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**THE NEED FOR NEW LEADERSHIP KNOWLEDGE AND  
SKILLS IN THE CHANGED WORLD OF WORK**

Master's thesis

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

The document length is 19 101 words from the introduction to the end of the conclusion.

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## **ABSTRACT**

Organizations and leaders are facing an era of hyperchange in the twenty-first century coping with a constantly changing, uncertain and complex business environment. It is expected that crisis will be more prevalent and it is critical to plan for structural disruption on a regular and proactive basis, therefore the ability to quickly adapt, remain calm under pressure, as well as to handle risks and quickly recover from setbacks are crucial the future success of organizations. Globalization, technological advancements, sustainability, new workforce entering the labour market, collective and systemic intelligence, human-centric approach drives the new paradigm of leadership forcing leaders to create new business models and innovate to stay ahead. In today's modern world leaders now have to take a worldview and fulfill a social purpose not only leading organizations but dynamic and diverse communities, balancing the needs of all stakeholder groups to help architect a healthy ecosystem in which their businesses can thrive. Given the magnitude of changes in today's modern world and the fact that the role of leaders is changing there is a need for new knowledge and skills adapted to the new reality. The aim of this master's thesis is to find out leaders needs in terms of new knowledge and skills, what kind of trainings are required and if the Estonian continuing education training market has followed to meet today's leaders needs for new knowledge and skills.

According to the Estonian continuous education training market research there is a gap in trainings related to competitive edge (know their markets and innovate to stay ahead) and inspirational leadership (inspire others to take action) compared to the new universal leadership eight-part capability model by Deloitte that was used as a basis for the training market research. The most crucial skills and knowledge needed by leaders today according to the online survey conducted among Estonian leaders are IT competencies, change management, self-management, collaboration, communication and strategic thinking to be able to see the big picture, how to innovate and be creative, how to motivate employees and knowledge related to sustainability, green economy and social responsibility.

Keywords: leadership skills; agile leadership; leadership development; leaders mindsets

## INTRODUCTION

In the twenty-first century, organizations have to cope with a constantly changing, uncertain and complex environment (Ngayo Fotso, 2021; Hatami *et al.*, 2020; Akkaya *et al.*, 2022; Korn Ferry, 2020). The world economy is becoming more global. Generation Z is currently entering the labour market, and millennials will account for  $\frac{3}{4}$  of the global workforce in the near future (Ngayo Fotso, 2021; Harvard, 2018; Korn Ferry, 2020; Deloitte, 2020). Technological advancements and the advancement of media technologies, facilitates the increasing digitization of the economy, making the world more virtual (Ngayo Fotso, 2021; Fontana *et al.*, 2017; De Meuse *et al.*, 2021; Bruni *et al.*, 2019; Abid *et al.*, 2020). As the sustainability agenda gains more attention, it is anticipated that every country and organization will adopt the triple-bottom-line approach, which will force leaders to create new business models (Ngayo Fotso, 2021; Müller, 2020; Breque *et al.*, 2021; IISD, 2020).

It is expected that by 2025, the majority of public companies are headquartered in emerging countries, necessitating leaders to cross cultural and physical borders as well as manage teams who also cross those borders (Harvard, 2018; Knoll *et al.*, 2021). Companies expect that over the next decade more than one-third of their full-time, permanent employees will work remotely (Flood, 2019). Why in today's modern world, leaders have to take a worldview, build meaningful relationships, win support, and consistently be prepared for the unexpected? People are looking to businesses more than governments to address the world's most pressing issues – such as the energy crisis and the need for workforce reskilling (Korn Ferry, 2020). If the society is demanding companies, both public and private, to fulfill a social purpose, is the role of leaders changing? Leaders are expected to lead dynamic and diverse communities, not simply companies – with their humanity and emotional intelligence, navigating apparently impossible paradoxes and conflicts, balancing the needs of stakeholders, redefining competition and cooperation, thinking not only about the success of their company, but also how they can help architect a healthy ecosystem in which their business can be successful (Hatami *et al.*, 2020; James *et al.*, 2021; Korn Ferry, 2020; Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021).

Collective and systemic intelligence drives the new paradigm of leadership (Herbst, 2021; Renda *et al.*, 2022; Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021). The Fourth Industrial Revolution (4IR) is not just about technology, but also about how the human experience can be integrated with technology in order to build a more inclusive, human-centered future (Herbst, 2021). How does the human-centric approach place the fundamental human needs and interests at the center of the production process, moving from technology-driven progress to a thoroughly human-centric and society-centric approach (Müller, 2020; Breque *et al.*, 2021)? A sustainable future in the context of Industry 5.0 can be defined as: “an innovative approach that encompasses and encourages simultaneous development and growth of both, economies and societies by introducing a concept of deep integration of humans and smart machines cognitive and emotional intelligence and open innovation, thereby empowering collective intelligence for the longterm well-being and prosperity of various stakeholder groups in the ecosystem” (Marinković *et al.*, 2020; Tornjanski *et al.*, 2021; Renda *et al.*, 2022). Why is it important considering the speed how quickly technology and new business models transform entire industries to plan for structural disruption regularly and proactively of key importance (Renda *et al.*, 2022; Harvard, 2018)? It is stated that to be prepared for systemic transformation, corporations need to change to stay productive, and focus their action towards Industry 5.0 objectives (Lu *et al.*, 2021; Renda *et al.*, 2022; Nedelko *et al.*, 2020).

There is an urgent need to clarify the leadership skills for the new era (Grant *et al.*, 2018; Moldoveanu *et al.*, 2019; Mengel, 2021; Harvard, 2018; Sulieman, 2021; Gerolamo *et al.*, 2020). Given the extent and significance of changes in today’s world, the problem is that leadership skills needed in previous industrial phases are not anymore enough. For sustainable leadership there is a need for defining the changes more clearly and the possibilities for acquiring new leadership knowledge and skills. New leadership knowledge and skills adapted to the new reality should ensure the long-term strength of organizations (Choo *et al.*, 2022; Todnem, 2021; Clegg *et al.*, 2021; Ngayo Fotso, 2021). Traditional skills to predict and control results have become obsolete and instead resilience, agility and the ability to adapt quickly and recognise trends has become essential (Herbst, 2021; Korn Ferry, 2020).

Leadership is deeply human and interpersonal process. Becoming a better leader follows the same process as becoming a better person. This necessitates broadening the definition of “transformation” from a process that primarily applies to the external environment of institutional structures, systems, and processes, including the consciousness from where these structures, processes, systems and institutions emerge – the inner world of the individual leader. A shift in

leaders consciousness is needed and how leaders perceive and think about their world, moving from an assumption of predictability, stability, continuity, and reliability – to an assumption of volatility, uncertainty, change and ambiguity (VUCA) (Herbst, 2021). Strong firms and leaders who can turn volatility into vision, uncertainty into perception, complexity into solution, and ambiguity into agility will be able to turn the VUCA world's crises and dangers into opportunities (Herbst, 2021; Mangipudi *et al.*, 2020; Akkaya *et al.*, 2022). The threat of disruption is also the greatest opportunity that a leadership team will ever face (Harvard, 2018; Anthony *et al.*, 2017; Korn Ferry, 2020).

The aim of this thesis is to find out leaders needs in terms of new knowledge and skills, what kind of trainings are required and if the Estonian continuing education training market has followed to meet today's leaders needs for new knowledge and skills. To achieve the aim of this master's thesis the author is seeking to answer the following research questions:

- 1) What kind of leadership knowledge and skills is needed in the changed world of work?
- 2) How the perceived changes in society and in economics are connected to the needed new knowledge and skills?
- 3) How well does the continuing education training market meet the needs of today's leaders for new knowledge and skills?

To describe and compare the perceived changes and the new needed knowledge and skills an eight-part capability model is used, based on results of Deloitte research (Deloitte, 2020).

This master's thesis is divided into the following parts. The first part gives an overview of the theoretical background of the changes in leadership during the last five years and challenges that are lying ahead affecting leaders and leadership on a personal, organizational, community and global scale based on scientific research and peer-reviewed publications. The methodology part describes the research methods used in this master's thesis and its design. A mixed method approach consisting of quantitative (deductive) and qualitative (inductive) analysis was used to find answers to the research questions. The results and data analysis part consists of two subgroups. First providing a comparison of Estonian continuous education training providers (Äripäev, 2022) and skills required in the changed world of work according to Deloitte eight-part capability model (Deloitte, 2020). Secondly the results gained from an online questionnaire survey conducted among Estonian leaders. The last part of this master's thesis presents the discussion, limitations and conclusion of the current research.



# **1. THEORETICAL BACKGROUND**

This master's thesis theoretical part explains the changing characteristics of leadership and the need for leadership development to acquire new knowledge and skills to lead in a complex and challenging business environment influenced by digital transformation, the transition from Industry 4.0 to 5.0, and the changing role of leaders on a global scale.

## **1.1. Leadership characteristics and styles**

The majority of traditional and modern leadership theory and research focuses almost solely on individual leaders and their asymmetrical impact on followers toward the accomplishment of shared goals (McCauley *et al.*, 2021). In more contemporary research leadership is being described as a collective phenomenon that is dispersed or shared among multiple individuals, possibly flexible, and produced through interaction (McCauley *et al.*, 2021), moving beyond individualist and heroic conceptions (Fairhurst *et al.*, 2018).

In the literature, leadership is described in terms of either personal traits and behaviors, interactions with followers and other stakeholders, administrative roles, or other people's perspectives. Other characteristics of leadership include intellectual stimulation, role modeling, and coaching (Alblooshi *et al.*, 2021). Leadership is a process whereby an individual influences a group of individuals to achieve a common goal (Choo *et al.*, 2022; Northouse, 2021; Hudson, 2019; Clegg *et al.*, 2021; Todnem, 2021). Leadership as a process means that it is not a trait or characteristic that a leader possesses, but rather a transactional event that takes place between a leader and their followers. A leader both influences and is influenced by followers. It highlights the fact that leadership is an interactive process rather than a linear, one-way event. It is not limited to the formally designated leader in a group (Northouse, 2021). Everyone may contribute to leadership, and everyone who does so is leading, and everyone who leads is a leader (Todnem, 2021). In other words, leadership is essentially collective by nature and involves initiating, developing, deciding, supporting, challenging, and executing actions as concurrent and interdependent parts (Todnem, 2021).

Scholars Clarke *et al.* (2019) state in recent years a growing interest in shared leadership, as a way of enabling team-based organizations to function effectively in complex business situations. Shared leadership is defined as „a dynamic interactive influence process among individuals in groups for which the purpose is to lead one another to the attainment of group or organizational goals or both“ (Clarke *et al.*, 2019). In the case of shared leadership, businesses are seen to function better when more people are brought into leadership roles, especially those in today’s knowledge-based enterprises. There is more knowledge available for complicated work, and individuals’ motivation and morale improve (Fairhurst *et al.*, 2018). Leadership is decentered from individuals and shifted to relationships, but it remains humanly embodied, which means that it is easy to detect the origins of leadership within distinct relationships and patterns of interaction among concrete social actors (Fairhurst *et al.*, 2020).

There are several different leadership theories to be distinguished, including leadership trait theories (which seek to explain the distinctive characteristics that account for leadership effectiveness), behavioral leadership theories (which seek to explain the distinctive styles used by effective leaders), and contingency leadership theories (which seek to explain the best leadership style given the circumstances, followers, and leader). Leadership style is a combination of traits, skills, and behaviors that leaders use while interacting with followers (Erkollar *et al.*, 2018). Traits are a group of distinguishing qualities, characteristics, or attributes that describe a person (Northouse, 2021; Erkollar *et al.*, 2018). A person’s personality is a combination of traits that classify individual behavior (Erkollar *et al.*, 2018). A skill is the capacity to use knowledge to produce the intended outcome (Brosi *et al.*, 2018; Gerolamo *et al.*, 2020). The development and enhancement of leadership skills is influenced by each persons individual differences in cognitive ability, personalities, capacity to control emotions, identities, and values coming from both personal experience and cultural contexts (Gerolamo *et al.*, 2020).

From research findings, competencies are composed of people’s knowledge, skills, personal characteristics, self-concepts, traits, and motives that are essential for leaders to lead companies successfully and effectively (Ngayo Fotso, 2021; Grant *et al.*, 2018). According to some academics, competence refers to the traits and abilities that people need to succeed in professional jobs. Competence is also defined as a set of skills, knowledge, and characteristics that contribute to excellent job performance. Individual competencies include techniques, skills, abilities, attitudes, beliefs, values, dispositions, personal characteristics, self-perceptions, and motivations

that enable people to successfully meet diverse job demands (Sulieman, 2021; Siengthai *et al.*, 2019). Intelligence is an individual's ability to acquire skills and knowledge and apply them to solve various tasks. Leadership intelligence relies on a leader's capacity to develop, learn, and master new ways of leading others. The continuing influence of digitalization and globalization has raised the leadership intelligence expectations placed on most firms (Choo *et al.*, 2022).

The personal values that leaders possess directly result in their traits, attitudes and leadership styles. Leadership styles may therefore be understood as a systematic pattern of a leader's standard and consistent behavior, which has direct influences on the shaping of organizational culture. Personal values have been acknowledged by many scholars as an important driver of leadership behavior. A company may be seen as a reflection of its top managers since a leader's personal values as a result also shapes a broader organizational environment. As leaders drive the vision, purpose, and position of future organizations, entire organizations will reflect their personalities in the way they work (Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021).

In addition to Henri Fayol's influence and his 14 principles of management, which were popularized in the early 1950s, a number of important leadership theories have had a significant influence on the competencies that determine current leadership development strategies (Fowler, 2018; Ngayo Fotso, 2021) (Appendix 11).

According to Northouse (2021) although management and leadership have distinct differences, the two concepts are related. While leadership seeks adaptive and positive change, management seeks order and stability. Leadership is characterized by inner motivation, originality, strategic planning, tolerance of ambiguity, and the capacity to understand people. Rules orientation, short-term planning, external motivation, orderliness, safety considerations, and punctuality are characteristics of management. Managers use leadership when they influence a group to achieve its objectives. Management occurs when leaders are active in planning, organizing, staffing, and controlling.

## 1.2. Leading in complexity

### 1.2.1. Crisis leadership

In today's fast-changing and uncertain world, the crisis is expected to be more prevalent. A crisis is described as „an unforeseen situation that disrupts the organization's regular operations and requires immediate action.“ Natural catastrophes, terrorist attacks, or a global health crisis are just a few examples of the many possible causes of crisis (Siengthai *et al.*, 2019; Wu *et al.*, 2021; Ngayo Fotso, 2021). Leaders for the twenty-first century need to have competencies to handle the crisis from detecting the first signal to recovery and learning (Bhaduri, 2019). To manage the crisis leaders are expected to show strong organizational skills and concern for people coupled with strong emotional intelligence (Bartsch *et al.*, 2020; Thwaite, 2022; Siengthai *et al.*, 2019), being able to lead mostly based on a collaborative leadership style (Forster *et al.*, 2020; Thwaite, 2022) but to adjust their leadership style to the situation (Bhaduri, 2019). Furthermore, they should also have strong communication skills (Abadi *et al.*, 2020; Siengthai *et al.*, 2019), demonstrate flexibility, self-awareness, and transparency (Forster *et al.*, 2020), strategic decision-making and accountability (Abadi *et al.*, 2020; Ngayo Fotso, 2021).

Further research is needed, according to Wu *et al.* (2021), to understand such organizational processes and how leaders participate in emotion management and control. Effective crisis leadership, according to Wu *et al.* (2021), depends on the capacity to understand and pay attention to employees' reactions as well as manage one's own emotions in order to instill a resilient response despite extreme contextual challenges. There is a need for research that specifically addresses how leaders can lessen both negative emotions and hardships as well as how they can elicit positive emotions, encourage effective coping, and foster resilience after crisis events (Wu *et al.*, 2021; Eid *et al.*, 2022). Additionally, those who are in control of their emotions are more likely to be able to make faster decisions, deal with problems, understand and empathize with other people's emotions, be self-directed and self-governing, be able to adjust to different contexts and rapidly changing situations, deal with conflict among their team members, and establish a leader-subordinate relationship (Mangipudi *et al.*, 2020). In organizational contexts, emotional intelligence is a critical predictor of effective and transformative leadership (Choo *et al.*, 2022). Daniel Goleman popularized the concept of „emotional intelligence“ and released a number of research that demonstrate the connection between „emotional intelligence“ and people's capacity to adapt to changing circumstances. Goleman even claims that an individual's emotional intelligence influences for two-thirds of their leadership performance (Deloitte, 2020). The

personality system represents the complexities of who individual leaders are internally, including their traits, self-regulation skills, goals, values, mindsets, and emotions (Dubrow *et al.*, 2018; Crane, 2022; Nedelko *et al.*, 2020).

Having leaders focusing on their mindsets to develop their effectiveness is one of the most powerful aspects that will help them to become more self-aware and mindful because it will force them to stand apart from themselves and think about their underlying mindsets, which typically operate at a subconscious level (Dubrow *et al.*, 2018; Crane, 2022; Nedelko *et al.*, 2020). Understanding that mindsets function as encoding processes for leaders makes it clear that a leader's mindset is the most essential component of why they act the way they do (Gottfredson *et al.*, 2021). As a result, when leadership development programs overlook mindsets, they overlook the most fundamental element of a leader's effectiveness (De Smet *et al.*, 2018). This is one of the reasons why modern leadership training can fail because it focuses on changing behaviors rather than understanding and changing the underlying beliefs, mindset, and motivation that drive behavior (Crane, 2022). It's comparable to understanding and managing the elements of our internal environment and then integrating them to meet the needs of the external environment (Mangipudi *et al.*, 2020). Leaders in the twenty-first century are required to understand their workforce and themselves in order to execute leadership roles effectively (Choo *et al.*, 2022; Thwaite, 2022).

The global pandemic of 2020 has made it clear that there is necessity of putting greater attention on creating leaders and followers who can lead in complexity (Uhl-Bien, 2021; Arena *et al.*, 2018; Gerolamo *et al.*, 2020). In this disruptive environment, leader's abilities and skills, as well as their mental and emotional capacities, will be crucial. A leader with strong mental and emotional capacities will be more critical-thinking and able to take strategic action above the technological tool to emerge as a successful leader in this disruptive business environment. With the introduction of Industry 4.0 and the emergence of technologies like artificial intelligence, machine learning, blockchain, etc., the entire business environment as well as work settings are going through radical change (Mangipudi *et al.*, 2020).

Resilience is described as elasticity under pressure, or the capacity to change, adapt, and reinvent what an organization accomplishes. Thinking occurs by acting in a disruptive crisis, so being open to trying new ideas and spotting new chances is essential (Clegg *et al.*, 2021; Brosi *et al.*, 2018; Harvard, 2018; Barasa *et al.*, 2018; Kniffin *et al.*, 2022; Thwaite, 2022). According to research,

most adults spend the majority of their time „in the reactive“, especially when challenged, and as a result, traditional organizations are designed to operate on the reactive. Reactive mindsets, also known as socialized mindsets, are an outside-in way of experiencing the world based on reacting to circumstances and other people. Creative, or self-authoring, mindsets are an inside-out way of experiencing the world based on creating our reality by connecting with our actual selves, our inner passion and purpose (De Smet *et al.*, 2018). In order to establish and lead agile organizations, leaders must make a personal transformation to operate mainly in the creative (De Smet *et al.*, 2018). This will provide the groundwork for leadership development, which will enable transformation leaders acquire, the competencies and attitudes required to be proactive and flexible in the face of change, as well as help establish and inspire an organization that will thrive in this new landscape (Harvard, 2018; Uhl-Bien, 2021). Initially, leaders must transform themselves to evolve new personal mindsets and behaviors, they need to transform their teams to perform in new ways and lastly, it is essential to develop the competencies needed to transform the organization by incorporating agility into the whole enterprise’s design and culture (De Smet *et al.*, 2018; Tornjanski *et al.*, 2021).

### **1.2.2. Agile leadership**

As organizations develop future-fit teams prepared to deal with increasingly frequent change, there’s an emphasis on ensuring agility is a priority (Skillsoft, 2020; Brosi *et al.*, 2018; Tornjanski *et al.*, 2021). In academic literature, the concept of agility is defined as the overall ability to respond quickly to rapidly changing circumstances, as well as a set of specific tools and methods (Mangipudi *et al.*, 2020). According to recent surveys, the adoption of learning agility is becoming more popular in the business world (De Meuse *et al.*, 2021). It is defined as „the ability and willingness to learn from experience and then apply that learning to successfully perform under new or first-time conditions“ (Korn Ferry, 2017; Hudson, 2019; De Meuse *et al.*, 2021). For those in leadership roles, the ability to quickly adjust and learn new things is crucial. Learning agility focuses on human behavior, high-level mental processing, and the ability to translate lessons learned in one situation and apply them quickly in another. It encompasses experimentation, risk-taking, self-reflection, constant development, mindfulness, resilience, and cognitively integrating experiences acquired in one situation to different challenges in another. Individual and organizational behavioral changes necessitate courage, a great deal of effort, focus, discipline, and determination (De Meuse *et al.*, 2021).

Individual learning agility is the capacity of an employee to learn and evolve as a leader – in official positions of supervision or informal responsibilities on a team. It turns into a fundamental component of talent management. Individual agility is a mindset and mindfulness (for example growth mindset, curiosity) as well as a set of skills (for example asking questions, taking acceptable risks), observing others, being resilient, experimenting with new ideas and activities, and evaluating what worked and what did not. Learning agile businesses are forming more and more high-performing teams that concentrate on market opportunities. These businesses also give those autonomous teams the freedom to act independently in order to complete their tasks quickly. However, agile organizations go further to ensure that independent teams are connected to other teams. The integration of autonomous teams into interconnected ecosystems institutionalizes agility. In a setting of hyperchange the terms defining this response are: transform, innovate, adapt, flex, change, reinvent, re-engineer, shift, pivot, renew and so forth. Learning agility assessment is frequently linked to the identification and development of high potential leaders (De Meuse *et al.*, 2021).

Table 1. High professionals and high potentials characteristics and differences

<b>High professionals</b>	<b>High potentials</b>
High performers	High performers
Dedicated learners	Dedicated learners
High in self-awareness and results orientation	High in self-awareness and results orientation
Seek depth	Seek breadth
Value certainty	Embrace the unknown
Refine existing solutions	Create new solutions
Seek status and recognition	Seek exposure and new experiences
Rely on knowledge and proven expertise („We should ...“)	Rely on intuition and willingness to experiment („What if we ...“)
Clearly defined problems	Ambiguously defined problems
Sufficient facts	Insufficient facts
Best or right solution	Many possible solutions
Following established practices	Devising own practices
Answering questions	Generating new questions

Source: Hallenbeck *et al.* (2019); compiled by author

An organization can develop leaders who are prepared for the future, capable of proactively seeing business possibilities, and fast to move when faced with unexpected difficulties by understanding how to recognize and promote learning agility.

### **1.2.3. Innovative leadership**

The capacity to adapt to the changing environment is essential for organizational survival, therefore innovation is priority (Arena *et al.*, 2018; Tornjanski *et al.*, 2021). Organizational innovation is the ability to produce and adopt new ideas or behaviours and is crucial to enhance productivity and improving company performance (Chen *et al.*, 2018). One of the key factors influencing organizational innovation is leadership, which is also a key factor in determining the amount of support given to innovation within an organization. As one of the most significant predictors of innovation, various human variables such as personality and motivation, as well as contextual factors such as organizational environment and leadership style, drive innovation (Alblooshi *et al.*, 2021; Chen *et al.*, 2018). To achieve organizational innovation, leaders must be proficient in key organizational-related hard and soft skills, as well as actively listen to all members of the organization in order to manage conflicts and analyze data. Leaders should be able to constantly improve their decision quality by analyzing all alternatives, considering all sources of feedback, and promoting a learning culture. Leaders should concentrate on inspiring people, providing incentives for better performance, and ensuring that everyone is working toward the same goals (Alblooshi *et al.*, 2021; Tornjanski *et al.*, 2021; Todnem, 2021).

Organizations are challenged in achieving innovation ambidexterity, which requires involvement in both exploratory or radical activities that aim to meet new market and customer needs and exploitative or incremental activities that address current customer needs and market conditions (Fu *et al.*, 2018; Alblooshi *et al.*, 2021; Asadullah *et al.*, 2021; Love *et al.*, 2018; Tornjanski *et al.*, 2021; Scheepers *et al.*, 2019). For these reasons, organizations that manage innovation in the traditional manner will struggle to survive. Success, on the other hand, depends on a company's ability to understand the new factors of the environment that, combined with business model innovation, will release initiative, imagination, and creativity (Akkaya *et al.*, 2022) and innovation needed to survive (Tornjanski *et al.*, 2021). Innovative leadership is described as the process of inventing radical changes to solve problems and therefore benefit people. Innovative leaders are characterised as visionary and having the ability to shape the future and communicate shared visions (Alblooshi *et al.*, 2021; Tornjanski *et al.*, 2021).



### **1.3. The need for new leadership knowledge and skills**

In an era of hyperchange, leaders regularly find themselves in new and first-time situations on a near-daily basis, and need to execute at the edge of their competence (De Meuse *et al.*, 2021). Standard leadership approaches frequently fail in these challenging, complex situations, therefore in order to understand and deal such complex trends, leaders need to possess new kinds of knowledge and skills (Choo *et al.*, 2022; Todnem, 2021; Clegg *et al.*, 2021; Ngayo Fotso, 2021; Grant *et al.*, 2018; Moldoveanu *et al.*, 2019; Mengel, 2021; Harvard, 2018; Sulieman, 2021; Gerolamo *et al.*, 2020). Now, the challenge is to help leaders continuously learn, grow, and adapt (De Meuse *et al.*, 2021).

The new era leaders needed knowledge and skills shape the company and prepare for new changes to face complexities of the business environment. According to Mangipudi *et al.*, (2020) leaders are using traditional and conventional methods for learning new skills, and as a result, leaders are not fast enough to keep up with the new normal for business (Mangipudi *et al.*, 2020). Leaders must learn to let go of a variety of old habits and skills that helped them succeed in the past. At the same time, they must embrace and develop new ones that are now required to perform effectively (De Meuse *et al.*, 2021; Ngayo Fotso, 2021), that are genuinely matched to the demands of that environment (Sulieman, 2021).

The need for organizations to develop this new kind of leader places more emphasis than ever on learning and development. Organizations must develop leaders who can not only drive rapidly necessary change, but also align employees with the business vision and strategy (Harvard, 2018; Alblooshi *et al.*, 2021; Todnem, 2021). Great leaders create a clear connection between what employees are expected to perform and how the changes will affect them and the organization (Harvard 2018). While things are continuously changing, leaders need to be more capable of handling changes on their own and expressing stability and consistency to their employees (Brosi *et al.*, 2018).

Given the importance of global business development, it is becoming increasingly necessary for leaders in practically every local industry to possess crucial qualities like flexibility, mindfulness, openness, and readiness in order to achieve organizational success and build a sustainable competitive advantage (Sulieman, 2021). Future leaders will need to exhibit curiosity, agility, humility, and interest for learning unlike any generation before them. All of this requires courage,

intelligence, grace, authenticity, and self-awareness as they achieve the results and execute strategy at the same time. It necessitates emotional intelligence qualities such as openness, vulnerability, and collaboration. In other words, leaders must be deeply rooted in their own humanity (Korn Ferry, 2020; Tornjanski *et al.*, 2021). The finest future leaders will possess vision, clarity, and agility, according to study by Mangipudi *et al.* (2020). Visionary leaders that have a clear vision of where they want their businesses to be will make business decisions to counteract the upheaval while keeping the organization's vision in mind. Clarity of thought and understanding of the situation will overcome the ambiguity of the situation. Leaders who can quickly and clearly identify themselves with the situation will make stronger and more powerful business decisions. The ability to be agile should enable the leader to deal with uncertainty (Mangipudi *et al.*, 2020; Tornjanski *et al.*, 2021).

According to research by De Haan *et al.* (2017) seven essential leadership skills were identified for the twenty-first century leader, including digital skills, information management, communication, teamwork, creativity, critical thinking, and problem-solving. Chow *et al.* (2017) adds additional seven competencies which include adaptability, agility, visioning, strategic thinking, change, corporate leadership, and generating funds (Ngayo Fotso, 2021; Tornjanski *et al.*, 2021). Based on interviews with successful leaders of large corporations, startups, and non-profit organizations academics Ashkenas *et al.* (2018) identified six leadership skills which according to their study are creating a vision for concentrating and challenging the team; translating the vision into a clear plan for what action to take and what not to do; communicating the vision to others; hiring, developing, and rewarding a strong team; concentrating on quantifiable outcomes; encouraging innovation and learning in order to maintain the team or company; and leading yourself. According to the scholars Gerolamo *et al.* (2020), the main points for developing proficiency in these leader skills are based on ongoing practice and real-world experience, rather than reading books or attending courses or seminars.

#### **1.4. Leadership development**

According to many large-scale industry studies, more than half of senior leaders believe their people development activities do not sufficiently build crucial skills and organizational capabilities. The problem is that traditional approaches to leadership development no longer match the demands of businesses or individuals. The research points out three reasons:

- 1) It's frequently challenging to apply the acquired knowledge obtained in class to the real world;
- 2) The benefits of investing in leadership development for organizations aren't usually as considerable as the benefits for individual learners;
- 3) The soft skills required by companies aren't being developed by providers (Harvard, 2018; Moldoveanu *et al.*, 2019; Renda *et al.*, 2022).

In today's faster-paced agile world the most successful people are actively seeking ways to improve their current skills and acquire new ones, to keep up with developing technologies, and to build their own leadership skills (Skillsoft, 2020). The most effective leaders are acquiring knowledge using a method known as network intelligence. Given the opportunity to acquire knowledge through one-on-one dialogue, the effort is worthwhile. In such environment, individuals frequently share observations they may not share with a big group, online, or in writing. Because learning through conversation is driven by individual questions, the lessons are delivered at learners' level. The goal is to ensure that people are in charge of their own careers, exploring what they want to do and making their own decisions, allowing individuals to take responsibility of their own development (Moldoveanu *et al.*, 2019; Nedelko *et al.*, 2020). Learning is a mindset, not just an action, an individual's dedication to a lifelong journey of development and self-improvement (Skillsoft, 2020).

The adoption of learning has increased, as has the desire for smarter and faster learning (Skillsoft, 2020). The needs of learners and how they prefer to learn is changing. Instead of participating one-size-fits-all programs, people choose to take control of their own learning (Harvard, 2018; McCauley *et al.*, 2021). Learning and development has considerable impact in major organizational change, which also prepares the basis for successful transformation. As businesses shift toward deploying smaller, more temporary teams to complete tasks, and as teams and responsibilities become more flexible, learning experiences must adapt (Harvard, 2018).

Millennials expect considerable improvements to leadership development programs. Poor content, insufficient thinking and expertise from outside sources, and a failure to make a convincing return-on-investment argument were identified as the most biggest barriers to learning and development program effectiveness in their businesses. Making learning experiences relevant and offering reliable content that learners are able to access from anywhere and on any device will be crucial, especially for millennials and the oncoming Generation Z. The transition from courses to resources

to experiences is priority now. Learning and development must shift away from complicated competence frameworks toward omni-present learning in the form of experiences, while giving employees with frictionless access to knowledge at any time and from any location (Harvard, 2018). That is the reason why the emphasis is shifting from what to learn to how to learn (Skillsoft, 2020). Learning and development should provide the external and internal expertise that millennials desire, select the best content and approaches from executive-level development programs, provide opportunities for cross-functional peer learning, and leverage learning technologies that millennials readily accept (such as gamification, simulation, social platforms, mobile, and video). Examples include launching a program in a new market or developing on-the-fly leadership training for managers on the fast track to advancement (Harvard, 2018).

An increasing number of online courses, social networks, and learning tools from both established providers and upstarts are supporting the change. Employees can learn new skills on the „personal learning cloud“ (PLC), which is adaptable and available right away. It resembles on-the-job training in the twenty-first century. The industry is trending away from prepackaged, one-size-fits-all content and toward the PLC as learning becomes personalized, socialized, contextualized and adaptive with opportunity to offer secure, trackable, and auditable verification of enrollment and success (Moldoveanu *et al.*, 2019). Organizations that use online learning resources can more quickly develop the capabilities necessary for change throughout their whole organization. E-learning, virtual classrooms, and massive open online courses are some examples of these tools (MOOCs). Change ready and collaborative organizational culture with a learning mindset is key to successful transformation (Harvard, 2018; Tornjanski *et al.*, 2021).

## **1.5. Digital transformation**

At the twenty-first century, the world is seeing the 4th industrial revolution and the digital transformation of the business world, referred to as Industry 4.0 (Ghobakhloo, 2020). Artificial intelligence, enterprise architecture, autonomous robots, simulation, horizontal and vertical system integration, the industrial internet of things, cybersecurity, the cloud, additive manufacturing, augmented reality, and big data and analytics are among the new technologies introduced by Industry 4.0 (Akkaya & Tabak, 2022; Tornjanski *et al.*, 2021; Gerolamo *et al.*, 2020). Industry 4.0 was already taking shape, but the global pandemic of 2020 has significant impact and sped up the process. Optimized computerization, digitalization, and artificial intelligence are being applied in

a variety of areas of life in general and particularly in business with never-seen-before speed and impact (Akkaya *et al.*, 2022). Even for businesses and industries that were still years away from it, digital transformation accelerated due to the global pandemic practically overnight (Skillsoft, 2020). As businesses require both physical and virtual structures that enable collaboration between machines, devices, and people as well as quick adaption along the value chain, Industry 4.0 has an impact on all business sectors. Digital technologies have an impact not just on information technology but also on how firms are run and the types of leadership styles used (Erkollar *et al.*, 2018).

According to Bekkers *et al.* (2019), hierarchical types of leadership are less suitable in virtual work contexts. Traditional leadership is supported by mechanisms of social influence. Yet in virtual settings, this impact is mediated by computer technologies, which alter worker's behaviors, emotions, thoughts, and performance (Liu *et al.*, 2019; Abid *et al.*, 2020; Bekkers *et al.*, 2019). Industry 4.0 requires open leadership styles that foster a culture of learning and innovation with an emphasis on enhancing knowledge and creative problem-solving. While a unified definition of leadership 4.0 or leadership in the context of Industry 4.0 is still being developed, the synthesis of this issue according to many authors addressing leadership 4.0 features includes: responsive leadership, swarm leadership, learning and innovation leadership, open leadership, agile leadership, participative leadership, network leadership, trust leadership, digital leadership, and collaborative leadership (Gerolamo *et al.*, 2020).

Digital leadership is rapid, cross-hierarchical, team-oriented, and cooperative, with a strong innovation focus. In an Industry 4.0 environment personal skills, open mindsets, and the capacity to use new tools are essential (Gerolamo *et al.*, 2020; Mangipudi *et al.*, 2020; Brosi *et al.*, 2018; Bruni *et al.*, 2019; Abid *et al.*, 2020; Erkollar *et al.*, 2018). Digital leadership requires new ways of thinking about business strategy, business model, IT function, enterprise platforms, mindset and skill set, and workplace. More than 90% of those surveyed regarding occupations in the digital age, including leaders and executives, underlined the necessity to upgrade skills at least once a year in order to function in the digital world (Gerolamo *et al.*, 2020).

Alongside technical and business capabilities, leaders need to have specific abilities for coaching, flexibility, career guidance, communicating, interpersonal relationships, and establishing cultural awareness (Flood, 2019; Tornjanski *et al.*, 2021) to understand various cultures and their differences (Brosi *et al.*, 2018; Abid *et al.*, 2020). A virtual work setting provides opportunities to

connect and communicate with people from all over the world (Bruni *et al.*, 2019, Abid *et al.*, 2020). Leading employees remotely is vastly different than in person (Flood, 2019). By scholars Liu *et al.* (2019) the following qualities are presented as the definition of digital leadership as the successful use and blending of electronic and traditional ways of communication: communication skills (communication clarity, avoidance of miscommunication, management of communication flow), social skills (leadership support), teamwork skills (encompassing team motivation, team accountability, and team member recognition), change management skill (covering change techniques), trustworthiness (sense of trust, honesty, consistency, follow-through, fairness, integrity, work-life balance, and support for diversity) and technological skills (correct use of relevant ICTs, blending traditional and virtual methods, technological knowledge, and technological security) (Liu *et al.*, 2019; Bruni *et al.*, 2019; Abid *et al.*, 2020; Kim *et al.*, 2020; Daniels *et al.*, 2018; Kim *et al.*, 2019).

It is a digital leader's competency to be aware of new technologies and technological developments (Kim *et al.*, 2019; Bruni *et al.*, 2019; Abid *et al.*, 2020). Digital leaders are responsible not only for implementing computer technologies in their organizations, but also for raising knowledge about these technologies among their employees in order to make teleworking accessible and comfortable for everyone (Liu *et al.*, 2019; Darics, 2020; Erkollar *et al.*, 2018). According to Brosi *et al.* (2018), digital leaders should cultivate tolerance of ambiguity and use creativity while creating organizational structures and procedures to ensure that all members of virtual teams are pursuing a same goal (Bruni *et al.*, 2019; Abid *et al.*, 2020).

## **1.6. The transition from Industry 4.0 to Industry 5.0**

However, due to the ever-increasing artificial intelligence capabilities, the need for human administration in the future might become obsolete. In a world of VUCA-RR (volatility, uncertainty, complexity, ambiguity, radicality and rapidity), artificial intelligence is becoming increasingly capable of making decisions. Many human tasks have been replaced by digital technologies in a business environment. An artificial intelligence-based algorithm, called „Leader Robot“, will be capable of making decisions in all divisions of a digital firm, including production, marketing, human resources, finance, and even management. Several research have been conducted on autonomous robots (Eiben *et al.*, 2021), human-robot interaction (Cross *et al.*, 2020), and robot decision making (Li *et al.*, 2020; Akkaya & Tabak, 2022). Manager robots are likely to

be a key concept in future organizations. According to review Industry 5.0 is being defined differently than Industry 4.0 in terms of its objective. Industry 4.0 is considered to be more focused on automating and digitizing supply networks and value chains, whereas Industry 5.0 must be characterized in a wider framework of human, ecological, and societal factors (Lu *et al.*, 2021). Consequently, it may be said that Industry 5.0 may be the period of successful and finished digital transformation that may require robot leaders. People could be willing to accept a robot as a leader, according to Ferrás (2019), and they might be able to follow directions from a robot. Due to the fact that digital automation will define the future of work, perhaps even paving the way for highly productive businesses run by robots (Akkaya & Tabak, 2022; Ferrás, 2019).

The European Commission publicly called for the Fifth Industrial Revolution (Industry 5.0) in 2021. Mindsets, skills, and competencies trained to understand complexity, think in systems, use complexity-friendly technologies and processes, design principles, experiential learning, action and reflection cycles, and iterations are all part of Industry 5.0. Curiosity, flexibility, empathy, and responsibility for interdependence and long-term results will need to become core qualifications and employment objectives (Lu *et al.*, 2021; Renda *et al.*, 2022; Nedelko *et al.*, 2020; Uhl-Bien, 2021).

The humanistic perspective of Society 5.0 motivates creative business concepts and is primarily based on the three components of data, information, and knowledge, which are seen as the three elements that will shape society in the future (Deguchi *et al.*, 2020; Hirai *et al.*, 2020; Tornjanski *et al.*, 2021). As a result, possibilities to develop, communicate, and generate new company ideas will increase (Ferreira *et al.*, 2019). It is a society that will be formed by revolutions that will be driven by technological and scientific developments (Deguchi *et al.*, 2020). Given the pace with which new technologies and business models affect entire industries, it is critical to plan for structural disruption on a regular and proactive basis. Corporations must adapt their perspectives and focus their actions on Industry 5.0 goals in order to establish a foundation for systemic transformation (Lu *et al.*, 2021; Renda *et al.*, 2022; Nedelko *et al.*, 2020).

The change from technology-driven progress to one that is wholly human- and society-centric places fundamental human needs and interests at the center of the manufacturing process. To respect planetary boundaries, the industry must become sustainable. It must establish circular methods for reusing, repurposing, and recycling natural resources, reducing waste and environmental impact, and ultimately leading to a circular economy with improved resource

efficiency and effectiveness. Resilience refers to the requirement to improve industrial production's resilience, equipping it better against interruptions and ensuring it can provide and sustain key infrastructure in times of crisis. Future industries must be adaptable enough to quickly traverse geo- and political upheavals and natural disasters (Müller, 2020; Breque *et al.*, 2021).

According to the Society 5.0 definition, a sustainable future is „an innovative approach that embraces and encourages simultaneous development and growth of both, economies and societies by introducing a concept of deep integration of humans' and smart machines' cognitive and emotional intelligence and open innovation, thus by empowering collective intelligence for the long-term well-being and prosperity of different stakeholder groups in the ecosystem“ (Marinković *et al.*, 2020; Tornjanski *et al.*, 2021; Renda *et al.*, 2022). New managerial skills and knowledge, as well as the development and adoption of novel leadership approaches, are required. Specifically, talent recognition and valuation as the most valuable asset, fusion skills, creativity, innovation management, ability to empower people, developed cognitive and emotional intelligence, leading by heart paradigm, development of soft-based skills, and empowerment throughout the entire organization (Daugherty *et al.*, 2018; Tornjanski *et al.*, 2021; Nedelko *et al.*, 2020; Thwaite, 2022).

## **1.7. Global leadership**

Companies, both public and private, are required by society to have a social purpose (Korn Ferry, 2020). Whether that means influencing geopolitical regulations and trade agreements, leading on carbon-neutral climate initiatives, or advocating for health benefits for frontline workers, leaders have a powerful voice, and they are increasingly using it to speak out for policies that benefit their stakeholders – including employees, customers, and shareholders. As a result, leaders are in charge of dynamic, diverse communities, not simply businesses. Whatever the industry, there is a growing understanding that corporate executives, and leaders in particular, are required to act as societal leaders. According to research by Korn Ferry (2020) future leaders are navigating seemingly insurmountable paradoxes and contradictions, balancing stakeholders needs, redefining competition and cooperation, and considering not only how to make their company successful but also how they can help architect a healthy ecosystem in which their business can thrive. This is a significant mindset shift for successful leadership (Hatami *et al.*, 2020; James *et al.*, 2021; Korn Ferry, 2020; Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021).



Leading social transformation will take the change challenges and responses to a societal or even global level. The necessary changes are multi-issue, multi-level, multi-organizational, and cross-sectoral in nature, and they may cross national borders (Nedelko *et al.*, 2020; Berberg *et al.*, 2021; Renda *et al.*, 2022). It is predicted that by 2025 most publicly traded firms will have their headquarters in developing economies. As a result, leaders will be required to manage teams that are capable of crossing cultural and geographic boundaries (Harvard, 2018; Knoll *et al.*, 2021). Companies predict that more than one third of their full-time, permanent personnel will work remotely during the next ten years (Flood, 2019). According to research, openness, resilience, and integrity are the three most important and reasonably consistent personality traits linked to global leadership. Resilience is necessary to remain persistent and emotionally stable in complex, ambiguous and diverse global business context that can lead to high stress levels. Integrity is linked to acting in a fair and respectful manner, being honest and reliable, and the requirement to uphold the highest ethical standards while working with all stakeholder groups (Knoll *et al.*, 2021; Uhl-Bien, 2021; Gerolamo *et al.*, 2020). Learning orientation, motivation to lead, drive for results, change orientation, and customer orientation are the five key traits attributed to global leaders. Emotional stability and the ability to remain calm under pressure and in difficult situations as well as the capability to handle risks and to quickly recover from setbacks are considered as important factors in deciding who should become a future global leader (Knoll *et al.*, 2021). The main competencies globally active companies are looking for in future global leaders are intercultural competence, interpersonal competence, leadership competence, cognitive complexity, learning competencies, and change competencies (Knoll *et al.*, 2021; Gerolamo *et al.*, 2020).

It is important to be aware that effective leadership within international settings needs knowledge of oneself as a global citizen (Flood, 2019; Hains *et al.*, 2023). Global citizenship has a significant impact in successful international leadership and can be defined as how one sees oneself fitting in to the world setting on a global scale. But being a global citizen entails more than being open-minded (Flood, 2019) or learning a specific set of leadership skills (Hains *et al.*, 2023). It involves changing one's mindset to acknowledge that anything one does might have an effect on society at large (Flood, 2019). Leading requires then to be relational, visionary, political, and adaptable, embracing emergence, holism, dynamism, and boundary issues (Clegg *et al.*, 2021; Berberg *et al.*, 2021; Tornjanski *et al.*, 2021). The 2030 Agenda for Sustainable Development, which includes the Sustainable Development Goals, was adopted by more than 150 world leaders at the UN Sustainable Development Summit on September 25, 2015. The performance of any country in pursuing the SDGs will largely depend on its leadership. Therefore, strong leadership, a well-

thought-out implementation strategy and unified efforts of governments, the business sector, society, and individual citizens are required to achieve the SDGs at national and international levels (IISD, 2018).

In a research by Deloitte (2020) more than 23,000 senior leaders and high potentials were assessed from a variety of businesses over the years, researching the differences between how leaders operate in different industries and functional specialities. According to the research it was found that there was very little that distinguished one kind of leader from another. Actually, they were all doing the same fundamental tasks, but the way how they expressed those activities were interpreted into their contexts. Whether it's captured in 30 competencies or 5, almost everyone has similar content at the core and the list of crucial leadership skills was relatively short. Shifting to a leadership capability model that is clear, more concise, and easier to understand than a traditional model can help businesses to focus on results rather than defining and aligning definitions that already exist. There is a need to define norms and expectations for all leaders, which according to the research by Deloitte are universal to all leaders, that is unified rather than fragmented development of leadership theory and practice moving forward (Deloitte, 2020; Todnem, 2021). A comprehensive, large-group, organizational, community, and global strategy is required (Todnem, 2021). A universal leadership capability model, on a more practical level, enables global organizations to unify the efforts of people on every continent in order to access a common set of skills while connecting to their local markets and communities. This new approach may also assist firms in adapting more rapidly as their operations, locations, capabilities, and technology develop (Deloitte, 2020).

Deloitte eight-part capability model contains the following capabilities:

- 1) Inspirational leadership – inspire others to take action;
- 2) Execution – get teams to achieve results;
- 3) Influence – persuade and influence in all directions;
- 4) Collaboration – collaborate with others;
- 5) Direction – set vision, direction, and a compelling course of action;
- 6) Business judgment – make business decisions that drive positive bottom-line performance;
- 7) Competitive edge – know their markets and innovate to stay ahead;
- 8) Building talent – develop people for competitive advantage.

A universal leadership capability model empowers leaders with the knowledge they need to react rapidly for more immediate effect at a lower cost and to focus on the end user to improve capability-model understanding, impact, and resilience. A universal leadership paradigm emphasizes all of the diversity and uniqueness that leaders have at the same time also providing a shared knowledge of what works on a fundamental level for everyone (Deloitte, 2020).

The findings from the literature review show that leadership is moving towards collective leadership enabling organizations to react more quickly to the changes. Considering the extent of changes in the society and in the world impacting business environment developing agility and innovation is important for organizational survival as well as human-centric approach and the ability to empower people in addition to cognitive and emotional intelligence to be able to make powerful decisions and to achieve triple-bottom-line objectives along with social responsibility.

## **2. METHODOLOGY**

The methodology part gives an overview of the research methodologies and approaches used in this master's thesis.

### **2.1. Research design**

In order to research how the Estonian leaders sense the changes in the business environment, how this has influenced leaders and their work related activities, including what kind of knowledge and skills are needed to remain successful and to be prepared to operate in an uncertain business environment, an online questionnaire survey was combined and conducted. To understand if the Estonian continuing education training market has followed and how well the trainings meet the needs of Estonian leaders today, a qualitative research was conducted based on the list of Top Estonian educators published in November 2022 by Äripäev (Äripäev, 2022). The combination of these research methods has provided valuable information from two perspectives, from one side what are the needs of today's leaders and on the other side if these needs are supported by the continuous education training institutions. To create a deeper understanding of the situation on the training market and to conduct a qualitative study, the author became acquainted with the continuous education training market in Estonia and how it is coordinated, its legislation and governing association, including the development of the training market in general.

Moreover, the research based on continuous education training market revealed the aspects for future research to develop new trainings that provide the new knowledge and skills needed in the changed world of work.

## **2.2. Sampling procedure and sample size**

### **2.2.1. Online questionnaire survey**

The online questionnaire survey approach used in this research was due to the aspects that online questionnaire ables to reach a wider group of respondents in order to make sufficient conclusions related to required trainings and the skills needed by leaders in order to successfully work in VUCA (volatile, uncertain, complex and ambiguous) business environment. The advantages of online questionnaire are that respondent can answer the questionnaire at a convenient time, respondent can take as much time as they need to response questions, respondent can complete survey in multiple sessions (Paudyal *et al.*, 2017; Sagar *et al.*, 2021). Additionally online questionnaire surveys enables question diversity (e.g. dichotomous questions, multiple-choice questions etc.) and collect an open-ended questions through a free text box (Paudyal *et al.*, 2017). The questionnaire design and the survey questions are presented in Appendix 1.

The online questionnaire survey was sent through Google Forms to general lists of 33 Estonian chambers and associations, whose members include entrepreneurs and companies and their leaders and shared via author's personal contacts (Appendix 9).

### **2.2.2. Continuous education institutions survey**

Data collected and published by Estonian business field newspaper „Äripäev“ was used as the basis for this analysis. Each year in November a list of Top educators is compiled for each previous year based on the following data:

- 1) Sales revenue, profit before income tax and added value per employee in 2020 and 2021;
- 2) Number of employees three or more in 2021, two or more in 2020;
- 3) In order to get to the top of the field, the share of the corresponding field in the company's turnover had to be at least 51% and the company had to have operated for two consecutive full financial years;
- 4) The data of the companies with the largest turnover in the field based on last year's financial results was retrieved from the Business Register;
- 5) Companies whose financial results were available in the Business Register at the time of data collection were chosen to participate in the Top educators list (Äripäev, 2022).

The Top educators list consists of 73 organizations (Appendix 3). In total 34 organizations were selected based on the description of the trainings to create a comparison table.

## **2.3. Methods and data collection**

### **2.3.1. Mixed methods analysis of online questionnaire survey**

The data for research analysis was collected from online questionnaire survey consisting of mixed methods approach – closed ended questions (quantitative) and open ended questions (qualitative). The input to form the questions originates from the findings of literature review: due to the changes in the past years that have disrupted the economy and companies forcing leaders to quickly adapt to changing circumstances and find new ways to solve complex situations, including acquiring new skills to stay successful. As learning is becoming more personalized, contextualized and practical, it is necessary to investigate what kind of learning methods leaders prefer. Also which trainings leaders considered crucial to participate during the past two to five years and what kind of skills/traits do leaders consider as their strenghts today and if these match the research results from literature review.

The online questionnaire contained a section of respondents general information and affiliation, following the questions regarding the changes in the economy and adoption with them, skills needed in the changed world of work, preferred learning methods and questions related to the trainings leaders have completed in the last two to five years, including their main strenghts as a leader today.

The first data collection period was during 13th until 20th of February 2023 and the second part only via author's personal contacts during 7th until 17th of April 2023. Because of the modest response rate as a result from the first survey period (9 answers), the survey was repeated in April and only via personalized e-mails and contacts to increase the response rate. As a result from the first survey attempt, the author received feedback from associations with reference that they are unable to send such an appeal to their members and suggested to write directly to the companies/company leaders and ask them to answer the questionnaire. Other reasons mentioned were that security rules do not allow the desired cooperation within the organization and the association has agreed with the members that they will only forward information that is directly important to them and this study does not qualify for this. On the other hand one association agreed to share the questionnaire via their social media platform and made a post with reference to fill in the questionnaire among their members. Despite the fact that the questionnaire was shared by some of the associations and organizations, the downside of online questionnaire survey approach is that online surveys are completed only by those who are interested in the subject (Andrade, 2020).

Therefore the second attempt to share the questionnaire was based on snowball method and via author's personal contacts, which received also a better result, 21 answers. The survey was conducted anonymously, and no other personal data was collected, besides e-mail address that could be added voluntarily by the respondent in case of to carry out an in-depth interview. The data has been stored by the author in Google Drive without any access of third parties. The personal e-mail addresses added by the respondents in case of in-depth interview have been removed to keep the respondents identity anonymous (Appendix 10).

### **2.3.2. Qualitative analysis of continuous education institutions**

The method of this analysis is based on qualitative approach. Altogether 73 organizations were included in the research according to the list of Top educators of 2021 by Äripäev (Äripäev, 2022). Every organization in the list was searched in Google (research was conducted in April 2023) and their webpage was researched according to services and trainings provided. Taken into account the findings from literature review and the research made by Deloitte (Deloitte, 2020) the eight-part capability model was used to make the final selection among the institutions from the Top educators list. In total 34 organizations were selected to create a comparison table. The comparison table is based on the following criterias: organization name and name of the training(s) divided into groups based on Deloitte eight-part capability model, which are: inspirational leadership, execution, influence, collaboration, direction, business judgment, competitive edge and building talent (Appendix 4). The main aim for the use of this information was to research if the trainings offered by continuous education institutions meet the needs of leaders today compared to the results gained from online questionnaire survey and if the training market supports the development of leaders to cope with the changes in the business environment according to the literature review. The outcome of this research is described in the results and data analysis part of this thesis.

### **3. RESEARCH RESULTS AND DATA ANALYSIS**

This part of master's thesis is composed of two parts. First part consists of an analysis based on trainings provided by training institutions for leaders and compared with Deloitte eight-part capability model from literature review (Appendix 4). Second part consists of research results from online questionnaire survey conducted among Estonian leaders and a mixed methods (quantitative and qualitative) analysis.

#### **3.1. Deloitte eight-part capability model comparison**

This part of master's thesis paper explores private continuing education institutions in accordance with Äripäev's Top educators of 2021 (Äripäev, 2022) and compares them to Deloitte's eight-part capability model (Deloitte, 2020) as the most important capabilities for future leaders. Out of 73 institutions 34 were selected for the purpose of this research that were featured in the Top educators list (Appendix 3). From the results it is shown that most of the trainings among continuing education institutions are offered related to collaboration (23 institutions) and the least related to inspirational leadership (4 institutions).

##### **3.1.1. Inspirational leadership**

According to academics McCauley *et al.* (2021) in more contemporary leadership research leadership is being described as „a collective phenomenon that is dispersed or shared among multiple individuals, possibly flexible, and produced through interaction.“ In research by Fairhurst *et al.* (2018) it is stated that in the case of shared leadership, businesses are seen to function better when more people are brought into leadership roles, especially those in today's knowledge-based enterprises. There is more knowledge available for complicated work, and individual's motivation and morale improve (Fairhurst *et al.*, 2018).

Inspiring others to take action is a capability of a leader who empowers others to take responsibility, motivates and encourages others to set ambitious goals and accomplish them consistently. The Estonian continuous education market overview and research points out the



following trainings (4 institutions) related to inspirational leadership: development of leaders resources, leadership empowerment, motivational communication, knowledge how to lead people, teams and yourself, including leadership psychology.

### **3.1.2. Competitive edge**

The second least offered trainings are related to competitive edge (5 institutions) whos trainings include agile leadership techniques, techniques for tolerance of ambiguity and how to innovate to stay ahead.

Several scholars are claiming that today's business environment that is characterized by four different types of challenges volatility, uncertainty, complexity, and ambiguity (VUCA) call for innovative management techniques (Attar *et al.*, 2020; Mangipudi *et al.*, 2020; Hudson, 2019; Akkaya *et al.*, 2022). VUCA climate requires organizations to embrace agility in their operations. Building agile capabilities and implementing frameworks that support agile leaders can help organizations overcome VUCA difficulties (Attar *et al.*, 2020; Tornjanski *et al.*, 2021). The capacity of managers and leaders to continuously produce value out of novel ideas will be the most crucial human survival skill in the VUCA future (Kosuri *et al.*, 2017; Akkaya *et al.*, 2022). It is critical to develop the competencies needed to transform the company by incorporating agility into the whole enterprise's architecture and culture (De Smet *et al.*, 2018; Tornjanski *et al.*, 2021). Success, on the other hand, is dependent on a company's capacity to recognize new elements of the environment, which, when combined with business model innovation, will release initiative, imagination, and creativity (Akkaya *et al.*, 2022) and innovation needed to survive (Tornjanski *et al.*, 2021).

Trainings provided in this particular field are agile organization and team management, how to operate in the creative and to gain the state of flow, also design thinking approach to facilitate innovation projects and processes.

### **3.1.3. Building talent**

Related to performance management, people development is considered to be a more crucial leadership role due to the increased competency standards that employees must meet in the digital era. Specifically, talent recognition and valuation is claimed the most valuable asset (Daugherty *et al.*, 2018; Tornjanski *et al.*, 2021; Nedelko *et al.*, 2020; Thwaite, 2022).

According to the research 6 institutions are offering trainings for leaders to develop employee competitive edge, to empower employees to solve tasks on their own and meet the challenges to deal with more difficult work-life interactions as well as greater job expectations and competency standards. Motivating and effective development conversations with employees, developing effective teams, DISC training solutions, the importance and advantages of implementing the competency model and the certified scrummaster (CSM) training, fit for purpose, Kanban systems improvement are examples of trainings provided on the market. According to literature review making learning experiences relevant and offering reliable content that learners are able to access from anywhere and on any device will be crucial, especially for millennials and the oncoming Generation Z (Harvard, 2018). It is important for leaders to acknowledge that learning is becoming personalized and more contextualized when building talent (Moldoveanu *et al.*, 2019).

#### **3.1.4. Influence**

According to the literature review the CEO role is changing and leaders are being called upon to act as societal leaders, devoted to generating value with and for a variety of different stakeholders (employees, investors, partners, communities), including influencing geopolitical regulations and trade agreements, leading on carbon-neutral climate initiatives, and advocating for health benefits for frontline workers. According to research by Korn Ferry (2020), navigating seemingly insurmountable paradoxes and contradictions, considering not only how to make their company successful but also how they can help architect a healthy ecosystem in which their business can thrive (Hatami *et al.*, 2020; James *et al.*, 2021; Korn Ferry, 2020; Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021).

From the Estonian continuing education training market review 8 institutions are supporting leaders with trainings related to developing influence, how to persuade, be assertive, use non-monetary incentives and inclusive leadership. Though running a business on a global scale needs awareness of one's mindset to acknowledge that anything one does might have an effect on society at large (Flood, 2019). CEOs need to be very grounded in their own humanity to shape the environment beyond the company, therefore very good business judgment skills are needed, including good cognitive and emotional intelligence to drive positive bottom-line performance (Knoll *et al.*, 2021; Daugherty *et al.*, 2018; Tornjanski *et al.*, 2021; Nedelko *et al.*, 2020; Thwaite, 2022).

### **3.1.5. Direction**

Due to quick changes and the advent of new technologies, risk is always rising in the global business environment, and a company's capacity to provide an accurate market prediction is declining (Fontana *et al.*, 2017). It is difficult to discern the organization's direction because of how quickly things are changing (Attar *et al.*, 2020; Tornjanski *et al.*, 2021).

3 institutions out of 8 are providing trainings for change management, 2 institutions are focusing on strategic leadership and systematic thinking, how to set the course and action. 1 institution is providing for leaders a training as a journey (Camino de Santiago trip) to discover a leader's resilience to set a vision and what is the goal where a leader wishes to get to and how to get there – choose the course. A company may be considered as a reflection of its top managers since a leader's personal values also influence a broader organizational environment (Nedelko *et al.*, 2020; Tornjanski *et al.*, 2021). Ashkenas *et al.* (2018) identified six leadership skills based on interviews with successful leaders of large corporations, startups, and non-profit organizations, two of which include creating a vision for concentrating and challenging the team and translating the vision into a clear plan for what action to take and what not to do. Direction involves also good process management in addition to change management. According to the list of Top educators 1 institution is offering a leadership development training on how to lead processes and leadership coaching to clarify the vision and direction with the industry professionals.

### **3.1.6. Execution**

To effectively execute leaders must ensure team performance on a very good level. There are 9 institutions offering a variety of different trainings to guarantee team effectiveness and good leadership skills to achieve it. As firms develop future-fit teams equipped to deal with increasingly frequent change, there's an emphasis on ensuring agility is a priority (Skillsoft, 2020; Brosi *et al.*, 2018; Tornjanski *et al.*, 2021). Leaders typically find themselves in novel and first-time scenarios on a daily basis in an age of hyperchange, and they are challenged to play at the edge of their competence. For those in leadership roles, the ability to quickly adjust and learn new things is crucial (De Meuse *et al.*, 2021). Trainings like Large-Scale Scrum (LeSS), Team Kanban Practitioner, High Performance Team Coaching (ICF), also time management and personal effectiveness, principles of successful management, negotiation practicum, coping with stress and setbacks in a work situation are provided to enhance productivity and increase company performance.

There are several differences between managing employees in person and remotely (Flood, 2019). There are possibilities to connect and communicate with individuals from all over the world in a virtual setting (Bruni *et al.*, 2019; Abid *et al.*, 2020). Remote work and managing hybrid teams is provided by 1 institution in the Top educators list, though there is a need for hybrid work trainings also from this point of the perspective that by 2025, it's predicted that most publicly traded firms will have their headquarters in developing economies. Executives will be required to manage teams that are capable of bridging cultural and geographic boundaries (Harvard, 2018; Knoll *et al.*, 2021).

### **3.1.7. Business judgment**

Due to the complexity, ambiguity, and diversity of a global business setting that might result in high stress levels, resilience is required in order to remain persistent and emotionally stable (Knoll *et al.*, 2021; Uhl-Bien, 2021; Gerolamo *et al.*, 2020). Future global leaders are expected to have the capacity to handle risks and rapidly recover from setbacks, and the ability to stay calm under pressure and in challenging situations (Knoll *et al.*, 2021). Clarity of thought and understanding of the situation will overcome the ambiguity of the situation. Leaders who can quickly and clearly identify themselves with the situation will make stronger and more powerful business decisions (Mangipudi *et al.*, 2020; Tornjanski *et al.*, 2021). Goleman even claims that an individual's emotional intelligence influences for two-thirds of their leadership performance (Deloitte, 2020). Those who are in control of their emotions are more likely to be able to make decisions quickly (Mangipudi *et al.*, 2020) and they are better at problem-solving (Choo *et al.*, 2022). A leader with strong mental and emotional capacities will be more critical-thinking and able to take strategic action above the technological tool to emerge as a success (Mangipudi *et al.*, 2020).

Trainings related to business judgment according to research are adoption of management decisions and oversight of execution, cognitive and emotional awareness, adopting important strategic decisions in crisis conditions, business plan and entrepreneurship training, including financial knowledge. Altogether 10 institutions are supporting leaders to gain knowledge on making business decisions and the main aspects affecting it.

### **3.1.8. Collaboration**

The most of the trainings provided (23 institutions) on the market are related to collaboration. The leaders skills and knowledge how to lead a team, also how to resolve conflict situations, effective

communication skills, including online performance skills. Though most of the trainings are focused on developing leaders capabilities and collaboration in a team, but according to literature review collaboration seen on global level necessitates these skills being leveraged to all cooperation forms and relationships. There is a lack of wider view at the moment how the skills obtained relate to relationships and cooperation internationally considering business environment future growth perspective.

Additionally, businesses require both physical and virtual structures that enable collaboration between machines, devices, and people (Erkollar *et al.*, 2018) considering collaborative ecosystem platforms (Gerolamo *et al.*, 2020). Corporations must adapt their perspectives and focus their actions on Industry 5.0 goals in order to establish a foundation for systemic transformation (Lu *et al.*, 2021; Renda *et al.*, 2022; Nedelko *et al.*, 2020).

On a global scale each nation's success in pursuing the SDGs will largely depend on its leadership. Governments, the corporate sector, society, and individual individuals must all work together to achieve the SDGs (IISD, 2018). In other words, leadership is basically collaborative in character and involves initiating, developing, determining, supporting, challenging, and carrying out actions as concurrent and interconnected parts (Todnem, 2021). To collaborate in a global work setting learning languages is a necessity. From the research of Estonian training market 11 institutions are providing language education supporting the needs for collaboration internationally. A collaborative, change-ready company culture that encourages a growth mindset is essential to any successful transition (Harvard, 2018; Tornjanski *et al.*, 2021).

Altogether the research results are showing that there are growth and development opportunities on the continuous education training market - at some level the knowledge and skills for today's and future leaders are there, but there are also lots of opportunities still to discover.

### **3.2. Online questionnaire survey results among Estonian leaders**

This part of the thesis is based on online questionnaire survey research results conducted among Estonian leaders by the author. The main aim of online questionnaire survey was to research how and to what extent Estonian leaders acknowledge the changes that have taken place in business environment worldwide in the past years and what kind of changes leaders have experienced in

their everyday work and activities due to these changes. Additionally, what kind of knowledge and skills are urgently needed to become a better leader and lead businesses more effectively in today's uncertain and complex business environment, how leaders prefer to acquire these new skills, what they have considered important and crucial to learn during the last two to five years and what kind of skills they see as their strongest qualities as a leader today. The survey was conducted anonymously, with an option by respondent voluntarily to add e-mail address in case of in-depth interview. Research was conducted in two periods in February and April 2023. The sample was formed of various Estonian company's leaders across different genders, age groups, education level, working experience, leaders position, company's field of activity and number of subordinates.

### **3.2.1. General data of the respondents**

The amount of the sample formed by the snowball method gave a total of 30 answers, of which there were 10 (33%) male respondents and 20 (67%) female respondents. The average age of the respondents was 52 years. To understand the scope of respondents educational level it can be concluded from the data that 12 (40%) respondents have master's degree, 14 (46,7%) respondents have bachelor's degree and 4 (13,3%) respondents have secondary education out of 30 responses. The education field of respondents in more detail is available in Appendix 2, Table 3.

Overview of respondents position, number of subordinates and number of employees in the company can be found in Table 2. The company's field of activity, according to the survey findings ranges from finance, commerce, consulting and trainings, education, environment and green economy, insurance, IT, production, publishing, retail business, security service and leisure business (tourism and restaurant management) to transportation, providing valuable feedback from various economic fields. Taken into account the changes in the economy based on the literature review (technological advancements, sustainability, environmental changes, etc.), the respondents company's field of activity and their leaders feedback gathered through this survey will reflect and be significant in understanding the situation regarding their expectations and needs of knowledge and skills needed in today's business environment. A more detailed description of the respondents field of activity is provided in Appendix 2, Table 4.

Table 2. General data of the respondents

<b>Gender</b>	<b>n</b>	<b>%</b>
Female	20	67
Male	10	33
<b>Age</b>	<b>n</b>	<b>%</b>
... < 30 years	0	0
31 - 40 years	3	10
41 - 50 years	12	40
51 - 60 years	10	33
61 < ... years	5	17
<b>Working experience</b>	<b>n</b>	<b>%</b>
... < 1 year	0	0
1 - 2 years	3	10
3 - 4 years	3	10
5 - 10 years	2	7
11 < ... years	22	73
<b>Leaders position</b>	<b>n</b>	<b>%</b>
First level leader	2	7
Middle level leader	10	33
Top level leader	10	33
Owner	5	17
Other	3	10
<b>Number of subordinates</b>	<b>n</b>	<b>%</b>
... < 10	20	67
11 - 25	3	10
26 - 50	6	20
51 - 250	1	3
251 < ...	0	
<b>Number of employees in the company</b>	<b>n</b>	<b>%</b>
... < 10 (micro company)	12	40
... < 50 (small company)	4	13
... < 250 (medium size company)	5	17
250 or more	9	30

Source: online survey; author's calculation

73,3% of the respondents have working experience 11 or more years, which shows that they are experienced leaders. A more detailed overview of respondents working experience is provided in Table 2, where working experience is divided into segments based on years worked.

### 3.2.2. Changes leaders perceive as having the highest impact

The changes leaders have experienced in the last five years are confirming the changes in society and in the world according to the findings in literature review. Leaders emphasize digitization as one of the biggest changes, including changes brought by the global pandemic (remote work,

adopting to new work arrangements, work structure etc.). Finding and retaining the right people in a competitive environment, employee motivation, communication and conflict management, also human-centric inclusive management has been a challenge for leaders. One leader states that people need support more than ever, at the same time, they are more individualistic and egoistic. Another leader argues that co-workers have become more insecure, do not dare to make decisions independently in their area of responsibility in their daily work, and need more and more support and guidance. Ability to adapt to a changing world, stakeholder needs, values, relationships and expectations for leaders have been important topics to adjust with the unexpected changes (Appendix 5, Q9).

Many leaders are pointing to economic challenges, for example currency printing and inflation has affected the business environment, also the aspect of overregulation was mentioned and sustainability area as the biggest impact of change. Updating of IT programs that simplifies work has become crucial and being data-based is the basis of everything. There has been changes also in advertising and marketing, for example one leader explains that changes in the rapid decrease in opportunities for direct marketing based on human contacts (meetings, trade fairs, open sales) has affected business. Due to price increase there's more pressure on wages and shortage of qualified labour force. The decrease of self-made people (simple work, craftsmen). People prefer more project-based paid work, more different jobs are done and not to be fixed with one employer. „To get results, you have to put in a lot more effort and set goals. The market is so messed up that today you can't figure out what works and what doesn't to get results.“ Big changes happen constantly and unexpectedly faster and faster, adaptability is important. Many changes and shorter plans are characterising the outcome brought by unexpected changes in the past five years and the global pandemic (Appendix 5, Q9).

One top level leader describes the change as follows: „Each new generation affects the work environment and also the so-called old ones. Of course, there are also influences from corona, war, politics, etc. Flexibility and humanity are increasingly appreciated. A leader needs to be more empathetic and flexible than ever before, but that also creates certain threats (and opportunities). Equality, social responsibility, hybrid work, privacy have come into greater focus.“ Change in people's awareness and in wider horizons, meaning that people are starting to put more emphasis seeing the big picture on a global scale (Appendix 5, Q9).



According to the socio-economic factors the biggest change leaders perceive is the development of technology. 83% of respondents are pointing out that technology has had significant or a very big impact to their work and activities as a leader. Environmental and socio-economic priority has also influenced, but in this case almost half of the leaders are saying that it has affected to some extent and same number of leaders are saying that it has affected them significantly. There are also 5 leaders who have sensed a very big impact of this factor influencing their business and activities. The next factor that is related to geopolitical topics has divided leaders opinions, out of which 10 leaders are saying that geopolitical topics have influenced them significantly, but 8 leaders are saying that it has influenced them to some extent and 6 leaders are saying that it has impacted them very little. Geopolitical topics are related to factors influenced by politics between countries or regions (for example the usage of natural resources of a country or region) including relations between countries (Figure 1; Appendix 2, Table 4).

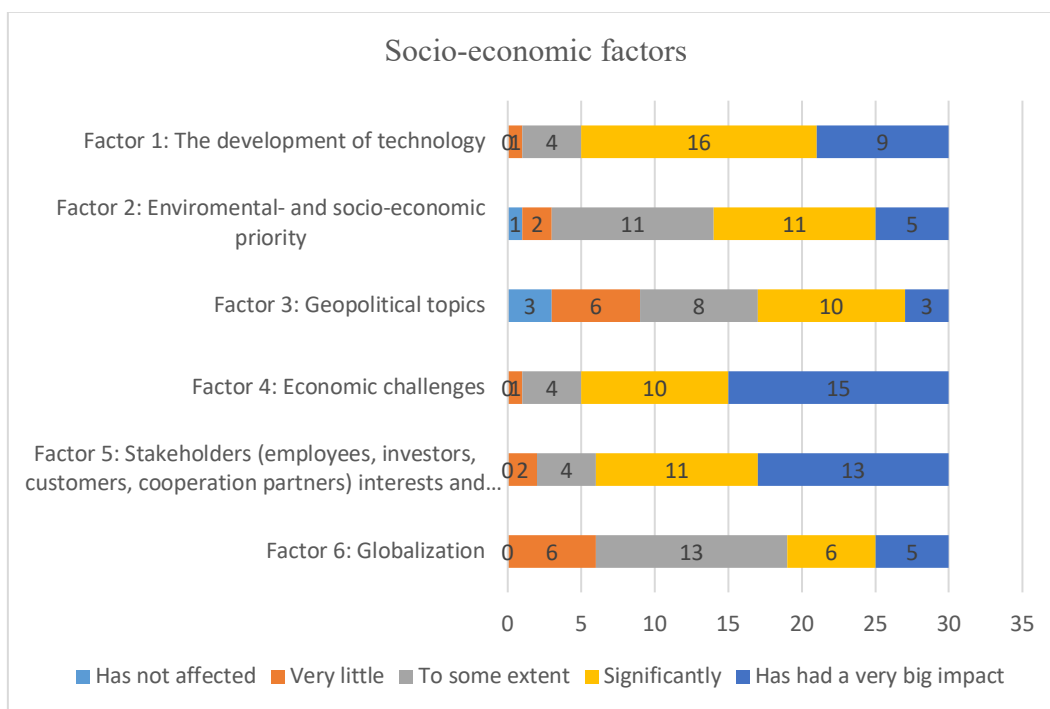


Figure 1. Socio-economic factors  
Source: online survey; author's calculation

In addition to the rapid development of technology, one of the next biggest influences that has been brought out by leaders are economic challenges. 15 respondents overwhelmingly mentioned the economic effects as a very big impact factor to their decisions and activities, following by 10 leaders who agreed that it has impacted their work significantly. For example, a middle level leader

from financial intermediation company's field of activity with employees 250 or more and with working experience 11 or more years is saying that economic challenges have impacted to some extent in their field. A top level leader from IT field with employees 250 or more and with working experience from 5 to 10 years is another example where the economic challenges have influenced to some extent, but not in a big way (Figure 1; Appendix 2, Table 4).

From the findings of literature review stakeholders needs and interests are of increasing importance in the VUCA (volatile, uncertain, complex and ambiguous) business environment caused by a complex economic environment and by the global pandemic. 80% of the respondents agree with this and are confirming that this has been an important factor affecting their work. There were 2 respondents who said that stakeholders needs and interests has affected them very little. One respondent is a top level leader from IT field, who answered that the most significant factors affecting the field of his business have been the development of technology and geopolitical topics. The second respondent was a company owner from tourism field, who answered that his business has been affected to some extent by technology and factors of environmental and socio-economic priority, other factors have influenced very little his business (Figure 1; Appendix 2, Table 4).

The last factor researched was the impact of globalization. The majority 43% of respondents are saying that globalization has influenced their work and activities to some extent. 6 leaders have answered that it has affected them very little, companies from publishing, financial intermediation, trainings, education, IT and tourism. On the other hand companies from security service, retail, green economy, consultation, marketing and coaching have sensed the globalization significantly. Respondents working in a field of transportation, storage, commerce, environment and education have evaluated that globalization has had a very big impact to their work and businesses (Figure 1; Appendix 2, Table 4).

### **3.2.3. Knowledge and skills needed to become a better leader**

The most crucial skills and knowledge needed by leaders today according to the answers by online survey respondents are IT competencies, change management, self-management, collaboration, communication and strategic thinking to be able to see the big picture. Due to the development of technology and influence by the global pandemic also remote work, how to motivate employees and team management skills. Leaders also emphasize that more knowledge and skills are needed related to sustainability, green economy, environment, climate and social responsibility. Additionally, how to prioritize, keep clarity and focus, how to innovate and stay creative. In the

changing circumstances marketing is very important for a company's success, one leader points out skills needed related to marketing and the role of a leader in it. Also legislation and data protection topics are gaining more importance, leaders emphasize the necessity of knowledge and skills related to that. Lack of international business experience and the need to develop language skills are also brought out as important features to develop to become a better leader (Table 5).

Table 5. Knowledge and skills needed by leaders today

<b>Knowledge and skills needed</b>	<b>Description</b>
IT competencies	Technical skills to conduct meetings and trainings via video, new IT trends (AI possibilities, automation). Related to rapid development of technology – know new possibilities.
Team management	1. Teamwork and teamwork skills 2. Team management as remote work, how to create an inspiring work environment, better remote work management skills, organization of remote work.
Motivation	Planning and implementation of employee development needs, mentoring in the workplace, people's motivation, implementation of new performance metrics, supporting people (empowerment), engagement and coaching skills.
Collaboration	Managing human relations and cooperation, diplomacy, empathy, psychology, to be tolerant of everything and everyone, recruitment skills, collaboration skills.
International business and relations	International business experience, English language skills.
Sustainability	Climate, social responsibility, the environment, the ability to maintain and cooperate with the surrounding nature, transition to circular economy, green economy.
Communication	Cultivating communication, conflict management, negotiation skills, better listener, better communicator.
Time management	Delegation skills, time management.
Legislation	Data protection among employees, knowledge of legislation, law.
Marketing	Marketing as the basis for the success of the entire company and the role of the leader in it.
Innovation, creativity	The ability and need to be constantly innovative, not stuck in old patterns.
Self-management skills	The ability to manage emotions, self-management skills, self-control, consideration of mental health issues, mental wellbeing, getting to know one's potential and one's talents, focus, ability to motivate and maintain oneself.
Direction	Prioritization of activities, keep a clear vision and follow it, maintaining focus.
Change management	Implementing change, adaptability, flexibility, fast management, a strong ability to tolerate chaos is required.

Strategic thinking	The ability to predict across fields and see the Big Picture, understanding of modern times, analytical skills, economies, impact assessment.
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Source: online survey (Appendix 6, Q11); compiled by author

To compare the findings related to skills needed in the changed world of work from literature review and the results from the online survey it can be concluded that all the skills listed (Figure 2) are evaluated by Estonian leaders as important or very important. This means that Estonian leaders sense the importance of the same skills that are held important in the uncertain and complex business environment everywhere in the world.

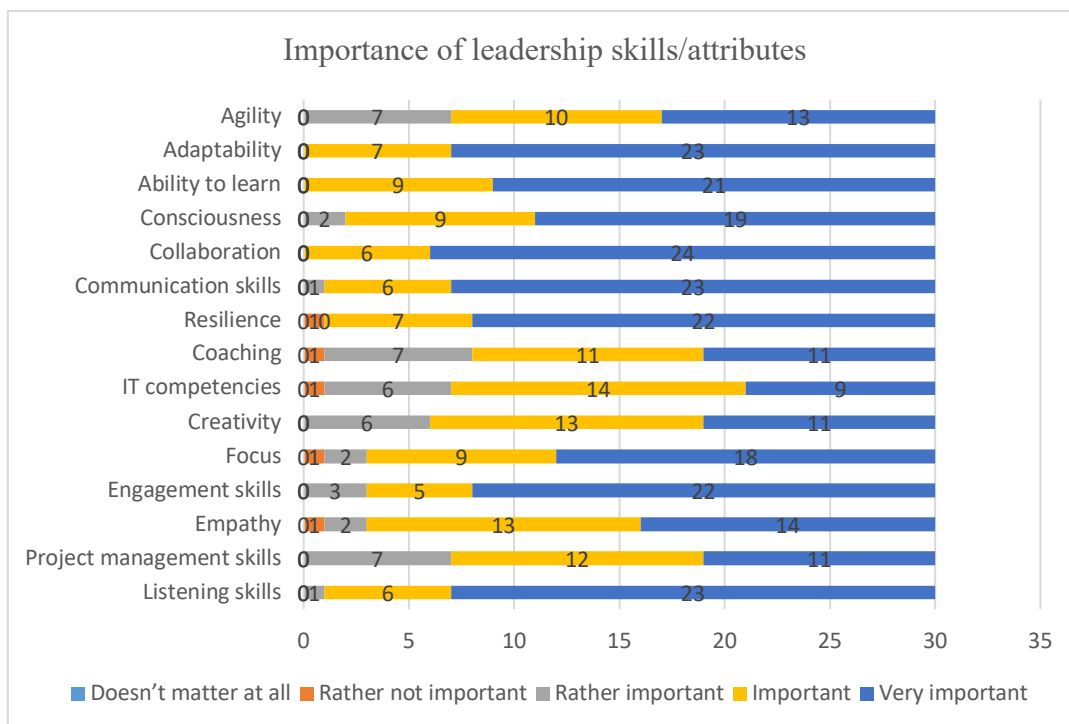


Figure 2. Importance of leadership skills/attributes

Source: online survey; author's calculation

This is a sign that firstly according to the literature review, as it is estimated that most publicly traded firms will have their headquarters in developing economies and leaders will be required to manage teams that are capable of crossing cultural and geographic boundaries (Harvard, 2018; Knoll *et al.*, 2021), meaning Estonian leaders clearly need to develop these skills to be able to lead companies successfully on a global scale. Secondly referring to Deloitte research (Deloitte, 2020) in the literature review and the eight-part capability model, that describes expectations and needs that are universal to all leaders, showing the deficiencies in the trainings provided on Estonian

continuous education market according to the research made among Estonian Top educators by the author (Äripäev, 2022) (Appendix 4).

### 3.2.4. Training frequency, subject and preferred training methods

On average the respondents have completed 1 to 3 continuing education trainings during the last two to five years (Figure 3). Though 6 respondents out of 30 have participated 10 or more trainings during this period. These results are quite similar to the findings in the literature review, where it is stated that more than 90% of those surveyed regarding occupations in the digital age, including leaders and executives, underlined the necessity to upgrade skills at least once a year in order to function in the digital world (Gerolamo *et al.*, 2020).

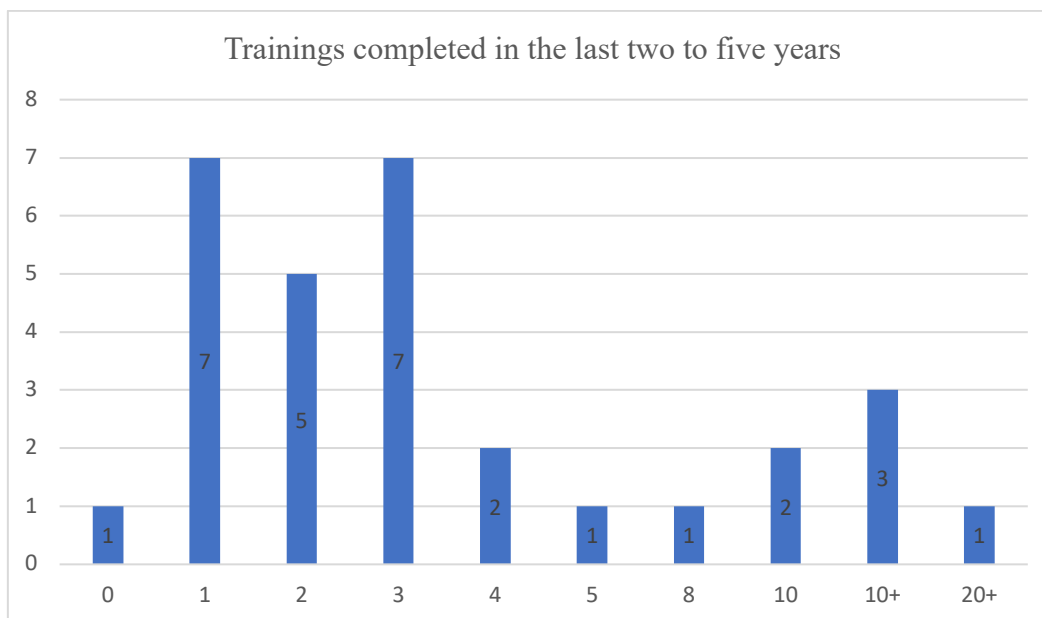


Figure 3. Trainings completed in the last two to five years

Source: online survey; author's calculation

To understand what kind of knowledge and skills leaders have considered important to learn in the last two to five years the survey results show two main groups which are developing leadership skills and self-management skills. People management, negotiation skills, IT skills and knowledge related to sustainability are also according to the research results of significant importance. For example a top level leader from security service field with subordinates from 26 to 50 from more than 250 employees company has participated trainings related to development of leadership skills. Another top level leader from restaurant management field with subordinates from 26 to 50 from less than 250 employees has participated in trainings related to coaching, presence or mindfulness

in leadership, using the Zoom environment for meetings and trainings and team management in changed circumstances. A top level leader and owner of the company from insurance/transport field has participated in 8 different trainings during the last two to five years (negotiation, strengths-based leadership, people management, motivation, development, targeted leadership, project management and marketing, sales, service). From retail trade field a middle level leader with 51 to 250 employees has participated in leadership and teamwork related trainings. A respondent working as a top level leader from IT field explains: „There have been several trainings of all sizes, focusing on management, cooperation, time management, technology and work tools, and so on. Every year, I attend roughly 2-3 large trainings.“ Another respondent working as a management employee from production field answers: „At least ten completely wall-to-wall, field-related trainings, as well as IT, data protection, environmental sustainability, and internal management“ (Table 6).

Table 6. Summary of trainings leaders have participated

<b>Training category</b>	<b>Training subject</b>
Leadership	Development of leadership skills, strengths-based leadership, targeted leadership, project management, leadership training, change management, time planning.
Self-management	Managing emotions, developing practical awareness, inspiration and intuition, use of awareness, presence or mindfulness in leadership, the power of the word in the field of mental health, covision.
Sales	Export trade rules for sales transactions, service.
Marketing	Marketing, social media.
Coaching	Coaching, mentor training.
Negotiation	Cooperation and negotiation skills, leader’s purchasing skills and negotiation.
People management	People management, motivation, development, human relations.
Collaboration	Cooperation, teamwork, team management in changed circumstances, language skills.
IT skills	Using the Zoom environment for meetings and trainings, IT skills, technology and work tools, data protection.
Professional training related to the field	Professional training related to company field, numerous in-house trainings for products, field-related trainings, management of vocational education, teaching through stories, category management (retail context), credit management, first aid training.
Sustainability	Environment-sustainability, quality and environmental management, renewable energy, natural engineering.

Source: online survey (Appendix 7, Q14); compiled by author

The results from the online survey are somewhat related to the findings from the continuous education training institutions, giving a tip towards trainings that are increasingly needed to stay competitive taken into account the trends in leadership development. For example trainings that are least provided like skills to develop inspirational leadership and competitive edge to innovate and stay ahead (Appendix 4).

The training methods Estonian leaders have considered as the most effective for acquiring new knowledge are (Figure 4):



Figure 4. Training methods leaders consider to be the most effective for acquiring new skills and knowledge

Source: online survey; author's calculation

Out of these training methods the top 5 preferred training methods for acquiring new knowledge and skills are:

- 1) On-the-fly leadership program;
- 2) Coaching;
- 3) Group courses;
- 4) Self reading;
- 5) A program developed internally in the company;

The leaders preferences for different learning methods partially match with the results from literature review. For example group courses that are listed by Estonian leaders on third place are not popular anymore among leaders according to the literature review, because it's frequently challenging to apply the acquired knowledge obtained in class to the real world (Harvard, 2018; Moldoveanu *et al.*, 2019; Renda *et al.*, 2022) and they are referred to as one-size-fits-all trainings that don't match the needs of learners the same way as personalized approach (Harvard, 2018; McCauley *et al.*, 2021). Though there are also opportunities to combine theoretical part with practical work and practice during group trainings to create a personal connection with the learner and considering the learners needs. In conclusion it can be said that the efficacy of group trainings depends which training methods are used and how well the theoretical part is combined with practical assignments to achieve the best possible result for the learner.

On the other hand on-the-fly leadership program listed as first preference to obtain new skills and coaching listed as the second choice match precisely with the findings in the literature review, including how the learning methods transform towards being more personalized, socialized, contextualized and adaptive (Moldoveanu *et al.*, 2019). According to the literature review and research the goal is to ensure that people are in charge of their own careers, exploring what they want to do and making their own decisions, allowing individuals to take responsibility of their own development (Moldoveanu *et al.*, 2019; Nedelko *et al.*, 2020).

### **3.2.5. Skills/traits leaders consider as their strenghts**

One of the main aims of this master's thesis was to research what kind of new leadership knowledge and skills Estonian leaders need to which online survey has provided answers and insights. On the other hand it is also important to know what kind of skills/traits leaders consider as their strenghts today. The answers provided by leaders include a variety of different skills, but the most mentioned skills by leaders were the following: communication skills, listening skills, cooperation skills, engagement skills, empathy, resilience, presence and awareness, creativity, the ability to see the big picture, rationality, quick adaptability etc. More detailed overview of the skills mentioned by leaders is provided in Appendix 2, Table 7.

To conclude from this compared to the new knowledge and skills needed and the skills/traits leaders consider as their strenghts it can be said, that some leaders already possess the important skills needed in the changed world of work. According to survey results communication skills are



brought out as a strength by 10 leaders, which is 1/3 of the leaders who participated the survey. Resilience as an important skill in crisis management and in global leadership that has been mentioned by 5 leaders out of 30. Agility as a strength was brought out by 1 leader from production field working as a management employee. IT competencies was mentioned as a strength by a middle level leader working in retail business, another leader from material industry working in a company with 250 or more employees has described his strenghts as follows: „Empathy, seeing new directions, seeing and recognizing contacts and connections.“ Finally a top level leader from IT field with 11 to 25 subordinates describes her strenghts with the following words: „Resilience, creativity, individualization, courage, innovation.“

Given the magnitude of global changes in the business environment the importance of acquiring new skills and to have a learning mindset is crucial. It is said that great leaders are great learners, therefore having a learning mindset is not just an action but an individual's dedication to a lifelong journey of development and self-improvement.

### **3.3. Discussion and research results**

#### **3.3.1. Research results from continuous education training market**

From the research results it can be concluded that the new knowledge and skills needed in the changed world of work is partly covered by continuous education institutions in Estonia. The comparison between Deloitte eight-part capability model and the training market research point out that some of the capabilities are more or less covered and on the other hand some capabilities are lacking with the concrete training to fully cover the needs to obtain the skills.

The capability inspirational leadership is covered according to the Top educators list (Äripäev, 2022) only by 4 institutions and it is not fully proven that the trainings provided enable leaders to develop inspirational leadership qualities by the introduction and name of the training. There is also a question regarding the training method and how well leaders can take into use of the knowledge obtained to drive successful results and inspire others to take action.

Execution has more corresponding trainings provided by 9 institutions including a variety of techniques to develop leadership skills that enables a leader to get teams to achieve results. These

trainings provide specific knowledge like high performance team coaching, leading people through coaching, large-scale scrum training, delegation etc.

The next capability, influence, which enables a leader to persuade and influence in all directions is rather well covered including public performance, immaterial motivation tools, personal brand and its marketing, trainings to communicate with public media, how to create clear messages, assertiveness and influencing others. These skills are needed by leaders in local markets but on a global scale aswell, taken into account the fact from literature review that leader's are expected to lead not only companies but also communities and have a societal purpose satisfying the needs of all stakeholders groups.

The widest selection of trainings provided on the market are related to the capability communication. This means obtaining the skills to collaborate with others inside the company and outside the company with cooperation partners, competitors, government etc. These trainings include skills to obtain communication effectiveness, how to resolve conflicts, teamwork skills, technical skills for teamwork (Zoom etc.), group management training, language courses and how to lead a team. Collaboration skills were brought out as one of the strongest strenghts of leaders from online survey questionnaire.

Skills related to the capability direction is offered by 8 institutions and focusing on change management, strategic leadership and systematic thinking. One institution is providing a on-the-fly leadership training program as a journey (Camino de Santiago trip) to discover a leaders resilience to set a vision and what is the goal where a leader wishes to get toand how to get there – choose a course. Additionally trainings like executive coaching, innovation and changes in the organization support the needs of leaders to set vision, direction and a compelling course of action.

Future global leaders are expected to have the capacity to handle risks and rapidly recover from setbacks, and the ability to stay calm under pressure and in challenging situations (Knoll *et al.*, 2021). Clarity of thought and understanding of the situation will overcome the ambiguity of the situation. Leaders who can quickly and clearly identify themselves with the situation will make stronger and more powerful business decisions (Mangipudi *et al.*, 2020; Tornjanski *et al.*, 2021). A leader with strong mental and emotional capacities will be more critical-thinking and able to take strategic action above the technological tool to emerge as a success (Mangipudi *et al.*, 2020). Altogether 10 institutions are supporting leaders to gain knowledge on making business decisions

and the main aspects affecting it. Trainings related to business judgment according to research contain adoption of management decisions and oversight of execution, cognitive and emotional awareness, adopting important strategic decisions in crisis conditions, business plan and entrepreneurship training, including financial knowledge.

Competitive edge is the second least supported capability according to the continuous education training market research. There are 5 institutions providing trainings to develop creativity, design thinking, agile leadership and team management, the ability to use inspiration and the flow state to quickly adapt to changing circumstances. According to literature review it is one of the most important skill of a leader how to innovate and stay ahead. Compared to the research results some of the Estonian leaders possess these skills, but to align towards Industry 5.0 objectives this skill is a necessity of many leaders to stay competitive in the future.

Lastly the capability building talent was researched with the trainings offered on the training market meaning developing people for competitive advantage. Related to performance management, people development is considered to be a more crucial leadership role due to the increased competency standards that employees must meet in the digital era. According to the research 6 institutions are offering trainings for leaders to develop employee competitive edge, to empower employees to solve tasks on their own and meet the challenges to deal with more difficult work-life interactions as well as greater job expectations and competency standards. Motivating and effective development conversations with employees, developing effective teams, DISC training solutions, the importance and advantages of implementing the competency model and the certified scrummaster (CSM) training, fit for purpose, Kanban systems improvement are some of the examples of trainings provided on the market.

Altogether it can be concluded that some of the capabilities out of Deloitte eight-part capability model compared to the trainings provided are lacking the sufficient trainings on the market for leaders to develop their knowledge and skills.

### **3.3.2. Research results from online survey**

The online survey conducted among Estonian leaders was limited to 30 respondents, but had a comprehensive selection of leaders from different fields of activity and position in the companies. The changes leaders have experienced in the last five years compared to the changes in the society and in the world described in the literature review were confirmed by Estonian leaders. Leaders

emphasize digitalization as one of the biggest changes, including changes brought by the global pandemic (remote work, adopting to new work arrangements, work structure etc.). Finding and retaining the right people in a competitive environment, employee motivation, communication and conflict management, also human-centric inclusive management has been a challenge for leaders. Many leaders are pointing to economic challenges, for example currency printing and inflation has affected the business environment, also the aspect of overregulation was mentioned and sustainability area as the biggest impact of change. According to the socio-economic factors the biggest change leaders perceive is the development of technology. 83% of respondents are pointing out that technology has had significant or a very big impact to their work and activities as a leader.

From the findings of literature review stakeholders needs and interests are of increasing importance in the VUCA (volatile, uncertain, complex and ambiguous) business environment caused by a complex economic environment and by the global pandemic. 80% of the online survey respondents agree with this and are confirming that this has been an important factor affecting their work among other factors like environmental and socio-economic priority, geopolitical topics, economic challenges and globalization (Figure 1).

The most crucial skills and knowledge needed by leaders today according to the answers by online survey respondents are IT competencies, change management, self-management, collaboration, communication and strategic thinking to be able to see the big picture. Due to the development of technology and influence by the global pandemic also remote work, how to motivate employees and team management skills. Leaders also emphasize that more knowledge and skills are needed related to sustainability, green economy, environment, climate and social responsibility (Table 5). The comparison between Estonian continuous education training market and online survey results by Estonian leaders show that the training market is providing to some extent the needed knowledge, but the selection could be bigger and some skills needed are provided partially and only by few institutions (for example skills needed for inspirational leadership and competitive edge, also IT related skills and sustainability related knowledge).

The top trainings leaders have participated and considered important to acquire new knowledge and skills in are leadership and self-management. People management, negotiation skills, IT skills and knowledge related to sustainability have been also according to the research results of significant importance (Table 6). On average the respondents have completed 1 to 3 continuing education trainings during the last two to five years (Figure 3). According to the research results

the top 3 learning methods preferred by leaders are on-the-fly training programs, coaching and group courses, referring that the learning methods are changing and becoming more personalized and trainings need to be combined with practical work and corresponding situations to apply the obtained theoretical skills. A variety of different skills were brought out by leaders which they consider as their strengths, but the most mentioned skills were communication skills, listening skills, collaboration skills, engagement skills, empathy, resilience, presence and awareness, creativity, the ability to see the big picture, rationality, quick adaptability (Appendix 2, Table 7).

To summarize the results from both researches the following connections between the changes in society and in the world connected to Deloitte eight-part capability model and the need for new knowledge and skills among Estonian leaders are presented in Figure 5:



Figure 5. Research results

Source: online survey; training market survey; author's adoption

The changes in the society and in the world – digitization, volatility, uncertainty, complexity, ambiguity, human centric society and sustainability are connected to the capability competitive edge as well as the need for new knowledge and skills by leaders related to IT competencies, sustainability, innovation, creativity. The second most needed knowledge and skills are change management and strategic thinking to see the big picture connected to the capability direction, which is influenced by volatility and globalization. According to the study by Mangipudi *et al.*, (2020) the finest future leaders will possess vision, clarity and agility, which are according to the Deloitte eight-part capability model competitive edge and direction (set vision, direction, and a compelling course of action).

### **3.4. Limitations and ethical considerations**

The limitation of this research is the modest proportion of responders through various connections. As the online survey was conducted in two parts, firstly during the period 13th until 20th of February 2023 through the general lists and additionally personal contacts, which brought altogether 9 answers (30% proportionally) and secondly during the period 7th until 17th of April 2023 only via author's personal contacts, which brought altogether 21 answers (70%). Therefore the conclusions are made based on the 30 answers gained from online survey to create an understanding the main changes influencing leadership today in Estonia and the knowledge and skills leaders need to be prepared to lead businesses successfully in the VUCA (volatile, uncertain, complex and ambiguous) business environment. The online survey was anonymous, no other personal data was collected, besides e-mail address that could be added voluntarily by the respondent in case of to carry out an in-depth interview.

As the research conducted among Estonian continuous education training institutions analysis is based on the data provided by the leading business field newspaper Äripäev Top educators list (Äripäev, 2022) and the list was composed on concrete criterias it is possible that some institutions active in the field are not included in this research.

## CONCLUSION

Due to the changes in the society and in the world in the last five years leaders and organizations have been placed into uncertain and complex business environment, where resilience, agility, the ability to adapt quickly and the capability to predict trends have become essential. The global pandemic has made it clear that there is a need to develop leaders who can lead in complexity. It is expected that crisis will be more prevalent and leaders are expected to show strong organizational skills among cognitive and emotional intelligence to understand and support their employees to lead the necessary change effectively. The transition from Industry 4.0 towards Industry 5.0 is forcing leaders and organizations to focus on human-centric approach as well as systemic transformation. There is an increasing need to innovate to stay ahead, be creative, open-minded and flexible. As things are constantly changing leaders need to understand themselves and the factors affecting their decisions, focusing on the values and mindsets that leaders possess. Becoming a better leader is related to the „transformation“ process of a leader referring to the inner world of the leader, how leaders perceive and think about their world. As leaders drive the vision and purpose of organizations the entire organizations will reflect a leader’s personality and they way they work. Leaders need to possess qualities to inspire employees ensuring that everyone is working towards the same goal and align employees with the business vision and strategy. In order to deal with such complex trends in the business environment the ability to quickly adapt and learn new things is crucial. This places more emphasis on learning and development to obtain new knowledge and skills shaping the organizations and preparing for new changes to face unexpected situations in the business environment that is deeply impacted by VUCA (volatility, uncertainty, complexity and ambiguity). Leaders and organizations who can turn volatility into vision, uncertainty into perception, complexity into solution, and ambiguity into agility will be able to turn the threat of disruption into opportunity.

In an era of hyperchange leaders find themselves in a new and first-time situations on a daily basis, the skills needed before to predict and control have become obsolete and there is a need for new leadership knowledge and skills for the long-term success of organizations and to build a sustainable competitive advantage. According to the aim of this master’s thesis the author has set the following research questions:

- 1) What kind of leadership knowledge and skills is needed in the changed world of work?
- 2) How the perceived changes in society and in economics are connected to the needed new knowledge and skills?
- 3) How well does the continuing education training market meet the needs of today's leaders for new knowledge and skills?

At first the author researched different leadership styles and characteristics identifying the most commonly used leadership styles in the past years and during complex and challenging work settings. Based on the findings from literature review describing the challenges facing leaders and organizations, new knowledge and skills needed, including the influence of digitization and transition towards Industry 5.0 society the author compiled an online survey questionnaire. The aim of the research was to find out how the Estonian leaders sense the changes in the business environment, how this has influenced leaders and their work related activities, including what kind of knowledge and skills are needed to remain successful and to be prepared to operate in an uncertain business environment. As learning is becoming more personalized, contextualized and practical, the author researched what kind of learning methods leaders prefer, also which trainings leaders considered crucial to participate during the past two to five years and what kind of skills/traits do leaders consider as their strengths today and if these match the research results from literature review. The online questionnaire survey was sent through Google Forms to general lists of 33 Estonian chambers and associations, whose members include entrepreneurs and companies and their leaders and shared via author's personal contacts. Research was conducted in two periods in February and April 2023

The changes leader's have experienced in the last five years are confirming the changes in the society and in the world according to the findings in literature review. Leader's emphasize digitization as one of the biggest changes, including changes brought by the global pandemic (remote work, adopting to new work arrangements, work structure etc.). Finding and retaining the right people in a competitive environment, employee motivation, communication and conflict management, also human-centric inclusive management has been a challenge for leaders. Ability to adapt to a changing world, stakeholder needs, values, relationships and expectations for leaders have been important topics to adjust with the unexpected changes. Many leaders are pointing to economic challenges, for example currency printing and inflation has affected the business environment, also the aspect of overregulation was mentioned and sustainability area as the biggest impact of change. Updating of IT programs that simplifies work has become crucial and being



data-based is the basis of everything. People prefer more project-based paid work, more different jobs are done and not to be fixed with one employer. A leader needs to be more empathetic and flexible than ever before, but that also creates certain threats (and opportunities). Equality, social responsibility, hybrid work, privacy have come into greater focus. Flexibility and humanity are increasingly appreciated.

83% of respondents are pointing out that technology has had significant or a very big impact to their work and activities as a leader. 80% of the respondents agree that stakeholders needs and interests are of increasing importance and are confirming that this has been an important factor affecting their work. The most crucial skills and knowledge needed by leaders today according to the answers by online survey respondents are IT competencies, change management, self-management, collaboration, communication and strategic thinking to be able to see the big picture. Due to the development of technology and influence by the global pandemic also remote work, how to motivate employees and team management skills. Leaders also emphasize that more knowledge and skills are needed related to sustainability, green economy, environment, climate and social responsibility. Additionally, how to prioritize, keep clarity and focus, how to innovate and stay creative.

To understand what kind of knowledge and skills leaders have considered important to learn in the last two to five years the survey results show two main groups which are developing leadership skills and self-management skills. People management, negotiation skills, IT skills and knowledge related to sustainability are also according to the research results of significant importance. The results from the online survey are somewhat related to the findings from the continuous education training institutions, giving a tip towards trainings that are increasingly needed to stay competitive taken into account the trends in leadership development.

To understand if the Estonian continuing education training market has followed and how well the trainings meet the needs of Estonian leaders today, a qualitative research was conducted based on the list of Top Estonian educators published in November 2022 by Äripäev. In total 34 organizations were selected based on the description of the trainings to create a comparison table. Taken into account the findings from literature review and the research made by Deloitte (Deloitte, 2020) the eight-part capability model was used to make the final selection among the institutions from the Top educators list. The comparison table is based on the following criterias: organization name and name of the training(s) divided into groups based on Deloitte eight-part capability

model, which are: inspirational leadership, execution, influence, collaboration, direction, business judgment, competitive edge and building talent. The main aim for the use of this information was to research if the trainings offered by continuous education institutions meet the needs of leader's today compared to the results gained from online questionnaire survey and if the training market supports the development of leader's to cope with the changes in the business environment according to the literature review.

From the research results it can be concluded that the new knowledge and skills needed in the changed world of work is partly covered by continuous education institutions in Estonia. The comparison between Deloitte eight-part capability model and the training market research point out that some of the capabilities are more or less covered and on the other hand some capabilities are lacking with the concrete training to fully cover the needs to obtain the skills.

The widest selection of trainings provided on the market are related to the capability communication. The least provided trainings on the market are inspirational relationship (inspire others to take action) and competitive edge (know their markets and innovate to stay ahead).

One of the main aims of this master's thesis was to research what kind of new leadership knowledge and skills Estonian leader's need to which online survey has provided answers and insights. Altogether it can be concluded that some of the capabilities out of Deloitte eight-part capability model compared to the trainings provided are lacking the sufficient trainings on the market for leader's to develop their knowledge and skills for competitive advantage.

For further research it would be recommended to analyse capabilities the training market is not supporting as broadly as other capabilities from the eight-part capability model, which are inspirational leadership and competitive edge and the possibility to develop training(s) to support these skills and knowledge needed. Another future research recommendation would be to conduct a research among Estonian continuous education training institutions to get an overview and possible solutions, bottlenecks from the leadership development and trainings providers.

## LIST OF REFERENCES

- Abadi, M., Alizadeh, A., Barhate, B., Dirani, K.M., Garza, R.C., Gunasekara, N., and Majzun, Z. (2020). Leadership competencies and the essential role of human resource development in times of crisis: a response to Covid-19 pandemic. *Human Resource Development International*, 23(4), 380-394. <https://doi.org/10.1080/13678868.2020.1780078>
- Abid, G., Baykal, E., and Contreras, F. (2020). E-Leadership and Teleworking in Times of COVID-19 and Beyond: What we know and where do we go. *Frontiers in Psychology*, 11:590271. <https://doi.org/10.3389/fpsyg.2020.590271>
- Akkaya, B. & Ahmed, J. (2022). VUCA-RR Toward Industry 5.0. *Emerald Publishing Limited, Bingley*, 1-11. <https://doi.org/10.1108/978-1-80262-325-320220001>
- Akkaya, B. & Tabak, A. (2022). Leader Robots (LRs): The Future Managers of Digital Organizations. *Emerald Publishing Limited, Bingley*, 215-222. <https://doi.org/10.1108/978-1-80262-325-320220015>
- Alblooshi, M., Haridy, S., and Shamsuzzaman, M. (2021). The relationship between leadership styles and organisational innovation: A systematic literature review and narrative synthesis. *European Journal of Innovation Management*, 24(2), 338-370. <https://doi.org/10.1108/EJIM-11-2019-0339>
- Andrade, C. (2020). The limitations of online surveys. *Indian Journal of Psychological Medicine*, 42(6), 575-576. <https://doi.org/10.1177/0253717620957496>
- Anthony, S. D., Gilbert, C. G., and Johnson, M. W. (2017). Dual Transformation. How to Reposition Today's Business While Creating the Future. *Harvard Business School Publishing Corporation*. Retrieved January 15, 2023, from: <https://www.innosight.com/wp-content/uploads/2017/11/Dual-Transformation.pdf>
- Arena, M. & Uhl-Bien, M. (2018). Leadership for organizational adaptability: A theoretical synthesis and integrative framework. *The Leadership Quarterly*, 29(1), 89–104. <https://doi.org/10.1016/j.leaqua.2017.12.009>
- Asadullah, M. A., Khadim, S., Nazir, S., Shafi, A., and Qun, W. (2021). Linking paternalistic leadership to follower's innovative work behavior: the influence of leader–member exchange and employee voice. *European Journal of Innovation Management*, 24(4), 1354-1378. <https://doi.org/10.1108/EJIM-01-2020-0005>
- Ashkenas, R., and Manville, B. (2018). The six fundamental skills every leader should practice. *Harvard Business Review*. Retrieved November 20, 2022, from: [https://andersonyorke.com/docs/Harvard\\_Business\\_Review\\_The\\_6\\_fundamental\\_skills\\_every\\_leader\\_should\\_practice\\_Oct2018.pdf](https://andersonyorke.com/docs/Harvard_Business_Review_The_6_fundamental_skills_every_leader_should_practice_Oct2018.pdf)

- Attar, M. & Abdul-Kareem, A. (2020). The Role of Agile Leadership in Organisational Agility, *Emerald Publishing Limited, Bingley*, 171-191. <https://doi.org/10.1108/978-1-80043-380-920201011>
- Barasa, E., Mbau, R., and Gilson, L. (2018). What is resilience and how can it be nurtured? A systematic review of empirical literature on organizational resilience. *International Journal of Health Policy and Management*, 7(6), 491–503. <https://doi:10.15171/ijhpm.2018.06>
- Bartsch, S., Büttgen, M., Huber, A., and Weber, E. (2020). Leadership matters in crisis induced digital transformation: how to lead service employees effectively during the COVID-19 pandemic. *Journal of Service Management*, 32(1), 71-85. <https://doi.org/10.1108/JOSM-05-2020-0160>
- Bekkers, V., De Vries, H., and Tummers, L. (2019). The benefits of teleworking in the public sector: reality or rhetoric? *Review of Public Personnel Administration*, 39(4), 570–593. <https://doi.org/10.1177/0734371X18760124>
- Berberg, B., Bryson, J. M., Crosby, B., and Patton, M. Q. (2021). Leading social transformations: creating public value and advancing the common good. *Journal of Change Management: Reframing Leadership and Organizational Practice*, 21(2), 180-202. <https://doi.org/10.1080/14697017.2021.1917492>
- Bhaduri, R. M. (2019). Leveraging culture and leadership in crisis management. *European Journal of Training and Development*, 43(5/6), 554-569. <https://doi.org/10.1108/EJTD-10-2018-0109>
- Breque, M., De Nul, L., and Petridis, A. (2021). Industry 5.0: Towards a Sustainable, Human-Centric and Resilient European Industry. *European Commission, Directorate-General for Research and Innovation, Luxembourg, LU*. Retrieved February 18, 2023, from: [https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/industry-50-towards-sustainable-human-centric-and-resilient-european-industry\\_en](https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/industry-50-towards-sustainable-human-centric-and-resilient-european-industry_en)
- Brosi, P., Duman, D., Schwarzmüller, T., and Welpel, I. M. (2018). How does the digital transformation affect organizations? Key themes of change in work design and leadership. *Manage. Revue*. 29(2), 114–138. <https://doi.org/10.5771/0935-9915-2018-2-114>
- Bruni, E., Cortellazzo, L. and Zampieri, R. (2019). The role of leadership in a digitalized world: a review. *Frontiers in Psychology*, 10:1938. <https://doi.org/10.3389/fpsyg.2019.01938>
- Chen, J., Jia, X., Mei, L., and Wu, Q. (2018). How leadership matters in organizational innovation: a perspective of openness. *Management Decision*, 56 (1), 6-25. <https://doi.org/10.1108/MD-04-2017-0415>
- Choo, L. S., Kaliappen, N., and Szymczyk, K. (2022). Leadership intelligence for leading organizations, in uncertainty and complexity. *Acta Polytechnica Hungarica*, 19(8). <https://doi:10.12700/APH.19.8.2022.8.8>

- Chow, T. W., Ismail, I. A., and Salleh, L. M. (2017). Lessons from the major leadership theories in comparison to the competency theory for leadership practice. *Journal of Business and Social Review in Emerging Economies*, 3(2), 147-156. <https://doi.org/10.26710/jbsee.v3i2.86>
- Clarke, N., Higgs, M., and Sweeney, A. (2019). Shared leadership in commercial organizations: A systematic review of definitions, theoretical frameworks and organizational outcomes. *International Journal of Management Reviews*, 21(1), 115-136. <https://doi.org/10.1111/ijmr.12181>
- Clegg, S., Crevani, L., Todnem, R., and Uhl-Bien, M. (2021). Changing Leadership in Changing Times II. *Journal of Change Management*, 21(2), 133-143. <https://doi.org/10.1080/14697017.2021.1917489>
- Collins, M. D., Dasborough, M. T., Deen, C. M., Gregg, H. R., He, Y., Restubog, S. L. D., Xu, C. (2023). Traversing the storm: an interdisciplinary review of crisis leadership. *The Leadership Quarterly*, 34(1), 101661. <https://doi.org/10.1016/j.leaqua.2022.101661>
- Crane, B. (2022). Leadership mindsets: Why new managers fail and what to do about it, *Business Horizons*, 65(4), 447-455. <https://doi.org/10.1016/j.bushor.2021.05.005>
- Cross, E. S., Henschel, A., and Hortensius, R. (2020). Social cognition in the age of human–robot interaction. *Trends in Neurosciences*, 43(6), 373–384. <https://doi.org/10.1016/j.tins.2020.03.013>
- Daniels, K., Donaldson-Feilder, E. J., Nayani, R. J., Nielsen, K., and Lewis, R. C. (2018). Out of sight and out of mind? A literature review of occupational safety and health leadership and management of distributed workers. *Work Stress*, 32, 124–146. <https://doi.org/10.1080/02678373.2017.1390797>
- Darics, E. (2020). E-leadership or “How to be boss in instant messaging?” The role of nonverbal communication. *International Journal of Business Communication*, 57(1), 3–29. <https://doi.org/10.1177/2329488416685068>
- Daugherty, P. R., Wilson, H. J. (2018). Collaborative intelligence: humans and AI are joining forces. *Harvard Business Review*, 96(4), 114-123. Retrieved January 6, 2023, from: <https://hometownhealthonline.com/wp-content/uploads/2019/02/ai2-R1804J-PDF-ENG.pdf>
- De Haan, J., Van Deursen, A. J., Van Dijk, J. A., and Van Laar, E. (2017). The relation between 21st-century skills and digital skills: a systematic literature review. *Computers in Human Behavior*, 72, 577-588. <https://doi.org/10.1016/j.chb.2017.03.010>
- De Meuse, K. P., Harvey, V. S. (2021). *The age of agility: Building learning agile leaders and organizations*. Society for Industrial and Organizational Psychology. Oxford University Press, NY. Retrieved February 15, 2023, from: <https://doi.org/10.1093/oso/9780190085353.001.0001>

- De Smet, A., Lurie, M., and St. George, A. (2018). McKinsey: Leading agile transformation: The new capabilities leaders need to build 21st-century organizations. Retrieved February 26, 2023, from: <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/leading-agile-transformation-the-new-capabilities-leaders-need-to-build-21st-century-organizations>
- Deguchi, A., and Kamimura, O. (2020). Introduction to Society 5.0. Society 5.0: A people-centric super-smart society (pp. xi–xiii). *Gateway East: Springer Nature*. <https://doi.org/10.1007/978-981-15-2989-4>
- Deloitte. (2020). The ‘DNA’ of leadership potential. Deloitte Leadership Capability Model: Theory. Deloitte Development LLC. Retrieved January 25, 2023, from: <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/about-deloitte/deloitte-uk-the-dna-of-leadership-potential-updated.pdf>
- Deloitte. (2020). Leadership capability modeling: Introducing the next-generation competency model. Deloitte Development LLC. Retrieved January 25, 2023, from, <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/human-capital/us-leadership-capability-modeling.pdf>
- Dubrow, S., Green, J. P., Kolze, M., and Zaccaro, S. J. (2018). Leader individual differences, situational parameters, and leadership outcomes: A comprehensive review and integration. *The Leadership Quarterly*, 29(1), 2-43. <https://doi.org/10.1016/j.leaqua.2017.10.003>
- Eiben, A. E., Hart, E., Timmis, J., Tyrrell, A. M., and Winfield, A. F. (2021). Towards autonomous robot evolution. Software engineering for robotics (pp. 29–51). Cham: Springer. [https://doi.org/10.1007/978-3-030-66494-7\\_2](https://doi.org/10.1007/978-3-030-66494-7_2)
- Eid J., Harris A., Dale Oen V, Solberg S. H. R., and Svihus J. (2022). Crisis leadership in COVID-19: A qualitative study of Norwegian business leaders. *Frontiers in Psychology*, 13:937935. <https://doi.org/10.3389/fpsyg.2022.937935>
- Erkollar, A., and Oberer, B. (2018). Leadership 4.0: Digital Leaders in the Age of Industry 4.0. *International Journal of Organizational Leadership*. Available at <https://ssrn.com/abstract=3337644>
- Fairhurst, G. T, Foldy, E. G., Jackson, B., and Ospina, S. M. (2020). Collective dimensions of leadership: Connecting theory and method. *Human Relations*, 73(4), 441–463. <https://doi.org/10.1177/0018726719899714>
- Fairhurst, G. T., and Holm, F. (2018). Configuring shared and hierarchical leadership through authoring. *Human Relations*, 71(5), 692–721. <https://doi.org/10.1177/0018726717720803>
- Ferràs, X. (2019). Can a robot be a leader? Retrieved February 4, 2023, from: <https://dobetter.esade.edu/en/robot-leader>

- Ferreira, C. M., and Serpa, S. (2019). Society 5.0 and sustainability digital innovations: A social process. *Journal of Organisational Culture, Communication and Conflict*, 23(1), 1–14. Retrieved February 4, 2023, from: <https://www.abacademies.org/articles/Society-5.0-and-Sustainability-Digital-Innovations-A-Social-Process-1939-4691-23-1-129.pdf>
- Forster, B. B., Lexa, F. J., and Patlas, M. N. (2020). Crisis leadership during and following COVID-19. *Canadian Association of Radiologists Journal*, 71(4), 421-422. <https://doi.org/10.1177/0846537120926752>
- Fowler, S. (2018). Toward a New Curriculum of Leadership Competencies: Advances in Motivation Science Call for Rethinking Leadership Development. *Advances in Developing Human Resources*, 20(2), 182–196. <https://doi.org/10.1177/1523422318756644>
- Flood, F. (2019). Leadership in the remote, freelance, and virtual workforce era. *Global Encyclopedia of Public Administration, Public Policy, and Governance*, ed. A. Farazmand (Lake Frederick, VA: Springer), 1–5. [https://doi.org/10.1007/978-3-319-31816-5\\_3825-1](https://doi.org/10.1007/978-3-319-31816-5_3825-1)
- Fontana, A. and Musa, S. (2017). The impact of entrepreneurial leadership on innovation management and its measurement validation. *International Journal of Innovation Science*, 9(1), 2-19. <https://doi.org/10.1108/IJIS-05-2016-0004>
- Fu, L., Liao, S., and Liu, Z. (2018). Is distributed leadership a driving factor of innovation ambidexterity? An empirical study with mediating and moderating effects. *Leadership and Organization Development Journal*, 39(3), 388-405. <https://doi.org/10.1108/LODJ-05-2017-0134>
- García, M. R., Moccia, S., and Tomic, I. (2021). Fintech strategy: e-reputation. *International Journal of Intellectual Property Management*, 11(1), 38–53. <https://doi.org/10.1504/IJIPM.2021.113367>
- Gerolamo, M., Guzmán, V. E., Kohl, H., Muschard, B., and Rozenfeld, H. (2020). Characteristics and skills of leadership in the context of industry 4.0. *Procedia Manufacturing*, 43, 543-550. <https://doi.org/10.1016/j.promfg.2020.02.167>
- Ghobakhloo, M. (2020). Industry 4.0, digitization, and opportunities for sustainability. *Journal of Cleaner Production*, 252, 119869. <https://doi.org/10.1016/j.jclepro.2019.119869>
- Gottfredson, R. K., and Reina, C. S. (2021). Illuminating the foundational role that mindsets should play in leadership development, *Business Horizons*, 64(4), 439-451. <https://doi.org/10.1016/j.bushor.2021.02.009>
- Grant, G., Golnaraghi, G., and Longmore, A. L. (2018). Closing the 21st-Century Knowledge Gap: Reconceptualizing Teaching and Learning to Transform Business Education. *Journal of Transformative Education*, 16(3), 197–219. <https://doi.org/10.1177/1541344617738514>
- Hains, B. J., Hains, K. D., and Hill, J. C. (2023). International leadership development through learner-centered instruction. *Journal of Leadership Education*, 22(1). <https://doi:10.12806/V22/I1/T1>

- Hallenbeck, G., and Santana, L. (2019). Great leaders are great learners. How to develop learning-agile high potentials. *Center for Creative Leadership*. Retrieved December 16, 2022, from: <https://www.ccl.org/wp-content/uploads/2019/03/great-leaders-are-great-learners-how-to-develop-learning-agile-high-potentials.pdf>
- Harvard Business Publishing Corporate Learning. The 2018 state of leadership development: Meeting the transformation imperative. Research report. Retrieved November 14, 2022, from: [https://www.harvardbusiness.org/wp-content/uploads/2018/11/20853\\_CL\\_StateOfLeadership\\_Report\\_2018\\_Nov2018.pdf](https://www.harvardbusiness.org/wp-content/uploads/2018/11/20853_CL_StateOfLeadership_Report_2018_Nov2018.pdf)
- Heaton, S., Schoemaker, P., and Teece, D. (2018). Innovation, dynamic capabilities, and leadership. *California Management Review*, 61(1), 15–42. <https://doi.org/10.1177/0008125618790246>
- Hirai, C., and Matsuoka, H. (2020). Habitat innovation. Society 5.0: A people-centric super-smart society (pp. 25–42). *Gateway East: Springer Nature*. Retrieved March 14, 2023, from: <https://doi.org/10.1007/978-981-15-2989-4>
- Hobson, P. R., Schick, A. and Ibisch, P. L. (2017). Conservation and sustainable development in a VUCA World: the need for a systemic and ecosystem-based approach. *Ecosystem Health and Sustainability*, 3(4), 1–12. <https://doi.org/10.1002/ehs2.1267>
- Hudson, T. E. (2019). In pursuit of organisational wisdom. <https://doi.org/10.53841/bpsadm.2019.11.3.18>
- IISD. (2018). The Essence of Leadership for Achieving the Sustainable Development Goals. Retrieved March 26, 2023, from: <https://sdg.iisd.org/commentary/generation-2030/the-essence-of-leadership-for-achieving-the-sustainable-development-goals/>
- James, K. V., and Priyadarshini, R. G. (2021). Responsible leadership: A new paradigm for organizational sustainability. *Management and Labour Studies*, 46(4), 452-470. <https://doi.org/10.1177/0258042X211005325>
- Kim, S., Liu, C., McCarthy, A., Ready, D., Van Wart, M., and Wang, X. (2020). The effects of national cultures on two technologically advanced countries: The case of e-leadership in South Korea and the United States. *Aus. J. Public Administ.* 79, 298–329. <https://doi.org/10.1111/1467-8500.12433>
- Kim, S., Liu, C., McCarthy, A., Roman, A. V., Van Wart, M., and Wang, X. (2019). Defining e-leadership as competence in ICT-mediated communications: An exploratory assessment. *Public Administ. Rev.* 79(6), 853–866. <https://doi.org/10.1111/puar.12980>
- Kniffin, L. E., and Whitaker, B. L. (2022). Crisis as pedagogy: Recommendations for using the pandemic in leadership education. *Journal of Leadership Education*, 21(3). <https://doi.org/10.12806/V21/I3/A2>
- Knoll, C. & Sternad, D. (2021). Identifying global leadership potential. *Journal of Management Development*, 40(4), 253-272. <https://doi.org/10.1108/JMD-05-2018-0158>
- Korn Ferry. (2017). Four Dimensional Enterprise Assessment. Retrieved October 10, 2022, from: <https://www.kornferry.com/content/dam/kornferry/docs/article-migration/KF4DEnterprise-TM-NOV-2017-nav.pdf>



- Korn Ferry. (2020). CEOs for the future, when the future is now. Retrieved October 15, 2022, from: <https://infokf.kornferry.com/rs/494-VUC-482/images/Korn-Ferry-CEOs-for-the-future.pdf>
- Kosuri, Ş. & Raghuramapatruni, R. (2017). The straits of success in a VUCA World. *IOSR Journal of Business and Management*, 1,16–22. Retrieved October 12, 2022, from: <https://www.iosrjournals.org/iosr-jbm/papers/Conf.17016-2017/Volume%201/3.%2016-22.pdf>
- Li, S., Shah, J. A., and Unhelkar, V. V. (2020). Decision-making for bidirectional communication in sequential human–robot collaborative tasks. In Proceedings of the 2020 ACM/IEEE international conference on human–robot interaction (pp. 329–341). Cambridge. Retrieved February 2, 2023, from: [https://users.cs.utah.edu/~dsbrown/readings/bidirectional\\_communication.pdf](https://users.cs.utah.edu/~dsbrown/readings/bidirectional_communication.pdf)
- Liu, C., Roman, A., Van Wart, M., and Wang, X. (2019). Operationalizing the definition of e-leadership: identifying the elements of e-leadership. *International Review of Administrative Sciences*, 85(1), 80–97. <https://doi.org/10.1177/0020852316681446>
- Love, J. H., and Roper, S. (2018). Knowledge context, learning and innovation: an integrating framework. *Industry and Innovation*, 25(4), 339-364. <https://doi.org/10.1080/13662716.2017.1414744>
- Lu, Y., Vogel-Heuser, B., Wang, L., and Xu, X. (2021). Industry 4.0 and industry 5.0—inception, conception and perception. *J. Manuf. Syst.*, 61, 530-535. <https://doi.org/10.1016/j.jmsy.2021.10.006>
- Mangipudi, M. R., Prasad, KDV., and Vaidya, R. (2020). Mental and Emotional Competencies of Leader’s Dealing with Disruptive Business Environment - A Conceptual Review. *International Journal of Management*, 11(5), 366-375. <https://ssrn.com/abstract=3629235>
- Marinković, S., Tornjanski, V., and Čudanov, M. (2020). Shaping a new business landscape by empowering collective intelligence: Synergetic effects of open innovation, human and artificial cognitive and emotional intelligence. In 2nd Virtual International Conference: Path to a Knowledge Society-Managing Risks and Innovation - PaKSoM (pp. 127-136). Retrieved November 14, 2022, from: [https://www.researchgate.net/publication/348690557\\_Shaping\\_a\\_new\\_business\\_landscape\\_by\\_empowering\\_collective\\_intelligence\\_Synergetic\\_effects\\_of\\_open\\_innovation\\_human\\_and\\_artificial\\_cognitive\\_and\\_emotional\\_intelligence](https://www.researchgate.net/publication/348690557_Shaping_a_new_business_landscape_by_empowering_collective_intelligence_Synergetic_effects_of_open_innovation_human_and_artificial_cognitive_and_emotional_intelligence)
- McCauley, C. D., and Palus, C. J. (2021). Developing the theory and practice of leadership development: a relational view. *The Leadership Quarterly*, 32(5). <https://doi.org/10.1016/j.leaqua.2020.101456>
- Mengel, T. (2021). Leadership for the Future: Lessons from the Past, Current Approaches, and Future Insights. *Cambridge Scholars Publishing*. Retrieved January 10, 2023, from: <https://www.cambridgescholars.com/resources/pdfs/978-1-5275-7059-7-sample.pdf>

- Moldoveanu, M., Narayandas, D. (2019) Educating the Next Generation of Leaders: The Future of Leadership Development. *Harvard Business Review*. Retrieved October 26, 2022, from: [https://media1-production.mightynetworks.com/asset/4825190/HBR\\_Future\\_of\\_Leadership\\_Development.pdf](https://media1-production.mightynetworks.com/asset/4825190/HBR_Future_of_Leadership_Development.pdf)
- Müller, J. (2020). Enabling Technologies for Industry 5.0 - Results of a Workshop with Europe's Technology Leaders. *Directorate-General for Research and Innovation. European Commission*. Retrieved January 12, 2023, from: <https://www.4bt.us/wp-content/uploads/2021/04/INDUSTRY-5.0.pdf>
- Nedelko, Z., and Črešnar, R. (2020). Understanding Future Leaders: How Are Personal Values of Generations Y and Z Tailored to Leadership in Industry 4.0? *Sustainability* 12(11), 4417. <https://doi.org/10.3390/su12114417>
- Ngayo Fotso, G.M. (2021). Leadership competencies for the 21st century: a review from the Western world literature. *European Journal of Training and Development*, 45(6/7), 566-587. <https://doi.org/10.1108/EJTD-04-2020-0078>
- Northouse, P. G. (2021). *Leadership: Theory and practice*. Thousand Oaks, CA: Sage publications. Retrieved December 8, 2022, from: [https://scholar.google.com/scholar?q=Northouse,+Peter+G.+\(2021\)&hl=en&as\\_sdt=0&as\\_vis=1&oi=scholart](https://scholar.google.com/scholar?q=Northouse,+Peter+G.+(2021)&hl=en&as_sdt=0&as_vis=1&oi=scholart)
- Paudyal, A., Regmi, P. R., Simkhada, P., van Teijlingen, E., and Waithaka, E. (2017). Guide to the design and application of online questionnaire surveys. *Nepal Journal of Epidemiology*, 6(4), 640–644. <https://doi.org/10.3126/nje.v6i4.17258>
- Renda, A., Schwaag Serger, S., and Tataj, D. (2022). European Commission, Directorate-General for Research and Innovation, Industry 5.0, a transformative vision for Europe: governing systemic transformations towards a sustainable industry. *Publications Office of the European Union*. <https://data.europa.eu/doi/10.2777/17322>
- Sagar, R., and Swarndeeep, S. (2021). A critical look at online survey or questionnaire-based research studies during COVID-19. *Asian Journal of Psychiatry*, volume 65, 102850. <https://doi.org/10.1016/j.ajp.2021.102850>
- Scheepers, C.B. and Storm, C.P. (2019). Authentic leadership's influence on ambidexterity with mediators in the South African context. *European Business Review*, 31(3), 352-378. <https://doi.org/10.1108/EBR-11-2017-0207>
- Siengthai, S., Wisittigars, B. (2019). Crisis leadership competencies: the facility management sector in Thailand. *Facilities*, 37(13/14), 881-896. <https://doi.org/10.1108/F-10-2017-0100>
- Skillsoft. (2020). Lean into learning: 2020 annual learning report. Brandon Hall Group for Skillsoft, “L&D and the Impact of COVID-19” Survey. Retrieved October 18, 2022, from: [https://s3.us-east-1.amazonaws.com/skillsoft.com/prod/documents/SS\\_AnnualLearningReport\\_vol11.pdf](https://s3.us-east-1.amazonaws.com/skillsoft.com/prod/documents/SS_AnnualLearningReport_vol11.pdf)
- Sulieman, M. (2021). Managerial Skills and Competencies of Future Managers In the UAE. *Akkad Journal of Contemporary Management Studies*, 1(4), 195-202. Retrieved February 4, 2023, from: <https://journal.acefs.org/index.php/AJCMS/article/view/76/43>

- Zhang, Y. & Yang, F. (2021). How and when spiritual leadership enhances employee innovative behavior. *Personnel Review*, 50(2), 596-609. <https://doi.org/10.1108/PR-07-2019-0346>
- Thwaite, S. V. (2022). Crisis is a Powerful Teacher: Resilient Leadership during a Global Health Pandemic. *Journal of Leadership Education*, 21(1). <https://doi.10.12806/V21/I1/C1>
- Todnem, R. (2021). Leadership: In Pursuit of Purpose. *Journal of Change Management*, 21(1), 30-44. <https://doi.org/10.1080/14697017.2021.1861698>
- Tornjanski, V., and Čudanov, M. (2021). Towards Society 5.0 Era: Organisational Empowerment of the Sustainable Future. Retrieved January 17, 2023 from: [https://www.researchgate.net/publication/358271052\\_Towards\\_Society\\_50\\_Era\\_Organisational\\_Empowerment\\_of\\_the\\_Sustainable\\_Future](https://www.researchgate.net/publication/358271052_Towards_Society_50_Era_Organisational_Empowerment_of_the_Sustainable_Future)
- Uhl-Bien, M. (2021). Complexity Leadership and Followership: Changed Leadership in a Changed World. *Journal of Change Management*, 21(2), 144-162. <https://doi.org/10.1080/14697017.2021.1917490>
- Wu, Y. L., Shao, B., Newman, A., and Schwarz, G. (2021). Crisis leadership: A review and future research agenda. *The Leadership Quarterly*, 32(6). <https://doi.org/10.1016/j.leaqua.2021.101518>
- Äripäev. (2022). Estonian Top educators. *Äripäev*, 45(6503), 6.

## APPENDICES

### Appendix 1. Online questionnaire survey design, structure

Dear company leader,

I am a master's student in the field of entrepreneurial management at Tallinn University of Technology. As part of my master's thesis, I am conducting research on the topic „The need for new leadership knowledge and skills in the changed world of work.“

The research problem addresses the changes in society and the world that have taken place in recent years, characterized by volatility, uncertainty, complexity and ambiguity, all of which affect business management. The purpose of the research is to find out what new leadership knowledge and skills leaders need and whether the Estonian training market supports the needs of leaders in acquiring these skills.

Answering the questionnaire is anonymous, I will analyse the obtained results in a generalized form and based on the goal set in the master's thesis. Answering the questionnaire takes an average of 10 minutes.

I am very grateful for your cooperation, because the larger the sample, the more reliable the data and the conclusions based on it.

The questionnaire opens via [this link](#). Looking forward to your answers until 16.04.2023.

Thank you in advance,  
Veronika Aalja  
TUT Department of Business Administration  
Entrepreneurial Management, MBA  
veronika.aalja@gmail.com

The need for new leadership knowledge and skills in the changed world of work  
Leadership questionnaire

1. Gender: \*

Female

Male

2. Age (in full years): \*

....

## Appendix 1. continued

3. Education level and field: \*

....

4. The company's field of activity: \*

....

5. The number of employees in the company: \*

- a) Less than 10 (micro company)
- b) Less than 50 (small company)
- c) Less than 250 (medium size company)
- d) 250 or more

6. Leader's position: \*

- a) First level leader
- b) Middle level leader
- c) Top level leader
- d) Owner
- e) Other ...

7. Number of subordinates: \*

- a) ... < 10
- b) 11 - 25
- c) 26 - 50
- d) 51 - 250
- e) 251 < ...

8. Working experience: \*

- a) Less than 1 year
- b) 1 - 2 years
- c) 3 - 4 years
- d) 5 - 10 years
- e) 11 - ... years

**Appendix 1. continued**

9. Over the past five years, many changes have taken place in society and in the world. When you think about your work and your actions as a leader, where do you see the impact of change the most? \*

....

10. As a follow-up to the previous question, if you think about changes in society and in the world, which socio-economic factors listed below have influenced your actions and to what extent? (1) Has not affected; (2) very little; (3) to some extent; (4) significantly; (5) has had a very big impact\*

	1	2	3	4	5
Factor 1: The development of technology					
Factor 2: Enviromental- and socio-economic priority					
Factor 3: Geopolitical topics					
Factor 4: Economic challenges					
Factor 5: Stakeholders (employees, investors, customers, cooperation partners) interests and needs					
Factor 6: Globalization					

11. What knowledge and skills would you need today to be a better leader? Please identify three to five needs. \*

....

12. Please evaluate the importance of the following leadership skills/attributes:

(1) Doesn't matter at all; (2) rather not important; (3) rather important; (4) important; (5) very important \*

	1	2	3	4	5
Agility					
Adaptability					
Ability to learn					
Consciousness					
Collaboration					
Communication skills					
Resilience					
Coaching					
IT competencies					
Creativity					

## Appendix 1. continued

Focus					
Engagement skills					
Empathy					
Project management skills					
Listening skills					

13. Which training methods from the selection below do you consider to be the most effective for acquiring new knowledge? Please list three to five methods. \*

- a) Group courses
- b) Online courses
- c) Self reading
- d) Coaching
- e) A program developed internally in the company
- f) E-learning platform
- g) Scenarios
- h) Guided journey
- i) Gamification
- j) Simulation
- k) Social platforms
- l) Launching a program in an emerging market
- m) On-the-fly leadership program

14. How many continuing education trainings and in what subject have you completed in the last two to five years? \*

....

15. What skills/traits do you consider to be your strengths as a leader today? Please name three to five skills/traits. \*

....

16. If you are willing to participate in an in-depth interview on the same research topic, please enter your e-mail address for further contact.

....

## Appendix 2. Online questionnaire survey data analysis tables

Table 3. Education level and field

Education level	Education field	Number of respondents
Master's degree	Business and Governance	4
Master's degree	Business management	2
Master's degree	Economic engineer	1
Master's degree	Education	2
Master's degree	Marketing	1
Master's degree	Organizational behavior	1
Master's degree	Unspecified	1
Bachelor's degree	Business and Governance	3
Bachelor's degree	Business management	1
Bachelor's degree	Corporate economy	1
Bachelor's degree	Economics and political science	1
Bachelor's degree	Liberal Arts in Humanities	1
Bachelor's degree	Management	1
Bachelor's degree	Mechatronics Engineer	2
Bachelor's degree	Philology	1
Bachelor's degree	Unspecified	1
Bachelor's degree	Unspecified	1
Bachelor's degree	Unspecified	1
Secondary education	Formal education	4

Source: online survey; author's calculation



## Appendix 2. continued

Table 4. The company's field of activity

The company's field of activity	Number of respondents	Percent %
Financial intermediation	1	3,3
Commerce	3	10,0
Consulting, marketing, coaching	1	3,3
Education	4	13,3
Environment	1	3,3
Green economy	1	3,3
Insurance, transport	1	3,3
IT	2	6,7
Material industry	1	3,3
Production	1	3,3
Production company (gardening, ecological lifestyle)	1	3,3
Publishing, consulting	1	3,3
Restaurant management	2	6,7
Retail - furnishing and furniture trade	1	3,3
Retail business	3	10,0
Security service	1	3,3
Tourism	1	3,3
Trainings	2	6,7
Transport and logistics	1	3,3
Transportation, storage	1	3,3

Source: online survey; author's calculation

## Appendix 2. continued

Table 7. Skills/traits leader's consider as their strenghts

Skills/traits leaders consider as their strenghts	Number of responses	Percent %
Communication	10	33
Listening skills	7	23
Cooperation	7	23
Engagement	6	20
Empathy	6	20
Resilience	5	17
Presence and awareness	5	17
Creativity	5	17
The ability to see the big picture	5	17
Rationality	4	13
Quick adaptability	4	13
Openness to change	3	10
Experiences	3	10
Delegation skills	3	10
Coaching	3	10
Balance	3	10
Analytical ability	3	10
Quick thinking	2	7
Organizing skills	2	7
Encouragement	2	7
Courage	2	7
Understanding people	1	3
Thoroughness	1	3
Systematicity	1	3
Supporting others	1	3
Strategic view	1	3
Positivity	1	3
Planning skills	1	3
Learning from mistakes	1	3
Learning ability	1	3
IT competence	1	3
Individualization	1	3
Goal setting	1	3
Friendly	1	3
Flexibility	1	3
Diligence	1	3
Decisive	1	3

Continuity	1	3
Assertiveness	1	3
Agility	1	3

Source: online survey; author's calculation

### Appendix 3. Estonian Top educators

Place	Organization name	Homepage address
1	Addenda OÜ	<a href="https://www.addenda.ee/">https://www.addenda.ee/</a>
2	Tark Impuls OÜ	<a href="https://tarkus24.ee/pealeht/">https://tarkus24.ee/pealeht/</a>
3	MSCA OÜ	<a href="https://reval.ee/en/">https://reval.ee/en/</a>
4	BCS Koolitus AS	<a href="https://www.bcskoolitus.ee/en/">https://www.bcskoolitus.ee/en/</a>
5	Insafety OÜ	<a href="http://insafety.ee/">http://insafety.ee/</a>
6	Eterna Koolituskeskus OÜ	<a href="https://www.eterna.ee/et/">https://www.eterna.ee/et/</a>
7	Human OÜ	<a href="https://human.ee/">https://human.ee/</a>
8	Paprika OÜ	<a href="https://paprika.ee/et/">https://paprika.ee/et/</a>
9	Atlanto Arendus OÜ	<a href="http://www.etreening.ee">http://www.etreening.ee</a>
10	Iluteeninduse Koolitus OÜ	<a href="https://iluteeninduskool.ee/">https://iluteeninduskool.ee/</a>
11	Multilingua Keelekeskus OÜ	<a href="https://multilingua.ee/">https://multilingua.ee/</a>
12	Oskuskoolitus OÜ	<a href="https://www.oskuskoolitus.ee/">https://www.oskuskoolitus.ee/</a>
13	Verge Eesti OÜ	<a href="http://verge.ee/">http://verge.ee/</a>
14	Holistika Instituut OÜ	<a href="https://holistika.ee/en/">https://holistika.ee/en/</a>
15	Annely Sootsi Koolitus OÜ	<a href="https://tervisekool.ee/">https://tervisekool.ee/</a>
16	Sikka OÜ	<a href="https://sikka.ee/">https://sikka.ee/</a>
17	TK Täienduskeskus OÜ	<a href="https://taienduskeskus.ee/">https://taienduskeskus.ee/</a>
18	Invicta OÜ	<a href="https://www.invicta.ee/">https://www.invicta.ee/</a>
19	Täiskasvanute Koolituskeskus OÜ	<a href="http://taiendkoolitus.com/">http://taiendkoolitus.com/</a>
20	Gaasikasutuskooolituse OÜ	<a href="https://gkk.ee/et/">https://gkk.ee/et/</a>
21	Trance-Personal OÜ	<a href="https://teadlikmina.ee/en/">https://teadlikmina.ee/en/</a>
22	Ametikoolitus OÜ	<a href="https://www.autosert.ee/">https://www.autosert.ee/</a>
23	Tallinna Mäenedžeride Kool OÜ	<a href="https://vtarassov.com/">https://vtarassov.com/</a>
24	Algus OÜ	<a href="https://www.alguskeskus.ee/">https://www.alguskeskus.ee/</a>
25	Reiting PR OÜ	<a href="https://www.reiting.ee/">https://www.reiting.ee/</a>
26	Change Partners OÜ	<a href="https://www.changepartners.ee/en/">https://www.changepartners.ee/en/</a>
27	Kersti Võlu Koolituskeskus OÜ	<a href="https://kvkoolitus.ee/">https://kvkoolitus.ee/</a>
28	Intelligentne Grupp OÜ	<a href="https://intelligentne.ee/">https://intelligentne.ee/</a>
29	Tocexpert OÜ	<a href="https://tocexpert.com/">https://tocexpert.com/</a>
30	Ecomengrad OÜ	<a href="https://ecomengrad.eu/">https://ecomengrad.eu/</a>
31	Luwi OÜ	<a href="https://luwi.ee/">https://luwi.ee/</a>
32	Äripäeva Akadeemia	<a href="https://akadeemia.aripaev.ee/">https://akadeemia.aripaev.ee/</a>
33	Keeltekeskus Kaja OÜ	<a href="https://www.keeltekeskuskaja.ee/">https://www.keeltekeskuskaja.ee/</a>
34	Akubens Koolitus OÜ	<a href="https://www.akubens.ee/">https://www.akubens.ee/</a>
35	Designminds OÜ	<a href="https://designminds.ee/">https://designminds.ee/</a>

Source: Äripäev (2022); author's adoption

### Appendix 3. continued

36	IT Koolitused	<a href="https://koolitus.ee/">https://koolitus.ee/</a>
37	Macte OÜ	<a href="https://www.macte.ee/taiskasvanutele/et/">https://www.macte.ee/taiskasvanutele/et/</a>
38	Belbin Eesti OÜ	<a href="https://belbin.ee/">https://belbin.ee/</a>
39	Teadmine ja Tarkus OÜ	<a href="https://www.tallinnlc.ee/">https://www.tallinnlc.ee/</a>
40	Aeternum Koolitus ja Konsultatsioonid OÜ	<a href="https://www.aeternum.ee/en/">https://www.aeternum.ee/en/</a>
41	Self-II OÜ	<a href="https://self.ee/en/">https://self.ee/en/</a>
42	Ehitajate Koolituskeskus OÜ	<a href="http://ehitajatekoolituskeskus.ee/">http://ehitajatekoolituskeskus.ee/</a>
43	Ivar Lukk Coaching OÜ	<a href="https://www.ivarluukk.com/">https://www.ivarluukk.com/</a>
44	Rada-SN OÜ	<a href="https://www.radasn.com/ee/">https://www.radasn.com/ee/</a>
45	Loov Ruum Koolitused OÜ	<a href="https://www.loovruum.com/">https://www.loovruum.com/</a>
46	IMG Konsultant AS	<a href="https://www.img.ee/en">https://www.img.ee/en</a>
47	Innowise OÜ	<a href="https://innowise.ee/">https://innowise.ee/</a>
48	Juunika Koolitus OÜ	<a href="https://juunika.ee/">https://juunika.ee/</a>
49	Lederson OÜ	<a href="http://www.lederson.ee">http://www.lederson.ee</a>
50	Hispaania Maja OÜ	<a href="https://www.hispaaniamaja.ee/eng/">https://www.hispaaniamaja.ee/eng/</a>
51	Puhastusekspert OÜ	<a href="https://puhastusekspert.ee/en/">https://puhastusekspert.ee/en/</a>
52	HMV-Systems Baltic OÜ	<a href="https://www.hmv-systems.fi">https://www.hmv-systems.fi</a>
53	Gelmett Consult OÜ	<a href="https://gelmett.ee/index.php/et/">https://gelmett.ee/index.php/et/</a>
54	Excellence Koolitus- ja Arenduskeskus OÜ	<a href="https://www.excellence.ee/">https://www.excellence.ee/</a>
55	Projektiexpert OÜ	<a href="https://projektid.ee/in-english/">https://projektid.ee/in-english/</a>
56	Keelepisik OÜ	<a href="https://keelepisik.ee/">https://keelepisik.ee/</a>
57	Õppekeskus N.O.R.T. OÜ	<a href="https://nort.ee/">https://nort.ee/</a>
58	Vestleja OÜ	<a href="http://www.vestleja.eu/">http://www.vestleja.eu/</a>
59	Logoserv OÜ	<a href="https://logoserv.ee/">https://logoserv.ee/</a>
60	Fortis Koolitus OÜ	<a href="https://shi.ee/">https://shi.ee/</a>
61	Eetel-Expert OÜ	<a href="https://elektriala.ee/">https://elektriala.ee/</a>
62	Rahvatervise Akadeemia OÜ	<a href="https://rahvatervis.ee/">https://rahvatervis.ee/</a>
63	Business Technologies OÜ	<a href="https://buseduc.com/et/">https://buseduc.com/et/</a>
64	Keerub OÜ	<a href="https://keerub.eu/">https://keerub.eu/</a>
65	Premium Management OÜ	<a href="https://premiummanagement.com/">https://premiummanagement.com/</a>
66	Speaksmart OÜ	<a href="https://www.speaksmart.ee/en">https://www.speaksmart.ee/en</a>
67	City Keeltekoool OÜ	<a href="https://citykeeltekoool.ee/en/">https://citykeeltekoool.ee/en/</a>
68	Heidi Plumberg International OÜ	<a href="https://heidiplumberg.ee/">https://heidiplumberg.ee/</a>
69	Sugesto OÜ	<a href="https://www.sugesto.ee/en/home/">https://www.sugesto.ee/en/home/</a>
70	Kwg Koolitus OÜ	<a href="https://www.helendoron.ee/Avaleht">https://www.helendoron.ee/Avaleht</a>
71	Alterum Plus OÜ	<a href="https://alterum.ee/et/">https://alterum.ee/et/</a>
72	Edu Akadeemia OÜ	<a href="https://eduakadeemia.ee/">https://eduakadeemia.ee/</a>
73	Collectiv OÜ	<a href="http://www.e-kursused.ee">http://www.e-kursused.ee</a>

Source: Äripäev (2022); author's adoption

## Appendix 4. Comparison table of Top educators and Deloitte capabilities

Organization name	Inspirational leadership <i>Inspire others to take action</i>	Execution <i>Get teams to achieve results</i>	Influence <i>Persuade and influence in all directions</i>	Collaboration <i>Collaborate with others</i>	Direction <i>Set vision, direction, and a compelling course of action</i>	Business judgement <i>Make business decisions that drive positive bottom-line performance</i>	Competitive edge <i>Know their markets and innovate to stay ahead</i>	Building talent <i>Develop people for competitive advantage</i>
Adianta OÜ			Public performance	Conflict management training Effective communication skills Teamwork training Language courses				
Tark Inspuls OÜ								
BCS Koolitus AS		Large-Scale Scrum (LeSS) Team Kanban Practitioner		Team Excellence through Visualization	Prosci® change management certification course Wardley Mapping Kanban Maturity Model (KMM) Kanban system design	Certified Agile Leadership (CAL)	Agile organization and team management	The Certified ScrumMaster (CSM) training Fit for Purpose Kanban Systems Improvement
Eterna Koolituskeskus OÜ	Development of leaders resources	Time management and personal effectiveness Creating a presentation in PowerPoint	Situational management Inaugible motivation tools	Language courses Internal company communications Conflict management		Adoption of management decisions and control of their execution		Effective management communications
Human OÜ						Class I Clarity & Class II Emotions Class III Thoughts	Class IV Consciousness Class V Flow	
Multilingua Keelekeskus OÜ				Language courses English language coaching				
Holistika Instituut OÜ						Self-esteem - the foundation of your life		
Sikka OÜ		Leadership coaching						
Invicta OÜ	Leadership and management Leading - from manager to leader	Principles of successful management Personal coaching for managers		Problem solving and decision making A successful team	Innovation and changes in the organization	100 days of the new leader Health and wellness management		

Source: Deloitte (2020); Äripäev (2022); compiled by author

## Appendix 4. continued

Organization name	Inspirational leadership	Execution	Influence	Collaboration	Direction	Business judgement	Competitive edge	Building talent
	<i>Inspire others to take action</i>	<i>Get teams to achieve results</i>	<i>Persuade and influence in all directions</i>	<i>Collaborate with others</i>	<i>Set vision, direction, and a compelling course of action</i>	<i>Make business decisions that drive positive bottom-line performance</i>	<i>Know their markets and innovate to stay ahead</i>	<i>Develop people for competitive advantage</i>
Täiskasvanute Koolituskeskus OÜ						Financial analysis using ratios		
Aligus OÜ				Language courses				
Reiting PR OÜ				Conflict management and negotiation				
				Teamwork				
Change Partners OÜ			Prosci® the basics of change management		Leadership Pipeline®			People development DISC
Intelligentne Grupp OÜ	From specialist to manager, from manager to leader	High Performance Team Coaching (ICF)	Personal branding and its marketing	Communication in a team	Strategic leadership	Expanding emotional intelligence (ICF)		
	Motivational communication	Coaching management		Successful negotiations	Manager as a leader and bearer of values. Systems thinking			
Toexpert OÜ							TOC thinking processes	
Äripäeva Akadeemia	The skill of delighting as a management tool	Negotiation practicum	Public speaking practicum	Communication in conflict situations	Camino de Santiago leadership training	Corporate financial planning		Motivating and effective development conversations
	How to manage people, team, yourself?	Professional project management	Media communication video training	From specialist to leader		Skillful decision making		Developing effective teams
	Leadership psychology	Effectiveness in daily management	Argumentation in management	Hidden aspects of teamwork		Skills of a successful self-leader		
		Coping with stress and setbacks in a work situation	How to create a readable and persuasive message?			School of financial knowledge for managers		
		Leading people through coaching	Non-monetary motivation and inclusive management					
		Time management	School of top performers					
		School of Leadership Skills	Intensive training of performance skills					
		Remote work and leading hybrid teams	Communication of clear messages					
Keehtekeskus Kaja OÜ				Language courses				
Designminds OÜ							DesignMinds	
Belbin Eesti OÜ								Teamwork based on strengths

Source: Deloitte (2020); Äripäev (2022); compiled by author

## Appendix 4. continued

Organization name	Inspirational leadership	Execution	Influence	Collaboration	Direction	Business judgement	Competitive edge	Building talent
	<i>Inspire others to take action</i>	<i>Get teams to achieve results</i>	<i>Persuade and influence in all directions</i>	<i>Collaborate with others</i>	<i>Set vision, direction, and a compelling course of action</i>	<i>Make business decisions that drive positive bottom-line performance</i>	<i>Know their markets and innovate to stay ahead</i>	<i>Develop people for competitive advantage</i>
Teadmine ja Tarkus OÜ				Language courses				
Aeternum Kooolitus ja Konsultatsioonid OÜ		Leadership Development Program Stress management						
Self-II OÜ			Assertiveness and influencing others	From specialist to leader	Me as a conscious leader			
Ivar Luukk Coaching OÜ					Executive coaching			
Rada-SN OÜ				Language courses				
Loov Ruum Kooolitused OÜ		Trainings for preventing and alleviating stress and burnout	Patterns of manipulation and how to deal with them	Basic group management training				
Juunika Kooolitus OÜ				From specialist to leader			Agile Project Management: A 5-Part Short Training Package	
Hispaania Maja OÜ				Language courses				
Excellence Kooolitus- ja Arenduskeskus OÜ		Middle level leader development program: team management		From specialist to manager: communication competencies	Middle level leader development program: process management	Adopting important strategic decisions in crisis conditions		Competence model - how to create and effectively implement?
				Practitioner to practitioner: a middle level leader development program	Middle level leader development program: planning, decision-making, change management			DISC Workplace Profile
				Practical management training: from a specialist to a leader of people				
Projektietspert OÜ				Language courses		Business Plan and Entrepreneurship Training		
Keelpsik OÜ				Using Zoom for beginners and advanced users				
Speaksmart OÜ			Performance and presentation skills	Language courses				
City Keeltekool OÜ				Language courses				
Sugesto OÜ				Language courses				
Edu Akadeemia OÜ				ABC of online performance				

Source: Deloitte (2020); Aripäev (2022); compiled by author



## Appendix 5. Answers of online questionnaire question nr 9

Over the past five years, many changes have taken place in society and in the world. When you think about your work and your activities as a leader, where do you see the impact of change the most?	Respondent number
Changes in work structure	1
Finding and retaining the right people in a competitive environment	2
In the rapid decrease in opportunities for direct marketing based on human contacts (meetings, trade fairs, open sales)	3
Allowing remote work and flexible working hours. The importance of digitization (customer-related processes and internal company processes)	4
Currency printing has affected the economic environment and the pandemic has devastated mental health	5
Administrative employees perform tasks in home offices. First level or front-line workers need to adapt and react quickly, while needing more support and motivation to cope with excessively calm and quiet times	6
Inflation zone, digitization, remote work	7
Individual-centred and inclusive management	8
Communication, conflict resolution	9
The most changes have taken place in the nature of work. Being in the office from 9 to 5 is no longer an obligation. And it has been bad for some and good for others. Finding this balance and recognizing those people for whom it is not suitable is difficult	10
Employee motivation	11
Co-workers have become more insecure, do not dare to make decisions independently in their area of responsibility in their daily work, and need more and more support and guidance	12
Changes are happening faster and faster, adaptability is important, data-based is the basis of everything	13
Each new generation affects the work environment and also the so-called old ones. Of course, there are also influences from corona, war, politics, etc. Flexibility and humanity are increasingly appreciated. A leader needs to be more empathetic and flexible than ever before, but that also creates certain threats (and opportunities). Equality, social responsibility, hybrid work, privacy have come into greater focus	14
Price increase, due to which wage pressure and shortage of qualified labor force	15
Sustainability area	16
Economic challenges	17
Updating of IT programs that simplifies work	18
In communication with people	19
To get results, you have to put in a lot more effort and set goals. The market is so messed up that today you can't figure out what works and what doesn't to get results	20
Overregulation	21

In people's attitude, people hold on to their jobs more tightly	22
Essentially everywhere, because the so-called "blood circulation" of society is disturbed, big changes happen constantly and unexpectedly	23
People work from home offices, value the mission, organizational culture, less desire to do volunteer work, more project-based paid work, more different jobs are done and not to be fixed with one employer, many changes and shorter plans	24
People's awareness, wider horizons. At the same time, the decrease of self-made work people (simple work, craftsmen, masters)	25
Advertising, marketing, IT, mental health	26
People need support more than ever. At the same time, they are more individualistic and egoistic	27
Mental health, work organization, relationships	28
Ability to adapt to a changing world, stakeholder needs, technological developments values, relationships and expectations for managers	29
Values, relationships and expectations for managers	30

Source: online survey; author's adoption

## Appendix 6. Answers of online questionnaire question nr 11

What knowledge and skills would you need today to be a better leader? Please identify three to five needs.	Respondent number
IT knowledge	1
Motivation, teamwork, change management	2
Diplomacy, the ability to predict across fields, the ability to manage emotions	3
Delegation skills, self-management skills, self-control	4
Cultivating communication/collaboration networks, marketing as the basis for the success of the entire company and the role of the manager in it, managing human relations and cooperation	5
1. Team management as remote work 2. Technical skills to conduct meetings and trainings via video 3. Creating an inspiring work environment as remote work 4. Planning and implementation of employee development needs	6
Better language skills, international business experience, better remote work management skills	7
Digital skills, marketing	8
IT related, conflict management, implementing change, mentoring in the workplace	9
Organization of remote work, people's motivation, implementation of new performance metrics	10
Empathy, understanding of modern times, adaptability, technology use skills	11
Negotiation skills/communication skills/analytical skills	12
New IT trends (AI possibilities, automation), time planning, prioritization of activities, supporting people (empowerment)	13
Leaders need to be constantly evolving. Since social responsibility, the environment, sustainability, flexibility, data protection among employees and other influence groups are currently in focus, you should definitely constantly develop yourself in these areas. For example, with my own example, I know that many people are not familiar with certain X influences or laws, but they like to watch "fake news" channels a lot (it is understandable that an ordinary person may not know what the scientific basis is and what scientific works to look at) and then they have misconceptions about things or expectations that are too biased in one direction. If you, as a driver, do not know the facts/laws, then a problem can arise from this	14
ICT skills, time management, consideration of mental health issues	15
Climate, mental wellbeing, time-management	16
IT competence, communication, mentorship	17
Maintaining relations with employees knowledge of legislation adapting to and implementing change delegation	18
Psychology, communication, IT knowledge	19
Fast management, a very good picture of the market and what is happening in the world, keep a clear vision and follow it, keeping employees motivated	20
Economics, law, psychology	21

Rapid development of technology - know new possibilities	22
Getting to know one's own nature, the ability to discover one's potential, one's talents, the ability to maintain and cooperate with the surrounding nature, the ability and need to be constantly innovative, not stuck in old patterns	23
Transition to circular economy, green economy, change management, impact assessment	24
IT skills, focus and marketing	25
English language skills, communication skills, teamwork skills	26
A strong ability to tolerate chaos is required. Ability to motivate and maintain oneself. To be tolerant of everything and everyone	27
Communication skills, IT competencies, recruitment skills	28
Adaptability/maintaining focus/engagement/IT competences/communication	29
Better listener, better communicator, coaching skills	30

Source: online survey; author's adoption

## Appendix 7. Answers of online questionnaire question nr 14

How many continuing education trainings and in what subject have you completed in the last two to five years?	Respondent number
2 training sessions on self-management	1
Development of leadership skills	2
Managing emotions, developing practical awareness, inspiration and intuition /3 courses/	3
3	4
3, sales/marketing, use of awareness, professional training related to your field	5
Coaching Presence or mindfulness in management Using the Zoom environment for meetings and trainings Team management in changed circumstances	6
8, Negotiations; Strengths-based management; People management, motivation, development; Targeted management; Marketing, sales, service; Project management	7
Over 10, leadership, HR, change management, etc.	8
Mostly IT-related trainings	9
Management training, numerous in-house trainings for products and fields.	10
Language skills, IT skills	11
1 training "Cooperation and negotiation skills"	12
There have been many trainings of different sizes, mainly management, cooperation, time planning, technology and work tools, etc. I participate in about 2-3 major trainings per year	13
I dare to think that at least 10. Completely wall-to-wall, field-related trainings and also IT, data protection, environment-sustainability, internal management	14
3, management of vocational education, management of skills, the power of the word in the field of mental health	15
10+	16
One	17
Managers' purchasing skills and negotiation	18
3, leadership, teamwork	19
2	20
Couple, professional trainings	21
1	22
More than 20 (quality and environmental management; social media; renewable energy; natural engineering; fishing; cooking, etc.	23
ca 10	24
First aid training	25
Approx. 5, Practical Consciousness, covision, coaching, teaching through stories	26
0	27
Mentor training	28

Category Management (retail context); Export trade rules for sales transactions; Credit Management	29
Three	30

Source: online survey; author's adoption

## Appendix 8. Answers of online questionnaire question nr 15

What skills/traits do you consider to be your strengths as a leader today? Please name three to five skills/traits	Respondent number
Quick adaptability, listening skills, empathy	1
Teamwork, empathy, coaching	2
Courage to make decisions, understanding people, creativity	3
Social skills, assertiveness, analytical ability	4
Presence and awareness, openness, learning from mistakes, listening to others, writing skills, speaking/communication skills	5
Listening skills, ability to analyze, mindfulness	6
Inclusion, empathy, creativity, big picture,	7
Involvement, listening, collaborative management	8
Communication, system, consistency	9
Empathy, seeing new directions, seeing and recognizing contacts and connections	10
Experiences, openness to change, adaptability	11
Rational/encouraging/friendly/analytical/determined/balanced	12
Communication, cooperation, goal setting	13
Agility, thoroughness, emotionality, but not excessive empathy	14
Planning skills, cooperation skills, involvement skills,	15
Resilience, creativity, individualization, courage, innovation	16
Listening, adapting, empathy	17
Delegation of cooperation, IT competence	18
Listening skills, delegation, willingness to cooperate, quick thinking, experience	19
Endurance, ability to learn, ability to engage, awareness	20
Calmness, endurance, stress tolerance	21
Finding a quick solution, not losing the ability to empathize in a hurry	22
Balance/intelligence; engagement/motivation; organization/arrangement	23
Communication, change management, strategic view, coaching	24
Quick adaptor, good stress tolerance, broad horizons, good communicator	25
Good listening skills, good knowledge of your field, self-regulation, hard work	26
Flexibility, positivity, orientation towards cooperation, the ability to see the big picture, the ability to effectively communicate with very different people	27
Communication, support, innovative	28
Coping with emotions, fact-based, communication	29
Listening, forwarding, couch skills, involvement	30

Source: online survey; author's adoption

## Appendix 9. Online questionnaire survey contacts list

Name of the association/organization	Homepage address	Questionnaire sharing date
The Estonian Retailers' Association	<a href="https://kaupmeesteliit.ee/">https://kaupmeesteliit.ee/</a>	13.02.2023
General Assembly of Estonian Waste Management Association	<a href="http://www.rmel.ee/">http://www.rmel.ee/</a>	13.02.2023
Estonian Association of Insulation Enterprises	<a href="https://eiel.ee/en/">https://eiel.ee/en/</a>	13.02.2023
TalTech Innovation and Business Centre Mektory	<a href="http://www.mektory.ee">http://www.mektory.ee</a>	13.02.2023
The Estonian Employers' Confederation	<a href="https://employers.ee/en/">https://employers.ee/en/</a>	13.02.2023
Startup Estonia	<a href="https://startupestonia.ee/en">https://startupestonia.ee/en</a>	13.02.2023
Startup Incubator	<a href="https://www.startupincubator.ee/en/">https://www.startupincubator.ee/en/</a>	13.02.2023
Estonian Family Business Association	<a href="https://epel.ee/">https://epel.ee/</a>	13.02.2023
MTÜ Autoettevõtete Liit	<a href="https://autoettevoteteliit.ee/">https://autoettevoteteliit.ee/</a>	13.02.2023
Estonian Association of Information Technology and Telecommunications	<a href="https://itl.ee/en/">https://itl.ee/en/</a>	13.02.2023
Estonian Association of SMEs	<a href="https://evea.ee/">https://evea.ee/</a>	13.02.2023
The Paldiski Association of Entrepreneurs	<a href="https://investinpaldiski.ee/en/">https://investinpaldiski.ee/en/</a>	13.02.2023
Eesti Meediaettevõtete Liit	<a href="https://meedialiit.ee/">https://meedialiit.ee/</a>	13.02.2023
Social Enterprise Estonia	<a href="https://sev.ee/en/">https://sev.ee/en/</a>	13.02.2023
Estonian Educational Personnel Union	<a href="https://ehl.org.ee/en/">https://ehl.org.ee/en/</a>	13.02.2023
The Chamber of Commerce	<a href="https://www.koda.ee/en">https://www.koda.ee/en</a>	13.02.2023
Eesti Kinnisvarafirmade Liit	<a href="https://www.ekfl.ee/">https://www.ekfl.ee/</a>	13.02.2023
Estonian Association Of Electrical Enterprises	<a href="https://eetel.ee/en/">https://eetel.ee/en/</a>	13.02.2023
Eesti Turvaettevõtete Liit	<a href="https://www.etel.ee/et">https://www.etel.ee/et</a>	13.02.2023
Estonian Trade Union Confederation	<a href="https://www.eakl.ee/">https://www.eakl.ee/</a>	13.02.2023
The Estonian Insurance Association	<a href="https://www.lkf.ee/en">https://www.lkf.ee/en</a>	13.02.2023
AAS BTA Baltic Insurance Company Eesti filiaal	<a href="https://www.bta.ee/">https://www.bta.ee/</a>	13.02.2023
AB "Lietuvos draudimas" Eesti filiaal	<a href="https://pzu.ee/">https://pzu.ee/</a>	13.02.2023
Akciné draudimo bendrovė "Gjensidige" Eesti filiaal	<a href="https://www.gjensidige.ee/">https://www.gjensidige.ee/</a>	13.02.2023
Aktsiaselts INGES KINDLUSTUS	<a href="https://www.inges.ee">https://www.inges.ee</a>	13.02.2023
AS LHV	<a href="https://www.lhv.ee">https://www.lhv.ee</a>	13.02.2023
Compensa Life Vienna Insurance Group SE	<a href="https://www.compensalife.ee/">https://www.compensalife.ee/</a>	13.02.2023
Compensa Vienna Insurance Group, ADB Eesti filiaal	<a href="https://www.seesam.ee/">https://www.seesam.ee/</a>	13.02.2023
ERGO Insurance SE	<a href="https://www.ergo.ee/">https://www.ergo.ee/</a>	13.02.2023
If P&C Insurance AS	<a href="https://www.if.ee/en/eraklient">https://www.if.ee/en/eraklient</a>	13.02.2023
Salva Kindlustuse AS	<a href="https://www.salva.ee/et">https://www.salva.ee/et</a>	13.02.2023
SEB Life and Pension Baltic SE Eesti filiaal	<a href="https://www.seb.ee">https://www.seb.ee</a>	13.02.2023
Swedbank AS	<a href="https://www.swedbank.ee">https://www.swedbank.ee</a>	13.02.2023
Author's personal contacts via social media		14.02.2023
Author's personal contacts via e-mail (18 contacts)		07.- 17.04.2023

Source: author's survey; Estonian associations/organizations websites; author's contacts



## **Appendix 10. Online questionnaire survey data**

The data is collected and stored by the author in Google Drive storage without any access of third parties. It contains unprocessed original anonymous information received from the respondents via the online survey. The e-mail addresses that were voluntarily added by the respondents in case of in-depth interview have been removed to keep the respondents identity anonymous.

Access to the file and data is available by clicking the following [link](#) or by contacting the author.

## Appendix 11. Leadership styles and theories

Agile leadership	Agile leadership refers to the capacity to implement an adaptively adaptable plan based on external and internal dynamics, as well as to use broader views to recognize and assess diverse situations and respond to them quickly. Agile leaders have the suppleness and versatility to lead in a number of demanding and unanticipated scenarios.	Attar <i>et al.</i> , 2020
Altruistic leadership	Altruistic behavior in leaders is a voluntary, empathic, and purposeful style of behavior that entails assisting people of the organization in their growth and development without expecting any kind of compensation. Such leaders are seen as highly esteemed and revered. Organizational learning, which fosters the creation of radical innovations, is positively associated to altruistic leadership behavior.	Alblooshi <i>et al.</i> , 2021
Ambidextrous leadership	This necessitates a complicated leadership strategy characterized by opening and shutting behaviors, the combination of which effects team creativity and its capacity to produce new, beneficial ideas and subsequently apply them in a direct proportionate ratio. Opening leadership behaviors motivate followers to explore by allowing them to act autonomously and think differently. Exploitation activities necessitate the establishment of goals and regulations, the monitoring of progress, and the implementation of appropriate corrective actions, which is aided by closing leadership behaviors.	Alblooshi <i>et al.</i> , 2021
Authentic leadership	Authentic leadership is a process that draws on both positive psychological potential and a highly developed organizational setting to produce more self-awareness and self-regulated positive actions in leaders and associates, enabling positive self-development.	Ngayo Fotso, 2021
Autocratic leadership	To a certain extent, the autocratic leadership style is also known as the authoritarian style. It employs a top-down strategy in which leaders make choices without engaging the rest of the team. The efficacy and end outcomes are the primary priorities of leaders. The managers want their staff to do exactly what they are told. This technique is typically utilized in businesses with stringent standards, and it does not allow for originality or innovation. However, it is effective when people are new to the business or have no prior job experience.	Choo <i>et al.</i> , 2022
Behavioral leadership	Around the mid-twentieth century, the behavioral approach to leadership arose. It accepts the notion that leadership can be taught and that a leader's chosen leadership style is determined by his or her inherent orientation toward workers or tasks and productivity.	Ngayo Fotso, 2021

Source: compiled by author

## Appendix 11. continued

CEO leadership	Any firm's CEO may kickstart the innovation process, lead successful transformation, and give the necessary support in terms of practices, circumstances, and atmosphere to assist the innovation process and inspire members to unleash their creative talents. CEOs may inspire staff to deal with the uncertainty and risk involved with adopting new ideas by expressing the values and shared vision of organizational innovation.	Alblooshi et al., 2021
Charismatic leadership	Charismatic leadership is typically seen in circumstances that are unpredictable and difficult, where leaders must influence team members' confidence in their talents while also promoting a feeling of community and common purpose. Charismatic leaders emphasize followers' sense of belonging in order to achieve certain organizational goals, and charisma is one of the transformational leadership aspects.	Alblooshi et al., 2021
Cluster leadership	The goal of cluster leadership is to address the needs of members while also meeting the cluster's innovative goals through a set of behaviors and competencies. Cluster leaders are critical in driving cluster performance. A cluster is made up of numerous comparable domain-connected enterprises that have the guts to innovate and act in response to changes in market conditions or the advent of new technologies in order to gain a competitive edge and hence boost productivity.	Alblooshi et al., 2021
Coaching leadership	This approach is built on determining an individual's motivations, strengths, and shortcomings. These factors will assist leaders in enabling the team's deficiencies as well as the optimization of their strengths. It is regarded as the most productive method, but it is also the least used because to the time and effort required, particularly in large businesses.	Choo et al., 2022
Collective leadership practises	A complex, multi-level, dynamic process that emerges at the crossroads of a distribution of the leadership role, diverse skills and expertise within the network, and the effective exchange of information among team members in order to capitalize on and coordinate their role behaviors and expertise.	Fairhurst et al., 2020
Complexity leadership	A discernible pattern of social and relational organization among independent varied individuals as they construct an action system. Complexity leadership theory "enables complex adaptive systems' (CAS) learning, creative, and adaptive capacity in knowledge-producing organizations." The operational system is concerned with formality, standardization, and organizational performance, whereas the entrepreneurial system is concerned with innovation, learning, and development.	Uhl-Bien, 2021; Fairhurst et al., 2020; Ngayo Fotsso, 2021
Crisis leadership	A crisis-management process that includes the period immediately preceding the crisis, the duration of the crisis as it unfolds, and the period immediately following the severe impacts of the crisis. Crisis leadership focuses on how leaders influence diverse stakeholders during crises, why some leaders are more effective than others in crisis circumstances, and how the crisis itself affects leaders.	Collins et al., 2023

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Appendix 11. continued

Democratic leadership	<p>The last type is democratic leadership, which is centered on the engagement of all team members. The leader takes into account the team members' contributions in accomplishing the organization's goals. This implies that before making choices, the leader consults with the entire team. This strategy efficiently draws the entire team together to work toward a single objective. This is because if the entire team participated in creating the goals, they would be devoted and accountable for their collective choice rather than a decision made on their behalf by the leaders. The bottom-up strategy can be applied in this form. This method is suitable for firms that value innovation and creativity.</p>	Choo <i>et al.</i> , 2022
Developmental leadership	<p>An employee-centered leadership style in which leaders focus in giving their followers with the skills and information they need to be more productive and contribute more to organizational success. Developmental leaders are thought of as knowledge catalysts because they provide the environment, guidance, and physiological safety that employees require in order to create, communicate, exchange, and apply new and existing knowledge, as well as overcome the demotivation that may be associated with failed innovation attempts.</p>	Alblooshi <i>et al.</i> , 2021
Digital leadership	<p>Agile, cross-hierarchical, team-oriented, and collaborative digital leadership places a strong focus on innovation. Digital leadership necessitates new ways of thinking about corporate strategy, business model, IT function, enterprise platforms, attitude and skill set, and workplace. The fast development of advanced information technology (AIT), such as emails, message boards, knowledge management systems, and information systems, has contributed to the quick growth of telecommuting and the greater use of virtual teams. Digital leadership necessitates a multidimensional approach: the leader must consider both, addressing the team as a whole as well as each individual team member.</p>	Gerolamo <i>et al.</i> , 2020; Ngayo Fotso, 2021
Distributed leadership	<p>The aggregated leadership of an organization is distributed among some, many, or maybe all of its members, allowing all organization members to be leaders at some point.</p>	Fairhurst <i>et al.</i> , 2020
Dual/co-leadership	<p>A leadership duo can fill in for a single-handed leader.</p>	Fairhurst <i>et al.</i> , 2020
Entrepreneurial leadership	<p>Entrepreneurial leadership is a type of leadership in which leaders direct the production of organizational strategic value by encouraging people to work more creatively in response to business environment uncertainty, a recognized business opportunity, or a future potential.</p>	Alblooshi <i>et al.</i> , 2021
Ethical leadership	<p>Leaders that uphold ethical standards serve as role models and serve as a source of inspiration for their followers, who will have strong morals as a consequence. Care, trustworthiness, honesty, and fairness are characteristics of ethical leaders, and their actions will reflect this. They establish and maintain the organization's ethical behavior. Ethical leadership creates a fair workplace where all employees have an equal chance to share their ideas and suggestions for improving procedures and are encouraged to think more creatively.</p>	Alblooshi <i>et al.</i> , 2021

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## Appendix 11. continued

Global leadership	Self-awareness, personal growth, and inquisitiveness are the essential competencies. Optimism, self-regulation, social judgment, empathy, motivation to operate in an international setting, cognitive capabilities, and acceptance of complexity are the mental traits. Social and networking skills, expertise, and foreign experience are all part of the behavioral competences.	Ngayo Fotso, 2021
Humble leadership	Humble leadership entails a set of steady and long-lasting interpersonal traits such as recognising and appreciating the contributions of others and admitting one's own faults and limits. This type of behavior decreases employees' fear of failure in innovation and hence motivates them to produce and present more fresh ideas.	Alblooshi <i>et al.</i> , 2021
Humorous leadership	Humorous leadership is a communication style centered on humour and fun, through which a leader may impact staff performance and work happiness. Humour may support such behaviors by ensuring a seamless flow of ideas during the idea generating process. It promotes new ways of thinking and creatively connects new and old concepts.	Alblooshi <i>et al.</i> , 2021
Innovative leadership	As the process of implementing drastic changes in order to address issues and so benefit people.	Alblooshi <i>et al.</i> , 2021
Integrative leadership	Integrative leadership is defined as a dynamic ability that integrates leadership elements with strategic decision-making objectives in the firm, taking into account their relationships and other stakeholders via operational and secure communication and performance mechanisms in order to achieve shared goals.	Alblooshi <i>et al.</i> , 2021
Leader-member exchange (LMX)	A dyadic interaction between supervisors and subordinates is referred to as LMX. Through various sorts of exchanges and interactions, supervisors build mutually beneficial exchange relationships with their subordinates.	Asadullah <i>et al.</i> , 2021
Multiteam systems leadership	Two or more teams that interact directly and interdependently in response to environmental circumstances in order to achieve common goals.	Fairhurst <i>et al.</i> , 2020
Network leadership (networks)	Leadership is an emerging network of interactions, a shared and diffused phenomena containing numerous leaders who may be formally appointed as well as develop more informally.	Fairhurst <i>et al.</i> , 2020
Pacesetter leadership	The pacesetter leadership style, where the major focus on employee performance, is the optimal leadership style for achieving quick outcomes. High standards are set in the form of individual goals, and employees' performance will be evaluated in terms of their accomplishments. This leadership style is good for motivating a fast-paced team, but it can be tough for new team members who seek feedback and guidance. Managers typically choose this method when they have an experienced workforce that requires little supervision and is well-trained. However, the leader must offer clear directions since if the team members work at a rapid speed without the necessary instructions, production may suffer.	Choo <i>et al.</i> , 2022

Source: compiled by author

Appendix 11. continued

Participative leadership	Participatory leadership is based on formal and informal ways in which leaders remove hierarchical obstacles, recognize organizational members' expertise and intelligence, and include them in decision-making. Through coworker knowledge exchange and absorptive capacity, participatory leadership is strongly linked to exploratory innovation activities.	Alblooshi <i>et al.</i> , 2021
Paternalistic leadership	Paternalistic leadership is a multifaceted strategy based on order respect that is linked to job satisfaction and goal planning. Paternalism also aids in the development of trust between team members and their supervisors, motivating them to better levels of collaboration, dedication, morale, and loyalty. A paternalistic leadership style combines "strong discipline and authority with fatherly benevolence." This leadership style consists of three separate components: morality, compassion, and authoritarianism.	Asadullah <i>et al.</i> , 2021; Alblooshi <i>et al.</i> , 2021
Political leadership	Political leadership entails making authoritative judgments in order to address societal concerns and discover solutions. This may be accomplished by either modifying current policies or generating new ones, which is not achievable in isolation and necessitates public participation and imaginative thinking, a process known as collaborative policy innovation.	Alblooshi <i>et al.</i> , 2021
Relational leadership	Leadership is defined as a social influence process that constructs and produces emergent coordination (e.g., changing social order) and change (e.g., new approaches, values, attitudes, behaviors, ideologies).	Fairhurst <i>et al.</i> , 2020
Self-leadership	Self-leadership is a leadership style and technique that fosters a social and psychological environment conducive to individual creativity and innovation. Individuals with self-leadership abilities are self-motivated and have greater creative potential, increasing the likelihood that they will apply and practice innovation.	Alblooshi <i>et al.</i> , 2021
Servant leadership	Servant leadership blends ethics, values, and morals for the greater good, corporate efficiency, and the well-being of followers. Inspiring and having a vision, building trust, good oral communication skills, listening skills, self-reflection, empathy and tolerance, intuition, future-oriented, awareness and at ease with the unknown, persuasive, using a step-by-step approach, and being conceptually clever are the 12 competencies for servant leadership.	Ngayo Fotsso, 2021
Shared leadership	With shared leadership, leadership is not only the duty of one person. Shared leadership centers leadership on the team, making each member accountable. Information and strategic direction are exchanged, and choices are reached by consensus.	Ngayo Fotsso, 2021
Social network leadership	Leadership is found in the interactions of individuals, which form a network of relationships that forms and evolves through time.	Fairhurst <i>et al.</i> , 2020

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Appendix 11. continued

Spiritual leadership	Spiritual leadership focuses on intrinsic self-significance and self-value in order to motivate employees genuinely. Spiritual leadership is a set of attitudes, actions, and beliefs that aspire to meet the spiritual needs of oneself and others based on calling and membership via inner drive.	Zhang <i>et al.</i> , 2021
Strategic leadership	Strategic leadership is critical in circumstances of great complexity, ambiguity, and rapid change. Under these conditions, a strategic leader must not only appraise the environment, but also give a strategic plan with a future orientation based on the analysis.	Ngayo Fotsio, 2021
Swarm leadership	Is essential to traverse complicated adaptive systems in which a decision, innovation, and direction are generated by the system itself. Swarm leadership is responsive because leaders operate in an agile environment, at a systemic level, and in response to the uncertainty and volatility of the Industry 4.0. This leadership is part of an adaptable, collaborative, complex, and self-organized network system.	Gerolamo <i>et al.</i> , 2020
Team leadership	Anyone who seeks to guarantee the team's requirements are satisfied is regarded as taking on the team leadership position.	Ngayo Fotsio, 2021
The great man and trait theories	The Great Man Theory, which dates back to the late nineteenth century, proposes that great men with natural traits and the potential to effect societal change affected the history of the world. Trait theorists provide a range of attributes essential for leadership, such as social skills, self-assurance, energy, and cognitive abilities.	Ngayo Fotsio, 2021
Transactional leadership	The transactional leadership style is founded on the idea that leaders and followers are mutually reliant. Leaders provide something of value to their subordinates in exchange for what they seek from the subordinates.	Ngayo Fotsio, 2021
Transformational leadership	According to the transformational leadership idea, the leader and their followers are in a mutually beneficial relationship that promotes the transcendence of both sides. Transformational leaders impact their followers by inspiring them or compelling them to adhere to their ideals, resulting in remarkable achievements and a high priority for the common good. A leader should give his or her people with meaningful employment that has a high moral purpose.	Ngayo Fotsio, 2021
Visionary leadership	Visionary leadership is the first kind in which leaders influence both changes and considerable progress. Visionary leaders also gain the trust of the rest of the team for new ideas and use methods to strengthen team cohesiveness. This leadership style is frequently effective in tiny growing businesses as well as large firms undergoing considerable transformation.	Choo <i>et al.</i> , 2022

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