

TALLINN UNIVERSITY OF TECHNOLOGY

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**Digital Symphony: Assessing the Synergy of Digital Development
and Nation Branding on a Country's Global Standing**

Master Thesis

Technology Governance and Sustainability

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I hereby declare that I have compiled the master's thesis independently and all works, critical standpoints, and data by other authors have been properly referenced, and the same paper has not been previously presented for grading.

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ABSTRACT

As small states strive for more power and differentiation within a dense global marketplace, digital capabilities emerge as crucial determinants of their reputational capital and economic strength to compete beyond the size of territory and military power. In the case of Estonia, which has gained recognition as one of the most digital societies in the world, the e-Estonia branding, aligned with the nation's digital development, has amplified the effects on the country's global standing.

This research investigates the interplay of digital development and brand strategy and its significance in shaping a country's competitiveness, international reputation, and soft power. In the modern techno-economic paradigm, where technological innovation and digital transformation are integral to national competitiveness, this study examines the implications and significance of a country's digital strategy and strategic nation branding efforts alignment as it attempts to map out and measure such interplay's contribution to the nation's global competitiveness, perception, and soft power.

The case of Estonia is fascinating as it allowed a small country to rise from a developing post-soviet state to a globally recognized nation as one of the most digital societies in less than 30 years. The author seeks to understand the phenomenon and, in cooperation with other field experts, explore a Big Data and AI model to measure and evaluate the synergies of the e-Estonia branding and digital development of Estonia as a digital society.

The study's scope contributes to the fields of nation brand management, international relations, public diplomacy, and digital development strategy to provide policymakers and industry leaders, particularly in small states, with insights to inform their decisions to optimize efforts regarding nation branding and digital development in the digital age and to justify investments in both digital development and nation branding initiatives.

Keywords: Estonia, nation brand, nation brand management, digital development, e-Estonia, competitiveness, soft power, synergy, Big Data, AI

ABOUT THE AUTHOR

The author, Anna Kuulmann (Piperl), has been working on the e-Estonia brand since its beginning in 2010, initially a marketing projects manager, public speaker, and cooperation coordinator at the NGO ICT Demo Center, established by Estonian ICT Companies (Kuulmann, 2024). From 2015 to 2021, she led the e-Estonia Briefing Center at the Estonian Business and Innovation board as Managing Director, e-governance expert, and keynote speaker, shaping e-Estonia narrative, brand management, stakeholder engagement, customer experience, public relations, and ICT export promotion activities (Kuulmann, 2024). This provides a unique insight into the e-Estonia brand history and strategy, allowing a deep understanding of its development, evolution, and implementation. The author has presented the story to 20,000+ world leaders, given over 50 keynotes at international conferences, and became the first Estonian to give a TED talk about the digital society with over 2.5 million views. This background positions the author to effectively explore the synergy between Estonia's strategic branding and digital development, aiming to develop a framework to measure their synergy with other experts – top-level stakeholders involved in digital development and nation branding.

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INTRODUCTION

Every nation aspires to boost its global standing and competitiveness while garnering a reputation and soft power to safeguard it. Even if small states become increasingly vulnerable, they may still be seen and heard, regardless of the current challenges of globalization and technological advancement.

This thesis examines the dynamic relationship between nation branding and digital development. We focus on how these two concepts contribute towards the creation of synergies to improve the global positions of small states, as well as their competitiveness, reputation, and soft power. This is done by examining the case of Estonia, which has become an example of a successful digital nation. Further studies on this area are important due to the rapidly changing continent and digitization of the states. Although the impact of nation branding has been studied under various contexts, little has been explored on the connection of the effect of digitization on nation branding for a small state.

The research aims to fill these gaps with the proposed synergy measurement model, which is an alternative to current, mainly subjective data production methods, such as indices, rankings, and reports. These methods are not always able to fully cover dynamic aspects of digital that affect nation brand development. Meanwhile, unlike a stasis approach, the proposed synergy measurement model is still dynamic, considering ongoing shifts in digital outsets, providing strategic management and improvement-oriented data in resource-strained realities.

The research contributes to nation branding, digital development, public diplomacy, economic development, and international relations. Utilizing a *Qualitative Research Synthesis approach*, the study integrates in-depth interviews with key stakeholders, analysis of selected digital media publications, examination of publicly available reports, unpublished internal documents, and contextual quantitative data. The methodology is designed to provide a rich, multidimensional understanding of the e-Estonia brand and digital development synergy. By employing purposeful sampling, the research gathers profound insights from a carefully selected group of high-level experts who have significantly shaped and benefitted from Estonia's digital and branding strategies.

The urgency of the study is indicated by the current global digitalization trend in governance and public engagement and the increasing geopolitical and economic pressure. Thus, understanding how these areas intersect and influence a nation's international image and reputation is essential for grasping the dynamics of everyday reality. This thesis examines these aspects and lays the groundwork for further academic investigations into nation branding, digital transformation, public diplomacy, and international relations to guide the strategic decisions of small states willing to use digital means to increase their soft power and global impact.

Working with the e-Estonia brand management and communications for more than a decade since 2010, including a period as the Managing Director at the e-Estonia Briefing Centre from 2015 to 2021, has shown the author the synergies in national brand management and communication with the development of digital environment. The author is inspired to help continue the success story of Estonia and provide innovative tools in strategic communication that will enhance the Estonian standing in the world.

The research problem

This thesis aims to understand the interplay and synergy of nation branding and digital development on a country's global position and reputation, its competitiveness, and most importantly, its soft power. Specifically, however, the following areas are of focus: how does the national brand of Estonia manifest itself as an action element on that of the country's digital society and digital development, and most importantly, how do they synergize to positively affect the international perception of Estonia and its competitiveness, reputation and soft power? If the

question above is valid and it is established which might be the critical components to push synergy, these are the following objectives:

The objective of this thesis research is to determine the interplay and synergies of the influence of nation branding and digital development on Estonia's global standing, international reputation, competitiveness, and soft power. The tasks for the author are to analyze and understand the connection between the national brand of Estonia, e-Estonia, the digital society, and digital development in the country, what links them, and how the interplay contributes to the creation of a synergy that intensifies Estonia's international competitiveness, boosts reputation and soft power. After acquiring knowledge of which features in this relationship between the key factors have contributed the most, the author sets the goal of developing a sound measurement framework. The research question on the difference aspect is:

- What is the interplay between nation branding (e-Estonia) and digital development in Estonia?
- How is the synergy created between digital development and nation branding, and how does it enhance the global standing of a small state like Estonia?
- How could we measure the synergy between digital development and national branding based on theory and national expert opinions?

1. SMALL STATES GLOBAL STANDING, COMPETITIVENESS AND SOFT POWER IN THE DIGITAL AGE

Small states in the era of globalization face complex problems that significantly affect their global positions, competitiveness, and soft power. Globalization is both an opportunity and a challenge. On the one hand, it promotes economic efficiency and cultural exchange; on the other hand, it weakens state sovereignty by strengthening global governance, which acquires multipolarity. As a result, globalization leads to the deterritorialization of activity and cultural and social homogenization. This process is excellently described in the works of Friedman (1999), Guillén, and Ontiveros (2020), who argue that globalization accelerates economic efficiency and people-to-people exchanges and is a major challenge to state autonomy and governance. This is especially true for small states, particularly vulnerable to external pressures and competition due to limited military and human resources and state finances. The influence of small states on international processes is also weakening. They have little influence on the results of diplomatic games and trade policy. Small countries depend on security and economic protection from others, primarily from larger states, and have rather limited leverage in international institutions and negotiations. In addition, asserting their interests in extensive organizations is difficult.

Small states often struggle to defend their interests in diplomatic negotiations and economic agreements. Small states largely depend on others for security, economic aid, and access to markets and have relatively little power in international politics and trade, which complicates the

situation when it comes to asserting their interests in multilateral trading arrangements such as the EU (Steinmetz, 2010).

The concept of “glocalization” focuses on the strategic balance, which is vital for the nation’s development and combines global and local processes. The approach is critical for small states that ought to preserve their cultural identity and simultaneously be part of the global process. The opportunity to break down into local cultures helps preserve global perspectives and expand global business while being culturally sensitive (Blatter, 2007; Edgington, Hayter, 2012). The risks are real. As small state populations decline due to immigration, national culture can erode, sparking a brain drain (Docquier and Rapoport, 2006). People will not be able to find better opportunities in the country, and more and more will leave it. A theory by renowned economist Carlota Peres (2010) of techno-economic paradigms provides a conceptual background to understand that technological revolutions drive ‘major changes over long epochs in economic and social organization.’ They set out new rules of commerce, new ways of life and labor, and new ways of governing that require almost all business organizations to adopt a massive amount of new technology. These include new infrastructures that change how businesses are run. They also form new businesses, industries, and models. Policy, regulation, and socially acceptable behaviors are changing (Drechsler, 2009; Perez, 2010;)

The concepts of digital sovereignty and data sovereignty for small states are especially meaningful in this regard, as small, resource-scar counties might not be able to sustain their independence in the digital economy due to a lack of resources for investment in digital infrastructure and services. (Kattel et al., 2011; Hummel et al., 2021). On the one hand, globalization has numerous benefits: increased access to foreign markets, economic and income diversification, and the ability to derive innovation and technology. These enable small states to climb up the development ladder more quickly and gain more power via partnerships and alliances (Friedman, 2005). Technology may also lead to power centralization and widening disparities; hence, the digital divide especially damages small states (Van Dijk 2006).

In the globalized and digital world, nation branding and digital development present critical strategies that small states can adopt or use to improve their international status, soft power, and competitiveness. When digital strategies align with nation branding, small states can overcome the complexities and challenges associated with globalization by increasing their visibility, attracting foreign investments, and engaging more meaningfully in international politics. In turn,

the digital and globalized world reduces the disadvantages small countries face in their pursuit of economic and political progress, and while the challenges and issues begin as such, the world becomes full of opportunities for growth and increasing global influence (Anholt, 2007; Dinnie, 2022). Thus, through active engagement in digital development and strategic branding reflecting the said potential, small states can get a head start, lead the way in the current technology evolution cycle, and influence global dialogues and interactions (Perez 2010).

1.1 Digital-Driven Development Strategies for Small States and Nation Branding

Small states' digital-driven development strategies place them as relevant players in an increasingly globalized world. Such strategies balance globally arising opportunities provided by globalization and the techno-economic paradigm, including new markets, collaboration patterns, and emerging challenges. Moreover, small states differentiate with competitive advantages developed over specialization in specific areas – fintech, e-commerce, and IT service. Not only do small states use these strategic niches to overcome the vulnerability of their economies, but they also become highly competitive players within the global market. Technological differentiation, innovation, and new technologies give countries competitive leverage, which can contribute a significant share to the country's GDP and global trade (Kattel et al., 2011; Guillén & Ontiveros, 2020).

On the one hand, a conducive environment for technological and business advancements needs to be created. Supportive policies can stimulate innovation and entrepreneurship, allowing small states to foster economic growth by creating new industries, goods, and services. Collaborations between government, academia, and industry are especially important, as they widen the spectrum of innovation networks and facilitate international interactions, which tend to increase their overall innovation capacities and, hence, their competitiveness (Katz, 2012; Bjola & Holmes, 2015; Archibugi & Filippetti, 2018).

On the other hand, Joseph Nye's concept of soft power allows a country to influence the preferences of other actors utilizing attraction and persuasion instead of force or financial resources (Nye, 2004). Small states could utilize their soft power potential with the help of smart

state strategies based on digital innovation and aspects of public and cultural diplomacy, often in the form of niche diplomacy. These strategies enable small states to act as policy entrepreneurs in various policy areas and influence various policies of the EU, which also increases their international standing (Grøn & Wivel, 2011).

Digital diplomacy is another effective measure for small states to increase their influence and presence. It means using digital platforms to raise their profile and be competitive in the international arena. This is essential for applying direct contact with the international audience, influencing their opinions, and building connections through web formats like blogs and social networks. Establishing networks with the states, EU institutions, and other actors playing a more significant role will enable small states to gain crucial access to policymakers, strengthen their position, and assert their policy preferences (Castells 2010; Bolin 2015; Manor 2019).

From this aspect, such networks are important for distributing soft power in public diplomacy, allowing minor countries to meet them and lobby for their interests. In such a way, it is how small countries could be expanded internationally (Castells, 2010). The latter serves its foreign policy, emphasizing that the regional powers are not new but specialize in something different. The development of networks with their regional interaction emphasizes two dimensions: regionalism and strategy. Both could help enhance global influence presence among small states (Castells, 2010; Steinmetz, 2010).

Bridging the digital divide and enhancing digital literacy are essential factors that can contribute to a country's image improvement and demonstrate its dedication to equitable growth and social progress. The successful utilization of digital technologies in disaster management and response, including natural catastrophes and epidemics, demonstrates a country's strength and resilience and can serve as an example of inspiration in new ways of leadership and collaboration (Hale et al., 2013)

1.2 Integrating Digital Development with Nation Branding for Small States

By combining digital development strategies with national branding, small states can successfully and exponentially increase their global power. Using brand communication helps compete and truly create a modern, innovative, and culturally attractive image with the help of technology. Integrated strategies help create good education, attract and keep brilliant minds, and

strengthen the country's economic and cultural power (Kotler & Gertner, 2002; Tammpuu & Masso, 2018).

The strategic integration of digital development and nation branding allows small states to develop a compelling national image. As a result, such states do not merely secure investments and promote tourism. They make their economies and cultures more attractive to the global consumer due to the enhanced image of their distinctive values by branding strategies promoting their economic interest and expressing key characteristics of their national identity (Anholt, 2007; Dinnie, 2022).

Successful nation branding tactics that take advantage of digital developments will contribute to the ideal image of a state as a new, forward-thinking, and culturally aware country. For small states, the nation-branding approach is particularly important given that it is an essential complementary strategy to the technological and globalization strategies, which are fundamental in improving a country's reputation and competitiveness. As a result, a lack of proper nation branding leaves small nations at the mercy of the external narrative that is often characterized by accentuating the challenges a small country faces, such as constant political disturbances and economic volatility, among others (Fan, 2006). These elements act as a barrier to entry or investment, which may hinder development and make it difficult for the state to recover from periods of conflict. The strong national brands also empower states to influence other nations or international norms and perceptions, which is crucial as they often lack the resources to be effective in international diplomacy and global forums (Anholt, 2007).

Nation branding is, therefore, a multidimensional and continuous task involving a systematic narrative and strategic communication of the country's history and comparative gains to a vast range of audiences through various media channels (Alhassan, 2023), including PR companies and leading foreign media (Bolin, 2015). In the lack of a well-defined nation branding policy, small nations could remain undifferentiated or inaccurately differentiated on the global stage, neglecting the opportunities in foreign tourism, export, direct foreign investment, and overseas partnerships.

Since digital networks do not immediately lead to democratization or empowerment, policymakers must critically evaluate whether a country's digital strategies support its branding goals or only provide a patchwork of artificial elements. This may, in turn, prevent the

disadvantages of digital inequalities and make sure that a country's digital progress enhances its international reputation and influence (Van Dijk 2006). National organizations and collaboration within the government are needed to develop and maintain the synergy for effective branding strategies that better project national values (Frig & Sorsa, 2020). In conclusion, the development of digital technologies, although extremely important for the modernization of the country and the necessary competitive advantages, is not enough for a country to have a strong national brand, which will further provide significant recognition and soft power

In conclusion, the development of digital technologies, although extremely important for the modernization of the country and the necessary competitive advantages, is not enough for a country to have a strong national brand, which will further provide significant recognition and soft power. A national brand is the projection of the uniqueness and strengths of the country, even beyond the digital capabilities. During times of crisis, this brand allows for the management of perception and the creation of a story of success and revival. It is important to be consistent in the messages and channels; otherwise, there would be a separate view regarding the country. In this way, digital technology contributes to the development of the foundation of a country, its infrastructure, and the principles of governance, while branding forms an attractive, solid, and long-term image that promotes recognition and acceptance in the international arena.

2. NATION BRANDING STRATEGIC IMPERATIVES

The insights into nation branding, as conceptualized by Kotler and Gertner (2002), represent the core of this definition, as the authors treat countries as brands. In this case, entities include tourism, exports, foreign direct investment, political relations, and other aspects as products and a company that uses strategic marketing in marketing research, segmenting, positioning, and developing a one-of-a-kind value proposition. All of the above is practical and can be used as a competitive advantage, including at the global level (Kotler and Gertner, 2002). The complexity of branding nations surpasses corporate branding, involving various stakeholders, including government entities, commerce, non-profits, tourism, and the media. This complexity is compounded by the infinite range of uncontrollable brand touchpoints, making national branding far more nuanced (Dinnie, 2022).

Nation branding is aligned with national commercialism and a governance approach because it involves marketing national identity as a commodity to achieve economic and political ends (Volcic and Mark Andrejevic, 2011). Thus, one of the distinguishing facts is that national branding is overwhelmingly funded by the government and faces unique challenges in implementing such campaigns. In the context of a large nation, political regime changes result in branding disruption or branding essence deprivation, as older nations can suffer from groupthink or even corruption, which results in the nation's brand remaining unchanged (Kaneva, 2011). However, in the context of small states, there can be more opportunities than threats; for instance, a less political or bureaucratic approach means that branding is more effective, which allows the small state to participate successfully in the global economy.

Another focus on the nation branding definition is the principled dimension of the concept. This dimension reflects the proactive formation of national stereotypes and images that could have resulted in a specific nation-state's detriment. Yan adds that the ethical basis of nation branding is especially relevant for small, emerging, and underdeveloped countries with an insignificant potential for economic, diplomatic, or military power, as nation branding helps them manage their geopolitical challenges (Yan, cited by Dinnie, 2022).

2.1 Nation Brand Manifestation and Competitive Identity

Unlike traditional marketing, national branding goes beyond external communication and is a deeply rooted element of national identity, focusing on cultural and unique aspects. Anholt (2007) states that a nation-brand is a "*unique, multidimensional blend of elements that provide culturally grounded differentiation and relevance for all target audiences.*" The importance of the authenticity of the brand, which many authors agree with, should be based on the state's actual strong position from the perspective of branding instead of relying on a created image that is often discrediting the brand (Anholt, 2007; Gilmore & Pine 2007; Fan, 2006; Kapferer, 2012) and creates a conflict in the internal and external perception (Ståhlberg & Bolin 2016). "Cultural branding" is another concept developed based on the brand's accent, which is closer to the culture and society with which it resonates and uses cultural ideas as a strategic element of the brand (Holt, 2004). Holt (2004) states that various trends and initiatives are the brand should be attractive and coherent. According to Roll (2016), nation-brand identity development is a systematic plan that includes a cohesive vision, defining the scope, and establishing segmentation strategies to ensure the brand's distinct positioning, personality, and essence.

The brand image is the interpretation by the consumer and, more broadly, by the public of the nation's diplomatic actions, international relations, and cultural outputs. It is drawn from national stories and national heroes that align with broader ideological and historical narratives of the nation (Bond et al., cited by Dinnie, 2022). It is a complex task to create a consistent and effective national message amid the cultural and social diversity of the modern nation; however, with a wide stakeholder engagement, it can reflect the national character and thus secure enough buy-in from the nation to be successful (Kavaratzis & Hatch 2013; Dinnie 2022). Moreover, the ethical use of public funds calls for using politically and socially appropriate measures, most likely effective public-private cooperation models (Dinnie, 2022).

In the digital era, nation branding has extended into online spaces and can be seen leaving digital footprints, from official government portals to cultural products. For instance, Anholt's (2007) "*Competitive Identity*" concept prioritizes the importance of a consistent and coherent message across exports, governance, investment, tourism, and cultural exchanges. Competitive identity merges brand management, public diplomacy, and trade promotion into a holistic strategy that enhances the nation's image (Anholt, 2007).

Stakeholder Engagement and Co-creation of Brand Value in Nation Branding

Brand value, a key element of national branding, is developed through strategic relationships with primary and secondary stakeholders, such as the government, corporations, investors, and the international community (Hill & Jones, 2012). Through two-way contact, these stakeholders are producers and consumers of brand value who greatly influence a nation's reputation, cohesiveness, political authority, and productivity. Primary stakeholders that relate to or are in contact with a brand regularly significantly impact the partnership. The power of a network's beneficial communicative network effect works through the joint influence of the contributing parties to raise the overall brand value beyond its individual components. There are also various propensities for engaging with stakeholders, including using high-profile brand ambassadors, branded export market promotion, showcasing national innovations (Dinnie, 2022), and sponsoring national celebrations and events (Gwinner & Eaton, 1999) and goods through media and social exposure. Systemically coordinating all stakeholder roles will foster greater brand equity that benefits nations' economic, social, and political outcomes. Hence, the comprehensive effort will facilitate greater awareness, reputation, appreciation, and respect towards the brand, correspond to a national priority for economic development, and reinforce global understanding.

2.2 The Challenges Of Nation Branding

Nation branding presents several significant challenges spanning from strategic implementation to effectiveness evaluation. One of the primary concerns is measuring the brand value and impact. According to Keller (2008), nation brand equity is critical as it reflects the global

perception of a country's image, which influences its reputation and competitive standing. This perceived value affects various facets, such as investment, tourism, and international relations. Anholt's Nation Brands Index attempts to provide a framework for financial valuation, encompassing factors like awareness, associations, perceived quality, and loyalty (Anholt 2005). However, the subjective nature of these measurements and the difficulty in quantifying the direct impacts pose significant challenges.

Strategic management and sources of funding are further problematic within nation branding. Constant political and economic ups and downs can challenge the strategic management of the nation's brand, leading to a considerable expenditure of funds. As emphasized by Anholt (2007), Dinnie (2015), and Gertner (2011), financial insecurity and the struggle for funds with national priorities – healthcare and education, primarily – leads to discontinuity of the financial support to the branding activities. The disruption hurts the nation branding's consistent financing, as it fails to demonstrate immediate and short-term returns on investment.

Finally, ethical considerations and engagement of stakeholders are also major prerequisites for successful national branding. More specifically, the allocation of public funds must meet certain requirements in terms of political and social ethics. Governance models that work well are those that enable the cooperation of efforts between the public and the private sectors and include a wide range of stakeholders in the policy development process to be implemented consistently at different levels of government (Kavaratzis & Hatch, 2013; Dinnie, 2022),

To sum up, crisis management and national resilience represent the means to anchor a strong nation's brand in external shocks, whether natural disasters, political crises, or economic plunges. Crises can be managed by rapidly reconceptualizing marketing messages through the focus on the strengths of the nation (Keller, 2008; Steenkamp, 2019). Moreover, national and traditional aspects should coexist with modern ones. In the digital age, such a combination allows a country to remain unique and authentic while engaging with the masses and ensuring that shared values and cultural identity are not abandoned. Thus, nation branding has to be comprehensive and strategic. (Anholt, 2007; Ståhlberg and Bolin, 2016).

Nation brand management

Ensuring a nation's brand is well-managed is of the utmost concern if the national brand's reputation and influence are to increase on the international scene. As a result, all branding efforts must be coordinated centrally rather than by the different government departments and private sector since this reduces the politicization impact and promises a unified national image (Kaneva,2011; Percy, 2018; Alhassan (2023). Branding the Nation's repetitive effort is honed by strategic consistency to ensure that maintaining alignment with the nation's core cultural values and strategic objectives becomes a holistic component of national policy, as discussed by Morgan et al. (2011) and Steenkamp (2019).

To be effective, nation branding should also involve comprehensive stakeholder engagement, appropriately strong leadership, and an organizational culture consistent with the strategic goals and national identity (Dinnie, 2022; Steenkamp, 2019). Dinnie (2022) argues that strong leadership and organizational support of branding activities will drive its efficiency. The capability of the implementation should also be evaluated to enhance the internalization and response over time to both global trends and stakeholder feedback (Percy, 2018). The brand resilience and flexibility aspect involves creating a strong enough brand to endure a global disruption, like a political, environmental, or military crisis, ensuring the country continues to be perceived positively independent of the challenging experience (Keller, 2008; Steenkamp, 2019).

Simon Anholt (2007) emphasizes the importance of national branding as part of broader governmental policy, which involves external promotion, developing new ideas, policies, laws, services, and products to enhance a nation's reputation and nation branding should be a central element of national development strategies, fostering innovation and enhancing the nation's identity beyond economic considerations (Anholt cited in Dinnie, 2022; McCoy and Venter, 2015). The strategic framework addresses the complexity of nation branding, particularly the challenges of transient political leadership, which can hinder long-term brand differentiation and success (Anholt cited in Dinnie, 2022; McCoy and Venter, 2015).

Strategic Integrated Marketing Communications in Nation Branding

Nation branding makes Integrated marketing communications (IMC) vital in ensuring that all communication forms represent the nation's identity, values, and offerings to the world through marketing campaigns, cultural exports, official statements, or diplomatic engagements. Such a comprehensive approach requires meticulous planning, execution, and monitoring to maintain effectiveness and strategic alignment of branding efforts (Percy 2018; Schultz 2003).

IMC is crucial in realizing unified messaging across multiple platforms. This is particularly important in building the state's brand awareness and credibility before global stakeholders, including people, investors, and tourists (Schultz 2003; Keller 2008). Additionally, proper integration of digital marketing augments engagement through programmatic advertising, native advertising or sponsored content, and social networking. This is important as such tools notably connect with innovation-friendly people and showcase the state's visibility on the digital frontiers (Percy 2018).

Digital technologies are critical in enhancing the relationship between nation branding and the experience economy. With advancing technology, unique cultural and experiential offerings may be distributed. Here, IMC fosters an excellent customer experience by ensuring user-friendly interactions and affinity to the brand's unique selling proposition, focusing on the user, which promotes lasting loyalty and advocacy (Morgan et al. 2011; Pine & Gilmore 1999). Additionally, IMC plays a vital role in the communication field during a catastrophe or crisis. It ensures that the nation's image is protected and strengthened through prompt and coordinated, swift, consistent messaging (Keller 2008). Digital analytics in IMC also aids in developing digital technology policies and programs that appeal to both domestic and international stakeholders (Kotler & Gertner, 2002). In conclusion, technology is essential in enhancing the connection between nation branding and the experience economy. IMC also enhances integration and collaboration among various stakeholders involved in digital transformation, aligning government departments, private sector partners, and international investors with the nation's branding goals (Dinnie, 2022; Schultz, 2003). An effective IMC enhances a nation's digital maturity and innovation capacity, enhancing its global standing and soft power. It enhances diplomatic relations, opens new international cooperation opportunities, and amplifies the effectiveness of a nation's digital development efforts.

3. THE SYNERGY OF DIGITAL DEVELOPMENT AND NATION BRANDING

Nation branding is crucial for trade, investment, tourism, and talent attraction and is a co-creative process that should align with national policies (Anholt, 2007; Kavartzis & Hatch, 2013).

Synergy as a collaborative effort that can leverage the unique strengths of each component (Hill & Jones, 2012) between digital development and nation branding can enhance cooperation and achieve outcomes unattainable by individual efforts. The dynamic interplay between digital development and nation branding impacts a nation's global standing, competitiveness, reputation, and soft power. When the synergy is achieved, digital development can become a catalyst for enhancing national branding, while branding becomes a catalyst for digital development.

In this respect, it is important to consider aligning nation branding with the development of technology to facilitate the growth of its global position and recognition. Carlota Perez argues that nations that take up new technology early can create new standards, attitudes, and markets, thus fundamentally creating their own niche that other economies can only duplicate and never truly catch up (Perez, 2010). Aside from that, Perez's rationale is further supported by Porter's (1990) claim that nation branding can create new industries and completely change existing ones through diversifying economies and expanding national resilience. Moreover, as Michael Porter contends in *The Competitive Advantage of Nations*, a strong all-encompassing brand enables clear differentiation due to the integrity of infrastructure, labor, and industry clusters these states nurture, which become an essential part of the brand. The ability to solve complex domestic problems creates high demand and, thus, strong competition for products within their state, attracting both the best human and company capital in the world, further facilitating the country's competitiveness. Finally, good national branding can fundamentally change international perceptions of politically transitioning countries, such as those in Central and Eastern Europe (Anholt 2007).

Soft power is a country's influence on global preferences, influenced by its cultural, political, and policy attributes (Nye 2004). Nation branding enhances a country's soft power by positively shaping global perceptions and improving diplomatic and economic engagements. Digital diplomacy and nation branding enhance a country's international image and soft power. Nation branding creates compelling narratives, supports digital diplomacy, and establishes credibility and trust, making it more impactful (Anholt 2007). Digital technologies can project a country's national brand dynamically, amplifying cultural diplomacy, supporting policy advocacy, and sustaining international relationships (Nye 2004; Bjola & Holmes 2015)

Digital technology significantly impacts economic efficiency, productivity, and innovation (Brynjolfsson and McAfee (2014). Digital innovation is much more significant, and the influence of technologies has proven itself to be truly transformative (Acemoglu & Robinson 2012). Public investment in necessary digital infrastructure becomes key to attracting investments and improving the business environment (Katz 2012; Mazzucato 2013). Through digitalization, infrastructure, and productivity, the nation also becomes the leader in creating the nation and state brand by developing the nation's image abroad as an innovative and modern state. The nation's developing digital capacity and branding combine into an integral set and strengthen the national narrative, thereby creating soft power (Nye, 2004; Anholt, 2007; Angell & Mordhorst, 2015). Thus, when building a nation, one should skillfully tell the nation's brand story internationally using digital platforms to promote cultural, political, and ideological values worldwide (Porter, 1990; Kotler & Gertner, 2002; Fan, 2006). It is a strategic game where the country will be associated with innovation and the future and considered the right category.

The Country of Origin (COO) effect demonstrates how a product or service's place of origin affects consumer attitudes and actions, promoting a mutually beneficial partnership between corporate and national brands (Freire cited in Dinnie 2022). While successful businesses can strengthen the nation's brand, nation branding is a strategic asset for SMEs, helping them overcome branding weaknesses and enhance competitiveness (Sophocleous, 23). Cooperation between the public and private sectors is crucial to minimize possible negative effects and enhance the nation's favorable reputation (Dinnie, 2022).

One of the strategic factors involved in creating this synergy is this strong and charismatic leadership – the one that maps, integrates, realigns, and showcases development in digital investment in alignment with the branding of a nation. They define strategic direction and

branding through their presence and lay. Without it, strategies would appear disparate and hollow, and investment and talent would likely look elsewhere. These dynamics ensure that both strategies have a strong impact since the competitive nation attracts more focus, attention, investment, and collaboration worldwide (Archibugi & Filippetti, 2018; Castells, 2010; Anholt, 2007).

Data-driven decision-making, facilitated by digital analytics, enables more targeted and effective nation branding strategies, offering deep insights into global audience behaviors and preferences (Fetscherin M, 2010; Kaneva N., 2011; Hummel et al., 2021; Kitchin, 2014). Real-time communication and feedback enhance responsiveness in international relations, further amplifying the impact of integrated digital development and nation branding efforts (Bjola & Holmes, 2015). The dynamic alignment between digital development and nation branding propels nations onto the international stage, enhancing their infrastructural and technological landscapes and solidifying their reputations as modern, innovative, and influential players. This alignment and mutual reinforcement significantly boost a country's global image, competitiveness, reputation, and soft power (Anholt 2007).

BRAND AND DIGITAL DEVELOPMENT

Why measure nation branding and digital development synergy?

For small states, measuring the synergy between policy and nation branding enables a nation to effectively increase global visibility, attract investment, maximize tourism potential, and strengthen international relations. These are some of the pillars that support the growth of a nation (Kotler & Gertner, 2002). It is particularly hard in the public sector, where resources are scarce, external consultancies are expensive, and the ranking results are potentially outdated to rely on (Bjola & Holmes, 2015). Hence, if digital development is a critical cornerstone for the nation's growth, it matters to look at branding and development impacts as one. At the same time, identifying the right measurement systems and the correct indicators is crucial in reaching strategic national goals. This exercise serves to understand the interconnection between the different strategic documents and the contribution therein to the national goals (Kavaratzis & Hatch, 2013). Nation branding refers to the desire to enhance a nation's global reputation and competitiveness and the number of industries it influences through its soft power, regardless of

whether that power is governmental, corporational, or civil (Fan, 2006). The measurement might also be challenging since certain government bodies formulate strategies independently, which is also particularly problematic, considering that lack of consensus might deteriorate the nation's brand (Dinnie, 2008). Therefore, the interaction between digital development and nation branding is essential. Under the concept that effective policy is measured and measured repeatedly, the adaptation of Percy's (2018) framework suggests integrating nation branding and digital development, i.e., measuring the latter through the former. This idea is based on revealing the synergies from the interaction between digital development and nation branding while using limited resources. This implies the urgent need to measure both and prioritize the investments that pay off in the best way possible (Kotler & Gertner, 2002).

Such an integrated measurement approach will also supply valuable information on the current levels of efficiency of the government's and enterprise's policies and practices, together with implications for strategy improvements by maximizing the technology capacity and national brand simultaneously (Bjola & Holmes, 2015). Hereby, combined measurement results can be analyzed by policymakers and stakeholders who could determine synergy as a ripple effect by exploiting the carrier functions, using the multiplying effect of the national brand power and its general global competitiveness, and ensuring the optimization of invaluable resources. Also, such measurement could justify work on country management and gauge its recognition by the international market, attesting to the producing necessity of internationally recognized, irrefutable, and evidence-based national image measurement as constructed by Anholt (2007).

Methodological Approaches and Challenges to Evaluation of Nation Brand Impact

Here, the author outlines various methodologies and opportunities for assessing the influence of nation branding alongside digital advances while emphasizing the distinction faced by small states. As the preceding sections have shown, measuring the influence of nation branding linked with digital advances in small states employs a unique set of issues and demands an approach that is tailored to suit their specific needs, resource restrictions, and apparently overrated role in present rankings when they need to resist powerful competitors on the worldwide level. As stated, nation branding is a multi-faceted notion encompassing cultural, economic, and political elements. Thus, the impact measures contain direct consequences, such as tourism and inbound investment, and more oblique ones, such as a country's reputation and soft power (Bartl et al.,

2019). The difficulties of measuring nation branding have been voiced by many researchers before, as there is no way to directly impact and numerically calculate the impact of the nation's brand to attract tourists, FDI, and talents, impacts on exporting or becoming a more influencing international actor (Rojas-Méndez & Khoshnevis, 2023). However, the lack of direct indicators does not imply that the corresponding impact does not exist. Drechsler's argument in favor of the alternative qualitative methods of governance is interesting in this regard, as it builds up a concept of governance without indicators that can be implemented in both fields (Drechsler, 2019). That is why the author proposes integrating qualitative insights with quantitative metrics in both fields. This could provide a more nuanced and comprehensive understanding of how digital development and nation branding synergize to improve the nation's global standing.

Methodologies for Measuring Nation Branding

In summary, the effectiveness of national branding is a balance of business, marketing, political, social, cultural, economic, labor, international, and environmental factors that promote or detract from it. Knowing these forces permits stronger gauges regarding how nation branding aligns with and propels a country's chosen strategic position. Measurements of nation branding impacts usually require a blend of quantitative and qualitative assessments to ensure a holistic understanding of the potential influences of a nation's brand. While quantitative data can establish factual impact, including tourist numbers, foreign direct investment inflow, and export volume in simple data, Anholt (2007) provides a comparative reference for how long branding efforts will pay off. An increase in tourist figures, for example, following a focused branding campaign, can directly link the campaign to its appeal as a global travel place. Alhassan (2023) also reflects on several additional quantitative factors, including international media reports, investment changes, and growing tourist numbers.

One of these instruments is the Nation Brand Hexagon, developed by Simon Anholt, based on qualitative survey data on nation perceptions. This hexagonal model is a strategic tool the government can use to determine and consolidate the facets of its international image that can serve as a magnet to tourists and investors and promote exports. Therefore, the hexagon comprises exports, governance, culture and heritage, people, tourism, investment, and immigration (Anholt, 2007).

What to Measure in Assessing Synergistic Effects of Nation Branding and Digital Development

This section outlines the metrics and dimensions essential in understanding the synergistic effects of national branding and digital development and establishes an evaluation framework of the resulting effects. Thus, to adequately measure these synergistic effects of nation branding and digital development, the following focus areas should be systematically measured to provide a comprehensive view of their achieved impact. Firstly, the volume of investment in digital technologies, the quality and coverage of digital services, and The adoption of new digital technologies in several sectors, including mobile and fixed networks, household uptake, and infrastructure, provide an insight into how effectively the initiatives improve digital infrastructure. Similarly, the dependent variables to measure are:

- **Digital Infrastructure Development.** Indeed, the quality of investment in digital technologies, the quality and coverage of digital services, and the level of adoption of new digital technologies in some variables, including mobile and fixed networks, household uptake, and infrastructure, should be closely monitored as this measures the extent to which the initiatives improved the infrastructure quality according to Katz (2012).
- **Cultural and Public Diplomacy:** Measure the reach and impact of cultural diplomacy initiatives facilitated by the use of digital means, those funded under international cultural exchange programs, or public diplomacy campaigns to see what role digital platforms play in helping the nation foster its cultural values around the globe (Angell & Mordhorst, 2015).
- **Innovation and Technological Advancement:** measure the number of patents filed and the percentage of innovations registered, engagement in international technology forums, the growth of startup ecosystems in general and in the sectors fintech, cyber tech, e-commerce, and IT services in particular, as well as growth in digitally facilitated business models, measure the adoption of ICTs, AI and other advanced technologies and systems and cloud technologies (Archibugi & Filippetti, 2018).

- **Digital Sovereignty and Cybersecurity:** The extent of compliance with digital standards, investments in cybersecurity, incidents, collaborations, rankings, and the amount of national data and digital operations controlled compared to other countries. This establishes how secure and sovereign a country remains digitally (Hummel et al., 2021).
- **Social and Digital Inclusion** covers efforts to bridge the digital divide, the extent to which the country's digital education material is accessed, the rate of digital literacy, and digital adoption and consumption among different populations (Morgan et al., 2011).
- **Tourism, Exports, and International Trade:** Measures relevant to tourism, exports, and international trade, such as the impact of digital marketing methods, growth in exports as a result of better branding, and participation in international trade and conferences, as well as digital marketplaces to determine the support for international commerce by the nation-branding outlook (Kotler & Gertner, 2002).
- **Stakeholder Engagement and Collaboration:** the amount of collaboration between states and private firms through feedback from international collaborators and stakeholders and investor evaluations, quantifying how much stakeholders co-create brand worth (Kavaratzis & Hatch, 2013), measuring the nation-branding department's effectiveness at nation-branding or digital initiatives (Percy, 2018).
- **Immigration and Talent:** Jobs and Immigration growth numbers in skilled professions. This section covers immigration trends, job growth in the technology sector, students and skilled talent attraction, and the variety of continuous learning opportunities.
- **Public Trust Metrics:** public trust in trust in terms of the usage of digital services and the government's ability to protect personal data are crucial to digital development in the first place and the embodiment of nation branding. These can be measured by public trust surveys, satisfaction rates in relation to digital services, and the breaches of personal data (Dinnie, 2008).

- **Sustainability and Environmental Impact Metrics:** These would indicate the environmental effect of the digital initiatives and how this is or is not in accordance with a sustainable nation branding (Kotler and Gertner, 2002).
- **Collaboration Metrics:** This would entail any metrics regarding the number of partnerships, international projects, and agreements (Bjola & Holmes, 2015).

Most importantly, upon integrating these metrics in a collaborative evaluation framework, policymakers and other stakeholders can track the central and peripheral impacts of respective initiatives, ultimately promoting more informed decision-making and effective strategic adjustments.

Challenges and Limitations of Nation Branding Measurement Methodologies: Implications for Small States

Currently, the field of nation branding includes the employment of numerous methodologies and approaches; it is challenging to bring the variety of results from different indices together. Such fragmentation results in a lack of consistency in measurements, complicating the assessment process of nation branding combat (Hao et al., 2021). Therefore, it is crucial to distinguish nation branding from such fields as place branding and destination branding because their influence goes far beyond general marketing and promotion strategies (Rojas-Méndez & Khoshnevis, 2023).

Existing nation branding indices, for example, the Global Soft Power Index, Anholt-Ipsos Nation Brands Index, Digital Country Index, Good Country Index, FutureBrand Country Index, Country Brand Strength Index, Brand Strength Index, etc, are designed to provide metrics for states to determine how they are perceived in the global market in comparison. While generally applied to assist small states in understanding their position in the international arena and improving connected reputation, some of the metrics play a significant role in quantifying the effectiveness of small states' brands when applied alongside digital development approaches to nation branding. However, indices have fundamental drawbacks that make them not fully applicable or useful for strategic planning, especially in small states that link nation branding with digital

development. Some limitations of the existing indices include the inability to fully quantify a nation's soft power and the effectiveness of branding efforts, for example, in digital diplomacy. Existing indices fail to capture vital contextual clarification, which refers to regulation as a key factor in performance and conditions affecting digital performance and nation branding (Ciudad et al., 2019). The primary existing indices limitations are:

- **Overreliance on Perceptions:** Overreliance on Perceptions – such studies as the Anholt-Ipsos Nation Brands Index, the Global Soft Power Index, or the FutureBrand Country Index are based on survey data that allows understanding the international perceptions of countries. However, this approach is also the most vulnerable, as perceptions tend to be shaped by the news cycle or a recent event rather than a long-term national attribute or policy. Therefore, for small states that usually have less coverage in major media, it will result in a result that is not fully appropriate (Anholt, 2016).
- **Narrow Economic Focus:** The FutureBrand Country Index or Brand Strength Index primarily focuses on the country's economic aspects, including GDP growth, trade volume, etc. However, this perspective does not allow for evaluating a country's full power, including technological advancements, digital literacy, or environmental sustainability that enable growth. In this context, countries with small economic backgrounds but significant power in reforms and tools, such as digital governance or green policies, are usually underestimated (Kotler and Gertner, 2002).
- **Temporal Discrepancies:** While the Digital Country Index and similar indices are intended to track national brand and state development, their data is typically outdated by several months, if not years. Considering the fast pace at which the digital environment evolves, such indices are almost always outdated. Since most indices suffer from temporal discrepancies, where the data used may not reflect the current state of affairs, it affects the strategic use of these indices in real-time decision-making (Ciudad et al., 2019). Small states aiming for rapid adaptation and innovation are particularly hurt by the limitations of the indices, which may misrepresent current standing and mislead policymakers based on outdated data (Fetscherin, 2010).

- **Cultural and Contextual Nuances:** The Good Country Index and Anholt-Ipsos Nation Brands Index hardly consider regional peculiarities and cultural affiliations that substantially affect small states' results. This can significantly skew the understanding of small states' contributions to global issues and ultimately underestimate them (Fan, 2006).
- **Limited Strategic Usefulness:** While the Global Soft Power Index and Digital Country Index provide an overview of a country's brand strength or digital standing, they do not provide details and insights on how to improve. In other words, those indexes are more for benchmarking than for planning. Being largely insufficient for small states that need to allocate their resources with laser precision, such information can be deemed misleading unless taken into account with a grain of disbelief (Dinnie, 2008).
- **Exclusion and Resource Intensity:** First, not all small states are regularly ranked – or, indeed, even included – in most global indices, which could thus deprive them of the benefit of global visibility. Second, the burden of effort and costs of participating in the indices to collect and submit data—for example, to show that one has achieved the Sustainable Development Goals—can be high. While again, many non-commercial indices need to be lobbied to ensure their methodologies do not discriminate against smaller nations, especially those ahead of the curve, the return on investment may be well beyond the capabilities of smaller countries (Bjola & Holmes, 2015).

Acknowledging these limitations makes it clear that nation branding indices provide a starting point for evaluating a country's image and effectiveness in global branding. However, they must be used cautiously. For small states, enhancing the accuracy and relevance of these tools is crucial for effectively measuring and strategizing their national branding initiatives, ensuring that they align with both current capabilities and future goals. None of the indices mentioned measure the synergy and effects of nation branding and digital development working in alignment, while some measure the digital presence, technological advancements, digital engagement, digital contributions, and innovation.

In summary, while these indices provide valuable insights into different aspects of nation branding and digital presence, there is a clear gap in the market for an index that explicitly measures the synergy between nation branding and digital development. Such an index would

offer more actionable insights for countries, especially small states, looking to leverage digital innovation within their nation branding strategies to enhance their international profile and influence.

4.1 Digital Nation Synergy Live Index: Big Data and AI model for measuring nation branding and digital development in real-time.

Integrating Big Data and AI in nation branding has a transformational potential to analyze and improve a nation's global ranking, competitiveness, reputation, and soft power. Using Big Data analysis and AI on massive datasets enables large-scale, previously overlooked insights and provides a more nuanced picture of global national attributes and perceptions. For example, extensive Big Data analyses of big data for Korea's national branding, covering Google and Facebook images, trends, risk assessment, spatial storytelling tools, and marketing content, have been performed to obtain broad knowledge regarding how Korea is perceived abroad (Chung, Rhee, and Cha 2020).

Nation branding has multiple dimensions: economic performance, political stability, and cultural perceptions, making data collection on all these fronts a complex and time-consuming task (Prensky, 2009). While traditional thinking approaches use static, Big Data provides trending insights in real-time, enabling the analysis of shifts in immediate and emerging perception, such as social media sentiment analysis, news mentions, and economic performance indicators (Steadman, 2013). Lithuania, for instance, is recognized for using a real-time data-driven strategy for nation branding in the European Union and worldwide (City Nation Place, 2021)

Traditional scientific approaches prioritize a theoretical or hypothesis approach, and big data allows for the direct extraction of patterns from extensive datasets in diverse fields. This enables us to make conclusions without the initial hypothesis, which results in scientific conclusions from pattern detection rather than predictions (Bartl et al., 2019). In fields such as social sciences and humanities, the full capacity of direct access to patterns in Big Data enables new digital humanities and computational social sciences approaches (Kitchin 2014). Pattern detection in Big Data changes how culture, history, and general patterns are understood nationally and globally. Its disruptive nature is due to its volume, variety, and velocity (Kitchin

2014), as it can provide a comprehensive real-time observation of national branding elements. Data-driven science does not reject empiricism in its purest form but adds new analytics to the scientific language. As Kitchin (2014) observes, the data will speak for itself. Therefore, data-driven science enhances the understanding of a nation's brand and results in branding strategies tailored in real-time based on global perception of reality and media broadcasting.

AI techniques such as machine learning, natural language processing, and neural networks allow professionals to analyze large datasets known as Big Data that can be collected from various sources. This may include but is not limited to social media, economic indicators and reports, global rankings, quantitative data, media publications, and digital interactions (Russell & Norvig, 2020). Analyzing the impact of particular digital initiatives on national branding can be effectively done with the help of Big Data. Predictive analytics, decision-making algorithms, and optimization algorithms make it possible to forecast the outcomes of particular digital strategies (Russell & Norvig, 2020), which means that data-driven decisions can be taken to make the country's image more attractive. Finally, combining strategic, well-aligned AI and enhanced methodologies enables data-driven decisions to improve the country's global competitiveness and increase its reputation and soft power. An example of a Big Data analytical tool is D2 – Analytics, which provides metrics and sights for the Digital Nation Index that helps countries identify their performance in the digital dimension and the level of recognition in the international environment with data collected from the internet (D2 - Analytics, 2023).

Integrating Big Data and AI can allow the development of dynamic scenario planning tools (Kitchin 2014, Delliote, 2023) that can be used to simulate the potential effects of different events or policy changes on a nation's branding. Through real-time data streams and predictive analytics, decision-makers can investigate alternative scenarios and determine the effect on a country's reputation, competitiveness, and soft power. This feature will enable more proactive decision-making and risk assessment by allowing nations to stay ahead of the curve and respond quickly to threats and opportunities without turning to consulting giants such as Deloitte and EY. Using Big Data and AI will also result in more inclusive and participatory nation branding processes by giving stakeholders direct access to real-time access and insights. This increased openness and engagement may result in more stakeholders in a society—citizens, businesses, universities, and civil society organizations – with a vested interest in a country's branding. By participating in the data-driven process, nations may ensure that their branding strategies veer toward their citizens' diverse needs and preferences.

The model can also be greatly enhanced by introducing design thinking principles, recognizing that different stakeholder groups have varying needs and motivations. As a result, data scientists and AI technologists, policymakers, and branding professionals can work together more effectively and develop the use cases better (Brenner & Uebernickel, 2016). Design thinking starts with a profound understanding of stakeholder motivations, and big data and AI are used to provide strategic insights into stakeholders' behaviors, needs, preferences, and problems, enabling more empathetic strategies suited to their needs. Big data analytics can refine our goals by determining where digital development has the greatest potential to enhance nation branding. This involves identifying what kinds of digital investments are most influential for economic development and the positive role of digital infrastructure in a country's reputation and international standing (Kitchin, 2014; Cukier & Mayer-Schonberger, 2013). AI can be employed for scenario planning and solution ideation, and possible applications can potentially improve the linking of aspirations for digital development and aspirations for nation branding (Russell & Norvig, 2020). Prototyping can be either actual or service-based, such as a pilot project in public services or a digital advertising initiative to improve the country's brand image abroad. This phase involves testing, where big data and AI algorithms determine which strategy works best at that time. It is done in real-time through feedback loops of interactions of the digital platforms and projects to determine which honed then synergy between digital development and the nation-branding market is performed effectively (Russell & Norvig, 2020).

Implementing a Data-Driven Nation Branding Synergy Measurement Model

The adoption of a data-driven model is proposed to enhance a nation's branding strategy effectively. The model operates through a structured series of phases, each critical to shaping a robust, data-driven approach to nation branding. The phases form a continuous, never-ending process to gather historical and present data.

First of all, is the Data Collection phase; the phase is necessary to obtain various data from multiple sources such as government statistical databases, media monitoring, international branding surveys, and digital platforms. A crucial focus is setting on gathering all-encompassing metrics, incorporating real-time measurements that are updated relatively regularly with more

traditional metrics that are rarely modified. It is important to achieve a balance between immediacy and in-depth analysis; the latter is based on text as well as numbers. Once the data is collected, it moves to the Data Integration phase. In this phase, the data is thoroughly cleaned, and all anomalies are cleared, which results in a coherent and cohesive dataset. In addition, data quality and consistency are to be checked; in this phase, it is important to verify the data origin and the type of data, its timeliness, and its integration status. The next phase is the data analysis phase, and advanced analytics is used in this phase. Statistical methods and machine learning techniques are mine to identify patterns in data and model human behavior to forecast possible deficiencies in the country's branding strategy. In the Dynamic Modeling and Simulation phase, artificial intelligence creates predictive models. Predictive modeling is used to model the impact of possible initiatives on the country branding model. It is used to predict possible deficiencies as well as improved strategies. The following phase is the Visualization and Reporting phase. It is used to visualize the findings for stakeholder usage and create a report or brief that can be implemented for future data-driven critical thinking.

Based on the measurement model results, a nation could develop the Digital Synergy Live Index to measure and visualize the synergy level between nation branding and digital development efforts and have a real-time understanding of the status quo on both fronts. AI and big data are great enablers of nation branding but pose significant risks. The quality and amount of data used impact its performance — poor, partial, or biased data can impair the AI models' performance and generate misleading branding policies. Data protection and privacy are other issues. Nation branding uses AI models and must comply with strict personal information protection regulations (Cukier & Mayer-Schonberger 2013).

Second, there is a high demand for highly qualified specialists in data science and AI engineering, which requires significant investment in education and the creation of a data-oriented and data-centric culture (Brynjolfsson & McAfee, 2014). In addition, it is expensive to create and maintain AI infrastructure, including purchasing hardware, subscription software, and cloud colonization. Third, integrating AI systems with existing technology imposes critical technical restrictions that require careful planning and considerable effort to alleviate (Davenport & Ronanki, 2018).

That's why it is important to realistically manage expectations; while big data and AI significantly enhance analytical capabilities and strategic insights, they will not create miracles. A pilot and iterative development model would be more appropriate.

For countries that have heavily invested in digital development and whose nation branding heavily relies on technological innovation, these challenges may be more manageable and enhance their reputation as digital pioneers if solved. Such investments likely enhance the synergy between digital technologies and nation branding efforts, leading to more effective and impactful outcomes. The big data and AI model allows a nation to maintain data sovereignty, relying on its information and insights rather than external resources, reports, and rankings. This autonomy can lead to technological partnerships that boost innovation and bring added value to the nation's reputation, competitiveness, and soft power, aligning strategically with data-driven governance and innovation (Hummel et al., 2021).

5. METHODOLOGY, SAMPLING, LIMITATIONS

Regarding the methodology used in the study, the research applied Qualitative Research Synthesis, which utilized various data sources to construct a holistic understanding of the e-Estonia nation brand and digital development. More specifically, the methodology of the study relied on the following:

1. Qualitative in-depth interviews

To produce the primary data for this research, we conducted in-depth semi-structured qualitative interviews with the high-level experts and stakeholders of e-Estonia nation branding and development. The sample consists of government officials and policymakers, representatives of technology, and business sector and startup representatives. To protect confidentiality and honorably report the findings, the responses are aggregated and anonymized. These interviews are vital for obtaining detailed perceptions, personal expertise, and expert views that regular surveys cannot fulfill. Qualitative data is analyzed based on content and thematic analysis using Nvivo.

2. Secondary analysis of digital media publications

The research methodology extends to analyzing digital media publications to support and contextualize the primary findings. In addition, a limited number of top-tier media publishers were selected for the thematic analysis (16 articles). Then, the selected publishers' content was classified based on the publishing date, the main identified themes, and the names of the publishers. The frequency of the topics was also analyzed to validate the study's findings and contextualize the publishers' coverage of the e-Estonia brand. This part of the methodology allows one to understand the discussions surrounding the e-Estonia national brand in the context of the general population or the experts' viewpoint.

3. Analysis of Publicly Available Strategy Documents and Reports

This study also includes publicly available reports from various Estonian and international organizations. These include white papers, governmental releases, institutional content, and many other contextual documents. They serve to support and place the primary data in the context of the policy and technological sections of e-Estonia branding and digital development. The content analysis was used for the reports and contextual documents.

4. Contextual Use of Quantitative Data and Rankings.

Although the study is based on qualitative analysis, it should be supported by some quantitative data to frame the background. Applying quantitative data is critical since it complements a qualitative perspective and ensures a holistic understanding. A content analysis was conducted for the reports and the ranking of websites.

5 . Use of unpublished internal documents

Moreover, the paper uses non-published internal documents obtained directly from the sources interviewed, including internal reports, strategy documents, and media monitoring. Since they are not open to the public, they can be provided upon demand.

6. Use of AI Chat GPT4

AI chatbot Chat (GPT 4) was used in preparation of this thesis:

- In the first research stage, AI was used to explore and understand complex concepts, compare them, find relevant frameworks, explore various theoretical approaches, and summarize/locate content from the long reports.
- In the analysis stage, it was used to find patterns and themes and locate and count keywords from the interviews, aiding with content and thematic analysis together with Nvivo software, which was also used for analysis.
- AI Chatbot was used in the final stages of the thesis to refine and shorten original content, eliminate repetitions, and occasionally rephrase the text for clarity and coherence, as English is not the author's mother tongue. AI was also applied to edit and format the text, references, tables, and lists to streamline the process.

It is important to clarify that this thesis represents original work, ideas, findings, and conclusions. The author properly checks and critically assesses all sources and references them for academic integrity. The author is fully responsible for the content and ideas presented in the research.

The study uses multiple data sources to ensure the limiting bias and enable triangulation. By data triangulation, the author refers to integrating information from direct interviews with stakeholders, content analysis of digital media, internal reports, and contextual statistical data. Thus, the approach taken for this study increases the overall depth and credibility of its findings. Moreover, it complies with the best practices for addressing the plurality of aspects related to the e-Estonia brand and digital development in quality research.

Sampling

For this research, theory-based or purposeful sampling (Suri, 2011) was used as the most appropriate non-random technique in qualitative research to select information-rich cases closely related to the studied case. Purposeful sampling focuses on the richness of data obtained from a few handpicked individuals, events, or cases that are most informative about digital development and nation branding. The selection of experts is based on criteria defined by the research objectives and theoretical considerations, not by the desire for them to be representative of a larger population. The interviewees are the key stakeholders of the nation's branding and digital development and are co-creators and beneficiaries of the brand value. All of the participants had

long-term experience with the topic, held different positions, some in the private and public sectors, and made a significant contribution or showed leadership in creating the synergies of digital development and nation branding. The author attempts to select an equal number of participants from each of these groups:

Experts: State leader, CIO position, ICT export companies, Trade Associations, Ministry of Foreign Affairs, Diplomats and Ambassadors, leaders of cooperation-focused organizations, Education, Startup representatives, Estonian Business and Innovation Board management and department, Brand Estonia management, Consulting companies.

Limitations

The research is not aiming at the possibility of generalization to other contexts; it relies heavily on the researcher's judgment while selecting the participants for interview and the cases, which might introduce a possible bias if the researcher's preconceptions are reflected in a selection of which individual or site to include. On the one hand, the author's professional position as an e-Estonia brand manager offers a deep insight into the internal operation and history of the brand, as well as professional relationship management in this area, which allows for a selection of the best-informed participants. This might benefit the research by allowing it to gain authentic insight. On the other hand, theoretical saturation might hardly be achieved in this kind of research, with a significant amount of time for numerous interviews and fieldwork, and therefore, it should be supplemented with more or less relevant quantitative or publicly available data. Regarding ethical issues, all interview recordings, transcriptions, and internal documents they provided will be kept confidential and presented in aggregate form with anonymous citations in the results.

6. ESTONIAN DIGITAL DEVELOPMENT AND NATION BRAND EVOLUTION

In the early 1990s, Estonia had to address the tremendous challenge of rebuilding the economy and governance from scratch (Kalmus et al. 2020). The choice of digital technologies was not accidental but motivated by the need for efficiency and economic success. As specified in the comprehensive research "Researching Estonian Transformation: Morphogenetic Reflections" (Kalmus et al. 2020), Estonia's digital development is best viewed through the transformation lens, when after regaining independence from the Soviet occupation, Estonia has experienced more than one systemic cycle of transformation, and as a major cultural driver through all of the cycles of transformation, rooted in a strong national motivation for self-assertion. This proactive stance laid the groundwork for Estonia's digital success story, marked by visionary policies and investments in ICT infrastructure. Aggressive digitalization stimulated critical administrative and governmental reform, positioning the country as the leader of e-society and digital governance (Kattel & Mergel, 2019). Opportunities to harness the outcomes of digital development provided a strong competitive advantage, coupled with the strong national motivation for catching up with the rich Nordic neighbors (Masso et al., 2020). This strategy redefined citizen-government interactions and established a foundation for continuous innovation and adaptability in policy-making and governance (Masso et al., 2020).

Estonia nation study, which evolved from a post-Soviet state to a digital leader, demonstrates the innovative technology transition with governance play, critical in the reconfigured public administrative system characterized by enhanced transparency, efficiency, and citizen involvement. This was made possible by the high level of governmental acumen, societal mandate, and orientation to such a wide area of digitalization, turning technology into a backbone of national development and formulating rare innovative digital consistency with political socio-context (Kalmus et al., 2020).

Estonia's small state status, size, and agility allowed immediate policy adaptations necessary for emerging advanced technologies within public administration. This promoted a culture of innovation and continuous experimentation, shaping e-governance in Estonia (Kattel et al. 2011).

Estonia's accession to the EU in 2004 advanced its public administration, democracy, and transparency and hastened digital reforms in ICT and information policy. Estonia's proximity to the Scandinavian tech sector tech market and small size supported quick digital adoption (Ernsdorff & Berbec as cited in Alec 2009). By 2007, the Estonian e-government was internationally known for sophisticated e-systems in banking, education, health, public transport, and administration (Polese et al., 2020).

One of the fundamental milestones of Estonia's digitalization is developing the national electronic ID card. This card, first introduced in 2002, makes it possible to access secure e-services for citizens, facilitates e-authentication for citizens, and offers legally binding e-signatures. Successful implementation has largely contributed to the country's trust in broader e-services and systems, such as X-Road, which links public and private sector databases and allows secure data exchange between governmental platforms (Kattel & Mergel, 2019).

Expanding the e-ID infrastructure, Estonia started the e-Residency program in 2014. This program offers various digital services to everyone outside Estonia that allow people worldwide to register and run businesses in the EU (e-Residency of Estonia, n.d.). The program has dramatically transformed the country's economic landscape, inviting people from across the globe to benefit from Estonian digital services.

According to recent research, digital transformation indeed improves operational efficiency and productivity, but it exposes the state and the economy to new cybersecurity threats, which makes cybersecurity issues a priority for governments and the private sector (Saeed et al., 2023). Not surprisingly, Estonia has gained popularity since it established itself as a leader in the field known for cooperating with the NATO Cooperative Cyber Defence Centre of Excellence and the state's otherwise advanced cybersecurity infrastructure. The latter is essential given the significance of multiple digital services state-wide. 2017 Estonia launched the world's first Data Embassy in Luxembourg, which involved keeping copies of essential digital assets abroad (e-Estonia, 2019). In September 2024, Estonia agreed on the formalizing of Tallinn Mechanism together with Canada, Denmark, France, Germany, the Netherlands, Poland, Sweden, the UK,

and the U.S. to improve and organize international support for Ukraine’s civilian cyber sector, streamline and provide more effective humanitarian aid (Ministry of Foreign Affairs of Estonia, 2024).

Moreover, startup-driven innovation has blossomed. Estonia’s cybersecurity landscape has been significantly boosted by the CyberTech initiative, helping the CyberTech sector to expand. By 2023, the country registered 66 CyberTech startups, reflecting how it strategically fosters the development of its cybersecurity and digital sectors (Startup Estonia 2017-2023). The Digital Society Stream of The Creative Destruction Lab opened in Estonia, is a global seed-stage, science-based startup platform operating in partnership with the University of Toronto’s Rotman School of Management (Creative Destruction Lab, n.d.).

Accelerate Estonia was established a few years ago with a mandate to remove regulatory barriers for entrepreneurs to enable their novel solutions, creating new market opportunities that benefit the entrepreneur, the surrounding industry, Estonia, and the world while fostering Estonia as a testbed for innovative technologies (Accelerate Estonia n.d.).

Estonia also promotes artificial intelligence (AI) and robotics across various sectors to enhance technological innovation. Initiatives like AI & Robotics Estonia (AIRE) aim to help industries adopt new technologies and provide essential resources for integrating AI and robotics into their operations. Additionally, establishing an AI and robotics innovation hub and developing KrattAI—a state-focused AI project—underscore Estonia’s commitment to using AI to streamline governmental processes and improve service efficiency (AI & Robotics Estonia, 2024).

6.1 Estonia Strategic Direction

The goals of the “Estonia 2035” strategy largely reflect the global trends and EU policies (Estonia Government, 2021). They include building a competitive economy, boosting innovation, and supporting balanced regional development. In terms of the source and directions of innovation, the strategy highlights the role of the private sector R&D, investment attraction, and sustainable resource use. The envisioned economy of Estonia should be secure and allow for flexible entrepreneurship in a free, competitive environment. At the same time, it has to ensure

social cohesion and innovative governance. A shift in the role of technology is demonstrated in the timeline of the strategy's documents from 2021 to 2024. In 2021, the role of technology in national development is increasingly referred to in terms of technological innovation. By 2024, the focus had also changed to strategic national security concerns, so the government prioritized its plans to maintain the best in the world's digital environment. This strategy includes targets such as cybersecurity, advanced digital infrastructure, and proactive technology to safeguard national interests. Thus, the national goals in digitalization reflect state security concerns and are focused on national defense and global competitiveness (Estonia Government, 2021).

The Estonian Digital Agenda 2030 aims to revolutionize the economy, governance, and societal fabric by bolstering digital capabilities over the next decade. In turn, the primary goal is to launch an extensive training program for the IT sphere, expanding the ICT workforce that can address numerous issues. Then, the need to establish a country-wide intervention to increase digital literacy is also among the leading priorities, along with the need to develop innovative technological solutions. A special focus is meant to be placed on Estonia's digital sovereignty: it must have the best digital government services in the world, top-quality digital infrastructure via the internet with maximum speed, and first-class cybersecurity. Therefore, the three pillars are defined: governance, connectivity, and security. Secondly, it must have the most proactive, AI-driven, and user-centered public services. Finally, efficient data governance and the newest digital platforms must support service sustainability and government (Ministry of Economic Affairs and Communications, Estonia, 2024)

The "Sustainable Estonia 21" document describes Estonia's sustainable development strategy up to 2030 (Ministry of Environment, Estonia, n.d.). It aims to harmonize global competitiveness with sustainable practices and traditional Estonian values. The approach combines ecology, society, and economy to suggest Estonia's strategic resilience. The country's goals are well-being, society as a coherent cluster, and ecology as equilibrium. The ways to reach these goals are defined with the help of a set of policies. The necessity outlined in the document is for Estonia as a sustainable entity to work effectively. The relations between external demand and internal possibility matrices are pointed to as having a conflictual character. It highlights internal challenges such as population decline, fragile political identity, and administrative inefficiencies as hindrances to development. Still, it also identifies a collective will for concerted action driven by a sense of urgency and a desire for accelerated progress.

For 2022, Estonia developed a cybersecurity strategy to strengthen the country's defenses against cyber threats within its digital environment. Based on fundamental rights, technological advancement, transparency, and international collaboration principles, the strategy focuses on several objectives, such as increasing technological resiliency, supporting industry development, and improving the public's awareness. As such, governance procedures, incident response, and stakeholder involvement are the major initiatives anticipated to affect national security and economic development (Ministry of Economic Affairs and Communications, Estonia, n.d.).

The vision of the Estonian Education Strategy 2021-2035 is to create an attractive education landscape that is accessible, inclusive, and responsive to the needs of the labor market. It is based on modern teaching, from early childhood to higher education, with proper implementation of digital resources and a culture of lifelong learning and accessibility standards. The new educational strategy is focused on the quality of teaching and competence of educators in various learning environments based on students' rights and needs and proficiency in language and cultural skills. Furthermore, digital literacy will be extended to all levels of education. New technologies like machine learning or artificial intelligence will be used for personalized learning and innovation efforts. It is planned to make a significant investment in developing digital infrastructure. Significant investments are planned for digital infrastructure development, alongside research in digital education solutions, to foster global collaboration and knowledge sharing (Estonian Ministry of Education and Research, 2020)

However, while there may be an alignment around the importance of further digital development, the author notes that the nation's brand, strategic importance, goals, or role in Estonian competitiveness and global standing were not mentioned in policy documents.

Estonia in rankings

The Elcano Global Presence Index demonstrates Estonia's changing international position. In 1990, it was at 98, then 85 in 2005, and then 101 in 2015. However, in 2021, it is at 84, meaning that Estonia is more visible than 44% of all sovereign states. When assessed through the economic lens, Estonia is ranked 69th, while its soft power is ranked 89, compensating for its military index 112. Estonia's locus of global presence is more profoundly economic – 71.6% – followed by soft power – 26% (Real Instituto Elcano, 2022).

Estonia's competitiveness demonstrates various performances on different indices. The Global Competitiveness Report for 2005 places Estonia 25th, dipping slightly to a ranking between 30th and 32nd in later years (World Economic Forum, 2019). The IMD World Competitiveness Ranking also moved from 30th in 2014 to 22nd in 2022 but dropped to 26th in 2023 (IMD World Competitiveness Center, 2023). The Digital Economy and Society Index placed Estonia 7th in 2015 and 8th from 2016 to 2021, moving down to 9th in 2022 (European Commission, 2023). The country continually ranks top in cybersecurity; the Global Cybersecurity Index placed Estonia 5th in 2014, 3rd in 2020, and 2023 (International Telecommunication Union, 2021). The Future of Emerging Europe 2024 report highlights Estonia as the leader in the massive dynamic forces shaping the world in innovation, entrepreneurship, and sustainability. Among 23 emerging European states, the country holds leadership across five critical dimensions: people, prosperity, planet, partnership, and peace. (Emerging Europe, 2023).

At the same time, Estonia's national brand rankings, like the Global Soft Power Index and the Nation Brand Index, show a more volatile trend. The Global Soft Power Index in 2022 rated Estonia 47th, 91st in 2022, and acquisition of the place 57th in 2024 (Brand Finance, 2023, 1). The Nation Brand Index in 2021 was 55th, and in 2018 was 41st (Brand Finance, 2023, 2). In addition, the Good Country Index rated Estonia 22nd in 2023, while in 2021, it was the 14th (The Place Brand Observer, 2023). Thus, existing rankings can provide a basis for assessing available resources and forecasting some initiatives but cannot immediately cover current and future challenges due to the lack of a focus on nation-brand strategy.

Today, Estonia's economy is in a prolonged recession and will continue to contract, according to the International Monetary Fund 2024 report (International Monetary Fund, 2024). The recession has disturbed regional stability and economic activities, with trade interferences and geopolitical tensions undermining confidence and investment. However, while growth was expected to rebound, economic activity shrunk, productivity stagnated, and exports weakened. Soft demand from major trading partners, loss of competitiveness, and imported energy inflation pressures exacerbate these difficulties even more. Therefore, a coordinated policy response is required to address and restore competitiveness (International Monetary Fund, 2024).

However, within these challenges, standing opportunity remains unused. Generative AI could contribute EUR 2.5-3 billion to GDP, with the countries' GDP increasing by around 8% over ten

years. Potential economic growth would be seen in the majority of 80% of the service sectors (Implement Consulting Group, 2023).

6.2 Brand of Estonia

The strategic goal of national branding has made Estonia a remarkable example of combining tradition and novelty methods, seeking to abandon its Soviet legacy by combining national branding with nation-building (Polese et al. 2020). At the forefront of this brand effort is Brand Estonia, a comprehensive communication and visual design toolkit aimed at presenting the nation consistently and effectively (BrandEstonia, n.d.). Brand Estonia accommodates nation branding stakeholders with the tools and insights to present Estonia coherently, inspired by its inherent values and strengths. The Brand Estonia is managed by the Estonian Business and Innovation Agency in conjunction with various governmental and non-governmental partners and is used by websites like Estonia. Ee, Visit Estonia, e-residency, e-Estonia, Work in Estonia, Study in Estonia, Invest in Estonia, Trade with Estonia, among others. Brand Estonia has diverse resources ranging from text and speaker manuals, visual and graphical design manuals, and ready-for-use materials for presentations, together with photos and videos to be utilized.

One of the central themes of Brand Estonia is the narrative, which includes four key messages: digital society, democratic values, independent minds, and a clean environment. The brand story is *“In Estonia, clean and untouched nature co-exists with the world’s most digitally advanced society; it’s a nation of independent minds, where bright ideas meet a can-do spirit.”* This narrative reflects Estonia's ethos of independence, innovation, and environmental stewardship, underpinned by democratic values and sustainability (Synamedia, 2023). Since Brand Estonia is a toolkit, it was not tasked with national branding consistent management, proactive stakeholder engagement, strategic direction, reputation management, PR, and media relations, but instead, it developed and managed this strategic design kit for the stakeholders.

In conclusion, the Brand Estonia project has been recognized as an example of modern and successful country branding, which has already been awarded as the “Best Use of Design” award. Moreover, country promotion expert Jose Filipe Torres identified Estonia as one of the few countries worldwide to use a modern methodology in brand development, where branding revolves around the *“central idea.”* He called Estonia the best example and proof that nation

branding works and labeled it the world's most digital country. In other words, the “*digital society narrative*” is the central idea. Notably, this narrative was not formally created within the Brand Estonia task force in 2017. The beginning of the e-Estonia brand dates back to 2011, when the NGO ICT Demo Center registered the trademark in 2011 with the European Union Intellectual Property Office (European Union Intellectual Property Office, n.d.).

6.3 e-Estonia Briefing Center

Established by an NGO in 2009 under the name of NGO ICT Demo Center and since 2014, managed by the Estonian Business and Innovation Agency, the e-Estonia Briefing Centre is a hub designed to promote Estonia as a digital society. The center strategically introduces Estonia's digital image globally and links international relations that contribute to its technology export. Its activities focus on enhancing Estonia's reputation through strategic marketing, communication, and international speaking engagements. It increases visibility through powerful storytelling, marketing, and speaking engagements. It also connects its target audience, the ICT industry, with the e-Estonia brand using government-to-business and business-to-business programs. Most importantly, it showcases Estonia's strengths. The center provides in-depth briefings and experiences, such as real-time digital solution demos, and currently services over 90 companies. As a pivotal entity in Estonia's national branding, the center is critical in managing the e-Estonia brand channels and messages and coordinating the e-Estonia reputation (e-Estonia, n.d. 1).

The 2023 unpublished analysis of the e-Estonia Briefing Center visitors (e-Estonia, 2023) reveals that by 2023, the Center hosted 130 countries' diverse delegations involving over 87,000 individuals from different sectors such as government, business, academia, and media. The main focus areas of visitors comprised e-governance, cyber security, and digital health, with a challenging evaluation of the current digital systems and calls for more digital services. By focusing on a strategic plan to preview Estonia's digital society and engage in international cooperation, the Center has increased its social media following to 80,000 followers globally, thus enhancing its conceptualization of digital narrative worldwide. The briefing center continues to play a crucial role in enhancing Estonia's digital state reputation, proving

instrumental in creating international ties that bolster export capabilities in the technology sector. This initiative supports Estonia's image as an innovative digital state and aligns with its broader goals of enhancing its international reputation and market reach through targeted communication and engagement strategies.

The effectiveness of this approach can be exemplified by two governments inspired by the nation's branding strategy and digital development. After several public presentations by the Briefing Center Managing Director in 2017 and 2020 at the Service Design Days conference in Barcelona (Service Design Days, n.d.) and the Barcelona FACIL digital conference (Barcelona Activa, 2020) organized in cooperation with Catalan Government leaders continued with an extensive business program organized for the Catalan Government in the e-Estonia Briefing Center (e-Estonia, n.d., 2) It seems to have left a lasting impression on Catalonia, inspiring the region with Estonia's ideology. According to findings from the analysis of The Catalan Digital Republic, Catalonia has actively utilized digital technologies to assert its identity and sovereignty, setting itself apart from Spain (Jiménez & Garai-Artetxe, 2023), followed by significant investments in digital infrastructure and governance frameworks to foster a digital society and economy. Catalonia has positioned itself as a technological hub in Southern Europe, leveraging digital tools and platforms to promote its digital sovereignty and capabilities through infrastructural developments and narrative (Jiménez & Garai-Artetxe, 2023).

A prominent example of leveraging international digital cooperation is Ukraine, a long-term partner country for Estonia. In 2011, during his first visit to Estonia, President Volodymyr Zelensky visited the e-Estonia Briefing Center (Anettu, 2023), followed by long-term cooperation with ESTDEV starting in 2014 (ESTDEV, n.d.). Multiple collaboration and support projects that are helping restore and digitalize Ukraine are described on the ESTDEV website. Ukraine's pre-2013 branding focused on cultural uniqueness; it has shifted towards managing global perceptions post-unrest (Ståhlberg and Bolin, 2016). Ukraine's official website currently promotes the nation as a digital leader, prominently featuring the Trembita system (Ukraine.ua, n.d.), a digital solution developed by Estonian companies, which forms a cornerstone of Ukraine's digital infrastructure (e-Estonia, 22.04.2021).

e-Estonia reputation survey

The e-Estonia Briefing Center (2020 and 2021) held a comprehensive reputation survey involving 407 post-event and pre-event surveys and 30 expert analyses representing 98 countries (e-Estonia, 2022). This research established Estonia as the most digitally advanced nation globally, with over 70% of respondents ranking Estonia among the top three digital leaders and 73% of experts acknowledging Estonia's premier status in digital advancement. Before visiting the e-Estonia Briefing Center, 81% of visitors considered Estonia a digitalization leader, a perception that increased to 93% post-visit (e-Estonia, 16.06.2021).

The findings of this study percussed the acceleration of Estonia's digital state brand development. It should be noted that while the e-Estonia brand name is widely known, the understanding of it is superficial. The NPS of the center has always been exceptionally high, while guests rated their experience as "*high-class discussions with very professional speakers,*" proving that Estonia's branding is effective and influential as a national brand experience (e-Estonia, 16.06.2021). Concurrently, the willingness of the visitors to continue working with the country and its ICT sector was at 81% before the visit. After the visit, it reached 92%, proving that direct communication critically influences stakeholders. The guest survey results also reminded me of the top 5 Estonian ICT services importing countries in 2014-2018. The leading importers were Finland, the USA, Germany, Sweden, and Latvia. Once again, this statistic shows that Estonian digital services are adopted and in demand internationally (e-Estonia, 16.06.2021).

e-Estonia media coverage and monitoring

It took the Estonian government a lot of resources and time to build its modernized e-governance system and foster the country's image in the eyes of other nations as a digital country, though most of the growth was spontaneous. More specifically, the visibility was majorly organic. The media monitoring analysis done by Milton Group (e-Estonia, unpublished) explored the ways Estonia and its views in terms of digital governance and cybersecurity have been portrayed in the media for the period starting from July 2021 to December 2022. The data was obtained from the following sources: Meltwater, Google, and selective searches on publication websites such as The New York Times Official Site. Access to some of the articles was enabled through platforms

like Pocket, Readwise, or directly via the user accounts with the Milton group. The way Estonia and its views on digital governance and cybersecurity have been portrayed by the media has been tremendously stable for the last several years. The continuity of the narrative indicates Estonia's very strong brand of the state in areas like cybersecurity. In general, the article strategically makes the narratives sufficiently concise and clear for the qualitative evaluations of the media coverage.

According to the monitoring results, Estonia is often named as a model in various digital contexts, including e-voting processes or digital government. The context is shaped by significant events and the constant presence of many eminent spokespersons. President Alar Karis and the former head of state, Kersti Kaljulaid, play significant roles in maintaining the narrative from a high level. Moreover, the media strategy in Estonia clearly states the importance of high-ranking spokespeople. By embodying the country's commitment to innovation and digital excellence, these individuals lend credibility and authority to the narratives, enhancing their persuasiveness and acceptance globally. This is particularly important in cybersecurity and e-governance, where expertise and trustworthiness are paramount.

Strategic narrative management of Estonia is a matter of international reputation and core economic prospects. Having analyzed the case, it is evident that a higher degree of visibility of high-ranking officials may amplify Estonia's innovation and digital achievements narrative. It is critical, however, to always develop a communication strategy to ensure high-ranking officials stay the faces of digital Estonia in diverse contexts. Further media monitoring should also include Estonian mentions in global news and the impact high-ranking officials have on them. In other words, the media monitoring by Milton has shown that while there is already a strong and positive narrative about Estonia's performance in digital governance, it also indicates a lack of targeted communication strategies that could showcase the performance of people in high-ranking positions. These people are vital in enhancing the reputation of Estonia on the international scene and outlining the set of systemic characteristics that underpin the country's role as a digital society leader. Understanding these perceptions and finding strategic ways to influence them is crucial for driving policy and creating new economic opportunities.

To gain supplementary context through global media, the author conducted an analysis of 16 publications by top-tier media outlets, namely Forbes, Washington Post, Wired, NY Times, The New Yorker, BBC, and The Guardian. As presented in Appendix 3, the analysis was conducted

from 2012 to 2024 and included 16 articles linked to Estonia based on the theme, publication date, and context. The content and thematic analysis show that political and geopolitical topics are the most recurrently covered. These topics regularly surface in connection to significant events, such as Russian cyber insecurity threats and the ongoing conflict in Ukraine.

The coverage of technology, innovation, cyber, and economic-related topics ranged from 2014 to 2023, indicating Estonia's well-known high standing regarding digital governance and innovation efforts. The least frequent mention was made regarding culture and social life, with the highest density of articles published in 2023 and 2024. The content focused on various aspects of Estonian everyday life, including gourmet options in Tallinn, education outreach milestones, and non-daily events such as sauna marathons.

The analysis also determined that the international media heavily covers Estonia's political aspects of strategic positioning, particularly its relations with Russia and NATO and its military support for Ukraine. Attention-grabbing titles of well-detailed articles about Estonia's digital movement up to 2023 indicate a shift in media focus. Moreover, many articles published in 2023 and 2024 predominantly address political and military issues such as NATO and Estonian fixation, Russia's aggressions, and support of Ukraine. Even though such issues are essential for Estonia, they do not directly support Estonian branding as a prominent digital leader unless Estonia's leadership in digital empowerment is underlined, potentially diluting its digital branding.

Nevertheless, the coverage on technology, innovation, cyber, and the economy was reduced in recent years in terms of volume, which is the most crucial one for the reputation of a forward digital nation. Estonia can benefit from a deliberate media and PR policy to maintain and further a solid digital society brand. The lack of recent digitization efforts and coverage of pioneering projects undermines the effort to attract investors, businesses, and tech specialists looking for a buzzing digitization environment. It is vital to continuously update this topic and keep this cohort informed and assured. Therefore, Estonia's recommendation on rebalancing its topics must include a much larger share of attention to its digital achievements and plans rather than justifying its geopolitical priorities and security concerns.

7. THE RESEARCH FINDINGS AND ANALYSIS

The author conducted 28 in-depth interviews with the selected experts from the public and private sectors to conduct this research. These interviews aimed to provide a profound understanding of the topics to be studied. These experts (Appendix 1) were chosen based on their organizations' strategic roles and unique insights into the study's thematic focus areas. The interviews were conducted over three weeks through top-level representatives of some of the most reputable and critical organizations, and they lasted an hour and a half via the Zoom application. Further, the author recorded the interviews but will not publish the individual discussions due to ethical reasons and since the participants requested that the information not be publicized. Instead, they will be presented in an aggregated form without identifying the individual response, thus maintaining the participants' anonymity and protecting individual privacy while ensuring rigorous data collection.

Appendix 2 contains the semi-structured questionnaire used during the interviews. This form was selected to permit more flexibility in the responses, making it possible to explore the respondents' perspectives more profoundly and nuancedly than structured interviews. Additionally, this format contributed to conducting a richer analysis of the issues under consideration, as the interviewees had more opportunities to expand on their answers and formulate informed opinions.

The qualitative data collected from interviews, digital media publications, and internal documents were analyzed using Nvivo software to ensure rigorous thematic analysis. The data was systematically coded to identify key themes, keywords, and topics, with adjustments made iteratively to refine the categories as thematic analysis helped establish key themes. AI Chatbot CHatGPT was used to find patterns and themes and locate and count keywords from the interviews, aiding with content and thematic analysis complementing Nvivo.

Findings about e-Estonia meaning and evolution.

Historically, the e-Estonia was aimed at serving as an umbrella trademark for export-oriented IT companies that developed Estonia's e-governance solutions. While e-Estonia is known from the

perspective of functional benefits like simplicity, safety, efficiency, and availability of public services, and digitally enabled well-being, representing e-governance, it is evident from the research that the meaning of e-Estonia as a sector-specific brand emerged as the strongest part of the national brand identity by 2024.

Estonia's digital society and improvements are seen as an integral aspect of the national identity and Estonian DNA, making the technology essential for daily living and the nation's growth. The most prevalent feelings are connected to the national digital identification, with the people feeling proud of its leadership and innovation in the topic and making it appear as a trailblazer of technological change and adaptation. The brand represents a modern ideology and a cultural shift that embraces the influence of technology on societal development and welcomes the potential for future technological integration.

Approximately 60% of the experts agree that e-Estonia is a national brand, as it is always named first when speaking about Estonia abroad, and it concerns not only the fact that it is a digital society and country in terms of governance but also the strongest differentiator of the nation and its main competitive advantage. All the interviewees unanimously and without doubts name a digital society as the main innovation driver and multiple technological advancements, thus positioning the country as a hub for technological and enterprise innovations and the most attractive place for a startup. The primary sentiments and drivers are openness to changes, education, ease of business, no red tape, security, and stability.

Experts often describe E-Estonia as integral to the larger Estonian national brand. It represents Estonia's bold, pioneering role in digital technology and governance, making it a standout feature compared to other nations. Around 30% offer mixed or nuanced views that recognize e-Estonia as part of the broader national branding efforts but express concerns about its effectiveness or clarity as a standalone element, in need of other elements like historical heritage and natural environment. Some responses suggest that while e-Estonia is a strong national brand, it lacks a clear "*vision*" and "*brand promise*" or a universally understood value proposition, which can lead to varied interpretations of its significance or purpose. Some responses highlight challenges such as misinformation or misunderstanding of the brand messaging and note national branding is rather passive in the mass media.

From the experts' perspective, government-driven innovation, strategic decisions by state leaders, and proactive roles in creating innovative solutions are the most appealing (18%). Secondly, the nation's early adoption and pioneering spirit are attractive for the bold approach and can-do attitude. Estonian unique solutions, like e-residency, demonstrate efficiency and time-saving, and cultural shifts embrace technology that appeals to transparency and ease of use. It's said that the model is also very attractive for developing countries looking to leapfrog with the help of technology. Lastly, the wow factor and surprise are mentioned by 10% of experts on Estonia's ability to exceed international expectations as a small post-Soviet state, which makes its digital transformation story especially compelling.

The role of nation brand ambassadors

Brand ambassadors and public speakers are the key to national brand promotion internationally. As for the key influential spokespeople, presidents, prime ministers, and ministers are the speaker's group, who, along with CIO positions and sector representatives, are named official representatives expected to promote the nation due to their role (48%). Usually, they get the most speaking engagements, media coverage, and attention in the global top-tier outlets. Both former presidents, Toomas Hendrik Ilves and Kersti Kaljulaid, are noted for their roles in promoting Estonia's digital image abroad. Taavi Rõivas and Andrus Ansip are highlighted for their significant contributions to advancing Estonia's digital agenda. The top high-profile acting political figure is named Kaja Kallas, who, while mentioned frequently, is considered to have shifted focus from digital topics for quite a long time. Three former CIOs of Estonia, Taavi Kotka, Siim Sikkut, and Luukas Ilves, are mentioned, while Taavi Kotka is often mentioned as a pivotal figure of impact. Linnar Viik and Jaan Tallinn are recognized for their foundational roles in the tech community and ongoing influence in technology discussions. Sandra Särav is identified as a contemporary voice in e-Estonia discussions. Other speakers mentioned are Priit Alamäe, Anett Numa, Ott Velsberg, Nele Leosk, Tiit Riisalu, Liina Vahtras, and Taavi Linnamäe.

The common expert realization is a lack of current active top-level visionary leaders and speakers. It's mentioned that new speakers are either not stepping up, while others who are supposed to take the stage based on their role are not considering that a compulsory part of the job. High-profile individuals like Kaja Kallas, Alar Karis, or Tiit Riisalu are recognized for their potential as spokespeople but are noted to not speak enough on technological themes, which reflects a misalignment between potential spokesperson roles and their engagement with the

digital narrative. The same was noted for the e-Estonia Briefing Center Managing Director role as an influential speaker, which was made redundant in 2024.

Firstly, there is a criticism that Estonia's digital story, although powerful, has not progressed substantially over time. Namely, much of the success narrative is old and may not correlate with modern global challenges or technologies. Furthermore, some experts have suggested that people like Linnar Viik and even Toomas Hendrik Ilves are "*telling old stories.*" Hence, the country needs a more updated and continued story related to its digital accomplishments and intentions. These criticisms all express the need for continuous, ongoing, and extensive communication approaches to better reflect Estonia's current achievements and future goals.

The critique extends to a perceived lack of visionary leadership, impacting the promotion and international perception of e-Estonia. The need for spokespersons who are influential, passionate, and actively involved in shaping and promoting the digital narrative internationally was emphasized. This also indicated little political focus and ambition around the national digital narrative. Comments about the lack of political ambition, with domestic narratives about "*coping and dealing with the reality*" rather than taking risks in pushing new innovations compared to their bold predecessors. It's suggested that more proactive and innovative approaches are needed rather than merely following functional ones.

The most impactful digital developments that build the brand up are the X-road, e-Residency, e-ID, M-ID, i-Voting, Cybersecurity topics including Blockchain and Nato CCDCEO, e-Health and e-Prescriptions, Data Embassy project, education projects like CodeTiger, and High-level education programs at TalTech and University of Tartu. The vast majority of the mentioned developments are dated before 2017. Considering that older digital developments are named, it might mean that there is either limited awareness about the most recent developments or nothing worth mentioning.

In the future nation brand evolution, the strongest narrative mentioned ten times is around digital innovation and infrastructure with the basis of cybersecurity and technological safety. It is mentioned as a cornerstone by 6 experts: Estonia could become a bold "*Disneyland for digital people*" and "*testbed.*" Quality of life and societal values, a way to enhance life through digital means, is mentioned seven times, similar to the Digital by Nature concept that ties life and technology together. Environmental and digital sustainability and global and cultural

connectivity were less popular, respectively, as mentioned three times, while some participants commented that we do not have the capabilities for this yet and that this messaging can backfire as “*greenwashing*.” As a prominent discussion point, the need for a strategic and coordinated high-level vision is mentioned six times, along with the proper funding. A proposal to focus on owning and monetizing the .est domain is recommended as an unexplored opportunity.

Nation branding stakeholders, engagement, and benefits.

The need for collaboration among various stakeholders, including government, private companies, startups, and educational institutions, is evident. This diversity helps to enhance the brand’s influence and effectiveness. Businesses, startups, state institutions, diplomats, ambassadors, brand managers, marketers, events organizers, and sector-specific initiatives like investing, tourism, work in Estonia, and study in Estonia. Government agencies, both local (Tallinn and Tartu) and national, alongside international diplomatic efforts, are significant stakeholders. They use the e-Estonia brand to foster soft power and implement digital diplomacy, enhancing Estonia's global standing. This includes various international community engagements and collaborations with entities like NIIS (Finland) and Accelerate Estonia, enhancing the brand’s reach and effectiveness. Organizations like Accelerate Estonia shape business policies and legislation essential for fostering innovation and improving the business environment for international companies coming to Estonia. The role of international relations and global perception is emphasized, with stakeholders like diplomats and international companies playing significant roles. This highlights the importance of maintaining and enhancing Estonia’s global image through public and digital diplomacy.

Specific sectors, particularly ICT and tech startups, are noted for their significant contributions and are the benefactors of the nation’s brand. Their innovative solutions support national branding and drive technological and economic advancement. Nortal and Cybernetica, for example, have used the brand to open doors and gain credibility under the e-Estonia brand and now contribute to the economy and nation brand with their export success stories. Startups and entrepreneurs are considered pivotal in the ecosystem, benefiting from the brand’s innovative image that helps to get investment for smaller startups, which, growing up, contribute through their presence, creating resonance in the global tech community.

Stakeholders leverage their role in promoting e-Estonia to enhance their own visibility and credibility and “*open the doors,*” which benefits personal, business, startup, and community growth. Analyzing experts' career developments, this argument finds an additional dimension of national experts as brand assets as ambassadors, independently of their current role. EdTech startups and the Female Founders Club are noted as other communities building and promoting national brands through inclusivity and improving education possibilities, which can enhance the internal and external reputation. As per experts' opinions, civil society and the broader international community benefit from and contribute to the e-Estonia brand by promoting digital integration, adopting digital services, and developing digital skills, thus benefiting from Estonia's digital advancements.

The most frequently indicated concerns regarding national brand value co-creation may refer to the confusion regarding brand custodianship, strategic direction, support from most nation-specific political establishments for continuous funding and development, and insufficiently diverse sector inclusion. This indicates that the previous use of the sector-specific sub-brand messaging or brand toolkits may not be sufficient for sustainable and impactful nation branding nationwide, and the problem may also revolve around missing nation brand activation. In addition, the findings indicated that the national branding authority and the importance of continuous development were not important elements, again reflecting the collective responsibility that previously worked through vocal, highly visionary leaders' endorsement. There are also concerns about the growing issue of the lack of a coherent national branding strategy covering strategic goals aligned with the country's overall development strategy. This reflects the issues of limited awareness and decreased political focus and involvement.

According to the experts, sometimes they did not have “*clear information on who decides on branding, how the decisions are made, and how they can contribute or be involved.*” The information flow was insufficient or did not reach all the potential stakeholders sufficiently, creating a feeling of exclusion and quasi-accountability. The lack of inclusion was linked to a lack of outreach and perceived elitism and design for specific sectors, such as ICT and startups, instead of a spectrum of industries. The concerns regarding the integration also suggest that there might be gaps in incorporating various viewpoints and industries in the development of e-Estonia. The discussions on the Brand Estonia toolkit and the need for financial resources for brand creation and exploitation imply that continuous financial support and development are critical for maintaining and advancing the nation's brand.

How important is synergy, and how can it be created?

All experts would agree that the synergy for improving Estonia's global power standing, reputation, competitiveness, and soft power matters greatly. Many responses focused on the necessity of synergy to stay ahead of others and successfully export high-demand technologies. While sovereignty matters indicate the vital context for Estonia's present state, as I mentioned, Estonian's digital and informational sovereignty, as well as the Estonian cybersecurity excellence, would enable us and our strong relations with the Western allies in EU and NATO, to be better prepared to fight the crisis; thus, the Estonians have proved to be resilient.

The synergy is considered very important and tied to the country's ambitions, also referred to as a "*self-perpetuating cycle*" and a "*snowball effect*" by the experts. The main critical call is for strategic direction and clarity on future national ambitions. The effectiveness of Estonia's initiatives suffers from a lack of clear top-level goals or the inability to communicate its high-level vision effectively. The consensus among the experts highlights that synergy is beneficial and essential for Estonia's continued success and standing on the global stage. However, they suggest it must be based on integrity, sustained, and aligned with national ambitions and international expectations to avoid pitfalls seen in other countries' digital efforts.

Yet there are shared concerns about keeping the synergy for various reasons. The experts have raised major concerns about the potential negative impacts if synergy is not achieved and managed or doesn't align with global trends. The discussion includes how Estonia's small size might limit its capabilities and the importance of being agile and innovative in government technology and policies. Having a digital leader image creates "*expectations*" and "*demand*," not just for businesses but also for the government to contribute and participate in discussions on global technological evolution and challenges. The nation has to find ways to keep up with the expectations. There is a fear of not being able to keep up with global trends or falling behind due to a lack of innovative risk-taking, while the "*low-hanging fruits*" referring to innovations were already picked up. As for today, complex Estonian legacy systems are said to need significant internal upgrades and funding, which, compared to new projects that could be funded with the help of the EU, must come from the local budget. Failure to do so may harm Estonia's reputation internationally, and the strong digital nation brand "*has a few more years*" before

collapsing. Thus, it is recognized that the nation needs to put significant efforts into sustaining its positive reputation, soft power, and global competitiveness, which is fueled by further digital development and becoming more productive when it comes to governance.

How do we create synergy?

There is no awareness and knowledge of the nation's brand strategy or goals, while some experts referenced the e-Estonia Briefing Center strategy they used to renew. A few people engaged in the process mentioned efforts to renew the nation's brand messaging, while others did not. Often referenced as a valuable strategic tool for nation branding was the "*Brand Estonia*" digital toolkit, also called "*boulders*," developed in the latest nation branding co-creation task force back in 2017, which was focused on providing universal verbal and visual tools for various partners rather than international audiences. The toolkit focus, as clarified, is "*not designed for external audiences*", but domestic stakeholders and several experts mentioned its passive use as a brand management authority or coordinator and its inability to convey a single narrative for the nation. There was a wide understanding of the dire need to update the national brand toolkit and strategy.

Among the most effective strategies and initiatives for creating the synergy between digital development and national branding mentioned by all the experts is the e-Estonia Briefing Center, a central hub for showcasing Estonian digital capabilities. The center is carrying the role of promoting digital solutions and facilitating business engagements to boost ICT sector export, opening doors under the umbrella of the government brand, messaging development and coordination, engaging relevant stakeholders from the public and private sectors, and facilitating information exchange and media relations. The center is praised for integrating and coordinating various initiatives and stakeholders, making it a pivotal element in Estonia's branding efforts. The center's digital channels and tools focus on introducing the brand story and provide tools like Digiexpo and talking points and materials for spokespeople. The center speakers' training seminars were mentioned as being valuable to educating high-level Estonian political leaders, diplomats, and other technology-related stakeholders to share the e-Estonia story. Hosting over 10000 decision-makers per year, it is called "*the best Estonian greeting card*" and is an essential place of public diplomacy promoting "public-private partnerships, B2B and G2B meetings. It also provides a significant "*wow effect*" by demonstrating Estonia's digital capabilities to visitors in practice, thereby directly influencing Estonia's image positively and being the brand

experience that proves the brand promise of the benefits of digitalization. It is noted that the center's contribution to creating a compelling story that resonates and “*continuous narrative development*” as the narrative evolution was happening in real-time based on the visitor's reaction throughout the years. All experts knew the center’s role in promoting Estonia as a digital nation.

The center also helps build personal links with over 140 countries’ highest-level decision-makers, to whom it presents and disseminates complex narratives according to expert opinion and the phenomenon for engaging stakeholders and promoting the sector worldwide. The platform helps companies learn how to sell and present their solutions, which increases Estonia’s reputation as leading in digital solutions. However, one of the report's critics is that over time, the narratives distributed by the center have not developed enough – focusing on the result achieved in the past does not always work in today’s global digital challenge. It was also noted that “the impact of the center as a keynote speaker in global conferences has significantly decreased in recent years.” This is connected with the fact that some managing directors have not accepted speaking invitations. Due to internal challenges, creating a strategic direction for the center from the CIO office has not been a priority in recent years.

E-Residency was also mentioned as an effective initiative in creating synergy, delivering financial gains, and proof of Estonian capabilities that have attracted the most free media attention. The service also works as a brand experience, just like the demonstrations in the Briefing Center, which proves that digital services work and create massive value.

Significant events like the Estonian Presidency in the EU and the Tallinn Digital Summit are also recognized by experts as key synergy creators, especially in terms of soft power, reputation, and international collaboration. The Tallinn Digital Summit, mentioned by experts (9 times), which brought 23 EU State leaders to Estonia at once, has continued to attract Ministerial-Level VIP participants, placing Estonia in a strong position to form and direct the EU dialogue regarding technology and policy. Experts noted that the initiative struggled to find political support and funding in recent years, and its value was not acknowledged enough as a key brand experience contributing to the nation’s brand and soft power. It was also noted that these areas were not a priority and that more collaboration is expected between event organizers.

Is the synergy still alive?

Consistency of messaging and political support are important for synergy. Concerns about the economic strategy and branding have become too sector-specific and are mentioned as lacking overarching coordination and direction. Ten experts mentioned the absence of visionary leadership, lacking coherent brand strategy, and a lack of a big narrative. Inconsistencies in messaging and vision and outdated success stories (“*ID-card is outdated*”) might mean no priority in nation branding. Most experts agree that the story became popular globally because Estonia focused on one thing to discuss and proved it by showing innovations, but now it has lost its pace. Some experts mention that the problem is not the missing digital innovations but people lacking “*awareness*” and skills to create an appealing modern narrative like those created and distributed previously. The experts have noted misrepresentations of some technologies and concepts. This indicated insufficient brand leadership and management to proactively engage with the stakeholders, update the messages, and create contemporary narratives in a proactive manner.

Political influence and lack of support are mentioned as detrimental to more than a third of the experts, with little push for branding or digital development in need of breakthroughs (“*we have nothing to talk about,*” “*innovation stopped in the 2000*”). Changes in the political landscape and the next generation of politicians have shifted their focus, reflected in little national strategic ambition, coordination, and goals, that have shifted towards defense and security. Negative public perception and skepticism towards political and economic instability and tax changes are mentioned that, along with the geopolitical crisis, often take digital topics out of the political agenda.

Noted were significant challenges faced by startups and other businesses in collaborating with the government in partnership based on the PPP model, which used to be the driver of Estonian transformation success. In their expert opinion, this is due to lengthy procurements and outdated regulatory environments, where the German “*DiGa initiative*” is proposed as a successful model for PPP cooperation with startups on a subscription basis. To boost public sector innovation, the experts mentioned the establishment of the Innofund with 65 million euros for public sector innovation and experimentation projects.

In the face of external crises, such as cyber-attacks, pandemics, or military tensions, the nations that have their digital development synced with branding their nations can achieve more resilience. Estonia's experience after the Cyber Incident in 2007 and the Pandemic mentioned by the experts serve as an example. The Cyberattack in 2007 was an example of national resilience and capability that is almost self-explanatory. Tallinn Manual and NATO CCDCEO in Tallinn that followed enhanced its brand by showcasing the nation as a leader in cybersecurity solutions. Estonia's ability to maintain governmental and educational operations virtually showcased its digital preparedness and reinforced its brand as a leading digital nation with which experts are in agreement.

In the present time of multiple military tensions, including the war in Ukraine, the majority of experts raise a concern about the negative impact that associations with war and conflict, including the proximity to the Ukraine crisis, could have on Estonia's brand image, let alone the economic competitiveness. As a result, in this case, the narrative of a peaceful, stable, innovative digital nation will hardly work. In addition, the crisis also raises questions about Estonian nation-state security measures and relations in frameworks like NATO and the EU, which are critical directions for national branding. All this shows that Estonia is currently vulnerable; thus, it should become more proactive to ensure its national competitiveness and not only security (*"We cannot move the country"* and *"This is a new reality."*) Therefore, although security is important, any means should be used to get rid of the negative impact on the Estonian economy due to this crisis; moreover, the country should use every possibility to act, leveraging the synergy that has been leading to positive results for many years.

According to the expert's opinion, the military crisis highlighted the importance of security and cybersecurity. Estonia's response to cyber threats during the Ukraine war is an example of how the country's resilience and capability in managing cyber incidents could potentially strengthen its brand as a leader in digital security and mitigate reputational risks. Several experts mentioned separate Initiatives like *"Tallinn Mechanism, "DefenceTech Consortium, and the opening of "NATO DIANA innovation accelerator,"* which brought defense experts and entrepreneurs from around the world. Estonia, the *"National Defence Fund,* "and Estonian efforts to enable Ukraine data exchange with the *"Trembita"* project and cybersecurity competence were mentioned. Yet, most experts agreed that these reinforcing technology-driven narratives reflecting Estonian support of Ukraine and restoring its sovereignty had not been developed and utilized in global communication by top-level speakers and politicians, including "Kaja Kallas. " It is clear that the

defense technology sector is mentioned to be experiencing growth in the current situation; thus, it was noted the initiatives were coming from the sector itself while the public sector backed them up. The situation calls for strategic intervention and leveraging Estonia's various technological strengths to mitigate negative impacts and highlight its role as a responsible and capable digital leader, reflecting the level of contribution to solving the crisis.

How does this synergy impact concretely?

Experts first mention a synergy example was business expansion and new niches such as the export of various ICT solutions, supported by the country of origin effect providing credibility, that helped them to find clients and form international partnerships while exporting solutions. “*e-Governance Academy*, “*Digital Nation*“ and “*Proud Engineers*“ as e-governance consultancies that would not otherwise exist. Companies such as “*Cybernetica*“ and “*Nortal*“ are said to have effectively leveraged Estonia's umbrella and digital community to promote their solutions and collaborate, translating the country's digital success into commercial export opportunities due to increased demand and visibility.

Indeed, the experts stated that this synergy has fostered a broad global acknowledgment of Estonia's digital activities and attracted much more media attention elevating the country's international image. In addition, the visibility of international media has provided more opportunities for communication with international corporations and other sector-specific media, intensifying Estonia's position as a center of digital advancements.

Experts from the private sector and startups majorly reported an easier time attracting both clients and investors due to the enhanced visibility provided by the e-Estonia brand. For instance, sectors like the digital services market have seen increased interest from foreign investors and higher rates of business-to-business (B2B) interactions. The synergy between digital development and nation branding has attracted significant investments, indicating a thriving ecosystem supported by a robust digital infrastructure and ease of doing business. Success stories like “*SKYPE*“ and “*Pipedrive*“ were mentioned as both benefactors and creators of the synergy as they are also quite big employers. While new markets have opened for Estonian businesses, such as the expansion of companies like “*BOLT*“, “there are also significant hurdles due to outdated and overly strict regulations, which the recently established Accelerate Estonia is

addressing today. According to expert opinions, enhanced synergy helps improve the regulatory and business environment and business public services in Estonia, accelerating innovation and attracting new companies to the Estonian market.

In addition, the demand for new services and solutions for global audiences has led to e-Estonia products, like “*e-Residency*.” Its financial success, along with its visibility and thriving community support today, is developing a next-generation biometrical identification solution for e-residents, directly contributing to digital development and exports.

Education theme development synergy examples named were “*The CodeTiger project*,” “high *PISA ranking*,” and various digital management, “e-governance,” and “*technology governance*” programs. edTech and other tech startup sector developments create demand for skilled professionals, upskilling programs, and overall professional development, attracting international experts and talents who become residents and “*doctorants*” participating in “*Estonian R&D projects managed by the FinEst Centre*.” Another example of the synergy noted is the technology-transfer collaboration enabler “*NIIS*,” which is focused on developing the X-road as an open-source solution globally, supporting a large community of experts worldwide. X-road built on the initial concepts of Estonian data exchange solution X-tee is now the main technology publicly available for any country that is interested, offering implementation support from “*local and international IT partners*.” Such initiatives are influential in growing the reputation and community for technology transfer, improving Estonia's reputation, and boosting exports.

The synergy has transformed these individuals into personal brands who have always been able to rise through sectoral or political prominence to have Estonian DNA, which brings a transformational ability among these domestic and global roles of the experts mentioned in their personal benefit. Global awards often recognize their success; thus, such influential leaders become brand assets, strengthening the nation's brand, reputation, and soft power.

Its global awards frequently highlight their success; therefore, such influential leaders become a brand asset, strengthening the nation's brand, reputation, and soft power. Moreover, digital nation brand and business expansion generate local and international talents' interest, triggering demand for technology field experts at various levels and in modern education programs. A significant portion of this audience are international students who can see many employment benefits here and, therefore, would choose this country as a new home. Second, the synergy's

impact on sector-specific development and domestic services' improvement is of particular importance as it allows for the reduction of bureaucracy and further development and implementation of digital services, again putting Estonia on the line of one of the most advanced digital societies. In conclusion, sustaining global competitiveness is possible thanks to sustained synergy. As noted, *“Demand is pushing the nation to keep up.”*

Hosting institutions like *“EU-LISA”* and *“NATO CCD COE”* that chose Estonia as their headquarters, as well as *“e-Government Academy National Cyber Security Index,”* further underline Estonia's global influence and expertise in cybersecurity areas. The CyberTech startup program was also mentioned in this context, and it has bred over 50 Cybersecurity startups since 2017. Domestic campaigns and funding for improving cybersecurity were noted in connection to increased demand for new services like *“cybersecurity research”* in Estonia.

Strong digital branding helps the nation to overcome external crisis situations and even benefits from them by turning them into opportunities. The examples discussed the examples of the Cyber attacks in 2007 and cohesive, proactive communication that have positioned the nation on the map for its competence in cyber and the whole evolution of the cyber sector and competence, as well as thriving during the COVID-19 Pandemic in comparison to other nations, becoming another proof point of the benefits of being a digital society thus striking a new wave of interest and demand for Estonian competence and experience in the field.

The e-Estonia brand has helped to secure financing for various collaborative projects, making it significantly easier, particularly in Smart City R&D projects. For example, FinEst Centre projects have attracted around *“200 million euros for research and development”*, benefitting and contributing to Estonia's digital reputation to secure substantial EU funding with substantial funds invested in Estonia for R&D and Smart City Projects.

Public sector experts have emphasized the synergy of digital development and nation branding that strengthens Estonia's political leadership and soft power through collaboration with examples like Estonia's *“participation in international coalitions and forums,”* like the *“G7”* within digital issues domain, and *“Nordic-Baltic ministerial cooperation,”* as well as the founding of the *“D9 - Digital nations ministerial Summit”*, an international forum of leading digital governments, along with Denmark, Israel, Korea, Canada, New Zealand, UK, Portugal, Mexico and Uruguay. The experts also mentioned creating a conducive environment for

technological advancements, negotiations, policy influence, and digital diplomacy. “*Estonia's EU Presidency in 2017*” was mentioned as an important milestone that allowed us to build on the brand and created the opportunity to increase Estonia's soft power and reputation through events. “*Tallinn Digital Summit*, “*which brings an exceptional number of ministers to Estonia's capital, was held long after the presidency finished*. This shows how important synergy is for the soft power of the nation as well as building a national brand for business tourism. Estonia’s capacity to host major international events, including the “*e-Government Conference*” and “*Latitude59*,” showcase Estonia’s technological prowess and facilitate international dialogue and collaboration on digital governance, cybersecurity, and startups. A table with synergy examples can be found in Appendix 4.

What can other small states learn from Estonia?

The unanimous stand among experts regarding other small states replicating Estonia’s success in other technological fields, though positive, affirms that while Estonia’s digital nation success is one of a kind, its strategies can be a source of inspiration for other countries. It is emphasized that there is a need for each state to find and develop its “*unique niche*.” For instance, “*Uruguay*” is an example of a country that has found its own niche, emphasizing that success depends on authentic development and not just on replicating another country's model. Additionally, Luxembourg, Singapore, and the Nordic countries are noted for their honorable branding efforts that are closely intertwined with digital technology – Singapore is a state of wealth, and the Nordics have highly developed social systems.

“*Lithuania*,” “*Latvia*,” and Belarus have tried to brand themselves this way, following the Estonian example. “*Ukraine*” was mentioned as one of the nations actively “*replicating the e-Estonia success story*” and promoting itself as a digital nation. The history of collaboration between Estonia and Ukraine goes back to 2016 when Estonian company eGA and its partners created and implemented a data exchange platform, “*Trembita*,” which ensures data exchange and safe communication between state registers and information systems. Additionally, the experts acknowledge that being a small country can be advantageous in implementing the needed changes, as they can have a more agile and direct governance. However, the approach must be grounded in the reality of their capabilities, ensuring that developments are genuine and not merely superficial branding exercises.

Measuring the nation's branding in synergy with digital developments

All experts offer different opinions about whether and how Estonia's national branding, aligned with its digital development, should be measured for effectiveness, but the majority agree it needs to be done. While many experts are used to tracking "*sector-specific indicators and rankings*," they agree on the necessity of measuring the impact of national branding efforts in relation to digital development. Yet they admit they "*don't know how*." Experts view any type of evaluation of these efforts as critical for strategic decision-making regarding future directions and guiding improvements. The majority pointed out the difficulty in "*directly quantifying*" the impact due to the multifaceted nature of national branding and digital development. They suggest using "*proxy metrics*" or a combination of different data points to get a broader picture. Other experts emphasize the importance of qualitative measures, such as the perception of Estonia's brand abroad, feedback from international partners, and media representation. Others expressed that they wish "*if only the connections could be made easier*" and "*The need for universal measurement/ indicator*".

The research suggests a blend of "*quantitative and qualitative methods*" to comprehensively measure Estonia's strategies' effectiveness, which would allow for a comprehensive measurement of the actual impact. Some of the experts that concrete economic initiatives, such as "*exports, ICT sector growth, and investments*." The presented investment and business growth indicators, such as newly established businesses and investment inflow, also measure Estonia as an attractive digital hub. Furthermore, tourism and business tourism rates, similar metrics on "*resident and student growth*," as well as related "*events*," would measure the broader created economic benefits as a result of the health of Estonia's digital endeavors. "*Media monitoring and trend analysis*," identified as broadly necessary in assessing the health of Estonia's international brand image, would be used to monitor how Estonia is portrayed on platforms such as Google's search, e-Estonia.com, and the Brand Estonia toolkit to see how effectively is Estonia reaching out to the global audiences. The first category, on the other hand, presents easily measurable outcomes from Estonia's branding efforts. Another category suggests using "*global rankings and indices*," referring to national brands, soft powers, competitiveness, innovation, and digital development, as widely used in Estonia.

Qualitative insights are mentioned as essential to understanding the experiential and perceptual aspects of Estonia's national branding, while multiple experts suggest that brand impact is difficult to quantify. Case studies and narrative analyses allow for a deeper dive into how Estonia's brand is experienced and perceived internationally. Gathering qualitative feedback from "*international partners, investors, and the global community*" offers insights that are not captured by quantitative data alone. Estonia's involvement in international policy-making and its ability to influence global digital policies indicate its brand strength and synergy with digital development.

Some responses propose using "*comparative analyses,*" hinting that Estonia's efforts in synergy need to be dynamic and "*aware of global standards and expectations.*" Experts stress the need for Estonia's branding efforts to be dynamically aligned with its actual capabilities to "*ensure authenticity and avoid superficial initiatives.*" "This real synergy is crucial for maintaining credibility and effectively leveraging Estonia's digital advancements on the global stage. There is a strong recommendation for integrating these metrics more robustly into Estonia's national policy frameworks. Such integration would ensure that branding efforts are not only aligned with but also actively contribute to Estonia's broader strategic goals. This would enhance strategic decision-making and allow Estonia to adapt its branding efforts effectively to respond to global trends and internal feedback.

Measuring the synergy in real-time with the BIG DATA and AI model

The Digital Synergy Live Index, a proposed Big Data and AI model, garners predominantly positive expert feedback for its potential to transform nation branding and digital development in Estonia through "*strategic, data-driven decision-making.*" This model represents a convergence of modern analytical tools with innovative problem-solving methods capable of integrating diverse data streams—including media and social media analytics, expert insights, and both quantitative and qualitative data. Its design promises to streamline the strategic planning process and enhance Estonia's stance as a leader in data-driven applications.

At the same time, the experts emphasize an adequate projection of the model on today's ways and methods of decision-making, emphasizing its "*practicality*" and "*feasibility*" in real-world applications. When this projection is made to the advanced analytics concepts deeply implemented in the model, it becomes apparent that it could serve as one of the essential

instruments in elevating Estonia's image internationally due to providing profound insight into the global stances and the efficiency of the considered country's branding activities. The model's similarity brought out by one of the experts to one of the InnoFund projects, developing "*a smart search solution for textual data to support policy decision-making*," reflects an understanding of the necessity to utilize comprehensive qualitative data sets for better governance.

Although the authors offer an optimistic observation, implementing the model and the following Digital Synergy Live Index concerns numerous other experts. These are the "*complexity*" of its setup, possible "*legislative hurdles*", and apparent problems of project "*ownership*". This is another area where clear operational support and data management mechanisms are required to ensure the model's efficacy and credibility. The questions of data "*quality and security*" also require the introduction of protocols that would prevent compromise of the model and metric due to unauthorized access.

Furthermore, there are concerns that the model could be too "*subjective*," with restricted automation possibilities ultimately leading to the "*skewing of results*." In this regard, a balanced automation approach should be maintained, where human supervision will be crucial for interpreting and contextualizing the data output. Finally, the "*degree of engagement required from data contributors*" is also a limitation, as not all fully acknowledge the model's functions. For this reason, extensive training and support should be provided to ensure that the number of participants is maximized and that they know how to use the data. To address these issues, experts propose that a "*pilot project*" is initiated involving a limited number of case studies that would illustrate the practical value of the model and uncover its flaws. As later evidenced, the model can be further adjusted and improved based on these pilot test results.

The overarching sentiment among experts is one of cautious optimism. In general, the analysis of expert opinions reveals a positive outlook on the model. Regardless of the concerns regarding operational issues, they generally agree that the development and implementation of the model have "*the potential to dramatically improve Estonia's branding activities by making decision-making better informed and more strategic*." Hence, the successful implementation of this AI-driven initiative may significantly improve the country's national branding activities and be an example for other countries that could use similar approaches to improve their global competitive and reputational positions.

8. DISCUSSION

This research's discussion comprises a rather complex interrelation between nation branding and digital development within the global context of Estonia. This study is designed to identify the interaction between the country's national brand and the country's digital development to determine how these factors impact Estonia's international prestige, competitiveness, and soft power. Among the aims embraced by the research question is an understanding of the processes and mechanisms that create the synergy between national branding and digital development under the country and measure the impact on Estonia's global standing. In addition, this research strives to explore the measurement framework based on the experts' input.

Further, the author will answer each research question separately in the discussion.

What is the interplay between nation branding (e-Estonia) and digital development in Estonia?

Due to its appealing ideology, inspiring narrative, and consistent promotion, the e-Estonia brand has developed from a sector-specific brand to a national identifier and has become the essential differentiator of the country. The digital brand is exceptional since it is based on a risk-friendly approach and is sometimes more similar to one of a start-up rather than a country. Since this one was the most clearly defined, and the branding of e-Estonia was consistently executed throughout the years, this brand developed the most distinct positioning. It is also based on the most crucial subjects, from transparency, efficiency, governance, trust, and tech-driven disruption, but significant risks as “*relevant cultural ideas*” (Holt, 2004). On the other hand, the nation is best positioned as a problem-solver and adeptly showcases the real digital revolution of the country and integrates global and local dynamics while maintaining and transmitting its cultural identity (Blatter, 2007; Edgington & Hayter, 2012).

The close interaction between digital development and nation branding is more than using digital technology and channels for marketing communication and digital diplomacy. For Estonia, digital development is a growth strategy. Combining these factors sets off a flywheel: achieving the results of national pride and motivation stimulates development and maintains politicians' desire to be true to the brand's original characteristics. Inspired by the dream of Estonia becoming a "*Disneyland for digital people*" and AI, cybersecurity, and innovation advancements set out in this research, there is a rapidly growing demand for components of the Estonian brand and its digital expertise in domestic and international markets.

Nation branding is integral to state development policy, fostering innovation and supporting initiatives that reflect and enhance the nation's identity beyond mere economic considerations (Anholt cited in Dinnie, 2022; McCoy & Venter, 2015). It addresses the same goals of achieving global competitiveness, improving reputation, and soft power. The research results reveal that synergy is beneficial and essential for Estonia's continued success and standing on the global stage, following Estonian ambition on a strong development plan reliant on technological innovation. This leads to the conclusion that when digital development is the leading national policy, the nation's brand is deeply rooted in digital identity, and their interplay becomes a "*digital symphony*," amplifying effects in multiple directions and fueling further growth. When achieving this synergy, digital development becomes the catalyst for the nation brand, and nation branding is a catalyst for digital development, which has not been recognized in the theoretical discourse.

Digital sovereignty and data sovereignty for Estonia from being a weakness (Kattel et al., 2011; Hummel et al., 2021) in synergy with digital development and nation branding becomes its strength. Estonia has transformed the potential vulnerabilities associated with digital and data sovereignty by strategically investing in robust digital infrastructure and implementing data policies that allow more control over digital landscapes and data security and create a strong demand for Estonian competence in forming global technology governance policies. Nation's branding as a secure, digitally advanced state attracts businesses, investors, and skilled talents and helps to get funding for innovation and R&D projects, thus enhancing its international stature and soft power.

Proactive engagement with technology can position the nation as a role model (Perez, 2010), while nation branding has showcased its competence and amplified these effects. The growing

demand for Estonian digital competence, invitations to global forums, high-level councils, and Estonian leadership in global collaboration projects in relation to digital, cyber, and technology governance fields makes it much simpler to collaborate, project its ideas, and increases soft power as previous research suggested (Nye, 2004). It helps to overcome the lack of resources for global diplomacy and branding, which is common (Anholt, 2007). Despite slower digital developments in AI, military crises, and economic downturns, the strong brand keeps the demand continuously growing in these fields.

The increased visibility of the e-Estonia brand has simplified the process of attracting clients and investors to companies, enhanced interactions between businesses, and attracted more foreign investments. The robust digital infrastructure has cultivated a thriving ecosystem that continues to attract international companies and investors during economic decline, thus boosting economic diversification and national resilience (Perez 2010). The synergy has led to business expansion, access to markets, and technology transfer just as theoretically expected (Friedman 2005), and it has also benefited businesses from the country of origin effect explored by Freire (Freire cited in Dinnie 2022). Businesses and startups with a trust stamp (Sophocleous, 2023) or a state credibility boost have more visibility, thus easier access to partners or counterparts, investments, and markets or markets that export their solutions. Then, they create well-paid jobs and give back to the economy and to the nation's brand, which grows. The greater global visibility has led to more media stories about everything digital going on in Estonia, thus helping strengthen the brand Estonia, the leading digital nation label.

Entrepreneurial spirit, quality education, and innovative environment coupled with substantial international investments led to numerous Estonian unicorns breeding in the digital society, as is evident from the research. They become world-famous success stories like Bolt, Veriff, Pipedrive, and Glia, building up the reputation and interest of Estonia as a startup powerhouse. So even when digital development in the public sector has declined, it continues to boost the nation's brand value, attract investments and publicity, and create jobs. Estonian startups are born global, often having multiple offices worldwide while their R&D department often remains in Estonia, which exemplifies the concept of glocalization (Blatter 2007; Edgington & Hayter 2012), allowing them to adapt to other cultures while maintaining their cultural identity and continuing to project it on the road to effective expansion.

This synergy between digital development and nation branding created multiple positive effects that were not anticipated. According to researchers (Van Dijk 2006), globalization and technology could lead to a digital divide and, thus, inequality of power. Estonian phenomenon proves that digital development in synergy with nation branding has a substantial positive effect on boosting domestic digital transformation and development, which was pivotal for reducing bureaucracy, accelerating the development and adoption of services, and pushing public sector innovation further. For example, establishing a public sector innovation fund specifically designed for experimentation will make it today's leading digital society. Further, digital success stories strengthen the brand and attract talent, international experts, researchers, and students. Stakeholders who build those success stories build personal brands, grow in their political or business careers, move between public and private sectors, project Estonian brand identity for a stronger national brand and soft power, and become part of international organizations. This contradicts Docquier and Rapoport's (2006) theory about the risks of cultural erosion and brain drain that globalization promises to small states.

The environment is also impacted by the synergy through improvements in the regulatory environment for new businesses to enter the market, improving the overall digital environment as a “testbed” for innovation, opening doors for healthy competition, and attracting new businesses. E-Residency and Startup Visa initiatives are significantly boosting these effects.

On the cybersecurity front, Estonia's emphasis on digital advancements has spurred a significant increase in demand for cybersecurity expertise and solutions, cybersecurity research, cyber training, and public-private collaborations, reflecting its global role in shaping digital policy and cybersecurity standards, as theorists like Perez proposed (2010). As the research found, those developments encouraged Estonia to improve its position in cybersecurity, raise domestic awareness, and support the private sector in boosting its cybersecurity.

How is the synergy created between digital development and nation branding, and how does it enhance the global standing of a small state like Estonia?

Previous research points to the dire need for synergy between the national government and national organizations to do national branding for effective coordination and projecting national

values and identity (Frig & Sorsa 2020). Many authors have emphasized the importance of a designated central brand management authority or responsible body responsible for overseeing and coordinating national branding efforts (Anholt 2007; Dinnie 2008; 2022) and the importance of having a coordinated national brand management strategy (Aronczyk 2013). This research has identified that the Estonian brand is experiencing management and financing challenges due to not following those recommendations.

The so-called “*promotion*” of the e-Estonia sub-brand to the core of the nation's brand identity and efforts has highlighted significant issues in awareness, coordination, and brand management. Although entire nations must tailor their initiatives, communication, and projects to their core cultural values, national policy, and top strategic objectives regardless of challenging political variability and occasional external crises (Morgan et al., 2011; Steenkamp, 2019), the phenomenon should be holistically embedded in all initiatives, communication, and projects for (Anholt, cited in Dinnie, 2022) for it to be effective. Thus, the empirical research findings of this study indicated a lack of a coherent national brand vision, a promise that does not consistently resonate across all international audiences, and out-of-date messaging. The “Brand Estonia” toolkit introduced in 2017 to facilitate the nation’s branding initiative has been deemed “forgotten” due to its non-integration with national strategic documents, resulting in its deprioritization primarily because the toolkit is not a strategy. This means that it lacks specific strategic goals designed to help ensure the nation’s global competitiveness in terms of its international reputation, soft power, and integration of nation branding with state policies. Therefore, the above situation arises from the fact that the sub-brand branch managing bodies, such as Invest in Estonia, Work in Estonia, Enter e-Estonia, and Study in Estonia, performed well at the sub-sectoral level but failed to centralize their brand management into an all-inclusive strategy due to its non-alignment with the national goals and the policy-digital scene integration, heavily criticized by the national experts.

It is important to note that the mentioned examples indicate that the fundamental value of national branding is overlooked politically, although Estonia is highly dependent on international exports, investments, security, partnerships, and talent acquisition, among other global-focused areas. Thus, not many departments work actively on advancing national brands; as mentioned before, the most proactive one is MFA, which is evident as they have a lot of global interactions and a pretty large network of brand ambassadors, which are diplomats. Hence, MFA needs to play a leading role in national branding.

Unlike corporate branding, nation branding necessitates ongoing engagement with stakeholders, policy alignment, and representation in other national strategies and development plans to amplify its potential effects on national and global success (Anholt, Morgan et al., 2011; Steenkamp, 2019). This lack of political focus and leadership has led to minimal financing. Without centralized leadership, responsibility for nation branding is diffused among ministries and institutions to steer future directions or advocate for necessary funding. The competition for funding with other national priorities like healthcare and education has led to inconsistent support (Anholt, 2007; Dinnie, 2008; Gertner, 2011), which is absolutely confirmed by the research, especially in current economic conditions. In early 2024, the country branding department was created within the Estonian Business and Innovation Agency, while the team of the e-Estonia Briefing Center team was restructured in the same period, which leaves questions of maintaining the operations of one of the most significant brand experience of Estonia. The action plan of the new department within the Ministry of Economy and Communication jurisdiction and, primarily funded by the Ministry of Foreign Affairs, recognized both the potentiality and the threat aspect of nation branding, showing a discrepancy in understanding of the strategic imperatives of a nation brand's impact on a nation's competitiveness, reputation and potential economic growth.

Competitive identity, emphasizes the importance of maintaining a consistent and coherent message across various channels, including exports, governance, investment, tourism, and cultural exchanges (Anholt 2007). This research highlights the pivotal role of the E-Estonia Briefing Center 2009, which created the Estonian brand competitive identity that merges brand management, public diplomacy, and trade promotion and has operated its consistent messaging and policy messages across public and private channels since 2009 (Anholt 2007). With strategic consistency and coherence, holistic integration with stakeholders, and digital development, the center engages with public and private sector partners, continuously measuring results and adapting to the international audience's needs, supporting the nation's resilience, and developing and distributing narratives in times of crisis (Anholt 2007). It was achieved with support from President Ilves's visionary leadership and the Government CIOs Taavi Kotka and Siim Sikkut.

Since 2009, the center setup, name, and location have evolved three times, but the commitment to the e-Estonia brand has not. The center is a critical gateway for foreign delegations, entrepreneurs, and government officials, and it is a well-designed national brand experience. The

primary function of the e-Estonia Briefing Center - showcase Estonia's cutting-edge digital solutions and technologies, has significantly bolstered the nation's reputation as one of the most advanced digital societies globally, becoming a must-visit place for media representatives in support of the value co-creation theory by Hill & Jones (2012). Serving the export-oriented private sector, engaging their speakers, and organizing conferences, events, and international B2B and G2B programs allowed to align stakeholders in an effective strategy, improve collaboration, and offer a coherent brand experience to international visitors.

From 2010 to 2024, the center has played a key role in managing the e-Estonia brand, working with stakeholders, promoting exports, and engaging in public diplomacy. It has been instrumental in coordinating brand strategies, training brand ambassadors, and managing digital channels and marketing efforts essential for creating a national competitive identity and effective national branding. The success of the center is attributed to its consistent approach, the backing of visionary leaders, consistent management, and active stakeholder engagement on various levels (Kavaratzis & Hatch 2013) As a national brand asset, the e-Estonia Briefing Center not only communicates a compelling narrative but also demonstrates the practical functioning of an e-society, creating a strong sense of fascination, trust, and credibility in the Estonian story. These effects of nation branding also correlate with other findings on soft power and public diplomacy, establishing credibility and trust that make diplomatic efforts more impactful (Nye 2004; Anholt 2007). This makes it essentially the center of a key brand customer experience that amplifies and distributes the unique cultural and experiential offerings that help to build loyalty and advocacy among visitors (Pine & Gilmore 2002; Morgan et al. 2011). The center format allowed us to form a deep understanding of audience behaviors and preferences. The narrative and services at the center have evolved based on real-time feedback from visitors, helping to refine the experience and narrative through an inspirational storyline, digital solutions, and communication channels, thus building up the e-Estonia brand experience. This proves the effective implementation of integrated marketing communication strategies and principles that, through real-time data and feedback, allow the design, tailoring, and improvement of experiences (Kotler & Gertner, 2002).

The center was not intended as a national branding authority but a sector-specific ICT demonstration center for export promotion funded by the private sector and EU funds. At the time, acting President Toomas Hendrik Ilves endorsed the center to secure continuation in financing under the Estonian Business and Innovation Agency in 2014 with a historical personal

note “ *to find funding for NGO ICT Demo Center,*” demonstrating the the low political understanding of the value of branding. Interestingly, from a legal perspective on national branding, the President could be the nation's brand leader and representative, yet oftentimes, they are not equipped to do so. Luckily for Estonia, in this case, the President as the state and nation leader compensated for the evident low political awareness and priority of nation branding.

Additionally, the e-residency program is highlighted as a significant example of a national brand product that effectively showcases the tangible benefits of the Estonian digital society, increasing its soft power, attracting online businesses and global talents, and fostering the service-provider community for those businesses (Blue 2021). The initiative has made headlines globally and is now leading the innovation of the e-ID with biometrics-based solution development. The e-Estonia positioning concept has been considered a successful example of country branding, particularly during Estonia’s Presidency of the Council of the EU (Papp-Váry, 2018). Thus, Major Estonian tech - events like the Tallinn Digital Summit, the e-Governance Conference, and Latitude59 are also examples of key assets in strengthening Estonia’s global brand that is instrumental in constructing a positive national image in accordance with previous research (Gwinner & Eaton 1999).

Yet, the loss of the synergy between digital development and nation branding is also the main vulnerability for Estonia and represents a new direction in theoretical discourse. The strong brand not only fosters national pride but also sets higher expectations and drives advancements, which is one of the synergistic effects. The effectiveness of digital development and branding was particularly evident when visionary leaders held power in Estonia. The nation's perception reflects its interpretation of its heroes' narratives, myths, and stories through diplomatic actions, international relations, and ideological and historical events (Bond et al., cited by Dinnie, 2022). Leaders such as Toomas Hendrik Ilves, Linnar Viik, Taavi Kotka, and Estonia's first president, Lennart Meri, are celebrated for their leadership, charisma, integrity, and strong advocacy for the future independent of their official positions. Their approach is characterized by bold and sometimes risky decisions that have led to innovative contributions to the digital agenda. They often achieved global recognition, visibility, and publicity, thus strengthening the brand as brand ambassadors (Dinnie 2022). These leaders have been instrumental in promoting the state and committing to significant initiatives, ensuring the branding was effective even without a structured strategy. However, research indicates a current shortage of top-level leaders who serve as competent speakers. Remarkably, while it is a natural part of their roles, some present-day

leaders either choose not to engage in international branding and communication or lack the necessary skills and competence in public speaking. This gap puts the nation's brand, competitiveness, and soft power at risk.

Therefore, the conclusion is that Estonia's vulnerability does not seem to stem from a lack of digital breakthroughs but rather from a shortage of visionary leaders. This shortfall is closely linked to a decreasing synergy between nation branding and digital development, leading to diminished global recognition of Estonia as a digital state and a lack of domestic ambition to improve. This reduced focus on innovation is attributed to domestic economic downturns and heightened focus on defense and security due to the war in Ukraine, as well as challenges in innovating Estonia's complex, costly, and aging legacy systems; as the research reveals, thus we can conclude there is a reflection of the visionary leaders' other priorities. Additionally, due to outdated procurement systems and requirements, startups find it challenging to work with public-private collaborations and continue public-sector innovation. This situation calls for visionary leaders willing to make bold decisions, as technology and change do not manage themselves. In such cases, a national strategy document and authority could help maintain focus on what is crucial for the country's competitiveness and reputation, regardless of changing political parties and political short-term focus, as other researchers like Anholt (2007) also suggest.

The nation's vulnerability becomes particularly pronounced during crises when branding efforts do not proactively support and mitigate their damaging effects (Keller 2008). Based on experts' comments, Estonian history has shown how effective national branding can minimize the risks during crises and build a stronger, more resilient image for the nation, thereby boosting both the economy and soft power. This experience correlates well with the soft power theory (Nye, 2004). For example, Estonia's handling of the 2007 cyber security incident and doing the same in the pandemic crisis were aligned with brand narratives, showcasing the resilience and capability of its digital society and turning these challenges into brand experiences that later increased demand for related expertise and collaboration. Conversely, the war in Ukraine, despite Estonia's extensive support efforts since 2014 (ESTDEV, n.d.), represents a missed opportunity that is damaging the nation's brand, competitiveness, and reputation. It is clear that the Estonian economy and reputation have taken a hit from the war. While a strong national brand can serve as a buffer in crises, it is vital to focus communication efforts on national strengths to maintain the nation's image during turbulent times (Keller 2008; Steenkamp 2019). It is unlikely that financial aid decisions, for example, €400 million in military aid from Estonia, were allocated

considering the synergistic effects these actions can have on both Ukraine and Estonia long-term and whether a different resource allocation for support within the nation's strongest competence areas would be more beneficial for both nations sustainable development.

Media coverage that in recent years primarily associates Estonia with the war focuses on military power and defense, while singular efforts to highlight peaceful life in Estonia are ineffective due to the global focus on the military crisis. Estonia empathizes deeply with Ukraine and has been the first to offer substantial support in restoring their nation. Despite the extensive aid, Estonia has provided within its strength areas, particularly in technology, digitalization, digital skills, as well as cybersecurity competence, and multiple collaboration projects, this contribution is not widely recognized or covered by the international media, nor is it communicated consistently as a coherent narrative. Supporting Ukraine since 2014 is not a public relations stunt but a genuine expression of Estonia's national values and essence, highlighting the critical need for alignment between nation branding and policy in communication for maintaining global competitiveness and reputation. In this case, showcasing Estonian resilience and digital capability would enhance the nation's global standing (Hale et al. 2013), demonstrate leadership, and encourage long-term global partnerships.

It is worthwhile to look at present Ukraine strategy, which is currently adopting Estonian branding and digitally synergistic approach and positioning itself as a digital nation. Ukraine is actively promoting its key digital solutions, including the data-exchange system Trembita, a system developed by Estonian companies based on Estonian X-road concept. This strategic positioning is being pursued by Ukraine despite ongoing military actions on its territory, underscoring Ukraine's commitment to building its nation through enhancing its global reputation, competitiveness, and soft power even amid conflict.

Other small states can learn valuable lessons from Estonia's success in technological advancements and nation branding working in synergy. While Estonia's distinct strategies as a digital nation provide a useful blueprint, each country must identify and cultivate its unique niche for specialization (Kattel et al. 2011; Guillén & Ontiveros 2020). Countries like Luxembourg, Singapore, the Nordic nations, and Uruguay have developed distinct branding strategies deeply rooted in digital technology, each tailored to their specific national needs. Singapore, for example, has leveraged digital technology for wealth generation, positioning itself as a global hub for finance and technology. Meanwhile, Uruguay has focused on authentic

growth, customizing its development to reflect its unique cultural and economic context. Similarly, Luxembourg and the Nordic countries have each crafted digital strategies that enhance their specific strengths, such as Luxembourg's financial services and the Nordic countries' advanced social systems.

As for the nation's brand evolution side, based on the current discussions, it is suggested that the Estonian focus should be on environmental, energy, and technological sustainability. However, a brand promise in the areas where the nation is willing but not well-equipped can be very hazardous as it can discredit the nation's credibility. Most likely, other nations follow these trends as well, and they are more advanced in these areas, and thus, the “*unique multidimensional blend of elements that provide culturally grounded differentiation and relevance for all target audiences*” (Anholt 2007) of Estonia should be preserved. Latvia and Lithuania were unsuccessful in branding themselves as digital nations due to the lack of actual digital achievements. Prioritizing sustainability may not align well with the branding of Estonia if it contradicts its existing policies, particularly since it still consumes shale oil, which makes it highly susceptible to accusations of “greenwashing.” Thus, a niche and repositioning around existing strengths will likely be more effective. It is crucial to involve a broader list of stakeholders and engage them more systematically to ensure internal buy-in (Kavaratzis & Hatch, 2013). A cooperative public-private sector approach, like the one facilitated by the e-Estonia Briefing Center, has proven to be the most effective brand management model (Dinnie, 2022).

How could we measure the synergy between digital development and national branding based on theory and national expert opinions?

Small states should consider synergy when measuring their national branding activities in connection with their digital development to raise their global position. However, adjusting any kind of data to a specific domain may seem controversial; the idea of synergy that the combination of several ordinary and straightforward indicators can result in a complex and comprehensive measure is the contribution that the author believes to bring to nation branding measures. Moreover, this measure indicates the effectiveness of the existing policies in place and

can also help to plan strategically and change short-term country popularity measures that global rankings represent. (Anholt, 2007).

At the same time, a synergy measure can help policymakers identify the synergistic effects that either increase national competitiveness or work against a more or less effective national brand (Kotler & Gertner, 2002). Measuring this synergy will help policymakers make more informed decisions regarding scarce resources and maximize the outcomes of any investment, resulting in a more effective national brand recognized worldwide (Bjola & Holmes, 2015). Measuring synergy will also call for constant improvement in strategic initiatives, proving both technological development and branding image with a constant urge to develop in one direction and alignment (Percy, 2018). Finally, with the constant change in synergy, national branding may become an issue that will be less challenging for politicians to turn a blind eye to, securing one of the biggest hurdles facing the author of the text.

Previous research suggests that digital analytics facilitates data-driven decision-making, enabling more effective nation-branding strategies and offering deep insights into global audience behaviors and preferences, and enhances responsiveness in international relations through real-time communication and feedback (Fetscherin, 2010; Kaneva, 2011; Kitchin, 2014; Hummel et al., 2021; Bjola & Holmes, 2015) further amplifying the impact of integrated digital development and nation branding efforts. In Estonia, criticism from the OECD highlights the insufficient use of research or data-driven decisions in governance, which results in its comparative inefficiency. This shortfall is compounded by a lack of human resources in various ministries, burdened by rapid decision-making cycles and increasing local and international demands. This situation underscores the need for technological solutions to enhance productivity using data (Bjola & Holmes, 2015). Estonia relies heavily on global rankings to measure the effectiveness of its strategies in both digital development and nation branding. The predominance of traditional metrics, such as brand perceptions, media coverage, and branding toolkits (Alhassan, 2023), often reduces nation branding to merely a marketing campaign, potentially overlooking broader impacts that significantly affect exports, business growth and the attraction of tourists, talent, and investments. These impacts are crucial for enhancing digital development and boosting national soft power (Nye, 2004) and are supported by the economic analyses of Kotler and Gertner (2002), as well as Kaneva's critique of cultural and political dimensions.

The issues of overreliance on perceptions (Anholt, 2016), narrow economic focus (Kotler and Gertner, 2002), temporal discrepancies (Ciudad et al., 2019), lack of local cultural and contextual nuances (Fan, 2006; Drechsler, 2009), and resource intensity (Bjola & Holmes, 2015) confirm the unsuitability of traditional metrics like global rankings and indices for strategic direction, decision-making, or planning that is confirmed in this research. Anholt (2016) advocates for a comprehensive measurement approach that goes beyond traditional marketing metrics to fully capture the multifaceted influence of nation branding on global standing. Research indicates the necessity of employing robust quantitative indicators to evaluate the tangible outcomes of national branding impact areas such as economic indicators, media monitoring and trends, investments, business growth, productivity and various competitiveness metrics, and innovation and governance-related global rankings and metrics.

Anholt Nation Brand Hexagon's qualitative perceptions should complement quantitative data in export, people, governance, investment, tourism, and culture. Since global rankings are important in Estonia, taking them into account is necessary. Qualitative assessments of national branding, including evaluating textual and contextual data, strategic documents, reports, and expert opinions, are essential for aligning brand measurements with broader state policies (Drechsler, 2009; Fan, 2006). In assessing the impact of Estonia's national branding in sync with its digital development, a rigorous academic approach that integrates both quantitative and qualitative methodologies is crucial. This integration provides a holistic understanding of the branding's effectiveness and identifies areas for improvement. Beyond the obvious synergistic examples, additional significant effects and indicators likely remain undiscovered.

The proposed Digital Nation Synergy Live Index, based on a Big Data and AI-driven model, represents a novel approach for measuring synergy in real-time and explores the opportunities to merge two fields and enable the consistent and perpetuating cycle of improvements. The tool proposed for measuring the nation brand and digital development effectiveness in their synergy also enables two-way communication between various nation brand stakeholders. The incentive to provide the data into the system to be able to extract it for present tasks and planning has not been previously addressed in the literature and might be found valuable by small states struggling with resource limitations.

The Big Data and AI-driven model reflects a novel approach to strategic decision-making concerning the nation branding opportunity in connection with the digital development of the

state. The new model uses the available data, such as the big data from global media monitoring, textual and numerical data, and all strategic outputs to provide a realist position to the Estonian nation-branding agenda. Hence, the output will indicate available, previously unacknowledged synergies and existing risk areas that require immediate action, ensuring a data-driven decision-making process. Moreover, the model also aims to remedy the lack of human resources and funding by taking over some of the key functions of the nation's branding. This model aims to alleviate the shortage of human and financial resources by automating key functions of national branding, such as research, media monitoring, messaging compilation, and data exchange. Doing so supports the co-creation of brand value across all stakeholders. Additionally, it aids in making branding decisions that enhance digital development and technological strategies to improve the nation's global standing.

Feedback from experts on the Digital Synergy model has been predominantly positive, highlighting its potential to integrate diverse data types like social media analytics, expert insights, and quantitative and qualitative data. This integration is expected to streamline strategic planning and reinforce Estonia's status as a leader in data-driven AI applications. However, implementing the Digital Synergy Live Index faces challenges, including its complexity, potential legislative impacts, and ownership issues. Concerns about data quality, security, and the level of engagement required from data contributors also remain, alongside apprehensions about potential biases and the limitations of automation. Despite these challenges, the successful use of AI in projects by Invest in Estonia, eResidency, and the MKM project for smart search solution development for textual data to aid policy decision-making illustrates the existing technological capabilities. With sufficient EU funding for innovation and visionary leadership, the model can become fully operational and get funding from the public sector innovation program InnoFund. For academic inquiry, these research findings highlight the importance of interdisciplinary research that spans big data analytics, AI applications in public policy, and nation branding strategies.

CONCLUSION

In this thesis, we explored the dynamic interplay between nation branding and digital development, emphasizing its critical role in fostering the synergy that enhances small states' global standing, competitiveness, reputation, and soft power, exemplified by Estonia's success story as a digital nation. As digital technologies increasingly reshape national strategies worldwide, the strategic international positioning of these dynamics becomes paramount. While considerable research has focused on the effects of nation branding in various contexts, the combined impact of digital development and nation branding, especially for small states in a rapidly evolving digital era, has received less attention. The urgency of this study is amplified by the current global trends towards digital integration across all facets of society and economy and geopolitical and economic challenges, necessitating a deeper understanding of how these elements converge to improve a nation's international reputation and global standing, competitiveness, and soft power.

Answering the first research question about the interplay between national branding and digital development in Estonia, the author can conclude that digital development has transcended its functional role to become a defining feature of Estonia's national identity, Estonian DNA offering significant benefits in terms of global perception and economic attractiveness. This profound integration suggests that **digital development as a national identity becomes “a trap”** that brings about significant advantages and some risks, demonstrating its dual nature. While the “*brand trap*” typically suggests negative connotations, in Estonia, it presents unique opportunities for national advancement and global positioning.

Estonia's reputation as a digital leader has attracted global recognition, boosting its soft power and enhancing its image as an innovative nation. Initiatives like e-residency and advanced digital public services exemplify this and have spurred economic growth in ICT, cybersecurity, and startups, attracting significant foreign investment. This digital identity also fosters national pride,

with widespread consensus on the importance of digital literacy and adoption across both public and private sectors.

While the digital sector thrives, other critical areas, such as manufacturing, agriculture, and traditional cultural sectors, may receive less attention, engagement, and funding, especially regarding technological needs. This imbalance can lead to **economic vulnerabilities** if the nation becomes too heavily reliant on a specific sector. Heavy reliance on digital identity may limit Estonia's flexibility in adapting to new global trends or shifts in the international economy. The “*brand trap*” can make it challenging to reposition or broaden the nation's image beyond digital themes. Moreover, the success of the e-Estonia brand might lead to complacency, where innovations and updates to digital infrastructure are delayed or deprioritized in favor of maintaining the status quo. This risks the brand becoming outdated, losing its appeal and effectiveness as technological advancements continue globally rapidly. Thus, while the interplay between e-Estonia and digital development highlights the powerful synergy that can elevate a nation's global standing and internal cohesion, it also necessitates continuous innovation and careful management to avoid the pitfalls of the 'brand trap.' Estonia's challenge remains to leverage its digital brand while ensuring it remains dynamic and inclusive of other sectors to sustain long-term national resilience and growth.

Next, addressing the question of how the synergy created between digital development and nation branding enhances the global standing of a small state like Estonia, the author concludes that **visionary leaders and speakers are the nation brand's key assets**, being so much more than free publicity. Furthermore, lacking those leaders is the biggest risk for the nation's competitiveness, reputation, and soft power, that cannot be severed even by strategic nation branding legislation.

Visionary leaders are critical to forging and maintaining the synergy between digital development and nation branding, serving as both strategists and ambassadors that enhance the global standing of a small state like Estonia. These leaders initiate transformative digital policies and effectively communicate Estonia's strengths, positioning it as a leader in digital innovation. Leaders like Toomas Hendrik Ilves and Taavi Kotka have been pivotal in establishing and promoting Estonian innovations, which have become cornerstones of Estonia's digital strategy and enhanced its reputation as an innovative digital nation, and have become symbols of Estonia's digital prowess. Their ability to articulate the benefits of digital advancements has

played a crucial role in aligning Estonia's national identity with its digital strategy. The involvement of these leaders in international discussions about digital governance and cybersecurity has positioned Estonia as a thought leader, enhancing its soft power and global influence. Through their leadership, Estonia has developed a culture that supports innovation and risk-taking, which is crucial for continuous digital advancement and reinforcing the nation's brand. Visionary leaders have fostered environments like the e-Estonia Briefing Center and e-Residency that enhance cooperation between the government and the tech community, amplifying the impact of Estonia's digital solutions and its brand as an innovative nation and continue to contribute to the nation long after their tenure has ended.

Leadership development is essential to sustain momentum in a technology-driven world and adapt to evolving global challenges like an economic downturn, pandemic, or a military crisis. Thus, lacking visionary figures in politics who carry the brand values despite the situation creates a serious risk that impacts the maintaining of the sustained global perception, effectiveness of the nation's branding efforts, and the nation's economic competitiveness.

Another relevant conclusion about how to create the synergy between digital development and nation branding that has been explored in the context of experience economy in corporate branding but has not been applied within nation branding theoretical discussions is the role of unique brand experiences. They play a pivotal role in enhancing the synergy between digital development and nation branding, building trust and loyalty directly contributing to Estonia's enhanced global recognition and appeal. The e-Estonia Briefing Center is a vital platform for demonstrating Estonia's digital solutions in action, essentially **the key brand experience**. By hosting over 10,000 decision-makers annually, it offers an immersive experience that substantiates Estonia's claims as a digital leader. These experiences have a profound impact on visitors, often leading to increased international collaborations, media coverage, and investments. The tangible demonstrations of digital services like e-residency, digital IDs, and i-voting systems strengthen Estonia's image as an innovative and functional digital society. Brand experiences are designed to create emotional, practical, and intellectual engagement, making the abstract concept of a 'digital society' relatable and impressive.

The e-Residency program is a standout brand experience that distinctly showcases Estonia's innovative approach to digital integration. By allowing global users to set up and manage businesses online based in Estonia, the program not only extends Estonia's digital services

globally but also serves as a proof point of its pioneering digital society, attracting international attention and fostering economic engagement.

Nation brand experiences are foundational in proving Estonia's digital prowess through visitors' personal customer experience, validating the country's reputation as a digital frontrunner and strategically enhancing its international standing. Through effective use of brand experiences, Estonia continuously reinforces its identity and expands its influence, proving that dynamic, experience-based branding is essential for small states looking to amplify their presence internationally. Events like the Tallinn Digital Summit and Latitude59 allow Estonia to present its digital achievements and future ambitions to a global audience, which is nothing less than another form of a nation-brand experience. These events provide unique opportunities for networking with global tech leaders and policymakers, fostering relationships that bolster Estonia's reputation, visibility, and influence in worldwide digital policy and technology governance discussions.

Another unique theoretical conclusion in nation branding of this research lies in the **ability of the synergy between digital development and nation branding to address and mitigate the inherent vulnerabilities** of small states like Estonia. This strategic synergy enhances resilience, competitiveness, and global visibility, turning potential weaknesses into strengths. Estonia's digital development has significantly leveled the playing field internationally, overcoming the typical economic limitations of small states. Estonia's e-Residency program, which allows global citizens to start and manage EU-based businesses online, is a prime example of opening borders and extending its soft power. This way, Estonia projects its values of openness and innovation, attracting global entrepreneurs and fostering a positive image of the country.

Estonia's digital infrastructure, anchored by initiatives like X-road and e-Government solutions, bolsters the nation's resilience against external shocks, including economic downturns and geopolitical tensions, safeguarding its digital and data sovereignty. This robust digital framework ensures the continuity of services and business operations, crucial for maintaining stability in a small state during global crises. The country's digital identity systems, such as e-ID and mobile ID, set global benchmarks for secure digital citizenship and governance, enhancing Estonia's digital sovereignty and its reputation as a trusted leader in the digital domain.

Hosting significant institutions like the NATO Cooperative Cyber Defence Centre of Excellence, EU-Lisa, and NATO DIANA in Tallinn positions Estonia as a central player in global cybersecurity, influencing international standards and contributing to worldwide security. The innovative "data embassies" initiative, which stores critical governmental data in servers located internationally yet treated as Estonian territory under diplomatic law, underscores Estonia's commitment to data security and operational continuity.

Moreover, Estonia's strategic investments in local tech development and the global promotion of its digital solutions amplify its independence and leadership in technology, shaping global tech practices. These concerted efforts **solidify Estonia's digital autonomy and leverage its digital capabilities as a strategic tool of soft power**, enhancing its global influence and addressing vulnerabilities inherent to small states.

During the COVID-19 pandemic, Estonia's advanced digital health infrastructure proved crucial, enabling effective management and continuation of public health services and education, thereby minimizing disruptions. The nation's swift transition to remote working and learning environments not only sustained economic and educational activities but also reinforced Estonia's image as a technologically agile and resilient nation. This demonstrated the practical benefits of its digital society in crisis management and recovery phases.

Similarly, amid Ukraine's ongoing conflict, Estonia has played a significant role in supporting digital transformation and cybersecurity enhancements. This includes implementing the data-exchange platform Trembita, based on Estonia's X-road system, which has helped Ukraine strengthen its digital infrastructure and restore the nation. By aiding Ukraine in enhancing its digital capabilities, Estonia supports crisis management and solidifies its reputation as a leader in providing resilient digital solutions suitable for crisis scenarios.

In answering the question of how to create the synergy between digital development and nation branding, it is useful to answer how it can be lost. Losing the synergy between digital development and nation branding can occur swiftly if key elements are neglected or mismanaged.

Leadership transitions that introduce leaders without a clear or strong commitment to digital innovation and speaker skills can quickly **erode the established synergy**. For Estonia, the

decline in visionary leadership noted by experts has led to less emphasis on bold digital initiatives, which previously propelled the nation's brand and digital advancements. This leads to a rapid loss of synergy, which can also result when a country fails to keep pace with global digital trends or ignores international standards. This can leave previously pioneering initiatives outdated, making the nation less competitive and diminishing its standing on the global stage. Without leadership, nation-branding and digital development projects will not receive funding and attention from politicians, as when digital development and nation-branding initiatives are not prioritized in the national budgets or policy agendas, they stagnate. Without funding, leadership, and goals, the synergy can be lost since the nation's messaging and strategic objectives become misaligned. In Estonia's case, inconsistencies between what is promoted internationally and the actual digital advancements can lead to credibility issues, reducing the effectiveness of its branding efforts. In addition, the lack of funding and leadership can deprioritize key national brand experiences, such as the e-Estonia Briefing Centre, or not fully capitalizing on initiatives like e-residency diminishes their impact. When these experiences do not evolve to reflect current capabilities or fail to engage effectively with international stakeholders, the synergy between branding and digital development weakens. The disconnect between public sector ambitions and the capabilities and innovations of the private sector can lead to a rapid loss of synergy when tech startups and the private sector struggle to maintain collaborative engagements with the state.

Strong leadership is vital for effective brand management. Maintaining synergy requires constant vigilance, cohesive strategies, accountability, and robust engagement across all sectors. Without these, the benefits of synergy can quickly unravel, undermining the combined impact of digital development and nation branding on a nation's global standing. A central authority specifically tasked with managing Estonia's national brand could ensure that all initiatives are aligned and contributing to a coherent national image, far more than a brand design toolkit. This body would oversee the integration of digital developments into the nation's branding strategy, ensuring that all efforts are synergistic and directed toward enhancing Estonia's global reputation, competitiveness, and soft power. This nation branding plan should articulate clear, strategic objectives for how the nation presents itself to the world; this includes fostering alignment across various government departments, the tech sector, educational institutions, and cultural bodies to ensure that everyone is working towards the same branding goals in a consistent way. Then, a system for regular evaluation of the nation's branding efforts will be implemented to measure their effectiveness and impact on Estonia's global standing.

The following conclusions answer the question of how to measure the synergy between digital development and national branding, so it is important to clarify the strategic imperatives behind why this novel approach is important.

Measuring this synergy is key for strategic reasons. It aids policymakers and brand managers in making informed decisions. It allows real-time strategy adjustments to boost Estonia's international digital and brand reputation. For example, the e-Estonia Briefing Center continuously adapts its showcases based on visitor feedback and global digital trends, assessing its impact on Estonia's digital image.

Regarding public accountability and political support, measuring synergy justifies expenditures on digital and branding projects, demonstrating the benefits of government spending to the public and stakeholders. The e-residency program's success, evidenced by increased business registrations and tax revenues, underscores the value of ongoing investment. This measurement guides decision-makers in resource allocation, optimizing outcomes for Estonia's digital infrastructure and global brand perception, and provides benchmarks against other nations and past performance.

Effective measurement confirms the integration of digital achievements into Estonia's national brand by showcasing tangible benefits to stakeholders, which justifies ongoing investment. Additionally, it creates a feedback loop for continuous improvement, aligning digital development with national branding efforts more effectively.

Continuous synergy measurement positions Estonia competitively internationally, enabling adaptation to rapid technological and market changes and maintaining relevance and leadership. Demonstrating successful synergy through measurement motivates greater stakeholder engagement, including from businesses and academia, who can see the outcomes of their contributions and ability to control dangerous narratives. Ongoing measurement informs long-term strategic planning, ensuring the sustainability and future readiness of both digital development and nation branding efforts.

The **Real-time Digital Brand Synergy Model** represents a **transformative and novel approach** to measuring nation branding, combining big data, advanced analytics, artificial

intelligence, and continuous feedback to enhance the synergy between digital development and nation branding. The proposed Digital Synergy Live Index utilizes diverse data streams, including social media analytics, expert insights, and quantitative and qualitative data, to provide real-time insights into the alignment of digital initiatives with national branding efforts. The model leverages predictive analytics and decision-making algorithms to forecast the outcomes of digital strategies and branding initiatives, enhancing Estonia's reputation and competitive edge. It also has the potential to become a two-way communication tool encouraging national branding stakeholder engagement.

This model uniquely **helps to create the synergy between national development and branding**. It exemplifies a forward-thinking approach for making data-driven decisions crucial for small states like Estonia, setting a benchmark for leveraging technology in national branding efforts and helping to maintain their global standing. Despite its potential, the challenges, such as data integrity, privacy, and resource demands, underscore the need for robust data governance frameworks. Yet, given proper leadership, it is within reach technology-wise.

Estonia's strategic integration of digital development with nation branding provides valuable lessons for other small states looking to enhance their global standing and competitiveness. The small size of a state, often viewed as a limitation, can be leveraged as a strategic advantage, allowing for rapid implementation and adaptation of new technologies. Estonia demonstrates how agility can be a significant asset, quickly testing and scaling digital solutions nationwide.

Estonia's success also highlights the crucial role of visionary leadership that embraces and drives digital transformation. Such leadership is essential for fostering effective synergy between national branding and digital development, pushing the topics to the top of the agenda both internationally and domestically.

Estonia's early commitment to digitalization has been pivotal. Small states should consider early adoption of new technologies to gain a competitive edge and cultivate a unique identity that underscores specific strengths and innovations. Building a brand must align with national strategic developments and strengths to avoid wasteful expenditures.

Utilizing big data and analytics is crucial for gaining insights into the effectiveness of digital strategies and making informed decisions in the digital age. This approach helps policies remain

responsive to real-world impacts and adaptable to rapidly changing technological landscapes. Measuring the synergy between development and national branding is vital for ensuring national progress and utilizing modern technology in real-time. Estonia's experience underlines the importance of visionary leadership and a unified national ambition. Integrating a nation's brand management authority and strategy into the national development plan is crucial for sustained engagement and collaboration, ensuring the nation's global success, competitiveness, and reputation.

Nation branding, much like building a successful life and career, involves understanding oneself, identifying strengths and aspirations, and adapting to external opportunities and trends. Effective nation branding, synchronized with national development strategies, requires leveraging strengths, commitment, and collaboration. Unlike individual careers, national strategies can be impeded by political cycles and irrational decision-making. Thus, a strategy, consistent engagement, and measurement of the progress is needed.

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APPENDICES

Appendix 1. The List Of Interviewed Experts

Toomas Hendrik Ilves

Positions Held: Former President of Estonia, Former Vice President, Foreign Affairs Committee at European Parliament, Former Ambassador to the US, Distinguished Visiting Fellow at Stanford University and University of Tartu, Former Minister of Foreign Affairs of Estonia.

Siim Sikkut

Positions Held: Partner at Digital Nation, Mentor at CDL-Estonia, Former Government CIO of Estonia, Co-Founder & Board Member of e-Residency Programme, Former Chairman of National AI Task Force, Former Digital Policy Adviser, Former NIIS Board Member, Partner at Digital Nation, Mentor at CDL-Estonia.

Luukas Ilves

Positions Held: Former Government CIO of Estonia, Former Head of Strategy at Guardtime, Former Counsellor for EU Digital Affairs, Head of Section, Member of The Supervisory Board at CR14.

Kata Varblane

Positions Held: Director of Country Promotion at Estonian Business and Innovation Agency, Co-Founder, Former Corporate Communications Officer of Suve, Former Marketing Manager at Bolt

Ave Lauringson

Positions Held: COO at Digital Nation, Former Managing Director at e-Estonia Briefing Center, Former ICT Skills Coordinator, Former Head of Training at Tiger Leap Foundation.

Liina Vahtras

Positions Held: Managing Director at e-Residency, Former Advisor to Vice President and Prime Minister of Estonia, Former Public Relations and Marketing Manager at Nortal, Former Chief of Staff at Tuum and Pipedrive.

Florian Marcus

Positions Held: e-Government Expert, Project Manager at Proud Engineers, Former Expert at EU CyberNet, Former Digital Transformation Adviser at e-Estonia Briefing Center.

Risto Hansen

Positions Held: Head of Tallinn Digital Summit EXPO, Advisor for E-Governance Technologies and Services at Taltech, Former e-Estonia Ambassador, Former COO, Director of Business Development at Guardtime, Former e-Governance and Digital Solutions Adviser for Estonian Presidency of the Council of the EU, Former Head Of Business Development & International Relations at RaulWalter.

Ralf-Martin Soe

Positions Held: Smart City Researcher and Innovator, Director of FinEst Centre for Smart Cities, Global Digital Governance Fellow at Stanford University, Assistant Professor at Taltech, Development Manager at ITL Digital Lab.

Liina Maria Lepik

Positions Held: Member of the Management Board at Enterprise Estonia, Former Director of the Tourism Board, Former Managing Director at e-Estonia Briefing Center.

Nele Leosk

Positions Held: Ambassador for Digital Affairs, Former Overall Lead for GovStack Initiative, Estonia, Member of the Global Future Council, World Economic Forum.

Minna-Liina Lind

Positions Held: Undersecretary for Global Affairs at the Estonian Foreign Ministry, Former Ambassador of Human Rights, Former Deputy Permanent Representative at the Permanent Mission of Estonia to the United Nations.

Mariin Ratnik

Positions Held: Undersecretary for Economic and Development Affairs, Former Estonian Ambassador in Madrid.

Maria Belovas

Positions Held: Consul General of Estonia in San Francisco, Former Head of Press & Public Diplomacy, Spokesperson, Delegation of the European Union to the United States, Former Head of Communication at the Ministry of Foreign Affairs.

Ville Sirviö

Positions Held: CEO of the Nordic Institute for Interoperability Solutions (NIIS), Board Member of the Gaia-X European Association for Data and Cloud, Chair of DPI Safeguards Working Group at the Office of the UN Secretary-General's Envoy on Technology, Former Expert at Nordic Smart Government and Business.

Anett Numa

Positions Held: Head of Government Relations and Communications at Accelerate Estonia, Former International Cyber Defence Policy Adviser in the NATO and EU department, Former Digital Transformation Adviser at the e-Estonia Briefing Center.

Anu Vahtra Hellat

Positions Held: Communication Manager at E-Governance Academy, Former Consultant at Hill&Knowlton.

Martin Ruubel

Positions Held: CEO of CyberSecurity at Nortal, Founder and Board Member of Talgen Cybersecurity, Founder and First Director at European Cyber Security Organisation, Founder and Board Member of EISA, Vice Chair at North European Cybersecurity Cluster, Former President of Guardtime.

Anna Klimovich

Positions Held: Head of Marketing and PR at Cybernetica, Former Social Media & Digital Marketing Manager at Marsaana Communications, Former Head of Marketing at iDeal.

Doris Põld

Positions Held: CEO of ITL Estonia, CEO of Estonian ICT Cluster, Member of the Executive Board at Digital Europe, Board Member at ITL Digital Lab.

Juhan Pukk

Positions Held: President at ITL, Member of the Board of Advisors at AIRE and e-Estonia Briefing Center, Partner at Flowit, Partner at Aitoldyou.

Peter Kentie

Positions Held: Estonian Honorary Consul in The Netherlands, Creator of Est-concept for Estonia, Managing Director at Eindhoven365, Advisory Board Member at Branding Team The Netherlands, Advisory Board Member at Dutch Design Foundation.

Elina Vilja

Positions Held: Partner and CMO at Rethink, Former Head of Marketing and Brand at Enterprise Estonia.

Kadri Tuisk

Positions Held: Founder and CEO at Clanbeat and Wundamental, Advisory Board Member on Science and Research Funding at Ministry of Economy and Communications, Founder and Board Member at EdTech Estonia.

Märt Aro

Positions Held: Co-Founder at Nordic EdTech Forum - N8, Director International Operations at Noordify, Co-founder and International Operations at DreamApply.

Anni Lehari

Positions Held: Chief Digital Strategy Officer at the Ministry of Economy and Communications, Former Public Sector Innovation Expert.

Appendix 2: The Semi-Structured Interview Questions

e-Estonia and National Branding

1. What does e-Estonia mean to you? How did your relationship start?
2. What is Estonia most known for today as a nation brand (main differentiator)?
3. Is e-Estonia a nation brand?
4. Why do you think Estonia has become so popular as a digital society as opposed to other small states (e.g., Switzerland, Netherlands, Singapore)? What cultural ideas of the e-Estonia project are so attractive?

Digital Initiatives and Nation Branding Stakeholder Engagement

5. Who are the main spokespeople?
6. How consistent are the messages? How politicized is nation branding?
7. What key digital initiatives have shaped international perceptions of this nation?
8. What is your role as a key stakeholder in co-creating the e-Estonia nation brand? What has been your contribution, and what value do you derive from it?
9. Which other stakeholders benefit from and contribute to the brand, and how?
10. What role does stakeholder feedback play in shaping the direction of nation branding efforts? How is their feedback integrated? What role do stakeholders play in aligning digital development with national branding efforts, and why is it important?

Synergy, Impact, Effectiveness

11. Can you describe the key digital initiatives that have built Estonia's image as a digital society within its national branding strategy over time?
12. How has the nation's branding strategy, particularly the e-Estonia initiative, influenced or accelerated digital transformation in Estonia?
13. What strategies and initiatives have proven most effective in creating synergy between Estonia's digital advancements and its national branding efforts? Which were not effective, and why?
14. How effectively does the nation manage its digital presence across international platforms?

15. How important is this synergy in enhancing Estonia's global standing, reputation, competitiveness, and soft power?
16. Nation branding is inherently vulnerable to external events such as natural, political, or military disasters. How did the nation brand in synergy with digital development help to overcome those? Bring examples.
17. How did this impact your specific area of work?
18. Based on your experience, what have been the most significant outcomes of the synergy between digital development and nation branding for Estonia?

Measurement and Future Outlook

19. How do you assess or quantify the effectiveness of Estonia's national branding and digital development working in alignment? Do we need to measure this at all?
20. What metrics or indicators do you use to measure and evaluate the effects and effectiveness of aligned digital development with national branding on Estonia's global standing, competitiveness, reputation, and soft power?
21. How do digital platforms and tools contribute to your branding strategies to enhance Estonia's visibility and attractiveness on the global stage? How can we measure it?
22. What about the Big data and AI models I propose?
23. How do you foresee the evolution of nation branding as digital technologies continue to advance? What future trends and cultural ideas should Estonia be prepared to capitalize on to improve its global standing?
24. What is working and what is not working any longer?
25. Do you think other small states could replicate Estonia's success in a different domain of technological advancement?

Appendix 3: Top Tier Media Sources

Media coverage analysis selection of prominent articles used for contextual research, organized based on the time, media outlet, and main topic with embedded links. The list reflects the focus of the articles, not the title.

Political and Geopolitical Coverage

- Washington Post
 - July 23, 2021: [She leads Estonia's democracy while keeping an eye on the bully next door](#)
 - March 7, 2023: [Estonia Prime Minister Kaja Kallas and Ukraine](#)
 - June 26, 2023: [Estonia Prime Minister on Ukraine War and NATO](#)
 - February 13, 2024: [Russia puts Estonian Prime Minister Kaja Kallas on wanted list](#)
- BBC
 - July 1, 2022: [Russia's cyber threat to the West](#)
- Forbes
 - April 6, 2024: [Estonia just found another million shells for Ukraine](#)

Technology, Innovation, Cyber, and Economy Topics

- NY Times
 - October 9, 2014: [Estonians Embrace Life in a Digital World](#)
- New Yorker
 - December 18, 2017: [Estonia, the Digital Republic](#)
- Forbes
 - June 14, 2016: [The tiny European country that became a global leader in digital government](#)
 - August 11, 2022: [Inflation in Estonia](#)
 - August 14, 2023: [Thriving, not surviving: Digital transformation lessons from Estonia](#)
 - December 26, 2023: [Beyond Brexit: Why Estonia's e-residency scheme attracts EU startups](#)
- BBC
 - May 1, 2024: [Estonia's evolving digital society and i-voting](#)

Cultural and Social Coverage

- Forbes
 - November 11, 2023: [The best places to eat and drink in Tallinn, Estonia](#)
- Washington Post
 - February 27, 2024: [Europe sauna marathon in Otepää, Estonia](#)
- Guardian
 - March 27, 2024: [Free lunches, brain breaks, and happy teachers: Why Estonia has the best schools in Europe](#)

Appendix 4. Digital Development And Nation Branding Synergy Examples

Digital Development	Nation Branding	Synergy Examples
Enhances Economic Competitiveness	Attracts Foreign Direct Investment	1. E-residency program attracts global entrepreneurs. 2. International tech companies establish in Estonia due to its tech ecosystem. 3. Growth in tech startups like Bolt and TransferWise that attract international attention and investment. 4. Estonia's development as a hub for fintech and e-commerce.
Facilitates Innovative Ecosystems	Strengthens Global Recognition as Innovation Hub	1. Startup accelerators and tech parks in Tallinn. 2. Presence of institutions like the European Innovation Academy. 3. Innovation contests and tech incubators, and events fostering global startup collaboration. 4. Creative Destruction Lab Estonia enhancing tech sector connectivity. 5. Companies like the European Innovation Academy.

<p>Improves Government Efficiency and Transparency</p>	<p>Enhances International Reputation for Good Governance</p>	<p>1. X-Road system for secure online services. 2. Export of e-governance solutions via the NIIS project. 3. International praise for Estonia's transparent and efficient i-voting system. 4. KSI Blockchain technology implementation for secure digital transactions. 5. Estonia's i-voting and digital ID cards.</p>
<p>Increases Global Connectivity and Partnerships</p>	<p>Boosts Soft Power and Diplomatic Influence</p>	<p>1. Hosting the Tallinn Digital Summit. 2. Annual e-Governance Conference showcasing Estonia's leadership. 3. Active participation in the Digital 9 (D9) group promoting digital government best practices globally. 4. Estonia's involvement in EU digital markets. 5. e-Residency programme</p>
<p>Promotes Educational and Technological Advancement</p>	<p>Attracts International Students and Academic Partnerships</p>	<p>1. Universities like Tartu and TalTech offering curricula focused on innovation, technology, and e-governance. 2. Partnerships with international tech universities and online course offerings expanding Estonia's educational influence. 3. Development of e-learning platforms and digital educational tools.</p>
<p>Supports Sustainable Development Goals</p>	<p>Improves Global Standing and Commitment to Global Challenges</p>	<p>1. Digital monitoring of environmental data to support sustainable practices. 2. E-services reducing carbon footprints by minimizing the need for physical transactions. 3. Hosting international forums on sustainable digital infrastructure. 4. Participation in the Future of Emerging Europe's Sustainability initiatives. 5. Digital solutions for Smart city projects.</p>

<p>Drives Cultural Exports and Digital Content</p>	<p>Promotes National Culture and Heritage</p>	<p>1. Digital platforms showcasing Estonian arts and music. 2. Latitude59 technology conference integrating cultural aspects. 3. Global promotion of Estonian digital art and virtual museum tours enhancing cultural outreach. 4. Digital archiving of cultural heritage.</p>
<p>Advances in Cybersecurity Measures</p>	<p>Establishes Reputation as a Safe and Secure Digital Leader</p>	<p>1. Hosting NATO's CCDCOE in Tallinn. 2. Development and promotion of the Tallinn Protocol on cybersecurity. 3. Hosting international cybersecurity conferences and training events like LockedShields and CyberSpike. 4. Implementation of KSI Blockchain in EU digital security measures. 5. Cybersecurity collaborations with other nations.</p>
<p>Facilitates Digital Transformation in Public Services</p>	<p>Showcases Efficiency and Innovation in Public Administration</p>	<p>1. e-Tax and e-Health systems praised internationally for efficiency. 2. Success of digital ID cards and their extensive use in both public and private sectors. 3. International consulting on digital public services by Estonian experts sharing best practices globally. 4. Development of e-government platforms for better public service delivery.</p>
<p>Emergence of New Businesses and Income Streams</p>	<p>Attracts Investment and Enhances Economic Diversification</p>	<p>1. Rise of tech consultancies like Digital Nation and Proud Engineers. 2. Expansion of e-commerce firms such as OGOShip. 3. Development of niche tech sectors like CyberTech, Cleantech, and fintech drawing global interest and investment. 4. New ventures in digital content and services.</p>

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