسـتلموا ارقامهم الوطنية في وقت قياسي حوالي اسبوعين وهذه مؤشرات جداً إجابيه في نظري لتقبل المواطنين والموظفين التحول الرقمي.

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبي، لا، لا ارى اي سـهولة وصـول ولا ارى خدمات حكومة الكترونية، حتى خدمات الرقم الوطني التي يفترض ان تكون الكترونية اصـبحت جهات معينة تطلبه مؤقع ومختوم وهذا يعني ان المنظومة بلا فائدة، وبالنسـبة لمنظومات منحة الزوجة والابناء فلسـت على دراية كاملة بهذا الموضـوع ولكن اراها مؤشـر جيد لتفاعل الناس معها كبيئة محيطة بي وليس كمقياس للناس كافة.

بخصــوص مجموعـات أو أفراد معينون داخل الحكومـة أو المجتمع يعملون كمـدافعين عن مبـادرات الحكومـة الإلكترونية في ليبيا، انا ارى ان اصـحاب المصـلحة الذين يفترض ان يكونوا مسؤولين هم وزارة التخطيط والهيئة العامة للاتصـالات وهيئة المعلومات والتوثيق هؤلاء الذين يفترض ان يكونوا اصحاب المصلحة في هذا الموضوع. كما يوجد صراعات قائمة بين هذه الاطراف اختلاط وتشابك مهام وان في ليبيا دائماً الجهات تحترف اداء مهام غير مكلفة بها وليست من اختصاصها.

بخصـوص الدوافع والعوائق الرئيسـية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدوافع اهمها هي ان ليبيا ان لم تتحول رقمياً وتنشــئ حكومة الكترونية حقيقية في القريب سـتكون متجهة في خط لا رجوع له، لان وجود حكومة الكترونية متكاملة شيء اساسي في هذا الوقت وان لم يحصل ف ستواجه ليبيا تأخر شديد يصعب تغييره مستقبلياً. اما العوائق هي عدم الاستقرار السياسي وعدم الامكانيات التقنية، ولكن التحول الرقمي ليس بصعب او مستحيل، فقط عند توفر هاذان العاملات سيتم التحول الرقمي بكل سلاسة في وجهة نظري.

Interview Code 06

بخصـوص تقيم الوضــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصــالات في ليبيا، لا ســيما فيما يتعلق بمبادرات الحكومة الإلكترونية، من وجهة نظري الشـخصـية، أرى ان عامة الشـعب تجيد اسـتعمال الهواتف الذكية وتملك اتصـال قوي بالأنترنت حتى في المناطق الفقيرة، مع الوضع بالاعتبار امتلاك كبار السن لهواتف قديمة. ولكن القطاع العام لم يقم باسـتغلال التقنيات الرقمية للتسـهيل من تقديم الخدمات، والذي سـيسـاعد على توقف الطوابير الطويلة.

وعدم اسـتغلال القطاع العام للتكنولوجيا لسـببين مهمين، عدم تواجد الرغبة والاهتمام طالما يمكن انجاز المهمة بالطريقة التقليدية. اما السبب الثاني هو تأخر التغيير في طريقة العمل بسبب القوانين. لتقوم المؤسـسات بالتغير فهم مجبرين على تغير الكثير من القوانين، وكل المشاريع الحالية فهي صغيرة، واشكال اخر في ليبيا هو عدد المؤسسات وكتغيرها بشكل متكرر مع غياب الادلة الاجرائية.

بخصـوص مسـتوى الإلمام بتكنولوجيا المعلومات والاتصـالات بين موظفي القطاع العام على تبني خدمات الحكومة الإلكترونية، فهو مبني حسـب العمر، حيث الشـباب ملمون أكثر من الكبار بالسـن، ولكن هذا لا يقف في طريق التغيير. عدم حصول التغيير يعود الى تعقيدات تسبب انهاء لسياسات وكون النظام غير واضح وعدم وجود تواصل بين جهات العمل لكي تشتغل معا.

بخصـوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، فاعتقد ان التكنولوجيا الحالية يمكنها تلبية الاساسيات للانطلاق، وللأسف فان القطاع العام لا يثق في القطاع الخاصة خاصه من ناحية امن المعلومات، ومن ناحية اخرى ان القطاع العام لا يمكنه تنفيذ هذه المشاريع وحده لضعف الكفاءات.

بخصوص الحلول الإلكترونية الناجحة، فهي قليلة ويتم تطويرها حاليا، مثل خدمة الرقم الوطني، للأسف حاليا اغلب الجهات الحكومية، قامت بالتخلي عن مواقعها الإلكترونية واتجهت لتقديم بلاغاتها واخبارها عبر شـبكات التواصـل الاجتماعي.

بخصـوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، فللأسـف هم غير مهتمين بشـكل كبير بالتحول الرقمي، وبعضهم لديه المعرفة لكن لا يستطيع تقديم هذه الخدمات او تنفيذها، خاصه مع نقص الوعي بفوائد اسـتخدام التكنولوجيا. للأسـف لدينا ما يزيد عن 300 مؤسـسـة حكومية ومن الصـعب ايجاد قيادات تؤمن بالتحول الرقمي في جميع المؤسسات.

بخصـوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية؟ هل تعتقد أن ليبيا لديها الموارد اللازمة لبدء التحول الرقمي، فلا دراية لدي ولم ار اي موارد الحقيقة.

بخصـوص تأثير الاستقرار السـياسـي أو عدم الاسـتقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، فالاستقرار السياسي مهم ويسهل العملية، لكن المؤسسات بمختلف انواعها يمكنها العمل على التحول الرقمي، لكنها في حاجه لدفعة من المواطنين.

بخصـوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، فللأسـف القوانين قديمة بشـكل ما ولا تدعم التحول الرقمي. نحن في حاجه لتقيم الوضـع العام بخصـوص التحول الرقمي في القطاع العام في ليبيا ومنها جانب القوانين التي يجب تغيرها.

بخصوص الضغوط الخارجية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فلا دراية لدي.

الفوائد المتصـورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فالمواطنون جاهزون، ويمكن التأكد من ذلك باسـتخدامهم لخدمات القطاع الخاص، وهم مهتمين بها وفي كل بيت يوجد على الاقل شـخص واحد ذو دراية. اما بخصـوص الموظفين، فلا يمكن لومهم وذلك لغياب المعرفة والاستراتيجيات الحقيقية .

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، للأسف اغلب الخدمات ليست سهلت الوصول، وهناك تعقيدات من الجهات الحكومية للوصول لهذه البيانات وذلك خوفا من الامن السيبراني.

بخصوص الجهود المحددة لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا، فهي فقط اماني وليست واقعية.

بخصوص الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، فهي ليست مؤثر كبير، ودائما يمكن التعامل معاها.

بخصوص اصحاب المصلحة في مجال التحول الرقمي في ليبيا، فرئاسة الوزراء هي الاهم.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال، فلا علم لدي.

بخصوص مبادرات خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا فلا علم لدي.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، من اهم العوائق هو غياب التخطيط والاستراتيجيات والعمل بالإضافة لغياب الاطار التشريعي. بخصوص الدوافع، فاهمها تسهيل الخدمات وتقليل الوقت على المواطنين.

Interview Code 07

بخصـــوص تقيم الوضـــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـــالات في ليبيا، لا ســيما فيما يتعلق بمبادرات الحكومة الإلكترونية، سأكون واقعي ومهني وصادق في اجابة السؤال، يوجد تحسن طفيف جداً في الآونة الاخيرة، ولكن هذا التحســن لا يُذكر مقارنة بدول الجوار وباقي العالم، ليبيا ليسـت طرابلس وبنغازي فقط لذا لا نســتطيع قياس جودة الخدمات في هذين المدينتين فقط، ليبيا كبيرة جداً كمســـاحة وليس السـكان، لذا التمركز في الخدمات وكذلك احتكار قطاع الاتصـــالات على الدولة الليبية يسـبب في انحدار الخدمات والبنية التحتية وكذلك عدم توسع الخدمات الاتصالية بشكل كبير.

بخصـــوص مســـتوى الإلمام بتكنولوجيا المعلومات والاتصـــالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فيوجد نوع من الأمّية نعم، غالبية الناس كانت لا تفقه شـيء في الانترنت ثم فجأة بدأت تستخدمه استخدام مباشر عن طريق تطبيقات مواقع التواصل الاجتماعي كفيسبوك وتك توك، ولكن نلاحظ بشكل كبير في ارتفاع في اسـتخدام التقنية لأسـباب معينة او لمصـلحة معينة ولكن غياب الوعي موجود وحتى غياب الثقة، يوجد أناس حاولوا الثقة في هذه الخدمات المقدمة من الحكومة الالكترونية او اي خدمات الكترونية ولكن وجدتها عبارة عن اوهام فقدت الثقة بها تدريجياً، ولكن ان رجعنا لأصل السـؤال فالأمية موجودة واسـتخدام التقنية في ليبيا محدود، فتجد الناس خصوصـاً الاعمار الكبيرة ستجدهم يستخدمون تقنية معينة او خدمة معينة فقط دون التوسـع في باقي التقنيات، واتفق تماماً مع فكرة ان الشـــخص تقبل انه يوجد انترنت في جهازه المحمول ولديه المعرفة التامة بكيفية استعماله وكيفية استعمال لوحة المفاتيح فنعم انا اعتقد ان هذا الشي يمهّد الى سهولة عملية الوصول لأي تقنيّة او خدمة حكومية، مثل ما ذكرت الأمية قبل عشـر سـنوات تختلف جداً عن اليوم ان اراد اي احد او جهة تقديم خدمة سواء حكومة او غيرها ولكن التمهيد الذي فعلته مواقع التواصل الاجتماعي حقيقةً ساهم جداً مع تحفظنا عن المشاكل التي سبّبها ولكن نعم التلفونات الذكية والبرامج الذكية تسـهّل عملية تبني تي تطبيق او منصـة الكترونية في الحكومة او غيرها.

وانا اتفق جداً ان مواقع التواصـــل الاجتماعي جعلت الناس معاييرها عالية من ناحية التطبيقات وان هذا يجعل منصـات الحكومة يجب ان توازي هذه المواقع والتطبيقات من ناحية الجودة وسـهولة الوصـول ولكن انا لا ارى ان هذا عائق فالأمر يتطلب فقط العمل بجدية لكي تصـــل لجودة تسـتطيع ان تضـاهي بها هذه التطبيقات، فالتطبيقات الحكومية لا تطلب اشـــياء تقنية معقدة هي فقط عبارة عن تقديم خدمات معينة لذا فقط يجب الاهتمام بالتصـــاميم والالوان والشكل العام وسلاسة التطبيق والقليل من المجهود فأنا لا اراه تحدي بالنسبة لي.

بخصـــوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، فقطاع الاتصـــالات حكر على الشـركات الحكومية، فالحكومة تعتقد انها الوصـي على التقنية في ليبيا، فالقطاع التقني معتمد اعتماد كلي على الشـــركة القابضـــة للاتصـــالات، التي هي بدورها تمثل الحكومة في قطاع الاتصـالات، فلن ترتقي التقنيات الموجودة في ليبيا لكي تتماشى مع الحكومة الالكترونية الا في حال ارتقاء خدمات القطاع العام للاتصالات، فالقطاع الخاص لا يشـكل اكثر من 10% من الســوق الليبي بما فيهم العنكبوت الليبي، فكل الخدمات والتعاقدات والتحركات تسيطر عليها الجهات الحكومية، فلا تطلب مني تقديم الخدمات الكبيرة كقطاع خاص بشكل فجائي وانت لا تحميني بشكل دائم قانونياً، فلن نستطيع العمل كقطاع خاص على اهواء المسؤولين، فنتخبط بناء على اراء كل مسؤول، نريد قوانين ثابتة تقدم لنا حقوقنا لكي نعمل في بيئة مريحة ومطمئنة.

بخصوص الابتكارات الحالية الناجحة، فنعم، منظومة الاقتصاد- السجل التجاري- منظومة الشؤون الاجتماعية، وان تحدثنا عن التجارب الناجحة فهذا سؤال صـعب جداً، ان تحدثنا عن منظومة ناجحة في ظروف هذه البلاد ومستمرة الى الان لا يوجد، لا يأتي في بالي اي منظومة، فكل المنظومات السـابقة اما تم الاختلاف عن تبعيتها الى اين او تم فيها الفساد وتوقفت.. الخ، وهذا يرجعنا لنقطة الاستمرارية، التحدي الحقيقي للاستمرارية، وهذا لا يتعلق بالاستقرار الامني في ليبيا، فهذه مشكلة قديمة في ليبيا، اي مسؤول يأتي يبدئ من الصفر وكأنه اول من عمل في هذا المنصب، وهنا يوجد سؤال يطرح نفسه، ماذا بعد؟ هل مبادرات الحكومة الالكترونية عند تغيّر المسؤول الحالي ستستمر؟ دولة مثل ليبيا يجب ان تُربط بميزانية او قانون معين يمنع مسؤوليها من البدء من جديد، يُفترض مراقبة ومحاسبة ومتابعة

الميزانيات التي تُصرف، هل حقاً تُصرف على انجازات حقيقية على ارض الواقع ومستمرة؟ ام ستختفي مع الوقت، انا احد المواطنين ارى ان كل ما يحدث الان عبارة عن مراهقة واشياء مؤقتة ستندثر مع الوقت وليست مستديمة، واصعب شيء في التجارة هو الاستمرارية والاستدامة، لذلك كل المؤسسات الحكومية تصل الى مرحلة احباط تترك كل شي وتتوقف فجأة عن عملها.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، في عدم وجود قيادة لهذا الامر اساساً لا يمكن ان يتم، حتى في دول الجوار هناك امثلة لذلك، مثلاً السعودية قبل عدة سنوات كنا لا نرى اي تقدم للسعودية في هذه الامور رغم انه يوجد عدة دول بارزة في المنطقة غيرها، ولكن في الآونة الاخيرة القيادة لديهم لديها الرغبة ان اسم دولتهم يظهر ويبرز، ان نظرنا على الدعاية والاعلان لديهم فأتوقع ان هذا ينعكس على العمل لديهم وانه بنفس مستوى الاعلانات، لذا التحول يحتاج الى استقرار، يحتاج الى دعم من القيادة ويحتاج الى استمرارية الموضوع، صحيح ان هذه الدولة لم تسجل اي انجازات في هذا الجانب ولكن خلال سنوات بسيطة حققت شيء ينافس دول اخرى تعمل على ذلك منذ 15-20 سنة وتسوق لنفسها، القيادة يجب ان تفهم هذا الشيء وتدعم هذا الشيء وتضمن استمرارية هذا الشيء، لماذا ؟ لأنه إذا تم تغيير في الحكومة او اي وزراء لا يجب ان يأتي الذي يليه ولا يتم ما بدؤه الذي يسبقه ويهمله، هل المؤسسات الحكومية من مصلحتها التحول الرقمي؟ الموظف عندما يدخل عليه التحول الرقمي هل يستفيد منه؟ وللأسف اغلب القيادات الحالية غير واعية بفوائد التحول الرقمي وجل المشاريع الحالية عبارة عن مشاريع مراهقة .

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، بالطبع قد تكون استضفت بعض الشخصيات القيادية في بعض المؤسسات، يوجد مؤسسات الهرم العملي لديهم يحتاج ويريد العمل على التغيير، وبدء في العمل عليه، ولديهم مبادرات جيدة وحاولوا تطبيقها ولكنك تريد ان تقوم بنقلة نوعية لمؤسسة وانت على دراية بتاريخ التوظيف في ليبيا وايضاً كيف موظف القطاع العام عوّض الفراغ المادي، لان المؤسسات الحكومية بمرتبات دائمة صحيح ولكنها لن تمكنك من العيش بشكل كافي لتغطية كل مصاريفك وتحافظ على بقاءك في الطبقة المتوسطة، لذا اختار الموظف ان يستخدم نفوذه او يستفيد من منصبه لكي يواكب مصاريفه واحتياجاته، فأي تحول رقمي الان يهدد نفوذه ويهدد الالية التي كان بها لكي يغطي احتياجه، كذلك ممانعة الفطرة، وهذه ليست في ليبيا فقط هي صفة بشرية وهي رفض كل شيء جديد وهي اسهل حل يختاره البشر، ولكن الممانعة بأسباب هي التي تشكل خطر وفي نظري هي التي تصعب الامور على اي منظمة لتبني مشروع حقيقي يتحدث عن التحول الرقمي، رغم انك لو تحدثت مع اكثر من مؤسسة ستجد ان الغالبية عملوا في لجان تعمل على التحول الرقمي ولكن ان وجدت خطط تحول رقمي لتسهيل للمواطن استخراج مستنداته وتسهيل للمواطن استخراج معاملاته، اعتقد ان هذا سيكون من اكبر التحديات، لأنك تقفل على سوق موازي سوق سوداء، تقفل على وساطة وتقفل على فساد، لأسباب ذكرتها سابقاً منها عدم توفر العيش الكريم له بمرتبه.

بخصوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكتروني، فصعب ان اعطي اجابة دقيقة ولكن من ضمن عملية التحول الرقمي او عملية رفع كفاءات الموظفين لا اراها تتم بشكل الصحيح، لماذا؟ هل يوجد احد ساهم بشكل كبير في تجربة تحول رقمي حقيقية؟ نسبة بسيطة جداً، يمكن ان يكونوا ليبيين كانوا بالخارج وشاهدوا هذا الامر، ولكن ان تحدثنا عن الخبرات الداخلية من الذي لديه القد او الخبرة الكافية للأشراف على عملية التحول الرقمي؟ فأنا لا ارى ان الحكومة توقفت للحظة وتمعنت هل هؤلاء لديهم القدرة او الخبرة لإحداث تغيير؟ نستطيع ان نأتي بأشخاص ذو خبرة حتى كمشرفين بعد اتمام العملية ان كانت الممانعة لأسباب كالأمن القومي وما الى ذلك، وان أردنا رفع كفاءة العاملين في هذا القطاع، فيما سنرفع كفاءتهم؟ هل في مهارات التواصل؟ ام في التقنية او التنظيم؟ يجب ان نتساءل ما مشكلة الموظفين لدينا مع التحول الرقمي، الاجابة ان تكون الا لدى أناس عملوا على برامج تقنية حقيقية ونجحت لكي نتعلم كيفية تطبيقها.

بخصوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، الحكومة غير جاهزة لتبني هذه المبادرات، هي فقط شعارات فضفاضة ومبادرات مؤقتة، واحياناً تكون غير واقعية لأنها ليس لديها قابلية لدى الموظف في حد ذاته، لذا يجب النظر في صلب المشكلة "اسباب رفض الموظف" من ثم ننظر للنواحي التقنية وغيرها.

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، لا اضمن لك ان عدم الاستقرار السياسي هو السبب الرئيسي المؤثر على تبني وتنفيذ مبادرات الحكومة الالكترونية، لان الوضع حتى قبل 2011 لم يكن يختلف كثيراً، فالاستقرار السياسي يؤثر على اي مشروع او مبادرة مهما كانت صغيرة ولكنه ليس السبب او العائق الرئيسي خاصةً في ليبيا، فليبيا لديها تاريخ في دفن المشاريع وعدم الاستمرارية في المشاريع بغض النظر عن الاستقرار السياسي، بالطبع له دور في استمرار المشاريع ولكن ان استقرت البلاد، هل تم حل المشكلة ؟ لا، يجب ان توضع خطط استراتيجية تضمن استمرارية المشاريع، فلا يستطيع اي احد يوقفها بقرار، تبقى مشاريع مستمرة ولها ميزانية تضمن استمراريتها.

صـــراحةً ليسـت لدي دراية بلوائح ولكن قوانين حتى وين كان يوجد من السـهل ان تلغيها ان كانت تعرقل سير عملية التحول ولكن حالياً قانون واضح يمنع لا يوجد، ولكن على سبيل المثال قانون م ح 5، الان على سـبيل المثال المالية او مصـلحة الضـرائب ارادوا ان يقوموا بدفع الكتروني والغاء الدفع الكاش، وجدوا انهم مدانين قانونيا، وهنا اي نعم القوانين اصبحت عائق، ولا تتماشى مع العصـر، فعلى سبيل المثال ترسل فتورة عن طريق البريد الالكتروني فتتلقى الجواب بالرفض وانها يجب ان تكون نسـخة اصـلية ومطبوعة، فنحتاج إعادة النظر في بعض القوانين لسـهولة تبني عملية التحول الرقمي وغيره من الاجراءات التي ليس لها داعي التي تجبرك ان تقف في طوابير طويلة وما الى ذلك، وفي بعض القوانين تجعل بعض الجهات التقنية في مشـاكل مع الرقابة وما الى ذلك وانا اراها تعرقلها في عملها وممكن ان تعرقلها في عملية التحول الرقمي ايضاً.

بخصـوص الضـغوط الخارجية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، انا ارى بعض المبادرات الدولية وليست ضـغوط، ممكن ان تعكس هذه المبادرات الضـغوط التي تتحدث عنها الله اعلم، ولكن انا ارى بعض المؤسـسـات والمنظمات الاجنبية تعمل على التحول الرقمي ولكنها مجرد مبادرات متواضـعة بحجم مشكلتنا لن تؤثر كثيراً، وبعضهم لديهم خلفية بماهية المشكلة ولكن يتعاملون بمنطق "هذا ما نقدر عليه."

بخصـوص الفوائد المتصـورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فالموظف سـبق وان اجبت على هذا السـؤال من ناحيته، ولن نعم ولكن اقصـد البعض يراها خطر على مصـالحهم وخطر على مناصـبهم ولكنها في حقيقة الامر العكس تماما، تسـهل له العمل وتنقص من الاخطاء لديه...الخ، ولكن بالطبع بعض الموظفين يشـعرون بخطر إحلال آخرين مكانهم، او حتى يمكن تعويضـهم بآلة، لذا هؤلاء الناس لا اعلم ماهي الاستراتيجية التي تتماشى مع حل مشكلتهم .

اما المواطنين سـأعطيك مثال بسيط على مبادرة بسيطة أنشـأها السجل المدني، سـابقاً لكي تسـتخرج اي ورقة من السـجل المدني يجب الذهاب للسـجل المدني الذي تتبعه، انا كمواطن ليبي انتقلت للمحلة التي اقيم فيها، فكنت اعاني من اجراءات تسـجيل طفل او مولود او اسـتخراج مستندات، وكانت عملية اسـتخراج ورقة تسـتغرق مني حوالي اسبوع، ولكن حالياً اقاموا مجموعة من النقاط تسـتطيع استخراج منها كل مستنداتك، حتى النقاط المحلية الصـغيرة في بعض مناطق طرابلس الان تتوفر فيها جميع اوراقك المطلوبة، هذه مبادرة بسـيطة ولكن حلت مشـاكل كبيرة، فالمواطن يريد اي شيء يسـهل له حياته وتنقص له مشـاويره واجراءاته، السـجل المدني اقام هذه المبادرة لأنه بالفعل عند الذهاب لاي جهة ستجد انها تطالب بأوراق كشـهادة الميلاد وغيرها.. بالرغم من انها تعاملات من جهة حكومية لجهة حكومية اخرى، فيفترض عند وقوفي امامك انت من يتعرف علي، انت الحكومة! فالمواطن يسـعد جداً بهذه المبادرات، وبتجارب شـخصـية قد قابلت مواطنين سـعدوا بتقديمنا لهم خدمات عن بُعد دون الحاجة للقدوم وتقديم الاوراق وما الى ذلك، فإذا قارن المواطن الليبي معيشـته بالناس في الخارج يجد انه يعيش حياته كاملةً في سـيارة، لماذا؟ لان في ناس لا تعد عملها او موظف متقاعس عن عمله فتجد نفسك انك تدفع في ضريبة هذا الفشل كمواطن.

بخصوص مدى سهولة وسـهولة الوصـول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، كمواطن لم تسـتفيد من هذه المبادرات لان هذه المبادرات في الاساس كانت تستهدف فئة معينة، كمنحة ابناء وغيرها فأنا لست ضمن هذه الشـريحة كصـاحب قطاع اعمال وصـاحب تجارة، فأنا لم اسـتفد منها شـيء، كمبادرة انا اراها جيدة، لأنها اوجدت حلول لبعض المشـاكل حتى ولو كانت مؤقتة وليست مسـتمرة، فقط انه لم يجعل الناس تقف في طوابير واتم كامل مبادرته فأنا اراه تحول رقمي مؤقت او لمحصـلة معينة، جيد ! لا يوجد مانع، الخوف فقط من هذه المبادرات الغير مسـتمرة هو فقد ثقة الناس لهذه الامور في هذه التخوفات التي يمكن ان تراودني، فحتى الشـؤون الاجتماعية، قدموا

خدمة الانتقال من مصرف الى مصرف دون الحاجة للقدوم فقط من بيتك وهذه ايضاً مبادرة جيدة، القروض ايضاً اعتقد انها اون لاين جيدة جداً! بالطبع لا نتكلم على نسبة 100% ولكن حتى وان تحدثنا عن 60% من شرائح المجتمع قامت بهذا الامر من بيتها فهذه مبادرة جيدة جداً، استمراريتها من عدمه هذا مثل ما ذكرت سابقاً انه من التحديات الكبرى ببلادنا.

بخصوص الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين وثقة المواطنين في الحكومة، فلا اعتقد ان المواطن لديه الثقة في الحكومة وخدماتها، ولا حتى المعطيات على ارض الواقع المشاكل تجعلك ان تعطي الثقة في اي شيء، فالان المواطن حتى عندما يأتي شخص يريد ان يقدم مبادرة حقيقية وخالصة لله، سينظرون له على انه شخص آتى ليكون سارق جديد فقط، فلا يوجد اي ثقة بعد الذي رأوه، فإذا نظرنا للوضع السياسي الحالي في ليبيا في رأي المواطن ان هذا سرق ولكنه اصلح لي الطرق، والسابق ايضاً سرق ولم يصلح الطرق، اذاً فالمواطن يرى ان من يقدمه له خدمة ويقدم له يد العون حتى بجرام صديقه، فإذا اتى القادم وسرق ولكنه ساعد الناس سيؤيدونه، فالناس تفكر بهذه الطريقة، فيرى المواطن ان خدمات الحكومة تنعكس عليه بغض النظر عن رأيه السياسي، فالثقة مفقودة ولكن استرجاعها ليس صعب، فالناس تبحث عن مصلحتها، مرتباتها واموالها وأشيائها الاساسية لم تفكر بعد في الخدمات الالكترونية، فإن ذكرنا القطاع المصرفي فالقطاع المصرفي يعتبر قطاع حيوي، فإن سألتني هل يوجد شركات تقنية نجحوا في هذا الشيء في ليبيا سأجيبك بلا، ستسألني لماذا ؟ سأجيبك لأنه لا يوجد تمويل رغم ان بعض الشركات بدأت في تنفيذ مبادرات وفشلت، فالقطاع المصرفي يستطيع تمويل هذه المشاريع، ولكن القطاع المصرفي قطاع حيوي ولا يؤدي في دوره وفاشل في ليبيا حقيقةً، فالناس تسافر وتضع في اموالها في الخارج وترى الخدمات، تأتي لليبيا تجد أنك تحتاج الى فلان، ووساطة، وطوابير، وازدحام.. الخ وفي نهاية الامر يخبرونك انه لا يوجد سيولة.

بخصوص اصحاب المصلحة، فانا على دراية ان هناك لجنة تشكلت للتحول الرقمي ولكن ماذا تفعل او ماذا حققت ليس لدي اي فكرة، وتشكلت بعدة مؤسسات مختلفة وهذا صحيح فالتحول الرقمي لن يتحقق بطرق واحد فقط ولكن ماذا فعلوا لا اعلم، اهدافهم واضحة ولكن متى ينتهي وماذا حققوا الى الان ايضاً لا اعلم، واعتقد انهم لم يحققوا شيء.

بخصوص المبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا في الوقت الحالي بالإمكانيات الحالية وان وُجدت الرغبة والارادة من الحكومة او الدولة الحالية فأعتقد ان المركزية لابد منها، لان اللامركزية تتطلب منك مجهود كبير، فالعمل المركزي لا يمانع الاعمال المنفصلة ولكن العمل اللامركزي سيستنزف الجهود لان الجميع سيبذل جهده في نفس الشيء والخطوات، لذا المركزية مهمة جداً الان لكي يوحدوا الجهود ويتخطوا العقبات الحالية، كيف تتوزع هذه الخدمات وهذه الامور ليست مشكلة، ولكن نحن نتحدث عن المركزية من الجانب الإيجابي فقط الان، بالنسبة للتداخل والمشاكل بين الهيئة العامة للاتصالات والهيئة العامة للمعلومات وتشكيل اللجنة المشتركة فالذي يحدث خطأ ولكن ربة ضرة نافعة، فإذا كانت المشكلة هي التداخل بين الاختصاصات والان اوجد الحل فهذا شيء ممتاز، ولكن هنا حدثت نفس المشكلة، فهل هذا الشخص سيبقى الى الابد؟ يعني بتغيير هذا الشخص سيعود هذا الصراع، فنحتاج الى قوة قانون لكي تنهي اي نوع من الصراعات في هذا الموضوع، فجميع هذه التفاصيل يجب ان تُحل بشيء لا يُلمس، ففي اي دولة كل شيء قابل لتغيير والتأويل الا القوانين، فأعتقد يجب ان يحل جذرياً هذا الموضوع.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالعوائق والدوافع :في العالم بالكامل اصبح في ضغوطات على هذا الجانب لأنه اصبح من الحقوق وليس رفاهية، فيوجد مشاكل لو فعلاً لدينا الرغبة في التحول الرقمي لكنّا لم نقع فيهم، ولكن نحن نقوم بتشكيل لجنة على اساس انها تعمل على حل المشكلة ولكنها تمضي الوقت ولا تحلها وتترك المشكلة على حالها، فإن لم تعمل الحكومة على تحول رقمي حقيقي وتوفير بنية تحتية خصبة للتحول الرقمي فلن يتغير شيء، والتحول الرقمي اصبح شيء ضروري للمواطن وللحكومة في حد ذاتها، فلم يعد رفاهية ولا كماليات، اصبح واجب ان توفر للمواطن تسهيل خدماته، فانعدام الخدمات عن بُعد تزيد من مشاكل المواصلات بسبب تزايد عدد السكان، والحكومة ايضاً تحتاج لترتيب وتنظيم عملها، فإن لم تصنع آلية

معينة تعمل بها لن تستطيع تلبية احتياجات المواطن، والتحول الرقمي الحقيقي قادم ويجب ان يأتي، من ولماذا في الحقيقة لا اعرف الاجابة ولكن ان شاء الله خير.

Interview Code 08

بخصــوص تقيم الوضــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصــالات في ليبيا، في البداية، عملية التقييم بعض الشيء صــعبة ونسبية، فبخصوص البنية التحتية فالوضع في ليبيا سيء بالمقارنة بدول الجوار، خاصــة مع غياب backbone الخاص بالاتصــالات وضـعف شبكة الالياف البصـرية وعدم ايصـالها لجميع المناطق في ليبيا، وذل بسبب الموروث الاداري والفني في قطاع الاتصالات وما تعانيه شركه هاتف ليبيا.

ايضا المسـاحات الشـاسـعة في ليبيا تشكل عائق مما يؤثر على الجدوى الاقتصادية من مشاريع البنية التحتية بشكل عام، وايضــا في المناطق الحيوية كالعاصــمة طرابلس، فان التطوير العقاري الخاص والمدن تتوسـع بشـكل سـريع بالمقارنة مع الخدمات الحكومية المقدمة من بنية تحتية خاصه بالصرف الصحي والاتصالات وغيرها .

فكل جهة حكومية او غير حكومية تدفع الاف الدنانير لتوصـيل خط الياف بصـرية. اما بخصـوص التكنولوجيا فمن المفروض على المؤدين اسـتخدام التقنية الحديثة، والتي لا يواكبا تطور في البنية التحتية للاتصـالات. اي مؤسـسـة مهتمة بتنفيذ مشاريع حقيقية، فكلها تذهب لتبني التكنولوجيا الحديثة من ناحية مراكز البيانات.

عندنا مشـكلة في غياب السياسـات الخاصـة بإعدام البيانات فالعديد من المؤسـسـات والمصـارف تحافظ على بيانات المودعين لما يزيد العشرين سنة، مما يؤثر على حجم قواعد البيانات، وذلك لغياب السياسات. صحيح البعض يعتقد ان التوسع في قواعد البيانات والتحديث المستمر هو من باب الفساد المالي، لكن في الحقيقة انه لا يذكر، لان صـعبة الفهم عند الكثيرين. ايضا يؤثر على اشكال اخر هو كمية استهلاك الكهرباء للمنظومات السابقة لسنوات كثيرة.

بخصـوص أؤثر مستوى الإلمام بتكنولوجيا المعلومات والاتصـالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فالموظفين فلديهم الالمام الكافي، لكن ادارة هذه الخدمات امر اخر، وهنا الاشــكالية الحقيقية في القطاع العام. مثلا كل 30 موظف تجد فقط موظف واحد يستطيع ادارة المشاريع التقنية في كل مؤسسة من القطاع العام، ويواجه ايضا ممانعة كبيرة للتعلم. والفساد المالي يأتي هنا، حيث جميع الموظفين يسعون للتدريب لدواعي السفر، وهذا مما يؤثر على العقود بمختلف اشكالها.

اما بخصـــوص المواطنين، فالمواطن ســيقوم بتنفيذ ما يطلب منه، ولنا تجارب عديدة تؤكد ذلك من ناحية القطاع المصـرفي، وكذلك الفئة العمرية تجعل القابلية تختلف. لكن مع فرض الخدمات المواطن يستجيب للتكنولوجيا ويتأقلم معها ويدافع عليها.

بخصـوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، فالشــركات الدولية مقدمة خدمات البنية التحتية من قواعد بيانات وغيرها متوفرة بشــكل ممتاز في ليبيا وتقدم في خدماتها بجودة عالية، اما بخصوص جانب البرمجيات فالسوق المحلي قد يعاني بعض الشيء، لكن الحل موجود، فالشركات الدولية بالمنطقة موجودة ويمكنها توفير كافة الخدمات المطلوبة، وهذا عن تجربة قمنا بها في القطاع المصـرفي في الســابق. خاصـه في ناحية البرمجيات المقدمة من الشركات الدولية فجميعا لديه شركاء بالمنطقة يمكنهم تلبية الاحتياج المحلي.

لكن السوق المحلي من ناحية البرمجيات فهو ضـعيف جدا، وبالمقارنة بالطلب فيؤل للصـفر. اما من ناحية المخاطرة في التعاقد مع الشــركات الدولية، فان وجود اقسام قانونية قوية في هذه المؤسـسـات الحكومية سيسـاهم في حماية حقوقها بالكامل وسلاسة تنفيذ هذه المشروعات. المخاطرة الحقيقية هو في الاعتماد التام على الشركات الدولية، من الضروري وجود شركات وفرق محلي لضمان تشغيل هذه المشاريع.

بخصوص الخدمات الالكترونية الناجحة، للأسف لا يوجد، فكل الخدمات الاساسية يدوية، من الضرائب الى السجل التجاري، على سبيل المثال، ضمن مشاريعنا الاستشارية الحالية، عند تقديم اوراق الشركة للجهات المختلفة، يطلب منا نسـخ اصلية لمستندات عديدة ورقية. الامر ذاته بخصوص الرقم الوطني وعملية استخراجه من السجل المدني بالبلديات، في حين ان كل هذه الخدمات يمكن ان تقدم الكترونيا. بخصــوص المشـــاريع المطلقة مؤخرا من قبل الحكومة فهي منظومات منفصلة غير متوفرة اونلاين، وكل منها عبارة عن جزيرة منفصلة.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، للأسف غياب الاستراتيجية والرؤية عائق كبير فهم حاليا يقومون بتنفيذ المشاريع بدون رؤية حقيقية. وهذا ناتج عن غياب المستشارين ذو الكفاءة على صعيد الحكومة .

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، للأسف المشاريع كلها وليدة اللحظة والمبادرة لا تأتي من اقسام تقنية المعلومات، بل تفرض المشاريع من الادارات العليا بدون اتمام التخطيط المناسب ودراسة الجدوى للمشاريع، ويتم محاربه اقسام تقنية المعلومات عند مبادرتها بأي خدمات الكرتونية. حيث الجميع في المؤسسات الحكومية يرى اقسام تقنية المعلومات على انها الادارات التي تقوم بصرف الاموال من دون فائدة.

بخصوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، فلا يوجد اي موارد حقيقية.

بخصوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، نعم ليبيا جاهزة للتحول الرقمي، وان كانت مع البنية التحتية الضعيفة الحالية فالحلول موجودة. للأسف المقياس الوحيد لنجاح المشاريع الحكومية في ليبيا يعتمد على نجاحها في المدن المكتظة ولا اهتمام بالمدن النائية.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، نعم له اثر كبير، والدليل واضح في القطاع المصرفي وخدمات الدفع الإلكتروني في كل من المنطقة الشرقية والمنطقة الغربية، كل منطقة تستخدم تطبيقات مغايرة وذلك نتاج للانقسام السياسي.

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، لا اعتقد بوجود اي عوائق واضحة، بالعكس هناك بعض السياسات التي تنظم العمليات خاصة في القطاع المصرفي، البعض يفشل في تنفيذ هذه السياسات. في العديد من الاحيان بعض المبادرات تأتي من القطاع الخاص وفور نجاحها تقوم الحكومة بالتكيف معها واعطاءها التراخيص اللازمة لاستمرار علمها .

بخصوص الضغوط الخارجية، والمبادرات الدولية أو الإقليمية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فهي قليلة تعاد لا تذكر، منها ذو علاقة بغسيل الاموال ومكافحة الفساد. للأسف الدعم الدولي في ليبيا يعتقد انه سيتمكن من الحد من الفساد قبل التعامل مع المشاكل التكنولوجية .

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فالموظف الحكومي يراها فقط مشروع وسينتهي، وذلك لغياب الرؤية والحافز، وبعضهم يحاول الاستفادة من التدريبات والسفر الذي يمكن التحصيل عليه من وراء هذه المشاريع. اما المواطنين، فهو سعيد بهذه الخدمات، والامر جلي في الخدمة المقدمة لمنحة الزوجة والبنات، خاصة مع عمليه التنظيمية للأجراء ودخول عدد من اصحاب المصلحة في العملية.

بخصوص سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، فالمواطن يقوم بما يفرض عليه .

بخصوص الجهود الحكومية لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا، نعم هناك مبادرات على اساس صندوق الضمان الاجتماعي وصندوق التضامن الاجتماعي، الحكومة تسعى لقيام مبادرات جديدة لكن المؤسسات التابعة لها بطيئة جدا، خاصه مع غياب ذوي الاختصاص في هذه المجالات.

بخصوص العرف الاجتماعي، فلا اثر له البثه، المواطن مجبر لاستخدام الخدمات الالكترونية، ومحاط بالأمل، في البداية قذ يمانع استخدام هذه الخدمات لكن في نهاية المطاف يقوم الإذعان الكامل.

بخصــوص اي مجموعـات أو أفراد معينون داخل الحكومـة أو المجتمع يعملون كمدافعين عن مبـادرات الحكومـة الإلكترونية في ليبيا، نعم هناك افراد داخل شـركات الاتصـالات والجهات الحكوميـة، لكن كلها على مسـتوى ضـيق وصغير .

بخصـوص اصحاب المصـلحة، فهم غير واضـحون، ولا يملكون الدراية، هم فقط يقومون بتنفيذ المشـاريع، كلها من دون اسـتراتيجية حقيقية. لدي الدراية بعدد من اللجان المشــكلة من قبل الحكومة، لكن كلها من دون جدوى او اي مخرجات. للأسـف العديد من المؤسـسـات لديها تضـارب وتقاطع في الاختصـاصـات وذلك بسـبب غياب ذوي الاختصاص وخاصه من قله الموارد.

بخصـوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فاهم الدوافع هو العمل على محاربه وقتنين الفسـاد، تسـهيل الخدمات للمواطن والتقليل من المركزية، والحكومة مهتمة براحة المواطن بسـبب الانتخابات القادمة. اما بخصـوص العوائق فاهمها، غياب التنفيذ، كلها احلام ومشـاريع غير واقعية، خاصـه مع غياب الخبرات المحلية وغياب الاستشارات الاجنبية، وغياب التواصل مع القطاع الخاص والتخطيط الاستراتيجي .

الحكومة في حاجه لشريك أجنبي لتنفيذ الاستراتيجية ومشاريعها لضمان التحول الرقمي السليم في القطاع العام، اما العمل بالعشوائية الحالية.

Interview Code 09

بخصـوص الوضـع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـالات في ليبيا نبدأ بالتواصـل يمكن تصـنيفه سيء ولكنه يتحسن تدريجياً، فالاتصال لا يتوفر بشكل دائم ومستمر، فالمصارف على سبيل المثال ان ارادت اطلاق خدمة رقمية تُدرك حينها ان العائق الاكبر لديها هو عدم الاستمرار والاتصـال في المنطقة المُراد اطلاق الخدمة بها، سواء مثلاً تغطية الاتصالات او الانترنت الذي هو ايضاً تختلف جودته من منطقة لأخرى، مثلاً داخل مدينة طرابلس تكون التغطية جيدة نوعاً ما ولكن عند الذهاب الى ضواحيها تنخفض جودة الاتصـال بالأنترنت بالتدريج، خاصةً ان المصـارف في ليبيا عندما تطلق خدمة تحرص دائماً على التواصـل مع جميع المراكز التي توفر هذه الخدمة، فحتى وإن استطعت توفير حلول بديلة كالحصـول على كوابل الالياف البصـرية من شـركة هاتف ليبيا او غيرها ستكون التكلفة جداً مرتفعة والجودة لا ترقى اكثر من المقبولة، هذا من جانب الاتصـال، اما بالحديث عن جانب الكوادر فأعتقد انها افضـل ما يمتاز به قطاع الاتصـالات في ليبيا، فلدينا الكثير من الموارد البشـرية في هذا القطاع، ليست هائلة ولكنها غير معرقلة كمشكلة البنية التحتية المتعلقة بالتواصل.

بخصـوص مسـتوى الإلمام بتكنولوجيا المعلومات والاتصـالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، لا اعتقد ان هناك اي مشـكلة، صـحيح يوجد نوع من الأمية ولكن بحكم ان ليبيا لم تتحول رقمياً 100% من ناحية هذه الخدمات، فصـحيح ان الأمية موجودة ولكن لا اعتقد انه يوجد تحديات، على العكس تماماً انا ارى ان هناك مصارف لديها قصص نجاح مثل مصرف الامان، رغم انه يواجه العديد من المشاكل ولكن الناس لم تواجه اي مشـاكل في تبني هذه الخدمات او استخدامها على العكس تماماً، حيث انها توسـعت بشـكل كبير وسريع واعتادها الناس بسرعة، انا ارى ان هناك نوع من الأمية ولكن ان توفرت الخدمات بالشـكل الصـحيح فلا اعتقد ان الناس سـتواجه اي مشـكلة، لان تعامل المواطنين مع الاجهزة الذكية جعل تعاملهم مع التكنولوجيا جداً ممتاز .

اما بالنسـبة للموظفين دائماً هذا موضـوع آخر فمصـرف الاسـلامي الليبي مثلاً لدينا مشـاكل من ناحية اسـتخدام الكمبيوتر حتى الاستخدام البسـيط اي الخدمات البسـيطة التي سـتقدمها للجمهور، المواطنين لديهم هواتف ذكية ولا توجد لديها مشـاكل معهم ولكن عند الحديث عن المصـارف فالموضـوع يصـبح اكثر تعقيداً، مثلاً اسـتخدام الكمبيوتر لكي يقدم خدمة معينة دائماً لدينا اشكالية في هذه النقطة، فأستطيع ان اصنف ان لدينا أمية من هذه الناحية.

بخصوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، ارى ان هناك ما يكفي من التكنولوجيا لكي نطلق خدمات قوية من نـاحية الخدمات الرقمية فأنا لم ارى في حياتي مشـاكل من نـاحية التكنولوجيا في حد ذاتها، المشـكلة دائماً تكمن في التنفيذ، في ليبيا المشـاكل دائماً ادارية وتخطيطية، اغلب الخدمات التي أُطلقت، تطلق بتكنولوجيا جداً عالية ولكن العيب دائماً يكون بسـوء تخطيط وتنظيم اداري، فبعد اطلاق الخدمة تصـطدم بالواقع بأرقام وأمور لم يتم اخذها بعين الاعتبار، فتفشـل، ولكن من نـاحية التكنولوجيا انا اراها جداً ممتازة وتدعم الكثير من الخدمات الجديدة ان تنطلق.

بخصـوص الخدمات الالكترونية الناجحة، فجميعها ابتكارات خجولة لا ترقى ان تكون مبادرات حكومية، فلا يوجد اي مبادرات حقيقية تدعم اي ابتكارات او حلول تكنولوجية متكاملة.

بخصـوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، القيادة رغم ان الظاهر في الصـورة انها تشجع وتدعم هذا الشيء ولكن عندما نرى الواقع نستوعب انه لا يوجد اي خطط قابلة للتنفيذ على ارض المدى الطويل، كله مجرد كلام فقط، لا يوجد خطط اطلاق خدمات ودمجها مع الخدمات اليومية التي يحتاجها المواطن، كله مجرد كلام فضـفاض ومبادرات كلامية فقط، احياناً لا تسـتطيع فهم حتى محتواها الحقيقي، في دول اخرى في الشـرق الاوسـط عند الحديث عن التحول الرقمي يكون بشـيء ملموس وثائقيات في جدول زمني وكيفية التحول بالتدريج، اشياء تستطيع البناء عليها، لأنك انت كقطاع خاص ايضاً تحتاج البناء على اشياء مبنية في الاساس ولكن هذه الخدمات الحكومة لا تقوم ببنائها بالتالي تتوقع العملية كاملةً، حتى مصـرف ليبيا المركزي غالباً ما تجده يعلن عبر منصـاته اطلاق خدمات جديدة ومبادرات، ولكنه مجرد كلام، نحن كمصـرف كجهة متأثرة بمصـرف ليبيا

المركزي بشكل مباشر لا نستطيع بناء اي شيء على اساس مبادرة اطلقها مصرف ليبيا المركزي، ولا حتى نستطيع ان نقدم على اساسها خدمة.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ الخدمات الالكترونية، سـأرجع لذات النقطة، لا يوجد آلية واضحة او ادارة واضحة لأي مبادرة، الحكومة في حد ذاتها لا يوجد تواصل جيد بين وزاراتها، فتكون مبادرة خرجت من قسم معين وباقي الاقسام لا يعلمون عنها اي شيء، والدليل على ذلك انه يوجد العديد من المبادرات تخرج متناقضـة، لأنها غير متجانسة، مثل موضوع المرتبات مثلاً، من نقطة بعيدة تشـعر ان اشكالية المرتبات قد انتهت بالحلول "الرقمية" ولكن عندما تكون في قلب المشـكلة تجد ان لا شـيء تغير مجرد انه ذات المشكلة بطابع رقمي فقط لا غير.

بخصـوص، الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية ان كان يوجد دعم كنا سنرى تطور حقيقي داخل المؤسسات، او تدريب لهذه الجهات، لان حتى المؤسسات قبل تطور خدماتهم التي يقدمونها وتتحول رقمياً يجب ان تتحول المؤســسـة داخليا كطريقة عمل، والى يومنا هذا لم ارى اي مؤسسة تحولت رقمياً في منظومة عملها بشكل كامل.

بخصـوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، الحكومة دائماً ما ترينا ان لديها اهتمام بالموضوع، فثقافياً بدأت الحكومة بتبنيه والدراية بأهميته، فوجود هذه الفكرة شيء جيد جداً ولكن لم نرى اي خطوة حقيقية للخروج بمبادرة ومحاولة جعلها ناجحة واطلاقها اطلاق صـحيح وهذا هو سـوء التنظيم الذي تحدثنا عنه سابقاً، والذي يمكن التخلص منه ان احتجنا بشركات خارجية، فثقافياً الموضوع ممتاز ولكن التخطيط والتنفيذ لم نأخذ الخطوات الصحيحة بعد حسب رأيي طبعاً.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، بالتأكيد لأنه يؤثر على كل الجوانب فما بالك بالتحول الرقمي الذي يتطلب توحد كل الحكومات الليبية حتى تسـتطيع اطلاق الخدمات على كامل الاراضي الليبية، حتى وستعطيه صياغة خطة موحدة لكامل الاراضي الليبية وكل المدن والبلديات، ولكن الحكومة الحالية رغم انه يوجد نوع من الاستقرار ولكن لا اعتقد انها ستستطيع النجاح في تحقيق التحول الرقمي طالما لازالت لا تستطيع فرض سيطرتها على كامل البلاد، انا اراه شيء غير منطقي ان يكون لديك حكومتين على الارض الواحدة وتطلق مبادرة كهذه وتتوقع لها النجاح، لان اسـاس التحول الرقمي هو اللامركزية من ناحية البيانات ولكن هذا لا يتوفر حالياً.

بخصـوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبي، حسـب ما رأيت في مصـرف ليبيا المركزي فهم قانونيين عاديين او احياناً مصـرفيين فقط لا هم بقانونيين ولا حتى بمختصـين في التحول الرقمي، والقوانين عشوائية ليست مبنية على دراسة حقيقية للسوق في الوضع الحالي، جميعها استنتاجات شخصية حتى عندما حاولت التكلم معهم بهذا الخصـوص وجدت انهم هم ذاتهم متناقضـين، ذات الفريق الذي وضـع اللائحة احد يستجيب وواحد يرفض ما تقترحه.

بخصـوص ضـغوط خارجية، مثل المبادرات الدولية أو الإقليمية، لا دراية لدي لو في مبادرة حقيقية تحت اسم او خطة معينة.

بخصوص الفوائد المتصـورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فهي تسهل على الموظفين عملية انتقال المعلومات والقضاء على الفساد الاداري وايضاً تسهل التواصل بين الاقسـام. اما المواطنين فتسـهّل لهم اجراءاتهم وتضـمن لهم حقوقهم من حيث النزاهة وتتخلص من طول وقت استخراج المستندات الورقية

بخصوص أمثلة على خدمات الحكومة الإلكترونية التي كانت فعالة بشـكل خاص في تحسـين الكفاءة أو الشفافية أو جودة الخدمة، نعم، رأيت منحة الزوجة والابناء وغالبية المواطنين الذين لم يكن لديهم اي اشـكالية، ولكن هذه خدمة سوف تستخدمها في فترات جداً بعيدة عن بعضها، ولكن عندما تريد تقييم خدمات فنحن نتحدث عن

اشياء ستحتاجها دائماً في كل وقت كشهادة الوضع العائلي والمستندات الوطنية الاخرى، لان هذا ما نحتاج بشكل اكبر ولم نرى اي مبادرة ناجحة بالخصوص.

بخصوص سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، اجل، اغلب الخدمات التي تم اطلاقها فيها نوع من التعقيد في الاستخدام، لا استطيع استحضار مثال محدد ولكن يوجد مبادرة او منصة اطلقتها الحكومة الحالية تدعى "حكومتنا" تجعلك تعتقد ان بها تحول رقمي ولكن هي عبارة عن ارسال بريد الكتروني لجهة معينة وتقوم هذه الجهة بالرد عليك رغم ان لغالبية الناس تجارب جيدة معها ولكنها عملية معقدة انك عندما تريد التواصل مع جهة حكومية ترسل بريد الكتروني وغالبية الناس تراها عملية معقدة، نتمنى ان يصبح لدينا خدمات حقيقية تسهل على المواطن الوصول لكل الخدمات دون التواصل مع جهة معينة كوسيط.

بخصوص تؤثر الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، لا اعتقد ان الاعراف المجتمعية تؤثر على تبني القرارات لأنها لا تتعارض مع فكرة التحول الرقمي. اما بالنسبة للثقة، اعتقد ان الامور ليس متعلق بالتحول الرقمي مثلما هو متعلق بفساد الاجراءات الحكومية في حد ذاتها، فبطبيعة الحال اي مواطن سيتوقع هذا، فيوجد قصص مثبتة لحالات فساد في الخدمات التي تم اطلاقها كمنحة الزوجة وهنا أود طرح نقطة اخرى الا وهي الرقابة، وهي مشكلة في ليبيا بشكل عام ومشكلة في التحول الرقمي بشكل خاص، لان الرقابة في شيء مثل التحول الرقمي شيء مهم وفي غاية الحساسية.

بخصوص هناك مجموعات أو أفراد معينون داخل الحكومة أو المجتمع يعملون كمدافعين عن مبادرات الحكومة الإلكترونية في ليبيا، فعلى صعيد الحكومة حسب علمي لا يوجد، هي فقط منظمات مجتمع مدني تشجع على التحول الرقمي ولكن هي ايضاً لم نرى منها اكثر من التشجيع من خلال حملات رقمية، ولكن لم نرى مؤتمر او ورش عمل بخصوص التحول الرقمي حسب علمي. اما بالنسبة لأصحاب المصالح فبصفة عامة السجل المدني ومصلحة الجوازات وكل المؤسسات يمكنها ان تستفيد من التحول الرقمي حتى قطاع التعليم، فالموضوع يتعلق بالعديد من القطاعات لذلك يستحيل ان تربطه بصاحب مصلحة واحد، فكل الوزارات والمؤسسات ستجد قسم واحد فقط على الاقل مستحيل بشكل مباشر كصاحب مصلحة.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال، فلا يوجد اي موارد او دعم متاح في الوقت الحالي لاستخدام خدمات التحول الرقمي فكلها عبارة عن حملات توعية ولكن حسب علمي.

بخصوص مبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبي، فلا يوجد مبادرات دعم ولكن هذا حسب علمي.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، في نظري الدافع الاهم هو الفساد والرقابة، فأنا ارى ان التحول الرقمي يعزز من الرقابة ويسهلها خاصةً ان تنفذ بالشكل الصحيح فحينها سيقلل من الفساد وهذه من اكبر المشاكل في ليبيا واكبر ثغرة يستغلها الفاسدين هي الامور المالية والادارية، التي يمكن ان يُقضى عليها او الحد منها على الاقل عن طريق التحول الرقمي، وهذا اكبر هدف لدينا كليبيين، ثانياً تسهل حياة المواطن، فالإجراءات الادارية جداً مرهقة التي قد تستغرق منك سنوات وطوابير طويلة دون جدوى، لذلك تنفيذ التحول الرقمي بشكل صحيح سيترك الطابع جداً مهم لحياة المواطن الليبي. اما بالنسبة للعوائق فعدم الاستقرار السياسي هو اكبر عائق للتحول الرقمي في ليبيا، لان التخطيط للتحول الرقمي دائماً يكون طويل المدى ويستغرق وقت، بينما الوضع السياسي الليبي المتضعضع يُفشل اي عملية تنفيذ خطة تحول رقمي، فلا تستطيع معرفة مدة حكم اي حكومة وايضاً يمكن الحصول على موافقة ودعم من حكومة والرفض من التي تليها وهكذا، لذلك ارى انا ان الاستقرار شرط اساسي لتحقيق التحول الرقمي.

الشيء الوحيد الذي ارغبه كشخص مصرفي ان ارى لجنة تتكون داخل مصرف ليبيا المركزي تكون مسؤولة عن وضع كل اللوائح والقوانين التي تمس التحول الرقمي وتكون بعيدة كل البُعد عن ادارة المصرف، فتكون لجنة

مســتقلة، وتكون عبارة عن خليط بين اخصــائيين تقنيين في التحول الرقمي ومصــرفيين وقانونيين، فهذا ســيعزز ويسهّل على المصارف تقديم خدماتها، لان هذه اللجنة ستكون مختصة باستخراج وانشاء القواعد واللوائح والقوانين التي تمس القطاع المصرفي فيما يتعلق بالتحول الرقمي.

Interview Code 10

بخصوص قيم الوضع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا، لا سيما فيما يتعلق بمبادرات الحكومة الإلكترونية، حاليا البنية التحتية غير متوفرة بشكل كامل او لا يوجد تنسيق في توفيرها.

بخصـــوص الجانب التقني، يوجد العديد من المشـــاكل التي تعاني منها ليبيا، ومنها وجود Gateway واحد فقط في ليبيا، والتي في حال تم فقدانها سـيتم فقدان الاتصـــال بالعالم الخارجي، وهي شـركة الاتصـالات الدولية، وهذه تعتبر عنق زجاجة ودائما في مشـــاكل. ثاني أمر هو عدم تطوير التقنيات الموجودة حاليا، لو تلاحظ ان Data Center التابعة لشـركة Libya Telecom and Technology لها ما يقارب الأسـبوع عاطلة عن العمل، اغلب الخدمات الحكومية والمصـــرفية عاطلة عن العمل، لذلك يوجد نوع من عدم مواكبة تطور الدفاع في Cyber Security والدفاع في DDoS او ما يعرف بـ distributed denial-of-service ، كذلك تطوير الـData Center ، يريدون تطوير Data Center منذ ست سنوات سـابقة، يقومون بالعطاءات والمقترحات لمدة ست سنوات ويقدمونها، من أجل الموافقة على الـ Upgrade.

يوجد نوع من سوء البنية التحتية وهو نوع Monopoly هذا، متجه نحو أن اي بنية تحتية تقوم بها الشركة القابضـة للاتصـالات فقط، اي نوع من الاتصـالات الحكومية تقوم بها الشركة القابضة للاتصالات، اي نوع من Cloud تقوم بها القابضـة للاتصـالات أو سحابة المدار، فهذه الـــ monopoly في حال حدوث اي مشكلة لدى الشركة القابضة للاتصالات، تتوقف العجلة بالكامل .

يوجد أيضــا مشـــاكل بين الوزارات وذلك لان كل وزارة تريد تجهيز Data Center خاص بها، بالنظر الى ترتيب ليبيا في الفساد فذلك يخلق مشـاكل، مثلا وزارة الشؤون الاجتماعية تحاول تجهيز Data Center خاص بها، ولكن دون جدوى .

للأسف عملية تطوير مراكز البيانات ومشتريات تقنية المعلومات تعتبر باب كبير من ابواب الفسـاد، حاليا الحكومة في مفترق طرق وهو بدل من تجهيز Data Center او شـــراء في كل وزارة أو جهة أو مصـــلحة، يمكننا تحميلهم على سحابة المدار، هذا يعتبر نوع من الترشيد، ولكن المدار بدوره ها شاركت في الـ Monopoly وذلك لعدم وجود توزيع للسوق او منافسة في مجال الـ Cloud ومن دورهم قاموا بالهيمنة على السوق وبالبيع بالآجل، ولم يكن لديهم مهندسـين كفاية، قريبا ثلاثة مهندسـين سـيقوم بتشـغيل دولة كاملة، كان الطلب اعلى من قوتهم البشـرية واعلى من ناحية المصادر، وبهذا عدنا إلى نقطة الصفر.

ثم ظهر اقتراح آخر، وهو Data Center وطنية تكون عند الهيئة العامـة للمعلومـات، ولا يزال الصـــراع فيها مستمر.

الموضـوع باختصـار ان الكل يريد المشـاركة في هذا الاستثمار بقوة ويوجد به نسبة عالية من الفسـاد، ان الكل يريد Data Center خاصة به يعتبر نوع من أنواع الفساد.

في سنة 2019 قام بإصدار القرار فائز السراج، بحيث يكون الـــ Data Center من الحكومة وبأموال من الشركة القابضـة للاتصـــالات، ولكن ملكيتها تكون للحكومة، حاولت البحث عن هذا القرار، ولكن لم اجده، ولكن سـأحاول توفيره في المرة القادمة.

بخصــوص Connectivity للأسـف في أخر ثلاثة سـنوات كان هناك تطور في مراحل معينة وركود في مراحل اخرى .

من سنة 2011 إلى سنة الـــ 2015 كانت ليبيا تشهد اسوء فترات الاتصالات وهي فترة الـــــYmax ، تواجد طلب عالي من الشعب ولم يكن هناك Fiber ولا اي نوع من انواع الاتصالات، وفي سنة 2016 2017 بدأ الـ 3 Gو4 G التابعات لشركة ليبيانا وبدت الأمور مرتاحة نسبيا، إلى ان بدأ الاهتمام الكبير لخدمات 4 Gوالذي تم الاستثمار فيه بشكل كبير.

كانت الـ Connectivity جيدة لغاية بداية سنة 2020 أو نهاية سنة 2021، ولكن نتيجة التخبطات والصراعات في قطاع الاتصالات والقابضة ايضا، الـــ Monopoly بشكل مختصر، التوجه Connectivity لم يعد اولوية، وهذا ادى الى أن مشاريع التطوير في هذا المجال شبه متوقفة، اي بمعنى نفس السرعات والسعات لا تزال كما هي منذ الـ 2021.

كذلك كما ذكرت سابقا فيما يخص الشركة الدولية التي تعد الـــ Gateway الدولي الوحيد وهي تابعة للحكومة، إذا انفصلت فإن الاتصالات على ليبيا بالكامل ستفصل .

في المنطقة الشرقية، وجدوا حل للدولية للاتصالات في الستة اشهر الماضية، وهو اخذ ما سعته Gig 100ما بين المنطقة الشرقية والغربية ايجار من هاتف ليبيا، بحيث لو حدث اي انقطاع في المنطقة الشرقية ستتيم تزويدها عن طريق البر وليس عن طريق البحر اي بمعنى المنطقة الشرقية ستكون مزودة عن طريق الالياف البصرية في مدينة درنة والمنطقة الغربية لديها توصيله في KM 4وايضا تاجوراء، في حال انقطاع الخطوط البحرية، هذا يؤدي الى انقطاع بالكامل، فالخطة هي امداد خطوط MPLS من شـــركة هاتف ليبيا برية عن طريق كوابل الفايبر لمشـــروع شـــبكة هاتف ليبيا، وهذا يعتبر حل مؤقت وتلفيقي ولا يمكن القول انه يوجد هناك Connectivity او اعتمادية على ان هذه الـ Connectivityدائمة، وهذا الشي لا يستطيع احد تأكيده بدليل ان اليوم لدينا مشكلة في Data Center التابعة لشركة الــــ LTTفي منطقة العمروص والذي ادى الى توقف الاتصالات بالكامل لمدة اسبوع ولا يوجد اي Back-upاو Redundancy لها، ولدينا اي مشكلة في حال انقطاع الكابل البحري .

ولدينا كذلك مشـــكلة سـياسـية، عندما يأمر أحد السـياسـيين أو أحد القادة بقطع الانترنت او الاتصالات على منطقة معينة، لا يوجد ما يجرم هذا الفعل او منعه، ولدينا ايضـــا مشـــكلة في عدم وجود عقاب لأي محاولات لإفسـاد أو تشويش الاتصالات مثل الأجهزة العسكرية التي تشوش في الاتصالات المدنية .

لدينا الكثير من المشاكل، ومع الأسف عدم وجود عقاب او قانون يؤدى الى ان هذه المشاكل تتشعب وتستمر. كذلك الـ Private ISP يعتبروا جيدين، ولكن يتشغلوا باستخدام تقنية الـ Wi-Fi للتوصيل وعلى التردد المفتوح وهو 2.4 و5 وهذا يؤدي الى تداخل في القنوات الخاصـــة ببعض و Noiseعالي جدا. كذلك موضـوع الالياف البصـرية دائما في صـراع على تنفيذ المشروع من حيث الجهة المنفذة هل هي قطاع خاص ام عام ويعتبر الـــ Fiber جزء كبير من الـ Monopoly لان هاتف ليبيا لديهم مستند ينص على اي كابل فايبر تحت الارض يعتبر مملوك لشركة هاتف ليبيا في الأصـــل، اي بمعنى إذا قمت بأمداد خطوط فايبر الخاصـــات بك من منزلك إلى منزل جارك، بالقانون تعتبر هذه الخطوط مملوكة لشركة هاتف ليبيا حتى إلى قمت بشراء أنت هذه الخطوط.

بخصـــوص مسـتوى الإلمام بتكنولوجيا المعلومات والاتصـــالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فهو امر نسبي وفضـفاض جدا، وانا اصبحت في مرحلة شـك ما بين كونهم مقاومين للتغيير ام هم حقا لا يفهمون، في مرحلة أجد أنهم يتفهمون، لكنهم يقاومون التغيير لدرجة الخوف على مناصـبهم من أشخاص قد يكونون أفضل منهم. أعتقد أنهم يقاومون أي شيء جديد أو يحاولون اعتلاء العرش ويظل كل شيء ملكًا لهم، وبدليل انهم لا يريدون استخدام اي Cloud Service سواء مقدمة من جهة محلية مثل المدار وشبكة العنكبوت أو دولية، مثلا محافظ مصرف ليبيا المركزي الصديق الكبير، قال علنا بأن يمنع على كل المصـارف الحكومية انها تستضيف بياناتها خارج ليبيا، في حين لدي أنا ورقة مسربة في سنة 2015 تم ارسالها لمدراء الإدارات مذكور فيها دراسـة لإمكانية اسـتضـافة البيانات المصـرفية في السـحابات الدولية وهنا انت لا تعرف إن كان المحافظ يريد الاستضافة عالميا أم لا، على سبيل المثال ايضا السيد عبدالباسط باعور وهو رئيس هيئة الاتصالات يرغب ان يكون هناك National Data Center ويرغب ان ينفذ ولديه فريق جيد جدا، ولكن تجد هناك صـراع من طرف مجلس التطوير الاقتصادي يريد ان يكون قائد التحول الرقمي في ليبيا .

بخصـــوص تدخل المجلس الوطني للتطوير الاقتصـادي في التحول الرقمي، فأحاول فهمها منذ اكثر من 9 شـــهور ولكن لم اجد لديهم اي قوى فنية او معرفية او خبرة سابقة، واجدها مناورة او مغامرة يريدون الدخول فيها، Trend ضـــخم، عندما تتكلم عن هيئة المعلومات لديها البيانات ولديها الموظفين ولديها خبراء متدربة في حين المجلس التطوير الاقتصادي ليس لديه اي شي الا انه يقترح على الحكومة والحكومة تناقش فيه ولكن لم تترك كل شي له، هم

مقاومين للتغيير وانا اتوقع انه لو وصل الموضوع الى مجلس التطوير الاقتصادي لن ينفذ اي شي بخبرات وطنية بل سيتم بعقد استشاري للخارج وهنا مشكلة لان لدينا خبرات وطنية موجودة في هيئة المعلومات وموجودة في بعض افراد من القابضة وموجودة في بعض ادارات هيئة الاتصالات وفي حين دخول لاعب جديد وهو مجلس التطوير الاقتصادي هو غير مفهوم وليس واضح ولم نرى منه اي شي الى هده اللحظة .

بخصوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، فالقطاع الخاص ما لم يجد ضمانات من المحتكرين بعدم اضرارهُم فهو لن يتقدم في عجلة التحول الرقمي في ليبيا لو يساهم فيها ولو بدرجة بسيطة، لان انا شاهد على بعض المشروعات الخاص بالخدمات الالكترونية للمواطنين تم النصب فيها على شركات خاصة وكانت صدمة، والمشكلة ان القطاع الخاص او الشركات الخاصة عند حدوث اي فساد او تلاعب من قبل القطاعات الحكومية ينشر هذه المعلومة عند كل اقرانه لتحذيرهم بعد التعامل مع هذه الدوائر او الجهات، كذلك الجشع او الانطلاق بشكل عنيف جدا للقطاعات الحكومية للسيطرة على الخدمات الالكترونية وان تكون مملوكة للدولة، هذا شي غريب جدا، اي بمعنى الوزارات والحكومات هي التي لديها الحق في تقديم الخدمة الالكترونية ولا يحق لأي جسم اخر خاص او منظمة مجتمع مدني او تجمع مدني انه يقدم خدمة الكترونية، وهذا يعتبر في مشكلة في تشريع الخدمات الالكترونية من الاساس وذلك لعدم توضيح من المسؤول عن تقديم هذه الخدمات .

مثلا وزارة الاتصالات تقول انها الجهة المسؤول على تقديم هذه الخدمات ولديها اللائحة التنفيذية الخاصة بالخدمات الالكترونية والتي تمنع اي جهة من تقديم اي خدمة الكترونية ما لم يتحصل على ترخيص من ادارة الخدمات الالكترونية من هيئة الاتصالات.

كذلك مشكلة اعداد اللجان لتقديم خدمة الكترونية على سبيل المثال لخدمة مستهدف اطلاقها بعد 3 أشهر لأنها سوف تستمر الخدمة لمدة سنة او سنتين ومن ثم تنتهي صلاحيتها مثل أي خدمة الكترونية، فتكوين اللجان اول شي تقوم به الجهات الحكومية، وهدف اللجنة أن تستمر لأطول فترة ممكنة وأعضاء اللجان تُصرف لهم مكافآت، والقطاع الخاص يبقى تحت رحمة القطاع عام للموافقة على اللجنة .

بخصوص الخدمات الالكترونية الناجحة، للأسف الكثير من الخدمات الالكترونية أطلقت لكنها فشلت ومنها:

- خدمة حجز موعد لقاح كورونا وقد فشلت.
- خدمة حجز تصوير جواز سفر وقد فشلت

اما الخدمات الناجحة :

- خدمة إصدار شهادة تحصين ضد فيروس كورونا للسفر، هده الخدمة نجحت وحتى هذه اللحظة تعتبر ناجحة.

الخدمات الممتازة ويوجد مقاومة ادارية من الداخل، مثل :خدمة اصدار الحالة الجنائية او شهادة البراءة من وزارة الداخلية، عمر هذه الخدمة أكثر من سنة وثلاثة، نجحت، ولكن تعاني من مقاومة تغيير في بعد الادارات، مثلا ادارة طرابلس لا تريد أن تستجيب والسبب هو الـــــ 5 دينار ثمن اصدار الشهادة، ولكن ادارت كثير مثل الكفرة وسبها وبنغازي تعتبر ناجحة جدا ولا تحتاج إلا تقديم معلوماتك اونلاين فقط.

خدمات داخل المؤسسات :خدمة الاستعلام الأمني عن السيارات، صادرة من إدارة التوثيق والمعلومات بوزارة الداخلية ومديرها البهلول، وهذه الخدمة صدرت منذ ثلاث أو اربعة أشهر سابقة، يستطيع رجال الأمن الاستعلام على السيارات في اقل من دقيقة باستخدام صور وارقام لوحات السيارات في حالات السرقة وغيرها، ولكن للأسف هذه الخدمة تواجه مشاكل غياب التمويل، ولكن لاتزال مستمرة .

خدمات اخرى :التحول الرقمي الصادر من النائب العام لكل النيابات، حيث فرض النائب العام استخدام الشبكة الداخلية في كل العمليات والاستعلامات والمراسلات.

- قاعدة البيانات الوطنية.

- المصرفي المركزي في خدمة ارباب الأسر والاستعلام عليها وطلبها.

السبب وراء نجاح بعض الخدمات يعود لوجود قوة وإرادة خلف هذه الخدمات، مثل وزارة الداخلية، أو النائب العام، أو مصـرف ليبيا المركزي، وهي اجهزة تعتبر بالنسـبة لموظفينا مخيفة، يوجد بها عقوبات مثل السـجن او الطرد وعدم رحمة او قسوة في التنفيذ، بقية مؤسسات الدولة غير قادرة على تنفيذ مثل هذه العقوبات.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، لا توجد هناك قيادة وإدارة تتفهم مفهوم التحول الرقمي بكامل متطلباته وتفاصـيله، ما يسـمي نفسـه قائد تجده لا يلتزم بالوقت وجل الجهات الحكومية يستخدمون البريد الإلكتروني مثل الــ Yahoo او WhatsApp للتواصل وارسال معلومات حساسة جدا وفي حال حدوث اي مشكلة او اختراقات لن تجد احد من القيادات الحالية للاستجابة. غياب قيادات فاعلة يعتبر أحد الاسباب في الرجوع للخلف او عدم التقدم في موضوع التحول الرقمي .

بخصـوص لثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، للأسف هذا الموضــوع يعتبر متخبط حاليا، مؤسـسـات الدولة تتصـارع بين بعضـها البعض والإدارات غير متعاونة مع بعضــها، بالإضــافة الى ذلك، انهم يحظرون بعضــهم البعض حتى في التشــريعات، مثل Public Domain Information والتي تعتبر معلومات عامة، ولكنهم يتحفظوا عليها لأنفسهم، أيضـا البيان المهم لبعض الجهات يمنع على جهة اخرى .

يوجد عدم تعاون بين المؤسـسـات والإدارات، على سـبيل المثال، يأتي وزير المالية مع وزير الشـؤون الاجتماعية لصرف المنحة، ويتم الانتظار حتى يتم تشكيل لجنة، وبعد ذلك تختار اللجنة شركة منفذة، ولا تحدد نفقات ومستحقات الشركة على أي جهة سواء كانت من المالية او من الشؤون الاجتماعية، ومن ثم يتم تحويل المشروع بقرار وزاري او اداري لهيئة المعلومات التي ليس لديها ميزانية للتنفيذ.

لدى بعض الجهات القدرة على ايقاف جهات اخرى من الاسـتفادة من اي خدمات الكترونية، على سـبيل المثال استضافة على Data Center او خدمات سحابيةCloud Services ، مثلا في جامعة طرابلس يوجد هناك Data Centerوتعتبر ملك للجامعة فقط وليست ملك للدولة الليبية او ملك لوزارة التعليم، في حين أن وزير التعليم العالي والبحث العلمي عمم منظومة متهالكة صممت من قبل هواة في مدينة سبها على كل الجامعات وسميت بــــ منظومة الرقم الجامعي الموحد وهي منظومة مليئة بالثغرات وكانت مشروع تخرج واعجب بها الوزير ولكن للأسف الوزير ليس لديه اي خلفية تقنية أو فنية وعندما قمنا بإرسـال تقرير امني بخصـوص المنظومة وثغراتها، لم يسـتجب لها واعتبرنا اعداء النجاح. باختصـار، القيادة لدينا للأسـف في صـراع، في عدم معرفة، في عدم وعي، ارى أن كان هناك إرادة قوية على التغيير فسيتم التغيير في خلال أشهر.

بخصـوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، تطلق ميزانيات، ولكن لم نر شـي في السـابق، مثلا طلبت وزارة الشـؤون الاجتماعية ميزانية وقيمتها 140 مليون دينار لإعداد Data Center ولكن لا اعلم ان تمت الموافقة عليها ام لا، ويوجد أيضـا قرار بتخصـيص 87 مليون يورو لإعداد Data Center خاصــة بهيئة المعلومات، ولكن تم إيقافه. لا توجد اسـتراتيجية دعم واضـحة من طرف الحكومة او تنسيق واضـح لعملية التحول الرقمي. وجدت ايضا من يحاول الاسـتفادة من المسـاعدات المقدمة، مثل ديوان المحاسـبة والـــــ USAID ، يتم الاسـتفادة في اعداد الاسـتراتيجية والتدريبات وبعض البرامج مثل Information and Auditing، توجد محاولات الاستفادة من البرامج العالمية من سبقونا في المعرفة .

بخصـوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، اعتقد يلزم وقت لحل المشـاكل والمختنقات الحالية، مثل Connectivity والتشـريعات التي تحد من التحول الرقمي ولا تباركه، كذلك النزاع على السلطات من طرف الجهات الحالية حول من يقود التحول الرقمي في البلاد.

نحتاج الى وقت للتحول الرقمي، وحتى وان تواجدت قيادة رشـــيدة اليوم وقامت بالبدء، نحتاج إلى فترة لا تقل عن أشهر ويمكن سنة لحل المختنقات السابقة أو الاخطاء التشريعية السابقة من منشورات، ولوائح، ومسودات، وقوانين .

مثلا قانون الجرائم الالكترونية، يتعارض جدا مع مشروع التحول الرقمي، مثل منع التشفير والخصوصية وغيره. لا ارى ان الدولة الليبية جاهزة، انما كلها مبادرة ومحاولات غير ناضجة.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، فهو موثر جدا، الاستقرار السياسي في 2021 كان له تأثير كبير جدا في تطوير كافة القطاعات الحكومية، بالإضافة لعدم وجود انقسام والذي بدوره يتسبب في مشاكل ايضا على سبيل المثال يوجد طرفين شرق وغرب او ادارتين. عدم وجود انقسام سياسي ووجود استقرار سياسي يدفع بالعجلة إلى الأمام .

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، يعتبر الموضوع نسبي، على سبيل المثال :

قانون الجرائم الالكترونية يعتبر قاسي جدا من ناحية العقوبات، ويجعل أي شخص يفكر أكثر من مرة قبل بدء المشروع   وقانون المعاملات الالكترونية والذي يدعم التحول الرقمي   .وهذه القوانين تم اصدارها في أواخر 2022.

توجد ايضا:

لوائح تنفيذية لقانون الاتصالات والاستراتيجية الوطنية للأمن السيبراني الصادرة عن NISSA نيسا - الهيئة الوطنية لأمن وسلامة المعلومات .

ايضا اصدرت الهيئة العامة للمعلومات في الفترة السابقة: الاستراتيجية الوطنية لحوكمة البيانات الحكومية. ودليل سياسات البيانات. والاستراتيجية الوطنية للتحول الرقمي الحكومي.

للأسف، كل هذه الافعال هي فردية من كل طرف وصدرت بشكل استعجالي للاستباق والمنافسة بين الاطراف، الصراع في عملية اصدار اللوائح والقوانين ليست بالطريقة المتناغمة بين الجهات، حيث ان البرلمان لا يستجيب مع الأخرين، والهيئات لا تتناقش مع بعضها وهذا يتسبب في وجود ربكة تشريعية .

بخصوص الضغوط خارجية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فهناك مشروعات USAID حتى هذه اللحظة هي افضل المشروعات وخاصة مع ديوان المحاسبة، حيث تم وضع خطة لتنفيذ التحول الرقمي على مدار ثلاث سنوات لتغطية احتياجات التحول الرقمي وديوان المحاسبة، وتم تحديد اطار عمل قانوني وكذلك توفير خبرات كافية لديوان المحاسبة لتعزيز الاستراتيجية الخاصة به، والان اصبح ادخال كل المستندات الكترونية كذلك تم برمجة App داخل الديوان، ولكن عندما حاولوا أن يربطوا مع بعض الجهات الحكومية الاخرى مثل المصرف المركزي أو الهيئات أو الوزارات وغيرها واجهوا الممانعة من تلك الجهات، ولكن مع التوعية من قِبل الديوان تحسن الوضع قليلا.

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا؟، لا استطيع أن أحكم ولكن بشكل يختلف بشكل كبير على البيئة الموجودون بها الموظفون مثلا موظفي الهيئة القابضة للاتصالات وشركاتها جدا سعديين بالتحول الرقمي لأنهم اكثر وعيًا على النقيض من موظفي هيئة الاتصالات فتجدهم أقل وعيًا. سبب هذا التفاوت ما بين الجهات هو البيئة الحاضنة لعملية التحول الرقمي هل هي بيئة تنمي الوعي التقني للموظف باستخدام أدوات حديثة مواكبة للعالم، يعتمد اعتماد كلي على حسب الجهة.

المواطن متعطش جدا لأي خدمة الكترونية وأرى أن المواطن تغلّب على الحكومة والهيئات والوزارات في استخدامه للتقنية، المواطنين اليوم يستخدمون أحدث الهواتف لاستخدام بعض البرامج المعينة التي تساعده في يومه، وأصبح يطالب الهيئات والوزارات والمصارف والشركات بتوفير تطبيقات على هواتفهم تقدم خدمات لتسهيل حياتهم اليومية .

على سبيل المثال عندما توقف برنامج توصيل الأكل Presto-Eat عن العمل لمدة اسبوعين بسبب ازمة الوقود، حدثت ضجة كبيرة بسبب تأخر الطلبات لنقص الوقود، وهذا دليل على أن المواطنين مستعدين لأي برنامج يقدم خدمات الكترونية .

بخصوص دي سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، تستخدم معظم التطبيقات المحلية المعايير العالمية، مثل تقليل عدد الأيقونات والتفاصيل داخل التطبيقات لتسهيل العملية على المواطنين خارج المدن والأرياف، من ابسط التطبيقات تعد التطبيقات الليبية ومن بساطتها احيانا يسقط منها الجانب الأمني مثل تطبيقات المصارف التي لا تحتوي على بصمة وذلك لتبسيط التطبيقات بشكل عام، وهذا التبسيط الغرض منه مراعاة المواطنين.

أنا أرى أن جانبي الوصول وسهولة الاستخدام جيد جدا بينما جانب الإتاحة توجد به بعض المشاكل مثل الانقطاع التي سبق ان تحدثنا عليها في شركة LTT ، هذا الانقطاع أثر على تطبيقات المصارف وايضا تطبيقات اخرى لا تعمل وهذه لا تعد مشكلة المواطن، بل مشكلة الحكومة أو الطرف الأخر .

بخصوص الجهود المحددة لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا، توجد العديد من الجهود المختلفة، ولكن امكانية وصولها ونجاحها موضع سؤال لأنها جهود مشتتة ولن تصل إلى نتيجة حقيقية قريبا.

بخصوص تأثير الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، المواطن لم يشعر بوجود خلل في الخدمة الالكترونية المقدّمة وانما شعر بخلل في المنتج بحد ذاته، الخدمة الالكترونية لم يشتك منها أحد التي قدمت سواء في الزوجة والأبناء، او في منحة ارباب الاسر وغيره، مرت بشكل سلس وبسيط جدا. ارى ان المواطن لم يصل لمرحلة ثقة وعدم ثقة، هي الامور كانت سلسة لدرجة ان المواطن لم يتوقع انها خدمة الكترونية.

اراء المواطنين ليست اراء فنية وإنما يبني في رأيه وحكمه على المنتج ككل الذي تقدمه الخدمة الالكترونية. مثلا الحالة الجنائية والتي تعتبر 100% الكترونية، سمعتها جيدة جدا في سبها وبنغازي بينما طرابلس لا، لان إدارة طرابلس ليست متعاونة، وهذا يؤدي إلى مشكلة وهي ليست مشكلة تقنية بس مشكلة إدارات .

بخصوص اصحاب المصلحة عندما يتعلق الأمر بالحكومة الإلكترونية في ليبيا فمنهم:

الهيئة العامة للمعلومات بشكل كبير جدا وتعتبر أكثر واحدة.

كمنفذين تعتبر القابضة للاتصالات ـ لجنة مشروعات التحول الرقمي

داخل القطاعات وكل قطاع لوحدة، مثل ديوان المحاسبة، المنطقة الحرة مصراته بشكل كبير جدا .

بالنسبة للاستراتيجيات، الباعوري حاول ان يوحد الجود بين كل مدراء تقنية المعلومات والتوثيق والمعلومات في الوزارات والهيئات، ولكن للأسف العمل الفردي مسيطر في ليبيا وكل جهة ترغب في العمل لوحدها.

بخصوص المبادرات أو الخطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا مبادرة اسكوا هي المبادرة الوحيدة التي صدرت وانا سمعت بها، ولكن لم يتم اعتمادها بعد ولا تزال مقترح .

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدوافع أهمها: سهولة الاجراءات. الافصاح والشفافية. سهولة الوصول للمعلومات.

اما العوائق فهي :مقاومي التغيير داخل المؤسسات الحكومية. التشريعات .

Interview Code 11

بخصــوص الوضــع الحالي لا لوضــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا، فالإشــكالية الاساسية تكم في أن المؤسسات الموجودة حاليا مستمرة بالعمل بالأليات القديمة، لا يزال يستخدمون Dedicated Service وBBS، لا أظن ان المؤسسات دخلت عالم ال Virtualization بشكل كبير، حتى فكرة وجود Cloud Service خاص بهم أو بنية تحتية مبنية على Cloud مثل ما يوجد في دول الخليج والسعودية حيث تم عمل Data Center مبنية بالكامل على Cloud تابعة للحكومة.

هذا شي يساعد بشكل كبير في عملية Deployment و continuous delivery/continuous deployment او ما يعرف بالــ CI/CD ، للأسف كل التقنيات تعتبر قديمة، لكي تستطيع العمل مع أحد الجهات الكبيرة ستضطر لاستخدام الــ VPN و Remote Access ويوجد من يزال يستخدم في FTP او ما يعرف بــ File Transfer Protocol وهذه التقنية تعتبر انتهت من كم سنة وبالنسبة لي شـخصـيا هذه التقنية انتهت. فكل التقنيات قديمة، وفي نفس الوقت لاتزال هناك اشــكالية أن المؤســســات التي تعاملت معها إلى هذه اللحظة تعاني من Drop in Connection او قطع مفاجئ في الاتصال بسبب مشاكل في الشبكة.

الفكرة غير المنطقية او على الأقل من وجهة نظري الشـخصـية، لماذا تملك Data Center او Infrastructure تحتاج الى متابعة بشكل دوري أي ساعة بساعة، تقديريا نسبة أن System أو Network أو Services مما يؤدي لمشاكل في الخدمات. شـخصـيا لا يوجد لدي خبرة في مجال Infrastructure ولكن الذي اعرفه، انا لدي نظام تبع لمؤسـسـة دار الافتاء يعمل بسـلاسـة منذ سـنة 2019 إلى اليوم لم يتوقف حتى ثانية واحدة، وتوقف مرة واحدة فقط وكان سببها عدم دفع المستحقات المالية فقط لا غير، بينما الأنظمة الأخرى التي تعاملت معها في القطاع الحكومي، تقريبا بشكل دوري تتعطل .System Down

بخصــوص كيف يؤثر مسـتوى الإلمام بتكنولوجيا المعلومات والاتصــالات بين موظفي القطاع العام والمواطنين، يعتبر ضــعيف جدا، بالمقياس تقريبيا 2 من 10، الفئتين ضــعيفتين من نـاحيـة الالمـام بتكنولوجيـا المعلومـات والاتصالات ولديهم ممانعة، بالأخص الموظفين غير التقنيين،

كمثال صـندوق الزواج وتجربة منحة الزواج، فهم لديهم ثلاث منظومات، واحدة للأرشـفة، وواحدة تخص بدراسـة الحياة الاجتماعية، والاخيرة للإعلانات والاخبار التي تخص المؤسسة والأوراق الرسمية واللوائح، وللأسف لا يتم استعمالها جميعا في حين ان جميعها Up Running والكل لديه الخلفية عن كيفية استخدامها، ولكن لم يتم استخدام اي منهم، لا يزال تفضيل استخدام تطبيق WhatsApp للمراسلة، وفي نفس الوقت لا يزال مستمرين في استعمال الأرشيف التقليدي بالرغم من وجود ارشفة الكترونية، اعتقد تمت ارشفة ثلاثة أو أربع مستندات فقط.

اما بخصــوص المواطنين فاعتقد ان هم أكثر فئة لديها الرغبة ويتمنوا ان يتم اسـتخدام التكنولوجيا في كل الخدمات، ولكن للأسف التجارب السـابقة تعمل على قتل هذا الحل، وخاصـة التجربة المصـرفية السـابقة التي تتمثل في تزاحم المواطنين على المصـارف لسـاعات وذلك فقط بعذر ان النظام الالكتروني لا يعمل والى اليوم غير معروف أصـل هذه الكلمة .

فالمواطن أصـبح ممانع لاسـتخدام التكنولوجيا وذلك بناء على تجاربه السـابقة السـيئة مع القطاع الحكومي، خاصـة تجارب المواطنين في الفئة العمرية الكبيرة سنيا، دائما لديهم كره لفكرة وجود التكنولوجيا للأسباب التي ذكرتها، لان في نظرهم المنظومة دائما متوقفة وتعطل في اعمالهم، ودائما يوجد بها اخطاء هذا حسب كلامهم. باختصار، لم تكن هناك امثلة ممتازة كافية لتشجع المواطنين على التحول الرقمي.

بخصــوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، لا يوجد توافق الحقيقة، احاول ان لا أكون سلبي بشكل كبير، ولكن لا أستطيع. من وجهة نظري يمكن أن يكون المحرك للتطور والتحولات الرقمية في ليبيا حاليا هو القطاع المصـرفي، وللأسـف ان التجربة المصـرفية في ليبيا من السـوء، فتوفير تطبيقات جيدة ليس بالأمر الصــعب، ولا توفير خدمة ممتازة للدفع الالكتروني، لو تم توفير هذه الخدمات بجودة 100% مثل

تركيا على سبيل المثال، المواطنين لا اراديا ستبدأ بالمطالبة بالخدمات الاخرى ان تتبع المصارف. تطبيقات رديئة جدا، وكل شــي يعتبر رديء، المحصلــة النهائية تجربة المواطنين ســيئة جدا. تستطيع رؤية ذلك، اليوم قمت بزيارة المصرف ووجدت العشرات من الناس يسألون على الرصيد الموجود في حساباتهم، يعني تخيل شخص جاء الى المصرف لكي يعرف رصيد حسابه .

بخصـوص الحلول الالكترونية الناجحة، فلا اعتقد ان هناك حلول متكاملة، النظام الوحيد والذي انا شــخصيا قمت بتطويره وســوف اكون غير محايد قليلا، هو منحة الزواج، فعليا كان كل شــي الكتروني لا اريد أن اقول انه تحول رقمي، ولكن من بداية الخدمة من التسجيل الى الربط مع السجل المدني الى اعداد القوائم وطباعة الصكوك المصدقة إلى يوم اســتلام الشــخص هي عملية الكترونية بالكامل، اعتقد الجزئية الوحيدة الغير الكترونية هي تسـليم الصـكوك باليد للأشخاص، والتي تمت المطالبة بان تكون حوالة RTGS أو Real Time Gross Settlement ولكن لم تتم الموافقة عليها، هذه هي التجربة الوحيدة، بينما التجارب الأخرى تمتاز بوجود التدخل البشري بشكل كبير.

مثال أخر هو منظومة مشـروع الاقراض الشــبابي واعتقد منظومة الاقراض تمت في ظروف اصــعب بقليل من منظومة منحة الزواج ومتطلباتها كانت اكبر، إلى الحد الذي لم يتمكنوا من ربطها بمنظومة الرقم الوطني، وطبعا هذا ادى الى تواجد العديد من البيانات غير الصحيحة. بالإضافة لعملية استكمال باقي العمليات بطريقة يدوية، مثلا تم تسجيل مليون ومئتين شـخص في المنظومة، وتم تحويلهم للهيئة لكي تتم عملية تنقيح البيانات والتي ادت بدورها الى اختيار 600 الف فقط من البيانات الصحيحة، ومن ثم تم ارسال الــ 600 الف بشكل ورقي إلى البلديات للتحقق منهم، يعني مرحلة التســجيل كانت الكترونية اما الباقي يدوي، حتى مرحلة الموافقة الاعتماد كانت يدوية ومن هنا سارت العملية بشكل خاطئ

ايضا تجربة منحة الزوجة والبنات، كانت ممتاز، ووفرت على المواطنين الكثير من الوقت، وتم تطويرها بالشراكة مع القطاع الخاص من قبل شركةLibyan Spiders

من اهم اسـباب نجاح كـل المنظومـات الي عملنـا عليهـا ركزنـا على User Experience و Customer Experienceبشكل اساسي وليس مجرد تصميم منظومة وتسليمها، حيث كنت نشط في المجموعات المختصة بمنحة الزواج على منصـة Facebook وكنت اقوم بدعم المواطنين مباشرة، وان وجدت احد يشتكي من انه سجل ولم يصله التأكيد، كنت اتواصل معه شخصيا للاستفسار على المشكلة، وبهذا الشكل استطيع حل المشاكل بشكل ســريع وهذه احدى النقاط التي ذكرتها اكثر من مرة وهي ان الفجوة ما بين المواطن والجبيهة المنفذة كبير، مثلا انا كشـخص مستخدم للمنظومة المصـرفية لمصـرف النوران على سبيل المثال، مشكلة مصـرف النوران ان مطور المنظومة لا يعرف من هم مســتخدمي الخدمة، لم يتعامل معاهم من قبل ولم يتواجد من قبل مكان موجودين فيه المســتخدمين لكي يفهم متطلباتهم واحتياجاتهم وفي نفس الوقت لا يســتطيع المواطنون إيجاد قنوات التواصــل مع مزودي الخدمة بشكل مباشر، كل الذي يمكن فعله هو الذهاب شخصيا لموظف الاستقبال في المصرف، ولا نعلم ان قام موظف الاستقبال بتسجيل الملاحظات او لا، وهذا يؤدي لاحتمالية وجود مشكلة لفترة لطويلة ولا احد يعلم بذلك، فأعتقد نحن كنا اقرب من العملاء من باب Customer Experience و User Experience ســواء كانت في تصميم Web او من ناحيةCustomer Flow ، عموما، في منظومة الزواج كانت هناك اشياء لم تكن مطلوبة مثل الطباعة والقوائم والتي تعتبر تنظيمية، وهذه النقطة الفارقة أني كنت متواجد معهم في مكان العمل بدوام كامل، انا لم اســلم المنظومة واغادر فقط على عكس الجهات المنفذة الاخرى، في صــندوق الزواج داومت معهم لمدة شــهرين ونصــف تقريبا بدوام كامل من الصــباح حتى المســاء. كنت اواكب التطورات والتغيرات والمشــاكل التي تطرأ للمنظومة والناس أول بأول فكانت المشاكل تحل بشكل وقتي ولم يوجد اي تأخير .

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، إذا لم يجربوا التكنولوجيا فلن يفعلوها، الفكرة ان يوجد هناك طرف في الحكومة الحالية هو الذي يقوم بإجبارهم للتحول الرقمي ونقل الأعمالOnline ، لم يكن الدافع من ذات نفسهم. فكل هذه الخدمات التي تم اطلاقها مؤخرا كانت مفروضة من الاعلى، بشكل اساسي لو لم تقم الحكومة الحالية بفرضها، لن يقوم احد من فعلها، اي بمعنى لم تأتي بقيادة و اوامر المؤسسة نفسها.

بالنسبة للقطاع العام، نعم كل الجهات، لم تكن اي جهة عامة مبادرة الا المصرف الليبي المركزي، الوحيديين بناء على احتياج داخلي ولم يكن مفروض عليهم من الأعلى، بل كان فعلا بناء على احتياج حيث انهم رءوا أن التكنولوجيا اساس وحتى حين تواصل معي الشخص المسؤول او على مشروع مصرف ليبيا المركزي، اقر بأن النظام قام بفروقات ضخمة، على سبيل المثال لو كان هناك مصرف على وشك الافلاس او يواجه مشكلة في Balance Sheetالخاص به، في الغالب سيتم اكتشافه بعد 6 اشهر ومن المستحيل معرفتها لشكل لحظي وذلك لكبر التعاملات الورقية، حيث كانت الدورة تأخذ في وقت كبير إلى الحد الذي يمكن ان تنتهي فيه السنة المالية وانت لا تعلم أنك مفلس، اما اليوم بوجود المنظومة التي طورت بناء على احتياج ورغبة منهم اصبحت تصلهم المعلومات بشكل دوري شهري وبدون اي تأخير او تأخير لمدة 10 ايام كحد اقصى.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية، فتجاربي الأخيرة كانت سلسلة، بالنسبة لمصرف الادخار مثلا كان سلس بشكل كامل بالرغم من أن المصرف كان اصعب بقليل من صندوق الزواج لأن الفروع هم من كان يستخدم النظام حيث أن الدائرة بعيدة نوعا ما، كان العمل في المقر الرئيسي ومن ثم تم ربط الفروع الأخرى وكان سلس جدا، باختصار اذا شعر الموظف الذي يتعامل مع التقنية بالراحة في التعامل، فلن يتوقف عن التعامل بها، ولن يقوم بممانعة اتجاهها بل سيقوم بالتكيف معها، كذلك منحة الزواج، الشخص المسؤول عنه هو المراجع المالي عمره تقريبا 64 سنة على وشك التقاعد، هو اكثر شخص احب فكرة وجود المنظومة واصبح من اشد المناصرين لها وتعتبر هذه اول تعامل له مع المنظومة الكترونية وليس ورقيا .

بخصوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، فهو ليس بالشكل الحقيقي الا اذ تواجدت مع العقد المبرم مع الجهة المنفذة، ولكن ان لم تذكر في العقد لن يقوموا بها .

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، فلا ارى ان الصراعات السياسية لها أثر على ذلك، فلا تأخر الميزانيات كانت عامل مؤثر كون القيمة المالية لعمليات التحول الرقمي ليست عالية بالمقارنة بالمصاريف الاخرى، ففعليا يستطيع اي حد القيام بها لو كان لديه الرغبة، اي جهة تستطيع ان تكون الكترونية 100% لو تريد ذلك، ولكن المشكلة في الجهات نفسها حيث انها ليست من اولوياتها او من خططها. لكن شخصيا لم ار ان الاسباب السياسية سبب في عدم التطور، ممكن تحصل في جهة او جهتين لأسباب غير معروفة، ولكن اغلب الجهات الاخرى لا .

بخصوص القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، لا اطلع على اي قوانين، ولكن ما اعرفه كمعلومة ولا اعرف ما مدى صحتها، هو عدم الاعتراف بالمستندات والمعاملات الالكترونية كمستند حقيقي، مثلا صندوق الزواج بالرغم من وجود منظومة الا انهم اضطروا في الاخر طلب ملفات من كل شخص .

بخصوص الضغوط خارجية والمبادرات الدولية أو الإقليمية، فهي موجودة، لكن لا نتائج واقعية.

فيما سبق كان هناك مشروع تابع UNDP له علاقة بالتوظيف، ومن الواضح ان المشروع كان كبير بمشاركة العديد من الوزارات، وكان مشروع متكامل، منصة توظيف كاملة ويوجد بها ايضا معلومات التوظيف في ليبيا والعديد من الاشياء، لا اتذكرها كليا، ولكن كان مشروع ضخم، وهذا المشروع الدولي الوحيد الذي رأيته. يمكن كان هناك مشروع اخر وليس متأكد وكان له علاقة بالمدينة القديمة، ولكن لا اتذكر ان المشروع كان له علاقة بالمواطنين، اعتقد كان له علاقة بالمواضيع التراثية وما الى ذلك. ولكن غير هذا لم ار اي شي دولي. ايضا بعض الضغوطات المتعلقة بغسيل الأموال ومصرف ليبيا المركزي، ولكن لا املك اي تفاصيل .

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، اي موظف غير تقني سيمانع الموضوع ويراه صداع جديد، على عكس مدراء الادارات! قي مصرف الادخار كان هناك اجتماع يضم مدراء الفروع، وكانوا مرحبين جدا بفكرة وجود منظومة موحدة ما بين الكل ومشاركة البيانات ما بينهم والتقارير تصل بصورة لحظية بالرغم من ان ليس لهم علاقة بالتقنية نهائيا.

بخصوص خدمات الحكومة الإلكترونية، التي ساهمت في رفع الكفاءة، فعلى سبيل المثال الخدمة التابعة لمصرف ليبيا المركزي، وهي عبارة عن منصة لجمع البيانات المالية من المصارف التجارية بشكل مباشر، مثلا ارصدة

الخزينة ترسل بشكل يومي، المراكز المالية ترسل بشكل شهري، وغيره، هذه المنظومة قامت بالمساعدة بشكل كبير وانا على يقين بأن التقارير المستخرجة في الفترة الماضية كانت تستخرج بشكل سريع بفضل وجود النظام هذا.

منصة منحة الزواج كان لها اثر ايضاً، ففي احدى الاجتماعات مع ديوان المحاسبة تمت المطالبة بتدقيق البيانات بشكل مباشر، وتم توفير ذلك بشكل يومي وهنا كان للتكنولوجيا دور في تحقيق الشفافية وتلبية شروط الحوكمة المطلوبة من ديوان المحاسبة.

بخصوص تؤثر الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين فلا اعتقد هذا، اما بخصوص ثقة المواطنين بالخدمات الحكومية الالكترونية، فالثقة موجودة ولكن ليست قوية. على سبيل المثال، تجربة منصة منحة الزواج، لا يزال هناك نسبة من المواطنين عند التسجيل تفضل ان تجد شخص في المؤسسة ذاتها لتأكيد عملية التسجيل بالرغم من وجود رسالة بتأكيد التسجيل، ولكن دائما يفضل التواصل مع أحد الموظفين بالمؤسسة لتأكيد التسجيل .

اعتقد ان السبب وراء ذلك هو التجارب والتراكمات السابقة، كمثال منظومة الرقم وطني يوجد بها العديد من الاخطاء مثل الرقم الوطني من ناحية استخراج بيانات خاطئة او استخدامها من قبل اخرين. ايضا الامر ذاته حصل في منحة الزوجة والبنات، حيث تفاجئ البعض ان بياناتهم مقيدة من قبل اشخاص اخرين واعتقد كل هذه الاخطاء تتطلب وجود مصدر داخلي للتأكيد بأن الاجراءات صحيحة ومستمرة .

بخصوص مبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا فلا دراية لي باي استراتيجيات حقيقية، سمعت عن بعض المبادرات من دون تفاصيل .

بخصوص الدوافع الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا فهي تختلف حسب المؤسسة، فبعض المؤسسات مثل المصرف الليبي المركزي فهي مهتمة برفع الكفاءة في العمل. واخرى فقط لدواعي سياسية وانتخابية، لان ما يحصل حاليا هوا الاهتمام فقط بأطلاق المشاريع الالكترونية، ليس ربطها او ضمان استدامتها.

بخصوص العوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا اهمها هو فشل في وجود مبادرة حقيقية من الحكومات السابقة. وغياب الاستراتيجيات، لم تقم أي حكومة بأخذ زمام الامور نحوي التحول الرقمي وتوقف الفوضى الحالية، هذا العائق الوحيد اعتقد والباقي لا يوجد عائق. كما اتفق ايضا مع القول ان التحول الرقمي بشكل كبير سينتج عنه كشف للفساد وهذا سبب ممانعة في عدة جهات.

ايضا غياب راس حربة معنية بالتحول الرقمي على صعيد الحكومة يعتبر عائق، لان بهذه الطريقة سنستمر بذات الدوامة الحالية، وان كل المنظومات المستقبلية ستكون رديئة جدا وليست مدروسة بشكل صحيح ولا يهم جودتها ولن يقوم أحد بمتابعتها. حيث ستستمر المشاكل في حال عدم وجود جهة مختصة لمتابعة تنفيذ مشاريع التحول الرقمي، اما المؤسسات الحكومية الحالية ليست لديها اي كفاءات.

ايضا تضارب الاختصاصات بين المؤسسات في ليبيا، حيث اعتقد انه من الضروري فصل الاختصاصات وضم كافة الاختصاصات ذات العلاقة بالتحول الرقمي تحت مؤسسة واحدة. على سبيل المثال ان مركز الاحصاء والبيانات لا يتبع جهة مثل الهيئة العامة للمعلومات، ليس منطقي ابدا!

بخصوص غياب الهوية الوطنية الرقمية فهو اشكال، لكن ليس بالكبير، الحقيقة سيكون له تأثير جيد، ولكن التحقق باستخدام الهاتف لا تزال مؤمنة بشكل جيد وموثوقة ويمكن الاعتماد عليها، السبب الرئيسي من الهوية الرقمية هو التحقق من المواطنين، وجود الهاتف والتحقق عبر الهاتف مع الربط ربط رقم الهاتف برقمك الوطني، تعتبر كافية بشكل كبير .

بخصوص التخوف من الاختراق فلا اعتقد ان هذا يعتبر عائق، حيث لو تستمر هذه العقلية لن تستطيع من انجاز اي شي للأسف، لأنك لن تكون محمي بالكامل، للمؤسسات ولكل الدول. إذا قمت بزيارة Deep Web سوف تجد

اختراقات لدول أكبر من ليبيا بكثير مثل الصين وغيره، طالما تم الوصول الى دول مثلهم فإذا بالتأكيد يمكن الوصول اليك، ولكن لا نقول بأن هذا الشي طبيعي، ولكن إذا قمت بوضعه على انه عائق فلن يحدث اي تغير .

الخلاصــة، التحول الرقمي يحتاج الي امرين الاول الى رغبة قوية والارادة، وفي نفس الوقت امكانية فرض التحول على المؤسسـات المختلفة. وتحتاج إلى جسم حقيقي يوجد به ناس كفاءة. توجد موارد بشرية كفوه، ولكن قلة، وهذه احدى المشاكل، يجب تجميعهم في مؤسسه واحدة.

Interview Code 12

بخصـوص الوضـع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـالات مازالت دون المسـتوى المطلوب فهي تحتاج الى استثمارات واموال لتواكب التطور السريع في مجال المعلومات والاتصالات. فقد تضررت اثناء الاحداث ومازالت تعاني من قلة التطوير والصيانة وتطوير القوى العاملة في المجال.

مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين يؤثر بشكل كبير على تبني الخدمات التكنولوجية، فكلما تأخرت برامج المعرفة والتعليم والتدريب في تكنولوجيا المعلومات والاتصـالات كلما تأخرت وتأثرت سلبا مشروعات الحكومة الالكترونية باي بلد كان.

بخصوص توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية للأسف مازالت متأخرة ولا يتوافق ما هو متوفر ومطروح على المستوى المحلي والدولي، لقد ساءت بعد الثورة وما هو مطروح لا يفي بما هو مؤمل.

بخصـوص الحلول التكنولوجية الناجحة حاليا، للأسف لا توجد وان وجدت فلا علم لي بها، وذلك نتيجة عدم تسويقها والاعلان عنها في وسائل الاعلام.

بخصـوص الحلول التكنولوجية الناجحة حاليا، للأسف لا توجد وان وجدت فلا علم لي بها، وذلك نتيجة عدم تسويقها والاعلان عنها في وسائل الاعلام.

بخصـــوص دور القيـادة والإدارة في تعزيز تبني الحكومـة الإلكترونيـة في ليبيـا هنـاك مبادرات فرديـة من بعض الشركات والمؤسسات الحكومية لا ترقى الى التحول الرقمي الذي يشهده العالم وحتى بعض الدول العربية.

بخصـوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، فليبيا من اوائل الدول العربية التي خاضـــت في الحكومة الالكترونية واقيمت لها العديد من الندوات والمؤتمرات وكتبت فيها رسـائل علمية متعددة، ولكن وضـع البلد السياسـي والاقتصـادي أثر سلبا على قيام الحكومة الالكترونية، ولكن يبقى كل شيء ممكن بفضل همة وعزيمة شبابها وخبرة عناصرها وتوفر الموارد المالية المتاحة لو استغلت بشكل أفضل وبشفافية.

بخصـــوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية محدودة جدا امام الظروف الحالية، لدواعي قلة الاستثمارات وقلة التعليم والتدريب.

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، من المؤكد ان البلد تحتاج الى اسـتقرار سـياسـي للتوجه نحو البناء ليس فقط في مجال الحكومة الالكترونية، بل في كل المجالات.

بخصـوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، على مسـتوى التشـريع تحتاج البلد الى تشريعات تواكب التطور العلمي والعملي في مجال المعلومات والاتصالات لوضـع سياسـات متطورة وواضـحة تواكب قيام الحكومة الالكترونية، ايضا ما توفر من تشريعات تحتاج الى تحديث وتطوير.

بخصوص ضغوط خارجية، مثل المبادرات الدولية أو الإقليمية، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا فهذا من المؤكد، حتى على المستوى المحلي.

بالنسبة لا لفوائد المتصـورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا فوائد لا تحصـــى ولا تعد ســوف يجنيها القطاع العام والخاص والمواطن لقيام الحكومة الالكترونية، بداية من توفر الاحصـائيات وانتهاء بالخدمات: (جوازات سـفر الكترونية، تأشـيرات دخول واقامة، خدمات دفع الالكتروني، توظيف الالكتروني والتعرف على فرص العمل. اصدار وتجديد التراخيص ورخص المنشأ، خدمات صحة التوقيع،

عضـــويات، غرف التجارة، ملكية المباني واســتئجارها، تغيير الســيارات وتجديدها، خدمات امنية خلال الســفر، حجوزات فنادق وسفر وسياحة... الخ

بخصوص أمثلة على خدمات الحكومة الإلكترونية التي كانت فعالة بشكل خاص في تحسين الكفاءة أو الشفافية فمثال على ذلك هو ادارة الســجل المدني ســهلت الى حد كبير الحصــول على وثائق الحالة المدنية، صــندوق الضــمان الاجتماعي.

بخصـــوص ســهولة وسـهولة الوصـــول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، فمحدودية التسـويق لهذه الخدمات ثم تدريب المواطن على الاستفادة من هذه الخدمات بكل الوسائل المتاحة.

بخصوص جهود تحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبيا فهي مبادرات محدودة جدا وغير معلن عنها بالشكل المطلوب.

بخصـــوص ثقة المواطنين في الخدمات الرقمية الحكومية فتحتاج الى تشـــريعات وتســـويق حتى يمكن الوثوق بها واعتمادها.

بخصوص اصـحاب المصـلحة هناك العديد من الجمعيات العلمية من اهدافها نشر المعرفة ونشر الوعي المعلوماتي في المجتمع من ضمنها الجمعية الليبية للمكتبات والمعلومات والارشيف.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال يكاد يكون معدوم وان وجد فهو قليل جدا، يجب تبني الاقتصاد المبني على المعرفة.

بخصـــوص المبادرات أو خطط لتحسـين الظروف الميسـرة لاعتماد الحكومة الإلكترونية في ليبي فربما يكون هناك بعض المبادرات، لكن لا علم لي بها، وان وجدت فتبقى دائما دون المؤمل.

بخصـــوص الدوافع والعوائق الرئيســية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فلا مجال لمناقشـــة دوافع قيام الحكومة الالكترونية فقد اصبحت ضرورة ملحة فهو مطلب وجوبي وليس اختياري. اما العوائق في ليبيا فهي كثيرة اولها قلة الاستمارات في المجال التقني والبشري تعليما وتدريبا. ايضا الاستقرار السياسي والاجتماعي.

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بخصـوص تقيم الوضـع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـالات في ليبيا، لا سـيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فهي جيدة، جودة الانترنت جيدة، المواطنين بسـبب مواقع التواصـل الاجتماعي استخدامها للتنقية اصبح شـائع، اما بالنسبة للخدمات الحكومية هنا يوجد مشكلة ونقص في اشـياء اسـاسـية ان كان الحديث عن حكومة الكترونية فلا يوجد مقومات حالياً ولكن ان تحدثنا عن البنية التحتية للشبكات فتعتبر معقولة حتى وان كانت قديمة، ولكن الان معظم الاسـتخدامات على الهاتف النقال، لا يوجد اعتماد على الفايبر اغلب التواصـل واي فاي.

بخصـوص مسـتوى الإلمام بتكنولوجيا المعلومات والاتصـالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فاستخدام الموظفين استخدام شخصي موجود، ولكن استخدام التقنية على صعيد العمل فهذا غير موجود الا في مؤسسات معينة مثل الشركات النفطية وهي ايضاً بعضها ليس جميعها، لا يوجد منظومات داخل المؤسسـات تربط الكمبيوترات ببعضـها، فتعمل الكمبيوترات كأداة لتخزين البيانات وطابعات فقط، ولذلك ان توقف الانترنت عن احدى المؤسسات لن تتأثر ابداً، لأنهم معتمدين على العمل الورقي.

بخصـوص اذ كانت أي ابتكارات أو حلول تكنولوجية ناجحة في سـياق الحكومة الإلكترونية في ليبيا، فالحديث عن الخدمات هل نجحت ام لا، هناك خدمات طُرحت وفرضـت وفرضـت فرض ان تكون الكترونية فلم يكن هناك خيار اخر للمواطن، كموضـوع القروض، لذا ستنجح هذه الخدمة لأنه لا يوجد هل لـه اخر للاستفادة منها، صـحيح يوجد اجحاف للمواطنين الذين لا تتوفر لهم التكنولوجيا، ولكن يوجد عدة وجهات نظر اخرى تبرر ذلك، كل شـــيء لـه مزايا وعيوب، ولكن عندما ترى تجد ان ال online ويسـهل لك الكثير، التكنولوجيا تعطي حلول كبيرة مثل المركزية في ليبيا، ان تكون في اي مكان وتقدّم اينما ما انت.

بخصـوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، فالقيادات عليا في الدولة بالذات الحكومة الاخيرة، من الواضـح انهم ملاحظين لأن كل الاشـياء عندما تحوّل رقمياً رجع الصـدى الخاص بها أكبر بكثير ونجاحها أسـهل، لذا فالواضـح انهم مركزين على هذا الشـيء جداً، يشـعرون ان هذا الموضـوع يأتي اهم بالمتابعات والقابلية لدى الناس أكثر بكثير من اي طرق اخرى، لذا يدعمونه ويهتمون به.

بخصـوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية، فكل قيادات المؤسسات مهتمين بهذا الموضوع، مثل المصارف او النفط، مهتمين اهتمام كبير جداً بالتقنية، وايضاً القطاع الخاص بسبب عدم توفر السيولة اتجهوا للبيع اون لاين، وباقي المؤسسات كالضمان وغيره جميعهم يتجهون للتحول الرقمي، ولكن الامكانيات لا تتوفر، فهم ليسـوا صـانعي قرار، يوجد مؤسسـات قياداتهم ليس لديهم ارادة حتى وان توفرت الرغبة، تعتمد امكانية الدعم للمؤسسة على علاقة رئيس المؤسسة بقيادة الحكومة.

بخصـوص تقيمون جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، فالمؤسسـات من ناحية الموارد البشـرية يجب ان تكون بكوادر داخلية وخارجية ايضـاً، ولكن هناك مشـكلة ان الكوادر الخارجية يمكن ان ترحل ويتوقف العمل بشكل فجائي، ولكن على صـعيد وطني يوجد شركات تعمل بجودة جيدة ولكن غير مسـتقرات لكي تعتمد عليهم في هذا العمل لانهم اشـخاص، اسـماء معينة ويمكن ان تختفي في اي وقت ولا يوجد لديهم خبرة طويلة ولكن لا يوجد شـــركات ثابتة مسـتقرة لتقديم هذه الخدمات، لذا فنحن غير جاهزين للتحول الرقمي من هذه الناحية.

يوجد لدينا 2 ادارات اساسيات داخل هيئة وسلامة المعلومات، كل ادارة داخلها أربع اقسام، كل قسم داخله شخصين او شـخص فقط، سـبق وان اسـتعننا بموظفين، ولكن بمشـاكل المرتبات وغيرها يرحلون عن العمل، ولا نسـتطيع منافسة الشركات الخاصة لأنهم يحصلون على امتيازات غير موجودة لدينا.

بخصوص مدى تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، هو سـبب توقف كل شـيء، الميزانيات التي تُصـرف فقط لتسـيير الاعمال، بينما التحول يريد ميزانيات كبيرة جداً،

وانقسام الادارات جداً متأثر بسبب عدم الاستقرار السياسي، ولكن التحول الرقمي ساعد جداً في موضوع الانقسام، لان يوجد اشياء لا يمكن ان تصل للطرف الاخر الا عن طريق الرقمة، ولكن الموضوع شائك جداً.

بخصـــوص مناقشــــة الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، فمؤخرا، بخصـــوص قانون الجرائم الإلكترونية، فهناك قسم مختص داخل وزارة الداخلية متخصـص بمحاسبة المواطنين ، ولكن نحن وظيفتنا مثل وظيفة ديوان محاسبة، المخالفات التي تصدر عن المؤسسات هذه مهمتنا نحن، مثل المراقبة والحجب وغيرها، مثل اشـــياء تخالف الاعراف والاخلاق العامة، و هذا موجود في كل القوانين ليس قوانين المعلومات فقط، والقوانين الليبية فضفاضة ويمكن التلاعب بها كثيراً، القانون صادر كمخالفة الاعراف ولكن لا يُهتم به كثيراً، قوانين العقوبات لا يوجد بها لائحة تنفيذية، ولكن قانون الجرائم الالكترونية صحيح وجيد جداً.

بخصوص ضغوط خارجية، او المبادرات الدولية أو الإقليمية ، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فهما يوجد ليس بضغط وانما تحفيز، يساعد ويقود بمعايير تقييمهم، لكي نعمل على نواقصنا لكي نطور من عملنا وننفذ مشـاريعنا قدر استطاعتنا، مثل موضوع القوانين الذي عملنا عليه واعتمدناه مثلاً، يعطوننا معيار نعمل به، يوجد مبادرات دولية مثلاً مشروع قام به الاتحاد الاوروبي الخاص بالسجل التجاري، وايضاً اعرف اكثر من مؤسسة قدموا لها الدعم، والمنظمة الدولية للهجرة قدمت منظومة للداخلية للعمل بها واكثر من مشروع لا يحضرني اخرين.

بخصوص الفوائد المتصـــورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فانا ارى ان هناك ممانعة اكثر من الموظفين، الذي يحدث انه حتى عندما تحدث رقمنة تبقى معتمدة على الموظفين اكثر من التقنية، لان الموظفين يقيمون انفسـهم بكمية احتياج الناس لهم، لذلك لا يرحبون جداً به، ولكن اصـحاب القيادات والمؤسسـات يريدون الرقمة لتسهيل العمل عليهم، مثالاً المصـارف لا تعلم لماذا الرقمنة لم تنجح كثيراً معهم ويذهبون اليها اضـراراً رغم انهم لا يواجهون المشـاكل التي تواجه القطاعات الاخرى، فالشركات التي تطورت رقمياً بسيطة جداً، الرقمنة يلجؤون اليها لجوء بالضـغط فقط. اما بالنسبة للمواطنين بصفة عامة اشعر ان الناس متقبلين لها، ولكن يوجد اناس يعارضون، غالبية الناس مستفيدين منها خاصةً بموضوع الميزانية يوجد اناس لا يذهبون للمصارف ابداً بوجود بطاقات الدفع الالكتروني.

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، فمثالاً موضوع البطاقات الالكترونية للدفع انا ارى ان هناك مشـكلة كبيرة لان الناس تمل الرقم الســري على الموظف، رغم انه يفترض ان يكتب الرقم السري وحده، ولكن الذي تسـبب في هذه الاشكالية هي دونية جودة هذه الخدمات فيضـطر المواطن ان يمل على الموظف الرقم لكي يعيد المحاولات كثيراً حتى تأتي تغطية الاتصـال، لذلك العملية غير سـلسة ويصـعب الاعتماد على هذه الخدمات.

بخصوص الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، فبالنسـبة للخدمات فلا اعتقد، بالعكس اجتماعياً لا يوجد مانع في هذا الموضـوع، فقط التحسس من مواقع التواصل الاجتماعي بحكم اننا مجتمع شرقي، يوجد نوعين من الخدمات، منحة من حقك كمنحة الزواج مثلاً فنعم يثق بك في هذا الموضـوع، ولكن كخدمة تعتمد على اختيار المؤسـسة في حد ذاتها كموضـوع القروض المؤسسة ستختار من ستعطي هنا لا يوجد ثقة، لديهم ثقة في التقنية ولا يوجد ثقة في المؤسسات في حد ذاتها، يوجد لغط كبير في المؤسـسـات الحكومية عند الحديث عن المعاملات الورقية حتى وان كانت العملية في حد ذاتها تحتوي على اجزاء تقنية.

بخصوص اصحاب المصلحة عندما يتعلق الأمر بالحكومة الإلكترونية في ليبيا فهم: رئاسـة الحكومة، الهيئة العامة للمعلومات، وزارة الاتصالات، والشـركة القابضـة للاتصـالات، وايضـا الهيئات الاستشـارية مثل الهيئة العامة للتخطيط او مجلس الاعلى التطوير الاقتصادي.

بخصوص المبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا، فيوجد مبادرات تم تنفيذها مثل منصـة العطاءات الحكومية، بدئنا العمل من خلالها، شـركات التنظيف من بداية السـنة عن طريق هذه

المنصـة تعاملنا معهم وكذلك اي مشـتريات وما الى ذلك، اصـدروا الكثير من الاسـتراتيجيات والقوانين واللوائح، فموضـوع التحول الرقمي اصـبح الرائج في السـوق الان، ولكن بالفعل لا يوجد تطبيق، غير ذلك يوجد نسـالك في الاختصـاصـات مما يجعل الامر ليس له قائد واضـح وصـريح، ومشـكلة تداخل الاختصـاصـات كبيرة جداً كبيرة، التحول الرقمي يوجد له استراتيجية كاملة وواضـحة ومكتوبة وليبيا دافعة ثمنها ملايين ولكنها موضـوعة في الاتصـالات في الدرج ولم يأخذ منها نسخة الا حوالي ثلاث اشخاص فقط، ولا تعلم لماذا، ولكن الامر كله متعلق بالإرادة فقط، العمل المتعلق بالحكومة دائماً متعلق بالإصرار والارادة، في ليبيا نوعين من المؤسسات فقط تستطيع ان تعمل بشكل جيد، التي لديها المال والتي لديها السلطة، هؤلاء النوعين فقط من يتحصلان على الدعم.

بخصـوص الدوافع والعوائق الرئيسـية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدافع للمواطن للقبول بالخدمات الرقمية هو عدم توفر خيار آخر غير الخدمة الرقمية، لذلك تنجح في ليبيا لأنها الحل الوحيد للمركزية في بلاد كبيرة مثل ليبيا، فلذلك الرقمنة في ليبيا اضطرار ليست خيار

اما العوائق، فأكبر عائق هو عدم الاستقرار السياسي، لا يوجد خطة ثابتة، مثال الحكومة الحالية تريد تنفيذ مشاريع، ولكن بأسـرع سـرعة ممكن لاسـتخدامها كدعاية لها، ولكن يوجد مشـاريع لا يمكن ان تكتمل بسـرعة وتأخذ وقت لتنفيذها، تضع خطة وتختار الموارد البشرية المناسبة وغيرها، والقيادة الحالية لا تنظر الى عامل الوقت، الميزانيات لا تسعف عامل الوقت.

Interview Code 14

بخصوص قيم الوضع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا، لا سيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فهو متوسط واقل من متوسط بشكل عام على جميع الاصعدة حتى من ناحية الربط والشبكات، لان في ليبيا حتى روابط الفايبر جداً ضعيفة، لذلك مستوى البنية التحتية في ليبيا في نظري اقل من المتوسط.

بخصوص تأثير مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، بالنسبة للمواطنين فأنا ارى انهم ملمّين بالتكنولوجيا أكثر من حتى المسؤولين! وهذا يرجع لان ابناء هذا الجيل هم ابناء التكنولوجيا التي تشــكل عامل كبير في حياتهم اليومية لذلك دائماً لديهم القابلية للتعلم، وعندما اتحدث عن التعلم لا اقصــد قطاع التعليم بالطبع! فقطاع التعليم لا يُخرج اي كفاءات لا على صــعيد التكنولوجيا او غيرها.. اما بالنســبة للموظفين فهذا يعتمد على الفئة العمرية وكذلك اختلاف القطاعات ولكن في كل الاحوال ان تحدثنا عن قطاع الاتصالات بما انه قطاع يجب ان يكون مُلِم بالتكنولوجيا فأستطيع ان اقول لك انه يوجد مؤسسات يستحيل ان تساعد في التحول رقمياً لان موظفيها تجدهم لا يفقهون شيئاً من النواحي التقنية، وكذلك يوجد مؤسسات موظفيها عناصر امنية وعمّال تنظيف وقلة قليلة من المهندسين التقنيين، لدرجة انه من الوهلة الاولى تعتقد انها شــركة امنية، وبما ان الموظف هو مواطن اولاً واخيراً فتجده اســتعماله للتكنولوجيا ومعرفته به مقتصــرة على مواقع التواصل الاجتماعي ككل المواطنين، ولكنها لن تضيف له اي قيمة كموظف او تقني.

بخصــوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، نعم يوجد توافق جزئي، هو جزئي، ولكنه موجود إذا تحدثنا من الجانب التقني، لذلك انا لا ارى ان التكنولوجيا هي المشــكلة في موضوع الحكومة الالكترونية، فالتكنولوجيا تستطيع ان تستوردها من الخارج سواء إذا تحدثنا عن ال software او الhardware ، كلاهما نســتطيع اســتيراده قد يســتغرق وقت طويل وميزانيات كبيرة، ولكن في النهاية نســتطيع تحقيقها، لذا انا ارى ان التكنولوجيا ليست المشكلة.

بخصوص الابتكارات الحكومية الناجحة، رأينا تجربة محنة ارباب الاســر ومنحة الزوجة والابناء، ولكنها ليســت تجربة الكترونية بالكامل، جزء فقط من العملية الكتروني، وكتجربة شخصية عند ادخالي البيانات لم يصلني OTP ولا يوجد اي خدمة عملاء تستطيع التواصل معها فتجد أنك مجبر على الذهاب للمصرف في حد ذاته.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، فالقيادة عاجزة عن تحويل ادارة داخل مؤسســة فكيف ســتحوّل حكومة الى حكومة الكترونية؟! القيادة عاجزة عن تعديل اي شــيء وفاقد الشــيء لا يعطيه وكذلك غياب المعرفة والدراية ســبب كبير لهذا العجز، فلكي تقوم بالتحول يجب ان تكون على دراية كبيرة فيما يخص هذا الموضــوع، وايضــاً لا يوجد ارادة حقيقية للتحول والاصــلاح بحكم ان التحول يضع الامور في سِكّتها الحقيقية ويقضــي على الفســاد ويسهّل العديد من الامور، وحديثي ليس عن القيادة فقط واصــحاب الســلطة بل ايضــاً بعض الموظفين.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، لا يوجد اي علاقة، فالتحول الرقمي اصــبح علكة فقط لا غير، وان طرحت هذا الســؤال على باقي ضــيوفك فأنا متأكد ان الاجابات جداً متباعدة عن بعضها البعض.

بخصــوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واســتخدام خدمات الحكومة الإلكترونية، فالحكومة تُنفق عشــرات ومئات الدولارات على مشــاريع التحول الرقمي، ورداً على ادعاءات ان قطاع ال IT اكبر قطاع في الفســاد فهذا غير صــحيح وغير منطقي، كل رئيس مؤســســة لديه وجهة نظر مختلفة لذلك يمكن ان يرى مشــاريع تختلف عن الذي يسبقه وينفق فيها اموال كثيرة ولكن هذا لرؤيته الخاصــة ليس من الباب الفســاد، فالفســاد موجود ولكن في كل مكان، الفســاد موجود من عامل النظافة الى رئيس مجلس الادارة وهو المتحكّم والمســيطر في كل القطاعات.

بخصوص تقيم جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، فهو الحكومة غير جاهزة، حتى لو ارادت الحكومة ذلك وامتلكت العصا السحرية لتحويل ليبيا الى جنة من التكنولوجيا لن يكون هذا ممكناً لان الموظفين اولاً ليسوا على دراية كافية بهذه التقنيات ثانياً بهذا الفساد في العمل لن يستطيعوا العمل والتعايش مع بيئة رقمية ترصد كل شيء بدقة، فالبلاد في حالة فوضى وفساد والحكومة اساساً وجدت لإدارة الفوضى ولكن لن يكون هناك تقبل للحكومة الالكترونية.

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، فهو يؤثر بشكل كبير، فانعدام الاستقرار السياسي يؤدي الى عدم وجود رؤية للحكومة لان الحكومة غير موجودة او موجودة وغير موحدة ومنقسمة لحكومتين وثلاث حكومات وهذا كله يؤدي الى فقدان الثقة لدى المواطن، كذلك على سبيل المثال انت كمواطن لماذا لا تستطيع أخذ رقمك الوطني بطريقة رقمية الان ؟ لان البيانات لدى مصلحة الاحوال المدنية ومنظومة الرقم الوطني مختلفين ويوجد قضية عند النائب العام الان بسبب هذا الموضوع وكله يرجع لسبب عدم الاستقرار السياسي فلا يوجد قوانين وتشريعات حكومية ثابتة وموحدة، فالحكومة ليس لها رؤية ولا وجود.

بخصوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، فالجانب القانوني لم يلتفت يوماً للجانب التقني، فلا يوجد اي قوانين حقيقية حول الجانب التقني، حتى القوانين التي تُصدر يكون الغرض منها ان السياسيين او اصحاب السلطة يريدون حماية انفسهم من الابتزاز الالكتروني او الفضيحة. الخ اغراض شخصية فقط لا غير، لذا لا ترى قوانين موحدة تصدر من كافة المؤسسات جميعها قوانين فردية تصدر من مؤسسة دون غيرها.

بخصوص الضغوط الخارجية، مثل المبادرات الدولية أو الإقليمية التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، لا يوجد اي ضغوط، حتى وإن وُجدت فتكون ضغوطات لإتمام صفقات فقط لا غير، بالتالي تكون ضغوطات تجارية ليست سياسية او دولية.. وجميع الشركات الامريكية التي تتعاقد معها شركات الاتصالات تكون ليست بشكل مباشر فتكون عن طريق وسيط ليبي صاحب شركة تأسست من اسبوع وهكذا.. لذلك يُعتبر هذا النوع من الصفقات والعقود من اكبر ابواب الفساد، وحتى ان كانت توجد ضغوطات دولية وتقديم ايدي المساعدة للتحول الرقمي فلن يجدي ذلك نفعاً في غياب وجود الارادة سواء على مستوى المسؤولين او على مستوى الموظفين.

بخصوص الفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فبالنسبة للموظفين، فالموظف الفاسد لن يؤيد ذلك ولن يرى اي فوائد للموضوع ابداً ولكن الموظف النزيه الذي يرغب في القضاء على الفساد والعمل بدقة ونزاهة فسيرحب جداً بهذه المبادرات، ولو تحدثنا عن المواطنين، فأنا كمواطن ارغب في تقديم ابسط الخدمات التي كانت متوفرة لدي في السابق كحجز تذاكر اون لاين او كاستخراج رقم وطني ورقم قيدي، وهذه ابسط حقوق المواطن التي تسهل له حياته وتحد حتى من الازدحام.

بخصوص أمثلة على خدمات الحكومة الإلكترونية التي كانت فعالة بشكل خاص في تحسين الكفاءة أو الشفافية أو جودة الخدمة، ففي الوقت الحالي لا يوجد خدمات فعالة في ابسط الاشياء ولكن كانت موجودة كالوصول للرقم الوطني من المنظومة وسحبه بكل سهولة، وقد اقترحت بشكل شخصي ان نعمل على هذه الخدمات البسيطة كالرقم الوطني ووضع رمز QR بدل من الختم لكي نسهل العملية على المواطن، ولكن على حد علمي مشكلة الارقام الوطنية في مدينة طرابلس غير موجودة وشائعة ولكن في مدن الجنوب يوجد مشاكل وتزوير والعديد من الاشكاليات.

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبي، فنظرتي لبرنامج منحة الزوجة والابناء نظرة غير تفاؤلية، حيث ان كما ذكرت سابقاً كان لي تجربة فاشلة معها، لم اجد اي بريد الكتروني للتواصل معه لفهم الخطأ او رقم معين للخطأ او اي معلومة قد تفيد بمعرفة الذي يحصل اثناء ادخال البيانات فقط يعطي اشعار بأنه يوجد خطأ، لذلك لا ارى وجود خدمات بشكل فعلي.

بخصوص جهود محددة لتحسين قابلية استخدام خدمات الحكومة الإلكترونية والوصول إليها في ليبي، فلا، لا ارى اي جهود لتطوير هذه الخدمات او المنظومات.

بخصوص تأثير الأعراف المجتمعية والاقران والرؤساء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، ابدا، والا لكان المجتمع نبذ جميع مواقع التواصل الاجتماعي، ومن ناحية هل المواطن يثق في هذه الخدمات ومخرجاتها فلا خيار لهم، في حالة تواجد هذه الخدمات فسوف يستخدمها المواطن وسيكون سعيد بها، وبالنسبة للخدمات التي لا تتوفر الا اون لاين ولا يستطيع اي شخص التقديم عليها الا رقمياً كمنحة الزواج لا يوجد لدي فكرة كبيرة على هذا الموضوع ولكنها ظاهرياً ناجحة ولا اعتقد ان هناك شخص لا يملك القدرة على ان يكون اون لاين حتى لو خارج المنزل فقط، ليبيا تعتبر جيدة جداً في توفر الاتصال، ونحن لا نتحدث عن جودة الاتصال، انا اتحدث عن شخص يحتاج ان يرسل شيء اون لاين تستطيع ان تفعل ذلك في اوباري مثلاً.

بخصوص اذ كان هناك مجموعات أو أفراد معينون داخل الحكومة أو المجتمع يعملون كمدافعين عن مبادرات الحكومة الإلكترونية في ليبيا، فأصحاب المصلحة هم المواطنين، هم اكثر ناس يمكن ان يستفيدوا من التحول الرقمي، والمسؤول بشكل رئيسي على تحقيق هذه الخدمات هي الحكومة بما فيها المؤسسات التشريعية، سواء مجلس النواب او مجلس الشيوخ ولكن في اطار رؤية عامة للدولة الليبية ودور التقنية الذي يمكن ان تصنعه في تطوير واستقرار الدولة الجغرافيا الضخمة وعدد السكان البسيط جداً في حال لم يكن مدعوم بجودة تقنية تقدم خدمات للمواطنين والمقيمين في غياب هذه الرؤية لا يمكن تحقيق اي تحول، قد يحصل في جانب واحد مثلاً في سنة من السنوات الماضية قاموا بالتقديم على الحج اون لاين ومن ثم توقف الموضوع لماذا توقف ؟ لا نعلم احتمال ان المنظومة توقفت او ان المهندس التقني الذي عمل على الموضوع لم يتقاضى ماله او الشركة لم تتقاضى مالها ولكن من المؤكد انهم ليسوا موجودين اليوم، لان الموضوع له علاقة برؤية شاملة للدولة الليبية حتى في اقتصادها وحتى في امنها، حدود الدولة الليبية لا يمكن ان تحميها بالوسائل التقليدية، فيجب ان تحميها تقنياً، لذا نوّهت على موضوع المقيمين سابقاً لان عدد المقيمين الافارقة عددهم في الازدياد بشكل كبير جداً وبدون اي احصاءات، حتى للتخطيط المستقبلي لن تستطيع التوقع كم سيكون عدد الليبيين وعدد المقيمين مستقبلياً، وحتى المؤسسات على سبيل المثال الذين يتصارعون في قطاع الاتصالات الموضوع بدء وكأن الصراع مفتعل لصرف ميزانيات وسرقة وفساد فقط هذا ما اراه وما يبدو لي.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فاهم الدوافع: تطوير اقتصاد البلد، على مستوى المواطنين والقطاع الخاص، فالقطاع الخاص مؤثر جداً حتى على القرار السياسي، فإذا شعر القطاع الخاص ان التحول الرقمي سيلعب دور في زيادة ثروته وتنميتها وتوسعة نشاطاته الاقتصادية فيكون داعم له وقد ترى انجازات تحدث على الارض، لان عموماً يرى التحول الرقمي تهديداً له، القطاع الخاص حتى ولو على مستوى شركات متوسطة او صغرى تراه تهديد، لأنه مجرد وجود اي تطبيق او اي منظومة تهدد له دخله بشكل واضح يراه تهديد من الضرائب على سبيل المثال، الضرائب المفروضة في ليبيا كم نسبة منها تُدفع ؟ التحول الرقمي الشامل او الجزئي في بعض القطاعات، يرى بعض اصحاب المصلحة مع هذا القطاع ان الضرائب هي المشكلة الكبرى مع التحول الرقمي، لأنه يرى انك تستطيع ان تعرف الدخل الخاص به بالتالي تستطيع فرض ضرائب عليه، مثلاً انا اردت ان اقيم مشروع، او اريده ذات علاقة بالأمور الصحية ومشروع اخر ذات علاقة بصالات الافراح وليسوا لهم علاقة ببعضهم البعض، تطلب ان يُدخلوا بيانات بعدد المرضى او بعدد الزوار او الحجوزات، سيكون الجواب بالسلب لان ذلك سيمكّن الدولة من تحديد الدخل وبالتالي ستستطيع فرض الضرائب، فالموضوع شائك جداً وله تأثيرات كبيرة، والمسؤولين لا يتم اعفاءهم من تحمل المسؤولية، فوجود حكومة حقيقية على الارض سينتج حكومة الكترونية، ويمكن ان تكون المشاريع الرقمية تأتي تنشئها الحكومة فقط كدعاية انتخابية، كموضوع منحة الزواج، ولن يستطيع ان ينشئ مشروع كهذا الا رقمياً لأنه مشروع يشمل ليبيا كاملة، فإن لم يكن رقمي لن يصل للشرق وغيره.

انا بخصوص العوائق: الفساد، الوضع السياسي، والكوادر البشرية التي سنحتاجها اثناء العمل على التحول، والتطوير الدائم للكوادر، هل لدينا كوادر تواكب سوق العمل؟ مخرجات التعليم لدينا لا تتوافق مع مخرجات سوق تحول رقمي.

سبب تفوق قطاعي النفط والاتصالات فيما يخص التعاملات الرقمية هذا لانهما قطاعين ممولات ذاتياً، فشركات الاتصالات لدينا وفرة مالية تجعلها تستطيع ان تجرّب بدون محاسب، فالمؤسسات العامة الاخرى لكي تُجرب

خدمات بسيطة يجب ان تحصـل على سلسـلة طويلة من الموافقات، وهذا غير موجود في قطاع الاتصـالات تحديداً، ولكن ماذا فعلوا في نهاية الامر؟ فشلوا في تقديم تطبيق "برنامج" للمستخدم العادي وهذا موجود بشكل جزئي، لذلك يوجد سهولة في اتخاذ القرارات ووفرة مالية ولا يوجد محاسبة، ولم يقدموا الكثير رغم ذلك.

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قيم الوضــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصـالات في ليبيا، لا سيما فيما يتعلق بمبادرات الحكومة الإلكترونية، بدايةً هذا اصـعب سؤال لان البنية التحتية او كتقنية المعلومات في الوزارة تعتبر المشكلة الاساسية في التحول الرقمي وفي كل المؤســـســـات الليبية، لان موضـــوع البنية التحتية هو العائق الاكبر الى الان في التحول الرقمي، يمكن تقييمها مقارنةً ببعض المؤســسـات الاخرى تعتبر جيدة، لدينا تجارب نجاح في التحول الرقمي، ولكن كبنية تحتية جداً سيئة، لان اصحاب القرارات التي تخص البنية التحتية دائماً لديهم تخوف من انشاء بنية تحتية جيدة في مؤسسات الدولة الليبية وهذه هي المشكلة، العقلية في حد ذاتها يجب تغييرها.

بالنسبة للمنظومات، لدينا منظومة بمسـتوى بسيط المحفوظات، التواصـل بين الادارات غير موجود، مثال منظومة داخليـة تربط جميع الادارات او المكاتب غير موجودة، الانترنت غير مربوط، بنية تحتية بدائية، وبالحديث عن الجهات التابعة لوزارة الاقتصــاد لديهم منظومة او السـجل التجاري، ولكن غير مربوطات ببعضـهم ايضـاً، لذا البنية التحتية جداً بدائية الى حد الان.

بخصـوص تأثير مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية ليس لديهم دراية اسـاسـاً بهذا التطور، حتى عندما أنشـأنا منظومة الارشـفة في عام 2009, كنت في ذلك الوقت على رأس مجموعة التغيير، ووضـعت عند كل مدير ادارة اسم مسـتخدم وكلمة سـر، بحيث يمكن استخدام بريد المنظومة، ولكن اضطررنا الى ان التعامل يكون بين المساعدين وليس رؤساء المدراء ما عدا اثنان او ثلاثة مدراء الذين يتعاملون مع المنظومة بشكل مباشـر، عدم درايتهم بقواعد اسـتخدام هذه المنظومات هو المفقود. استكمالاً، العنصر البشري مفقود، فقط 10% لديهم إلمام بالتكنولوجيا، ويرجع ذلك لمجهودات الشخص الذاتية، حتى عند استبدال موظف بموظف لا يتم تدريب الجدد، وهذه الامور مسببة لنقص اما المواطنين: كمواطنين اجيال، كجيل الشـباب، تبارك الله، وجدوا هذه التقنيات امامهم، يوجد تجاوب وتفاعل مع اي مبادرات تقنية قامت بها الوزارة او جهات تانية، بحكم انهم وجدوها امامهم، نحن نرى انه سـيكون في المام اكثر عند المواطنين، ونسـبة الشباب في ليبيا تشكل اكثر من 50% اذا ناحية المام المواطنين ليست عائق ابداً.

بخصــوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، بأمانة، نحن عملنا على العديد من المنصـات، كان عمل ليبي بنسـبة أكثر من 70-80%، ورأينا وزارات ومؤسـسـات اخرى قامت بمبادرات كانت عمل ليبي 100%، لذا الامكانيات المتاحة حالياً يمكن الاعتماد عليها، حتى المعروض التقنية التي قاموا بيها جعلتنا ندرك انه يوجد كوادر نسـتطيع الاعتماد عليها في التحول الرقمي في ليبيا، ان اردت ان اقوم بتطبيق اي مبادرة لوزارة الاقتصاد سأجد في السوق الليبي من يعمل عليها ككوادر ليبية 100% ولن اضطر للجوء الى الخارج اذا كان هذا المقصـد، الى حد الان المكانيات تغطي الاحتياج، لان الاحتياج في حد ذاته ليس ضـخم او يفوق قدرات الليبيين .

بخصـوص وجود أي ابتكارات أو حلول تكنولوجية محددة كانت ناجحة أو صـعبة بشـكل خاص في سـياق الحكومة الإلكترونية في ليبيا، فالابتكارات لا تُقارن بالدول المجاورة للأمانة، ولكن بالنسبة للقطاع العام يوجد بعض المنصات مثل صندوق تيسير الزواج ومنظوماته في الخدمة المدنية والارقام الوطنية، وتطبيق خدمة المواطن الحكومي، يوجد حلول ســهلت الخدمات على المواطن، يجب التطوير اكثر فاكثر ولكن يوجد عمل مبدئي، وكذلك منصـة اجراءات التي عملنا عليها

حاولنا ان ننشـئ ولو بذرة بسيطة في التحول الرقمي في القطاع الحكومي ولا نتحدث عن القطاع الخاص لان القطاع الخاص تفوق وسـبق القطاع الحكومي، يوجد امكانيات وخدمات في القطاع الخاص لا تتوفر في القطاع العام، ولكن فشـلنا لان الجميع يحاول فرض سـيطرته على المشـاريع بالأخص عند ذكر ان هذا المشـروع ممول من الاتحاد الاوروبي، ولكن وصـلنا لنتيجة ان الوزارة تطلع منصتان خاصتان بها، وشـرحنا كيفية استخدام هذه المنصات، وحفزنا الجهات الاخرى ان تبدأ بمحاولة التحول رقمياً، ونجح الموضـوع بعد ان انفردنا به نحن، كوّنا فرق المنصـتين وتم اطلاقهما ووجدنا بوادر تقبل للتحول الرقمي، بالإضافة ان وجدنا ارادة سياسية من الحكومة ان الجهـات تدّعي الرغبة بـالتحول الرقمي ولكن على ارض الواقع لا يوجد اي بوادر او محـاولات، طرق الـدفع

الالكتروني مصــرف ليبيا المركزي لم يفعله الا بعد كورونا، لذا مبادرات التحول لا يوجد بها اســتمرارية الا العمل الذي اطلقناه وهذا ليس كلاما او احكامنا بل احكام اللجان المختصة.

بخصوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، الجميع يتكلم ويقول نريد تحول رقمي لان هذا الرائج، ولكن لا احد يعلم كيفية ذلك، لان موضوع التحول الرقمي يجب ان يكون من الاساس او من الصفر، سترى مدى جاهزيتك للتحول الرقمي، ما الاشياء التي ستحولها رقمياً، هنا الاشكالية الكبرى، يتحدث المدير عن انه يريد ان يحول المؤســسة رقمياً ولكن ليس لديه موظفين لكي يحوّلوا المؤســسة رقمياً، وكل الجهات عندما تحاول التواصل معهم يتم الرد بأنهم يريدون العمل على ذلك منفصلين، لأنه لا يوجد تكامل، الشـيء الوحيد الذي نجحنا فيه اننا جمّعنا كل الجهات وجعلناهم يعملون بروح الفريق، والسبب وراء رغبة المدراء في التحول الرقمي والكلام عنه بينهم اصــبح رائج لانهم يرون العالم كيف تغير، ويرون تأثير التحول الرقمي على المواطن والحكومة ولكن ليس لديه القدرة ولا الامكانيات لتطبيقه، رغم نجاح بعض البنوك في المنظومات والمعاملات الالكترونية فيرون ذلك رائج ويرغبون في تطبيقه ولكن الواقع يقول ان ليس الجميع لديه الامكانية لتحقيق ذلك. القيادة ان لم يكن لديها رؤية او رغبة للتحول الرقمي فستكون عائق، فالقيادة من اهم عوامل التحول الرقمي، ونتفق مع السيد موسى في كلامه 100%.

بخصوص الثقافة التنظيمية داخل الجهات الحكومية فيما يتعلق بقبول وتنفيذ مبادرات الحكومة الإلكترونية، فالهيكل التنظيمي اكبر عائق، لأنه يوجد تداخل مهام واختصــاصــات، مثل مراكز المعلومات والتوثيق، يوجد مراكز تعمل معنا تحت الهيئة العامة للمعلومات والتوثيق، يوجد مراكز تعمل وحدها دون الاكتراث للطرفين، فهو يشــعر انه مســتقل، ماذا يفعل هنا في الوزارة لا نعلم عنه شــيء يعمل وحده، حتى عندما رغب الســجل التجاري بالعمل على منظومة شــرط عليهم ان يقدم لهم منظومة ويتحكم فيها دون التدخل فيه كسـجل تجاري! وحب التملك هذا يرجع للعقلية التي يمتلكها صانعي القرار.

بخصــوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واســتخدام خدمات الحكومة الإلكترونية، مؤخرا، تم تكليف لجنة للتحول الرقمي فيها أناس الغالبية العظمى منهم ليس لهم علاقة بالتحول الرقمي، وحدث تخبط بين جميع الاطراف من أربع او خمس سنوات فيمن سيطبّق المشاريع المطروحة، ولكي يستكملوا ما بدأناه حينها وتركناه استغرقوا أربع سنوات! تداخل الاختصاصات وحب التملك لكي شيء يُفسد كل شيء، بذلنا الكثير من الجهود والمبادرات للتحول رقمياً ولكن فشـلنا لنفس الاسـباب، ولكن التحول رقمياً واجب للتواصـل مع باقي العالم الاخر.

بخصوص أثيرت الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، نعم هو جزء كبير بالطبع، عدم الاستقرار السياسـي سيؤدي الى عدم الدعم المادي وصرف ميزانيات لهذا الموضوع، فانقسام الميزانيات لكن يجعل اي احد من الطرفين يهتم لصرف ميزانيات للتحول الرقمي.

بخصوص مناقشة الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، بالنسبة للقوانين فكانت ملائمة، فكل القوانين التي احتجنا لصدورها صدرت، كقانون المعاملات الإلكترونية، بالإضافة الى اللوائح التنظيمية للهيئات والمؤسسات، التي اعطتنا مساحة للعمل بأريحية كبيرة، قبل صـدور قانون المعاملات الالكترونية كان عائق ولكن جائحة كورونا سرّعت بصدور هذه القوانين.

بخصوص وجود أي ضـغوط خارجية، مثل المبادرات الدولية أو الإقليمية ، التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فالمنظمات الاجنبية يريد ان يدعم ولكن الداخل رافض، فيرى ان جميع هذه المبادرات تمس بالأمن القومي والجاسوسية وما الى ذلك، عقلية الخوف من الاجنبي مسيطرة جداً، بعض المؤسسة تنفذ في مبادرات وتستقبل دعم دولي ولكن لدينا مشكلة في الرؤية الكاملة، فالمؤسسـات المتقبلة لهذا الموضوع قلة قليلة جداً رغم ان المؤسسات القليلة مراكز جداً حساسة ولكن لا يستعطون العمل وحدهم.

بخصــوص الفوائد المتصــورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، فهذا صعب، لان الموظفين ليسوا سواسية، يوجد موظفين يرغبون في ذلك لأنه سيسهل له عمله ويسرعه،

ويوجد اخرين يرونه انه هراء زائد ويفضـــل العمل ورقياً وتقليدياً، لأنه يذهب للمصــارف يتلقى جُملة "المنظومة متوقفة" فيرى انه اذا تُرك العمل دون هذه المنظومات كانت العملية سـتكون اسـهل، فهذا ســوء دراية، وايضـاً احد الافكـار ان الموظف يريد ان يهيمن على العمل كلـه، ولكن هذا يعتمد على اختيـارك انت للموظفين عند التحول الرقمي من الذي تحاول تطويره للاسـتفادة من التحول الرقمي ومن لا لأنه لا يوجد لديه الرغبة اسـاسـاً في التحول رقمياً.

بخصــوص مدى سـهولة وسـهولة الوصـول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، جميع الاشـكاليات لم تحدث في المنظومة في حد ذاتها، حتى عند التصـميم نأخذ في الحسـبان السـهولة والوضـوح، ولكن الاشـكالية في الانترنت، فيوجد مناطق لا تدعم خدمات الانترنت لكي تحمّل لك المنظومة والدخول عليها.

بالنسـبة للفائدة التي قدمتها لبعض المنصـات التي تعمل عليها الحكومة في منحة الابناء ومنحة الزوجة وما الى ذلك، الي تتداخل فيها الكثير من الهيئات والمؤسسات، انا احد الاشخاص كنت استلم هذه المنحة من احد المصارف خارج مدينة طرابلس وقمت بتحويلها لحسـاب في مدينة طرابلس، اجراء كهذا في السـابق يمكن ان يحتاج وقت طويل او وسـاطة ولكن بدون مبالغة في جلسـة واحدة فقط قمت بتطبيق شـروط التحقق من هويتي التي يجب ان تكون في اي منصـة الكترونية وقمت بتغيير المصـرف وتم الاجراء بنجاح، فالمواطن في السـابق يمكن ان يحتاج من وقته وجهده الكثير والكثير فالتجارب الناجحة هذه التي تعتبر بسـيطة ولكن نسـتطيع ان نبني عليها ونسـتخدمها كترويج لفكرة التحول الرقمي.

بخصــوص تأثير الأعراف المجتمعية والاقران والرؤسـاء على تبني واسـتخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين نعتبر في فكرة ان اطلاق الحكومة لمبادرة وكسبها ثقة الناس هذه من اكبر التحديات للحكومة، ان تبني منظومة موثوقة، فبناء منظومة دون ثقة المواطن تعتبر لا جدوى منها، فهي نقطة مهمة يجب ان تؤخذ بعين الاعتبار، ولكن توجد ثقة نوعا ما في التطبيقات البسيطة الموجودة.

بخصــوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاسـتخدام خدمات الحكومة الإلكترونية بشـكل فعال، سـأتكلم عن هنا في الوزارة للأسف انا اعمل هنا من عام 2019 لم نتلقى هي تدريب ابداً، يوجد تقصـير كبير في هذا الجانب، يمكن ان هذا بسـبب تغيير الحكومات وانقسـام الميزانيات، لذلك لا يقومون بتخطيط استراتيجي طويل او قصير، وانا اتكلم عن الوزارة وايضـاً اغلب المؤسسات الاخرى ولكن بالطبع بلا شك يوجد استثناءات.

بخصــوص الدوافع والعوائق الرئيسـية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فالدوافع اهمها تسـهيل حياة المواطن او حتى الموظف، فإذا كنت موظف فسـيزيد التحول الرقمي من كفاءتك وانتاجيتك وامور كثيرة اخرى، تسـهيل الاجراءات، حفظ المال العام، زيادة الثقة والشـفافية بين المواطن والحكومة اما العوائق أكبر معوّق هو العقلية، تبدأ من المواطن العادي للمسـؤول، للحكومة، والمعوق الآخر هو الانترنت الذي لا يتوفر في كامل ربوع البلاد وليس بالجودة المطلوبة، والبنية التحتية التقنية بصـفة عامة، وبالتأكيد التحدي الامني والاسـتقرار السـياسي بصفة عامة.

Interview Code 16

بخصوص تقيم الوضع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصالات في ليبيا، من ناحية الاتصالات تعتبر جيدة الى حد ما، وهذا ما قمنا بالتركيز عليه بشركة المدار الجديد السنين الماضية بخصوص رؤيتنا نحون التحول الرقمي. بشكل عام البنية التحتية تحسنت مع تطور قطاع الاتصالات في ليبيا. غياب شبكة الالياف البصرية هو جزء من المشكلة في ليبيا، ولهذا قمنا في شركة المدار إطلاق خدمة سحابة المدار. وذلك ضمن رؤية الشركة الداخلية للتحول الرقمي ودفع التحول الرقمي الوطني والنهوض بالاقتصاد الوطني، ولهذا كانت رؤية المدار الجديد للتعامل مع باقي اصحاب المصلحة لتقديم الخدمات الإلكترونية في ليبيا. غياب البنية التحتية بسبب عدم اهتمام الحكومة بدعم البنية التحتية والخدمات المختلفة.

اما بخصوص تقديم الخدمات الإلكترونية من القطاع العام وغير مرضي ابدا، وعلى اصحاب المصلحة العمل على تحسين الامر.

بخصوص مستوى الإلمام بتكنولوجيا المعلومات والاتصالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، هذا الامر مؤثر بشكل كبير في تطوير الخدمات الالكترونية وتبنيها. المواطنين لديهم المعرفة باستخدام التطبيقات الخاصة بشبكات التواصل الاجتماعي. لكن الموظفين غير جاهزين لإدارة هذه الخدمات او تطويرها. وهذا يحتاج مبادرات من الحكومة للعمل على تجهيز المؤسسات لتطوير خدماتها وتحسين جودتها.

بخصوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، من ناحية البنية التحتية ومراكز البيانات والخدمات السحابية فنحن جاهزون، خاصة مع مشروع سحابة المدار وتعاونا في تطوير قاعدة البيانات الوطنية مع الهيئة العامة للمعلومات ومع وزارة الداخلية ومشروع الرقم الوطني .

اما بخصوص البرمجيات هو ضعيف جدا، فنحن في حاجه لدعم سوق البرمجيات وبناء بيئة تكاملية مع القطاع الخاص، فنحن في حاجه لرؤية لدعم القطاع الخاص وانشاء شركات تقدم الخدمات البرمجية للقطاع الحكومي والسوق بشكل عام .

تطوير البرمجيات داخليا في المؤسسات الحكومية امر صعب جدا، وذلك بسبب النظام الرجعي العام في الاقتصاد ومع تضخم القطاع العام وضعف المرتبات، فلهذا ضروري جدا التعاون مع القطاع الخاص، وعلى الحكومة تقديم الفرصة للقطاع الخاص لتطوير نفسه.

بخصوص الخدمات الإلكترونية الناجحة في ليبيا، مشروع الوطن الرقمي ومشروعاته المكملة التابع للهيئة العامة للمعلومات، ومشاريع اخرى مثل منحة الزواج ومنحة الزوجة والبنات، كلها مبنية بشكل او اخر على منظومة الرقم الوطني. بخصوص مقترح استراتيجية التحول الرقمي الأخيرة، نحن جزء منها، وتم اختيار التوجه الحالي لإعطاء الاختصاص للقطاعات كونه هو اختصاصهم، اما اللجنة الاشرافية فتختص فقط بالسياسات والقوانين والمبادرات بشكل عام .

بخصوص تصف دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبي، فهذا مهم جدا، حكومة الوحدة الوطنية تدفع نوعا ما نحو التحول الرقمي، بأكثر من مشروع، ومنها تطوير البنية التحتية لتبادل البيني للبيانات بالتعاون بين شركة المدار الجديد والهيئة العامة للمعلومات. في انتظار تأسيس المجلس الوطني للتحول الرقمي لوضع الميزانيات ودعم تنفيذ هذه المشاريع.

بخصوص لموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واستخدام خدمات الحكومة الإلكترونية، فهي مبادرات بسيطة، لكن تمتاز بغياب الاليه والاستراتيجية الوطنية، مع هذا نقوم حاليا بالعمل على نظام تبادل البيانات البيني بين المؤسسات الحكومية، كذلك قمنا بالعمل مع وزارة الداخلية في تطوير بعض المنظومات مثل استخراج شهادة الحالة الجنائية، للأسف الميزانية تصرف بشكل غير حكيم وفي ابواب غير استراتيجية. وشركات قطاع الاتصالات لا تستطيع العمل وحيدة وتغطية كل هذه التكاليف المالية.

بخصوص جاهزية الجهات الحكومية في ليبيا لتبني مبادرات الحكومة الإلكترونية، الحكومة تدعم في كافة المبادرات، لكن الهيئات التابعة لها بطيئة في تبني الخدمات والتعامل معها. ومنها على سبيل المثال منظومة المشتريات الحكومية الموحدة.

بخصوص تأثير الاستقرار السياسي أو عدم الاستقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، طبعا الاستقرار السياسي مهم جدا لتبني الحكومة الالكترونية، عدم الاستقرار السياسي وانقسام الحكومة القى يظله على الهيئات الحكومية المختلفة. من هذه الاشكاليات هو غياب الدليل الاجرائي داخل المؤسسات الحكومية الليبية، وفي بعض المؤسسات يختلف الاجراء ذاته من فرع لأخر.

وايضا الاشكال قائم بخصوص تقاطع الاختصاصات، لكن الحل هو ضرورة اشراك الجميع في عملية التحول الرقمي، وكل صاحب مصلحة يقوم بتغطية الجانب الذي يمكنه تغطيته حسب التفاهم. وكل هذا يأتي بعد تبني استراتيجية وطنية للتحول الرقمي والمملكة السعودية مثال لذلك .

بخصوص لإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا؟ هل هناك أي قوانين أو سياسات محددة تعزز أو تعيق تبني الحكومة الإلكترونية، فالجسم التشريعي شبه مجمد، والتشريعات الصادرة اخيرا ذات العلاقة بالتحول الرقمي ينقصها المشاركة المجتمعية واستشارة اصحاب المصلحة باختلافهم وذلك نتيجة عدم الاستقرار السياسي في ليبيا.

بخصوص الضغوط الخارجية، والمبادرات الدولية أو الإقليمية، فأرى ان هناك بعض المنظمات تعمل وتدفع نحو التحول الرقمي في ليبيا، بالتنسيق مع اصحاب المصلحة المختلفين مثل مصرف ليبيا المركزي والهيئة العامة للمعلومات .

بخصوص لفوائد المتصورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، الموظفين بشكل عام عند إطلاق الخدمات الالكترونية، الموظفين يقفون ضدها، وكذلك المواطنين، خاصه بسبب عدم مصداقية المبادرات الحكومية السابقة، بسبب ضعف الإدارة وغياب الديمومة في هذه الخدمات خاصه مع غياب الاراد المالي لهذه الخدمات. بشكل عام المواطنين مهتمين بهذه الخدمات خاصه مع اطلاعهم على تجارب دول الجوار في التحول الرقمي. عدم الاستقرار السياسي هو اهم العوائق هنا، والمواطن وخدماته ليست من الاولويات الحالية.

بخصوص مدى سهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا؟ ما هي التحديات التي يواجهها المستخدمون عند الوصول إلى هذه الخدمات، فان الحكومة عليها استخدام اليات لتحفيز المواطن لاستخدام هذه الخدمات، فاستخدام التكنولوجيا كان لتحسين تجربة المستخدم، الاشكال في العادة هو العامل اللوجيستي لهذه الخدمات، الامر ذاته يكمن في غياب البدائل للقنوات الالكترونية، لكن بشكل عام المواطن متعطش لهذه الخدمات. لكن بشكل عام على المؤسسات الحكومية العمل على تحولها الرقمي داخليا اولا، لتسهل خروج هذه الخدمات للمواطنين لاحقا .

بخصوص ثقة المواطن في الخدمات الالكترونية، للأسف المواطنين لا يثقون بشكل كبير في هذه الخدمات، بسبب الانقسام والاشكال السياسي، الذي يؤثر على تقديم هذه الخدمات، خاصة مع ضعف مصداقية الحكومة، الا ان مع كل هذه الاشكاليات، الا ان الكثير من المؤسسات تشتغل لأحداث التغيير.

بخصوص الموارد والتدريب والدعم المتاح لموظفي القطاع العام والمواطنين لاستخدام خدمات الحكومة الإلكترونية بشكل فعال، للأسف لا يوجد اي دعم او تدريب، فهي ثقافة قديمة في القطاع الحكومي.

بخصوص مبادرات أو خطط لتحسين الظروف الميسرة لاعتماد الحكومة الإلكترونية في ليبيا. واحدة من اهم المشاكل في الثقافة الحكومية الليبية هو غياب الخبرة التراكمية، اي قيادة جديدة تأتي تقوم بالبناء من الصفر من دون الالتفاف للمشاريع السابقة، خاصه مع ضعف المحاسب والشفافية.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، فان اهم الدوافع هو تسهيل الخدمات للمواطنين، تقليل التكاليف، زيادة الشفافية والمحاسبة، تحسين الجودة وزيادة المشاركة المجتمعية في صنع القرار. للأسف الحكومة الحالية اهم دوافعها هو العامل السياسي والانتخابي. اما بخصوص العوائق فهو غياب الاستراتيجية الوطنية، وعدم وجود التوعية باستخدام التكنولوجيا داخل الجهات الحكومية، ضعف البنية التحتية، غياب الإطار التشريعي، الاشكال الامني وتأثيره على اتخاد القرار والبنية التحتية، ضعف قدرات المؤسسات الحكومية ذاتها، خاصه مع الهيكل الاداري والتنظيمي للمؤسسات الحكومية، تضخم العنصر البشري وضعف في الكفاءة.

الفرصة متاحة لتقديم هذه الخدمات وصناعة قصص نجاح، الزخم موجود والمواطن جاهز بشكل كبير لاستخدام هذه الخدمات. حيث لا مفر من التحول الرقمي.

Interview Code 17

بخصـــوص تقيم الوضـــع الحالي للبنية التحتية لتكنولوجيا المعلومات والاتصــالات في ليبيا، لا ســيما فيما يتعلق بمبادرات الحكومة الإلكترونية، فبالنسبة لشبكات الأنترنت الى حد ما تعتبر معقوله، الا ان شركات الاتصالات في ليبيا اغلبها كانت Voice واليوم IP ، شركات الاتصالات في ليبيا عليها التحول لإدخال عدة خدمات اخرى في ليبيا. خاصه مع تحول شركات الاتصالات في العالم لتقديم خدمات رقمية متعددة ليس فقط اتصـال بالأنترنت. خاصــه ان شركات الاتصالات في ليبيا تعتبر من اغنى المؤسسات في ليبيا وعليها العمل على منافسة الشركات الدولية.

بخصوص شبكة الالياف البصرية، فليبيا تملك شبكة ضخمه تغطي ليبيا كلها ملك لشركة الاتصالات بحجم 18 ألف كيلو متر وشركة الكهرباء لديها حوالي 30 ألف كيلومتر من شبكة الالياف البصرية، لكنها محدودة الاستخدام بسبب القوانين. بشـكل عام الاشكال في شـبكة الاليات البصـرية هو في خدمة توصـيل FTTH ، FTTX. دولة مثل ليبيا تعاني بسبب سعة حجمها الكبير وقلة كثافتها السكانية مما يؤثر على الجدوى الاقتصادية لهذه المشاريع. لهذا قطاع الاتصالات يحتاج لدعم أكثر من الحكومة، لهذا يتم التركيز على الشبكات لا السلكية.

بخصـــوص مســـتوى الإلمام بتكنولوجيا المعلومات والاتصـــالات بين موظفي القطاع العام والمواطنين على تبني خدمات الحكومة الإلكترونية، فهذه مشـكلة كبيرة، فالتحول الرقمي يعتمد على ثلاث نقاط وهي المواطن، الاجراءات والتكنولوجيا، والاشكال في ليبيا يتم التركيز فقط على التكنولوجيا، اما بخصوص البشر فلا هناك اي اهتمام حقيقي لتدريب بناء قدرات الموظفين في هذا المجال. بداية من حملات التوعية، والعمل على ممانعة الموظفين، وتطوير مهاراتهم لتلبية متطلبات التكنولوجيا الحديثة. الاجراءات ايضـــا مشــكلة حقيقية في القطاع العام، كونها غير موحدة وغير معروفة في القطاع العام في ليبيا ومن اهم العوائق في التحول الرقمي في ليبيا. ومثال على ذلك هو عملنا داخل مصـــرف ليبيا المركزي، فالأشــكال الاكبر الذي يواجهنا في تطوير النظم هو غياب الادلة الاجرائية. واغلب المشـاريع التي تنفذ في ليبيا فهي مشاريع غير مبنية على الدروس المستفادة من العالم، وتطويعها بشكل محلي غير احترافي فقط لتطويع البرمجيات لما يتماشـــى مع الوضـــع في ليبيا. بخصـــوص التكنلوجيا فهي متاحة وفي اخر اصـــداراتها. للأســف الاجراءات في ليبيا لا تتماشـــى مع الادلة الاجرائية المتعارف عليها في العالم، مما يجعل المبرمجين المحليين يمضـــون الكثير من الوقت لتطويع البرمجيات لتتماشـــى مع الوضـــع المحلي مما يؤثر على الفاتورة ومدة التسليم.

بخصوص مدى توافق التقنيات الموجودة في ليبيا مع متطلبات مبادرات الحكومة الإلكترونية، فالحكومة الالكترونية خطوة قبل التحول الرقمي الكامل، وكان لدينا تجارب ســابقة واســتراتيجيات طورت من قبل الجهات الدولية ســنة 2013، وكله متواجد في الاوراق فقط، والحكومة الليبية والادارات للأسف لا تبني على ما سبقها من دارسات، وتبدأ في العمل من الصـفر. يمكننا البداية بمشـاريع صـغيرة ثم العمل على توسيعها، حينها في 2013، كانت الاتصالات ضعيفة مكلفة.

اما القطاع الخاص في ليبيا أصبح قوي واقوى من القطاع العام، ويمكنه العمل على تنفيذ هذه المبادرات، لكن يتحاج لتنظم للشراكة بين القطاع العام والخاص ومشاركة الربح وكيفية ادارة هذه الشراكات، لكن للأسف هذا الامر غير واضـــح للجهات الحكومية واصـــحاب المصـــلحة. للأســف كلهم يرونها من ناحية تطوير لمراكز بيانات وعدم فهم للمصطلحات الخاصة بالتحول الرقمي. ولا استجابة قوية من اصحاب المصلحة بخصوص اي تدريبات للكوادر البشرية داخلها في مجالات التحول الرقمي، فباء القدرات البشرية أصعب بكثير من بناء قواعد البيانات وشركات القطاع الخاص متوفرة لتغطية اي احتياج في مجال التكنولوجيا.

بخصوص المبادرات والابتكارات الناجحة، فلم اشـاهد اي خدمة حقيقية، كلها لأجل الاعلام ولأهداف سياسية. اما بخصوص الخدمات الحالية فكلها خدمات لا ترتقي للتحول الرقمي الحقيقي. للأسـف في ليبيا لا توجد دراية حقيقية بمعاني هذه المصـطلحات، الاشـكال في الجانب البشري كبير جدا، ولا يمكن اتمام التحول الرقمي في ليبيا من غير العمل على تطوير الجانب البشري في القطاع الحكومي وعلى الصـعيد العام. فكل القطعات يجب ان تكون جزء من هذا التحول. فأي نجاح حالي هو فقط بسبب صـاحب المبادرة. بالإضافة لوجود مشـكلة كبيره في غياب اجراءات السلامة والحماية الرقمية، مهما كانت العمليات بسيط فهي تؤثر بشكل كبير على الخدمات في ليبيا .

بخصـــوص دور القيادة والإدارة في تعزيز تبني الحكومة الإلكترونية في ليبيا، الرؤية يجب ان تأتي من القيادات، وجلهم في ليبيا مهتمين بهذا التحول، لكن للأسف لا يوجد اسـتراتيجية حقيقية لاي مؤسسـه حكومية للتحول الرقمي في ليبيا، او حتى لعمليات الرقمنة الكلاسـيكية. لا خطط حقيقية او مقنعة باتجاه التحول الرقمي. الرغبة موجودة والهدف هو الحاق بالترد. كل العمل حليا على بناء مراكز بيانات، او اتمام عمليات شـــراء عمليات تكنولوجية وينتهي الامر هنا .

بخصـــوص الموارد والدعم المتاح للجهات الحكومية والموظفين لتنفيذ واسـتخدام خدمات الحكومة الإلكترونية، نعم الحكومة مهتمة بمشاريع التحول الرقمي، لكن لا اعتقد انه تم تقديم اي مشاريع مدروسة بشكل حقيقي او مبنية على استراتيجية في ليبيا. فجميع المشاريع تجدها تتمحور على بناء مراكز البيانات الخاصـة بهدأ وعدم استخدام الخدمات السحابية وقواعد البيانات الوطنية المتاحة. للأسف ان عمليات تطوير قواعد البيانات اغلبها يتم بسبب الفساد المالي والرغبة في الصـرف المالي. هناك تعميمات من الحكومة للمؤسـسـات التابعة لها للتعاقد مجانا مع سـحابة المدار. بخصـــوص outsourcing فهو امر ذو مخاطرة خاصـه من باب الشـركات المحلية لكن يمكن العمل مع شـركات دولية، خاصـه مع غياب SLA and TERE 1 وغير متوافقة مع المعايير الدولية خاصة في مجال الامن السيبراني والتنظيمي.

بخصـــوص تأثير الاسـتقرار السـياسـي أو عدم الاسـتقرار في ليبيا على تبني وتنفيذ مبادرات الحكومة الإلكترونية، بالتأكيد، فالأمر مرتبط بالسياسـة، كون الجانب التقني هو الجانب الاسـهل في العملية، لكن بسبب ضعف الدولة تجد غياب القدرات البشـرية وغياب الادلة الاجرائية، وانقسـام الحكومة ادى لتفاقم الامر، ناهيك عن غياب الثقافة التنظيمية في القطاع العام.

بخصـــوص الإطار القانوني واللوائح المتعلقة بالحكومة الإلكترونية في ليبيا، للأسـف القوانين قديمة في ليبيا، وليبيا تعتبر من الدول المتأخرة من هذا الجانب، خاصـه في تبني التوقيع الالكتروني واستخدام البريد الالكتروني، ومؤخرا بعد اصدار قانون الجريمة الالكترونية فهذا القانون يعتبر ضـعيف وغير سـليم مع غياب اللوائح التنفيذية. لكن وجود قانون معيب أفضـل من عدم وجود قانون على الاطلاق. لكن بشـكل عام غياب القانون فقط شـماعة، ففي العادة في مواضيع التحول الرقمي فالتكنولوجيا تأتي اولا ثم تأتي القوانين لاحقا.

بخصـــوص ضـــغوط خارجية التي تؤثر على اعتماد خدمات الحكومة الإلكترونية في ليبيا، فهي موجودة بداية من القطاع المصرفي، خاصـة في تبني معايير امن المعلومات في فتره زمنيه محدده، كون ليبيا جزء من العالم ولا يمكن ان تكون جزء من الشبكة المالية الدولية من غير هذه المعايير.

بخصـــوص الفوائد المتصـــورة لمبادرات الحكومة الإلكترونية لموظفي القطاع العام والهيئات الحكومية والمواطنين في ليبيا، بالنسـبة للجيل الجديد فهو مهتم بهذه الخدمات، فقط في حاجه لبناء القدرات ولا توجد اي ممانعة حقيقية من قبلهم، لكن الاشـكال الحقيقي هو في الخبرات القديمة بسبب ضـعفهم في استخدام التكنولوجيا، وللأسف اغلبهم هم مدراء هذه المؤسسات ويمانعونها بسبب الخوف من الشافية والمحاسبة والمتابعة. غياب التدريب هو أكبر عائق.

بخصوص السهولة وسهولة الوصول إلى خدمات الحكومة الإلكترونية الحالية في ليبيا، فمع تواضع الخدمات، فان المواطنين استخدموها بشكل سلسل، ويتم استخدامها من دون اي دوافع على عكس دول العالم الاخر. فكلهم يريدون الخدمات بشـكل أسـهل وان كانت بقيمة مالية اضـافية. للأسـف الخدمات في ليبيا ضعيفة خاصـة مع غياب البيئة التكاملية في ليبيا لهذه الخدمات، من جانب لوجيسـتي وكذلك من جانب البريد الوطني. بالإضـافة لغياب المدفوعات المالية لوائح تنظيمية مثل م ح 5.

بخصوص الأعراف المجتمعية والاقران والرؤسـاء على تبني واستخدام خدمات الحكومة الإلكترونية بين موظفي القطاع العام والمواطنين، فلا اعتقد ذلك، فالمواطن مهتم بشـكل كبير بهذه الخدمات ومسـتجيب بشـكل عالي وهناك الكثير من الامثلة لذلك. المواطن فقط يحتاج لهذه الخدمات، التي يصـعب تطويرها محليا للأسف. بخصـوص الثقة فمع غياب السياسات التنظيمية والرقابية فلا شـيء يمنع هذا للأسف. لكن للأسف ادارة الدولة بشكل قبلي وعشوائي فهذا يعتبر اشكال كبير في هذه المشاريع خاصة مع غياب المراجعة الداخلية.

بخصوص اصحاب المصلحة عندما يتعلق الأمر بالحكومة الإلكترونية في ليبيا فهم غير واضحون في ليبيا.

بخصــوص مبادرات أو خطط لتحســين الظروف الميســرة لاعتماد الحكومة الإلكترونية في ليبيا، فللأســف لا شــيء حقيقي، واللجنة الوطنية المشــكلة العام الماضــي ولدت ميته، وهذه اللجان لن يكون لها اي قيمة ما لم تكن برئاســة رئيس الحكومة او نائبه. كذلك الاستراتيجية يجب ان تأتي من رئاسة الحكومة وليس شكل منفصل كما نجد اليوم في ليبيا، وغيرها من هيئات وطنية ذات علاقة فواجبها فقط تنظيمي بحث. وللأســف مقترح الاســتراتيجية الحالي فهو ضــعيف ولا علاقة له بالتحول الرقمي ولا يتماشى مع العالم والواقع في ليبيا. ولن يكون هناك استراتيجية حقيقية مع غياب الشريك الاجنبي وضعف الاختصاصات في ليبيا.

بخصوص الدوافع والعوائق الرئيسية لتطبيق الحكومة الإلكترونية في دولة ليبيا، بخصوص الدوافع فمحاربة الفساد والبيروقراطية والمركزية من اهم الدوافع، ناهيك عن ان توفر هذه الخدمات ستساهم في توحيد الدولة الليبية وستقلل من اشــكالية المركزية الحالية في العاصــمة طرابلس. ليبيا من ناحية اقتصــادية دولة مترامية الاطراف، ولا يمكن توفير كافة الخدمات الحكومية في ليبيا أجملها، وله مصــاريف مالية كبيره. اما بخصــوص العوائق فاهما الموارد البشرية وضعفها، البناء المؤسسي للمؤسسات الليبية، واغلب المؤسسات تعتمد على اشخاص، ويتغير كل شيء بناء على الاشــخاص. غياب الاستراتيجية الوطنية هو عائق ايضــا. والعمل بشكل جزر منصــة للتحول الرقمي فهو امر فاشــل. بناء بيئة تكاملية امر مهم جدا لنجاح التحول الرقمي في ليبيا. كون الثقافة الليبية العامة لا يتماشــى مع اسس التحول الرقمي .

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تم إنشاء جرد لجميع المؤسسات التابعة للحكومة، وهي خطوة حديثة وحاسمة تمامًا في عملية إدارة الأعمال. بالنسبة للجزء الأكبر ، هناك قوانين وإجراءات واضحة في ليبيا ، لكن الفوضى في القطاع الحكومي هي حلقة لا تنتهي من الفوضى. تعتمد المؤسسات الليبية بالكامل على مواطنيها. سنجد إدارة جيدة، مما يعني أنها فارغة تمامًا إذا كانت جودة إدارته تميز الشخص المسؤول عن الإدارة. تنبع عجز القيادة الإدارية من مفهوم التكنوقراط ونظام الخدمة المدنية. "يمكنك التسليم إذا اتبعت الكتاب." التعاقد المباشر عقد على المستوى الوزاري يتطلب موافقة مجلس الوزراء، ويعتبر أحد أبواب تفشي الفساد. يساهم غياب المستشارين والخبراء في مجلس الوزراء، وكذلك الغياب الأخير لوزير خاص في قطاع الاتصالات ، في تمرير العقود والمشاريع المتعلقة بالتكنولوجيا دون تدقيق مناسب. سواء كان ذلك من خلال عقود الشراء أو الاستشارات، فإن أبواب الفساد مفتوحة دائمًا. من ناحية أخرى ، بسبب الافتقار إلى الحوكمة الرشيدة ، يعاني القطاع الحكومي من عجز وحاجة ماسة. الأشخاص الذين يتولون قيادة البلاد هم الأشخاص الخطأ ، خاصة في السنوات العشر الماضية. تفتقر غالبية قادة المؤسسات إلى الخبرة ذات الصلة في مجالاتهم. بدلاً من ذلك ، كان ترويجهم لنظام الحصص القبلية والسياسية ، فضلاً عن معارضتهم للنظام ، أسبابًا لتعيينهم ، وهناك نمط تشابه في نظام الانتداب عبر العديد من المؤسسات الحكومية بسبب عدم وجود دليل إجرائي لـ المؤسسات الحكومية. أحد الأسباب الرئيسية للفساد في القطاع العام هو ميزانية قطاع التكنولوجيا ، ولهذا السبب نركز على توحيد المعايير. القطاع العام أعمى من الناحية التكنولوجية ، وهناك مشكلة كبيرة في عدم البناء على الجهود السابقة لأن الجميع يبدأ من الصفر. هناك أيضًا مشكلة في التوثيق والمحفوظات ، مما يعني أنه حتى لو كانت هناك مبادرات واستراتيجيات سابقة ، فإنها ستكون بلا قيمة إذا لم يتم أرشفتها وتوثيقها في السجلات. الاحتكار في الدولة يضر بالقطاع الخاص. هناك شباب شغوف وذو خبرة وهذه فرصتهم الآن. ومع ذلك ، فإن مشكلة كون الكيان دولة ريعية نتيجة لسوء إدارة القطاع العام يقيد تقديم الخدمات للقطاع العام فقط ، ويقلل من الجودة والقيمة ، ويمنع المواطنين من الوصول إلى الإنترنت. عملنا على عدد من اللوائح ومسودات القوانين ، لكنها تعطلت بسبب الانقسام السياسي التشريعي الليبي. في عام 2013 ، تعرضت شبكة الإطفاء للانقطاع لمدة أربعة أيام كل أربعة أيام ، وفي عام 2014 ، زادت الانقطاعات إلى مرتين يوميًا نتيجة عدم الاستقرار في ليبيا ، وهو ما يضر بخدمات الإنترنت. كان إعداد ما يقرب من 30 مكتب بريد في جميع أنحاء ليبيا وتدريب الموظفين لتقديم الخدمات الحكومية للمواطنين كجزء من الحكومة الشاملة لضمان الإدماج والوصول إلى جميع المواطنين ، بغض النظر عن مستواهم التعليمي أو مدى الوصول إلى الإنترنت ، أحد من قصص النجاح التي شهدها عام 2014 ، بالتوازي مع عمل الوزارة في دراسة الوضع والبدء في مشاريع مختلفة. وفي العام نفسه ، تم إنشاء (الهيئة الوطنية لسلامة المعلومات) لتكون الحصن والحامي والمسئول عن هذه الشؤون نتيجة لنجاحات العمل نحو التحول الرقمي ووضع استراتيجية وطنية. نظرًا لأن شركات الاتصالات تعتمد على القانون التجاري ، فإن اتخاذ القرار أسهل وأسرع وأكثر مرونة وحداثة ، على عكس المؤسسات الحكومية التي يجب أن تمر عبر الدورة المستندية الكاملة ، كما هو الحال في المشتريات. ونتيجة لذلك ، لا بد من إدراج القطاع الحكومي في خطة الوزارة وإقرارها من قبل مجلس الوزراء ، يليه المجلس التشريعي. وفيما يلي الجهات ذات العلاقة: وزارة المالية - مجلس الوزراء - مجلس النواب - وزارة التخطيط - مصرف ليبيا المركزي - ديوان المحاسبة - الرقابة الإدارية - وزارة المالية - مجلس الوزراء - مجلس النواب - وزارة التخطيط. يتم تحديد المبلغ المصروف حسب نوع المشروع ، حيث تتطلب مشاريع التطوير موافقة وزارة التخطيط والباقي يتطلب موافقة وزارة المالية. بشكل عام ، لا يوجد تنسيق بين المؤسسات الحكومية ، بما في ذلك عدم وجود بروتوكولات للاتصال المباشر ، والتي لا تستطيع الوزارة فرضها ؛ يجب على مجلس الوزراء القيام بذلك ، وأي اتصال بين المؤسسات يقتصر على المعارف الشخصية. لقد قمنا بصياغة مقترح لمركز بيانات وطني بمعايير الاتصال ، بالإضافة إلى عدد من مشاريع القوانين ، ولكن بسبب غياب المجلس التشريعي ، لم يتم تنفيذها بعد. ويعتبر ضعف القيادات وعدم وجود أنظمة ومعايير حديثة لهذه القضايا من أخطر المشاكل بين المؤسسات مما ينتج عنه ضعف المخرجات وعدم رضى المواطنين عن الخدمة وتفضيلهم العودة إلى الورق والقلم. التغيير أمر بالغ الأهمية ـ إدارة التغيير أمر بالغ الأهمية ـ لأن القيادة الليبية ، وكذلك الإدارة ، بما في ذلك التخطيط والمتابعة والوظائف الأخرى ، هي مشكلة خطيرة تستلزم توظيف سياسيين لإدارة البلاد. يجب تعديل العديد من القوانين ، فضلاً عن الاستقرار الحكومي والإصلاح .

Interview Code 19

تم إطلاق البرنامج في البداية كمبادرة من وزارة الاتصــالات في عام 2011 تحت اســـم "مبادرة ليبيا الإلكترونية". تبنى مجلس الوزراء المبادرة وأنشأ الإدارة العامة للخدمات الإلكترونية بقرار مجلس الوزراء (360-2012) لتكون مســـؤولة عن تطوير المبادرة إلى برنامج عملي وتنفيذي. تمت الموافقة على البرنامج باســم برنامج الخدمات الإلكترونية من قبل مجلس الوزراء بموجب القرار رقم (99 لســنة 2013). البرنامج تابع إداريًا لهيئة الاتصالات والمعلوماتية ، تحت إدارة الإدارة العامة للخدمات الإلكترونية. التعريف ببرنامج الخدمات الإلكترونية الاسم الرسمي لمبادرة ليبيا الإلكترونية. تم إنشاؤه من قبل مجلس الوزراء بموجب القرار (99 لســنة 2013) وتشــرف عليه لجنة عليا مشكلة من الوزراء وتديرها لجنة توجيهية من نواب الوزراء وأصحاب المصلحة ، بناءً على توصية من الإدارة العامة للخدمات الإلكترونية. بعد مناقشـات مع الشــركة. المسؤول عن تطوير الإستراتيجية التنفيذية للمبادرة. اللجنة العليا المســؤولة عن حوكمة برنامج الخدمات الإلكترونية: نائب رئيس الوزراء للشــؤون الفنية - وزير الاتصــالات والمعلوماتية - وزير المالية - وزير التخطيط - وزير العمل والتأهيل - وزير الاقتصــاد - وزير الحكم المحلي - وزير الداخلية - المنســق العام لمكتب دعم القرار بمجلس الوزراء. اللجنة التوجيهية لإدارة المشــاريع: وكيل وزارة الاتصــالات والمعلوماتية - وكيل وزارة العمل والتأهيل - منســق الحكومة الإلكترونية في مكتب دعم القرار بمجلس الوزراء - مدير الإدارة العامة للخدمات الإلكترونية. - ممثل مجلس التنمية الاقتصــادية - ممثل الهيئة العامة للمعلومات. مراحل تنفيذ برنامج الخدمات الإلكترونية: تعاقدت وزارة الاتصــالات والمعلوماتية مع شــركة PwC PricewaterhouseCoopers، وهي شركة استشارية عالمية ، ووضعت خطة استراتيجية لتنفيذ البرنامج بتكلفة تقارب 3.5 مليون دولار. بدأ مشــروع تطوير اســتراتيجية برنامج الخدمات الإلكترونية في منتصــف عام 2013 وانتهى عمليا في منتصف عام 2014. وافقت اللجنة العليا للبرنامج على مخرجات مشروع تطوير الاستراتيجية في اجتماعها الأخير في 23 يوليو 2014. ويهدف برنامج ليبيا الإلكترونية إلى: تحســين وتســهيل وتوطيد العلاقة بين المواطن والمؤســسات الحكومية - زيادة الشفافية والحد من الفساد. - تفعيل اللامركزية في تقديم الخدمات - تقليل البيروقراطية والتعقيد في الإجراءات الحكومية - المســاهمة في تطوير القطاع الخاص في مجالات الاتصالات وتكنولوجيا المعلومات وتعزيز الاقتصــاد - الاستفادة القصوى من الاستثمارات الحكومية في مشــاريع تكنولوجيا المعلومات من خلال تقديم أنظمة مشترك بدلاً من تطبيقها في كل جهة حكومية - التركيز على تقديم خدمات الحكومة الإلكترونية بغض النظر عن مقدم الخدمة - زيادة كفاءة وإنتاجية موظفي الحكومة. دور برنامج ليبيا الإلكترونية في دعم المســتفيدين وأصــحاب المصلحة: تســهيل التواصل بين المواطنين والجهات الحكومية - إنشــاء مراكز لتقديم الخدمات قريبة من المواطن - تفعيل قنوات الاتصال المختلفة وإطلاع المواطنين على المستجدات - توفير المعلومات اللازمة لقطاع الأعمال بطريقة ســهلة وفعالة - المســاهمة في تطوير القطاع الخاص من خلال المشــاركة في تنفيذ المشــاريع - توفير بنية تحتية مشــتركة وآمنة - توفير قاعدة بيانات وطنية - توفير نظام لإدارة الموارد الحكومية - توفير نظام للمراســلات الإلكترونية - توفير البنية التحتية - التكنولوجيا الآمنة - تطوير وتحســين الخدمات المقدمة للمســتفيدين - تطوير قدرات موظفي الحكومة الذين يقدمون الخدمات - رفع مؤشــر الأمم المتحدة لجاهزية الحكومة الإلكترونية - إطلاق مشاريع جديدة تســاهم في تنمية الاقتصــاد. الغرض من المشــروع هو تطوير اســتراتيجية تنفيذ للبرنامج بناءً على أفضل الممارسات الدولية وأحدث التقنيات.

بدأ العمل في تطوير الاستراتيجية في مايو 2013 بالتعاون مع استشاري PwC. برنامج الخدمات الإلكترونية هو برنامج وطني يســـعى إلى تطبيق الحكومة الإلكترونية في ليبيا ولديه اســتراتيجية تنفيذية لتحقيق ذلك. دور الإدارة العامة للخدمات الإلكترونية في دعم تحول المعاملات الإلكترونية داخل الهيئة. بادرت الإدارة بجعل التعاملات الإلكترونية وتقديم الخدمات جزءاً من مفهوم عملها. كما نظمت بعض الدورات التدريبية الداخلية في رغبتها في بناء قدرات فريق عملها وفق الإمكانات المتاحة. تقديم الدعم الفني والاستراتيجي والمشورة لعدد من الجهات الحكومية. أهم التحديات: عدم انعقاد اللجنة العليا واللجنة التوجيهية للبرنامج (الاجتماع الأخير في 23 يوليو 2014) - الحوكمة: تداخل المهام والاختصــاصــات الوظيفية مع الجهات الحكومية الأخرى - غياب الدعم الحكومي للبرنامج منذ 2014 - نقص الميزانية والموارد اللازمة.

Interview Code 20

القطاع العام كارثة ، لا سيما من حيث الإجراءات والموارد البشرية. يمكن تقسيم قطاع الحكومة الليبية إلى قسمين:
قطاع متطور للغاية يشمل صناعات النفط والمصارف ، وقطاع اتصالات كان يدمج تكنولوجيا المعلومات لفترة طويلة
من خلال شركاء أجانب منذ أواخر السبعينيات ولديه مجموعة متنوعة من الخدمات الجيدة بشكل خاص. التطبيقات.
يُنظر إلى باقي القطاع الحكومي على أنه يفتقر إلى توطين تقنية المعلومات ، حيث يتم استخدامه فقط للتحرير ومعالجة
النصوص والأرشفة. بسبب الإجراءات المصرفية ، فإن جميع المؤسسات الحكومية لديها نظام الرواتب. بالإضافة
إلى ذلك ، تستخدم المفوضية العليا للانتخابات تكنولوجيا المعلومات في جميع جوانب عملياتها. يعد الافتقار إلى
التشريعات التي تحكم المعاملات الرقمية ، فضلاً عن الميزانيات المحدودة ، عائقين أمام التحول الرقمي. هناك العديد
من التدابير التي يمكن اتخاذها لمعالجة التحول الرقمي ، لكن الوضع الحالي غير كاف. كما يعيق التحول الرقمي
نقص السياسات والاستراتيجيات. تضمن مركز المواصفات الليبي بعض السياسات المتعلقة باستخدام التكنولوجيا قبل
عام 2011. وقد تم تطوير ما يقرب من 300 معيار ISO ، وتعتبر جميع هذه المعايير تطبيقًا إلزاميًا في الإطار
الحكومي ، وفقًا للقانون. لسوء الحظ ، كانت الحكومات ولا تزال غير مهتمة ؛ التحول الرقمي ليس أولوية ؛ البلد لديه
احتياجات أساسية أخرى ؛ دمرت الحرب الأهلية البنية التحتية. ولا يمكن للحكومة تبرير الإنفاق على التحول الرقمي
عندما تفشل في تلبية الاحتياجات الأخرى للمواطنين. خاصة في ظل عدم رؤية مجلس الوزراء. قبل عام 2011 ،
كانت النتائج أفضل وأكثر دقة من مخرجات مشروع برايس ووترهاوس كوبرز. ومن المعوقات عقلية الموظف
الحكومي وعدم الاهتمام بالصالح العام والمال العام. يعد الافتقار إلى إطار قانوني للتحول الرقمي ، فضلاً عن الافتقار
إلى الإرادة السياسية للتحول الرقمي ، قضية رئيسية. يمكنك الاعتماد على القطاع الخاص للمساعدة في التحول
الرقمي. لا تعتبر التكنولوجيا عاملا في تمكين العمل الحكومي في القطاع العام. اعتاد الموظفون على إفساد التكنولوجيا
لأنهم اعتبروها خصمًا لهم ، لكن الأمر لم يعد كذلك ، خاصة بالنظر إلى الاعتماد الكبير للعمل عليها. بالتوازي مع
المهام المتضاربة لهذه المؤسسات ، فإن عدم وجود دليل إجرائي للمؤسسات الحكومية يمثل مشكلة. إن الافتقار إلى
الأمن والإفلات من العقاب وانتشار الفساد كلها عوامل تعيق التحول الرقمي. بالنسبة للمؤسسات الحكومية ، لا يوجد
دليل إجرائي ، وتعتبر لائحة العقود الإدارية إحدى معوقات التحول الرقمي. لا يمكن دفع قيمة لاحتياجات التكنولوجيا
على أقساط والالتزام بشروط الدفع الخاصة بلائحة العقود الإدارية. أي تقدم تقني ، مثل الوصول السهل إلى المعلومات
على الإنترنت ، يجعل الناس سعداء. إذا توفرت بيئة الحضانة والتمويل المناسب ، فإن الكفاءات موجودة. التعليم
متأخر عن التكنولوجيا ، ويقتصر الاستخدام الحالي لمعظم المواطنين على وسائل التواصل الاجتماعي. في ليبيا ،
هناك فجوة كبيرة بين الأجيال عندما يتعلق الأمر باستخدام التكنولوجيا. في هذا الصدد ، يلعب المجتمع المدني دورًا
مهمًا في تطوير وتقديم المقترحات وكذلك تثقيف المواطنين.

Interview Code 21

إن قطاع الحكومة الليبية متأخر عن العصر مقارنة بدول مماثلة حول العالم ، ومشكلتنا نقص الموارد البشرية. على الرغم من أن قطاع الاتصـــالات والنهر الصـــناعي والنفط من القطاعـات المتقدمة تكنولوجياً بفضـــل الاستشـــاريين والشركاء الأجانب ، فإن علاقة باقي مؤسسات القطاع الحكومي بالتكنولوجيا محدودة ومقتصرة على استخدام برامج تحرير النصـــوص. يعكس وجود جهاز كمبيوتر في المكتب مســـتوى اجتماعيًا عاليًا لأن الكثير من الناس يعتبرونه جزءًا من الأثاث. لا توجد قاعدة بيانات موحدة في ليبيا ، والمؤسـسـات الحسـاسـة مثل وزارة الداخلية والدفاع تفتقر إلى أنظمة معلومات متكاملة لتلبية احتياجاتها. ونتيجة لذلك ، تعتبر جميع المشاريع الحكومية الرقمية جزرًا منفصلة عن بعضها البعض ولا تتواصل مع بعضها البعض ؛ كل مشروع يبدأ من البداية. يرجع قلة وعينا بالعيوب والمشاكل المتعلقة بالتحول الرقمي إلى فشـلنا في بدء رحلتنا الحقيقية في التحول الرقمي لأن الكثيرين يعارضـون اسـتخدام التكنولوجيا لأنها تحارب الفسـاد وتحد من الاحتيال ، ولكن المشـكلة الأخرى هي أن الوكالات التنفيذية والحكومة ومن يرأسـها متخلفون من الناحية التكنولوجية ونادرًا ما يهتمون بقضايا التحول الرقمي. يصبح الجانب التشريعي للعملية حلاً للمشـاكل التي تنشـأ على الأرض. تقتصـر التكنولوجيا اليوم على الأجهزة الطرفية ، حيث لا يوجد عمل مؤسسي أو بنية تحتية أو بيانات وطنية محدثة ، وكل ما يتم القيام به هو نتيجة جهود وأحكام شخصية ، حيث جعل الانقسام السياسي تنفيذ الحكومة انتقائيًا لدرجة أن المبادئ مثل حيث أن تضارب المصالح ليس مهما بالنسبة لها ، وفي هذا الشـأن يحاول ديوان المحاسـبة فرض بعض القيود والشـروط ولكن بشـكل ضـعيف ، حيث أن العملية الحكومية برمتها تقوم على الجهود والأحكام الشخصية ، وكل ما يتم فعله هو النتيجة. من الجهود الشخصية. في ليبيا ، يمتلك القطاع الخاص القدرة على تنفيذ التحول الرقمي. تأسـس مركز تكنولوجيا المعلومات قبل عام 2007 ، ويعتبر من أهم الانتصـارات السـريعة في مجال الرقمنة ، حيث بدأ بناء قاعدة بيانات المواطنين والمشاريع التكميلية اللاحقة. في عام 2012 ، تم توزيع منحة على الأسر الليبية باستخدام نظام ورقي ، بمعدل خطأ يقدر بـــ 10٪ من إجمالي قيمة المنحة. كانت هذه النسـبة كافية لإرسـاء أسـاس متين للتحول الرقمي في ليبيا. بشـكل عام ، قد يكون النجـاح محدودًا بعد عام 2011 وغير مرئي على المسـتوى الحكومي ، لكن المواطنين أصـبحوا أكثر اهتمامًا واستخدامًا للتكنولوجيا ، ويُنظر إليها الآن على أنها أداة للضغط على الحكومة لتسريع عملية التحول الرقمي . علاوة على ذلك ، يتمتع المواطنون بقبول كبير للخدمات الإلكترونية وفرصـة كبيرة للاسـتفادة من جائحة كورونا ؛ يتمتع الأشـخاص بقدرة عالية على التعلم ، وعندما تصـلهم الاسـتفادة من هذه الخدمات ، فإنهم سـيثقون بها كطريقة للعمل والتعامل ، وهم على ثقة من أن التكنولوجيا ستضـمن حقهم وراحتهم ؛ ومع ذلك ، مشـكلتنا هي أن مشكلتنا هي أن مشـكلتنا هي أن مشكلتنا هي أن مشكلتنا هي أن مشكلتنا هي أن مشكلتنا تكمن في أنها متجذرة في عقليات الحكومة ، وكذلك نقاط ضـعف الإدارة والموظفين. على سـبيل المثال ، نجد أن القطاع الخاص يفضـل المنافسة ومواكبة آخر التطورات من خلال متابعة بعضنا البعض. ونتيجة لذلك ، نكتشف أن ليبيا لديها عقلية تنافسية يمكن اسـتخدامها لتعزيز التحول الرقمي. المسـألة تتعلق فقط بموظفي الحكومة واعتقادهم أنها أموال الدولة وبالتالي فهي غير مهمة ، على عكس القطاع الخاص الذي يهتم أكثر بإدارة الموارد المالية. القوانين الحالية قادرة على إرساء أسـس التحول الرقمي ، لكن الأشـكال الحقيقية موجودة في تطبيقها ، لذا فإن الحل هو النظر إلى تجارب الدول الأخرى ووضـع اسـتراتيجية تأخذ في الاعتبار عدة عوامل ، مثل الاسـتقرار السـياسـي ، الإرادة والإدارة الناجحة ، وفرض التحول من قبل الإدارات العليا. القوانين الجديدة المتعلقة بالمعاملات الإلكترونية والجرائم الإلكترونية ليست سـوى البدايـة ، ونـأمـل أن نحصـــل على المزيد من التعليقـات من الخبراء في المسـتقبل حتى نتمكن من تحسينها .

Interview Code 22

ليبيا أرض الاحتمالات الضـائعة ، وكل العناصــر موجودة في مكانها. بدأنا المحول ببوابة ليبيا الإلكترونية ، والتي بدأت بتقديم إرشادات إجرائية للحكومة الليبية قبل أن تتوسع إلى بوابات الصحة والأعمال والتعليم وما إلى ذلك). من السـياسـات والنماذج المتسـقة ، وكذلك الأدلة الإجرائية ، كانت أكثر القضـايا إثارة للقلق في ذلك الوقت. المشـروع السـابق الذي يهدف إلى إنشـاء قاعدة بيانات للمواطنين الليبيين لاسـتخدامها لاحقاً في مختلف الخدمات ، بدأ بمعالجة بطاقة الهوية الإلكترونية ، تمت خوضه بشق الأنفس قبل عام 2011 ، والتجربة قبل عام 2011 أفضل من المشروع الحالي ، لأن المشروع السابق كان يهدف إلى إنشاء قاعدة بيانات للمواطنين الليبيين لاستخدامها لاحقًا في مختلف الخدمات ، بدءًا بتجهيز بطاقة الهوية الإلكترونية. في نظام مراقبة الجوازات ونظام الأحوال المدنية والملف الرقمي (الرقم الآلي) والمستندات الورقية ، كانت هناك آليات كبيرة لتصحيح البيانات بشكل منظم من خلال مقارنة البيانات مع قواعد البيانات المرجعية ، وأي خطأ في البيانات كان تصـحيحها بوصـول رب الأسـرة بعد اتخاذ إجراءات معينة على وجه الخصوص ، المشكلة الحالية. المواطن الليبي غير محدد الكترونيا. مشروع الرقم الوطني بعد 2011 لا علاقة له بالمشروع السابق. تم إنشاء المشروع الحالي كوسيلة لإتمام إصدار الجوازات في البداية ، وتعتمد البيانات فقط على نظام الأحوال المدنية ، مع عدم وجود آليات حقيقية للتحقق من البيانات ، مثل التقارير الدورية التي تحذر من وجود بيانات كاذبة. أعداد. وكل ذلك بسبب عدم وجود معرّف بيومتري. يعد عدم وجود خطة طريق واستراتيجية حكومية للتحول الرقمي قضية رئيسية ، حيث تقع على عاتقهم مسؤولية توضيح تخصصـات جميع المؤسسـات الحكومية. استخدام التكنولوجيا في ليبيا متفاوت للغاية. قطاع الاتصالات ممتاز لكن الباقي ليس كذلك. سبب هذا الضـعف هو نقص الميزانيات المخصـصـة للتكنولوجيا في السـنوات السـابقة. وبالطبع ، ينبع نقص الموارد البشـرية من نقص الأدلة الإجرائية والعشـوائية في العمل وغياب مفهوم العمل المؤسسي. صـحيح أن ليبيا لديها تقييم معقول للاتصالات ، لكن نقص التكامل والاستراتيجية في العمل الحكومي نحو التحول الرقمي هو القضية ، وفي كل مرة تأتي حكومة جديدة وتَعِد الناس بأنها سـتعمل على التحول الرقمي وإصـلاح الحكومة ، يذوب في مشاكل الدولة اليومية والسياسية. نظرًا لعدم وجود آلية للتكنولوجيا ، لا يمكن إجراء بعض العناصـر ، مثل ترخيص البرامج ، في مناقصة عامة ويتم تقديم أكثر من عرض واحد حصريًا من جانب واحد ، فهناك حاجة لتغيير سياسات شراء البرامج. عند مقارنة عدد الخبراء بعدد المؤسسات الحكومية ، فمن غير المنطقي أن تمتلك جميع المؤسسات الحكومية كفاءات خاصة بالتكنولوجيا. لا يوجد تكامل ، ولا مركز بيانات حكومي ، ولا عمل حكومي مركزي ، ولا عمل حكومي مركزي يساعد على استقطاب وتطوير الخبرات الجيدة وتقديم جهود وأموال كبيرة للحكومة ، لأنه من غير المنطقي أن تمتلك جميع المؤسسات الحكومية التكنولوجيا- كفاءات محددة. الأمن السيبراني هو قضية خطيرة لا تحظى بـاهتمـام كبير في الوقت الحالي. لا يوجد إطار قـانوني ولا أمن أو حمـاية إلكترونية للمسـتخدمين ولا معاملات إلكترونية. ويظهر البيان الأخير الذي نشره مجلس النواب عدم وجود تنسيق وتكامل في المؤسسات الليبية. للهيئة العامة للمعلومات قاعدة بيانات وطنية تربط الاتصـالات بجوازات السفر وصـورة لكل مواطن ، لكن لا صـلة لها بالحالة المدنية. هذه المسـألة تتطلب إرادة وفرضا من الجهات العليا ، حيث ترفض بعض الإدارات والمؤسسات التعاون. منح قرار مجلس الوزراء رقم 2018-2 للهيئة العامة للمعلومات صـلاحيات إدارية على قواعد البيانات. مبادرة ليبيا الإلكترونية هي مشـروع يهدف إلى تحسـين حياة الليبيين ، وكان آخر اجتماع لها في 2014-6 ، ولم تبد الوزارات أي اهتمام بالمتابعة ، على الرغم من حقيقة أن الاجتماع أسـفر عن العديد من النتائج الرئيسـية التي خرج منها الجميع قد تسـتفيد. ومع ذلك ، في ظل عدم الاسـتقرار السـياسـي والتشـرذم الحكومي ، ما مدى جدوى تطوير تحول رقمي حكومي متكامل؟ من الممكن التركيز على المشـاريع الصـغيرة لجعلها أكثر اسـتدامة. القطاع الخاص الليبي جيد جدًا في توريد المعدات. فيما يتعلق بالبرمجيات ، لا توجد مؤسسـات مهمة يمكن الوثوق بها ، ولا يوجد استثمار حقيقي في هذا المجال ، وكلها تعتمد على العقود الحكومية وستتأثر بإنهائها. فيما يتعلق بالتعليم ، فإن النتائج معقولة إلى حد ما. إذا أتيحت الفرصـة ، فهناك مؤسسـات وشباب لديهم إمكانات كبيرة. التعليم الآن ليس كما كان في الماضي ، وهناك بدائل. الشيء الرئيسي هو أن التعلم قد يكون أبسط وأسهل باستخدام الإنترنت. ليبيا أرض الفرص الضائعة. موضوع الحكومة الإلكترونية ليس جديدا على ليبيا أو بقية العالم. كانت الميزانيات موجودة ، لكن المشكلة كانت في الافتقار إلى الرغبة والإدارة والاستقرار السياسي .

Interview Code 23

لا يوجد قطـاع عام في ليبيا. يصــل معظم الموظفين في الوقت المحدد ولكنهم غير منتجين ؛ وفقًا لتقرير ديوان المحاسبة من العام الماضي ، بلغت إنتاجية الموظفين 15 دقيقة يوميًا ، وأعتقد أنها أقل. تُتخذ غالبية قرارات الحكومة على الفور استجابةً للضغوط السياسية أو العامة. الحكومات هي حكومات ردود فعل وليست أفعالاً ، وغالبية ردود الفعل هذه لم يتم التحقيق فيها. الضــغوط العامة والسـياسـية أهم من البحث والآراء التكنوقراطية ، والحفاظ على القانون ، ومكافحة الفسـاد ، والمحسـوبية التفضيلية لبعض الأشـخاص على الآخرين. لا يوجد رقمنة في القطاع الحكومي ، وما يوجد الآن هو مجرد مساعي شخصية مدفوعة بدوافع سياسية ، ونزاع سياسي متأصل في كل شيء ، حتى جهود الرقمنة الحكومية. للأسـف ، لا توجد معايير ، ولا يوجد أي فهم لأهمية هذه القواعد في المقام الأول. تفتقر بعض المؤسـسـات إلى الخدمات الأساسـية مثل مراكز اسـترجاع البيانات. لا توجد اسـتراتيجية لإعداد البنية التحتية ، ويتم التعامل مع العديد من عمليات إعداد البنية التحتية للمؤسـسـات الحكومية من قبل إدارة إعداد المباني. يفتقر هذا القسم إلى المهنيين ، ويقوم بالشراء على أسـاس سـعر أقل بدلاً من فحص الاحتياجات الفعلية. إن المفاخرة وإطلاق المشاريع أمر حيوي في الخدمات الإلكترونية ، لكن لا يوجد متابعة أو اهتمام بالمتابعة. بشكل أسـاسـي ، يتم توظيف هذه الخدمات لتحقيق انتصارات سياسية سريعة. على الرغم من استخدام التكنولوجيا ، إلا أنه من المستحيل تحديد ما إذا كانت تُسـتخدم في القطاع الحكومي. نظرًا لأن القيادة العليا ليسـت على دراية بأهمية التكنولوجيا أو تفاصيلها ، فإن الجميع يشاركون بشكل عشوائي في عملية الرقمنة دون إعطاء الخبز للخبز. في السنوات الأخيرة ، كانت قصص النجاح في التحول الرقمي والرقمنة نادرة. بالمقارنة مع المخططات الأخرى ، يعتبر صـندوق تيسـير الزواج ومنحة جواز السفر الأخيرة من قصص النجاح النسبية. لمنح المتزوجين حديثًا ، تم رقمنة أكثر من 80٪ من إجراءات العمل ؛ يتم التحقق من صحة البيانات بشكل تلقائي ومباشر مع السلطات المختصـة في السجل المدني عند تقديمها. أسـس هذا النظام مفهوم تسـجيل حالة المعاملة ، والذي كان شـبه معدوم في الجهود الليبية السـابقة ، وهي المرة الأولى التي يقترب فيها هذا النظام من التنفيذ.

لسـوء الحظ ، لم يكن هناك دليل إجرائي واضـح أثناء تطوير هذا المشـروع وغيره ، وكلها لا تزال في المراحل التجريبية. يعد الفساد وانعدام الاتصال بالمتخصصين من الأسباب الرئيسية لفشل الحكومة في تقديم الخدمات. عادةً ما يقوم غير المتخصصين بإجراء عمليات شراء دون تقييم متطلبات أو خصوصيات عمليات الاستحواذ على النظام الرقمي أولاً. لم أر أي تردد في اسـتخدام التكنولوجيا في القطاع الحكومي أو بين الموظفين. يدرك الجميع أنها أداة لجعل الحياة أسـهل وزيادة الإنتاجية. تمت زيادة الإنتاجية من 600 معاملة تقريبًا في يوم العمل إلى 6000 معاملة لكل يوم عمل في مشروع صندوق تسهيل الزواج ، على سبيل المثال. كان الموظفون في البداية سعداء. بسبب نقص المهنيين والقيود الخاصـة ، أصبحت طرق الشراء مشكلة ، وتركز الحكومة على تحقيق الأهداف السياسية بدلاً من خدمة المواطنين. يفتقر القطاع الحكومي لقدرات الموارد البشرية ولا يدرك أي كادر أسـباب تنفيذ التحول الرقمي في المقام الأول. يعمل معظم موظفي تكنولوجيا المعلومات على أساس عشوائي ، دون أي اعتبار للسياسات أو المعايير. لا يجد معظم الخريجين الجدد خبيرًا لمساعدتهم وشرح العمل لهم عند التحاقهم بمؤسـسـة حكومية للعمل ، لذلك فهم يعملون على أساس عشوائي. لا توجد خطط تدريب حقيقية لموظفي القطاع العام ، لكنها كلها أنشطة أساسية بسيطة لا تقدم أي نتائج ملموسة وتغطي موضوعات تعتبر قديمة. كفاءاتنا هي نتيجة حماسـهم ، وليس مخرجاتهم التعليمية. من حيث التكنولوجيا ، مخرجات التعليم الليبي لا تلبي متطلبات السـوق وهي بعيدة عن بقية العالم. يعتبر عدم تنفيذ قارات الحكومة بتجزئة قاعدة بيانات السـجل المدني ، حيث جاء قرار الحكومة بأن قاعدة البيانات في الهيئة العامة للمعلومات وإدارتها في السـجل المدني ، مشكلة كبيرة. وللأسف فإن القاعدة موجودة حاليا في السجل المدني الذي يفتقر إلى الخبرة التكنولوجية لإدارتها مما يتسبب في تعقيدات وصعوبة الارتباط به. المواجهات بين المؤسسات هي في الغالب مدفوعة بالرغبة في احتكار الخدمة وفرض السـلطة لتحسـين المواقف التفاوضـية ، وهي مرتبطة بالميزانية. إذا تم إجراء تدقيق للبيانات ، فمن الممكن أن تظهر قاعدة البيانات بشـكل خاطئ عندما يتم تسـليمها إلى أطراف أخرى.

لا توجد قوانين تدعم التغيير الرقمي. القوانين الحـالية ، من ناحية أخرى ، تعرقل ؛ المعاملات الإلكترونية غير مسـموح بها قانونًا ، ويجب إجراء جميع المعاملات الإلكترونية جنبًا إلى جنب مع المعاملات الورقية حتى تكون قانونية. وبدأت الحكومة مؤخراً في تقديم خدمات إلكترونية ، مثل منح للزوج والأبناء ، وحجوزات لمواد حكومية

مثل الأسمنت ، وإمكانية الحصول على شهادة الحالة الجنائية إلكترونياً. بدأ فهم الجمهور لكيفية استخدام التكنولوجيا في النمو. يتم استقبال أي خدمات جديدة بشكل جيد من قبل المواطنين ، ولكن لا يثق المواطنون في الخدمات الإلكترونية الحكومية. هذه هي نتيجة إخفاقات سابقة ، لا سيما تجربة الليبيين مع القطاع المصرفي ، مما يجعل الناس يعكسون تجاربهم المصرفية الرهيبة في أي خدمة إلكترونية حكومية. بشكل عام ، وجود القطاع الخاص كمقدم للخدمات التقنية محدود ، وخبرته محدودة. خدماتها مقصورة على الحكومة. كما أنها بعيدة عن التكنولوجيا الحديثة ، وتتعلم وهي تتماشى مع مبادراتها. جميع عمليات تطوير المشاريع التكنولوجية في ليبيا مرتجلة ؛ ليست هناك حاجة للتحليل أو المواصفات الدقيقة. ويرجع ذلك إلى الإلحاح ونقص المعرفة بالإجراء القياسي ؛ يستغرق العمل المعياري وقتًا ، وهو ما يتعارض مع الأهداف السياسية لأصحاب المصلحة في الحكومة. صناع القرار ليسوا على دراية بالمتطلبات والأساليب في الوقت الفعلي المطلوبة لبناء مشروع سليم ، واهتمامهم الوحيد بالتحول الرقمي ينبع من الدوافع السياسية. يعد التعليم والموارد البشرية من أكثر القضايا إلحاحًا ، كما هي عقلية الموظف الليبي ، التي تقوم على اقتصاد الدولة الريعي ، حيث تعطي الحكومة كل شيء. قضية أخرى هي التفاوت في الأجور بين موظفي التكنولوجيا وموظفي القطاع العام الآخرين ؛ هذه المشكلة ، إلى جانب الأجور المنخفضة ، تدفع المواهب إلى القطاع الخاص والابتعاد عن القطاع العام. في الوقت الحالي ، من المفترض أن نركز على البنية التحتية والموارد البشرية ، فضلاً عن ضرورة إنشاء بنية تحتية موحدة ومركزية وقاعدة بيانات حكومية ، حيث إنه من غير المنطقي أن تنشئ كل مؤسسة قاعدة بيانات تكلف ملايين الدولارات لتشغيلها. مبادرات متواضعة. يعد الفشل في البناء على الجهود والخطط السابقة مشكلة كبيرة. تريد كل إدارة جديدة أن تنسب إنجازها لنفسها ، مما يجبرها على البدء من جديد في كل مرة.

Interview Code 01 Translated to English

Government services are very modest, and the government sector can be described as a sector that lacks a vision of digital transformation. As for digital services, all services are not based on plans. Rather, they are spur-of-the-moment services that cause a lot of corruption, and their purpose is not with a clear purpose; they are just random services that provide and disappear. And speaking of citizens, the citizen is relatively happy, as he can easily obtain the information he needs now "online", but the pace of development is very slow. I opened a company in the United States of America in just one week, and I did not encounter any problems. In Libya, either you resort to For bribery or for it to take a very long time, and here we find the huge difference, and an example of the slow pace and loss of time in Libya, the information technology sector is still working on the same projects, proposals, and initiatives tirelessly, repeatedly, and continuously.

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya. Infrastructure. It is wrong to talk about poor infrastructure in 2023, especially in places where the government is present. All of them have strong connectivity and almost free cloud services. Government agencies that talk about infrastructure It uses it as an argument only, the private sector precedes the public sector in this regard and has achieved progress that government agencies have not provided by using capabilities and budgets. The private sector has a clear vision, so the answer to your question is that the infrastructure is sufficient to transform institutions digitally.

Regarding the level of knowledge of information and communication technology among public sector employees and citizens, my personal view is that the citizen, as long as he is able to use social networking sites such as Facebook and Instagram, can deal with the digital environment. The important thing in providing digital services is the balance between forcing the citizen to use these services and at the same time being Indeed, it makes his life easier for him and reduces his trips to the simplest things, even if it is knowing the result of the student's high school diploma. An example of this is the citizens' response to the digital services provided by the telecom companies, such as how to subscribe, the types of packages, etc. And I see that the citizen is as long as he can deal with Facebook, so government services It requires much less knowledge, as it is specific and easy, but Facebook is very complex and has many more complex details.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, we have cadres and capabilities. Yes, there are local capabilities and joint capabilities locally and internationally with regard to the software side. Hardware has no problems at all and is considered advanced in Libya, but with regard to

software, even if external cadres are used, this aspect must be developed locally because there are always different problems in every country and it will not be able to deal with them externally, no matter how specific Libya's problems are, but there will always be problems in every country. It is a country that is unique from others, and the private sector must be stimulated and given confidence to work on technical projects. Now the largest customer for the private sector is the public sector because of the complexities that public sector employees face. Working in the private sector is easier and faster, unlike the public sector.

Concerning the successful technological solution, far from the services of the banking sector, the services of social affairs, "the grant for the wife and children," but they are individual experiences, I do not mention a complete experience of providing something from A to Z online.

Regarding the description of the role of leadership and administration in promoting the adoption of e-government in Libya, you will almost not find any ministry in Libya that does not talk about its desire to provide digital initiatives and services, but in terms of work and implementation you will not find anything real, as all of them lack vision, there is no clear vision, They launch random initiatives that are not based on the past and cannot be built upon in the future. Each director who comes does not look at the work of the one that preceded him. Thus, large budgets are spent on these initiatives, but to no avail, because the problem in Libya is not technical but administrative, and corruption has a major role in this matter, so budgets are spent Huge and bulky for temporary projects.

Regarding the assessment of the readiness of government agencies in Libya to adopt e-government initiatives, there is no one who manages technology in these institutions, even if they provide high technical capabilities, there is no one to manage them, and in the event that you find someone to manage them, then everything stops, the capacity of our team will not be able to operate Giant projects, so I don't see any resources and it's not about money at all.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, I do not see the political situation as a major obstacle. It is a relative obstacle when talking about projects that were halted because of the war or were incomplete because they were not implemented in conflict areas, but there is a lot of arguments on this subject. And public companies are not affected by the political situation because their budgets are spent in all cases. Some entities can work, especially those that offer "long-term" strategic projects, but there are projects that have been suspended for reasons that I think are political, such as the Libyan electronic identity, and the obstacle, especially in the eastern part of the country, is the abundance of corruption.

There is, with all due respect, and there is confusion in the data for that project that has been suspended to this day.

Regarding the laws and legislation related to e-government in Libya, there are previous initiatives and attempts that have reached the point that regulations have been issued to recognize e-mail, but upon reaching the judiciary, I do not think that the judiciary will recognize anything except the law, and I do not think that the Libyan laws have been amended, as I think, and I have no knowledge In this aspect, we have a big gap in electronic laws even with regard to electronic crimes, so there is a legal delay with regard to the technical and digital aspect.

Concerning external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, I am aware of GIZ's work in the field of digital transformation in the field of municipal work, such as enabling the citizen to conduct his procedures outside Tripoli without the need to come to it "fighting decentralization" France also has an initiative, but it is not yet clear.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, Libya lacks the smallest electronic services, so it will benefit from the simplest electronic services and initiatives. Libya is still 100% paper, so we are lagging behind even the smallest Arab countries, so electronic services will save time and effort. And many other benefits even from an economic point of view.

Regarding the ease of access to the current e-government services in Libya, I see that access to these services is easy, and I am against those who claim that citizens face challenges in accessing or using technology. Libya is mostly young, and even the elderly, very few of them suffer from illiteracy. They do not face any difficulty in e-government services, but the idea is that there is no integrated e-service yet.

I object with those who claim that citizens face difficulty in using technology because if no 100% electronic service has been provided before, you will not be able to know how easy it is for citizens to access these services until they are provided.

Concerning the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, and citizens' trust in government services, in Tripoli and Benghazi, these mainly use technology. Management and employees are the ones who alienate people from technology, such as "the system is stopped" and most of the time the system is working Naturally, but to put people off purification in general and prefer paper transactions.

With regard to stakeholders, in every organization there are people who want to bring about change and advance something, but they cannot do anything other than work hard and with pure intent only.

In Libya there is money, cadres and all the capabilities, but there is no unified administration that covers these projects. There are existing initiatives such as the initiative of the General Authority for Information in carrying out the Libyan electronic identity project, and there are several attempts in several other parties, but they are sporadic and random projects and services without unified management.

Regarding the main motives and obstacles to implementing e-government in the state of Libya, the government does not have numbers, in order to fully see any country, you must have accurate information, and the electronic identity is not a random feature, it is a collection of information about a person in the light of which a great benefit can be obtained Very much, and enables you to verify the number of citizens and facilitates any electronic procedure for them. As for the obstacles, I do not see any real obstacles, but the absence of will is considered an obstacle, and also there is no unified, stable, and clear vision.

I believe that vision is a very important thing in achieving technical development, and stable management also helps clear planning without working in a cumulative manner.

Interview Code 02 Translated to English

Regarding the evaluation of the current situation of the information and communication technology infrastructure in Libya, the infrastructure from a technical point of view is considered reasonable, especially from our experience in the General Information Authority, in the last year when we started working on digital transformation. The issue is new in Libya, so we compared Libya with another country and found that The infrastructure is fairly good, and we can start the digital transformation in Libya.

For example, the national database of the General Information Authority, linked with several databases, albeit indirectly, it is linked with services such as the wife's grant, the children's grant, and the marriage fund. The problem lies in the leaders in the General Information Authority, especially with regard to the necessary budgets for digital transformation and infrastructure development Because development is necessary periodically while ensuring continuity, and this is what we lack in Libya, especially with regard to organizing priorities.

The matter is not limited to the General Authority for Information, it is an integral matter, as we need the solidarity of all institutions to work together to provide an appropriate technological environment for the provision of services.

With regard to the level of knowledge of information and communication technology among public sector employees and citizens, in some matters it was imposed on employees in terms of technology. Much of the technology we learned without the vision of its institutions, all of which are in line with the requirements of the times and the services provided. We are in the year 2023, a lot of knowledge is concerned with technology and the use of computers, we are supposed to have surpassed it for years, but unfortunately there are shortcomings in terms of the use of technology, especially the simple ones in terms of employees, but we at the General Information Authority are educating and training employees to keep pace with the requirements of the era.

For citizens, we are currently in the process of planning a national digital survey to measure national literacy at the national level. As for other institutions, they may find a lack of knowledge of technology in terms of leaders and employees, and this is part of the paths proposed for the national strategy for digital transformation to work on eradicating digital illiteracy.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, at the level of software at the government level, you find absurd in terms of software licenses, updating them, and the possibility of linking with other

institutions, which reflects the lack of interest of these institutions in technology, especially institutions with specialization rather than technology. In 2023, with the direction of the government of national unity with the General Information Authority, some important authorities were forced to link with the General Information Authority to modernize its infrastructure, but only and only the request and not within a national strategy.

Concerning successful technological solutions, for example, the wife and daughters grant, it is considered one of the successful services, especially as it is in partnership with the private sector. In the past, a similar service needed days. to complete the transactions, but today it is instant by SMS, by sending some data, where the role of the citizen is limited only to go to the municipality to receive the grant. Likewise, the elections for the Youth Parliament took place via SMS.

The success of these services was due to linking them to the base of the national number, the digital national identity of the citizen, and the presence of a quasi-digital identity for the citizen. Where we have linked up with 21 national institutions or ministries to provide services to citizens in various sectors.

In the year 2022, we worked on measuring the indicator of the maturity of electronic and mobile government services by the United Nations Economic and Social Commission for Western Asia to assess the digital transformation in the Arab world, as it was the first experiment to evaluate the state of Libya, and Libya's ranking was penultimate, due to our unfairness in self - assessment. Being a new experience, we also encountered problems with the non-cooperation of some of the targeted institutions in the measurement. Now we are working on improving the measurement for the year 2023.

Regarding the description of the role of leadership and management in promoting the adoption of e-government in Libya, the biggest challenge for reform and development is to convince the leaders within the institutions. Once the leadership is convinced, it facilitates the development and implementation of various projects. Convincing stakeholders and senior leaders help facilitate and support the adoption of digital transformation in sectors and middle management.

An example of leadership support. Due to the political division in the State of Libya and the absence of the legislative body and the necessary legislation to support digital transformation, the leadership of the new General Authority for Information took the initiative to cover the gap by issuing regulatory policies and preparing agreements between institutions different to frame the work. This matter is calculated for the leadership of the General Authority for Information. These include government data

policy, electronic transactions law, and cybercrime law. This is only within technology-related institutions.

But outside of technology-related institutions, it is It is more difficult and requires a lot of persuasion for leaders and the need for their belief in the benefit of technology to develop its services and facilitate the matter for citizens.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, only simple budgets, but the problems are large and that is due to the delay in budgets. In the General Authority for Information, 25 projects related to digital transformation for the year 2023 are suspended due to the delay in liquidating the necessary budgets. Especially we are at the beginning of the transition because we need to provide many human and technological resources.

Unfortunately, there are not enough human resources in Libya to meet the requirements of digital transformation, especially in the public sector, due to the weak financial returns. When measuring digital transformation and comparing it between the public and private sectors, you will find that the private sector is advanced to manage it good financial resources. One of the problems related to human resources is the leakage of employees to the private sector because of the incentives provided by the private sector. The government should treat technicians and those with delicate specializations in particular in terms of financial rewards to ensure their presence and continuity in the public sector.

Regarding assessing the readiness of government agencies in Libya to adopt e-government initiatives, the readiness is only psychological, the desire is there, but there are no real projects, especially in terms of training employees and preparing them for digital transformation. All current trainings are classic, non-specialized trainings that do not fit the requirements of digital transformation, not to mention that they are old and focus only on the technical side and do not pay attention to the behavioural side. In addition to the lack of self-knowledge and self-development of employees.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, we did not work seriously on digital transformation projects until 2022, after the political agreement and the national unity government. All these concepts were not a priority previously, especially with the absence of laws and legislation.

In the year 2022, the government issued several policies that push towards digital transformation, especially with political stability and its reflection on government institutions, and with continued stability, the situation will improve in the long term.

Regarding the laws and legislation related to e-government in Libya, the national strategy for digital transformation proposed by the General Information Authority with stakeholders, in addition to the government's push for digital transformation projects, which we see in the government's acceptance of projects that we initiate and cooperate with. In the strategy, you will find a proposal for missing legislation, which will be worked on in the coming years.

Among the current projects that we are currently working on is the X-Road project implemented in Estonia. We proposed this project for the interchange of government data in Libya, which is reinforced by the national strategy for digital transformation and data exchange policies.

Regarding external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, we have partnerships with the United Nations Economic and Social Commission for Western Asia, French experts, and the European Union's TAIEX Agency, in addition to several other United Nations agencies in Libya. The most important of these institutions is the United Nations Economic and Social Commission for Western Asia, with which we issued a national strategy proposal and several other policies. We also made educational visits to several leading countries in the field of digital transformation.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, it is necessary for the employee to be convinced of the benefits of digital transformation and to reflect this benefit directly on the employees. For example, we worked within the General Information Authority, for example, to work to develop a better experience for employees, and the beginning was by linking the existing systems and developing ERP system and we are currently working on adopting this system. Once the employee benefits from the digital transformation, this is reflected in his adoption of the digital transformation.

As for the citizen, the citizen is happy with the facilitation and availability of services in more than one way.

Currently, there are 84 e-government services, and they are provided in several ways to citizens, and citizens' comments and satisfaction on these services are followed up.

Regarding the ease of access to the current e-government services in Libya, the Internet is available in the main cities, some areas may suffer from access to the Internet, and in some cases, they are not aware of the possibility of accessing the service electronically, which prompts institutions to provide these services in a manner that keeps pace with the

standards of digital transformation and access for all. The citizen is a recipient and always hopes to provide these services.

Concerning the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, and the citizens' trust in government services, when the service starts from the citizen and ends with the citizen, he will trust it, before 2020, the citizen will never trust these services, but after the availability of services and his satisfaction with them His confidence in her increased. I do not think that social norms affect the adoption of these services by citizens.

Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, within the General Information Authority we have trainings that are in line with the proposal of the National Strategy for Digital Transformation, to include many trainings related to digital transformation, as well as specialized technical aspects, as well as in the field of specialized auditing for transformation digital. Legal and technological empowerment is important to ensure digital transformation.

Regarding initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, in coordination with a number of stakeholders, we have launched the government procurement platform and enabled it by the end of this year.

Regarding the intersection of competencies between the bodies in Libya, and as it relates to the digital transformation strategy, the representation of qualities within the National Committee for Digital Transformation is excellent, but the harmony between members of the committee with different backgrounds may cause a problem, and the success of the current committee is facilitated due to the quality of the current leaders, in the future if the people are changed In the future, it may cause problems. Therefore, the national strategy for digital transformation must be quickly adopted to ensure compatibility between institutions, especially with the absence of a national institution specialized in law in the field of digital transformation. Forms of intersection of competencies between the bodies in Libya, this is a classic matter and in most government institutions in Libya, unfortunately.

Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, the motives are many, the most important of which is keeping pace with the digital transformation in the world, since digital transformation is considered the easy possible, especially with the knowledge of the experiences of neighbouring countries. The most important motive currently is the government's political orientation, and its goal is

to gain the trust and trust of citizens for electoral reasons. Also, reality requires the adoption of electronic services.

As for the obstacles, it is the absence of complementarity between government institutions, the acquisition and ownership of data between institutions and the possibility of its circulation between institutions. In addition to the skills of employees, especially leaders, in the field of digital transformation, in addition The impact of political stability and its reflection on the stability of institutions. In addition to conflicting terms of reference and their intersection between stakeholders.

Interview Code 03 Translated to English

Regarding the evaluation of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, in general, the use of technology by the simple citizen is a natural use with many obstacles, which may be among the reasons that contribute to the significant obstruction of work and even affect the psychological factor, because there are many problems, including the difficulty of obtaining the network signal everywhere, as well as the power outage, which in turn contributes to the fluctuation of the service, and even in the presence of the network signal completely, I am afraid of practicing some activities such as "meeting or training . " remotely, which requires a good internet connection, for fear of any sudden outage. Thus, we find here that the problem lies in trusting the network and the infrastructure itself, and that it is considered one of the main obstacles that hinders the technology sector completely.

As for the use of technology in providing services and public administration, we find that the banking sector faces great challenges despite the presence of banks that have kept pace with development in this field and contributed to providing services and applications to citizens that meet the needs, but at the same time we find that there is a group of banks suffering from the interruption of services. As a result of the interruption of the Internet and the presence of problems in the infrastructure.

We also find that public services provided by the state and dealt with by citizens on a daily basis, such as the aforementioned banking services or services provided by municipalities such as civil papers and others, or with regard to tax and registration services, as well as services related to the educational system or health services, we find that the common factor that The lack of infrastructure hinders the provision of these services, as there is no integrated system that provides the provision of these services properly, and even in the presence of some digital systems in some entities, but these systems cannot provide services in an integrated manner, rather some of them are limited to the beginning of the process only. And by virtue of my experience and knowledge in this aspect, I know that they face a big problem, due to their lack of knowledge and knowledge of cybersecurity , and the lack of experience and knowledge in dealing with the installed infrastructure such as information archiving systems and data centres, and by virtue of my previous work with the General Information Authority, the Statistics and Census Authority, and other institutions, I found that some of them You do not have the infrastructure that meets the work of these institutions.

Hence, I think that the appropriate expression regarding the infrastructure is that it is collapsing and suffers from lack of organization, and even the institutions that have some

systems are only the result of personal initiatives by some individuals, without the presence of organized work by the state to go to electronic governance, and therefore the existence is nothing but a phrase Unregulated and integrated mutations and lack of proper infrastructure and government legislation.

With regard to the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, there are two aspects to delve into this topic:

social media with working in the private sector, which in turn shows us that we have had enough One of the human resources that needs to be developed, but it is not enough to start working.

Digital illiteracy among decision-makers and their lack of awareness of the importance of digital transformation. As for citizens, we find that according to estimates by the official authorities in the country, 30% to 40% of the general public have the ability and ability to use technology, so that the problem is in the older groups and their lack of technical awareness. This, in turn, can be remedied and addressed, so that the difficulty remains in recognizing and addressing the lack of awareness among decision-makers, and this is one of the biggest challenges we face.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, the idea of adopting the public sector as a basis for electronic services needs more than the technical aspect, but when looking at private sector institutions such as hospitals, factories, and some banks, they all use software for organizing human resources, procurement, and supply chains. The success stories achieved by the private sector can be easily reflected in the public sector. The public sector has the ability to benefit from the expertise and services of the private sector with its local or foreign competencies.

The main problem in the public sector is the administrative problem, and administrative complications, since the public system is distorted, which makes it impossible to adopt digital transformation strategies. Since the idea of traditional management and lack of adherence to the principles of new public administration, the public sector cannot implement these projects, due to weak human resources and competencies, with the absence of internal policies and procedures. In general, we in Libya have gone beyond the idea that the public sector can reform itself. This was confirmed by the reports of international consulting firms in 2007 and 2008 with the help of Michael Porter, Monitor Group, and Adam Smith and Mackenzie , where the tendency was to create a new supreme institution that would oversee reform in the public sector, hence the idea of

establishing an economic and social development council, and also the shapes that Public sector reform in Libya is linked to the reform of higher systems such as the legislative bodies. All this was in 2008, and today in the year 2023, the number of public sector employees has increased exponentially and institutions as well, which makes the reform process in general difficult and more complicated. For this, the public sector cannot reform itself, and for this it needs accompanying legislation, advisory bodies, and cooperation with the private sector, in addition to private sector bodies, to build the solid and software infrastructure.

Regarding the outsourcing process or not and its long-term effects , I am a supporter of the idea that each country usually has its own context, and it must evaluate itself in search of the most suitable for it, but in general, the services in their diversity, diversity and complexity are what govern the outsourcing , and in my point of view that The public sector cannot implement any of these programmes, especially due to the lack of human resources and the spread of corruption. As for projects that were previously in partnership with the private sector and failed, failure cannot be linked only to the weakness of the private sector, but certainly to other reasons, including poor procurement procedures, or the idea of designing the project itself , and many projects from the beginning are designed to fail or designed for financial corruption with weakness In the follow-up and the absence of sustainability, especially with the Libyan government contracting regulation, it is entirely in favour of the public sector.

In principle, the law does not differ with regard to technology supply operations and other classic supply operations. Unfortunately, policies and regulations do not keep pace with the developments of the times. It is funny that only two years ago, the use of e- mail was approved as a guide in government administrative transactions. Legislation in general is not technology-friendly, which prepares us to think that if the projects were well designed by the public sector, the private sector would be able to succeed in implementing them. For example, two years ago, the Government of National Unity signed a contract to launch a national data centre for the Libyan government under the supervision of the General Authority for Information. Unfortunately, a contract was signed with a company that does not have any experience in the field, and today, no part of this project has been implemented.

Regarding successful government innovations, I think that in different institutions, such as some public universities, they had some reasonable systems. Recently, I have had some contact with the Open University, which has a simple system. Perhaps if there is a specialized person to evaluate it, you will find many errors and problems in terms of cybersecurity. But I, as a user, find it easy and smooth to use and successful in providing

the required service. Currently, within my experience with the Libyan embassy in London, some of the systems provided by the government are good, such as inquiring about civil registry data and the national number system. Unfortunately, the use of paper is present in these systems, as it is not integrated.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, the leadership problem is a general problem, especially with the spread of corruption in the country, and this is considered one of the most important obstacles towards digital transformation, because the use of technology contributes to raising transparency, follow-up and accountability, which closes the doors of corruption for a number of these leaders. Nevertheless, there are some initiatives that are being worked on at the government level, such as the public bidding system led by the Government of National Unity and payment from the Audit Bureau. Launching such a platform means that leaders are aware of the importance of technology and the need to adopt these services. Also motivated by the Audit Bureau, work is currently underway on the medical supply system, as it is one of the biggest doors to corruption in the health sector.

Where medical equipment and medicines are imported with documentary credits amounting to billions, then they disappear, and you find no trace of them in health centres or hospitals. Here we find that the initiative was by the official oversight institution, represented by the Audit Bureau, and the government interacted with it.

In general, many projects, their success or failure is linked to the policies based on them, as they are usually based on three aspects, the policy side as an idea, the policy as the program, and the implementation of this policy, and each stage may be exposed to design problems, which affects the general output, accompanied by processes for tracking and review, and this It is considered one of the most important problems in digital transformation processes in the public sector in Libya.

In another experience, we find that its security institutions use technology to a large extent, for example the Public Prosecutor and the Ministry of Interior, although some of the systems that I worked on in my capacity as a consultant in the Ministry of Interior were not crowned with success, at that time we had two projects in implementation, the vehicle tracking system and the application of the Interior Gate The application was a complete failure in terms of the experience of the willing. As for the vehicle tracking system, it was good, but they stopped it after the change of leadership in the ministry.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, as long as the regulatory legislation

changes, and decision-makers from the current or future executive authority, as well as the legislative authority, do not understand the necessity of reforming the public sector in general, there will not be a holistic and integrated approach towards digital transformation or the use of Electronic governance.

Therefore, the matter will continue with the current situation and is only related to some booms related to internal initiatives , or resulting from the reason for a particular deal , and sometimes these initiatives succeed because of the presence of an international organization behind them that obliges the state to make some reforms, such as what happened in the security and justice sectors or the banking sectors, or sometimes Others are supported financially and technically by international bodies.

All of this will not help in general reform, due to the absence of the organizational foundations for public administration in Libya. After completing that, you can use the ideas of digital transformation, or you can work in parallel, or sometimes use electronic governance as a reform tool or the main direction of reform , for example Reforming Public Administration After reviewing the successor administration systems, such as the new public administration and the New Liberal State or electronic governance, it comes as an example of one of the public sector reform theories, trends, or types of administration.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, of course, financial resources exist, and this is the most important thing. Regarding human resources, there are enough of them as well regarding the capabilities of the private sector, which can complete partnerships with the public sector and international companies to complete this transformation. An example of this is the profits of the telecommunications sector that can cover all these projects, but unfortunately, they are used to finance projects that are not feasible. What we lack is the will and the decision.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, the current situation, the political situation is unstable, as the government feels threatened in its continuity and has a state of uncertainty about its future and therefore its priorities are currently cantered around the political side, without regard for the invisible long-term plans and it works more while enhancing its credibility.

It improves its image for the sake of elections, projects such as road projects or financial grants, and if the project is related to digital transformation, then it stands in the party of the launch and the media hype.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, yes.

Regarding the legal framework and regulations related to e-government in Libya, I cannot give a complete answer because sometimes the Libyan legislation dazzles you, but some studies that I have read indicate that the current legislation is full of defects and deficiencies, and as I said earlier, the idea of using e-mail in correspondence has not entered into force legally Except recently. Imagine that to send a correspondent to a Libyan embassy abroad, a diplomatic bag holder is used, the same applies to the electronic signature.

However, from my knowledge regarding the context of electronic governance, the legislative framework lacks many aspects, whether it is related to cyber security protection, user protection, service provider protection, and protection related to bids related to technical projects.

Regarding if there were any external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, such initiatives that I was part of was an initiative that the IOM ran with the Libyan Ministry of Labour, its beginning was in the year 2019, it was almost under the name of the Market information Libyan labour The project was the result of a study by Think Tanks International , and I believe it has entered into force.

The second initiatives, I am aware that part of the transformation initiatives adopted by the Central Bank of Libya from 2011 or 2010 was under international pressure related to the need to adopt an internal governance guide, and the same thing was related to the issue of classifying Libya in the Gray lists of money laundering and terrorist financing, I think that part of it was There are existing systems that have a relationship with old projects.

For example, in the security sector, when ISIS spread in Libya, some systems were put into effect under American pressure, and a checkpoint was added at Mitiga and Misrata airports, where these systems were provided by the US State Department in coordination with Interpol, and the same thing with the Ministry of Justice regarding international wanted persons and war crimes.

Also, when looking at the strategic plan of the Audit Bureau, you will find that it is generally a response and commitment to comply with these international pressures.

Regarding the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, the social base

affects the public administration as a whole, whether with regard to informal institutions such as tribes, social relations, or militias. In general, if there are binding services, most citizens use them. The only social impact here is that some people go to their relatives who work in these agencies traditionally to complete the transaction, and I think that this is the only transgression that may affect the digital transformation.

Regarding if there were specific groups or individuals within the government or society working as advocates for e-government initiatives in Libya, currently I think that the authority finally charged with the issue of digital transformation is the Telecom Holding Company and its strategy on the smart state, while the General Authority for Information is marginalized in one way or another.

Any initiative in Libya related to digital transformation or public administration reform that did not understand the idea of involving civil society and all stakeholders in an environment that has a lot of corruption like Libya will fail. Regarding the intersection of terms of reference between institutions Scientifically and technically, there are no real problems, especially with the large projects and the difficulty of putting them all under one institution. An example of this is the security aspect. It is natural for it to be in more than one institution, working in the same field, and its work intersects in different levels of the same field.

In Libya, the problem of duplication of institutions centres on the weakness of internal coordination and coordination between these institutions. Therefore, the large number of institutions concerned with one field without the existence of real coordination will create an obstacle in any project. Especially since the conflict between these institutions is not over the implementation of projects. Most of the problems lie in the conflict over the budget and a struggle over corruption and personal benefit.

Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, most of the successful trainings are provided by international.

organizations. Regarding if there are any initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, I only know about the strategy of the Telecom Holding Company in parallel with the government bidding portal project, and the supply chain system of medical supplies. Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, understand the obstacles: the political forms are the most important obstacles, in parallel with the absence of the legislative authority and a stable executive authority, which has the time and space

to take care of the real problems and work on reforming public administration and then digital transformation projects. In addition to the absence of will and decision makers.

As for the motives: including international compulsion, with the presence of human resources and competencies from civil society and the telecommunications sector, as well as popular pressure that often pushes towards digital transformation. Sometimes in a desire to look good in front of citizens.

Interview Code 04 Translated to English

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, this issue is divided into three axes. It is hardware, and this axis is an open market that you can import from abroad, but it only needs to pump money and budgets, and this is the obstacle, in my opinion, to the public sector in this matter. The third axis is the development of programs and systems, and this is what I see as some shortage in it despite the presence of cadres, but we lack ready companies To develop applications and provide services in this context.

Regarding the impact of the level of knowledge of information and communication technology among public sector employees and citizens on the adoption of e-government services, there is a big difference from five years ago to this day. Dealing with electronic services such as banking systems, as well as smart phones that are available to almost everyone opens the door to developing advanced service programs.

Regarding any specific technological innovations or solutions that have been particularly successful or challenging in the context of e-government in Libya, I have not yet seen applications available to the citizen such as booking appointments or renewing a license. Etc., we are still in the primary services such as delivery services, banking systems, and so on, but the health, transportation, and interior sectors... etc. We did not see any systems in them except for the payment mechanism systems, as for the low services according to my personal experiences such as obtaining a patent certificate and so on, it is their presence as well as their absence. They may exist, but they are very low, and I do not blame the Ministry of the Interior for that. The problem is with the internal cadres and their lack of experience and training. There are many other services that I hope will develop because we are too late and far away. Technology makes our lives easier and makes us abandon the principle of mediation, with regard to the use of technology in elections in The first round in 2012 in the National Congress elections there was no electronic technology, but when we learned from the experience of 2012 in the municipal elections in 2013, we used electronic registration via SMS. But then, in the years that followed, the development of the issue of electronic registration and the use of simple technology is considered the latest revolution, the effects of which are still present.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, this is the most important and very important issue. Having a long-term vision and getting to know the world where this will go is what we are missing in Libya. Those in power in Libya are not even aware of the service applications that they can provide. For citizens through technology, even the institutions that provided services

such as the Wings Aviation Company with regard to booking tickets, they activated the online ticket booking service, but the receipt is from Maitika Airport, but I consider it a good stage, because I believe in the implementation phase, but there must be a future vision As well as a political and technical will to implement these issues, with regard to governments and their interest in this issue, even the Government of National Accord, there was no interest in the issue, but now in the national unity government, we have noticed great interest in the issue, and there are development projects, such as the preparation of the new information law that was prepared by a committee that you were among, And under the leadership of this government, many institutions are thinking of automating many internal works, and this is a very good thing, so now we are witnessing a big change, and this matter is not related to the desire of the citizen, so he is not to blame for the technical delay, as this is the responsibility of the state, as the citizen will be very happy with the ease of his transactions electronically Evidence of citizens' ability to electronic financial banking transactions such as cards.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, yes, there is supposed to be a long-term strategic plan presented by the government and approved by Parliament and gives the green light to allocate a budget, to carry out research and development This issue, however, in technical Libya is in a chaotic, unorganized state and has not followed a specific plan since the era of the previous regime. There is a very pivotal issue, the issue of the national number, which has gone through a series of stages, but now Al-Madar and Libyana companies can communicate with the bank directly and take all the simple required information. Therefore, linking sectors is required, but it is an advanced stage.

With regard to the resources and support available to government agencies and employees to implement and use e-government services, the resources and support available to government agencies and employees to implement and use e-government services are generally available if appropriate legislation and political will exist.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, it evaluates the readiness of government agencies in Libya to adopt e-government initiatives. This government is better than any previous government in this matter, and there is work in the General Authority for Information and the General Authority for Communications, and there is full coordination between them, but the responsibility Now it is a sectoral responsibility. It needs a vision and strategy at the state level, but also at the level of the Central Bank, the Ministry of Communications, the Tax

Authority, the Customs Authority, and the Ministry of Finance only because its employees have become large in number, not for the purpose of providing services that they have somewhat digitally transformed. The government welcomes it, but there is an absence For the vision and the absence of objective goals for the ministers. Regarding the extent to which political stability or instability in Libya affects the adoption and implementation of e-government initiatives, yes, political and security stability is very important. Telecom companies' wires were stolen until cameras were installed, and this issue was eliminated, but progress is always important. In general, those who are now at the top of the institutions are much better in digital awareness than those who preceded them. Regarding the legal framework and regulations related to e-government in Libya. Are there any specific laws or policies that promote or hinder the adoption of e-government? The legal framework and regulations related to e-government in Libya. In 1994 Law No. 4 was issued, giving all powers, and introducing them. We came the previous year and introduced the new information law. Technology has evolved so it must be There is an accreditation centre for digital signatures...etc, and the government helped speed up the process of adopting the law. Public entities did not present a vision. I challenge any public entity that presented a vision, and it was obstructed. The state cares about priorities. Legislations were all outdated but promote digital transformation and electronic services. The legislation is what is presented, but the development of technology has hindered the implementation of these legislations.

Regarding if there were any external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, the issue of financial procedures and the procedures of the International Monetary Fund These measures are imposed on the whole world. As for the Attorney General, young people are doing a great job, they are doing a very excellent job. I do not see them as negative points, I see them as an encouragement to enter the world. Yes, I have seen other initiatives for external initiatives with other public sectors, so the issue is moving slowly, but the financial abundance and the return Materialism makes these companies bear this pressure and delay. I do not agree with you that they are pressures, as they are supported by parties to support digital transformation, and yes, they exist. Regarding the perceived benefits of e-government initiatives for public sector employees

, government agencies, and citizens in Libya 100%, and now I see that 60-56% are not supportive of technology as a public sector, because it will lose the benefits of this job, while the rest encourage and support considering that even their studies depend on technology and usually these are young. Citizens: They very much welcome digital

transformation and the provision of services and provision Time, services are a real tragedy without digital transformation.

Regarding the ease and ease of access to the current e-government services in Libya, the citizen has acceptance even in the initiatives that were presented, such as the marriage fund and the grant for the wife and children. I see that the citizen has a very acceptance in this matter.

Regarding whether there are any specific efforts to improve the usability of e-government services and access to them in Libya, as for the existence of any specific efforts to improve the usability of e-government services and access to them in Libya, no , unfortunately I hope that any party before presenting its initiative to train Staff on how to use and how to deal with it, but I did not see that unfortunately .

Regarding the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, regarding the impact of Societal norms, peers, and superiors to adopt and use e-government services among public sector employees and citizens? Does it not conflict? There are no social controls or restrictions to refuse to use these applications. There is no discrimination on the basis of gender in this part. I do not see any restrictions. The beginning of anything new is a natural societal phenomenon, and in Libya it works strongly, and complaints from citizens are present, and technical weakness is also present and we cannot deny it.

Concerning stakeholders with regard to e- government in Libya, I have no knowledge, and stakeholders are supposed to be all owners of institutions. The law did not specify any central authority concerned with defining electronic systems. There is no department to help citizens when an error occurs in services. This aspect also suffers from We have a shortage. Regarding the parties that offer digital initiatives, you must know that you are fighting not in measures but in a culture that is unaware of these developments. On the other hand, you need a legislative and legal aspect, because the resistance groups will begin to lag legally. Therefore, when ensuring the law, money, and support, then they can You arrive, but you will face countless obstacles.

The main motives and obstacles for the implementation of e-government in the State of Libya. The motives are the pressure of the citizen, especially when he travels to other countries and obtains services and feels that he wants that in his country as well. The obstacles are the lack of a strategic vision in this matter, and this is what I want to talk about. I see that this topic The government, parliament and experts should put in it a strategic plan, clarifying the services that will be provided, and the time frame is fixed by the concerned authorities, and the absence of this written idea I see as the biggest obstacle,

and the parliament is not doing its work, so attention must be paid to this point in order to facilitate the procedures that are in line with the world, because it has bypassed us , With the government of national unity, I have great hope, especially with the rising youth, to build the generation of technology. I see the obstacle in this matter is the availability of material resources, not technology. There is a mixture of specializations that are large and unclear, and the overlapping of laws is also a major factor in spreading corruption, but in general the situation is very optimistic. now.

Interview Code 05 Translated to English

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, I worked in the Ministry of Communications in the past and then moved to the private sector. The legislative field is in its infancy in terms of decisions. There is no law, although in 2012 there was an initiative called "E Libya." This project talks about several dimensions, including: the legislative dimensions and the technical dimension. Where it was carried out by the Ministry of Communications in partnership with several other ministries, and by returning to the issue from the side of legislation, there are only limited initiatives so far.

There is no data centre that supports the launch of e-government services, especially sensitive ones. There is only one data centre in the country, which is provided by LTT, Libya Telecom and Technology Company, and it is very weak, so the foundation is not available and very worn out. Also, Al-Madar Al-Jadeed Company provided its services as a data centre, but it also failed, as a specific project worked with it, and it was delayed in providing services for more than 8 months. Also, the cost was very high, about 120,000, although these services cost much less. The Libyan spider company provides these services, but there is always a fear of private sector companies, because The data is very sensitive, and this is in terms of the technical infrastructure.

In terms of the communications infrastructure, I see it as immature. We have a big delay in terms of communications, as evidenced by the very weak Internet speed. We have a deficit in the capabilities that enable us to provide a strong Internet despite the competition of companies to provide good services, especially private ones, but their capabilities are limited from a technical point of view. You will not be able to ask me to enter any system to create a digital transaction, the Internet speed is low, and communications in general are not good.

As for human resources, they are very good in Libya. We only have problems with the decision- makers, but from the creative and technical side, I know people who met me in my field of work who have very good capabilities, but they did not have the appropriate conditions or capabilities.

very technically savvy, but they use social networking sites such as Facebook and Instagram, and this means that they have the ability to develop technically, especially if this development supports their needs, I see that they are of course ready and have a good technical knowledge.

As for public sector employees, they are not with this degree of awareness, as they have a kind of technical rejection, because they rob them of some of their powers and practical privileges when the system becomes the one that provides all services instead of personal decisions, influence and personal authority, but I also see that there is a good organization With good management, the issue will be accepted and developed little by little.

Regarding the successful technological solutions provided by the e- government, I experienced an experience with the General Commercial Register that was launched two months ago. Of course, it met a kind of rejection at the beginning, but then it imposed itself. Even contract writers want to work in an easier and smoother way, so they supported this initiative. This A recent experience and I don't know where it will go.

Regarding the role of leadership and administration in promoting the adoption of e-government in Libya, I see that it falls from the top to the bottom, in the sense that if the leaders in the country do not prioritize this thing and all the material and moral support and also institutions such as civil society institutions do not promote this initiative, we will not reach good results. You want to provide a service to people that you own, if you specify this method of submission, if you want, you can provide your services through employees and remain as you are as offices crowded with employees and useless at times, or you want to provide other opportunities for these employees and change the mechanism for providing services so that it becomes "online". It caused development, well-being and prosperity for my people and the fight against corruption as well. Therefore, I see that digital transformation or e-government in particular is a descending thing from top to bottom explicitly. Of course, we do not forget the role of civil society institutions to raise awareness, create a clear vision for citizens, and fight corruption.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, I believe that centralization is very important in setting policies, provisions, laws and the work mechanism, but not in digital transformation, in the sense that the two sectors, whether public or even private, must state in order to support institutions for digital transformation To provide it with all the means and to set for it a specific mechanism and restrictions in which it operates in order to show it how to transform without interfering in the transformation process, it is only for guidance and then let the body or institution transform digitally on its own by internal work without the direct intervention of the leadership .. centralization is only in legislation, provisions, and the mechanism Not in implementation.

Regarding the resources and support available to government agencies and employees to implement and use e-government services? Do you think that Libya has the necessary resources to start the digital transformation? No, there is absolutely no support for

technicians. As a technical person, if you want to work in any government agency, you will receive a salary of about 1500 LYD and in the bank, and you will stand in long lines to get it, while it is possible that She works in a private sector company and receives multiples of this amount. There is no support for the technicians, and they are not given their right of the cost, which makes them reluctant and there is no readiness.

Regarding assessing the readiness of government agencies in Libya to adopt e-government initiatives, there is absolutely no readiness to adopt initiatives. I have worked with the health sector on several projects. We have previously worked on the public giving initiative, and we have worked on a complete system for this project, and it has received admiration from more than one external party, but When we sent it to the government for approval, it chose to go back to the manual system and put it aside. Regarding the extent to which political stability or instability in Libya affects the adoption and implementation of e-government initiatives, yes, it is effective, directly or even indirectly, as politicians in Libya are in a state of power struggle and all their concerns On how to exclude the other and this is my personal opinion and not my political opinion, or through administrative corruption in order to maintain his political position, so political stability is very important. Regarding the legal framework and regulations related to e-government in Libya, there is a law in the country called the "MH5" law when Carrying out any legal or traffic violation … etc., you must go to pay the value of the violation financially, and receive an receipt called MH5 that is sent to the Ministry of Finance in order to enter the public treasury of the state, so how can you start an electronic government and digital transformation and when you want to pay a violation you must spend it this way. There is no such thing as electronic payment in Libyan laws. Libyan law does not recognize anything but cash, "cash payment." Libyan law did not previously, until a year ago, recognize e-mail, and until now the form of this permitted and recognized mail has not been accurately specified. Regarding external pressures, I have no background in international or regional initiatives. I am a technical person, not a politician, so I am not familiar with issues related to pressures, etc. Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, I do not have a measure, but in my personal opinion, the Libyan citizen He feels joy when the word system is mentioned to him, for example when the national number system was activated, we saw a great response to that, and all citizens received their national numbers in a record time of about two weeks, and these are very positive indicators, in my view, of citizens and employees accepting digital transformation.

Concerning the ease and ease of access to the current e-government services in Libya, no, I do not see any ease of access, nor do I see e-government services. Even the national

number services that are supposed to be electronic have become specific entities that require it to be signed and sealed, and this means that the system is useless, and for other systems Granting a wife and children. I am not fully aware of this issue, but I see it as a good indicator of people's interaction with it as an environment surrounding me and not as a measure for all people. With regard to specific groups or individuals within the government or society working as advocates for e-government initiatives in Libya, I see that the stakeholders who are supposed to. They are responsible for the Ministry of Planning, the General Authority for Communications, and the Information and Documentation Authority, who are supposed to be stakeholders in this matter. There are also conflicts existing between these parties, mixing and intertwining of tasks, and that in Libya, the parties have always been professional in performing tasks that are not assigned to them and are not within their competence.

Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, the most important motives are that if Libya does not transform digitally and establish a real electronic government in the near future, it will be heading in an irreversible line, because the existence of an integrated electronic government is essential at this time, and if it does not happen, then Libya will face A severe delay that is difficult to change in the future. As for the obstacles, they are the political instability and the lack of technical capabilities, but the digital transformation is not difficult or impossible, only when these two factors are available, the digital transformation will take place smoothly in my view.

Interview Code 06 Translated to English

Regarding the evaluation of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, from my personal point of view, I see that the general public is good at using smart phones and has a strong connection to the Internet even in poor areas, taking into consideration that the elderly has phones An old. However, the public sector has not taken advantage of digital technologies to facilitate the provision of services, which would help stop long queues.

And the public sector does not exploit technology for two important reasons, the lack of desire and interest as long as the task can be accomplished way traditional. The second reason is the delay in the change in the way of work because of the laws. In order for the institutions to change, they are forced to change a lot of laws, and all the current projects are small. Another problem in Libya is the number of institutions and their frequent change with the absence of procedural evidence.

Regarding the level of knowledge of information and communication technology among public sector employees to adopt e-government services, it is based on age, where young people are more familiar than the elderly, but this does not stand in the way of change. The lack of change is due to complications that cause the termination of policies, the fact that the system is not clear, and the lack of communication between business entities in order to work together.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, I believe that the current technology can meet the basics for launch. Unfortunately, the public sector does not trust the private sector, especially in terms of information security. On the other hand, the public sector cannot implement these projects alone due to weak competencies.

successful electronic solutions, they are few and are currently being developed, such as the national number service. Unfortunately, most of the government agencies have abandoned their websites and moved to submit their communications and news via social networks.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, unfortunately they are not very interested in digital transformation, and some of them have knowledge but cannot provide or implement these services, especially with a lack of awareness of the benefits of using technology. Unfortunately,

we have more than 300 government institutions, and it is difficult to find leaders who believe in digital transformation in all institutions.

Regarding the resources and support available to government agencies and employees to implement and use e-government services? Do you think that Libya has the necessary resources to start the digital transformation? I have no knowledge and I have not seen any real resources.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, political stability is important and facilitates the process, but institutions of all kinds can work on digital transformation, but they need a boost from citizens. Regarding the legal framework and regulations related to e-government in Libya, unfortunately The laws are somewhat outdated and do not support digital transformation. We need to assess the general situation regarding digital transformation in the public sector in Libya, including the aspect of laws that must be changed. Regarding external pressures, which affect the adoption of e-government services in Libya, I have no knowledge. The perceived benefits of e-government initiatives for public sector employees

, government agencies, and citizens in Libya. There is at least one knowledgeable person. As for the employees, they cannot be blamed for the absence of real knowledge and strategies.

Regarding the ease and ease of access to the current e-government services in Libya, unfortunately most of the services are not easy to access, and there are complications from government agencies to access this data for fear of cyber security.

Regarding the specific efforts to improve the usability and accessibility of e-government services in Libya, they are only wishful thinking and not realistic. Regarding societal norms, peers and superiors on the adoption and use of e-government services among public sector employees and citizens, it is not a major influence, and is always manageable. Regarding stakeholders In the field of digital transformation in Libya, the prime minister is the most important. Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, I have no knowledge.

Regarding the initiatives of plans to improve the facilitating conditions for the adoption of e-government in Libya, I do not know.

Regarding the main motives and obstacles for implementing e-government in the State of Libya, one of the most important obstacles is the absence of planning, strategies, and

action, in addition to the absence of a legislative framework. Regarding the motives, they are understood as facilitating services and reducing time for citizens.

Interview Code 07 Translated to English

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, I will be realistic, professional, and honest in answering the question. There has been a very slight improvement recently, but this improvement is negligible compared to neighbouring countries and the rest of the world. Libya is not Tripoli. Benghazi only, so we cannot measure the quality of services in these two cities only, Libya is very large in terms of area and not the population, so the concentration of services as well as the monopoly of the telecommunications sector on the Libyan state causes the decline of services and infrastructure, as well as the lack of significant expansion of communication services.

Regarding the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, there is a kind of illiteracy. Yes, the majority of people did not know anything about the Internet, then suddenly they started using it directly through social networking applications such as Facebook and TikTok, but we notice in a way There is a great increase in the use of technology for certain reasons or for a specific interest, but the absence of awareness exists and even the absence of trust. There are people who tried to trust these services provided by the e-government or any electronic services, but found them to be illusions, so I gradually lost confidence in them, but if we go back to the origin of the question , then illiteracy Exists and the use of technology in Libya is limited, so you will find people, especially the elderly, who will find them using a specific technology or a specific service only without expanding on the rest of the technologies. I think that this thing paves the way for the ease of access to any technology or government service, like what was mentioned about illiteracy ten years ago, which is very different from today if anyone or an entity wants to provide a service, whether government or otherwise, but the preparation that social networking sites did really contributed greatly with our reservations About the problems it caused, but yes, smart phones and smart programs facilitate the process of adopting an application or an electronic platform in the government or elsewhere.

And I very much agree that social networking sites have set people to high standards in terms of applications, and this makes government platforms should be equal to these sites and applications in terms of quality and ease of access, but I do not see that this is an obstacle, as the matter only requires serious work in order to reach a quality that can match these Applications. Government applications do not require complex technical things. They are only about providing certain services. Therefore, attention should only be paid to the designs, colours, general shape, smoothness of the application, and a little

effort. I do not see it as a challenge for me. Regarding the extent to which existing technologies in Libya are compatible with the requirements of e-government initiatives, sector Communications are monopolized by government companies, as the government believes that it is the custodian of technology in Libya, as the technical sector is totally dependent on the Telecom Holding Company, which in turn represents the government in the communications sector. The public sector for communications, the private sector does not constitute more than 10% of the Libyan market, including the Libyan spider, all services, contracts and movements are controlled by government agencies, so do not ask me to provide large services as a private sector suddenly and you do not protect me permanently legally, we will not be able to work as a sector Especially on the whims of officials, so we flounder based on the opinions of every official. We want firm laws that give us our rights in order to work in a comfortable and reassuring environment. Regarding the current successful innovations, yes, the economy system - the commercial register - the social affairs system, and if we talk about successful experiences, this is a difficult question Very much, if we talk about a system that is successful in the conditions of this country and continues to this day, there is no, no system comes to my mind, because all the previous systems either diverged from their affiliation to where or were corrupted and stopped. Etc., and this brings us back to the point of continuity, the real challenge For continuity, and this is not related to security stability in Libya, this is an old problem in Libya, any official who comes starts from scratch as if he was the first to work in this position, and here there is a question that arises, what next? Will the e-government initiatives continue when the current official changes? State Like Libya, it must be linked to a specific budget or law that prevents its officials from starting over. It is assumed that the budgets that are spent are monitored, accounted for, and followed up. Are they really spent on real and continuous achievements on the ground? Or will they disappear with time? About adolescence and temporary things that will disappear with time and are not sustainable, and the most difficult thing in commerce is continuity and sustainability, so all government institutions reach a stage of frustration, leaving everything and suddenly stopping their work.

Regarding the role of leadership and management in promoting the adoption of electronic government in Libya, in the absence of leadership for this matter basically it cannot be done, even in neighbouring countries there are examples of this, for example Saudi Arabia several years ago, we did not see any progress for Saudi Arabia in these matters, although there are several There are other prominent countries in the region, but recently their leadership has the desire for the name of their country to appear and stand out. To the continuity of the issue, it is true that this country did not record any achievements in this aspect, but within a few years it achieved something that competes with other countries that have been working on it for 15-20 years and marketing themselves. The leadership

must understand this thing, support this thing, and ensure the continuity of this thing, why? Because he If a change takes place in the government or any ministers, the next one should not come, and the one that preceded and neglected it should not be completed. Are government institutions in the interest of digital transformation? When the employee enters the digital transformation, does he benefit from it? Unfortunately, most of the current leaders are not aware of the benefits of digital transformation, and most of the current projects are teenage projects.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, of course you may have hosted some leading personalities in some institutions, there are institutions of a practical pyramid that need and want to work on change, and start working on it, and they have good initiatives and tried to implement them, but you want to A quantum leap for an institution and you are aware of the history of employment in Libya and also how the public sector employee compensated for the material vacuum, because government institutions with permanent salaries are true, but they will not enable you to live sufficiently to cover all your expenses and maintain your survival in the middle class, so the employee chose to use his influence or benefit From his position in order to keep up with his expenses and needs, so any digital transformation now threatens his influence and threatens the mechanism he used to work in order to cover his needs, as well as the reluctance of instinct, and this is not only in Libya, but it is a human characteristic and it is the rejection of everything new and it is the easiest solution that people choose, but the reluctance is for reasons It is the one that poses a danger, and in my opinion, it is the one that makes things difficult for any organization to adopt a real project that talks about digital transformation, although if you talk to more than one institution, you will find that the majority worked in committees working on digital transformation, but if there are digital transformation plans to facilitate the citizen's extraction of his documents and facilitate For the citizen to extract his transactions, I think that this will be one of the biggest challenges, because you are closed on a parallel market, a black market, on mediation and on corruption, for reasons I mentioned earlier, including the lack of a decent living for him on his salary.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, it is difficult for me to give an accurate answer, but within the process of digital transformation or the process of raising the competencies of employees, I do not see it being done correctly. Why? Is there anyone who contributed significantly to a real digital transformation experience? Percentage Very simple, they could be Libyans who were abroad and witnessed this matter, but if we talk about internal experiences, who has the capacity or sufficient experience to supervise the digital

transformation process? I do not see that the government stopped for a moment and looked, do they have the ability or experience to make a change? Can we Bring in experienced people, even as supervisors, after the completion of the process, if the reluctance is for reasons Such as national security and so on, and if we want to raise the efficiency of workers in this sector, while we will raise their efficiency? Are you in communication skills? Or in technology or organization? We must ask what the problem of our employees with digital transformation is, the answer is that it is only with people who worked on real technical programs and succeeded in order for us to learn how to apply them.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, the government is not ready to adopt these initiatives, they are only loose slogans and temporary initiatives, and sometimes they are unrealistic because they do not have the ability of the employee per se, so the core of the problem must be considered "the reasons for the employee's refusal" Then we look at the technical and other aspects.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, I do not guarantee you that political instability is the main reason affecting the adoption and implementation of e-government initiatives, because the situation even before 2011 was not much different, as political stability affects any project Or an initiative, no matter how small, but it is not the main reason or obstacle, especially in Libya. Libya has a history of burying projects and lack of continuity in projects regardless of political stability. Of course, it has a role in the continuation of projects, but if the country stabilizes, has the problem been solved? No, strategic plans must be put in place to ensure the continuity of projects, so no one can stop them with a decision. Projects remain ongoing and have a budget that guarantees their continuity.

Frankly, I do not have knowledge of regulations but laws. Even where there are laws that obstruct it, it is easy to cancel them if they impede the course of the transformation process, but currently there is a clear law that prevents there is no, but for example the MH5 law, now for example the Finance or the Tax Authority wanted to They make an electronic payment and cancel the cash payment, and they find that they are legally convicted, and here, yes, the laws have become an obstacle, and they are not in line with the times. For example, you send an invoice by e-mail, and you receive a refusal answer, and that it must be an original and printed copy, so we need to reconsider some laws For the ease of adopting the digital transformation process and other unnecessary procedures that force you to stand in long lines and so on, and in some laws that make some technical

agencies have problems with censorship and so on, and I see them hindering them in their work and may hinder them in the process of digital transformation as well .

Regarding the external pressures that affect the adoption of e-government services in Libya, I see some international initiatives, not pressures. These initiatives may reflect the pressures that you are talking about, God knows best, but I see some foreign institutions and organizations working on digital transformation, but they are only modest initiatives in size. Our problem will not affect much, and some of them have a background in what the problem is, but they deal with the logic of "this is what we can do." Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, the employee has already answered this question on his part, and we will not generalize, but I mean some He sees it as a danger to their interests and a danger to their positions, but in reality, it is quite the opposite. It facilitates his work and reduces his mistakes … etc., but of course some employees feel the danger of replacing them with others, or even being replaced by a machine, so these people do not know what strategy is in line with solve their problem.

As for the citizens, I will give you a simple example of a simple initiative established by the civil registry. Previously, in order to extract any paper from the civil registry, you must go to the civil registry that you follow. As a Libyan citizen, I moved to the locality in which I reside, so I was suffering from the procedures for registering a child or new-born or issuing documents, and it was a process It takes me about a week to extract a paper, but now they set up a number of points from which you can extract all your documents, even the small local points in some areas of Tripoli now have all your required papers. This is a simple initiative, but it solved big problems, as the citizen wants anything that makes his life easier for him and lacks It has its own consultations and procedures. The civil registry established this initiative because indeed, when you go to any party, you will find that it demands papers such as a birth certificate and others. even though it is dealings from one government agency to another government agency, so when I stand in front of you, it is assumed that you are the one who recognizes me, you are the government! The citizen is very happy with these initiatives, and with personal experiences I have met citizens who were happy to provide them with remote services without the need to come and submit papers and so on. If the Libyan citizen compares his life with people abroad, he finds that he lives his entire life in a car, why? Because there are people who do not count their work or an employee who fails to do his work, so you find yourself paying the tax of this failure as a citizen.

Regarding the ease and ease of access to the current e-government services in Libya, as a citizen you did not benefit from these initiatives because these initiatives were mainly

targeting a specific group, such as granting children and others. I see it as good, because it has found solutions to some problems, even if they are temporary and not continuous, only that he did not make people stand in lines and completed his entire initiative, as I see it as a temporary digital transformation or for a specific outcome, good! There is no objection, the only fear of these non-continuous initiatives is the loss of people's confidence in these matters in these fears that I may have, even the social affairs, they provided the transfer service from bank to bank without the need to come only from your home, and this is also a good initiative, loans also I think It's very good online! Of course, we are not talking about 100%, but even if we talk about 60% of the segments of society who have done this from their homes, this is a very good initiative. Whether or not this is a continuity is like what I mentioned earlier that it is one of the major challenges for our country.

Concerning societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, and citizens' trust in the government, I do not think that the citizen has confidence in the government and its services, not even data on the ground. Problems make you give confidence in anything. Now, the citizen, even when A person comes who wants to present a real and sincere initiative to God. They will see him as a person who came to be a new thief only. There is no confidence after what they have seen. If we look at the current political situation in Libya, in the opinion of the citizen, this one stole, but he fixed the ways for me, and the previous one also stole. And he did not fix the roads, so the citizen sees that whoever offers him a service and gives him a helping hand even with the gram of his friend, and if the next one comes and steals but he helps people, they will support him, so people think in this way, so the citizen sees that the government's services reflect on him regardless of his political opinion, so trust is lost, but Retrieving it is not difficult, as people are looking for their interest, their salaries, money and basic things. They have not yet thought about electronic services. If we mentioned the banking sector, then the banking sector is a vital sector. If you ask me whether there are technical companies that have succeeded in this thing in Libya, I will answer you no, you will ask me why? I will answer you because there is no funding, although some companies started to implement initiatives and failed. The banking sector can finance these projects, but the banking sector is a vital sector and does not perform in its role and is a failure in Libya. People travel and put their money abroad and see services. You come to Libya and find that you need so-and - so mediation, Queues, crowds, etc. At the end of the matter, they tell you that there is no liquidity.

Regarding the stakeholders, I am aware that there is a committee formed for digital transformation, but what it does or what it achieved, I have no idea, and it was formed by

several different institutions, and this is true. Digital transformation will not be achieved in one way only, but what they did I do not know, their goals are clear, but when will it end and what they have achieved Until now, I also do not know, and I think that they have not achieved anything. Regarding initiatives or plans to improve the facilitating conditions for the adoption of electronic government in Libya in Libya at the present time with the current capabilities, and if there is a desire and will from the current government or state, then I think that centralization is a must, because decentralization requires you A great effort, the central work does not mind the separate work, but the decentralized work will drain the efforts because everyone will exert his effort in the same thing and the steps, so the centralization is very important now in order to unite the efforts and overcome the current obstacles, how these services and these things are distributed is not a problem, but we are talking about the centralization of The positive side only now, with regard to the overlap and problems between the Public Authority for Communications and the General Authority for Information and the formation of the joint committee, what is happening is a mistake, but it is a beneficial harm. will stay forever? I mean, by changing this person, this conflict will return, so we need the force of law in order to end any kind of conflict in this matter. All these details must be resolved by something that cannot be touched. In any country, everything is subject to change and interpretation except for laws.

Regarding the main motives and obstacles to the implementation of e-government in the State of Libya, the obstacles, and motives: In the entire world, there is pressure on this aspect because it has become a right and not a luxury. There are problems. If we really had the desire for digital transformation, we would not fall into them, but we are forming a committee on The basis is that it works to solve the problem, but it spends time and does not solve it and leaves the problem as it is. If the government does not work on a real digital transformation and provide a fertile infrastructure for digital transformation, nothing will change, and digital transformation has become something necessary for the citizen and for the government in itself, so it is no longer a luxury or a luxury It has become a duty to provide the citizen with facilitation of his services, as the lack of remote services increases transportation problems due to the increase in the population, and the government also needs to arrange and organize its work. Who and why, in fact, I do not know the answer, but God willing, it is good.

Interview Code 08 Translated to English

Regarding the evaluation of the current situation of the information and communication technology infrastructure in Libya, at the beginning, the evaluation process is somewhat difficult and relative. With regard to the infrastructure, the situation in Libya is bad compared to neighbouring countries, especially with the absence of a communications backbone, the weakness of the fibre optic network, and its failure to deliver it to all regions in Libya, It was humiliated because of the administrative and technical heritage in the telecommunications sector and the suffering of the Libya Phone Company.

vast areas in Libya constitute an obstacle, which affects the economic feasibility of infrastructure projects in general, and also in vital areas such as the capital, Tripoli, private real estate development and cities are expanding rapidly compared to government services provided by sanitation, communications, and other infrastructure.

Every governmental or non-governmental entity pays thousands of dinars to connect a fibre optic line. As for technology, performers are required to use modern technology, which does not keep pace with developments in the communications infrastructure. Any institution interested in implementing real projects, they all go to adopt modern technology in terms of data centres.

We have a problem in the absence of policies for the destruction of data, as many institutions and banks maintain the data of depositors for more than twenty years, which affects the size of the databases, due to the absence of policies. It is true that some believe that the expansion of databases and continuous updating is a matter of financial corruption, but in fact it is not mentioned, because it is difficult for many to understand. It also affects other forms, which is the amount of electricity consumption of the previous systems for many years.

Regarding the impact of the level of knowledge of information and communication technology among public sector employees and citizens on adopting e-government services, employees have sufficient knowledge, but managing these services is another matter, and here is the real problem in the public sector. For example, for every 30 employees, you find only one employee who can manage technical projects in every public sector institution, and he also faces great reluctance to learn. And financial corruption comes here, as all employees seek training for reasons of travel, and this affects contracts in all its forms.

As for the citizens, the citizen will implement what is asked of him, and we have many experiences that confirm this in terms of the banking sector, as well as the age group that

makes the ability to differ. However, with the imposition of services, the citizen responds to technology, adapts to it, and defends it.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, the international companies that provide infrastructure services such as databases and others are excellently available in Libya and provide their services with high quality. As for the software side, the local market may suffer somewhat, but the solution exists. International companies It exists in the region and can provide all the required services, and this is based on an experience that we had in the banking sector in the past. Especially in terms of software provided by international companies, all of them have partners in the region who can meet the local needs.

But the local market in terms of software is very weak, and compared to demand, it is considered zero. As for the risk in contracting with international companies, the presence of strong legal departments in these government institutions will contribute to the protection of their rights in full and the smooth implementation of these projects. risk The real thing is in completely relying on international companies. It is necessary to have local companies and teams to ensure the operation of these projects.

Concerning successful electronic services, unfortunately, there are none. All basic services are manual, from taxes to the commercial registry, for example. Within our current consulting projects, when submitting company papers to various parties, we are asked to have original copies of many paper documents. The same applies to the national number and the process of extracting it from the civil registry in the municipalities, while all these services can be provided electronically. Regarding the projects launched recently by the government, they are separate systems that are not available online, and each of them is a separate island.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, unfortunately, the lack of strategy and vision is a major obstacle. They are currently implementing projects without a real vision. This is due to the absence of qualified advisors at the government level.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, unfortunately all projects are born of the moment and the initiative does not come from information technology departments. cartoon. Where everyone in government institutions sees information technology departments as departments that spend money without interest.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, there are no real resources.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, yes, Libya is ready for digital transformation, even if with the current weak infrastructure, solutions exist. Unfortunately, the only measure of the success of government projects in Libya depends on their success in overcrowded cities and no interest in remote cities.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, yes, it has a significant impact, and the evidence is clear in the banking sector and electronic payment services in both the eastern and western regions. Each region uses different applications as a result of the political division.

Regarding the legal framework and regulations related to e-government in Libya, I do not think there are any clear obstacles. On the contrary, there are some policies that regulate operations, especially in the banking sector. Some fail to implement these policies. In many cases, some initiatives come from the private sector, and as soon as they succeed, the government adapts them and gives them the necessary licenses to continue their knowledge.

Regarding external pressures, and international or regional initiatives that affect the adoption of e-government services in Libya, they are insignificant, including those related to money laundering and combating corruption. Unfortunately, international support in Libya believes that it will be able to reduce corruption before dealing with the technological problems.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies and citizens in Libya, the government employee only sees it as a project and it will end, due to the absence of vision and motivation, and some of them try to benefit from the training and travel that can be obtained from behind these projects. As for the citizens, he is happy with these services, and the matter is evident in the service provided to grant the wife and daughters, especially with the organizational process of the procedure and the entry of a number of stakeholders into the process.

Regarding the ease and ease of access to the current e-government services in Libya, the citizen does what is required of him.

Regarding government efforts to improve the usability and accessibility of e-government services in Libya, yes, there are initiatives on the basis of the Social Security Fund and

the Social Solidarity Fund. The government is seeking to establish new initiatives, but its affiliated institutions are very slow, especially with the absence of specialists in these areas. Regarding social custom The broadcast has no effect, the citizen is forced to use electronic services, and is surrounded by hope. At first, he refuses to use these services, but in the end, he fully.

submits. Regarding any specific groups or individuals within the government or society working as advocates for e-government initiatives in Libya, yes, there are individuals within telecommunications companies and government agencies, but all of them are on a narrow and small level. Regarding the stakeholders, they are not clear, they do not have the know-how, they just implement projects, all without a real strategy. I am aware of a number of committees formed by the government, but all of them are useless or have any outputs. Unfortunately, many institutions have conflicts and intersections in specializations, due to the absence of specialists, especially due to the lack of resources.

Regarding the main motives and obstacles to the implementation of e-government in the State of Libya, the most important motives are working to fight it and legalize corruption, facilitating services to citizens and reducing centralization, and the government is interested in the citizen's comfort because of the upcoming elections. As for the obstacles, the most important of them is the absence of implementation, all of which are unrealistic dreams and projects, especially with the absence of local expertise, the absence of foreign consultations, and the absence of communication with the private sector and strategic planning.

The government needs a foreign partner to implement the strategy and its projects to ensure proper digital transformation in the public sector, but to work with the current randomness.

Interview Code 09 Translated to English

Regarding the current situation of the information and communication technology infrastructure in Libya, we start with communication. It can be classified as bad, but it is gradually improving. Communication is not always and continuously available. Banks, for example, if they want to launch a digital service, realize at that time that the biggest obstacle they have is the lack of continuity and communication in the area to be launched. There, whether for example coverage of communications or the Internet, whose quality also varies from one region to another, for example within the city of Tripoli, the coverage is somewhat good, but when going to its outskirts, the quality of the Internet connection gradually decreases, especially since banks in Libya, when they launch a service, are always keen to communicate with All the centres that provide this service, even if you can provide alternative solutions such as obtaining fibre optic cables from the Libya Phone Company or others, the cost will be very high and the quality is not more than acceptable. The telecommunications sector in Libya, we have a lot of human resources in this sector, not huge but not obstructed as the problem of infrastructure related to communication.

Regarding the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, I do not think that there is any problem. There are challenges. On the contrary, I see that there are banks that have success stories such as the Aman Bank, although it faces many problems, but people did not face any problems in adopting or using these services, on the contrary, as they expanded rapidly and quickly, and people got used to them quickly. I see that there is a kind of illiteracy, but if services are provided in the right way, I do not think that people will face any problem, because the interaction of citizens with smart devices made their interaction with technology very excellent.

the simple services that it will provide to the public. We always have a problem with this point, so I can classify that we have illiteracy in this regard.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, I see that there is enough technology in order to launch strong services in terms of digital services. I have never seen problems in my life in terms of technology itself. The problem always lies in implementation. In Libya, problems Always administrative and planning, most of the services that were launched are launched with very high technology, but the defect is always in poor planning and administrative organization. be tripped.

Regarding successful electronic services, all of them are timid innovations that do not amount to government initiatives. There are no real initiatives that support any innovations or integrated technological solutions.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, the leadership, although it appears in the picture that it encourages and supports this thing, but when we see the reality, we realize that there are no plans that can be implemented on the ground in the long term, it is all just talk only, there are no plans to launch services And merging it with the daily services that the citizen needs, all of it is just loose talk and verbal initiatives only, sometimes you cannot understand even its real content, in other countries in the Middle East when talking about digital transformation it is about something tangible, documentaries on a timetable and how to gradually transform, things you can build on Because you , as a private sector, also need to build on things that are built in the foundation, but these services are not built by the government, so you expect the whole process, even the Central Bank of Libya, you often find it announcing through its platforms the launch of new services and initiatives, but it is just talk, we as a bank as a party affected by the Bank of Libya Directly, we cannot build anything on the basis of an initiative launched by the Central Bank of Libya, nor can we even provide a service on the basis of it.

Regarding the organizational culture within government agencies with regard to accepting and implementing electronic services, I will return to the same point. There is no clear mechanism or clear management for any initiative. The government itself does not have good communication between its ministries, so it is an initiative that came from a specific department and the rest of the departments do not know about it. Something, and the evidence for that is that there are many initiatives that come out contradictory, because they are not homogeneous, such as the issue of salaries, for example. From a far point, you feel that the problem of salaries has ended with "digital" solutions, but when you are at the heart of the problem, you find that nothing has changed, just that it is the same problem. Only digitally.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, if there was support, we would see real development within institutions, or training for these agencies, because even institutions before the development of their services that they provide and digital transformation, the institution must be transformed internally as a way of working, and to this day I have not seen any institution that has completely digitized its work system.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, the government always shows us that it has an interest in the subject.

Culturally, the government started to adopt it and become aware of its importance. The existence of this idea is a very good thing, but we did not see any real step to come out with an initiative and try to make it successful and launch it correctly, and this is bad. The organization that we talked about previously, which can be disposed of if we need external companies. Culturally, the issue is excellent, but planning and implementation have not taken the right steps yet, in my opinion, of course. Regarding the extent to which political stability or instability in Libya affects the adoption and implementation of e-government initiatives, certainly because it effects On all aspects , what about the digital transformation that requires the unification of all Libyan governments so that they can launch services on the entire Libyan territory, even and you will give him the formulation of a unified plan for the entire Libyan territory and all cities and municipalities, but the current government, although there is some kind of stability, but I do not think that it will be able to succeed In achieving digital transformation as long as it still cannot impose its control over the entire country, I see it as illogical to have two governments on one land and launch such an initiative and expect it to succeed, because the basis of digital transformation is decentralization in terms of data, but this is not available at the present time.

Regarding the legal framework and regulations related to e-government in Libya, according to what I saw in the Central Bank of Libya, they are ordinary legalists or sometimes only bankers. They are not jurists or even specialists in digital transformation. The laws are random and not based on a real study of the market in the current situation. All of them are even personal conclusions. When I tried to talk to them in this regard, I found that they are the same contradictions, the same team that set the list. One responds and one rejects what you propose. Regarding external pressures, such as international or regional initiatives, I have no knowledge if there is a real initiative under a specific name or plan. Regarding the perceived benefits For e-government initiatives for public sector employees, government agencies, and citizens in Libya, it facilitates the process of information transfer for employees, eliminating administrative corruption, and also facilitating communication between departments. As for citizens, it facilitates their procedures, guarantees them their rights in terms of integrity, and eliminates the long time for issuing paper documents. Regarding examples of e-government services that were particularly effective in improving efficiency, transparency, or quality of service, yes, I saw the wife and children grant, and the majority of citizens who tried it were not. They have any problems, but this is a service that you will use in very distant periods, but when you want to evaluate services, we are talking about things that you will always need at all times, such as the family status certificate and other national documents, because this is what we need more, and we have not seen any successful initiative in particular. Regarding the ease and ease of access to the current e-government services in Libya, yes,

most of the services that were launched have some kind of complexity in their use. I cannot evoke a specific example, but there is an initiative or platform launched by the current government called "Our Government" that makes you believe that it has a digital transformation, but It is about sending an e-mail to a specific entity, and this entity responds to you, although the majority of people have good experiences with it, but it is a complicated process. When you want to communicate with a government entity, you send an e-mail, and the majority of people see it as a complicated process. We hope that we will have real services that make it easier for the citizen to reach all Services without communicating with a specific party as an intermediary. Regarding the impact of societal norms, peers and superiors on the adoption and use of e-government services among public sector employees and citizens, I do not think that societal norms affect the adoption of decisions because they do not conflict with the idea of digital transformation. As for trust, I think that matters are not related to digital transformation as they are related to the corruption of government procedures per se. Of course, any citizen would expect this, as there are proven stories of cases of corruption in the services that were launched, such as the wife's grant, and here I would like to raise another point, which is censorship, which is A problem in Libya in general and a problem with digital transformation in particular, because censorship in something like digital transformation is an important and very sensitive thing.

Concerning there are specific groups or individuals within the government or society working as advocates for e-government initiatives in Libya. At the government level, as far as I know, there are none. They are only civil society organizations that encourage digital transformation, but we also did not see more of them than encouragement through digital campaigns. However, we have not seen a conference or workshops regarding digital transformation, as far as I know. As for stakeholders, in general, the Civil Registry, the Passports Authority, and all institutions can benefit from digital transformation, even the education sector. The issue is related to many sectors, so it is impossible to link it to one stakeholder. All ministries and institutions will find only one department, at least, that is directly impossible as a stakeholder.

Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, there are no resources or support available at the present time to use digital transformation services. Libyan, there are no support initiatives, but this is to the best of my knowledge. Regarding the main motives and obstacles for implementing e-government in the State of Libya, in my opinion the most important motive is corruption and censorship. The biggest problems in Libya and the biggest loophole exploited by the corrupt are the financial and administrative matters, which can be eliminated or at least reduced through digital transformation, and this is the

biggest goal we have as Libyans. Secondly, it facilitates the life of the citizen, as the administrative procedures are very cumbersome that may take you years and long queues. To no avail, so implementing the digital transformation properly will leave a very important character for the life of the Libyan citizen. As for the obstacles, political instability is the biggest obstacle to digital transformation in Libya, because planning for digital transformation is always long-term and takes time, while the shaky Libyan political situation thwarts any process of implementing a digital transformation plan, so you cannot know the term of any government's rule and also it is possible to obtain approval Support from a government and rejection from the next, and so on. Therefore, I see stability as a prerequisite for achieving digital transformation.

The only thing I want as a banker is to see a committee formed within the Central Bank of Libya that is responsible for setting all the regulations and laws that affect digital transformation and is far removed from the management of the bank, so it is an independent committee, and it is a mixture of technical specialists in digital transformation, bankers and jurists, This will enhance and make it easier for banks to provide their services, because this committee will be specialized in extracting and establishing rules, regulations, and laws that affect the banking sector with regard to digital transformation.

Interview Code 10 Translated to English

Regarding the values of the current status of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, currently the infrastructure is not fully available or there is no coordination in its provision.

Regarding the technical side, there are many problems that Libya suffers from, including the presence of only one Gateway in Libya, which, if it is lost, will lose contact with the outside world, which is the international telecommunications company, and this is considered a bottleneck and is always in trouble. The second thing is the lack of development of the existing technologies. If you notice that the Data Centre of Libya Telecom and Technology has been idle for about a week, most of the government and banking services are idle, so there is a kind of failure to keep pace with the development of defence in Cyber Security. And the defence in DDoS or what is known as distributed denial-of-service, as well as the development of the Data Centre, they want to develop the Data Centre six years ago, they make bids and proposals for a period of six years and submit them, in order to approve the upgrade.

There is a kind of poor infrastructure, which is this type of Monopoly , heading towards that any infrastructure is carried out by the Telecom Holding Company only, what kind of government communications is carried out by the Holding Company for Communications, what kind of cloud is carried out by the Holding Company for Telecom or the orbit cloud, this monopoly In the event of any problem with the Telecom Holding Company, the wheel stops completely.

There are also problems between the ministries because each ministry wants to equip its own data centre, given Libya's ranking in terms of corruption, which creates problems. For example, the Ministry of Social Affairs is trying to equip its own data centre, but to no avail.

Unfortunately, the process of developing data centres and purchasing information technology is considered a major door to corruption. Currently, the government is at a crossroads, and instead of preparing a data centre or purchasing it in every ministry, agency, or interest, we can upload them to the orbit cloud. This is considered a kind of rationalization, but the orbit In turn, I participated in the Monopoly , because there was no market distribution or competition in the cloud field , and from their turn they dominated the market and sold on credit, and they did not have enough engineers, three engineers will soon run an entire country, the demand was higher than their manpower and higher in terms of resources, With this we are back to square one.

Then another proposal emerged, which is a national data centre to be with the General Information Authority, and the conflict is still going on.

The issue, in short, is that everyone wants to participate in this investment strongly, and there is a high rate of corruption in it. Everyone wants their own data centre, which is considered a form of corruption.

In the year 2019, the decision was issued by Fayez Al-Sarraj, so that the data centre is from the government and with funds from the Telecommunications Holding Company, but its ownership is for the government. I tried to search for this decision, but I did not find it, but I will try to provide it next time.

Regarding Connectivity Unfortunately, in the last three years, there has been development in certain stages and stagnation in other stages.

From the year 2011 to the year 2015, Libya was witnessing the worst periods of communications, which is the Ymax period. There was a high demand from the people, and there was no fibre or any type of communication, and in the year 2016-2017 the 3G started. And 4G belonging to the Libyana company, and things seemed relatively comfortable, until the great interest in 4G services began, in which a large amount of investment was made.

Connectivity was good until the beginning of the year 2020 or the end of the year 2021, but as a result of the confusion and conflicts in the telecommunications sector and the holding as well, Monopoly in short, the Connectivity orientation is no longer a priority, and this has led to development projects in this field almost stopped, meaning the same speeds The capacities are still the same since 2021.

Likewise, as I mentioned earlier with regard to the international company, which is the only international gateway and is affiliated with the government, if it is separated, all communications over Libya will be separated.

In the eastern region, they found a solution for international communications in the past six months, which is to take a capacity of 100 Gig between the eastern and western regions as rent from the Libya phone, so that if any interruption occurs in the eastern region, it will be supplied by land and not by sea, meaning the region The eastern region will be supplied by optical fibre in the city of Derma and the western region has a connection at 4 km and also Rajouri. In the event of a sea line interruption, this leads to a complete interruption. The plan is to supply MPLS lines from a land-based Libyan telephone company via fibre cables for the Libya Telephone Network project. This is considered a temporary and fabricated solution, and it cannot be said that there is a Connectivity or

reliability that this Connectivity is permanent, and this thing no one can confirm with the evidence that today we have a problem in the Data Centre of the LTT company in the Armours area, which led to a complete halt of communications for a period A week and there is no Back-up or Redundancy for it, and we have no problem in the event of a submarine cable break.

We also have a political problem, when a politician or a leader order to cut off the internet or communications in a specific area, there is nothing to criminalize or prevent this act, and we also have a problem in the absence of punishment for any attempts to corrupt or jam communications such as military devices that interfere with civil communications.

We have a lot of problems, and unfortunately there is no punishment or law that leads to these problems diverging and continuing. The private ISP is also considered good, but they operate using Wi-Fi technology to connect and on the open frequency, which is 2.4 and 5, and this leads to interference in some private channels and very high noise. Likewise, the issue of optical fibbers is always in conflict over the implementation of the project in terms of the executing agency, is it a private or public sector? If you extend your own fibre lines from your home to your neighbour's house, by law these lines are considered to be owned by Libya Phone Company until you purchase these lines.

Regarding the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, it is a very relative and loose matter, and I am at a stage of doubt between being resistant to change or they really do not understand, at a stage I find that they understand , but they resist change to the extent Fear for their positions from people who might be better than them. I believe that they are resisting anything new or trying to ascend the throne and everything remains theirs, and with evidence that they do not want to use any Cloud Service , whether provided by a local party such as orbit and the spider web, or international, for example, the Governor of the Central Bank of Libya, Al-Sidiki Al-Kabeer, he said publicly to prevent Ali All government banks host their data outside Libya, while I have a leaked paper in the year 2015 that was sent to the directors of departments in which it is mentioned a study of the possibility of hosting banking data in international clouds, and here you do not know if the governor wants to host globally or not, for example also Mr. Abdul Basit Baur, who is the head of the Communications Authority, wants to have a National Data Centre and wants to implement it, and he has a very good team, but there is a struggle on the part of the Economic Development Council that wants to be the leader of digital transformation in Libya.

Regarding the National Council for Economic Development's intervention in the digital transformation, I have been trying to understand it for more than 9 months, but I did not

find that they have any technical or knowledge powers or previous experience, and I find it a manoeuvre or adventure that they want to enter into. The trend is huge, when you talk about the Information Authority that has data and has employees It has trained experts, while the Economic Development Council does not have anything except that it proposes to the government and the government discusses it, but it did not leave everything to it. They are resistant to change, and I expect that if the matter reaches the Economic Development Council, nothing will be implemented with national expertise, but rather it will be done through a consultative contract. Outside, here is a problem because we have national experiences in the Information Authority, and they are present in some members of the holding, and they are present in some departments of the Communications Authority. While the entry of a new player, which is the Economic Development Council, is incomprehensible and not clear, and we have not seen anything from it until this moment.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, the private sector, unless it finds guarantees from the monopolists that they will not be harmed, it will not progress in the wheel of digital transformation in Libya if it contributes to it, even in a small degree, because I am a witness to some projects related to electronic services for citizens that have been deceived It involved private companies and it was a shock, and the problem is that the private sector or private companies, when any corruption or manipulation occurs by the government sectors, spreads this information to all its peers to warn them after dealing with these departments or agencies, as well as greed or launching in a very violent way for government sectors to control Electronic services and to be owned by the state, this is a very strange thing, meaning that ministries and governments are the ones that have the right to provide electronic services and no other private body, civil society organization or civil assembly has the right to provide electronic services, and this is considered a problem in the legislation of electronic services Basically, because it is not clear who is responsible for providing these services.

For example, the Ministry of Communications says that it is the entity responsible for providing these services and has the executive regulations for electronic services, which prevent any entity from providing any electronic service unless it obtains a license from the Department of Electronic Services from the Communications Commission.

Likewise, the problem of preparing committees to provide an electronic service, for example, for a service that is intended to be launched after 3 months, because the service will last for a year or two, and then it expires like any electronic service. Forming committees is the first thing that government agencies do, and the committee's goal is to

continue for as long as possible and members The committees are given bonuses, and the private sector remains at the mercy of the public sector to approve the committee.

Regarding successful electronic services, unfortunately many electronic services were launched but failed, including:

- Corona vaccine appointment booking service has failed.

- Passport photocopy service failed.

As for successful services:

- The service of issuing a certificate of immunization against the Corona virus for travel, this service succeeded and until this moment is considered successful.

- Excellent services and there are administrative resistance from within, such as:

The service of issuing a criminal case or a certificate of innocence from the Ministry of the Interior. This service has been in existence for more than a year and three. It succeeded, but it suffers from resistance to change in some administrations. For example, the Tripoli administration does not want to respond, and the reason is the 5 dinars price for issuing the certificate, but it managed many such Kufra, Sabha and Benghazi are considered very successful, and you only need to provide your information online.

In-house services:

Security inquiry service about cars, issued by the Documentation and Information Department of the Ministry of Interior and its director, Ballou, and this service was issued three or four months ago, security men can inquire about cars in less than a minute using pictures and license plate numbers in cases of theft and others, but unfortunately this service Facing problems of lack of funding, but still continuing.

Other services:

The digital transformation issued by the Attorney General for all prosecutions, as the Attorney General imposed the use of the internal network in all operations, inquiries, and correspondence.

National database.

The central banker is at the service of heads of families, inquiring about them and requesting them.

The reason behind the success of some services is due to the presence of strength and will behind these services, such as the Ministry of Interior, the Attorney General, or the Central Bank of Libya, which are devices that are considered frightening to our employees, and there are penalties such as imprisonment or expulsion and lack of mercy or cruelty in implementation, the rest of the state institutions unable to carry out such penalties.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, there is no leadership and management that understands the concept of digital transformation in all its requirements and details. What calls himself a leader is not committed to time and most government agencies use e-mail such as Yahoo or WhatsApp to communicate and send very sensitive information. And in the event of any problem or breakthroughs, you will not find one of the current leaders to respond. The absence of effective leaders is one of the reasons for backwardness or lack of progress in the issue of digital transformation.

Regarding the organizational culture within government agencies regarding the acceptance and implementation of e-government initiatives, unfortunately, this issue is currently floundering. State institutions are wrestling with each other, and departments are not cooperating with each other. In addition, they prohibit each other even in legislation, such as Public Domain Information, which It is considered general information, but they keep it to themselves. Also, the important statement for some parties is prohibited from others.

There is a lack of cooperation between institutions and departments, for example, the Minister of Finance comes with the Minister of Social Affairs to disburse the grant, and waits until a committee is formed, after which the committee chooses an executing company, and does not specify the expenses and dues of the company to any party, whether it is from the financial or affairs Social, and then the project is transferred by a ministerial or administrative decision to the Information Authority, which does not have a budget for implementation. Some parties have the ability to stop other parties from benefiting from any electronic services, for example hosting on Data Centre or cloud services , for example at a university Tripoli There is a Data Centre and it is considered the property of the university only and is not owned by the Libyan state or owned by the Ministry of Education, while the Minister of Higher Education and Scientific Research circulated a dilapidated system designed by amateurs in the city of Sabha to all universities and was called the Unified University Number System, which is a system full of loopholes and was A graduation project and the minister admired it, but unfortunately the minister does not have any technical background. When we sent a security report

regarding the system and its vulnerabilities, he did not respond to it and considered us enemies of success. In short, our leadership is unfortunately in conflict, in ignorance, in ignorance. I see that if there is a strong will for change, change will take place within months.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, budgets are released, but we have not seen anything in the past. For example, the Ministry of Social Affairs requested a budget of 140 million dinars to prepare the Data Centre, but I do not know if it was approved or not. There is also a decision to allocate 87 million euros to set up a data centre for the Information Authority, but it was stopped. There is no clear government support strategy or clear coordination of the digital transformation process. I also found those trying to benefit from the assistance provided, such as the Audit Bureau and the USAID. They are used in preparing the strategy, training, and some programs such as Information and Auditing. There are attempts to benefit from international programs from those who preceded us in knowledge.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, I believe that time is needed to solve the current problems and bottlenecks, such as connectivity and legislation that limit and do not bless digital transformation, as well as the dispute over authorities on the part of the current authorities over who leads the digital transformation in the country.

We need time for digital transformation, and even if there is a rational leadership today and it starts, we need a period of no less than months and maybe a year to resolve previous bottlenecks or previous legislative mistakes from publications, regulations, drafts, and laws.

For example, the Cybercrime Law is very contradictory to the digital transformation project, such as preventing encryption, privacy, and others. I do not see that the Libyan state is ready, but it is all initiative and immature attempts. Regarding the extent to which political stability or instability in Libya affects the adoption and implementation of e-government initiatives, it is very effective. Political stability in 2021 had a very significant impact on the development of all government sectors. In addition to the lack of division, which in turn causes problems as well, for example, there are two parties, east and west, or two departments. The absence of political division and the existence of political stability pushes the wheel forward. Regarding the legal framework and regulations related to e-government in Libya, the issue is relative, for example:

- The Cybercrime Law is very harsh in terms of penalties and makes anyone think more than once before starting a project.

- Electronic Transactions Law, which supports digital transformation.

- These laws were issued in late 2022.

There are also:

- Implementing regulations of the Telecommunications Law

- The National Cybersecurity Strategy issued by NISSA NISA - The National Authority for Information Security and Safety.

Also, the General Authority for Information issued in the previous period:

- National strategy for government data governance.

- Data Policy Manual.

- National strategy for government digital transformation.

Unfortunately, all these actions are individual from each party and were issued in an urgent manner to anticipate and compete between the parties. The conflict in the process of issuing regulations and laws is not in a harmonious way between the parties, as Parliament does not respond with others, and the bodies do not discuss with each other, and this causes legislative confusion.

Regarding external pressures , which affect the adoption of e-government services in Libya, there are USAID projects so far that are the best projects , especially with the Audit Bureau, where a plan was developed to implement digital transformation over a period of three years to cover the needs of digital transformation and the Audit Bureau, and a framework was defined Legal as well as providing sufficient expertise for the Audit Bureau to enhance its strategy, and now the entry of all documents has become electronic as well. An application has been programmed within the Bureau, but when they tried to link up with some other government agencies such as the Central Bank, agencies, ministries, etc., they encountered reluctance from those parties, but With the diwan's awareness, the situation improved a bit.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya? I cannot judge, but it differs greatly on the environment in which the employees are. For example, the employees of the

Telecommunications Holding Authority and its companies are very happy with the digital transformation because they are more aware, in contrast to the employees of the Communications Authority, as you find them less consciousness. The reason for this discrepancy between the entities is the environment that incubates the digital transformation process. Is it an environment that develops the technical awareness of the employee using modern tools that keep pace with the world? Total reliance depends on the entity.

The citizen is very thirsty for any electronic service, and I see that the citizen has overcome the government, agencies, and ministries in his use of technology. Today, citizens use the latest phones to use some specific programs that help him in his day, and he is asking agencies, ministries, banks, and companies to provide applications on their phones that provide services to facilitate their daily lives.

For example, when the Presto-Eat food delivery program stopped working for two weeks due to the fuel crisis, there was a huge uproar due to the delay in requests due to the lack of fuel, and this is evidence that citizens are ready for any program that provides electronic services.

Regarding the ease and ease of access to the current e-government services in Libya, most local applications use international standards, such as reducing the number of icons and details within applications to facilitate the process for citizens outside cities and rural areas, among the simplest applications. Banks that do not contain a fingerprint in order to simplify applications in general, and this simplification is intended to take into account citizens.

I see that the aspects of access and ease of use are very good, while the availability side has some problems, such as the interruption that we previously talked about in the LTT company. This interruption affected banking applications as well as other applications that do not work, and this is not a problem of the citizen, but rather a problem of the government or the other party.

Regarding specific efforts to improve the usability and accessibility of e-government services in Libya, there are many different efforts, but their accessibility and success are questionable because they are scattered efforts and will not reach a real result soon.

Regarding the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, the citizen did not feel a defect in the electronic service provided but felt a defect in the product itself. No one complained about the electronic service that was provided, whether in the wife and

children, or in The grant of heads of families and others, passed very smoothly and simply. I see that the citizen did not reach a stage of trust and mistrust. Things were so smooth that the citizen did not expect that it was an electronic service.

Citizens' opinions are not technical opinions, but rather he bases his opinion and judgment on the product as a whole that is provided by the electronic service. For example, the criminal case, which is 100% electronic, has a very good reputation in Sabha and Benghazi, while Tripoli is not, because the Tripoli administration is not cooperative, and this leads to a problem, which is not a technical problem, but rather a management problem.

Regarding stakeholders when it comes to e-government in Libya, they include:

- The General Information Authority is very much considered one more.

- As executors, the Telecom Holding - Digital Transformation Projects Committee

Within the sectors and each sector for a unit, such as the Audit Bureau, the Misurata Free Zone is very large.

With regard to strategies, Al-Balouris tried to unite the quality of all managers of information technology, documentation and information in ministries and agencies, but unfortunately individual work in Libya is dominant and every party wants to work alone.

Regarding the initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, the ESCWA initiative is the only initiative issued and I have heard of it, but it has not been approved yet and is still proposed. Regarding the main motives and obstacles to the implementation of e-government in the State of Libya, the most important motives are:

- Ease of procedures.

- Disclosure and transparency.

- Easy access to information.

The obstacles are:

- Resistant to change within government institutions.

- legislation.

Interview Code 11 Translated to English

Regarding the current situation, not the current situation of the information and communication technology infrastructure in Libya, the main problem is that the existing institutions continue to work with the old mechanisms , they are still using Dedicated Service And BBS , I do not think that organizations have entered the world of virtualization in a big way, even the idea of having their own cloud service or an infrastructure based on the cloud , such as what is found in the Gulf countries and Saudi Arabia, where the data centre was built entirely on the cloud of the government.

This is something that greatly helps in the Deployment process And continuous delivery/continuous deployment or what is known as CI/CD. Unfortunately, all technologies are considered outdated. In order to be able to work with one of the large parties, you will have to use a VPN. and Remote Access And there are those who still use FTP or what is known as the File Transfer Protocol, and this technology is considered to have expired for how many years, and for me personally, this technology has ended. All technologies are old, and at the same time there is still a problem that the institutions that I have dealt with until this moment suffer from Drop in Connection or a sudden disconnection due to network problems.

The illogical idea, or at least from my personal point of view, why do you have a Data Centre or Infrastructure that needs to be monitored periodically, hour by hour, estimating the proportion of the System, Network or Services, which leads to problems in the services. Personally, I do not have experience in the field of Infrastructure, but what I know is that I have a system affiliated with the Dar Al-Iftar Foundation that has been working smoothly since 2019 until today. It did not stop even for one second, and it stopped only once, and it was caused by non-payment of financial dues only, while other systems that I dealt with it in the government sector, it almost periodically crashes System Down.

Regarding how the level of ICT literacy affects public sector employees and citizens, it is considered very weak, on an approximate scale of 2 out of 10. The two categories are weak in terms of ICT literacy and have reluctance, especially non-technical employees.

For example, the marriage fund and the marriage grant experience. They have three systems, one for archiving, one for studying social life, and the last for announcements and news related to the institution, official papers, and regulations. Unfortunately, not all of them are used while all of them are Up Running and everyone has the background on how to use them, but None of them are used, the preference is still to use the WhatsApp application for messaging, and at the same time they still continue to use the traditional

archive despite the existence of electronic archiving, I think only three or four documents have been archived.

As for the citizens, I think that they are the most willing group and wish that technology be used in all services , but unfortunately previous experiences work to kill this solution, especially the previous banking experience, which is represented in the crowding of citizens to banks for hours, and that is only with the excuse that the electronic system does not work and to Today the origin of this word is not known .

The citizen has become reluctant to use technology, based on his previous bad experiences with the government sector, especially the experiences of citizens in the older age group. They always hate the idea of technology for the reasons I mentioned, because in their view the system is always stopped and disrupts their work, and there are always errors. their words. In short, there were not enough excellent examples to encourage citizens to go digital.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, there is no real compatibility. I try not to be too negative, but I ca not. From my point of view, the engine of digital development and transformations in Libya can currently be the banking sector. Unfortunately, the banking experience in Libya is bad. Providing good applications is not difficult, nor is providing an excellent service for electronic payment, if these services are provided with 100% quality, such as Turkey. For example, citizens will involuntarily begin to demand that other services follow banks. Very poor applications, and everything is considered poor. The end result is a very bad experience for citizens. You can see that, today I visited the bank and found dozens of people asking about the balance in their accounts. I mean, imagine a person who came to the bank to know the balance of his account.

integrated solutions. The only system that I personally developed, and I will be a little neutral is the marriage grant. Actually, everything was electronic. I do not want to say that it was a digital transformation, but from the beginning of the service, from registration to linking. With the civil registry to preparing lists and printing certified deeds until the day the person receives it is a completely electronic process, I think the only non-electronic part is handing the deeds to people, which was claimed to be an RTGS transfer or Real Time Gross Settlement but was not approved, this is the experience The only one, while the other experiences are characterized by the presence of human intervention to a large extent.

Another example is the youth loan project system. I believe that the loan system took place in slightly more difficult conditions than the marriage grant system, and its

requirements were greater, to the extent that they were unable to link it to the national number system, and of course this led to the presence of many incorrect data. In addition to the process of completing the rest of the operations manually, for example, one million and two hundred people were registered in the system, and they were transferred to the authority in order to complete the process of revising the data, which in turn led to the selection of only 600 thousand of the correct data, and then the 600 thousand were sent in paper form to the municipalities for verification I mean, the registration stage was electronic, and the rest was manual, until the approval stage was manual, and from here the process went wrong.

Also, the experience of granting wives and daughters was excellent, and it saved citizens a lot of time, and it was developed in partnership with the private sector by the Libyan Spiders company.

from The most important reasons for the success of all the systems that we worked on, we focused on user experience and customer experience mainly, and not just designing and delivering a system, as I was active in the groups concerned with the marriage grant on the Facebook platform , and I was directly supporting citizens, and if I found someone complaining that he registered and did not receive confirmation I used to communicate with him personally to inquire about the problem, and in this way I can solve the problems quickly, and this is one of the points that I mentioned more than once, which is that the gap between the citizen and the executing tax is large. For example, I, as a person who uses the banking system of the Nuraan Bank, for example, the problem of the Nuraan Bank The developer of the system does not know who the service users are. He has not dealt with them before and has not been to a place where the users are located in order to understand their requirements and needs. At the same time, citizens cannot find channels of communication with service providers directly. All that can be done is to go in person. For the receptionist in the bank, and we do not know whether the receptionist recorded the notes or not, and this leads to the possibility of a problem for a long time and no one knows about that, so I think we were closer to the customers in terms of Customer Experience and User Experience, whether it was in Web design or in terms of Customer Flow , in general, in the marriage system there were things that were not required such as printing and lists, which are considered organizational, and this difference is that I was present with them in the place of work full time, I did not hand over the system and just leave, unlike other implementing agencies, in the marriage fund I stayed with them For about two and a half months, full time from morning to evening. I was keeping up with the developments, changes and problems that occurred in the system and the people first, so the problems were solved on a temporary basis and there was no delay.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, if they do not try the technology, they will not do it. The idea is that there is a party in the current government that is forcing them to digital transformation and transferring business online. The motive was not from themselves. All these services that were launched Recently it was imposed from above, mainly if the current government did not impose it, no one would do it, meaning that it did not come under the leadership and orders of the institution itself.

With regard to the public sector, yes all parties, no public agency was an initiative except the Central Bank of Libya, the only ones based on an internal need and it was not imposed on them from above, but rather it was based on a need as they saw technology as a basis and even when the responsible person contacted me or On the Central Bank of Libya project, I acknowledge that the system has made huge differences, for example if a bank is on the verge of bankruptcy or is facing a problem in its Balance Sheet , it will most likely be discovered after 6 months and it is impossible to know it in an instantaneous form due to the large number of paper transactions, as The course used to take a long time to the extent that the fiscal year could end and you did not know that you are bankrupt, but today, with the presence of the system that was developed based on the need and desire of them, they receive information on a monthly basis without any delay or delay for a maximum of 10 days.

Regarding the organizational culture within government agencies, my recent experiences were series. For the savings bank, for example, it was completely smooth, although the bank was a little more difficult than the marriage fund, because the branches were the ones who used the system, as the department is somewhat far away. The work was in the main headquarters and from Then the other branches were connected and it was very smooth. In short, if the employee who deals with the technology feels comfortable in dealing, he will not stop dealing with it, and he will not object to it, but will adapt to it, as well as the marriage grant, the person responsible for it is the financial auditor, his age is approximately 64 years He is about to retire. He is the person who liked the idea of the system the most and became one of its staunch supporters. This is his first dealing with the system electronically, not on paper.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, it is not in the real form unless it is present with the contract concluded with the implementing agency, but if it is not mentioned in the contract, they will not perform it.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, I do not see that political conflicts have an

impact on that. The delay in budgets was not an influencing factor since the financial value of digital transformation operations is not high compared to other expenses. Actually, anyone can do it. If he had the desire, any party can be 100% electronic if it wants to, but the problem is with the parties themselves, as it is not one of their priorities or plans. But personally, I did not see that political reasons are a reason for the lack of development. It may happen in one or two ways for reasons Unknown, but most others are not.

. Regarding the legal and regulations related to e-government in Libya, I do not see any laws, but what I know as information and I do not know the extent of its validity, is the lack of recognition of electronic documents and transactions as a real document, for example the marriage fund despite the existence of a system, but in the end, they had to request files from each person.

Regarding external pressures and international or regional initiatives, they exist, but there are no realistic results.

Previously, there was a UNDP project related to employment, and it is clear that the project was large with the participation of many ministries, and it was an integrated project, a complete employment platform, and there is also employment information in Libya and many other things, I do not remember them completely, but it was a huge project, and this The only international project I saw. Maybe there was another project, and I'm not sure, and it was related to the old city, but I don't remember that the project was related to citizens, I think it was related to heritage issues and so on. But other than this, I did not see anything international. Pressures related to money laundering and the Central Bank of Libya, but I do not have any details.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, any non-technical employee will mind the issue and see it as a new headache, unlike department managers! All and share data between them, and reports arrive in real time, although they have absolutely nothing to do with technology.

Regarding e-government services, which have contributed to raising efficiency , for example the service of the Central Bank of Libya, which is a platform for collecting financial data from commercial banks directly, for example treasury balances are sent on a daily basis, financial centres are sent on a monthly basis, etc., this system It helped a lot, and I am sure that the reports extracted in the last period were extracted quickly thanks to the presence of this system.

The marriage grant platform also had an impact. In one of the meetings with the State Audit Bureau, it was demanded to check the data directly, and this was provided on a daily basis. Here, technology had a role in achieving transparency and meeting the requirements of governance required by the State Audit Bureau. Regarding the influence of societal norms, peers, and superiors on the adoption and use of E-government services are between public sector employees and citizens, so I do not think so. As for citizens' confidence in e-government services, trust exists, but it is not strong. For example, the experience of the marriage grant platform. There is still a percentage of citizens who, upon registration, prefer to find a person in the same institution to confirm the registration process despite the presence of a message confirming the registration, but it is always preferable to contact an employee in the institution to confirm the registration.

I believe that the reason behind this is previous experiences and accumulations, for example, the national number system has many errors such as the national number in terms of extracting wrong data or using it by others. The same thing happened with the wife and daughters grant, where some were surprised that their data was restricted by Other people, and I think all of these mistakes require an internal source of assurance that the procedures are correct and ongoing.

Regarding initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, I am not aware of any real strategies. I heard about some initiatives without details.

Regarding the main motives for implementing e-government in the State of Libya, they differ according to the institution. Some institutions, such as the Central Bank of Libya, are interested in raising efficiency at work. Others are only for political and electoral reasons because what is currently happening is the interest only in launching electronic projects, not linking them, or ensuring their sustainability.

Regarding the main obstacles to the implementation of e-government in the State of Libya, the most important of which is the failure to have a real initiative from previous governments. And the absence of strategies, no government has taken the reins towards digital transformation and stopping the current chaos. This is the only obstacle, I think, and the rest is no obstacle. I also agree with you. Saying that digital transformation in a large way will result in the detection of corruption, and this is a reason for reluctance in several quarters.

Also, the absence of a spearhead concerned with digital transformation at the government level is considered an obstacle, because in this way we will continue in the same current cycle, and that all future systems will be very poor and not properly studied, and their

quality does not matter, and no one will follow them up. Problems will continue in the absence of a competent authority to follow up. Implementation of digital transformation projects, but the current government institutions do not have any competencies.

Also, the conflict of specializations between institutions in Libya, where I think it is necessary to separate the specializations and include all specializations related to digital transformation under one institution. For example, it is not logical that the Statistics and Data Centre does not belong to a body such as the General Authority for Information, it is not logical at all!

Regarding the absence of a digital national identity, it is problematic, but not significant. The truth will have a good effect, but verification using the phone is still well secured, reliable, and reliable. The main reason for the digital identity is the verification of citizens, the presence of the phone and verification via the phone with the link The phone number with your national number is considered sufficient.

Regarding the fear of penetration, I do not think that this is considered an obstacle. If this mentality continues, you will not be able to accomplish anything, unfortunately, because you will not be fully protected, for institutions and for all countries. If you visit the Deep Web, you will find penetrations of countries much larger than Libya, such as China and others. As long as countries like them are reached, then surely you can be reached, but we do not say that this thing is normal, but if you put it as an obstacle, there will be no change.

In conclusion, digital transformation needs two things. The first is a strong desire and will, and at the same time the possibility of imposing transformation on various institutions. And it needs a real body with qualified people. There are sufficient human resources, but they are few, and this is one of the problems. They must be gathered in one institution.

Interview Code 12 Translated to English

Regarding the current situation of the information and communication technology infrastructure, it is still below the required level, as it needs investments and funds to keep pace with the rapid development in the field of information and communications. It was damaged during the events and still suffers from a lack of development, maintenance, and manpower development in the field.

and communication technology among public sector employees and citizens greatly affects the adoption of technological services.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, unfortunately, it is still lagging behind and what is available and offered at the local and international levels does not match. It got worse after the revolution and what is proposed does not meet what is hoped for.

Regarding the currently successful technological solutions, unfortunately they do not exist, and if they exist, I have no knowledge of them, as a result of not marketing and advertising them in the media.

Regarding the currently successful technological solutions, unfortunately they do not exist, and if they exist, I have no knowledge of them, as a result of not marketing and advertising them in the media.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, there are individual initiatives by some companies and government institutions that do not amount to the digital transformation that the world and even some Arab countries are witnessing.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, Libya is one of the first Arab countries to engage in e-government and hold many seminars and conferences for it and write several scientific theses, but the country's political and economic situation negatively affected the establishment of e - government , but all remains Something is possible thanks to the determination and determination of its youth, the experience of its members, and the availability of the available financial resources, if they were used in a better and transparent manner.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, it is very limited in light of the current circumstances, due to lack of investment and lack of education and training.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, it is certain that the country needs political stability to move towards building not only in the field of e- government, but in all fields.

Regarding the legal framework and regulations related to e-government in Libya, at the level of legislation, the country needs legislation that keeps pace with the scientific and practical development in the field of information and communications in order to develop clear and developed policies that keep pace with the establishment of e-government, as well as the available legislation that needs updating and development.

Regarding external pressures, such as international or regional initiatives, affecting the adoption of e-government services in Libya, this is certain, even at the local level.

With regard to the perceived benefits of e-government initiatives for public sector employees, government agencies and citizens in Libya, the countless benefits that the public and private sectors and citizens will reap from the establishment of e-government, starting from the availability of statistics and ending with services: (electronic passports, entry and residence visas, electronic payment services E-employment and identification of job opportunities, issuance and renewal of licenses and licenses of origin, signature validity services, memberships , chambers of commerce, building ownership and rent, car change and renewal, security services during travel, hotel, travel and tourism reservations...etc.

Regarding examples of e-government services that have been particularly effective in improving efficiency or transparency, an example is the Civil Registry Department, which has greatly facilitated access to civil status documents, the Social Security Fund.

With regard to the ease and ease of access to the current e-government services in Libya, the marketing of these services and the training of citizens to benefit from these services is limited by all available means.

Regarding efforts to improve the usability and access to e-government services in Libya, these are very limited initiatives and are not advertised as required.

Concerning citizens' trust in government digital services, they need legislation and marketing so that they can be trusted and approved.

Regarding the stakeholders, there are many scientific associations whose goals are to spread knowledge and information awareness in society, including the Libyan Association for Libraries, Information and Archives.

Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, it is almost non-existent, and if it exists, it is very few. The knowledge-based economy must be adopted.

With regard to initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, there may be some initiatives, but I am not aware of them, and if they exist, they will always remain below expectations.

Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, there is no room for discussing the motives for the establishment of e-government, as it has become an urgent necessity, as it is an obligatory requirement, not optional. As for the obstacles in Libya, they are many, the first of which is the lack of investment in the technical and human fields, education, and training. Also, political, and social stability.

Interview Code 13 Translated to English

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, it is good, the quality of the Internet is good, citizens because of social networking sites, its use for filtering has become common, as for government services here, there is a problem and lack of basic things if any Talking about electronic government, there are no ingredients currently, but if we talk about the network infrastructure, it is considered reasonable even if it is old, but now most of the uses are on the mobile phone, there is no dependence on the fibre, most of the communication is Wi- Fi .

Regarding the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, the use of employees for personal use exists , but the use of technology at the level of work does not exist except in certain institutions such as oil companies, which are also some but not all, there are no systems within institutions Computers are connected to each other, so that computers act as a tool for storing data and printers only, and therefore if the Internet stops in one of the institutions, it will not be affected at all, because they depend on paper work.

Concerning whether any innovations or technological solutions were successful in the context of e-government in Libya, the talk about services has it succeeded or not. There are services that were proposed and assumed to be electronic, so there was no other option for the citizen, such as the subject of loans, so this service will succeed because there is not Another way to take advantage of it. It is true that there is prejudice to citizens who do not have access to technology, but there are several other points of view that justify this. Everything has advantages and disadvantages, but when you see that the Internet makes it easier for you, technology gives great solutions such as centralization in Libya, that Be anywhere and progress wherever you are.

Regarding the role of leadership and administration in promoting the adoption of e-government in Libya, the senior leaders in the country, especially the last government, clearly notice that when all things are digitally transformed, their resonance is much greater and their success is easier, so it is clear that they are very focused on this thing , they feel that This topic comes more important to the follow-up and ability of people than any other methods, so they support and care about it.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, all institutional leaders are interested in this issue, such as banks or oil. Digital, but the capabilities are not available, they are not

decision-makers, there are institutions whose leaders do not have a will even if the desire is available, the possibility of support for the institution depends on the relationship of the head of the institution with the leadership of the government.

Regarding your assessment of the readiness of government agencies in Libya to adopt e-government initiatives, institutions in terms of human resources must have internal and external cadres as well, but there is a problem that external cadres can leave and work stops suddenly, but on a national level there are companies that work with good quality but not Stables to rely on in this work because they are people, certain names and they can disappear at any time and they do not have long experience, but there are no stable companies to provide these services, so we are not ready for digital transformation in this regard.

We have 2 basic departments within the Information and Safety Authority, each department has four departments, each department has two people or one person only, who have previously sought help from With employees, but with salary problems and others, they leave work, and we cannot compete with private companies because they get privileges that we do not have.

Regarding the extent of the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, it is the reason for everything stopping, the budgets that are spent only for the conduct of business, while the transformation requires very large budgets, and the division of departments is very affected by the political instability, but the digital transformation helped Very much on the issue of division, because there are things that cannot reach the other party except through the number , but the issue is very thorny.

Regarding the discussion of the legal framework and regulations related to e-government in Libya, recently, regarding the cybercrime law, there is a specialized department within the Ministry of Interior that specializes in holding citizens accountable, but our job is like that of an audit office. Such as things that violate norms and public morals, and this is found in all laws, not only information laws, and Libyan laws are loose and can be manipulated a lot. The law is issued as a violation of norms, but it is not given much attention. Penal laws do not have an executive regulation, but the cybercrime law is correct and very good.

Concerning external pressures, or international or regional initiatives, that affect the adoption of e-government services in Libya, they are there not pressure but rather motivation, helping and leading with their evaluation criteria, in order for us to work on our shortcomings in order to develop our work and implement our projects as much as

we can, such as the issue of laws that we worked on And we adopted it, for example. They give us a standard to work with. There are international initiatives, for example, a project undertaken by the European Union regarding the commercial registry. I also know more than one institution that they provided support to, and the International Organization for Migration provided a system for the Ministry of Interior to work with and more than one project that others do not attend.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, I see that there is more reluctance than employees, which happens that even when digitization occurs, it remains dependent on employees more than technology, because employees evaluate themselves by the amount of people's need for them, so there is no They welcome it very much, but the owners of leaders and institutions want digitization to facilitate work for them, for example, banks do not know why digitization did not succeed much with them and they go to it with harm even though they do not face the problems that face other sectors, companies that have developed digitally are very simple, digitization they resort to resort to pressure only . As for citizens in general, I feel that people accept it, but there are people who oppose it. The majority of people benefit from it, especially with regard to the issue of the budget. There are people who never go to banks with the presence of electronic payment cards.

Regarding the ease and ease of access to the current e-government services in Libya, for example the issue of electronic cards for payment, I see that there is a big problem because people fill in the password on the employee, although he is supposed to write the password alone, but what caused this problem is the inferior quality These services force the citizen to dictate to the employee the number in order to repeat the attempts a lot until the communication coverage comes, so the process is not smooth and it is difficult to rely on these services.

Concerning societal norms, peers, and superiors to adopt and use e-government services among public sector employees and citizens. With regard to services, I do not think. On the contrary, socially, there is no objection to this issue. Only sensitivity to social networking sites, given that we are an eastern society, there are two types of services, a grant that is your right. As a marriage grant, for example, yes, he trusts you in this matter, but as a service that depends on choosing the institution itself, such as the subject of loans, the institution will choose who it will give here. There is no trust, they have confidence in the technology and there is no confidence in the institutions themselves. There is great confusion in government institutions when Talking about paper transactions even if the process itself contains technical parts.

Concerning the stakeholders when it comes to e-government in Libya, they are the Presidency of the Government, the General Authority for Information, the Ministry of Communications, and the Telecommunications Holding Company, as well as advisory bodies such as the General Authority for Planning or the Supreme Council for Economic Development.

Regarding the initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya, there are initiatives that have been implemented such as the government bidding platform, we started working through it, cleaning companies from the beginning of the year through this platform we dealt with them as well as any purchases and so on, they issued a lot of strategies and laws And regulations, the issue of digital transformation has become popular in the market now, but there is really no application, otherwise there is your question in specializations, which makes the matter not have a clear and explicit leader, and the problem of overlapping specializations is very big, digital transformation has a complete, clear and written strategy, and Libya is paying for millions But it is placed in the communications in the drawer, and only about three people took a copy of it, and you do not know why, but it is all about the will only, the work related to the government is always related to determination and will, in Libya there are only two types of institutions that can work well, which have money And who has the power, only those two types get support.

Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, the motive for the citizen to accept digital services is the lack of an option other than digital service, so it succeeds in Libya because it is the only solution to decentralization in large countries like Libya, so digitization in Libya is a necessity, not an option.

As for the obstacles, the biggest obstacle is political instability. There is no fixed plan. For example, the current government wants to implement projects, but as quickly as possible to use it as propaganda. However, there are projects that cannot be completed quickly and take time to implement. It sets a plan and chooses appropriate human resources, and so on. The current leadership does not look at the time factor. Budgets do not help the time factor.

Interview Code 14 Translated to English

Regarding the values of the current status of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, it is average and below average in general at all levels, even in terms of connectivity and networks, because in Libya even the fibre links are very weak, so the level of infrastructure in Libya, in my opinion, is below average.

Regarding the impact of the level of knowledge of information and communication technology among public sector employees and citizens on the adoption of e-government services, as for citizens, I see that they are more familiar with technology than even officials! This is due to the fact that the children of this generation are the children of technology, which is a major factor in their daily lives, so they always have the ability to learn, and when I talk about learning, I do not mean the education sector, of course! The education sector does not produce any competencies, not in terms of technology or others. As for the employees, this depends on the age group as well as the different sectors. But in any case, if we talk about the telecommunications sector, since it is a sector that must be familiar with technology, then I can tell you that there are institutions where it is impossible It helps in the digital transformation because its employees do not understand anything from the technical aspects, and there are also institutions whose employees are security personnel, cleaning workers and very few technical engineers, to the extent that at first glance you think that it is a security company, and since the employee is a citizen first and foremost, you find him using technology and his knowledge It is limited to social networking sites for all citizens, but it will not add any value to him as an employee or technician.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, yes, there is a partial compatibility, it is partial , but it exists if we talk from the technical side, so I do not see that technology is the problem in the issue of e-government, because technology can be imported from abroad, whether We talked about the software or the hardware , both of which we can import. It may take a long time and large budgets, but in the end, we can achieve it, so I see that technology is not the problem.

With regard to successful government innovations, we have seen the experience of the ordeal of heads of families and the grant of a wife and children, but it is not a completely electronic experience, only part of the electronic process, and as a personal experience when I entered the data, I did not receive the OTP and there is no customer service that you can communicate with, so you find that you are forced to go to the bank alone same.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, the leadership is unable to transform an administration within an institution, so how will it transform a government into an electronic government?! The leadership is incapable of amending anything, and losing something does not give it. Likewise, the absence of knowledge and know-how is a major reason for this inability. In order to carry out the transformation, you must have great knowledge regarding this issue, and also there is no real will for transformation and reform by virtue of the fact that the transformation puts things in their true path and eliminates Corruption facilitates many things, and my talk is not only about the leadership and those in power, but also some of the employees.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, there is no relationship, as digital transformation has become only chewing gum, and if you ask this question to the rest of your guests, I am sure that the answers are very far from each other. Regarding the resources and support available to government agencies And employees to implement and use e-government services, the government spends tens and hundreds of dollars on digital transformation projects, and in response to allegations that the IT sector is the largest sector in corruption, this is incorrect and illogical, each head of an institution has a different point of view, so he can see projects that differ from the one before him And he spends a lot of money in it, but this is for his own vision, and it is not from the door of corruption. Corruption exists, but it is everywhere. Corruption is present from the cleaner to the chairman of the board of directors, and he is the one who controls and controls all sectors.

Regarding assessing the readiness of government agencies in Libya to adopt e-government initiatives, the government is not ready, even if the government wanted it and possessed the magic wand to turn Libya into a paradise of technology. They will not be able to work and coexist with a digital environment that monitors everything accurately, as the country is in a state of chaos and corruption, and the government was mainly established to manage chaos, but there will be no acceptance of electronic government.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, it affects greatly, as the lack of political stability leads to a lack of vision for the government because the government does not exist or exists and is not unified and divided into two and three governments, and all of this leads to a loss of confidence among the citizen Likewise, for example, you as a citizen, why can't you take your national number in a digital way now? Because the data at the Civil Status Authority and the national number system are different, and there is a

case with the Attorney General now because of this issue, and it's all due to the cause of political instability, as there are no fixed and unified government laws and legislations. The government has neither a vision nor an existence.

Regarding the legal framework and regulations related to e-government in Libya, the legal side has never paid attention to the technical side, as there are no real laws on the technical side, even the laws that are issued for the purpose of politicians or those in power wanting to protect themselves from electronic extortion or scandal, etc. Only personal, so you do not see unified laws issued by all institutions. All of them are individual laws issued by one institution and not others.

With regard to external pressures, such as international or regional initiatives that affect the adoption of e-government services in Libya, there are no pressures, even if they exist, they are pressures to complete deals only, and therefore they are commercial pressures that are not political or international. And all US companies that contract With it, telecom companies are not directly, so they are through a Libyan mediator who owns a company that was established a week ago, and so of. Therefore, this type of deals and contracts is considered one of the biggest doors to corruption, and even if there are international pressures and helping hands for digital transformation, this will not work in the absence of Willingness either at the level of officials or at the level of employees. Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies and citizens in Libya, for employees, a corrupt employee will not endorse it and will never see any benefits of the subject but an honest employee who is willing to eliminate corruption and act meticulously In fairness, he would very much welcome these initiatives. If we talk about citizens, I, as a citizen, would like to provide the simplest services that were available to me in the past, such as booking tickets online or obtaining a national number and my registration number. These are the simplest rights of a citizen that facilitate his life and limit even congestion. Regarding examples On e-government services that were particularly effective in improving efficiency, transparency or quality of service, at the present time there are no effective services in the simplest things, but previously they existed such as accessing the national number from the system and withdrawing it with ease, and I personally suggested that we work on these services Simple, such as the national number, and putting a QR code instead of a stamp, in order to facilitate the process for the citizen, but as far as I know, the problem of national numbers in the city of Tripoli does not exist and is common, but in the cities of the south there are problems, forgery, and many problems.

Regarding the ease and ease of access to the current e-government services in Libya, my view of the wife and children grant program is not optimistic, since as I mentioned

previously I had a failed experience with it, I did not find any e-mail to communicate with it to understand the error or a specific number for the error or any information that might It states that knowing what happens during data entry only gives a notification that there is an error, so I do not see the actual existence of services. Regarding specific efforts to improve the usability and accessibility of e-government services in Libya, no, I do not see any efforts to develop these services or systems. Regarding the impact Societal norms, peers, and superiors call for the adoption and use of e-government services among public sector employees and citizens, never. Otherwise, society would have rejected all social networking sites. In terms of whether the citizen trusts these services and their outputs, they have no choice. If these services exist, the citizen will use them and be happy. With regard to the services that are only available online and no one can apply for them except digitally, such as the marriage grant, I do not have a great idea on this subject, but it is apparently successful, and I do not think that there is a person who does not have the ability to be online, even if only outside the home. Libya is considered very good in providing communication, and we are not talking about the quality of communication, I am talking about someone who needs to send something online. You can do that in Umari, for example. Regarding if there are certain groups or individuals within the government or society who work as advocates for government initiatives e-commerce in Libya, the stakeholders are the citizens, they are the people who can benefit the most from the digital transformation, and the main responsible for achieving these services is the government, including the legislative institutions, whether the House of Representatives or the Senate, but within the framework of a general vision of the Libyan state and the role of technology that can To make it in the development and stability of the country, the huge geography and the very simple population, in the event that it is not supported by the quality of technology that provides services to citizens and residents. Then the issue stopped, why did it stop? We do not know the possibility that the system stopped, or that the technical engineer who worked on the issue did not receive his money, or the company did not receive its money, but it is certain that they are not present today, because the issue has to do with a comprehensive vision for the Libyan state, even in its economy and even in Its security, the borders of the Libyan state cannot be protected by traditional means, so it must be protected technically, so I mentioned the issue of residents previously because the number of African residents is increasing very dramatically and without any statistics, even for future planning you will not be able to predict how many Libyans will be and how many residents will be in the future Even institutions, for example, who are fighting in the telecommunications sector, the issue started as if the conflict was fabricated to spend budgets, theft and corruption only. This is what I see and what it seems to me.

Regarding the main motives and obstacles for implementing e-government in the State of Libya, understand the motives: Developing the country's economy, at the level of citizens

and the private sector, as the private sector is very influential even on political decisions. It is supportive and you may see achievements taking place on the ground, because in general it sees digital transformation as a threat to it. The private sector, even at the level of medium or small companies, sees it as a threat, because the mere existence of any application or any system that clearly threatens its income, it sees as a threat from taxes, for example. Taxes imposed in Libya, how much of them are paid? Comprehensive or partial digital transformation in some sectors. Some stakeholders with this sector see that taxes are the major problem with digital transformation because they believe that you can know their income and thus you can impose taxes on it. For example, I wanted to set up a project, or I want it related to health matters, and another project related to wedding halls and they are not related to each other. It requires that they enter data on the number of patients or the number of visitors or reservations. The answer will be in the negative because this will enable the state to determine the income and thus it will be able to impose Taxes, the issue is very thorny and has great impacts, and officials are not exempted from responsibility, because the presence of a real government on the ground will produce an electronic government, and digital projects can be created by the government only as electoral propaganda, such as the subject of a marriage grant, and such a project can only be established digitally Because it is a project that includes all of Libya. If my number is not there, it will not reach the East and others.

I am about the obstacles: corruption, the political situation, and the human cadres that we will need while working on transformation, and the permanent development of cadres. Do we have cadres that keep pace with the labour market? Our education outcomes do not correspond to the outputs of a digital transformation market. The reason for the superiority of the oil and telecommunications sectors in terms of digital transactions is because they are two self-financed sectors. Telecom companies have a financial abundance that makes them able to experiment without an accountant. Other public institutions, in order to try simple services, must obtain a long series of approvals, and this is not found in the telecommunications sector in particular. But what did they do in the end? They failed to provide a "program" application for the average user, and this is partially present, so there is ease in decision-making, financial abundance, and there is no accountability, and they did not provide much despite that.

Interview Code 15 Translated to English

Assess the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives. First of all, this is the most difficult question because the infrastructure or information technology in the ministry is considered the main problem in digital transformation and in all Libyan institutions, because the issue of infrastructure is the biggest obstacle to Now in digital transformation, it can be evaluated compared to some other institutions. It is considered good. We have success experiences in digital transformation, but as a very bad infrastructure, because the decision-makers related to infrastructure always have a fear of establishing good infrastructure in the Libyan state institutions, and this is the problem. The mentality itself must be changed.

With regard to the systems, we have a system at a simple level, the archives, the communication between the departments does not exist, for example, an internal system that links all departments or offices does not exist, the Internet is not connected, a primitive infrastructure, and speaking of the entities affiliated with the Ministry of Economy, they have a system or the commercial register, but they are not linked to each other Also, so the infrastructure is very rudimentary as of now.

Regarding the impact of the level of knowledge of information and communication technology among public sector employees and citizens on the adoption of e-government services, they are not aware of this development in the first place, even when we established the archiving system in 2009. Secret, so that the mail of the system can be used, but we had to deal with the assistants and not the heads of the managers, except for two or three managers who deal with the system directly. Their lack of knowledge of the rules for using these systems is what is missing. To complete, the human element is missing, only 10% They have knowledge of technology, and this is due to the person's own efforts, even when replacing an employee with an employee, new ones are not trained, and these things cause a shortage for citizens: as citizens of generations, like the younger generation, blessed be God, they found these technologies in front of them, there is a response and interaction with any technical initiatives that were undertaken The ministry or other parties, by virtue of that they found it in front of them, we believe that it will be more knowledgeable among citizens, and the percentage of young people in Libya constitutes more than 50%, so the aspect of knowledge of citizens is not an obstacle at all.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, honestly, we worked on many platforms, the work was Libyan by more than 70-80%, and we saw other ministries and institutions that took initiatives that

were 100% Libyan work, so the capabilities currently available can Relying on it, even the technical offerings that they made us realize that there are cadres that we can rely on in the digital transformation in Libya. If I want to implement any initiative of the Ministry of Economy, I will find in the Libyan market someone who works on it as 100% Libyan cadres, and I will not have to go abroad if it is This purpose, so far, the capabilities cover the need, because the need in itself is not huge or exceeds the capabilities of the Libyans. Regarding the existence of any innovations or specific technological solutions that were successful or particularly difficult in the context of e-government in Libya, the innovations are not comparable to the neighbouring countries of the Secretariat, But with regard to the public sector, there are some platforms such as the Marriage Facilitation Fund and its systems in the civil service and national numbers, and the application of the government citizen service. There are solutions that facilitated services for the citizen. We must develop more and more, but there is preliminary work, as well as a platform of procedures that we worked on. We tried to create even a seed.

. Simple in digital transformation in the government sector, and we do not talk about the private sector because the private sector has outperformed and preceded the government sector. There are capabilities and services in the private sector that are not available in the public sector, but we failed because everyone is trying to impose control on projects, especially when it is mentioned that this project is funded by the Union But we came to the conclusion that the ministry is looking for two platforms of its own, and we explained how to use these platforms, and we motivated other parties to start trying to digitally transform, and the issue succeeded after we were alone with it . It is political from the government that all parties claim the desire for digital transformation, but on the ground, there are no signs or attempts. Electronic payment methods were not implemented by the Central Bank of Libya until after Corona, so the transformation initiatives have no continuity except for the work that we launched, and this is not our words or judgments, but rather Provisions of the competent committees.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, everyone talks and says we want digital transformation because this is popular, but no one knows how to do that, because the issue of digital transformation must be from the ground up or from scratch, you will see how ready you are for digital transformation, what things What you will digitally transform, here is the big problem, the manager talks about that he wants to digitally transform the organization, but he does not have employees to digitally transform the organization, and all parties when you try to communicate with them are answered that they want to work on that separately, because there is no integration, the only thing we succeeded In it, we gathered all parties and made them work in a team spirit, and the reason behind the managers' desire for

digital transformation and talking about it among them has become popular because they see how the world has changed, and they see the impact of digital transformation on the citizen and the government, but he does not have the ability or capabilities to implement it, despite the success of some banks in systems and transactions They see this as popular and want to apply it, but the reality says that not everyone has the ability to achieve this. If leadership does not have a vision or desire for digital transformation, it will be an obstacle. Leadership is one of the most important factors in digital transformation, and we agree with Mr. Musa in his words 100%.

Regarding the organizational culture within government agencies with regard to accepting and implementing e-government initiatives, the organizational structure is the biggest obstacle, because there is overlapping tasks and specializations, such as information and documentation centres. There are centres that work with us under the General Authority for Information and Documentation. He is independent. What does he do here in the Ministry? We do not know anything about him working alone. Even when the commercial registry wanted to work on a system, on condition that they provide them with a system and control it without interfering with it as a commercial registry! This love of ownership is due to the mentality possessed by decision makers.

Concerning the resources and support available to government agencies and employees to implement and use e-government services, recently, a digital transformation committee was assigned in which the vast majority of people have nothing to do with digital transformation, and there has been confusion among all parties for four or five years regarding who will implement the proposed projects, and in order to complete what we started At that time, we left him , and it took four years! Overlapping specializations and the love of possession in order for something to spoil everything. We made a lot of efforts and initiatives for digital transformation, but we failed for the same reasons, but digital transformation is an obligation to communicate with the rest of the other world.

Concerning political stability or instability in Libya was raised on the adoption and implementation of e-government initiatives. Yes, it is a large part of course. Political instability will lead to a lack of financial support and the disbursement of budgets for this issue. The division of budgets but makes any of the two parties interested in spending budgets for digital transformation. Regarding Discussing the legal framework and regulations related to e-government in Libya. Regarding the laws, they were appropriate. All the laws that we needed to issue were issued, such as the Electronic Transactions Law, in addition to the regulatory regulations for bodies and institutions, which gave us space to work with great comfort, before the issuance of the Electronic Transactions Law was an obstacle, but the Corona pandemic I accelerated the issuance of these laws.

Regarding the existence of any external pressures, such as international or regional initiatives, that affect the adoption of e-government services in Libya, foreign organizations want to support them, but the internal ones refuse, seeing that all these initiatives affect national security, espionage, etc., the mentality of fear of foreigners is very dominant Some institutions implement initiatives and receive international support, but we have a problem with the full vision. Very few institutions accept this issue, although the few institutions are very sensitive centres, but they cannot work alone.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies, and citizens in Libya, this is difficult, because employees are not equal. There are employees who want it because it will facilitate and speed up their work, and there are others who see it as excessive nonsense and prefer to work on paper and traditionally, because he goes to banks and receives a lot. "The system is stopped." He believes that if the work was left without these systems, the process would have been easier. This is a lack of knowledge, and also one of the ideas is that the employee wants to dominate the entire work, but this depends on your choice of employees during the digital transformation. Who are you trying to develop to take advantage of the transformation? Digital and who does not, because he basically has no desire to transform digitally.

Regarding the ease and ease of access to the current e-government services in Libya, all the problems did not occur in the system itself, even when designing we take into account the ease and clarity, but the problem is on the Internet, as there are areas that do not support Internet services in order for you to download the system and access it.

With regard to the benefit that I provided to some platforms that the government is working on in granting children, granting wives, and so on, in which many bodies and institutions overlap. I am one of the people who used to receive this grant from a bank outside the city of Tripoli, and I transferred it to an account in the city of Tripoli, such a procedure in The former may require a long time or mediation, but without exaggeration, in only one session, I applied the conditions for verifying my identity, which must be in any electronic platform, and I changed the bank, and the procedure was completed successfully. A citizen in the past could need a lot of his time and effort, so these successful experiences Which is considered simple, but we can build on it and use it as a promotion for the idea of digital transformation.

Regarding the impact of societal norms, peers, and superiors on the adoption and use of e-government services among public sector employees and citizens, we consider the idea that the government's launch of an initiative and gaining people's trust is one of the biggest challenges for the government, to build a reliable system. Building a system without the

citizen's trust is useless, as it is a point A task that must be taken into account, but there is some confidence in the simple applications that exist. Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, I will talk about here in the ministry. Unfortunately, I have been working here since 2019. We have never received training. There is a major shortcoming in this aspect. This could be due to changing governments and the division of budgets. Therefore, they do not undertake long or short strategic planning, and I am talking about the ministry as well as most other institutions, but of course there are undoubtedly exceptions.

Regarding the main motives and obstacles to implementing e-government in the State of Libya, the most important motives are facilitating the life of the citizen or even the employee. If you are an employee, digital transformation will increase your efficiency, productivity, and many other things. Facilitating procedures, preserving public money, increasing trust and transparency between the citizen and the government. The biggest obstacle is the mentality, starting from the ordinary citizen to the official, to the government. The other obstacle is the Internet, which is not available throughout the country and is not of the required quality, and the technical infrastructure in general, and certainly The security challenge and political stability in general.

Interview Code 16 Translated to English

Regarding the evaluation of the current situation of the information and communication technology infrastructure in Libya, in terms of communications it is considered fairly good, and this is what we have focused on at Al-Madar Al-Jadeed Company over the past years regarding our vision towards digital transformation. In general, the infrastructure has improved with the development of the telecommunications sector in Libya. The absence of a fibre optic network is part of the problem in Libya, which is why we, at Al-Madar Company, launched the Al-Madar cloud service. This is within the company's internal vision of digital transformation, advancing the national digital transformation, and advancing the national economy, and for this reason, the vision of the new orbit was to deal with the rest of the stakeholders to provide electronic services in Libya. Absence of infrastructure due to the government's lack of interest in supporting infrastructure and various services.

As for the provision of electronic services from the public sector, it is not satisfactory at all, and stakeholders should work to improve the matter.

With regard to the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, this matter greatly affects the development and adoption of e-services. Citizens have knowledge of using social networking applications. But the staff is not ready to manage or develop these services. This requires initiatives from the government to work on equipping institutions to develop their services and improve their quality.

Regarding the compatibility of existing technologies in Libya with the requirements of e-government initiatives, in terms of infrastructure, data centres and cloud services, we are ready, especially with the orbit cloud project, and we have cooperated in developing the national database with the General Authority for Information and with the Ministry of Interior and the national number project.

As for software, it is very weak. We need to support the software market and build an integrated environment with the private sector. We need a vision to support the private sector and establish companies that provide software services to the government sector and the market in general.

Software development internally in organizations It is very difficult for the government, because of the general reactionary system in the economy and with the inflation of the public sector and weak salaries, so it is very necessary to cooperate with the private sector, and the government should provide the opportunity for the private sector to develop itself.

Regarding the successful electronic services in Libya, the Digital Homeland project and its complementary projects of the General Authority for Information, and other projects such as the marriage grant and the wife and daughters grant, are all based in one way or another on the national number system. Regarding the proposal for the recent digital transformation strategy, we are part of it, and the current approach was chosen to give competence to the sectors as it is their specialty, while the supervisory committee is concerned only with policies, laws, and initiatives in general.

Regarding describing the role of leadership and administration in promoting the adoption of e-government in Libya, this is very important. The government of national unity is somewhat pushing towards digital transformation, with more than one project, including the development of the infrastructure for the interchange of data in cooperation between the New Orbit Company and the General Authority for Information. Pending the establishment of the National Council for Digital Transformation to set budgets and support the implementation of these projects.

With regard to the resources and support available to government agencies and employees to implement and use e-government services, they are simple initiatives, but they are characterized by the absence of a mechanism and a national strategy. Nevertheless, we are currently working on the data exchange system between government institutions. We have also worked with the Ministry of Interior in developing some systems such as extraction Criminal status certificate. Unfortunately, the budget was spent unwisely and in non-strategic ways. Telecom companies cannot work alone and cover all these financial costs.

Regarding the readiness of government agencies in Libya to adopt e-government initiatives, the government supports all initiatives, but its affiliated agencies are slow in adopting services and dealing with them. Including, for example, the unified government procurement system. Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, of course, political stability is very important for e-government development. Political instability and government division cast a shadow over the various government bodies. One of these problems is the absence of a procedural guide within the Libyan government institutions, and in some institutions the procedure itself differs from one branch to another.

Also, doubts exist regarding the intersection of specializations, but the solution is the need to involve everyone in the digital transformation process, and every stakeholder covers the aspect that he can cover according to the understanding. And all this comes after adopting a national strategy for digital transformation, and Saudi Arabia is an example of this.

Regarding the legal framework and regulations related to e-government in Libya. Are there any specific laws or policies that promote or hinder the adoption of e-government? The legislative body is almost frozen, and the recently issued legislation related to digital transformation lacks community participation and consultation with different stakeholders, as a result of the political instability in Libya.

Regarding external pressures, and international or regional initiatives, I see that there are some organizations working and pushing towards digital transformation in Libya, in coordination with various stakeholders such as the Central Bank of Libya and the General Authority for Information.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies and citizens in Libya, employees in general when launching electronic services, employees stand against it, as well as citizens, especially because of the lack of credibility of previous government initiatives, due to weak management and the absence of sustainability in these services, especially with the absence of will. financially for these services. In general, citizens are interested in these services, especially with their knowledge of the experiences of neighbouring countries in digital transformation. Political instability is the most important obstacle here, and the citizen and his services are not among the current priorities.

Regarding the ease and ease of access to the current e-government services in Libya? What are the challenges that users face when accessing these services? The government must use mechanisms to motivate citizens to use these services. The use of technology was to improve the user experience. The problem is usually the logistical factor for these services. The same thing lies in the absence of alternatives to electronic channels, but in a form The general public is thirsty for these services. But in general, government institutions must work on their digital transformation internally first, to facilitate the exit of these services to citizens later.

Concerning citizen confidence in electronic services, unfortunately, citizens do not have much confidence in these services, due to division and political problems, which affect the provision of these services, especially with the weak credibility of the government. However, despite all these problems, many institutions are working to bring about change.

Regarding the resources, training and support available to public sector employees and citizens to use e-government services effectively, unfortunately there is no support or training, as it is an old culture in the government sector.

Concerning initiatives or plans to improve the facilitating conditions for the adoption of e-government in Libya. One of the most important problems in the Libyan government culture is the absence of cumulative experience, that is, a new leadership that comes to build from scratch without turning to previous projects, especially with the weakness of the accountant and transparency.

Regarding the main motives and obstacles to implementing e-government in the State of Libya, the most important motives are facilitating services to citizens, reducing costs, increasing transparency and accountability, improving quality, and increasing community participation in decision-making. Unfortunately, the current government's most important motive is the political and electoral factor. As for the obstacles, it is the absence of a national strategy, lack of awareness of the use of technology within government agencies, weak infrastructure, absence of a legislative framework, security problems and its impact on decision-making and infrastructure, weak capabilities of government institutions themselves, especially with the administrative and organizational structure of government institutions, inflation of the element human and incompetent.

The opportunity is available to provide these services and create success stories. The momentum is there, and the citizen is very ready to use these services. Where digital transformation is inevitable.

Interview Code 17 Translated to English

Regarding the assessment of the current situation of the information and communication technology infrastructure in Libya, especially with regard to e-government initiatives, as for the Internet networks to some extent it is reasonable, but the telecommunications companies in Libya were mostly Voice and today IP, the telecommunications companies in Libya have to shift to introduce Several other services in Libya. Especially with the transformation of telecommunications companies in the world to provide multiple digital services, not just an Internet connection. Especially since the telecommunications companies in Libya are considered among the richest institutions in Libya, and they must work to compete with international companies.

Regarding the fibre optic network, Libya has a huge network that covers all of Libya, owned by the telecommunications company, with a size of 18 thousand kilometres, and the Electricity Company has about 30 thousand kilometres of fibre optic network, but its use is limited due to the laws. In general, the problem in the optical network is in the FTTH, FTTX connection service. A country like Libya suffers because of its large size and low population density, which affects the economic feasibility of these projects. This is why the telecommunications sector needs more support from the government, which is why the focus is on non-wireless networks.

Regarding the level of knowledge of information and communication technology among public sector employees and citizens to adopt e-government services, this is a big problem, as digital transformation depends on three points, which are the citizen, procedures and technology, and forms. In Libya, the focus is only on technology, but with regard to people, there is no real interest To train staff capacity building in this field. Beginning with awareness campaigns, working on employee reluctance, and developing their skills to meet the requirements of modern technology. The procedures are also a real problem in the public sector, as they are not standardized and unknown in the public sector in Libya and one of the most important obstacles in the digital transformation in Libya. An example of this is our work within the Central Bank of Libya. The biggest problem we face in developing systems is the absence of procedural evidence. Most of the projects that are implemented in Libya are projects that are not based on lessons learned from the world and are adapted locally in an unprofessional manner only to adapt the software in line with the situation in Libya. Regarding technology, it is available and in its latest versions. Unfortunately, the procedures in Libya are not in line with the procedural guides known in the world, which makes local programmers spend a lot of time to adapt the software to match the local situation, which affects the bill and the delivery period.

Regarding the extent to which existing technologies in Libya are compatible with the requirements of e-government initiatives, e-government is a step before the complete digital transformation, and we had previous experiences and strategies developed by international bodies in 2013, and it is all in the papers only, and the Libyan government and administrations, unfortunately, do not build on what preceded it. studies, and start working from scratch. We can start with small projects and then work on expanding them. Back then, in 2013, communications were weak and costly.

As for the private sector in Libya, it has become stronger and stronger than the public sector, and it can work to implement these initiatives, but it needs to organize the partnership between the public and private sectors and profit sharing and how to manage these partnerships, but unfortunately this matter is not clear to government agencies and stakeholders. Unfortunately, they all see it in terms of developing data centres and not understanding the terminology of digital transformation. There is no strong response from stakeholders regarding any training of human resources within it in the areas of digital transformation because human capabilities are much more difficult than building databases, and private sector companies are available to cover any need in the field of technology.

Concerning successful initiatives and innovations, I have not seen any real service, all for media and political goals. As for the current services, they are all services that do not rise to real digital transformation. Unfortunately, in Libya, there is no real knowledge of the meanings of these terms. The problems on the human side are very large, and digital transformation cannot be completed in Libya without working to develop the human side in the government sector and at the public level. All parts must be part of this transformation. Any current success is only because of the initiator. In addition to the existence of a major problem in the absence of safety measures and digital protection, no matter how simple the operations are, they greatly affect services in Libya.

Regarding the role of leadership and management in promoting the adoption of e-government in Libya, the vision must come from the leaders, and most of them in Libya are interested in this transformation, but unfortunately there is no real strategy for any government institution for digital transformation in Libya, or even for the classic digitization processes. There are no real or convincing plans towards digital transformation. The desire is there, and the goal is to catch up with the response. All the work is currently on building data centres, or completing technology purchases, and it ends here.

Regarding the resources and support available to government agencies and employees to implement and use e-government services, yes, the government is interested in digital

transformation projects, but I do not think that any truly studied or strategic-based projects have been presented in Libya. All projects focus on building private data centres quietly and not using cloud services and available national databases. Unfortunately, most of the database development processes are due to financial corruption and the desire for financial spending. There are circulars from the government to its affiliated institutions to contract for free with cloud orbit. Regarding outsourcing, it is a matter of particular risk from the door of local companies, but it is possible to work with international companies, especially with the absence of SLA and TERE 1, which are not compatible with international standards, especially in the field of cyber and organizational security.

Regarding the impact of political stability or instability in Libya on the adoption and implementation of e-government initiatives, certainly , the matter is related to politics, since the technical aspect is the easiest aspect of the process, but due to the weakness of the state, you find the absence of human capabilities and the absence of procedural evidence, and the division of the government exacerbated the matter, not to mention About the absence of organizational culture in the public sector.

Regarding the legal framework and regulations related to e-government in Libya, unfortunately the laws are old in Libya, and Libya is considered one of the lagging countries in this regard, especially in adopting the electronic signature and the use of e-mail, and recently after the issuance of the electronic crime law, this law is considered weak and unsound with the absence of executive regulations. But a flawed law is better than no law at all. But in general, the absence of the law is only a pretext. Usually, in matters of digital transformation, technology comes first, and laws come later.

Regarding external pressures that affect the adoption of e-government services in Libya, they are present starting from the banking sector, especially in adopting information security standards in a specific period of time, given that Libya is part of the world and cannot be part of the international financial network without these standards.

Regarding the perceived benefits of e-government initiatives for public sector employees, government agencies and citizens in Libya, as for the new generation, it is interested in these services, only in need of capacity building and there is no real objection on their part, but the real problem is in the old experiences because of their weakness in the use of technology, and unfortunately Most of them are the directors of these institutions and oppose them because of fear of recovery, accountability and follow-up. Lack of training is the biggest handicap.

Regarding the ease and ease of access to the current e-government services in Libya, with the modest services, the citizens used them smoothly, and they are used without any

motives, unlike the countries of the other world. They all want easier services, albeit with additional financial value. Unfortunately, services in Libya are weak, especially with the absence of an integrated environment in Libya for these services, on the logistical side as well as on the part of the national post. In addition to the absence of financial payments, there are regulations such as MH 5.

Regarding societal norms, peers, and superiors to adopt and use e-government services among public sector employees and citizens, I do not think so, as the citizen is very interested in these services and is highly responsive, and there are many examples of that. Only the citizen needs these services, which unfortunately are difficult to develop locally. Regarding trust, with the absence of regulatory and oversight policies, unfortunately, nothing prevents this. Unfortunately, the administration of the state is tribal and arbitrary, as this is considered a major problem in these projects, especially with the absence of internal audit.

Concerning stakeholders when it comes to e-government in Libya, they are not clear in Libya. Regarding initiatives or plans to improve the facilitating conditions for adopting e-government in Libya, unfortunately nothing is real, and the national committee formed last year was stillborn, and these committees will have no value whatsoever. It was not headed by the prime minister or his deputy. Likewise, the strategy must come from the presidency of the government and not a separate form, as we find today in Libya, and other relevant national bodies, as their duty is only to organize research. Unfortunately, the current strategy proposal is weak and has nothing to do with digital transformation and is not in line with the world and the reality in Libya. There will not be a real strategy with the absence of a foreign partner and weak competencies in Libya.

Regarding the main motives and obstacles for the implementation of e-government in the State of Libya, regarding the motives, fighting corruption, bureaucracy and centralization are among the most important motives, not to mention that the availability of these services will contribute to the unification of the Libyan state and will reduce the current centralization problem in the capital, Tripoli. Libya, from an economic point of view, is a vast country, and it is not possible to provide all government services in Libya, the most beautiful of them, and it has large financial expenses. As for the obstacles, they are human resources and their weaknesses, the institutional building of Libyan institutions, and most institutions depend on people, and everything changes based on people. The absence of a national strategy is also an obstacle. Working as a platform for digital transformation is a failure. Building an integrated environment is very important for the success of digital transformation in Libya. The fact that the general Libyan culture is not in line with the foundations of digital transformation.

Interview Code 18 Translated to English

An inventory of all government-affiliated institutions has been created, a completely modern and crucial step in the business management process. For the most part, there are clear laws and procedures in Libya, but the chaos in the government sector is a never-ending cycle of chaos. Libya's institutions are entirely reliant on its citizens. We will find a good administration, which means that it is completely empty if the quality of his management distinguishes the person in charge of the administration. The inability of administrative leadership stems from the concept of technocrats and the civil service system. "You can deliver if you follow the book." Direct contracting is a contract at the ministerial level that requires the approval of the Council of Ministers, and it is considered one of the doors to rampant corruption. The absence of consultants and experts in the Council of Ministers, as well as the recent absence of a special minister in the communications sector, contributes to the passage of technology-related contracts and projects without proper scrutiny. Whether it's through procurement or consulting contracts, the doors to corruption are always open. On the other hand, due to a lack of good governance, the government sector is experiencing a deficit and a severe need. People who take the country's leadership are the wrong people, especially in the last ten years. The majority of institutional leaders lack relevant experience in their fields. Rather, their promotion of tribal and political quotas, as well as their opposition to the system, were the reasons for their appointment, and there is a pattern of similarity in the mandate system across several government institutions due to the lack of a procedural guide for government institutions. One of the main causes of corruption in the public sector is the budget for the technology sector, which is why we are focusing on standardisation. The public sector is technologically blind, and there's a big problem with not building on previous efforts because everyone is starting from scratch. There's also a problem with documentation and archives, which means that even if there were previous initiatives and strategies, they'd be worthless if they weren't archived and documented in records. Monopoly in the state is harmful to the private sector; there are passionate and experienced youth, and this is their chance now; however, the problem with the entity being a rentier state as a result of mismanagement of the public sector restricts the supply of services to the public sector only, lowering quality and value, and preventing citizens from accessing the Internet. We worked on a number of regulations and draft laws, but they were all stalled due to Libya's legislative political division. In 2013, the fire network experienced four-day outages every four days, and in 2014, the outages increased to twice daily as a result of Libyan instability, which is harmful to Internet services. The preparation of nearly 30 post offices around Libya and the training of employees to provide government services to citizens as part of the one-stop Government to ensure inclusion and access to all citizens, regardless of their educational level or extent of

Internet access, was one of the success stories witnessed in 2014, in parallel with the Ministry's work in studying the situation and initiating various projects. In the same year, the (National Information Safety Authority) was established to be the fortress, protector, and responsible for these affairs, as a result of the successes of work toward digital transformation and the development of a national strategy. Because telecommunications companies are based on commercial law, decision-making is easier, faster, more flexible, and up to date, as opposed to government institutions, which must go through the full documentary cycle, as is the case in procurement. As a result, the government sector must be included in the Ministry's plan and approved by the Council of Ministers, followed by the Legislative Council. The following are the relevant authorities: Ministry of Finance - Council of Ministers - Parliament - Ministry of Planning - Central Bank of Libya - Audit Bureau - Administrative Control - Ministry of Finance - Council of Ministers - Parliament - Ministry of Planning. The amount disbursed is determined by the type of project, with development projects requiring Ministry of Planning approval and the rest requiring Ministry of Finance approval. In general, there is no coordination between government institutions, including no protocols for direct communication, which the Ministry cannot impose; the Council of Ministers must do so, and any communication between institutions is limited to personal acquaintances. We have drafted a proposal for a national data centre with communication standards, as well as a number of bills, but due to the absence of the Legislative Council, they have yet to be implemented. The weakness of leaders and the lack of modern regulations and standards for these issues are considered among the most serious problems among institutions, resulting in poor outputs and citizen dissatisfaction with the service, preferring to return to paper and pen. Change is critical - managing change is critical - because Libyan leadership, as well as management, including planning, follow-up, and other functions, is a serious problem, necessitating the hiring of politicians to run the country. Many laws must be amended, as well as governmental stability and reform.

Interview Code 19 Translated to English

The program was initially launched as an initiative of the Ministry of Communications in 2011 under the name "Libya Electronic Initiative". The Council of Ministers adopted the initiative and established the General Administration of Electronic Services by Cabinet Resolution (360-2012) to be responsible for developing the initiative into a practical and executive program. The program was approved in the name of the Electronic Services Program by the Council of Ministers pursuant to Resolution (99 of 2013). The program is administratively affiliated with the Communications and Informatics Authority, under the management of the General Administration of Electronic Services. Definition of the electronic services program, the official name of the Libya e-initiative. It was established by the Council of Ministers in accordance with Resolution (99 of 2013) and is supervised by a higher committee formed of ministers and managed by a steering committee of deputy ministers and stakeholders, based on a recommendation from the General Administration of Electronic Services after discussions with the company. In charge of developing the executive strategy for the initiative. The Higher Committee responsible for the governance of the e-services program: Deputy Prime Minister for Technical Affairs - Minister of Communications and Informatics - Minister of Finance - Minister of Planning - Minister of Labour and Rehabilitation - Minister of Economy - Minister of Local Government - Minister of Interior - General Coordinator of the Decision Support Office in the Council of Ministers. The Steering Committee for Project Management: Undersecretary of the Ministry of Communications and Informatics - Undersecretary of the Ministry of Labour and Rehabilitation - Coordinator of the e-government in the Decision Support Office in the Council of Ministers - Director of the General Administration of Electronic Services - Representative of the Economic Development Council - representative of the General Information Authority. Phases of Implementation of the Electronic Services Program: The Ministry of Communications and Informatics contracted with PwC PricewaterhouseCoopers, a global consulting firm, and developed a strategic plan to implement the program at a cost of approximately $3.5 million. The e-services program strategy development project started in mid-2013 and practically ended in mid-2014. The program's Higher Committee approved the outputs of the strategy development project at its last meeting on July 23, 2014. The e-Libya program aims to: To improve, facilitate and consolidate the relationship between the citizen and government institutions - Increase transparency and reduce corruption - Activate decentralisation in the provision of services - Reduce bureaucracy and complexity in government procedures - Contribute to the development of the private sector in the areas of communications and information technology and strengthen the economy - Maximum use of investments Government in information technology projects by providing joint systems instead of implementing them in every government agency - Focusing on

providing electronic government services regardless of the service provider - Increasing the efficiency and productivity of government employees. The role of the e-Libya program in supporting beneficiaries and stakeholders: Facilitating communication between citizens and government agencies - Establishing service delivery centres close to the citizen - Activating different channels of communication and informing citizens of developments - Providing the necessary information for the business sector in an easy and effective manner - Contributing to the development of the private sector through participation in the implementation of projects - Providing shared and secure infrastructure - Providing a national database - Providing a system for managing government resources - Providing an electronic correspondence system - Providing infrastructure - Safe technology - Developing and improving services provided to beneficiaries - Developing the capabilities of government employees who provide services - Raising the United Nations index For e-government readiness - launching new projects that contribute to the development of the economy. The purpose of the project is to develop an implementation strategy for the program based on international best practices and the latest technologies.

Work began on developing the strategy in May 2013 in collaboration with the consultant PwC. The e-services program is a national program that seeks to implement e-government in Libya and has an implementation strategy to achieve this. The role of the General Administration of Electronic Services in supporting the transformation of electronic transactions within the authority. The administration took the initiative to make electronic transactions and the provision of services a part of its work concept. It also organised some internal training courses in its desire to build the capabilities of its work team according to the available capabilities. Providing technical and strategic support and advice to a number of government agencies. The most important challenges: the non-convening of the Higher Committee and the Steering Committee of the program (the last meeting of July 23, 2014) - Governance: the overlapping of functional tasks and competencies with other government agencies - The absence of government support for the program since 2014 - The lack of the necessary budget and resources.

Interview Code 20 Translated to English

The public sector is a disaster, particularly in terms of procedures and human resources. Libya's government sector can be divided into two parts: a highly developed sector that includes the oil and banking industries, and a communications sector that has been incorporating information technology for a long time through foreign partners since the late 1970s and has a variety of particularly good applications. The rest of the government sector is regarded as lacking in terms of information technology localisation, as it is only used for editing, text processing, and archiving. Due to banking procedures, all government institutions have a payroll system. In addition, the High Electoral Commission employs information technology in all aspects of its operations. The lack of legislation governing digital transactions, as well as tight budgets, are both barriers to digital transformation. There are numerous measures that can be taken to address digital transformation, but the current situation is insufficient. Digital transformation is also hampered by a lack of policies and strategies. The Libyan Standards Centre included some policies related to the use of technology prior to 2011. Nearly 300 ISO standards have been developed, and all of these standards are considered mandatory implementation in the governmental framework, according to the law. Unfortunately, governments were and continue to be unconcerned; digital transformation is not a priority; the country has other basic needs; the civil war destroyed infrastructure; and the Government cannot justify spending on digital transformation when it fails to meet the citizens' other needs. Especially in light of the Cabinet's lack of vision. Before 2011, the results were better and more accurate than the PwC project's outputs. One of the barriers is the government employee's mentality and lack of interest in the public good and public funds. The lack of a legal framework for digital transformation, as well as a lack of political will for digital transformation, is a major issue. You can count on the private sector to help with digital transformation. Technology is not seen as a factor in enabling government work in the public sector. Employees used to corrupt technology because they saw it as their adversary, but that is no longer the case, especially given the high reliance of work on it. Parallel to the conflicting tasks of these institutions, the lack of a procedural guide for government institutions is a problem. The lack of security, impunity, and the spread of corruption are all factors that stymie digital transformation. For government institutions, there is no procedural guide, and the Administrative Contracts Regulation is one of the roadblocks to digital transformation. It is not possible to pay a value for technology needs in instalments and adhere to the Administrative Contracts Regulation's payment terms. Any technological advancement, such as easier access to information on the Internet, makes people happy. If the incubation environment and appropriate funding are available, the competencies exist. Education lags behind technology, and most citizens' current usage is restricted to social media. In Libya, there is a significant divide between

generations when it comes to the use of technology. In this regard, civil society plays an important role in developing and presenting proposals as well as educating citizens.

Interview Code 21 Translated to English

Libya's government sector is behind the times in comparison to similar countries around the world, and our problem is a lack of human resources. Despite the fact that the communications sector, the industrial river, and oil are technologically advanced sectors thanks to consultants and foreign partners, the rest of the government sector institutions' relationship with technology is limited and limited only to the use of text editing programs. Having a computer in the office reflects a high social level because many people consider it to be part of the furniture. There is no unified database in Libya, and sensitive institutions like the Ministry of Interior and Défense lack integrated information systems to meet their needs. As a result, all digital government projects are considered separate islands from one another and do not communicate with one another; each project begins from the beginning. Our lack of awareness of the flaws and problems with digital transformation is due to our failure to begin our real journey in digital transformation because many are opposed to the use of technology because it fights corruption and reduces fraud, but the other problem is that executive agencies, the Government, and those headed by them are technologically backward and rarely care about issues of digital transformation. The legislative aspect of the operation becomes a solution to the problems that arise on the ground. Technology is confined to peripheral devices today, as there is no institutional work, infrastructure, or updated national data, and everything that is done is the result of personal efforts and judgments, as the political division has made the Government's implementation so selective that principles such as conflict of interests are not important to it, and in this matter, The Audit Bureau tries to impose some restrictions and conditions, but weakly, as the entire governmental process is based on personal efforts and judgments, and everything that is done is the result of personal efforts. In Libya, the private sector has the ability to implement digital transformation. The Information Technology Centre was established prior to 2007, and it is regarded as one of the most significant quick victories in the field of digitisation, as the construction of a citizen database and subsequent complementary projects began. In 2012, a grant was distributed to Libyan families using a paper-based system, with an estimated error rate of 10% of the total grant value; this percentage was sufficient to lay a solid foundation for Libya's digital transformation. In general, success may have been limited after 2011 and not visible at the government level, but citizens have become more interested in and use of technology, and it is now seen as a tool for putting pressure on the Government to accelerate the digital transformation process. Furthermore, citizens have a high acceptance of electronic services and a great opportunity to benefit from the Corona pandemic; people have a high ability to learn, and when the benefit of these services reaches them, they will trust them as a method of work and dealing, and they are confident that technology will guarantee their right and comfort; however, our problem is that our

problem is that our problem is that our problem is that our problem is that our problem is that our problem is that our problem is that our problem is that our problem is that our problem is that It is rooted in the Government's mentalities, as well as the administration's and employees' weaknesses. For example, we find that the private sector prefers competition and keeping up with the latest developments by following each other. As a result, we discover that Libya has a competitive mentality that can be used to promote digital transformation. The issue is solely with government employees and their belief that it is state money and therefore unimportant, in contrast to the private sector, which is more concerned with financial resource management. The current laws are capable of laying the foundations for digital transformation, but the real forms are found in their application, so the solution is to look at other countries' experiences and devise a strategy that takes into account several factors, such as political stability, will and successful management, and the imposition of transformation by senior administrations. The new laws on electronic transactions and cybercrime are just the beginning, and we hope to get more feedback from experts in the future so that we can improve them.

Interview Code 22 Translated to English

Libya is a land of missed possibilities, and all of the elements are in place. We started the transformer with the Libya electronic portal, which began by giving procedural guidance for the Libyan Government before expanding out into portals for health, business, education, and so on.) The lack of integration amongst government entities, as well as the lack of consistent policies and models, as well as procedural evidence, were the most concerning issues at the time. The previous project, which was aimed at creating a database for Libyan citizens to be used later in various services, starting with the processing of the electronic identity card, was fought hard before 2011, and the experience before 2011 is better than the current project, because the previous project was aimed at creating a database for Libyan citizens to be used later in various services, starting with the processing of the electronic identity card. In the passport control system, the civil status system, the digital file (automatic number), and paper documents, there were large mechanisms to correct the data in an orderly manner by comparing the data with reference databases, and any error in the data was corrected by the arrival of the head of the family after taking certain measures in particular, the current problem. The Libyan citizen is not identified electronically. The national number project after 2011 has nothing to do with the previous project; the current project was established as a means to complete the issuance of passports at the outset, and the data is solely based on the civil status system, with no real mechanisms to verify the data, such as periodic reports that warn of the presence of false numbers. And it's all due of the lack of a biometric identifier. The lack of a road plan and government strategy for digital transformation is a major issue, as it is their responsibility to clarify the specialities of all government organisations. The use of technology in Libya is highly disparate; the telecommunications sector is excellent, but the rest is not; the reason for this weakness is a lack of budgets allocated to technology in previous years; and, of course, the lack of human resources stems from a lack of procedural evidence, randomness at work, and the lack of the concept of institutional work. True, Libya has a reasonable communications assessment, but the lack of integration and strategy in government work toward digital transformation is the issue, and every time a new government comes in and promises the people that it will work on digital transformation and government reform, it dissolves in the state's daily and political problems. Because there is no mechanism for technology, some items, such as software licensing, cannot be made in a public bid and more than one offer is being made exclusively from one side, there is a need to alter software procurement policies. When you compare the number of experts to the number of government institutions, it is illogical for all government institutions to have Technology-specific competencies. There is no integration, no government data centre, no central government work, and no central government work that helps to attract and advance good expertise and provide great

efforts and funds to the Government, because it is illogical for all government institutions to have Technology-specific competencies. Cybersecurity is a serious issue that is currently receiving little attention. There is no legal framework, no electronic security or protection for users, and no electronic transactions. The latest statement published by the House of Representatives demonstrates the lack of coordination and integration in Libyan institutions. The General Information Authority has a national database that links communications with passports and a photo for each citizen, but there is no link with civil status. This issue requires will and imposition from higher authorities, as some departments and institutions refuse to cooperate. Cabinet Decision 2-2018 gave the General Information Authority administrative powers over databases. The Libya e-initiative is a project that aims to improve the lives of Libyans The most recent meeting was on 6-2014, and the ministries have shown no interest in following up, despite the fact that the meeting produced numerous key outcomes from which everyone may benefit. However, given political instability and government fragmentation, how feasible is it to develop an integrated government digital transformation? It is possible to concentrate on smaller projects in order to make them more sustainable. Libya's private sector is quite good at supplying gear. In terms of software, there are no significant institutions that can be trusted, there is no genuine investment in this area, and they all rely on government contracts and will be affected by their termination. In terms of education, the outcomes are to some extent reasonable. If given the chance, there are institutions and youth who have great potential. Education now is not the same as it was in the past, and there are alternatives. The main thing is that learning may be made simpler and easier using the Internet. Libya is a land of squandered opportunities. The topic of e-governance is not new to Libya or the rest of the world. Budgets were present, but the problem was a lack of desire, management, and political stability.

Interview Code 23 Translated to English

In Libya, there is no public sector; most employees arrive on time but are unproductive; according to the Audit Bureau's report from last year, employee productivity reached 15 minutes per day, and I believe it is lower. The majority of government decisions are made on the spur of the moment in response to political or public pressures. Governments are governments of reactions, not deeds, and the majority of these reactions are not investigated. Public and political pressures are more important than technocratic research and opinions, preserving the law, combating corruption, and preferential nepotism for certain people over others. There is no digitisation in the government sector, and what exists now are only personal endeavours motivated by political motives, political strife embedded in everything, even government digitisation efforts. Regrettably, there are no standards, nor is there any understanding of the significance of these norms in the first place. Some institutions lack basic services such as data retrieval centres. There is no strategy for preparing infrastructure, and many government organisations' infrastructure preparation operations are handled by the building preparation department. This department lacks professionals, and it buys on the basis of the lowest price rather than examining actual needs. Bragging and project launch parties are vital in electronic services, but there is no follow-up or interest in follow-up. Essentially, these services are employed to achieve swift political triumphs. Although technology is used, it is impossible to establish whether it is used in the government sector. Because the high leadership is uninformed of the relevance of technology or its details, everyone is randomly involved in the digitisation process without giving the baker bread. In recent years, success stories in digital transformation and digitalisation have been scarce. In comparison to other schemes, the Marriage Facilitation Fund and the recent passport grant are regarded relative success stories. To grant newly married couples, more than 80% of the work procedures have been digitised; the data is automatically and directly validated with the relevant authorities in the civil registry upon submission. This system established the concept of recording transaction status, which was nearly non-existent in prior Libyan efforts, and it is the first time this system has come close to being implemented.

Unfortunately, there has been no clear procedural proof during the development of this and other projects, all of which are still in the experimental stages. Corruption and a lack of connection with specialists are the main reasons for the Government's failure to provide services. Non-specialists typically make purchases without first assessing the demands or idiosyncrasies of digital system acquisitions. I saw no reluctance to use technology in the government sector or among employees; everyone understands that it is a tool to make life easier and boost productivity. Productivity was increased from roughly 600 transactions per working day to 6000 transactions per working day in the Marriage

Facilitation Fund project, for example. The employees were first pleased. Due to a lack of professionals and particular restrictions, procurement methods have become an issue, and the Government is focused on achieving political goals rather than serving citizens. Human resource capabilities are lacking in the government sector, and no cadres are aware of the reasons for the execution of digital transformation in the first place. Most IT employees work on a haphazard basis, with no regard for policies or standards. Most fresh graduates do not find an expert to assist them and explain the work to them when they attend a government institution to work, therefore they work on a haphazard basis. There are no true training plans for public sector employees, but they are all simple basic activities that provide no tangible outcomes and cover themes that are considered outdated. Our competencies are the consequence of their enthusiasm, not their education outputs. In terms of technology, Libyan educational outputs do not fulfil market demands and are out of step with the rest of the globe. The lack of implementation of government decisions to split the civil registration database, where the government decision says that the database is at the General Information Authority and its management is at the civil register, is regarded a major problem. Unfortunately, the base is presently in the civil registry, which lacks the technological expertise to administer it, causing complications and making it difficult to link with it. The confrontations between the institutions are mostly motivated by a desire to monopolise the service and the imposition of power to improve bargaining positions, and they are budget related. If a data audit is conducted, it is possible that the database will appear wrong when it is given over to other parties.

There are no laws that support digital change. Current laws, on the other hand, obstruct; electronic transactions are not legally permitted, and all electronic transactions must be conducted in tandem with paper transactions in order to be legal. The Government has recently begun to give electronic services, such as grants for the husband and children, reservations for government items such as cement, and the ability to get a criminal status certificate electronically. The public's understanding of how to use technology has begun to grow. Any new services are well received by citizens, but citizens have little faith in government e-services. This is the outcome of earlier failures, particularly Libyans' experiences with the banking sector, which causes people to reflect their terrible banking experiences on any government e-service. In general, the private sector's presence as a provider of technology services is limited, and its experience is limited. Its services are restricted to the Government. It is also out of touch with modern technology, and it learns as it goes along with its initiatives. The processes of developing technological projects in Libya are all improvised; there is no need for analysis or precise specifications. This is due to the urgency and a lack of knowledge of the standard procedure; standard work takes time, which contradicts the political goals of the Government's stakeholders. Decision-makers are uninformed of the real-time requirements and methods required to

construct a sound project, and their only interest in digital transformation stems from political motivations. Education and human resources are the most pressing issues, as is the Libyan employee's mentality, which is founded on the state's rentier economy, in which the Government gives everything. Another issue is the pay disparity between technology employees and other public sector employees; this issue, combined with low wages, drives talent to the private sector and away from the public sector. At the moment, we are supposed to concentrate on infrastructure and human resources, as well as the necessity to construct a uniform and central infrastructure and a government database, as it is nonsensical for each institution to create a database that costs millions of dollars to run modest initiatives. The failure to build on prior efforts and plans is a big issue. Every new management wants to credit his or her accomplishment to themselves, which forces them to start over every time.

E. Survey Results

Identifying Drivers and Barriers of e-government implimnations in The Public Sector – Libya

I.   Technological Factors: (1: Less Likely, 5: Most Likely)
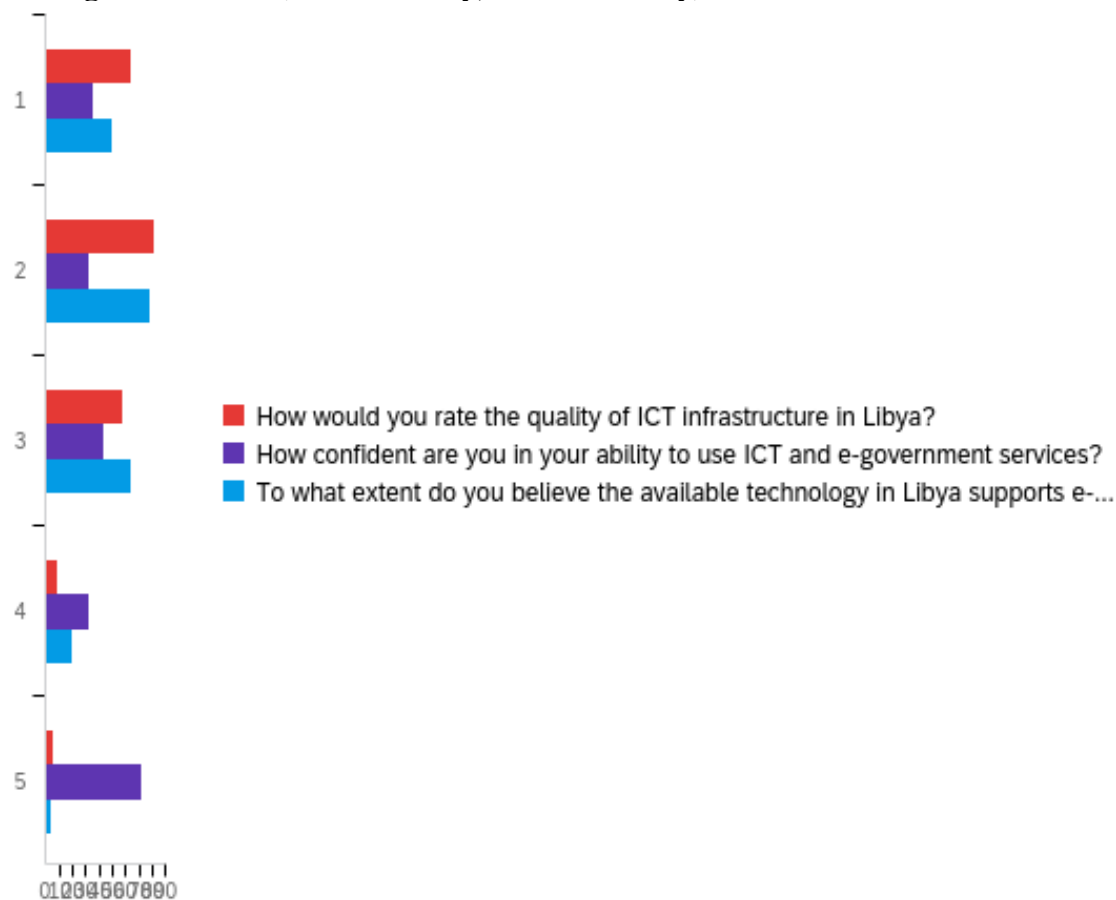
Legend:
- How would you rate the quality of ICT infrastructure in Libya?
- How confident are you in your ability to use ICT and e-government services?
- To what extent do you believe the available technology in Libya supports e-...

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How would you rate the quality of ICT infrastructure in Libya?	1.00	5.00	2.14	0.97	0.95	219
2	How confident are you in your ability to use ICT and e-government services?	1.00	5.00	3.34	1.48	2.18	219
3	To what extent do you believe the available technology in Libya supports e-government initiatives?	1.00	5.00	2.30	0.98	0.97	217

#	Question	1		2		3		4		5		Total
1	How would you rate the quality of ICT infrastructure in Libya?	29.22%	64	37.44%	82	26.48%	58	4.11%	9	2.74%	6	219
2	How confident are you in your ability to use	16.44%	36	15.07%	33	20.09%	44	15.07%	33	33.33%	73	219

	ICT and e-government services?										
3	To what extent do you believe the available technology in Libya supports e-government initiatives?	23.04%	50	36.41%	79	29.49%	64	9.22%	20	1.84%	4	217

II.   Organizational Factors: (1: Less Likely, 5: Most Likely)
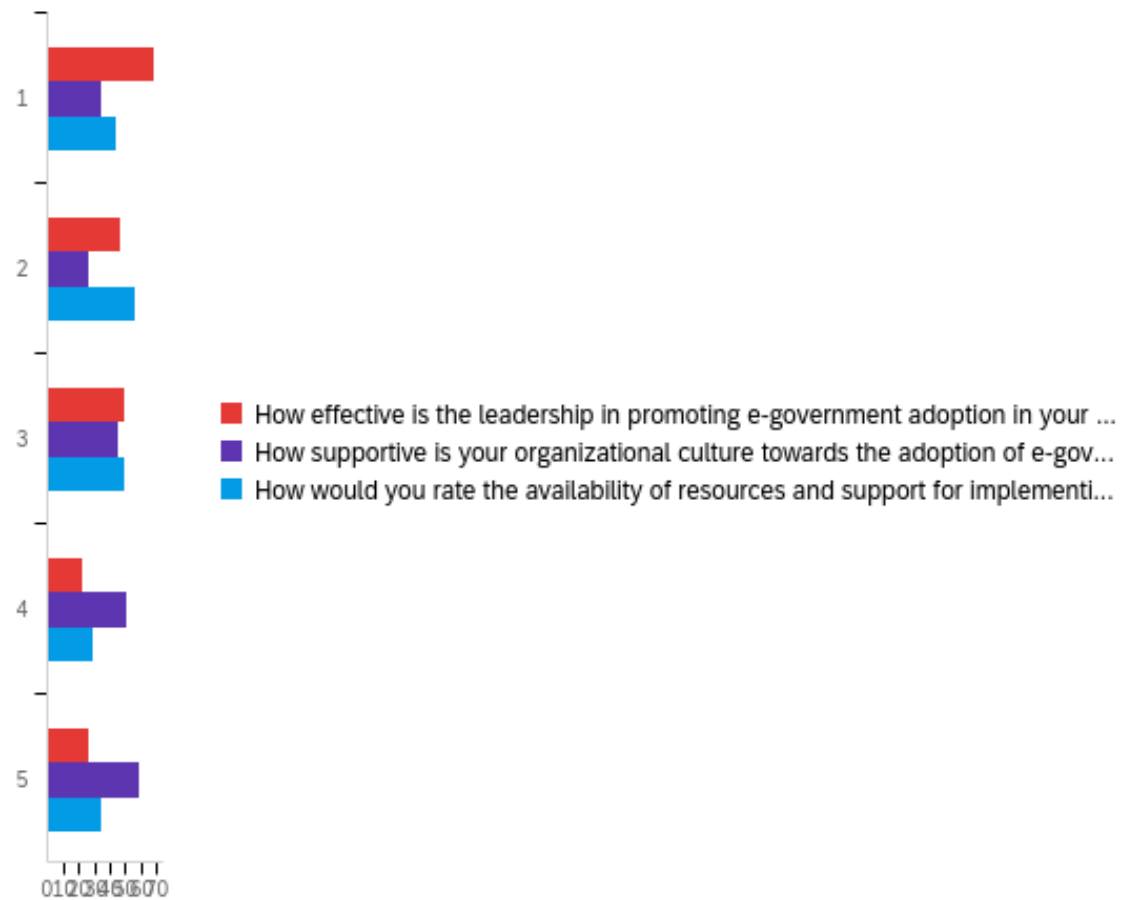
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How effective is the leadership in promoting e-government adoption in your organization?	1.00	5.00	2.51	1.36	1.85	215
2	How supportive is your organizational culture towards the adoption of e-government initiatives?	1.00	5.00	3.35	1.40	1.97	215
3	How would you rate the availability of resources and support for implementing e-government services in your organization?	1.00	5.00	2.77	1.35	1.82	213

#	Question	1		2		3		4		5		Total
1	How effective is the leadership in promoting e-government adoption in your organization?	31.63%	68	21.86%	47	23.26%	50	10.70%	23	12.56%	27	215

2	How supportive is your organizational culture towards the adoption of e-government initiatives?	15.81 %	3 4	12.09 %	2 6	20.93 %	4 5	23.72 %	5 1	27.44 %	5 9	215
3	How would you rate the availability of resources and support for implementing e-government services in your organization?	20.66 %	4 4	26.76 %	5 7	23.00 %	4 9	13.62 %	2 9	15.96 %	3 4	213

III.   Environmental Factors: (1: Less Likely, 5: Most Likely)

How much do you believe political stability in Libya affects the adoption o...

How familiar are you with the legal framework and regulations related to e-...
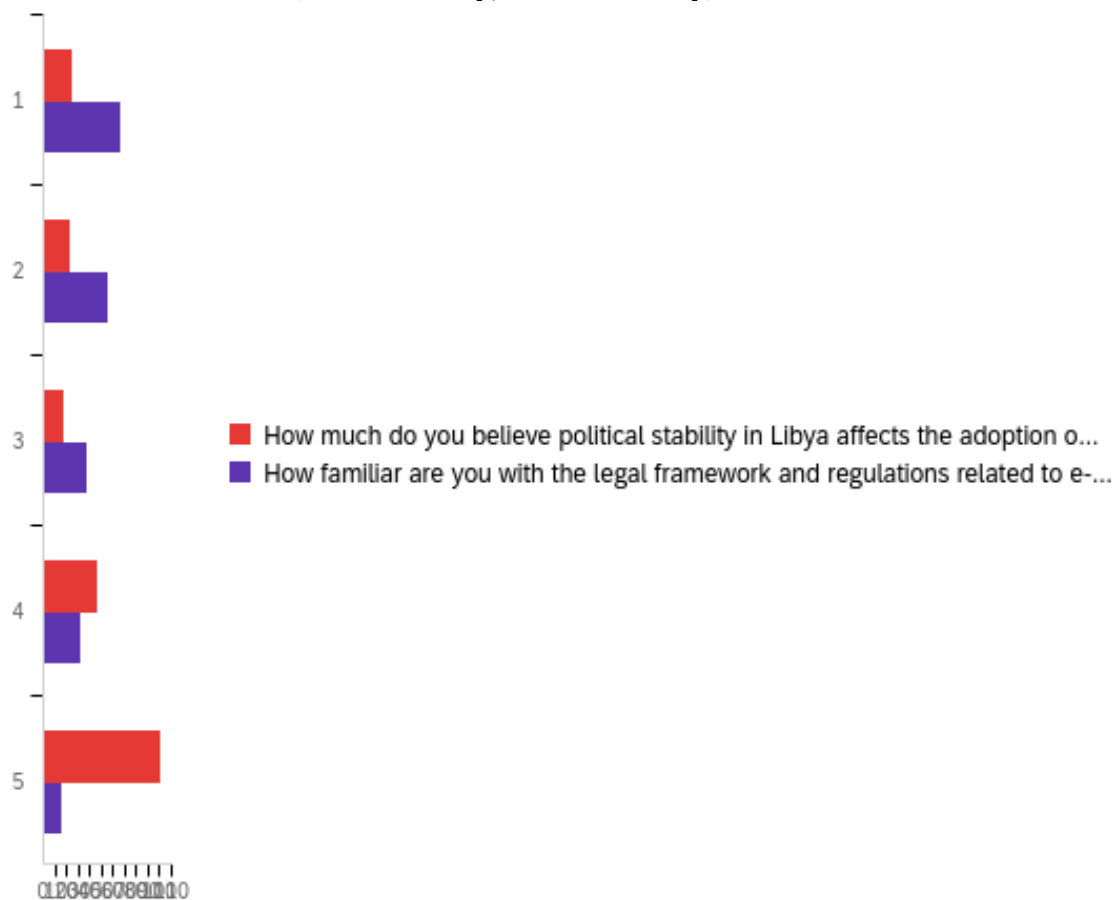
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How much do you believe political stability in Libya affects the adoption of e-government initiatives?	1.00	5.00	3.85	1.41	1.98	212
2	How familiar are you with the legal framework and regulations related to e-government in Libya?	1.00	5.00	2.39	1.29	1.65	208

#	Question	1		2		3		4		5		Total
1	How much do you believe political stability in Libya affects the adoption of e-government initiatives?	11.32%	24	10.38%	22	8.49%	18	21.70%	46	48.11%	102	212

| 2 | How familiar are you with the legal framework and regulations related to e-government in Libya? | 32.21% | 67 | 26.92% | 56 | 17.79% | 37 | 15.38% | 32 | 7.69% | 16 | 208 |

IV.　　Performance Expectancy: (1: Less Likely, 5: Most Likely)
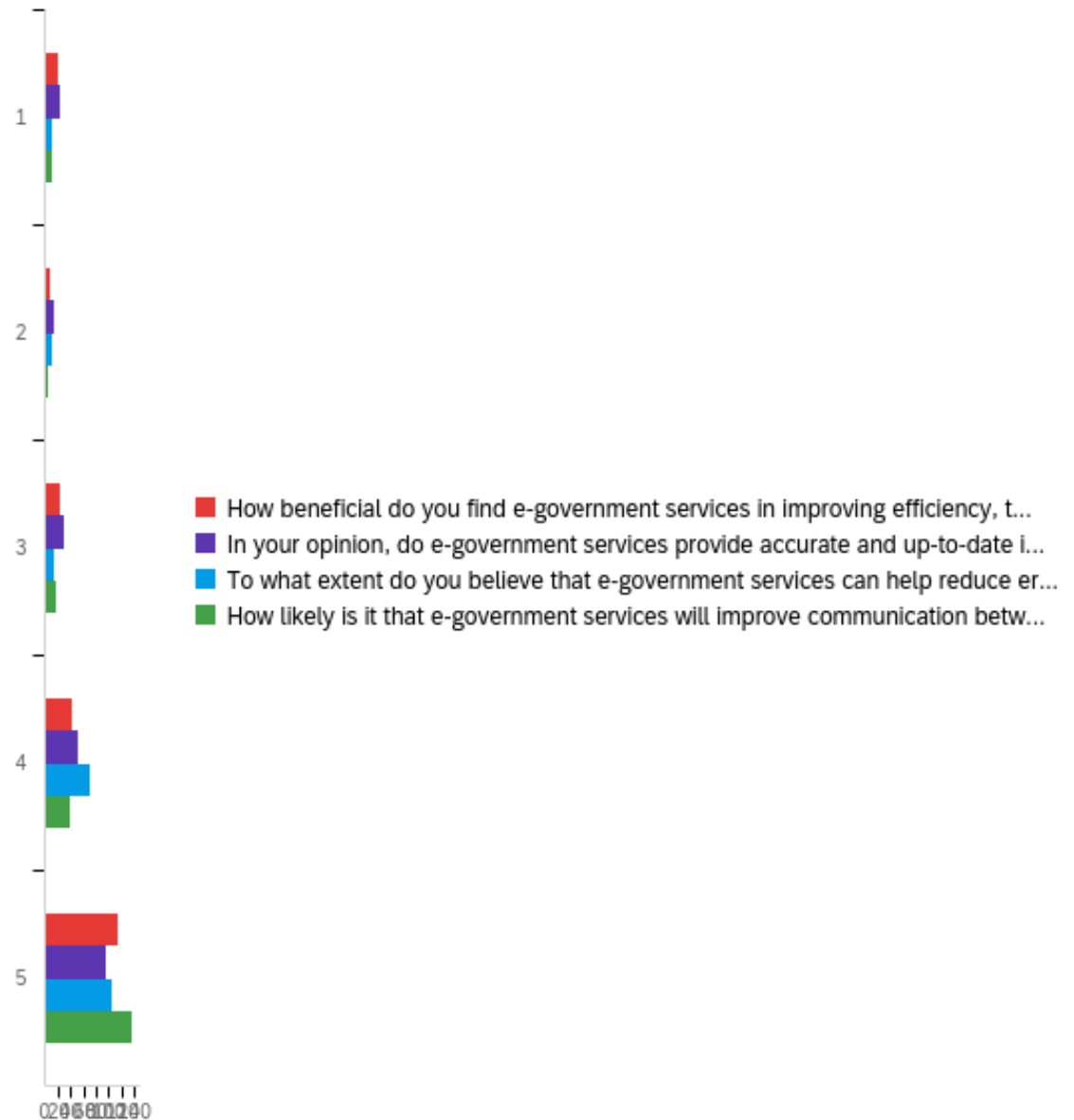
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How beneficial do you find e-government services in improving efficiency, transparency, or service quality?	1.00	5.00	4.05	1.31	1.71	214
2	In your opinion, do e-government services provide accurate and up-to-date information compared to traditional methods?	1.00	5.00	3.85	1.34	1.80	215
3	To what extent do you believe that e-government services can help reduce errors in government-related processes?	1.00	5.00	4.16	1.12	1.25	213
4	How likely is it that e-government services will	1.00	5.00	4.33	1.11	1.24	213

	improve communication between citizens and the government?										

#	Question	1		2		3		4		5		Total
1	How beneficial do you find e-government services in improving efficiency, transparency, or service quality?	9.81%	21	4.21%	9	11.68%	25	20.09%	43	54.21%	116	214
2	In your opinion, do e-government services provide accurate and up-to-date information compared to traditional methods?	10.70%	23	6.98%	15	13.95%	30	23.72%	51	44.65%	96	215
3	To what extent do you believe that e-government services can help reduce errors in government-related processes?	5.63%	12	5.16%	11	6.57%	14	32.86%	70	49.77%	106	213
4	How likely is it that e-government services will improve communication between citizens and the government?	5.63%	12	2.82%	6	8.45%	18	18.78%	40	64.32%	137	213

V.   Effort Expectancy: (1: Less Likely, 5: Most Likely)

■ How easy is it to use and access e-government services in Libya?
■ How easy do you find it to learn and use e-government services?
■ How intuitive and user-friendly is the interface of the e-government platfo...
■ In your opinion, how well do e-government services cater to users with diff...
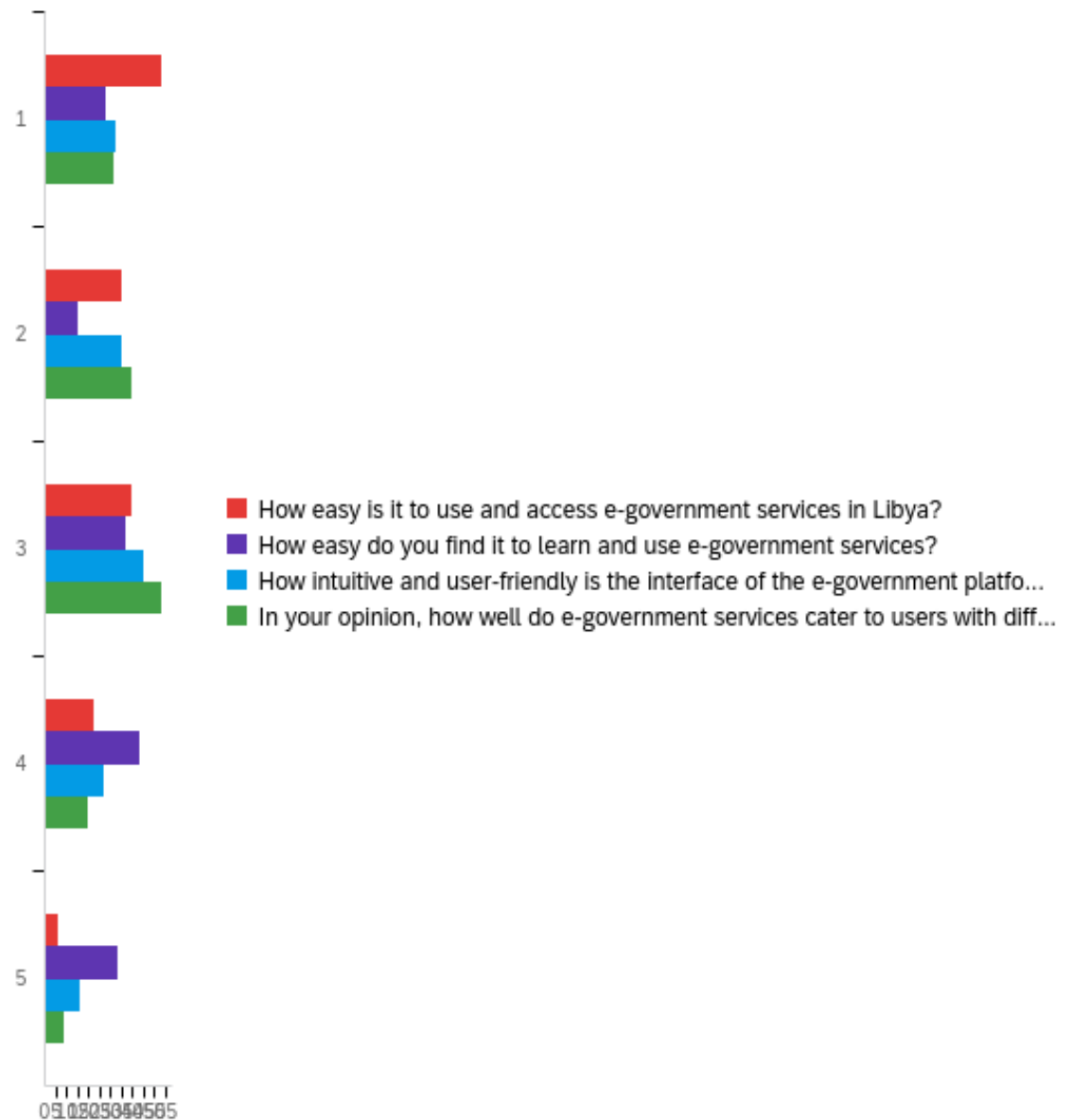
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How easy is it to use and access e-government services in Libya?	1.00	5.00	2.31	1.19	1.41	156
2	How easy do you find it to learn and use e-government services?	1.00	5.00	3.24	1.37	1.88	156
3	How intuitive and user-friendly is the interface of the e-government platform?	1.00	5.00	2.74	1.25	1.57	155
4	In your opinion, how well do e-government services cater to users with different levels of technical expertise?	1.00	5.00	2.58	1.12	1.26	153

#	Question	1		2		3		4		5		Total
1	How easy is it to use and access e-government services in Libya?	33.97%	53	22.44%	35	25.64%	40	14.10%	22	3.85%	6	156
2	How easy do you find it to learn and use e-government services?	17.95%	28	9.62%	15	23.72%	37	27.56%	43	21.15%	33	156
3	How intuitive and user-friendly is the interface of the e-government platform?	20.65%	32	22.58%	35	29.03%	45	17.42%	27	10.32%	16	155
4	In your opinion, how well do e-government services cater to users with different levels of technical expertise?	20.26%	31	26.14%	40	34.64%	53	13.07%	20	5.88%	9	153

VI. Social Influence: (1: Less Likely, 5: Most Likely)

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How much influence do your peers or superiors have on your adoption and use of e-government services?	1.00	5.00	2.97	1.28	1.64	153
2	To what extent do your friends, family, or colleagues encourage you to use e-government services?	1.00	5.00	2.92	1.43	2.06	154
3	How often do you observe others using e-government services in your social or professional network?	1.00	5.00	2.63	1.24	1.54	153
4	How strongly do you feel the societal pressure to adopt e-government services?	1.00	5.00	2.51	1.39	1.93	152

#	Question	1		2		3		4		5		Total
1	How much influence do your peers or superiors have on your adoption and use of e-government services?	16.99%	26	18.95%	29	28.10%	43	22.22%	34	13.73%	21	153
2	To what extent do your friends, family, or colleagues encourage you to use e-government services?	24.03%	37	16.88%	26	20.13%	31	20.78%	32	18.18%	28	154
3	How often do you observe others using e-government services in your social or professional network?	22.88%	35	24.84%	38	28.10%	43	15.03%	23	9.15%	14	153
4	How strongly do you feel the societal pressure to adopt e-government services?	34.21%	52	19.74%	30	17.11%	26	18.42%	28	10.53%	16	152

VII.   Facilitating Conditions (1: Less Likely, 5: Most Likely)
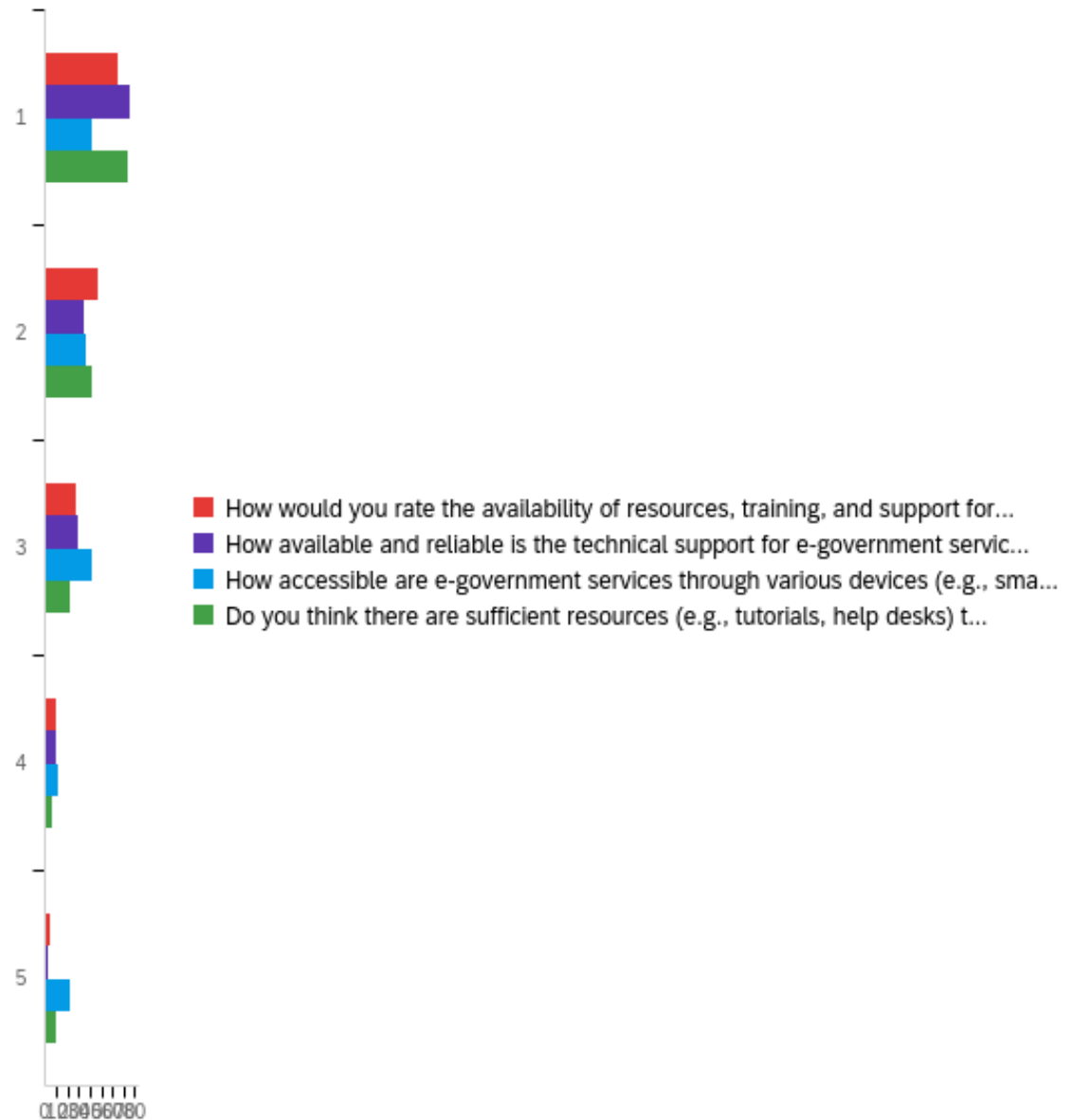
■ How would you rate the availability of resources, training, and support for...
■ How available and reliable is the technical support for e-government servic...
■ How accessible are e-government services through various devices (e.g., sma...
■ Do you think there are sufficient resources (e.g., tutorials, help desks) t...

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How would you rate the availability of resources, training, and support for using e-government services in Libya?	1.00	5.00	1.97	1.05	1.10	154
2	How available and reliable is the technical support for e-government services in case you face any issues?	1.00	5.00	1.85	1.01	1.03	151
3	How accessible are e-government services through various devices (e.g., smartphones, tablets, computers)?	1.00	5.00	2.59	1.34	1.79	154
4	Do you think there are sufficient resources (e.g.,	1.00	5.00	1.92	1.14	1.31	153

	tutorials, help desks) to assist you in using e-government services?									

| #	Question	1		2		3		4		5		Total
1	How would you rate the availability of resources, training, and support for using e-government services in Libya?	42.21%	65	30.52%	47	18.18%	28	6.49%	10	2.60%	4	154
2	How available and reliable is the technical support for e-government services in case you face any issues?	50.33%	76	23.18%	35	19.21%	29	5.96%	9	1.32%	2	151
3	How accessible are e-government services through various devices (e.g., smartphones, tablets, computers)?	26.62%	41	24.03%	37	27.27%	42	7.79%	12	14.29%	22	154
4	Do you think there are sufficient resources (e.g., tutorials, help desks) to assist you in using e-government services?	48.37%	74	27.45%	42	14.38%	22	3.92%	6	5.88%	9	153

VIII.   Expected Barriers (1: Less Likely, 5: Most Likely)
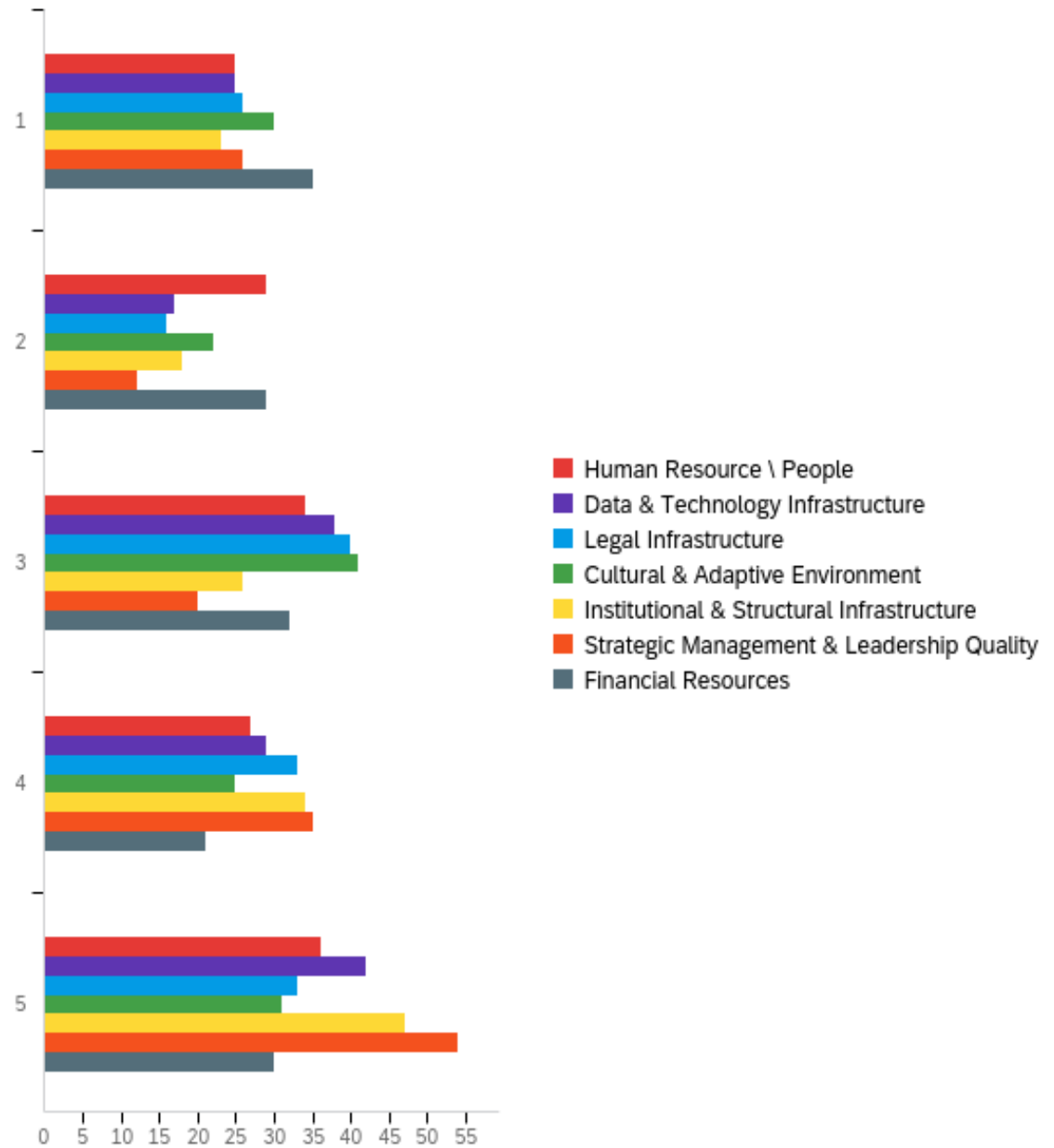
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Human Resource \ People	1.00	5.00	3.13	1.40	1.97	151
2	Data & Technology Infrastructure	1.00	5.00	3.30	1.41	1.99	151
3	Legal Infrastructure	1.00	5.00	3.21	1.37	1.88	148
4	Cultural & Adaptive Environment	1.00	5.00	3.03	1.40	1.95	149
5	Institutional & Structural Infrastructure	1.00	5.00	3.43	1.43	2.06	148
6	Strategic Management & Leadership Quality	1.00	5.00	3.54	1.49	2.21	147
7	Financial Resources	1.00	5.00	2.88	1.45	2.09	147

#	Question	1		2		3		4		5		Total
1	Human Resource \ People	16.56%	25	19.21%	29	22.52%	34	17.88%	27	23.84%	36	151
2	Data & Technology Infrastructure	16.56%	25	11.26%	17	25.17%	38	19.21%	29	27.81%	42	151
3	Legal Infrastructure	17.57%	26	10.81%	16	27.03%	40	22.30%	33	22.30%	33	148
4	Cultural & Adaptive Environment	20.13%	30	14.77%	22	27.52%	41	16.78%	25	20.81%	31	149
5	Institutional & Structural Infrastructure	15.54%	23	12.16%	18	17.57%	26	22.97%	34	31.76%	47	148
6	Strategic Management & Leadership Quality	17.69%	26	8.16%	12	13.61%	20	23.81%	35	36.73%	54	147
7	Financial Resources	23.81%	35	19.73%	29	21.77%	32	14.29%	21	20.41%	30	147

IX.   Expected Drivers (1: Less Likely, 5: Most Likely)
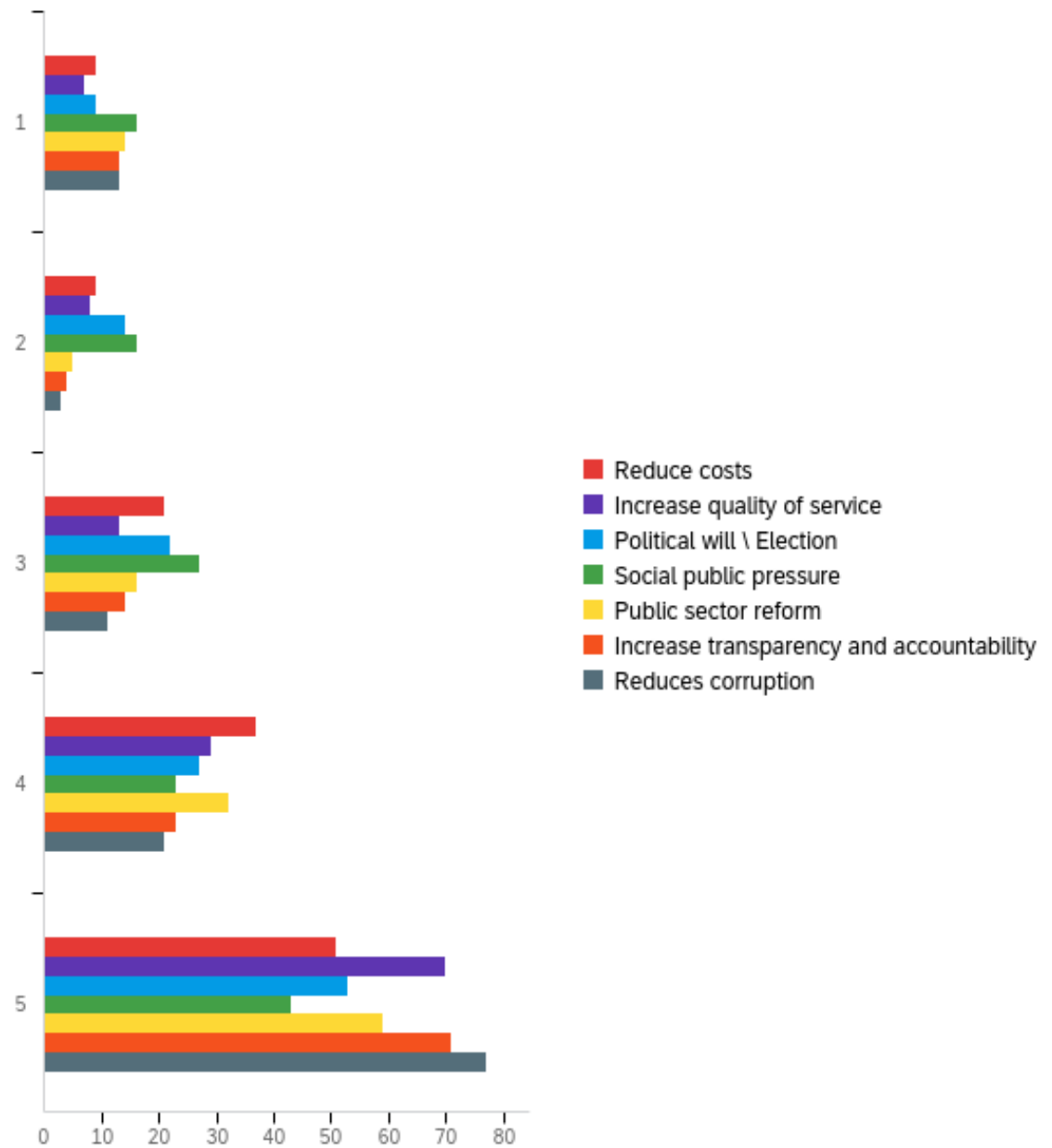
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Reduce costs	1.00	5.00	3.88	1.21	1.47	127
2	Increase quality of service	1.00	5.00	4.16	1.17	1.38	127
3	Political will \ Election	1.00	5.00	3.81	1.29	1.66	125
4	Social public pressure	1.00	5.00	3.49	1.40	1.96	125
5	Public sector reform	1.00	5.00	3.93	1.32	1.75	126
6	Increase transparency and accountability	1.00	5.00	4.08	1.32	1.74	125
7	Reduces corruption	1.00	5.00	4.17	1.31	1.71	125

#	Question	1		2		3		4		5		Total
1	Reduce costs	7.09%	9	7.09%	9	16.54%	21	29.13%	37	40.16%	51	127
2	Increase quality of service	5.51%	7	6.30%	8	10.24%	13	22.83%	29	55.12%	70	127
3	Political will \ Election	7.20%	9	11.20%	14	17.60%	22	21.60%	27	42.40%	53	125
4	Social public pressure	12.80%	16	12.80%	16	21.60%	27	18.40%	23	34.40%	43	125
5	Public sector reform	11.11%	14	3.97%	5	12.70%	16	25.40%	32	46.83%	59	126
6	Increase transparency and accountability	10.40%	13	3.20%	4	11.20%	14	18.40%	23	56.80%	71	125
7	Reduces corruption	10.40%	13	2.40%	3	8.80%	11	16.80%	21	61.60%	77	125

X.   Demographic Information:

- ○ **How old are you?**
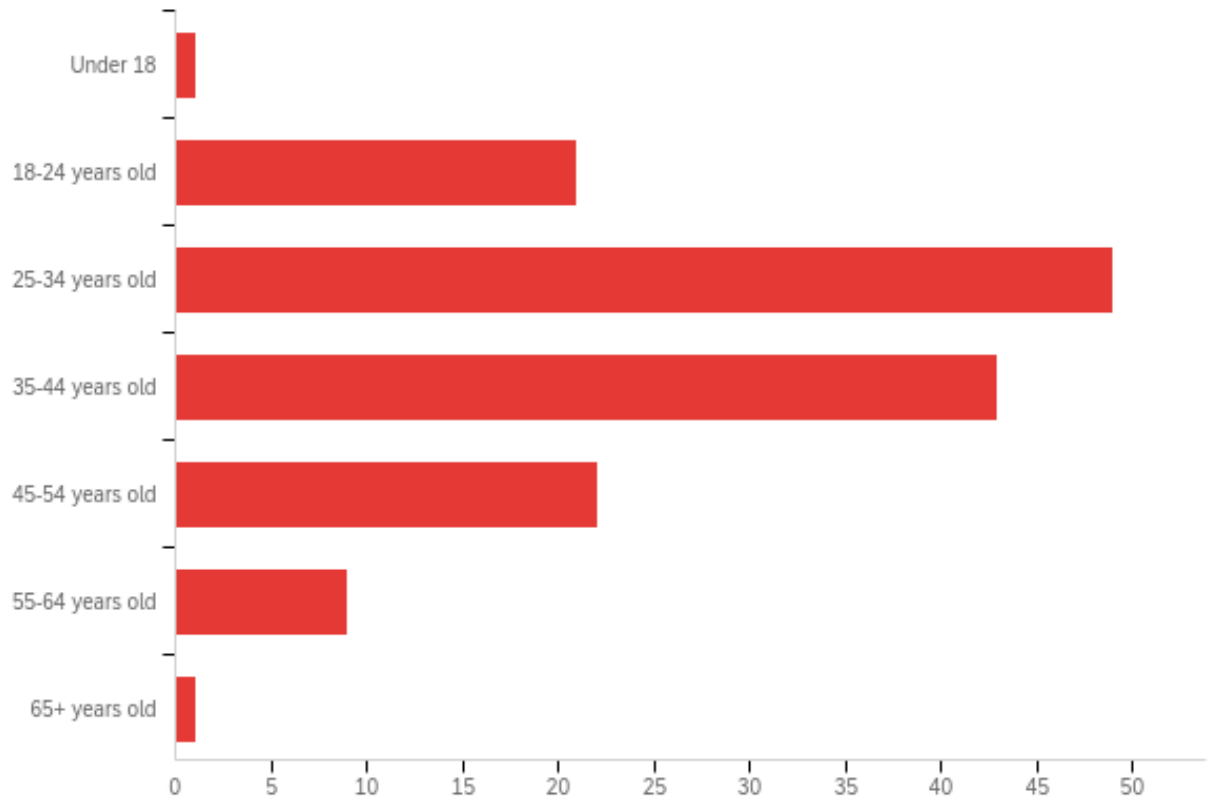
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How old are you?	1.00	7.00	3.65	1.14	1.31	146

#	Answer	%	Count
1	Under 18	0.68%	1
2	18-24 years old	14.38%	21
3	25-34 years old	33.56%	49
4	35-44 years old	29.45%	43
5	45-54 years old	15.07%	22
6	55-64 years old	6.16%	9
7	65+ years old	0.68%	1
	Total	100%	146

o **What is your gender?**
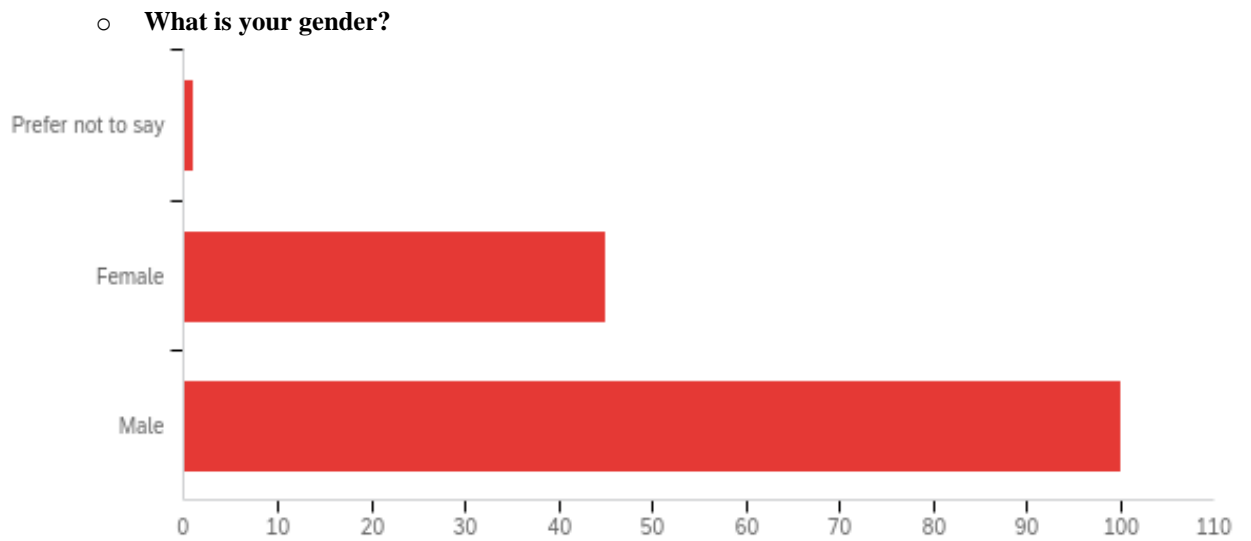
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your gender?	1.00	3.00	2.68	0.48	0.23	146

#	Answer	%	Count
1	Prefer not to say	0.68%	1
2	Female	30.82%	45
3	Male	68.49%	100
	Total	100%	146

o **What is your level of education?**
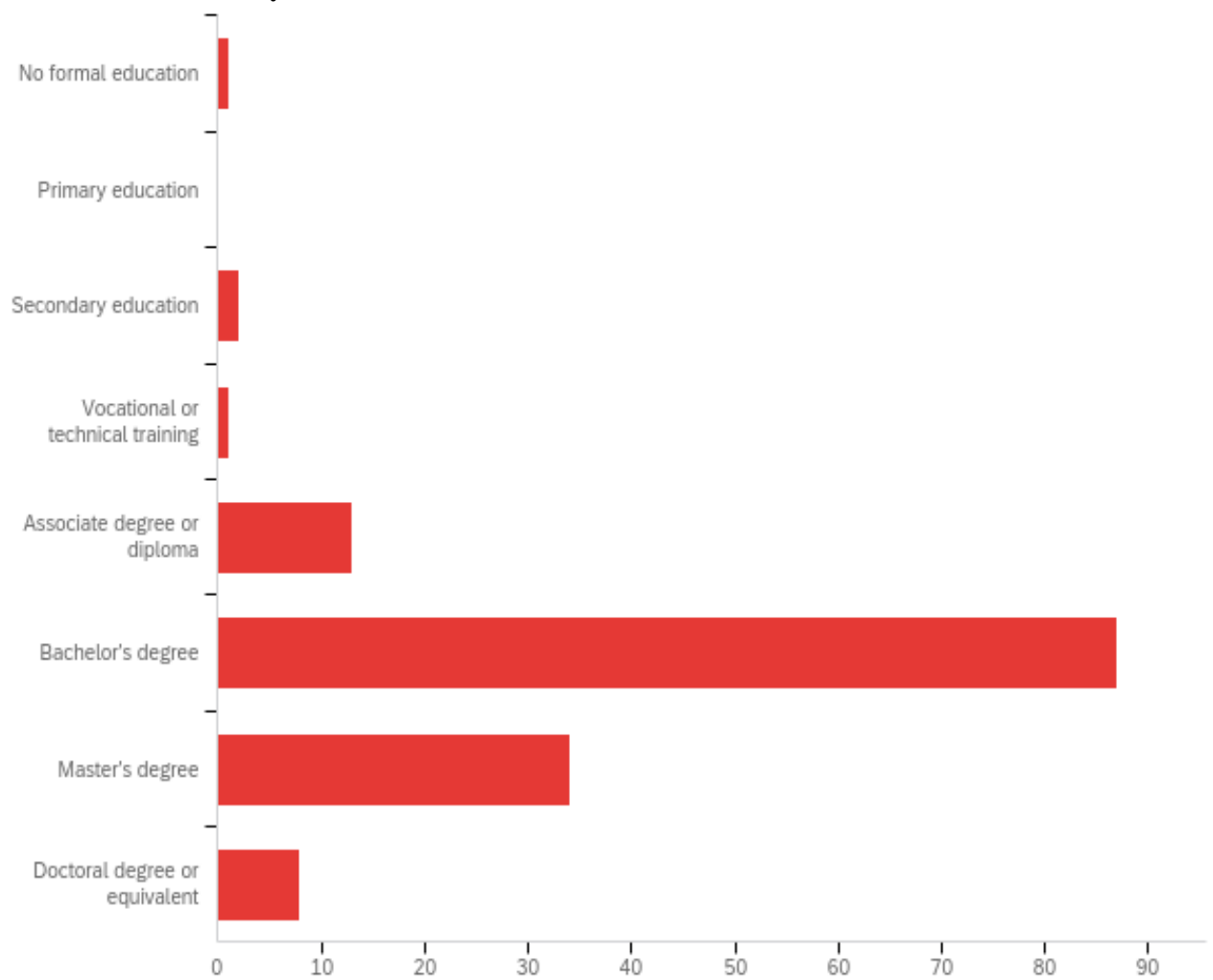
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	What is your level of education?	1.00	8.00	6.16	0.91	0.84	146

#	Answer	%	Count
1	No formal education	0.68%	1
2	Primary education	0.00%	0
3	Secondary education	1.37%	2
4	Vocational or technical training	0.68%	1
5	Associate degree or diploma	8.90%	13
6	Bachelor's degree	59.59%	87
7	Master's degree	23.29%	34

8	Doctoral degree or equivalent	5.48%	8
	Total	100%	146

o **In which sector do you work?**
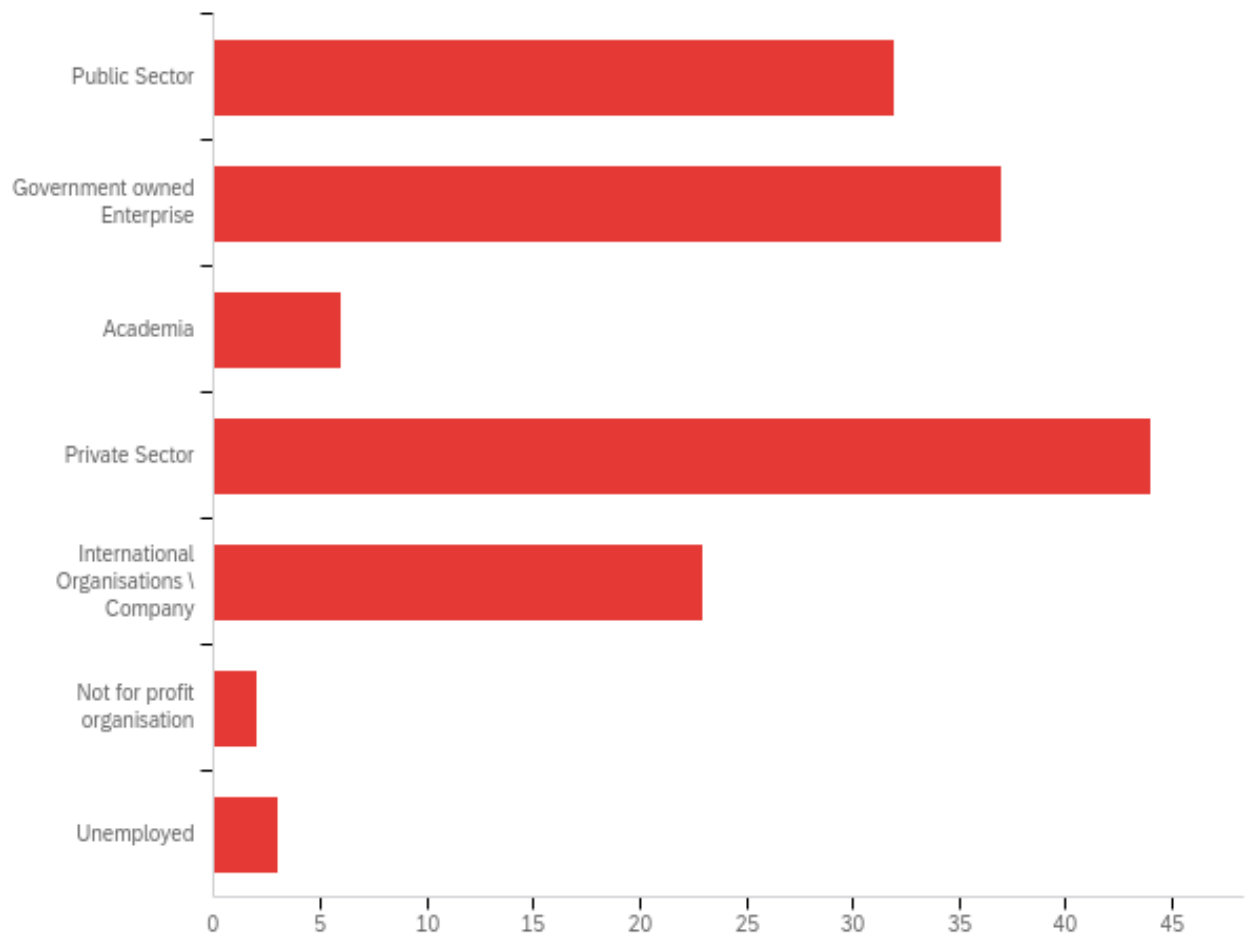
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	In which sector do you work?	1.00	7.00	3.05	1.58	2.49	147

#	Answer	%	Count
1	Public Sector	21.77%	32
2	Government owned Enterprise	25.17%	37
3	Academia	4.08%	6
4	Private Sector	29.93%	44
5	International Organisations \ Company	15.65%	23
6	Not for profit organisation	1.36%	2
7	Unemployed	2.04%	3
	Total	100%	147

F. The Informed Consent Form

Front Page

KU LEUVEN

INFORMED CONSENT

LEUVEN   *

Please read this informed consent document carefully. Make sure to pose all your clarifying questions about the research before participation.

Information about the research project

Provisional title: **Identifying Drivers and Barriers of Digital Transformation in The Public Sector – Libya as a Case Study**.

Institution(s):   KU Leuven, WWU Münster and Tallinn University of Technology.

Researcher: Amged B Shwehdy (M.Sc. in Public Sector Innovation and e-Governance (Pioneer), Graduate Student)

Contact: amgedb.shwehdy@student.kuleuven.be

Supervisor: Prof Dr. Ing. Joep Crompvoets (Professor, KU Leuven)

Research Objectives and Methodology

The primary aim of this research is to identify and analyse the drivers, barriers, and challenges associated with e-government implementation in developing countries, using Libya as a case study where it will help in building a proper understanding of the current status of the State of Libya's digital transformation and e-government initiatives and strategies, their drivers, and the barriers they face in their journey. The research will use a mixed-methodology approach, conducting simi-structured interviews for the qualitative part and distributing a survey for the quantitative part.

Research intervention

I am aware that I am asked to participate in a semi-structured interview that will take approximately 40-75 minutes. The interview will be held online, using video conferencing software or offline. The interview will follow an interview guide assembled by the researcher but may include additional ad-hoc questions that arise during the interview.

Information

I have received sufficient information about the purpose and methods of this research. I understand what is expected of me during this study.

Recording

I consent to the interview being audio/video recorded and transcribed into writing to facilitate data processing and analysis.

Voluntary participation

I understand that my participation in this study is voluntary. I have the right to stop participating at any time. I do not have to give a reason for this, and I know it will not have any negative repercussions. Taking part in this study does not involve known risks or inconveniences.

Back Page

Compensation

My participation offers a voluntary contribution to scientific research and advancement. I know I will not receive any further reward or compensation for my participation.

General Data Protection Regulation (GDPR)

Under the GDPR, the data collected during the study will be processed based on public interest. This implies that when you withdraw from the study, any previously collected data can still be lawfully processed and do not need to be deleted by the researchers. In case a third party acts as a processor of the collected data, it can be requested at any time to have the processing of the data stopped and, where appropriate, have the collected data deleted.

I understand that some of the data collected for the purposes of this study might be classified as 'sensitive personal data' under the General Data Protection Regulation. I hereby expressly consent to the collection of these data for the purposes of this study.

Confidentiality

The results of this study can be used for scientific goals and may be published. My name will not be published. The confidentiality of the data will be protected in all stages of the research.
In the context of transparency in scientific research, the data of this study may be shared with others, such as researchers from different universities. In that case, only non-identifiable data will be shared. It will not be possible for others to know that I have participated in this study or to know which data belongs to me.

Dissemination of results

In case you wish to remain updated on any published results of this study, please provide the researcher with an e-mail address to contact you at: _____

Contact details

For any questions, concerns, or to exercise your rights (access to or the correction of data, etc.) after participating in the study, you can contact:

    a)   The researcher at: amgedb.shwehdy@student.kuleuven.be

    b)   The supervisor at: joep.crompvoets@kuleuven.be

For any complaints or other concerns about ethical issues relating to this study, I can contact KU Leuven's Social and Societal Ethics Committee: smec@kuleuven.be

I have read and understood the information above. I received answers to all my questions regarding this study. I agree to participate in this study under the conditions set out in this document.

_____   _____

[To be filled out by the respondent]   *[To be filled out by the researcher]*

G. Declaration of Authorship

I hereby declare that, to the best of my knowledge and belief, this Master Thesis titled "Identifying Drivers and Barriers of e-Government Implementations in The Public Sector – Libya as a Case Study." is my own work. I confirm that each significant contribution to and quotation in this thesis that originates from the work or works of others is indicated by proper use of citations and references.

Leuven, 03 August 2023

Amged B. Shwehdy