



**THE ROLE OF ENTREPRENEURIAL LEADERSHIP IN BUSINESS
PERFORMANCE: A STUDY ON INNOVATION IN THE VUCA WORLD**

Lappeenranta–Lahti University of Technology LUT
Industrial Engineering and Management, Bachelor's thesis
2021

Noora Saksa

Examiner: Associate Professor, D.Sc. (Tech.) Antero Kutvonen

TIIVISTELMÄ

Lappeenrannan–Lahden teknillinen yliopisto LUT
LUT Teknis-luonnontieteellinen
Tuotantotalous

Noora Saksa

Yrittäjämäisen johtajuuden rooli liiketoiminnan menestyksessä: tutkimus innovaatiosta VUCA maailmassa

Tuotantotalouden kandidaatintyö

58 sivua, 4 kuvaa, 8 taulukkoa ja 1 liite

Tarkastaja: Apulaisprofessori Antero Kutvonen

Avainsanat: Yrittäjyys, VUCA, Innovaatio, Liiketoiminnan menestys, Yrittäjämäinen johtajuus, Yrittäjämäinen yksilö, Yrittäjämäinen valmius, Yrittäjämäinen kognitio, Yrittäjämäinen ajattelutapa, Yrittäjämäinen johtaminen, Yrittäjämäinen suuntautuminen, Strateginen yrittäjyys

Tämän kandidaatintyön tarkoituksena on selvittää yrittäjämäisen johtajuuden vaikutus liiketoiminnan menestykseen VUCA (epävakaa, epävarma, monimutkainen, epäselvä) ympäristössä. Tätä analysoidaan yhdistämällä kirjallisuutta, teoriaa ja puolistrukturoituja haastatteluja. Näiden avulla käydään läpi relevanttien aiheiden määritelmät sekä kehitys, ja rakennetaan yhtenäinen viitekehys yrittäjämäisen johtajuuden ympärille.

Tutkielma on kvalitatiivinen tutkimus. Se käsittelee aihetta puolistrukturoitujen teemahaastattelujen avulla, jotka yhdistetään ajankohtaisiin artikkeleihin, tutkimustuloksiin ja kirjallisuuteen. Empiirinen aineisto koostuu kolmesta haastateltavasta, jotka kaikki edustavat eri toimialoja: energia-alan monikansallista pörssi-yhtiötä, rahoitusalan yritystä ja hyvinvointialan julkisesti hallintoa yritystä.

Kirjallisuuden perusteella on selvää, että yrittäjämäisen johtajuuden avulla voidaan onnistuneesti valmistaa organisaatio 2020-luvun ja sen VUCA ympäristön asettamiin vaatimuksiin. Tulevaisuudessa VUCA ympäristö luo kasvavaa painostusta yritysten resilienssiin, jotta pystytään vastaamaan kilpailijoiden ja kuluttajien vaatimuksiin ketterämmin. Yrittäjämäisten johtamismenetelmien avulla on mahdollista parantaa liiketoiminnan menestystä, reagoitokykyä riskeihin ja transformaatiomahdollisuuksia. Haastattelujen perusteella nähdään, kuinka yrittäjämäisen johtajuuden avulla on mahdollista luoda koko organisaation laajuinen muutos omistajuuden ja motivaation keinoin. Yritys, joka mahdollistaa yritteliäiden yksilöiden tunnistamisen ja onnistuneen johtamisen, reagoi tuleviin muutoksiin kilpailijoitaan nopeammin. Tämän mahdollistamiseksi yritysjohton tulisi keskittyä integroimaan avoimuus, riskinotto, omistushalu ja ongelmanratkaisukyky eri organisaatiotasojille. Vastatakseen tähän, yritykset voivat edistää 1) yrittäjämäisten yksilöiden tunnistamista, 2) yrittäjyysmäisyyden valjastamista keskijohtovetoisesti, 3) monialaisia tiimejä liiketoiminnassa ja 4) yrittäjämäistä oppimista tukevaa organisatorista liikkuvuutta.

ABSTRACT

Lappeenranta–Lahti University of Technology LUT
School of Engineering Science
Industrial Engineering and Management

Noora Saksa

The role of entrepreneurial leadership in business performance: a study on innovation in the VUCA world

Bachelor's thesis

58 pages, 4 figures, 8 tables and 1 appendix

Examiner: Associate Professor Antero Kutvonen

Keywords: Entrepreneurship, VUCA, Innovation, Business performance, Entrepreneurial Leadership, Enterprising Individual, Entrepreneurial Alertness, Entrepreneurial Cognition, Entrepreneurial Mindset, Entrepreneurial Management, Entrepreneurial Orientation, Strategic Entrepreneurship

The purpose of this Bachelor's Thesis is to find out the role of Entrepreneurial Leadership in business performance in an increasingly VUCA (Volatile, Uncertain, Complex, Ambiguous) environment. The topic is analyzed with a combination of theory, literature, and semi-structured interviews, which go over the definitions and history of relevant topics as well as build a coherent framework around Entrepreneurial Leadership.

The thesis is a qualitative study that deals with the topic based on semi-structured thematic interviews combined with relevant and topical articles, research results, and literature. The empirical data consists of three interviewees, with each of them representing a different industry: a multinational listed company in the energy sector, a company in the financial sector, and a publicly administrated company in the welfare sector.

Based on the literature, it is apparent that Entrepreneurial Leadership can be used as a tool to successfully transform an organization to the requirements of the 2020s and its VUCA environment. In the future, the VUCA environment places an even higher emphasis on creating new in order to match up the changes in customer needs and standards of competition. The utilization of entrepreneurially oriented management methods leads to an increase in business performance, risk responsiveness, and change capabilities. The interviews show that Entrepreneurial Leadership is an enabler for companywide transformation through the means of ownership and motivation. A company, which makes it possible for identifying and successfully managing Enterprising Individuals, responds to future problems faster than its competitors. To enable this, managers across companies should focus on spotting characteristics such as open-mindedness, risk-taking, willingness to take ownership, and problem-solving. To achieve this, companies should 1) identify Enterprising Individuals, 2) harness entrepreneurship through middle management, 3) integrate multidisciplinary teams in operations, and 4) support entrepreneurial learning with organizational flexibility.

Table of Contents

Tiivistelmä

Abstract

1	Introduction	1
1.1	Background and objectives	1
1.2	Research problem and limitations	3
2	Literature review	5
2.1	The position of Entrepreneurial Leadership	5
2.1.1	Learning Entrepreneurial Leadership	11
2.2.1	Ways to adapt to the VUCA world	16
2.2.2	Entrepreneurial Leadership and business performance	18
2.3	Successful applications of Entrepreneurial Leadership	19
2.4	Hypothesis development	23
3	Entrepreneurial Leadership in practice	25
3.1	Introduction to the research material	26
3.2	Entrepreneurship in innovation work	27
3.2	VUCA affecting organization performance	29
3.3	Entrepreneurial Leadership	33
3.4	The Role of Entrepreneurial Leadership	36
4	Results & conclusions	41
4.1	Conclusions	43
4.2	Reliability of the research	46
4.3	Suggestions for future research	47
	References	49

Appendices

Appendix 1. Interview questions.

1 Introduction

The year 2020 showed a roller coaster of business performance. It kickstarted with a Covid-19 epidemic, quickly developing into a pandemic placing companies around the globe under significant pressure. What's worse, instead of the pandemic being lifted in a couple of months, we're still affected by the phenomenon in countless ways at the time of this research study at the end of 2021. Consequently, companies lost a lot of business and revenue during 2020, yet on the other hand, the year was reported to be one of the most innovative ones in recent history judged by the Global Innovation Index of 2021 (Jewell 2021). However, this doesn't hide the fact that for example the selection of the world's most profitable and traded companies, in other words, the S&P 500 index, dipped drastically. Bloomberg Markets reports that the net revenue of S&P 500 companies was on average 20 % percentages lower in Q1-Q3 in 2020 if compared to the equivalents of 2019. (Bloomberg Markets 2021)

What could begin to reason the phenomenon that made companies around the globe report record low net revenues in 2020, and yet there seem to be evident positive effects? Having followed the development of Entrepreneurial Leadership in contemporary society, this question intrigued the Enterprising Individual in me. In brief, the answer could stem from entrepreneurially oriented leadership in the changing world also explained by the VUCA framework. Entrepreneurship is not only about founding a company, but also a holistic mindset and a way of acting (Drucker 1979). Hereby, the goal of this research is to address why the current leadership is insufficient, why companies need to act as we speak and how Entrepreneurial Leadership can harness vision and ownership to benefit business performance.

1.1 Background and objectives

VUCA is an acronym that consists of Volatility, Uncertainty, Complexity, and Ambiguity. It is one description of the world where we currently live and practice business in. The core of VUCA is to reason why the current circumstances are troublesome for business practices, and what dimensions construct the wholeness. The main thesis of VUCA is that due to disruptive development in industries across the world, we have entered a spiral of

accelerating circumstantial change. This requires companies to observe the environment and react to its changes rapidly. (Bennett & Lemoine 2014; Millar, Groth & Mahon 2018) Of course, it makes the business as usual exponentially more complicated.

One way of unraveling the pressure of the business environment is to turn towards leadership. As the circumstances have shifted and keep on shifting, contemporary leadership seems to be lacking even though we have agile organizations and a lot of fast-evolving industries (Ferreira, Coelho & Moutinho 2020). In other words, the leadership models haven't been updated to match the requirements set by the VUCA world. Elaborating, VUCA is enabling, or forcing, a chance to the 21st-century leadership styles. This can enable more agile and future resilient companies. Moreover, the missing piece of leadership could stem from the entrepreneurship academia, which has developed as its entity but offers fresh ideas on how to act on the enabled change, **Figure 1**.

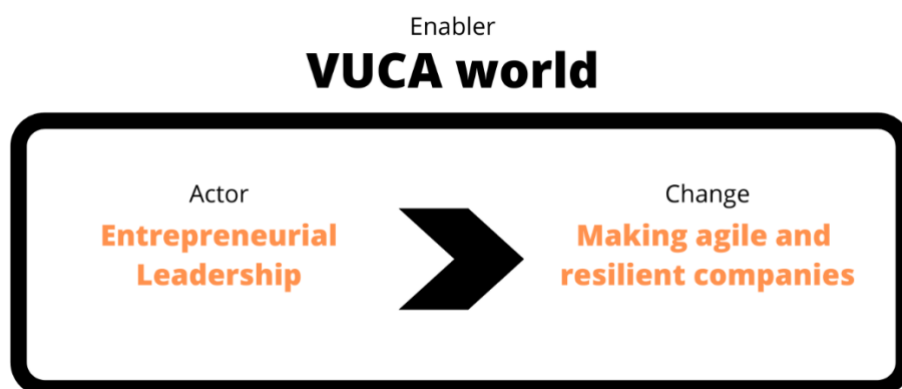


Figure 1. The dimensions of the leadership shift.

Entrepreneurial Leadership (EL) came about in the 1970s, and its purpose is to take a group of individuals towards the common goal utilizing entrepreneurial skills and capabilities (Leitch et al. 2013). The important part about EL are the components coming together to form an entrepreneurial leader; they usually originate from strong cognitive abilities (Gottfredson 1997; Shepherd & Patzelt 2018, 1-7) and a conscious individual will to take ownership and change things favorably (Shook, Priem & McGee 2003). Big corporations tend to struggle with the lack of interest in the company mission, and as an undesirable result, employees go for other kinds of incentives, like compensation or societal acceptance (Hansen & Levin 2016).

The current level of Entrepreneurial Leadership in organizations is ambiguous. However, there are multiple applications of similar skillsets and intentions that go behind the framework. The most prominent example is innovation work, which inherently attracts entrepreneurial individuals due to the nature of the work, such as sensing the market changes and creating something novel (Berkhout, Hartmann & Trott 2011). Thus, innovation medium makes an attractive lens for the research of finding whether Entrepreneurial Leadership could answer the need for new leadership for the 2020s. Furthermore, the goal of this research is to lay the groundwork for the private sector and answer why adapting Entrepreneurial Leadership into the company culture is beneficial.

1.2 Research problem and limitations

The research focuses on capturing the role of entrepreneurship in creating future-proof business performance. This means characterizing the position of Entrepreneurial Leadership in the entrepreneurship academia, as well as finding the companies' key issues in the VUCA world. The innovation point of view is utilized to gain sophisticated knowledge of how applicable EL is to wider dissemination in organizations.

The main research question is:

- How does Entrepreneurial Leadership help companies to succeed in the VUCA world?

The answer is approached with three sub-questions:

1. What challenges does the VUCA world set on company success?
2. How does Entrepreneurial Leadership affect company success?
3. What can be applied to organizational management from the Entrepreneurial Leadership of innovation?

The research is conducted with qualitative research and three thematic interviews, with the research objects coming from a strong innovation background. Structurally the research opens with a literature review, where the relevant theoretical frameworks are studied to form a hypothesis to carry to the empirical section. Furthermore, the qualitative research aims to

find concrete evidence of the hypothesis. Lastly, the research ends with results and conclusions, also including an analysis of the reliability of the research and suggestions for future research.

The thesis has multiple limitations, especially on the theory side. Leadership academia has multiple branches and implications, yet this research only focuses on the conceptualization of Entrepreneurial Leadership. The reason for this limitation stems from the novelty value of the topic in the current pairing with VUCA. Continuing, there are also no other theories utilized to describe the state of the world. The acronym and framework behind it have timely value, as Covid-19 is one of the most drastic changes in recent history, and it is a prime example of VUCA.

There is also a geographical limitation. The main lens of business world trends, leadership styles, and company culture are examined through the Western World point of view. There are drastic differences in company cultures and for example strategic work outside of the chosen area (Dorfman 1997), hence the findings do not apply to other business areas as they are. Also due to the focus on the private sector, the research doesn't cater to the topics of public sector and policymaking. For example, research to business is one implication of entrepreneurship in public organizations, but for the time being, Entrepreneurial Leadership is not extended there.

The last limitation is related to the characterization of business performance. To rationalize the scope of this research, the metrics and indications of successful business performance are taken as stated by the associated literature. From the financial point of view, the most recognized performance success factors are the return of investment, net profit, sales, and increased share price (Neely 2007, 12-25; Simon et al. 2015). In addition, market share, product leadership, employee creativity and development, and a balance between short- and long-term goals are widely noted performance drivers (Neely 2007, 27-28; Luftig & Ouellette 2012, 15). Another factor brought up by Luftig and Ouellette (2012, 40-43) is the importance of customer satisfaction, and how materialized customer value correlates to favorable company performance. Also, the general satisfaction and retention of key stakeholders, like customers and employees are noted as important non-financial metrics

(Simon et al. 2015). Concluding, when this research refers to successful business performance, these recognized success metrics lay the framework for the discussion.

2 Literature review

The section of the literature review examines the relevant body of knowledge related to the major theoretical frameworks comprising the makeup of this study. Here the characteristics and position of Entrepreneurial Leadership are conceptualized throughout understanding the landscape of entrepreneurship in companies. Secondly, the study dives into the other major framework, VUCA, which concludes and rationalizes the current state of the business environment. After these guidelines, the review turns to a few selected applications of Entrepreneurial Leadership across academia. Lastly, this section ends with hypothesis development, which will be carried to the empirical part of the study.

2.1 The position of Entrepreneurial Leadership

Entrepreneurial Leadership gained mainstream research attention during the 1980s. Since then, and especially in the new millennium, there has been a growing emphasis on the need for Entrepreneurial Leadership by leaders across industries, educators, and researchers. The phenomenon has resulted in multiple iterations and descriptions of what entrepreneurially aligned leadership is and how it can be identified. Most often the characteristics and reasonings of the phenomenon can be found from the business research and behavioral psychology studies; there are multiple recognized descriptions of entrepreneurship in business and leadership contexts. Moreover, the literature portrays multiple levels of integrating entrepreneurship into business operations. Most often the emphasis starts from the Enterprising Individual (Antonakis & Autio 2006, 189), that is the basis of the development of Entrepreneurial Leadership and Management (Drucker 1985, 143-146), which can ultimately lead to an Entrepreneurial Orientation in the company and ultimately to Strategic Entrepreneurship (Wiklund and Shepherd 2003; Hitt et al. 2011),

Table 1. This chapter captures the essence of each entity, and how they form the common theoretical framework and position of Entrepreneurial Leadership.

Table 1. Descriptions and levels of entrepreneurship in business and leadership context: the whereabouts of Entrepreneurial Leadership.

The level of integration	Description
1. Enterprising individual	<ul style="list-style-type: none"> • A conscious state of mind and willingness to identify opportunities (Shook, Priem & McGee 2003) • Need to convince stakeholders about the value of their vision and transfer it to action (Antonakis & Autio 2006, 189)
2. Entrepreneurial Alertness	<ul style="list-style-type: none"> • Psychological and cognitive capabilities of Enterprising Individuals; base for opportunity recognition (Lanivich et al. 2022)
3. Entrepreneurial Cognition	<ul style="list-style-type: none"> • Teaching cognitive abilities related to problem-solving, comprehending complex entities, and abstract thinking (Gottfredson 1997; Shepherd & Patzelt 2018, 1-7)
4. Entrepreneurial Mindset	<ul style="list-style-type: none"> • Characterizes the individual attributes and behavioral models that are included in the Entrepreneurial Mindset (McGrath & MacMillan 2000, 7)
5. Entrepreneurial Management	<ul style="list-style-type: none"> • A management structure for entrepreneurship (Drucker 1985, 143-146) • A systemic approach to implement entrepreneurial opportunity identification & culture at all organization layers (Osiyevskyy, Radnejad & MahdaviMazdeh 2020)
6. Entrepreneurial Orientation	<ul style="list-style-type: none"> • Organization-wide entrepreneurship (Wiklund and Shepherd 2003) • Innovation, proactiveness, and risk-taking (Wiklund 1999)
7. Strategic Entrepreneurship	<ul style="list-style-type: none"> • The marriage of strategic management and entrepreneurial skills (Kyrgidou & Hughes 2010) • The company aims to find a balance between competitive advantage and new opportunity seeking (Hitt et al. 2011)

When the topic of Entrepreneurial Leadership is touched, Israel M. Kirzner is often named one of the thought leaders of his time. In his book *Competition and entrepreneurship* (1973), Kirzner laid down the framework for further studies. Since then, Entrepreneurial Leadership (EL) has been defined as the determination to organize a group of people for achieving a predefined common goal with the utilization of entrepreneurial concepts like risk

optimization, innovation in the face of new opportunities, personal responsibility adoption, and change management in dynamic environments (Leitch et al. 2013). Although EL is a relatively fresh concept in academia, it is based on the unification of three older and more established concepts with leadership: Entrepreneurship (Schumpeter 1934), Entrepreneurial Orientation (Miller 1983), and Entrepreneurial Management (Stevenson 1983). In simplistic terms, EL accentuates combining strategic leadership components with entrepreneurial elements in a way that they together support the development of enhanced capabilities for continuous value creation within the company. In consequence, entrepreneurship can form a fundamental base for a competitive advantage and the growth of innovation capabilities in firms of all sizes that are oriented towards leadership and excellence (Gupta et al. 2004).

EL is not a new framework, rather, it's crafted from a wider set of entrepreneurially aligned theories in management and business. Broken down to pieces, first and foremost, EL roots down to individuals. The starting point of entrepreneurial activities is venture creation, where the Enterprising Individuals (EI) interact with the environment and thus create ventures as a direct outcome of their entrepreneurial actions. From the individual point of view, the starting point is entrepreneurial intention. It is a conscious state of mind which results in active opportunity search and discovery. To be more specific, ideas are not ready to be discovered, instead, the individual analyses market trends and how different goods and services are valued at certain times. The next step is to choose whether the opportunity is seized and how that should be done. (Shook, Priem & McGee 2003) The importance of individual intent and ownership seems to be a significant starting point for entrepreneurial activities. Moreover, the difference-making EI characteristics are the ability to convince stakeholders, as well as turn vision into transformation (Antonakis & Autio 2006, 189). Furthermore, Entrepreneurial Alertness (EA), the distinctive ability to identify idiosyncratic opportunities for business development, has been associated with EI in the more recent studies. Lanivich et al. (2022) suggest that EA adds to the psychological and cognitive characteristics of Enterprising Individuals. Together EI and EA form the basis on how individuals spot opportunities and why that is crucial for enterprising actions: they point out the importance of individual cognitive abilities for venturing.

The link between cognitive and entrepreneurial abilities has been discovered on the other side of the field as well. Interest in EL has also spurred numerous subcategories within the

same subject area such as Entrepreneurial Cognition (EC) and Entrepreneurial Mindset. EC deals with all the relevant cognitive abilities and knowledge structures that people use to make assessments, judgments, or decisions involving opportunity evaluation and growth. In brief, cognitive abilities characterize individual mental capabilities related to problem-solving, abstract thinking, experience-based learning, and the ability to comprehend complex ideas (Gottfredson 1997). Through motivation, attention, identity, and emotion, EC research tries to teach these thought models to individuals that don't possess them inherently (Shepherd & Patzelt 2018, 1-7). Hence, achieving the characteristics of a developed entrepreneurial leader comes available to the whole organization.

Entrepreneurial Mindset (EM), on the other hand, refers to the specific set of beliefs, knowledge, and thought processes that constitute the entrepreneurial behavioral models (McGrath & MacMillan 2000, 7). The main part of the research focuses on why some individuals can identify opportunities, while others can not. Commonly shared EM concepts don't exist. Instead, EM has multiple descriptions from individual points of view. For example, McGrath and MacMillan (2000, 15) propose EM to be an ability to identify, act and mobilize opportunities rapidly under uncertain circumstances. Baron (2014) suggests that entrepreneurial individuals connect unrelated patterns. The third point of view is from McMullen and Kier (2016, 664), who bring in the goal of striving for pleasure through maximum achievements in an individual's entrepreneurial actions.

The next natural level of entrepreneurial activities is how the framework develops when the focus is lifted from individuals to a wider company aspect. The base component, Entrepreneurial Management (EM), can be simply stated as the act of giving entrepreneurship a more solid management structure. In practice, it involves the ability to seek out abnormalities in the business environment and reallocate current resources to exploit and develop plans for the future possibilities more efficiently (Drucker 1985, 143-146). Furthermore, EM describes an enterprise culture where a systemic identification of novel opportunities is allowed, followed by utilizing the opportunities at hand to the max. For this to come about, entrepreneurial thinking must be implemented and prioritized at all levels of the organization. A successful adaptation of EM has fruitful results – the CEO and executive team are not the only sources of creative business ideas. (Osiyevskyy, Radnejad & MahdaviMazdeh 2020) However, a fully functional EM has multiple challenges, the most

prominent of which stem from the nature of entrepreneurial activities and their lack of scalability (Mazzarol & Reboud 2020, 45-60). A successful technique for entrepreneurial idea generation in one company doesn't necessarily translate to another industry, while there's also a lack of executive training targeted to entrepreneurial thinking. This results in insufficient entrepreneurial culture, which even the best entrepreneurially oriented tools can't mend. (Osiyevskyy et al. 2020)

A competing firm-wide conceptualization of entrepreneurship was originally coined by Schumpeter (1934) when he defined it as the willingness to convert a new idea into a successful innovation. This process was in turn the chief reason for the development of local, regional, and national economies. In the present age, entrepreneurship has been identified to be one of the defining factors in established firms being beset by competition. For entrepreneurial qualities to prosper within a company, its Entrepreneurial Orientation (EO) is utterly important. In practice, it is a concept that describes entrepreneurship as an organizational attribute. EO consists of three dimensions (Innovation, Proactiveness and Risk-taking), all of which can be assessed in their level of entrepreneurship. Companies that categorize highly on EO can adapt their capabilities swiftly to meet developing competition through flexible resource utilization. (Wales, Covin & Monsen 2020) Essentially, this means that entrepreneurially oriented companies can adapt their organizational structure by effectively allocating their current capabilities continuously into new areas, while simultaneously enhancing the current ones. This allows them to shift quickly onto emerging new products/markets and discontinue current ones (Ghoshal & Bartlett 1996).

Finally, the most sophisticated level of entrepreneurial integration on a company level arrives at the marriage of Strategic Management and Entrepreneurship. When touching the implementation of the Entrepreneurial Mindset and Leadership, there's a recognized framework, Strategic Entrepreneurship (SE). The vocal focus point of SE is to integrate strategic and entrepreneurial management for attaining a balance between maintaining competitive advantage, while also identifying and utilizing new business opportunities. The framework aims to provide an understanding of how established companies can successfully become more entrepreneurial. (Hitt et al. 2011) The core of SE is creating competitive advantages and wealth with the tools of Strategic Management and entrepreneurial virtues; even though the frameworks of entrepreneurship and strategic management have developed

individually, there are multiple points of connection. The relation between these two is that entrepreneurial skills are beneficial to identify and exploit opportunities, whereas strategic management focuses on creating and sustaining competitive advantages from the identified opportunities. Hereby SE enables firms to act strongly on two fronts: both staying competitive, as well as actively finding new competencies. SE stays relevant the whole duration of the organizational life cycle, since the driving components of SE are 1) opportunity identification, 2) innovation, 3) acceptance of risk, 4) flexibility, 5) vision, and 6) growth. (Kyrgidou & Hughes 2010)

Thus, we arrive at the concept of Entrepreneurial Leadership, and what is its relationship to the rest of the entrepreneurial framework. The basis of EL was already characterized at the beginning of this section. However, based on the literature review, a more applicable approach would be what kind of Entrepreneurial Leadership is needed to fill in the gaps left behind by the other theoretical frameworks. Such further development is natural to the EL framework, as it is based on multiple different entrepreneurial frameworks; the **Figure 2** pictures the here analyzed relationships between different theories.

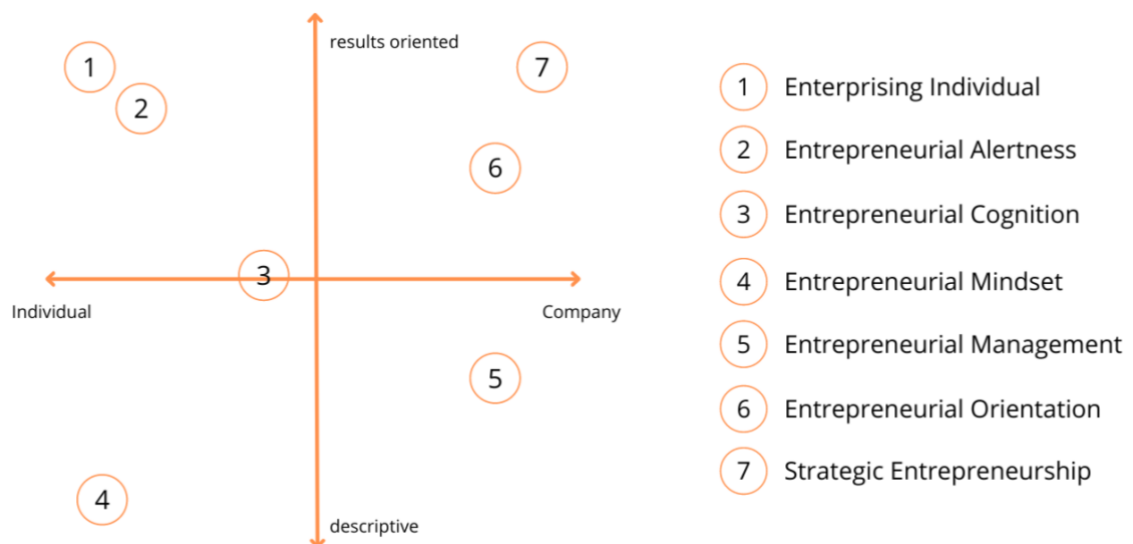


Figure 2. The position of entrepreneurship in business settings.

Based on the analysis, a suitable frame for Entrepreneurial Leadership can be found from points of discontinuity. Whereas theories are describing the importance of individual characteristics and a company-wide application of entrepreneurial activities, leadership

could benefit from an approach to best cater to the Enterprising Individuals and how to harness those capabilities for company-wide transformation. Notable points are also the enabling factors of Entrepreneurial Leadership – here the central question is how to allow Entrepreneurial Mindset to spread inside the organization. Without Enterprising Individuals and Alertness, the creation of Entrepreneurial Orientation and Strategic Entrepreneurship become irrelevant. Here the part of EL is to enable venture creation, experimenting with ideas, mending decision-making skills, and emphasizing the importance of ownership. Hereby the focus of Entrepreneurial Leadership needs seem to point towards the middle management of organizations and how an enabling entrepreneurial culture can be crafted; this finding is carried throughout the rest of the literature review to understand how it fits the topic matter.

2.1.1 Learning Entrepreneurial Leadership

As brought up during the literature review on Entrepreneurial Leadership and Cognition, one interesting part of EL is to enable learning entrepreneurial skills and thinking. Individuals aren't necessarily born with superhuman alertness and applicable skills, they must be developed (Shepherd & Patzelt 2018, 1-7). The topic of entrepreneurial learning has interested various individuals in academia since entrepreneurship is arguably unattainable to learn from traditional education – yet the entrepreneurial virtues provide an opportunity for more adaptive organizations (Hitt et al. 2011). McMullen and Shepherd summarize the phenomenon, stating that everyone would engage in entrepreneurial action if they only knew how to escape the ignorance caused by uncertainty.

Established researchers in the field of Strategic Management, Strategic Entrepreneurship, and Business Development came together to map out the architecture of entrepreneurial learning. Holcomb, Ireland, Holmes and Hitt (2009) suggest that entrepreneurial learning constitutes linkages among heuristics, knowledge, and action. This is reasoned by psychological findings of decision-making: under uncertainties, which enterprising individuals should learn to leverage, humans most likely rely on simplified strategies to avoid complex cognitive operations. The authors also argue that entrepreneurial learning occurs while the subject inherits more knowledge from direct experiences, assimilating new

information using heuristics and linking it with the already acquired information. This is described as a process where the environmental learning context provides both experimental (first-hand experiences) and vicarious (second-hand experiences) learning processes, which result in entrepreneurial knowledge. With the newly acquired knowledge, the subject makes decisions guided by heuristics, after which the outcomes add on the environmental context itself, creating further learning opportunities. (Holcomb et al. 2009) Furthermore, entrepreneurial individuals can acquire new dynamic capabilities and entrepreneurial skills from successful events (Ucbasaran et al. 2003).

Judging by the findings of Holcomb et al. (2009) and Ucbasaran et al. (2003), entrepreneurial learning seems to be relatively hard to initiate by traditional education. Coming outside of academia, Nick Petrie, a Senior Faculty member at the Center for Creative Learning, emphasizes the gradual development of entrepreneurial thinking and skills to address entrepreneurial learning. Petrie (2013) approaches the subject through cognitive capabilities. To adapt to the changing business environment, the key entrepreneurial “skill” to develop is one’s thinking capability, which is referenced as Vertical Development, while traditional skill-acquiring learning is called Horizontal Development. The topic has also gained interest from some researchers explaining the need for change in traditional leadership (Jones, Chelsey & Egan 2020). The basis of Vertical Development lies in behavioral and developmental psychology, emphasizing the importance of socio-emotional and cognitive sophistication (Kegan 1982, 15; Torbert 1987, 27). Vertical Development requires long-term learning, as an individual’s cognitional development takes time. What’s noted successful, interdisciplinary collaboration and constantly being exposed to novel challenges that need a new level of conceptualization enhance Vertical Development and thus entrepreneurial skills in the similar way that Holcomb and others described. (Jones et al. 2020; Petrie 2013)

2.2 VUCA affecting business performance

A rising tide of volatility, uncertainty, complexity, and ambiguity in the business world is changing the nature of competition and business operations. This wholeness can be characterized with the acronym VUCA, unraveling the state of the current business world. For example, globalization has equally created endless opportunities, like novel business models, easily accessible new markets, and increased flow of capital. On the other hand, it

has also introduced new threats, such as cross dependencies, increased competition, and insufficient regulation. (Hult et al. 2008; Cavusgil, Knight & Riesenger 2016, 15-20) Catalysts of the VUCA world are for example trade protectionism, migration, and intergenerational hand-offs; they are both the driver and outcome of disruptive innovation (Millar et al. 2018). This chapter provides a holistic review of the VUCA framework and presents the key takeaways from the business point of view.

VUCA means Volatility, Uncertainty, Complexity, and Ambiguity (Bennett & Lemoine 2014). The VUCA framework arrived in the business world from the military world in the 1980s, when the leadership theories inside and outside business environments called for redirection (Bennis & Nanus 1985, 226-227; Boulton et al. 1982). At the early stages of its research, the dimensions of VUCA were intentionally studied individually (Boulton et al. 1982). Complexity and ambiguity were also introduced to the mix more recently since their importance was short-circuited by both Ettlie and Bridges (1982) and Price (1982) – this was mostly due to ambiguity related to the meanings of the terms themselves. Apart from management research, the acronym has also been used to describe political environments; the rapidly changing circumstances call for conceptualization across industries and society. Elaborating, VUCA has found its distinctive way to the scholars and researchers of the business world in the 2010s. The emergent Covid-19 crisis has risen the relevance of the framework: it helps characterize the acceleratingly complex ecosystems and business environments, that can oppose businesses to unexpected new challenges on any occasion.

Volatility, Uncertainty, Complexity, and Ambiguity present unique challenges to business performance, and thus, to leadership. On the other hand, all the four elements also provide business opportunities when identified correctly – each principle requires distinctive responses. While VUCA can offer a more tangible framework to the changing business world, it can also lead to oversimplification. If VUCA is only seen as a general characterization of the unavoidable and unsolvable circumstances, organizations will lack actions to solve the problems they are facing. For this reason, VUCA can be used as an excuse to avoid thorough planning and acting (Millar et al. 2018). Nevertheless, it is also possible to misread the business environment and address the VUCA-related problem with the wrong approach. (Bennett & Lemoine 2014)

Holistically speaking, VUCA can help the strategic planning process to get a grip of what is happening in the world we live in. Ultimately, successful business means adapting to the ever-changing business environment as fast and as profitable as possible. The first metric of VUCA is Volatility, **Table 2**. It means unstable changes, which are commonly seen in the business world. Most of the time when VUCA is brought up in business settings, the issue at hand is related to volatile situations. (Bennett & Lemoine 2014) Volatility characterizes the speed, volume, and dynamics of the change (Horney, Pasmore & O'Shea 2010). For example, petrol pricing has changed drastically over the years, and predicting the next price change, its intensity and duration is unsure. Quick changes logically threaten company profitability: firms might over-adjust in volatile situations or not be prepared enough.

Table 2. The dimensions of VUCA (Bennett & Lemoine 2014; Millar et al. 2018).

	Characteristics	An example
Volatility	Unstable changes Information and understanding of the situation are available, but the change itself is frequent and unpredictable	Volatile commodity pricing in the 21st century: quick changes, for example, in petrol prices after natural disasters
Uncertainty	Unsure effects The cause of the effect is known, but the severity of the meaningful effect is unknown due to a lack of information	Terrorism in the 21st century has understandable root issues and causes, but the time and place of the next attack are unknown
Complexity	Unknown relevance of factors A multiform network of interconnected parts is apparent; information can be predicted, whereas the intensity or relevance of said information is not	Internationalizing business operations, such as moving to a new market, includes a complex web of possible issues regarding laws, tariffs, and logistics
Ambiguity	Unsure cause effects Predicting changes is hard due to lack of knowledge to paint the whole picture of root issues and effects	Transformation from print to digital media, where the whole industry changed drastically due to shift in customer preferences

Uncertainty, on the other hand, describes a situation where the change-making factors are known, but the relevance of the effect itself is unsure. In addition, the situation involves various moving parts. Compared to Volatility, **Table 3**, where the change seems evident, an uncertain situation questions whether the change at hand is relevant enough to cause a

significant effect. (Millar et al. 2018) Furthermore, the lack of predictability of the importance of the change brings business challenges. Getting ready for a change, that might not have any significant importance, ramps up unnecessary costs.

Table 3. The characteristics of the four dimensions of VUCA.

	The change is known to happen	The change is relevant	Factors causing the change	Relevant components that change	Understanding of the situation	Enough information
Volatility	known	known	unknown			
Uncertainty		unknown	known			unknown
Complexity				unknown	known	known
Ambiguity	known	known	unknown		unknown	unknown

A Complex situation consists of multiple interconnected parts. There is no unpredictable change in the horizon, but the matter is an interconnected network of trends, issues and threats surrounding the organization (Horney, Pasmore & O'Shea 2010). In complex situations, the company is facing multiple factors possibly affecting the company's success, yet the relevance of each factor is unsure due to a lack of information. The risk here is to not fully understand the importance of future challenges and thus not allocate the company resources where they should be targeted. (Bennett & Lemoine 2014) One Covid-19 related novel and complex challenge is the unreliability of supply chains. The company might be unsure whether to invest in its own production facilities for semi-finished products, find alternative delivery channels or strengthen current supplier relations.

Lastly, Ambiguity highlights the uncertainty of causes and effects. Compared to Uncertainty **Table 3**, where the causes of changes are known but the severity of the effect is not, in ambiguous situations there is little reliable information on what is ought to happen. The issue at hand often happens in a new market or when a novel product is introduced. One example of this is the Blue Ocean Strategy describing a new industry, where competition does not exist yet and the emerging customer needs are not met; the first company trying to match the need might succeed or miscarry (Kim & Mauborgne 2005, 3-16). However, the detrimental

decision to make in such an ambiguous situation is to wait too long for more information to appear, since then the act is already too late.

2.2.1 Ways to adapt to the VUCA world

For businesses to cope in the rapidly changing VUCA business environment, there is a call for the application of new concepts and frameworks. This means moving from linear processes to holistic problem solving and systemic thinking. (Mack et al. 2015) Each dimension of VUCA – Volatility, Uncertainty, Complexity, and Ambiguity – call for different measures from companies. Characterized by Bennett and Lemoine (2014), the key actions in a VUCA environment are Agility, Information, Restructuring, and Experimentation.

First off, agility is the main point of direction in Volatile situations. It means devoting resources to enhance the company's agility, in other words building a buffer to ensure future flexibility. Information, on the other hand, is useful while coping with Uncertainty. On a practical level this could mean driving open innovation, boundary-spanning collaboration inside the organization, or establishing new collaboration models. Restructuring answers issues presented by Complexity; research shows that companies introducing new company structures to match the changing conditions outperform their stagnant competitors. Lastly, Ambiguity can be coped with experimentation. In an ambiguous environment, the most cost and time-effective route is to opt for experimentation to understand the company's target audience and other stakeholders in a comprehensive manner. Even though experimentation is not easy or cheap so to speak, it's less risky than taking the whole company towards a new direction without knowing the true nature of the circumstances. (Bennett & Lemoine 2014)

On top of Bennett and Lemoine, the recent publications suggest other ways to adapt to the VUCA world. Interesting propositions can be found especially right before and during the Covid-19 pandemic. For example, Worley and Jules (2020) point out how despite the call for agility and sustainability during the 21st century, organizations didn't have the means to respond to the pandemic. One of the most painful findings is the insufficient scenario work to prepare for VUCA fragilities forecasted by the academic and science worlds; pre-

pandemic, established organizations settled for munificence instead of asking the question “what if”. Even though fast pandemic responses were seen across industries, the focus should be shifted towards what was successful improvisation, and what is repeatable adaptation capability. One of the root issues to the topic at hand seems to be the rewarding systems of companies: leaders are rewarded for successful action, whereas agile enterprises should reward learning. Nonetheless, companies should invest in scenario planning, and deeply embed learning into the organization culture. (Worley & Jules 2020)

From the leadership point of view, Chawla and Lenka (2018) introduce two different leadership styles for companies to sustain in the VUCA world: transformational and resonant leadership. According to the authors, the need for both leadership styles stems from the importance of implementing fresh perspectives, disrupting old beliefs, and increasing organizational flexibility and creativity. Furthermore, organizations should implement a “learning organization” culture, where knowledge sharing and experimentation are focus points. (Chawla & Lenka 2018) The learning organization approach is not new, since for example Argyris and Schön discussed the concept in 1995, describing a need for continuous organizational learning to reach desired goals. However, the contemporary circumstantial pressure by VUCA is higher than ever. Transformational (TL) and Resonant Leadership (RL) both have attributes that help in achieving a resilient learning organization. For example, TL emphasizes the importance of intellectual stimulation, inspirational motivation, and individual consideration. RL on the other hand highlights vision, compassion, and a positive atmosphere in the company. A transformational leader recognizes the need to change and empower employees by creating a common vision. On the other hand, a resonant leader was perceived as easier to follow by the subordinates due to the emotional closeness. (Chawla & Lenka 2018) Moreover, the majority of these leadership needs were also identified in the section characterizing the position of Entrepreneurial Leadership.

Another interesting lens to business performance in the VUCA world sprouts from change management. As change is evident in the VUCA circumstances, Pearse (2017) suggests different approaches to design planned change. The demand is evident: up to 70 % of change programs go under (Kotter 1995; Self & Schraeder 2009; Todnem 2007), and at the time of rapidly accelerating business environment the likelihood of failure is even higher. The most common issues of change management are lack of vision, missing a sense of urgency,

catering for short-term wins, and not systematically embedding the changes in the company's operations. Instead, it is sufficient to accept the ever-changing business environment and create methodologies that provide for constant organizational change. Yet again, Pearse brings up a familiar conclusion: instead of incremental or transitional change, companies should aim for transformational change where the core identity and purpose of the company change. Especially in the VUCA world, rather radical changes are needed from organizations to maintain their profitability: leaders need to adapt the complexity thinking and enable their organizations to gain information about the environment sufficiently. These are achieved by resource-based focus areas, such as visionary leadership, organizational change capacity, learning agility, and intellectual capital. Furthermore, it is crucial to create a sense of purpose, emphasize systemic thinking, and create a culture of knowledge sharing, innovation, and accountability. (Pearse 2017)

2.2.2 Entrepreneurial Leadership and business performance

In the face of surging competition for critical resources amidst the larger complexity and volatility than ever, literature onward from the '90s (Bettis & Hitt 1995; Rauch et al. 2009) has showcased the increased ineffectiveness of the traditional leadership methods, which has resulted in a pivot to more entrepreneurial approaches. Based on the literature today, EO and EL do not only improve a firm's capacity to face uncertainty but they can be considered a necessity for adequate long-term survival (Covin et al. 2006). Although a moderate relationship between Entrepreneurial Leadership and business performance has been found, its presence in literature isn't unanimous.

Rauch et al. (2009) conducted the largest literature review on the subject consisting of 51 studies on EO and business performance including 14 259 different companies during the period of 1980 – 2008. From all the studies combined a statistically significant moderately large correlation ($r = .24$) was found between perceived business performance and EO. The authors then looked at the effect of company size, industry, and company location. In terms of size, the largest correlation ($r = .35$) was found in micro (1 to 49 people) firms, following up with the large ($r = .24$) and small businesses ($r = .2$).

It was concluded that the effect was highest in micro size established firms since they achieve the largest benefit from their size, due to increased flexibility and the absence of middle management. However, the lower correlation in small in comparison to large firms was attributed to the fact that companies that have grown out of the microphase already employ established operating models, from which the benefit of inducing more EO wasn't as grave. The large companies by nature gained a larger benefit due to their rigid structure and undynamic nature. From the point of view of industries, high-tech industries benefitted significantly the most ($r = .4$), confirming the fact that the importance of applying EO rises with more complex, dynamic, and volatile environments, which highlights its importance, particularly in the future. In terms of geographical location, no significant correlations were found, and it was deemed that EO has similar importance within different cultural contexts. (Rauch et al. 2009)

More recent studies have only confirmed these existing findings with size being an important moderator of EO's effectiveness. Núñez-Pomar et al. (2017) studied the business performance of Spanish sports firms and reported the largest benefit in small companies. Kraus et al. (2012) found comparative results in the Netherlands but added that this performance increase by EO only becomes more relevant in turbulent times. Buli (2017) achieved similar findings on an emerging market while investigating over 170 Ethiopian firms. In addition to their increased performance, firms that assimilated EO early on had a greater degree of competitiveness in complex global markets in addition to superior performance in the volatile domestic market. To conclude, a moderate correlation can be found between EO and business performance. This correlation only seems to rise as the dynamism and complexity of the environment increase. This suggests that regardless of company size, maturity, location, and industry, benefits can be gained by obtaining Entrepreneurial Leadership methods, especially within increasingly turbulent times, environments, and economies.

2.3 Successful applications of Entrepreneurial Leadership

Based on the literature review, a few entrepreneurial themes seem to appear more than often while adapting to the changing business environment (VUCA) and creating new value to the

organization by identifying opportunities and seizing them (Entrepreneurial Leadership). The goal of this part of the literature review is to 1) find successful applications of similar findings in related fields of research, as well as 2) validate the findings of the previous sections to finally formulate a hypothesis in the last chapter, 2.4.

When thinking of related fields where like-minded results could be found, innovation work is one of the most evident applications of Entrepreneurial Leadership. Because of the nature of innovation work, the field benefits from Entrepreneurial Mindset and action. Both innovation and entrepreneurial actions create new solutions out of thin air to address any given societal or business challenge. This type of work calls for novel ways of thinking, as well as actors with an Entrepreneurial Mindset – be it innovators, entrepreneurs or intrapreneurs. (Karlsson, Rickardsson & Wincent 2019) Interestingly enough, based on research by Subotic et al. (2018), innovators possess developed key characteristics that are also vital for entrepreneurs, such as motivational factors, social capacity, and vision. Moreover, organizations that put efforts into product and business model innovation in the VUCA world also promote entrepreneurial leadership in top management teams (Shoemaker, Heaton & Teece 2018) Moreover, Shoemaker et al. (2018) suggest that the VUCA world requires bold innovation; they are the only way to break the companies' reactive approach to change.

A concrete example of the joining of innovation and entrepreneurship is the Cyclic Innovation Model (CIM), **Figure 3**. Introduced in 2007, the model characterizes four different lenses coming together: 1) Technological change, 2) Product development, 3) Market transitions and 4) Scientific research. The center point of the model is Entrepreneurship, which is portrayed as the source of new information and ideas. The reasoning behind the model was to fill the gap between innovation and entrepreneurship, which had long been identified as a key factor of companies' innovation management. Also, the current innovation models were insufficient as they didn't recognize the strategic issues at hand. Some of the needs also stemmed from the industry change from manufacturing-centered business to service-oriented R&D. (Berkhout et al. 2011)

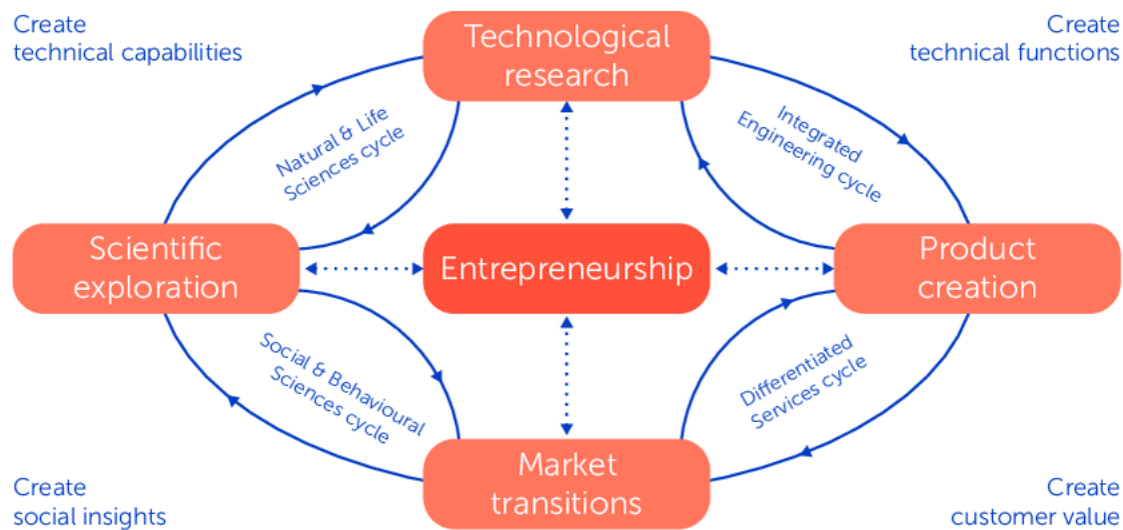


Figure 3. The Cyclic Innovation Model (Berkhout et al. 2011).

What's noteworthy in CIM is the emphasis on the cross-disciplinary open innovation arena, where entrepreneurship is the driving force of value creation and innovation: without the entrepreneurial drive, there is no innovation, which leads to no new business. Furthermore, the CIM characterizes entrepreneurship as the basis of innovation. (Berkhout et al. 2007) Thus, cyclic innovation is a meaningful example of the creation of internal entrepreneurially aligned environments. Also related to the management side, Berkhout et al. (2011) call for a change in the organizational culture as disciplinary extensive boundaries exist and thus prevent the empowerment of innovation processes and innovation circles. The importance of diversity in innovation has been researched in an accelerating manner, and there have been multiple correlations between diversity and successful innovation work (Van der Vegt & Janssen 2003; Qian, Cao & Takeuchi 2012; Subotic et al. 2018).

Furthermore, the importance of entrepreneurship seems to be applicable outside of the Entrepreneurial Leadership entity, as innovation management showcases. The next tempting questions are 1) how significant these findings could be in the eye of organizational performance if applied further, and 2) where can references for further application of these findings be found. Another way around the adaptation of entrepreneurial activities and thinking is Strategic Management, which was already vaguely touched in the section characterizing Strategic Entrepreneurship. If Entrepreneurial Leadership is established as an organizational umbrella term and as a provider for the entrepreneurial tools for renewal, as

introduced at the end of section 2.1, Dynamic Capabilities from the Strategic Management framework could be a feasible extension to the EL framework.

The fundamentals of EL are questioning the current ways of business with the Entrepreneurial Mindset and adapting the organization to these changes, as the CIM framework also underlines. Introduced by Teece, Pisano & Shuen (1997), Dynamic Capabilities describe the organization's ability to integrate and reconfigure its internal competencies and adapt to the changes in the environment. Furthermore, short-term competencies should be utilized to create long-term competitive advantage. The authors also suggest that the new opportunity identification alongside organizing the company to effectively embrace them is more important for business performance than engaging in traditional strategy work. Here strategy work follows the lines also introduced in Porter's Five Competition Forces framework (1979), such as excluding new entrants and keeping competitors off-balance.

Entrepreneurship does not exist without action, and action does not happen without innovation. This is the key logical path behind the way from Innovations to Entrepreneurial Leadership, and further to Dynamic Capabilities. Dynamic Capabilities provide the framework for an organizational structure that emphasizes agility over stagnation. To dig deeper into the offering from Dynamic Capabilities, Teece et al. (1997) introduce other sub-capabilities to provide for opportunity recognition and organizational agility. These are enabled by capabilities to:

- 1) sense and shape the opportunities and threats at hand,
- 2) utilize the opportunities, and
- 3) maintain competitiveness by enhancing, even reconfiguring, the firm's tangible and intangible assets.

However, the Dynamic Capabilities are no silver bullet to organizational glory. The most important part is to keep exploring; the art of entrepreneurship is not evergreen, and the benefits will succumb as soon as the organization lets go of entrepreneurial activities. This is also recognized in strategy research as the development of core rigidities, the antithesis of core capabilities. For example, Leonard (1992) describes the development of core rigidities

and organizational stagnation when exploration is forgotten; this paradox of utilizing core capabilities, yet not falling prey to unoriginality, is a risk of innovativeness. The same balance is also studied by March (1991), where the phenomenon is called Exploration versus Exploitation: exploration refers to new opportunities (risk-taking, discovery, innovation) and exploitation to core capabilities (efficiency, execution, production). Organizations make choices allocating resources between the two. What makes the decision-making hard, exploitation has a more certain return of investment (ROI) compared to exploration. Thus, exploitation makes evident financial sense while measuring organizational performance. What's more, individuals tend to adjust to the organizational culture before the culture learns from the individuals. (March 1991) Hence, a need for the emphasis of non-financial metrics is identified.

Despite the risks of core rigidities, Dynamic Capabilities comprise a makeup for further analysis from the point of entrepreneurship. A recent perspective from Knowledge Management affirms that investing in internal knowledge and making outside knowledge spillovers available increase the enterprise's tendency to innovate. In addition, the urgency of aligning multiple elements of knowledge matter, such as organization level, skill composition, and industry alignment, is emphasized in entrepreneurial organizations. (Audretsch et al. 2020)

2.4 Hypothesis development

With the existing body of knowledge spiraling around the phenomenon of creating new business opportunities to stay profitable and agile in the changing business environment, the search for the role of Entrepreneurial Leadership seems ambiguous. Various theoretical frameworks are examining the state of the world, leadership, innovations, strategic management, and knowledge management, wanting to capture an applicable way to operate in an entrepreneurial way, which seems to be the desirable glue between the established and well-working pieces of the puzzle. Based on the literature review, this section develops a hypothesis on what could be the role of Entrepreneurial Leadership, and how that hypothesis is carried to the following empirical section.

Entrepreneurial Leadership and entrepreneurship academia have originated from a different source, as well as developed on their own. The various fields of research highlight multiple important characteristics, applications, and needs for entrepreneurship in business settings. However, the struggling part is how to enable a movement of entrepreneurial thinking and actions on all organization levels in a sophisticated way, one size does not fit all. Elaborating the findings of the literature review, Entrepreneurial Leadership might be successful if used as a tool to transform an organization to the requirements of the 2020s and the ever-changing VUCA environment; especially innovators might produce more sophisticated learnings why EL is suitable for this since the Entrepreneurial Mindset and Management has long been used in the medium. Furthermore, the strategic urgency of entrepreneurship in venturing, and thus, enterprise value creation seems evident.

The interesting part is why hasn't the company culture enabled this to translate to the whole organization, while Strategic Entrepreneurship and Entrepreneurial Orientation highlight its importance. Generally speaking, the core capabilities are utilized well and even too much in contemporary business, keeping the companies from renewing drastically enough. Furthermore, there might be an unpleasant off-balance between aiming towards financial goals and at the same time enabling change with the core capabilities; companies focus too much on exploitation. Adding to the matter, the role of middle management and the general reward systems in corporations seem to be a possible pain point in the equation keeping the EL from materializing. What could be derived from the role of middle management, enabling both Enterprising Individuals to work efficiently, but also acting as a driver for Entrepreneurial Orientation in the organization. Lastly, the importance and impact of EL in company success should only increase, as turbulent times call for EL methods that bring benefits to companies despite the industry, company size, location, or maturity.

Concluding, the main hypothesis passed to the empirical research is that the key to translating Strategic Entrepreneurship to company culture could come from equipping middle management with Entrepreneurial Leadership capabilities, decision-making skills, risk-taking, exploration, vision lead movement, and ownership, as well as widening the horizon of what goals are measured and rewarded. This also calls for supporting structures enabling entrepreneurial learning and scaling company-wide entrepreneurship.

3 Entrepreneurial Leadership in practice

The third main section analyses the role of Entrepreneurial Leadership in organizations utilizing qualitative research. On the structural side, the section opens with an introduction to the research methodology and the theoretical framework of the research method. The following sections focus on introducing the research material and conducting the research, lastly introducing the Role of Entrepreneurial Leadership in 21st-century companies. The goal of the interviews is to gain practical knowledge and reflection on the topic and find analogies and answers to the research questions revealed in the introduction.

The study follows a qualitative research methodology. Qualitative research focuses on understanding the interviewees' experiences to gain information on the topic at hand. Thus, the research material consists of first-hand observations. Most often qualitative research material is collected through questionnaires, interviews, and observations. The research objects are chosen based on experience in the field in order to ensure reliability despite the small sample size. (Hirsijärvi et al. 1997, 192; Tuomi & Sarajärvi 2002, 73-77) Elaborating, the volume of the research material is not the deterring factor of qualitative research. Instead, preferred is an unambiguous analysis of curated research questions covering the topic comprehensively (Eskola & Suoranta 2014, 18).

In this case, the research is conducted with semi-open thematic interviews, meaning that the interviews are half structured. This interview method is applicable especially in topics that do not have one right answer or lack existing systematic research (Hirsijärvi et al. 1997, 2005). In a themed interview, each research object is asked questions related to a determined theme. However, the exact wording and order of questions might differ, which leaves the possibility for follow-up questions. What's important, the interviewee should be as unbiased as possible while conducting the interviews (Eskola & Suoranta 2014, 19-20). Semi-open interviews also enable the interviewer to take the tone of voice or word choices into account. (Tuomi & Sarajärvi 2002, 75-77) This research aims to successfully fill the guidelines and limitations of qualitative research.

Elaborating on the research practicalities, the analysis is based on content analysis, where the goal is to conclude research material based on verbal or symbolic communication. This method is preferred with analysis where the content of the interview is more important than the tone of voice, pauses, and intonation. (Tuomi & Sarajärvi 2022, 110-115) Typically, content analysis is divided into qualitative classes. Due to the limited research material, the main method here was to identify reoccurring themes in the data.

3.1 Introduction to the research material

This chapter introduces the research material, and how the interviewees were chosen. The interviews aim to paint a picture of how innovators think of Entrepreneurial Leadership and innovation, and how those affect business performance. On the other hand, the interviews noted the accelerating VUCA world, analyzing how a disruptive business environment affects entrepreneurial working and innovating. Three individuals were chosen to represent the innovation medium in different industries: one interviewee (A) works in a multinational listed company in the energy sector, another (B) in one of the biggest companies in the Finnish financial sector, and the third (C) in an established publicly administrated company focusing on societal welfare, **Table 4**. All three companies hold a long history, being founded at the end of the 19th and the beginning of the 20th century. The diversity of industries aims to gain a wide understanding despite the small sample size.

Table 4. The background factors of the interviewees.

	Represented industry / sector	Represented company type	Role	Innovation work experience
Interviewee A	Energy	Multinational listed company	Senior Manager, New Business Portfolio	12 years
Interviewee B	Finance	Private company	Head of Emerging Business & Internal Venture	11 years
Interviewee C	Societal welfare	Public administration	Group Manager, IT Innovation	20 years

The interviews were held remotely via Microsoft Teams, recorded, transcribed, and analyzed with qualitative content analysis. The answers were anonymized, and the interviewees are referred to with a gender-neutral pronoun “they” during the analysis. The interview questions, **Appendix 1**, were prepared before the interviews and sent to the interviewees in advance. The order of questions remained the same throughout the interviews, yet additional follow-up questions were introduced during the interview to attain a better understanding of the interviewee’s unique insights about the topic.

3.2 Entrepreneurship in innovation work

The first focus point of the analysis is how the interviewees see innovation. They were asked multiple questions related to their point of view on innovation, and how they would characterize it. Moreover, the goal of this part is to see what innovative characteristics and aspects they bring up, what makes successful innovation work, and lastly, how they see the topics of entrepreneurship and innovation aligning. The main goal of this section is to find similarities and analogies between the innovation-related observations and iterate what general derivations of applicable entrepreneurial skills lay the foundation of Entrepreneurial Leadership and culture. The answers are compared to the Entrepreneurial Leadership and innovation part of the literature review, to find direction to further analyses.

First off, the starting point of the interview is personal characteristics. The direct characteristics the interviewees pinpointed to reason their success as an innovator followed a similar pattern: the keywords included being an enabler for innovation, collaborating, and being open-minded, not fixed on certain assumptions. Moreover, all interviewees touched on the importance of observing and analyzing the surrounding business environment and new information, after which they would draw conclusions to carry on. Interviewee B also highlights risk-taking and finding possibilities, which both turn out to be a combining factor of the interviewees, and how they ended up working with innovations. For example, interviewee A saw an organizational need, as new ideas were not taken care of despite an established tool and took the initiative to make it work. Interviewee C, on the other hand, had gotten fond of finding ideas for innovation from the outside world, which lead them to take ownership of creating novel customer-centric innovation. On the front of

innovativeness, all interviewees portray evident entrepreneurial skills and mindset that were also highlighted in section 2.

The evident connection point of entrepreneurship and innovation was also asked on a separate question towards the end of the interview. Interviewee C highlighted passion and caring about the people, as individuals are catalysts to the people around them. Interviewee C also states that the same characteristics make a good innovator and entrepreneurial individual. The catalyst aspect was also mentioned by interviewee A, who brings up the need for accountability to drive things forward. They also highlight the Entrepreneurial Mindset and Management that are both needed to break silos to see the bigger picture – the drive for going forward could also mean working in various parts of the organization to facilitate integrated collaboration and bringing different aspects together. Interviewee B, on the other hand, feels that because their team focuses on venturing and emerging business, it attracts very entrepreneurial individuals in general. Interestingly, Interviewee B sees incremental innovation as suitable for less entrepreneurial people.

Having laid the foundation, the interviewees were also asked to characterize successful innovation work. The interesting division between the interviewees was based on their home organizations, where interviewee A from a listed company and B from the finance sector went straight into numeric metrics like key performance indicators (KPI) and return of investment (ROI), growing stakeholder value. However, interviewee C first and foremost highlighted the collaboration:

“It’s a good innovation if you can’t first point out who made it because it’s a team effort.”

On top of this interviewee C also described a general innovation process that starts from the interest in the surrounding world, followed by observation. This train of thought follows the theories of Enterprising Individual and Entrepreneurial Alertness. Following up, they also brought up the importance of co-developing and the urgency of maintaining interest in experimentation. Adding to the collaboration side, interviewee A also brought up a quality matrix utilized in their company, which measures how many people collaborated on the innovation, and how the innovative mindset evolves. During the years their company has noticed a gradual improvement in the mindset, as attributes of following through with novel

initiatives, openness to share ideas and the feeling of adequate reward for innovative contributions were measured.

The connection between innovation work and organizational success also gathered quite entrepreneurially inclined observations. For a listed company (interviewee A), the most pressing fact seemed to be the need for an up-to-date portfolio, as customers want to buy goods that hold value. Moreover, to build products that stay relevant amid an energy transition, Entrepreneurial Alertness should be high in the innovation process. Here interviewee C continues with the relevancy topic, as they mentioned the biggest threat of a company in general here to be distancing itself too far away from the environment when the company doesn't succeed to stay relevant due to growth and success. This happens gradually, and the consequences can be detrimental, as was learned when the former pride of Finnish mobile technology, Nokia, failed to see the changes in the environment and eventually offered goods the customers were not willing to use. Interviewee B, on the other hand, took a more philosophical turn, as they compared the differences of industries and their need for innovation: for example, innovation readiness in the insurance sector doesn't seem as crucial as in tech-heavy business, where interviewee A works.

The answers based on entrepreneurship and innovation show that innovation work naturally intrigues entrepreneurially inclined individuals, who pose multiple entrepreneurial qualities, such as risk-taking, open-mindedness, willingness to take ownership, and general problem-solving, to name a few. This underlines the hypothesis of the theory section that innovation work is a good example of entrepreneurially aligned day-to-day activities in established organizations across industries.

3.2 VUCA affecting organization performance

The second layer of the interviews was the changing business environment. The term VUCA was not brought up in the interviews to attain authentic answers, instead, the phenomenon was referred to as the unpredictable and changing business circumstances. Furthermore, this section maps out how entrepreneurially inclined work and mindset adapt to a changing environment. Moreover, the interviewees were asked questions related to the challenges of

innovation work, what kind of pressure it's opposed to, and how the interviewees reflect the most evident change of the last two years, Covid-19.

The first interview question for the section maps out the challenges of innovation work in a changing environment. Interviewee B highlighted insufficient strategy work and poorly made scenario choices – also identified in the theoretical section – which fail to cope with the challenges presented with disruptive technologies, new entrants, and market changes. In other words, they pointed out the practical borders that directly affect innovation work. Interviewee A also touched on the same topic, calling it the confusion in the energy sector around the world. Even though everyone wants to see the energy transition materialize, the way to make it happen in a safe way raises many questions. This also translates to customer hesitation: since the makeup of the transition is unknown, customers are reluctant to make investments for the fear of them turning into strained assets in a few years. Here interviewee A pointed out the need for both creating more flexibility in the organization and strategy work, to bridge the gap between where the company wants to be in 2030 and what is needed to get there.

Other challenges were holistic observations mentioned by interviewee C. They brought up the need for outside-in innovation, which means moving the innovation work from conference room debates to being present at the surface of the change. This is present both in answers from interviewees C and A:

“You can't close up and not care about the change. The outside world won't act as the company wishes. Instead, you should look for weak signals to buy more time for the innovation work.” (Interviewee C)

“You need to work in an innovation ecosystem and branch out to areas that are out of your knowledge area. This movement of working in ecosystems systematically has been developing.” (Interviewee A)

The ecosystems work and being present at the edge of the change essentially try to solve the same issues described by Berkhout et al. 2007 in the Cyclical Innovation Model's cross-disciplinary open innovation arena, where the aim of innovation is to answer to the strategic

needs of innovation, instead of settling for happy engineering. Also, a touchpoint between innovation and profitability was mentioned. Interviewee A described the recent shift of focus from open-ended collaborative innovation towards doing more targeted activities for finding new business opportunities from the space between the core of the company and the outside world. The ecosystems collaboration was beneficial especially here. Interviewee A explained the shift towards this direction by following the idea of exploration and exploitation (March 1991), thus emphasizing the need for a balance between innovation (exploration) and the company's current profitable capabilities (exploitation). The profitability aspect was also elaborated by interviewee C, who highlighted the fear of economic and disruptive changes that demand the company to rapidly find a new way to profitability in changing times.

The logical sequel to the VUCA related challenges is how the most recent global VUCA explosion affects innovation work and what kind of pressure the phenomenon has brought. The first response from all interviewees was how Covid-19 made the actual innovation itself hard due to the lack of face-to-face interactions. Interviewees B and A also mentioned changes in the staff, as innovation workers were put to temporary layoffs or let go completely. In other words, Covid-19 was a phenomenon that disrupted the fundamentals of innovation work (spontaneous interactions, interpersonal contact) and limited the possibilities of innovative solutions due to cost reductions. Though, this measure is short-sighted. Interviewees B and C pointed out the urgent need to follow and react to the new business trends bringing possibilities to the innovation work and business performance, underlining the literary review's consensus of the need for innovative activities in the VUCA world.

"The business trends, such as the growth of e-commerce, reduction in cash payments and movement to digital service platforms, needed to be answered." (Interviewee B)

"Covid has accelerated innovation work: some things that were noticed pre-pandemic developed with multiplex speed. Digitalization and the independence of customers [self-service] accelerated." (Interviewee C)

Here we can see the VUCA world placing pressure for change and innovation. This was named “positive pressure” by interviewee C, who also pointed out the number of innovations that happened during the pandemic. Elaborating, according to the Global Innovation Index (GII) 2021, a high level of resilience was seen during 2020; for example, international patent filings reached an all-time high, increasing 3,5 % since 2019 (Jewell 2021).

In general, innovation work faces pressure without the additional layer of a global VUCA crisis. The answer to who sets the pressure for innovation follows the lines introduced in the previous question. Interviewees A and B both pointed out the pressure by customers wanting to see the company offering reflect the market development, accompanied by the general push for innovation from the competitors’ side. Interviewee B also elaborated this with the focus on platforms in the finance sector. The limiting factor is the company resources and whether those are sufficient to reach the requirements for the platforms where the products and services are sold.

Interestingly, interviewee C brought up the cultural aspect. According to their experience, innovation work has a safe, not threatened space in their publicly administrated company, yet the pressure is placed by the result-oriented and time-constrained working environment. Interviewee C compares the differences between the pressure in their current organization and previous experience in listed companies, and the differences in the current job come from the huge pressure from the nationwide customer segment, which limits the innovative culture on daily basis.

Generally speaking, the Covid-19 pandemic is a good demonstration of what happens in a company in a time of crisis. The unpredictable and ambiguous business environment calls for reactivity and meaningful strategy work, which was addressed by the interviewees as well. However, there’s another side to the coin. What seems alarming is the risk of lacking entrepreneurially minded employees during a VUCA crisis, as innovation workers might be an easy human resource to find savings from. This comes down to the reason that the VUCA environment needs constant alertness and observation, and if the Entrepreneurial Individuals are cut off, the organization might miss relevant market signals and the opportunities brought by the phenomenon. This seems to follow the findings of Worley and Jules (2020), addressing the lack of strategic capabilities and scenario planning in the business world.

3.3 Entrepreneurial Leadership

Finalizing the interviews, the aspect of Entrepreneurial Leadership and its present forms in innovation work is analyzed. The interviewees were mostly asked questions about leadership related to innovation work, and lastly, the entrepreneurial lens was introduced. Hereby authentic responses based on first-hand experiences can be achieved. The section aims to understand the role of Entrepreneurial Leadership on a more comprehensive organizational level, adding it to the previous findings of the qualitative research. The questions in the section focus on the leadership of innovations, finding defects of applied entrepreneurial leadership, and general characteristics of the entrepreneurial innovation work and entrepreneurial leaders.

The first leadership question focused on the nature of innovation work, asking how innovation work should be managed. This resonated with the interviewees, as especially interviewees A and C affirmed that they are constantly reflecting over the topic matter on an individual and/or organizational level. Interviewee C brought up the enabler side and creating a safe space. Elaborating, they named these as the basis of feeding motivation, experimentation, and inspiration. Interviewee A also followed the theme of people management. They acknowledged the importance of processes and tools for facilitation, but the more important focus is on the soft values and mindset:

“Psychological safety, optimism, and trust in the organization are important. - - It is also about giving the mandate and ensuring follow-ups.” (Interviewee A)

Interviewee B also highlights the enabling side of management, and most importantly, removing the obstacles of innovation. They also mentioned the ownership mentality within the individuals, which results in less need for constant mentoring.

Projecting good management, some aspects of limiting company culture factors were named. Here failure and fear of change were highlighted. Interviewee B points out that in general, failure is welcomed and even encouraged, but only if the potential reward justifies it. Interviewee C highlights the need for a learning culture as they see failure as a good way to

gain knowledge. They also point out the challenges of big organizations, where some employees are inevitably afraid of change; it hinders exploration and boldness. They also state that people are even afraid of successful innovation and what happens after that.

Incremental innovation was managed well in the represented organizations, as the focus is on bettering existing and predictable patterns. The challenges stem from managing things that go beyond the core offering. For example, interviewee A feels a need to strengthen the management of adjacent innovation, since those hold the biggest business opportunities. Interviewee C adds the role of executive middle management. They see that both senior management and people in touch with the customers understand the need for change and drive for it, but the bottleneck is the overly pressured middle management, whose success is measured on metrics counteracting entrepreneurial culture. This can, for example, mean financial goals at the expense of other divisions or other result-oriented KPIs. Thus, the existence of change and trying out new things is easy to be seen as a threat to success that is hard to achieve even now; the reasons behind the phenomenon are utterly humane.

Continuing, the importance of innovation was seen in all three organizations. Interviewee B mentioned that at the thought level the importance of periodically reinventing the company is apparent to the leaders. They, too, point out the reward systems that in practicality counteract strategic entrepreneurship; the senior management incentives are interconnected with short-term goals, whereas the process of approving an innovation takes a long time. Interviewee C reasons the positive status of innovations in their organization with the successful track record of innovations, while also implying that the innovation horizon tends to be longer in publicly administrated companies. Adding to the body of knowledge, interviewee A points out the disharmony of viewpoints in their multinational enterprise when it comes to innovations. The company has shifted its focus towards building capabilities to follow through with innovations, instead of focusing on the ideation in all 170 countries of operation. Even if this is generally a good change, there is dissatisfaction inside the company as some employees feel that their ideas are not heard, since not as many resources are placed on the collecting of ideas.

Elaborating on the innovations, the companies represented have multiple different characteristics to their innovation work. Interviewee A continues with the theme of respect.

The company has multiple divisions and thus hundreds of innovation processes depending on the type of innovation: 1) incremental operations development, 2) adjacent initiatives going beyond the core capabilities, and 3) bettering the core offering. However, the common factor is the need to respect and process the ideas that stem from one's team, which interviewee A sees as the basis of innovation culture. In the finance sector, the normal strategic cycle is 3-5 years, with quarterly forecasts and goals. According to interviewee B, the focus is to always keep the current business procedures in a pristine condition – as the long-term goals are often disrupting the current main business and incentivizing the focus on present activities. Interviewee C is the most experimental of the trio, as they highlight the culture that enables experimenting and learning. Even though the pressure of meeting goals is present at publicly administrated companies as well, the natural incline towards a longer innovation cycle has a positive effect on the entrepreneurial innovation culture.

Lastly, wrapping up the leadership analysis, the interviewees were asked to characterize an entrepreneurial leader. Interviewee C highlighted the importance of ownership, passion, and willingness to keep developing, as those characteristics will not vanish. It means putting oneself on the line and wanting to deeply understand the environment where the subordinates work in. Similarly, interviewee B points out enthusiasm, as well as Enterprising Individuals who can solve a complex issue. Another layer added by interviewee A is the leader's capabilities to involve the rest of the organization in their forward-looking ideas, and truly push the initiatives through. This comes down to the mindset of enabling entrepreneurship inside the organization and providing the opportunity for different viewpoints to come together. Interviewee A also concludes with putting the decision-making power down in the organization:

“The more people feel the influence in the decision, the faster it is. It creates an agile organization and a feel of power. - - Entrepreneurial Mindset is needed to go through a transition, looking at leadership and employee perspective.” (Interviewee A)

The consensus here is that even though companies have the evident will to be more entrepreneurial and renew themselves, the most prominent bottlenecks come down to the humane problems. The middle management is overly stretched to meet performance KPIs, while the managers are awarded when achieving short-term goals. Moreover, there seems to

be a need for more embedded Entrepreneurial Leadership in the middle management, allowing the Enterprising Individuals to feel valued, and drive a transformation to turn vision into action. This type of leadership should focus on creating a safe environment for learning, as well as marrying the strategic level to the operations (Strategic Entrepreneurship).

3.4 The Role of Entrepreneurial Leadership

The interviews map out the role of Entrepreneurial Leadership, answering the following questions:

1. Where is EL needed in the company context to answer the VUCA challenges?
2. How should EL be implemented in organizations?

Noting that one size does not fit all, some derivations can still be made from the research material. Based on the research and combined with the literature review, the three different companies portrayed similar challenges and needs. Generally speaking, the VUCA environment calls for new approaches from companies to generate change, for which Entrepreneurial Leadership is an actor, a tool for improvement. This section elaborates and combines the answers from the interviews to form the Role of Entrepreneurial Leaderships, **Figure 4**, which is to be carried to the results and conclusions, section 4.

Laying the ground for the **Figure 4**, the companies act in a VUCA environment, where the four dimensions of VUCA are present and affect the company layer. The firm-level goal needs to be turning vision and passion into transformative company-wide action. The starting point to enable the transformation is the Enterprising Individual, after which enabling Entrepreneurial Leadership is needed to create change on a larger scale. Furthermore, the steps enabled by Entrepreneurial Leadership are 1) The beginning of Entrepreneurship as a phenomenon, 2) Harnessing the power of entrepreneurship with leadership, 3) Entrepreneurship in business settings, and 4) Developing entrepreneurial skills.

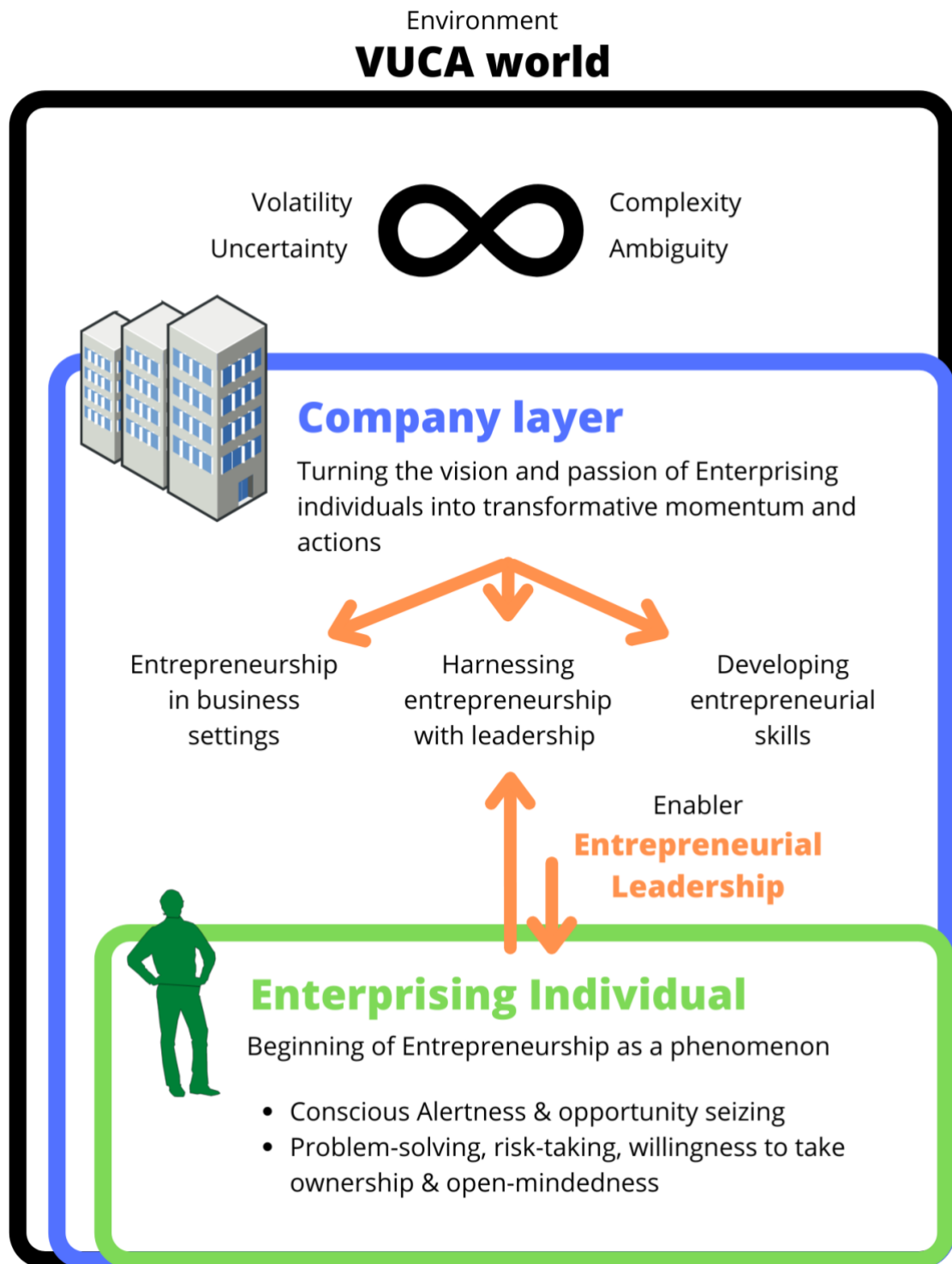



Figure 4. The Role of Entrepreneurial Leadership.

Going from the bottom up, entrepreneurship starts from an Enterprising Individual, who consciously looks for opportunities, **Table 5**. This was identified both in the literature and interviews. The enterprising characteristics stem from motivation, vision, and other entrepreneurial virtues, like problem-solving, ownership and open-mindedness. These lead to

the person being alert and capable of seizing opportunities from the world around them. These types of individuals are the greatest resource of companies willing to enhance their entrepreneurship. For this reason, the first focus of EL is to identify these individuals and make them feel valued by for example rewarding them with decision-making power or stronger ownership of projects. Moreover, the critical part is the supervisor of an Enterprising Individual. The managers also need idea procession tools and processes to not take away from their other tasks.

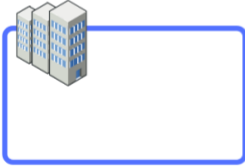
Table 5. The beginning of entrepreneurship in companies.

The stage of EL	Consensus (Literature & interviews)	Role of Entrepreneurial Leadership
1. The beginning of entrepreneurship as a phenomenon 	<ul style="list-style-type: none"> • Enterprising Individual observes their surroundings with Alertness • Seizing opportunities • Entrepreneurially inclined characters (Entrepreneurial Mindset): problem-solving, risk-taking, willingness to take ownership, open-mindedness 	<p>Enabler: supervisor</p> <p>What: spotting enterprising individuals, handling the risen ideas with care and respect; rewarding subordinates with ownership and decision-making power</p> <p>Needs: tools for idea generation and processes to handle them</p>

The next step is to level up from the individual standpoint and characterize how entrepreneurship can be harnessed to the whole organization, as portrayed in **Table 6**. The goal here is to turn the individual's vision and passion into transformative momentum and action in the organization. It means entrepreneurial organization culture, as well as embedding entrepreneurial virtues to the strategy work of the company. These are the ways to enhance organizational performance in VUCA settings. This needs systematical EL around the organization so that the Entrepreneurial Mindset can be disseminated. The ideal result is motivated and accountable employees throughout the company. For this to become even remotely a reality, executive middle management needs to participate. They are the translator between the organization layers needed to materialize entrepreneurial culture. A concrete way to establish entrepreneurship inside the company is to include more people in

the decision-making, which creates a feeling of ownership. Moreover, Enterprising Individuals feel the need for validation and support for their ideas, as the interviews pointed out. However, the support mechanisms are longer-term strategic goals, psychological wellbeing, and mindset development that need to be included in the middle management incentives to not take away from the established entrepreneurship.

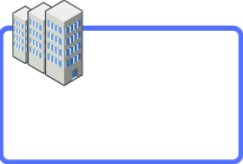
Table 6. Enabling entrepreneurship with EL.

The stage of EL	Consensus (Literature & interviews)	Role of Entrepreneurial Leadership
<p>2. Harnessing the power of entrepreneurship with leadership</p> 	<ul style="list-style-type: none"> • Turning the vision and passion of an Enterprising Individual into transformative momentum and action • Entrepreneurial organization culture (Entrepreneurial Orientation) • Motivated and accountable employees throughout the organization 	<p>Enabler: executive middle management</p> <p>What: materializing the entrepreneurial culture from top management to customer interface and vice versa; increasing ownership by sharing the decision-making power in the organization</p> <p>Needs: reward mechanisms that acknowledge long term goals, psychological wellbeing, and entrepreneurial mindset</p>

Having successfully started the entrepreneurially inclined culture, the next step is to materialize entrepreneurship in business settings, **Table 7**. Here successful innovation work is a cornerstone, as it ultimately is the source of all new initiatives in the organization. However, the nature of innovation work could also use some refreshing. An important factor is the presence of Dynamic Capabilities and understanding the balance of experimentation and exploitation. In turbulent times, more focus should be shifted towards experimentation, to sense new market signals. This is important, as companies find it especially hard to successfully innovate outside the core of the business. However, that is the likely origin of future prosperity. Currently, companies don't seem entrepreneurial enough to take the leap, but Entrepreneurial Leadership can be an enabling tool for that. The enabler for this change comes from top management and HR, who need to facilitate opportunities for new exploration and situations - examples are interdisciplinary teams and collaborative

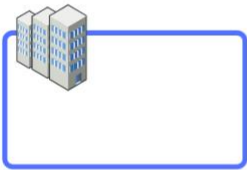
ecosystems to ensure colliding perspectives. Of course, this kind of organizational movement needs to be backed up with enough focus on the core capabilities to ensure profitability until successful innovations stem.

Table 7. Creating working structures that support entrepreneurship in companies.

The stage of EL	Consensus (Literature & interviews)	Role of Entrepreneurial Leadership
3. Entrepreneurship in business settings 	<ul style="list-style-type: none"> • The primal source of new initiatives in an organization, e.g. Cyclic Innovation Model • Dynamic Capabilities: sensing opportunities, utilizing them while sensibly maintaining competitiveness core capabilities • Balance between exploration and exploitation, creating new and utilizing capabilities 	<p>Enabler: top management and HR</p> <p>What: facilitation of multidisciplinary teams for innovation and daily work for colliding perspectives; participating in collaborative ecosystems</p> <p>Needs: focus on core capabilities to ensure profitability, but not enabling them to become core rigidities</p>

Lastly, we arrive at the topic of developing and maintaining necessary entrepreneurship skills, **Table 8**. This means cognitional development for individuals to be able to expand their thinking capability. This becomes crucial as solutions and problems in the VUCA world are increasingly complex and ambiguous. This kind of learning should happen both from first-hand and second-hand experiences, where more diverse experiences mean a larger entrepreneurial body of knowledge.

Table 8. Enabling continuous entrepreneurship through learning.

The stage of EL	Consensus (Literature & interviews)	Role of Entrepreneurial Leadership
4. Developing entrepreneurial skills 	<ul style="list-style-type: none"> • Developing vertically to evolve cognitional skills (Entrepreneurial Cognition) to enhance the thinking capability • A learning cycle of first-hand and second-hand-experiences expanding the body of entrepreneurial knowledge • Learning organization; gaining knowledge through mistakes 	<p>Enabler: HR and middle management</p> <p>What: nurturing the mindset and measuring its development; supporting employees to experience job rotations or establish side roles on the other side of the organization</p> <p>Needs: KPIs for measuring; organizational structure allowing flexibility; culture of trust and safety</p>

What's also important, learning should be embedded into the core of operations, not only in individual pieces of training. All humans do mistakes often, and they are a great, integrated way to gain knowledge. The enabler for learning purposes is naturally HR, but also a supportive and psychologically safe middle management is needed. The Entrepreneurial Mindset should be measured and developed. One way to do this is job rotations or establishing smaller side roles on the other side of the organization. Learning is often the strongest when an individual is placed to handle a new situation, and thus, forced to rethink the way they operate (Jones et al. 2020). The needs from the organization side would be KPIs for measuring the mindset, as well as creating organizational flexibility and a culture of trust and safety.

4 Results & conclusions

The last section of the thesis showcases the key results of the research while answering the research questions. Another critical part of the section is to also analyze the reliability of the study, as well as make suggestions for future research. The aim of this research was to find out the role of Entrepreneurial Leadership in the increasingly VUCA world and derive

possible reasonings of how EL could answer the organizational need for adapting to the demanding business environment. One of the most prominent applications of Entrepreneurial Leadership is innovation work; the identified possibilities of EL and management in turbulent times is introduced with the Role of Entrepreneurial Leadership.

The basis of the research is the literature review on entrepreneurial frameworks to draw the theoretical position and background of EL. In addition, the relation of EL and company performance, as well as ways to learn EL were introduced. Moreover, the current state of the world was described with the VUCA framework, accompanied by ways for companies to adapt to the changing environment. The literature review also supported the importance and relevance of the topic with successful applications of EL, such as the Cyclic Innovation Model, Dynamic Capabilities, and Exploration versus Exploitation. The various fields of research highlight multiple important characteristics, applications, and needs for entrepreneurship in business settings. However, the missing part is how to enable a movement of entrepreneurial thinking and actions on all organization levels. Entrepreneurial Leadership showcases promising applicability to be used as a tool to transform an organization to the requirements of the 2020s VUCA world. Furthermore, the timely urgency of entrepreneurship in venturing, leadership and strategy work seems evident.

This literature review laid down the basis for hypothesis development: the key to translating entrepreneurship to company operations comes from equipping middle management with Entrepreneurial Leadership capabilities (decision-making skills, risk-taking, openness, exploration, vision lead movement, and ownership), to better support the change-making Enterprising Individuals in the organization. The hypothesis was carried to the empirical research, that was conducted with three interviews following the guidelines of qualitative research and content analysis. Each interviewee represented a different industry and company type: 1. energy sector, multinational listed company, 2. finance sector, private company, and 3. welfare sector, publicly administrated company. Combining the interview material and findings from the literature review, enterprises can establish entrepreneurship in a company setting by emphasizing the following four levels: 1) recognizing Enterprising Individuals, 2) harnessing their entrepreneurship with leadership, 3) integrating entrepreneurship into business operations, and 4) developing entrepreneurial skills. Furthermore, the most beneficial and result-prone beginning of corporate entrepreneurship

is to identify and support Enterprising Individuals. These individuals will naturally incline towards creating vision-lead transformation, hence the deciding success factor is whether the organization gives them the needed support, as the four levels of Entrepreneurial Leadership display.

4.1 Conclusions

The conclusions draw together the research on the Role of Entrepreneurial Leadership in business performance in the VUCA world. The section first answers the sub-questions of the research, after which the main research question is addressed. Here the derivations of the empirical research are applied, combined to the fitting conclusions of theoretical conclusion.

1. What challenges does the VUCA world set on company success?

Ultimately, the biggest challenges are the speed of change and resiliency the VUCA environment requires from the companies. A case example of this phenomenon is Covid-19 when the agile companies of the 21st century struggled to answer to the drastic change of circumstances. It pointed out the insufficiencies of strategy and scenario work. Crisis responses, like cutting off innovative and problem-solving employees to cut costs, were made. In the meantime, the market was booming with business opportunities in e-commerce and digitalization. Furthermore, it's important to be at the surface of change to not lose relevancy; the VUCA world places positive pressure on creating new and accelerating the speed of innovation to match up the changes in customer needs and standards of competition. Even though Covid-19 hit companies hard, the huge potential of changing markets is underlined as 2020 was one of the most innovative years in recent history (Jewell 2021). A positive shift towards a more VUCA suitable company strategy is the focus for more targeted initiatives through collaboration and ecosystems, where companies can branch out and find potential growth outside the core of the business. These kinds of ventures result in lasting successful performance, as there is only so much incremental development a company can do.

2. How does Entrepreneurial Leadership affect company success?

Entrepreneurial Leadership is an enabler for company-wide transformation in turbulent times, while companies seem to have a strong will to integrate entrepreneurship. It comes down to the idea of creating accountability and motivation in the organization by delegating responsibility and empowering lower company levels. The most important asset of a company is its human capital, which will make or break the company's success. The unique part of entrepreneurship is its strength: the passion and vision of entrepreneurial doers are very unlikely to vanish once it is surfaced. Therefore, the key role of EL is being an enabler for Enterprising Individuals to flourish, take ownership of the issues they see in the company, and make it a movement of action. If companies don't allow this to happen, the Enterprising Individuals will find another place where their passion is valued and supported. Nonetheless, the problems stem from the strained middle management and incentive structures that do not align with the needs of organizational EL. Incentives and strategies focus on goals that are too short-sighted since longer-term strategies are seen as a threat, for they emphasize disruptive initiatives replacing the current profitable core business. However, the strategic focus and reward KPIs need to be shifted longer into the future. It allows companies to capitalize on the entrepreneurial drive, instead of suppressing it. Here Entrepreneurial Leadership is needed to enable a cultural shift on all organizational layers, providing the support for seizing profitable business opportunities.

3. What can be applied to organizational management from the Entrepreneurial Leadership of innovation?

Innovation work is an established application of EL – it is the most researchable entity of organizational EL. While innovation naturally attract forward-thinking minds, other parts of the organizations do not yet provide the needed support for entrepreneurial employees even though the skills at hand would be needed elsewhere too. The characteristics that managers across divisions should focus on spotting are vision, open-mindedness, risk-taking, willingness to take ownership, and problem-solving. In addition, the leadership must enable an organizational culture to learn entrepreneurial skills. Individuals do not inherit these capabilities, rather absorb them through first-hand and second-hand experiences. Culture and leadership play a significant role here, as experimentation is often limited by failures. If the

result-oriented culture doesn't enable gaining important knowledge from failures, it has detrimental consequences to the heart of entrepreneurship: exploring new. Contrarily, the whole organization should adapt to the learning organization framework that is materialized by both entrepreneurially supportive middle management and HR initiatives enabling employees to be exposed to colliding ideas and novel functions.

Furthermore, we arrive at the main question of the research:

How does Entrepreneurial Leadership help companies to succeed in the VUCA world?

Concluding the previous findings, Entrepreneurial Leadership can guide organizations to flourish in the VUCA world. EL accelerates the rate of change, dynamism, ownership, and decision-making skills within, and on a longer horizon, it leads to increased business performance, more efficient innovation work, and a strong resistance towards changes in the environment. Enterprises can achieve the benefits of company-wide entrepreneurship through a proposed four-level approach; once the previous stage is covered, the company is organizationally ready to move towards a more sophisticated level of implementation:

1. Identifying and supporting Enterprising Individuals
2. Harnessing entrepreneurship with Entrepreneurial Leadership
3. Integrating Entrepreneurship to business operations
4. Developing and maintaining entrepreneurial skills

The beginning of corporate entrepreneurship is the Enterprising Individuals, who the company should start to identify through supervisors. The initiatives made by these individuals must be supported, for example, by rewarding them with decision-making power to spark ownership. The logical sequel is how to create a company-wide movement with the identified empowered individuals. Here the need for true entrepreneurial movement begins. It is crucial to establish long-term goals and incentives for the middle management for them to be motivated to advance entrepreneurial initiatives and culture. The role of the middle management is significant when creating the entrepreneurial culture, characteristics of which are exploration, learning by failing and disseminating the decision-making power to achieve agility.

Moreover, the company can integrate entrepreneurship into business operations, where the importance of multidisciplinary teams is underlined. Targeted collaboration between divisions and other companies results in more innovative initiatives on how the firm can explore new business opportunities even outside core capabilities and attain successful performance in a VUCA world. The research suggests that core capabilities should be utilized to enable exploration (Teece et al. 1997) since new ventures are the beginning of company resilience (Berkhout et al. 2011). However, only reaching this third level is not enough since companies need to stay relevant in the changing world. The development and maintaining of entrepreneurial skills are crucial: HR and top management need to create constant opportunities, like job rotations, to first- and second-hand experiences with colliding perspectives. Furthermore, the development of the entrepreneurial mindset needs to be measured, while the organizational structure needs to allow constant role flexibility.

Concluding in simplistic terms, the flexibility and promptness given by entrepreneurially lead practices give companies an incomparable ability to react to changes. As time goes on, Entrepreneurial Leadership capabilities will not only form a competitive advantage but possibly become a mandatory requirement as the VUCA world's ongoing complexity increases further. This leaves the actors within the system with one simple observation: Learn or Die.

4.2 Reliability of the research

The reliability of the conducted research depends on a multitude of factors. First and foremost, reliable research implies the transferability of the findings, and the believability of them (Tuomi & Sarajärvi 2002, 136-137). The research has been reported to the best of the abilities, while the research material was curated to collect as diverse a body of knowledge as possible despite the small sample size. To enhance reliability, the believability of the study has been improved by showcasing citations from the interview transcripts. The reliability of the research also grows if the literature review is based on multiple theories and authors instead of focusing merely on a few sources (Tuomi & Sarajärvi 2002, 140-142). Here the theoretical research material is versatile and consists solely of sources of high quality; peer-reviewed journals and academically published books. Counteracting, due to only one

researcher, the reliability of the research is questioned, as the tendency to fall prey to biases increases. In conclusion, considering the realities of the research, the available measures to be taken to produce reliable research have been taken.

The research can be used as a basis for developing the Role of Entrepreneurial Leadership in companies. As the interviewees were Finnish nationals working in international and national enterprises, the findings are likely to be the most applicable in the Finnish companies wishing to find a way to include entrepreneurial thinking into the company culture and operations, or Western companies looking into one conceptualization of the topic matter.

4.3 Suggestions for future research

The field of Entrepreneurial Leadership is under development, as the need for it is likely to increase in the future. What's more, EL could be combined with Transformational Leadership (TL), to find more concrete ideas to how the vision of entrepreneurial individuals can be turned into organizational action. The topic of TL in detail is out of the scope of this research, but it could potentially add to the body of knowledge and bring more sophisticated suggestions for leadership in changing times. Other suggestions relate to quantifying the research topic. As of now, there is not a lot of quantified data on the effects of EL, even less so for VUCA. Both theoretical frameworks could derive valuable insights to companies. However, the lack of quantified data limits the applicability of the theories.

The body of knowledge could also benefit from studies on the learning of entrepreneurial skills. The learning aspect was not covered, as it points more towards the Human Resources side of business literature. Here the briefly touched concepts of knowledge management, dynamic capabilities, and knowledge-based strategy views highlight the importance of entrepreneurial learning and its in-depth research for companies' managerial purposes. Either quantitative measure based on Vertical Development or qualitative research focusing on the mindset shift provide logical next iterations for the body of knowledge.

The third entity for potential future research focuses on governance. The tension between entrepreneurship and policymaking is an evergreen topic, as governance falls short on following the speed of entrepreneurial actions. As disclosed in the research, the VUCA world is, on the other hand, accelerated by reacting to the VUCA world's requirements. Hereby the companies' actions towards higher profitability in the VUCA environment can be an alarming sign for governance and regulations. Furthermore, an interesting research topic would be how policymakers should react and direct companies' adaptation to the changing business environments to avoid an ever-accelerating spiral of faster and faster reactivity and resiliency.

References

- Antonakis, J. & Autio, E. (2006) 'Entrepreneurship and Leadership', in *The Psychology of Entrepreneurship*. Lawrence Erlbaum: New Jersey. pp. 189-207.
- Argyris, C. & Schön, D. (1995) *Organizational learning: A theory of action perspective*. Massachusetts: Addison-Wesley Publishing Company.
- Baron, R. A. (2014) 'Cognitive foundations of Entrepreneurship', in *Essentials of Entrepreneurship. Evidence and Practice*. Cheltenham: Edward Elgar. pp. 3-58.
- Bennett, N. & Lemoine G.J. (2014) What a difference a word makes: Understanding threats to performance in a VUCA world. *Business Horizons*, 57(3), 311-317.
- Bennis, W. & Nanus, B. (1985) *Leaders: The Strategies for Taking Charge*. New York: Harpet & Row, New York.
- Berkhout G., van der Duin, P., Hartmann, D. & Ortt, R. (2007) *Cyclic Nature of Innovation: Connecting Hard Sciences with Soft Values*. Bingley: Emerald Group Publishing Limited.
- Berkhout, G., Hartmann, D. & Trott, P. (2011) Connecting technological capabilities with market needs using a cyclic innovation model. *R&D Management*, 40(5), 474-490.
- Bettis, R. A. & Hitt, M. A. (1995) The new competitive landscape. *Strategic Management Journal*, 16(1), 7-19.
- Boulton, W. R., Lindsay, W. M., Franklin, S.G. & Rue, L.W. (1982) Strategic Planning: Determining the Impact of Environmental Characteristics and Uncertainty. *Academy of Management Journal*, 25/3(September 1982), 500-509.
- Buli, B. M. (2017) Entrepreneurial orientation, market orientation and performance of SMEs in the manufacturing industry: Evidence from Ethiopian enterprises. *Management Research Review*, 40(3), 292-309.

Ettlie, J. E. & Bridges, W. P. (1982) Environmental Uncertainty and Organizational Technology Policy. *IEEE Transactions and Engineering Management*, 29(1), 2-10.

Ferreira, J., Coelho, A. & Moutinho, L. (2020) Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, 92-93, art. no. 102061.

Cavusgil, S. T., Knight, G. & Riesengerger, J. R. (2016) International business: the new realities. Fourth edition, global edition. Harlow: Pearson Education Limited.

Chawla, S. & Lenka, U. (2017) 'Leadership in VUCA Environment', in *Visionary Leadership in a Turbulent World: Thriving in the New VUCA Context*. Singapore: Springer. pp. 213-224.

Dorfman, P. W., Howell, J. P., Hibino, S., Lee, J. K., Tate, U. & Bautista, A. (1997) Leadership in Western and Asian countries: Commonalities and differences in effective leadership processes across cultures. *The Leadership Quarterly*, 8(3), 233-274.

Dhir, S. (2018) Flexible Strategies in VUCA Markets. Singapore: Springer.

Drucker, P. F. (1979) Adventures of a bystander. New York. Harper and Row.

Drucker, P. F. (1985) Management: Tasks, responsibilities, practices. New York. Harper Business.

Eskola, J. & Suoranta, J. (2014) Johdatus laadulliseen tutkimukseen. 10. p. Tampere, Vastapaino.

Ghoshal, S., & Bartlett, C. A. (1990) The multinational corporation as an interorganizational network. *Academy of Management Review*, 75(4), 6.

Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997) Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly*, 42(4), 750–783.

Gottfredson, L. S. (1997) Why g matters: The complexity of everyday life. *Intelligence*, 24(1), 79-132.

Gupta, V., MacMillan, I. & Surie, G. (2004) Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct. *Journal of Business Venturing*, 19(2), 241-260.

Hansen, J. M. & Levin, M. A. (2016) The effect of apathetic motivation on employees' intentions to use social media for business. *Journal of Business Research*, 69(12), 6058-6066.

Hirsjärvi, S., Remes, P. & Sajavaara, P. (2009) Tutki ja kirjoita. 15. p. Helsinki, Kirjayhtymä.

Hitt, M.A. et al., (2011) Strategic entrepreneurship: creating value for individuals, organizations, and society. *Academy of management perspectives*, 25(2), 57–75.

Holcomb, T. R., Ireland, R. D., Holmes, R. M. & Hitt, M. A. (2009) Architecture of Entrepreneurial Learning: Exploring the Link among Heuristics, Knowledge, and Action. *Entrepreneurship Theory and Practice*, 33(1), 167-192.

Horney, N., Pasmore, B. & O'Shea, T. (2010) Leadership Agility: A Business Imperative for a VUCA World. *People & Strategy*, 33(4), 32-38.

Hult, G. T. M., Ketchen, D. J., Griffith, D. A., Chabowski, B. R., Hamman, M. K., Dykes, B. J., Pollitte, W. A. & Cavusgil, S. T. (2008) An Assessment of the Measurement of Performance in International Business Research. *Journal of International Business Studies*, 39(6), 1064-1080.

Jewell, C. (2021) Global Innovation Index 2021: Tracking innovation through the COVID-19 crisis. WIPO [online source]. [Retrieved 7.12.2021]. Available: https://www.wipo.int/wipo_magazine/en/2021/03/article_0002.html.

Karlsson, C., Rickardsson, J. & Wincent, J. (2019) Diversity, innovation and entrepreneurship: where we are and where should we go in future studies? *Small Business Economics*, 56(2021), 759-772.

- Kegan, R. (1982) *The Evolving Self: Problems and Process in Human Development*. Cambridge: Harvard University Press.
- Kim, W. C. & Mauborgne, R. (2005) *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Boston: Harvard Business School Publishing.
- Kirzner, I. M. (1973) *Competition and entrepreneurship*. Chicago, IL: University of Chicago Press.
- Kyrgidou, L. P., & Hughes, M. (2010) Strategic entrepreneurship: Origins, core elements and research directions. *European Business Review*, 22(1), 43– 63.
- Lanivich, S. E., Smith, A., Levasseur, L., Pidduck, R. J., Busenitz, L. & Tang, J. (2022) Advancing entrepreneurial alertness: Review, synthesis, and future research directions. *Journal of Business Research*, 139(2022), 1165-1176.
- Leitch, C. M, McMullan, C, Harrison, RT (2013) The development of entrepreneurial leadership: The role of human, social and institutional capital. *British Journal of Management*, 24(3): 347–366.
- Luftig, J. T. & Ouellette, S. M. (2012) *Business performance excellence*. London: Bloomsbury.
- Mack, O., Khare, A., Krämer, A. & Burgartz, T. (2015) *Managing in a VUCA world*. Berlin: Springer International.
- Mazzarol, T. & Reboud, S. (2020) ‘The Entrepreneur’, in *Entrepreneurship and Innovation*. Springer: Singapore. pp. 35-61.
- McGrath, R. G. & MacMillain, I. C. (2000) *The entrepreneurial mindset*. Boston: Harvard Business School Press.
- McMullen, J. S. & Kier, A. S. (2016) Trapped by the entrepreneurial mindset: Opportunity seeking and escalation of commitment in the Mount Everest disaster. *Journal of Business Venturing*, 31(6), 663-686.

Millar, C. C. J. M., Groth, O. & Mahon J. F. (2018) Management Innovation in a VUCA World: Challenges and Recommendations. *California Management Review*, 61(1), 5-14.

Neely, A. D. (2007) Business Performance Measurement : Unifying Theory and Integrating Practice. Cambridge: Cambridge University Press.

Núñez-Pomar, J., Prado-Gascó, V., Sanz, V. A., Hervás, J. C. & Moreno, F. C. (2017) Does size matter? Entrepreneurial orientation and performance in Spanish sports firms. *Journal of Business Research*, 69(11), 5336-5341.

Osiyevskyy, O., Radnejad, A. B. & MahdaviMazdeh H. (2020) An Entrepreneurial Management System for established companies. *Strategy & Leadership*, 48(2), 24-31.

Pearse, N. J. (2017) 'Change Management in a VUCA World', in *Visionary Leadership in a Turbulent World: Thriving in the New VUCA Context*. Bingley: Emerald Publishing Limited. pp. 81-105.

Petrie, N. (2013) Vertical leadership development - Part 1: Developing Leaders for a Complex World. Center for Creative Leadership [online source]. [Retrieved: 6.12.2012]. Available: https://14226776-c20f-46a2-bcd6-85cefe57153f.filesusr.com/ugd/a8b141_65db299b1e274cdc84e3de48016b9862.pdf

Price, R. M. (1982) Uncertainty and Strategic Opportunity. *The Journal of Business Strategy*, 2(3), 378-387.

Qian, C., Cao, Q. & Takeuchi, R. (2012) Top management team functional diversity and organizational innovation in China: The moderating effects of environment. *Strategic Management Journal*, 34(1), 110-120.

Rauch, A., Wiklund, J., Lumpkin, G.T. & Frese, M. (2009) Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship: Theory and Practice*, 33(3), 751-787.

Schumpeter, J. A. (1934) The Theory of Economic Development: An Inquiry into Profits, Capital, Credits, Interest, and the Business Cycle. Transaction Publishers, Piscataway.

- Shepherd, D. A. & Patzelt, H. (2018) *Entrepreneurial Cognition*. Gewerbestrasse: Springer.
- Shoemaker, P. J. H., Heaton, S. & Teece, D. (2018) Innovation, Dynamic Capabilities, and Leadership. *California Management Journal*, 61(1), 15-41.
- Shook, C. L., Priem, R. L. & McGee, J. E. (2003) Venture Creation and the Enterprising Individual: A Review and Syntesis. *Journal of Management*, 29(3), 379-399.
- Simon, A., Bartle, C., Stockport, G., Smith, B., Klobas, J. E. & Sohal, A. (2015) Business leaders' views on the importance of strategic and dynamic capabilities for successful financial and non-financial business performance. *International journal of productivity and performance management*, 64 (7), 908–931.
- Stevenson, H. H. (1983) A perspective on entrepreneurship. *Harvard Business School Working Paper*, 9, 384-131.
- Subotic, M., Maric, M., Mitrovic, S. & Mesko, M. (2018) Differences between adaptors and innovators in the context of entrepreneurial potential dimensions. *Kybernetes*, 47(2).
- Torbert, W. R. (1987) *Managing the Corporate Dream: Restructuring for Long-Term Success*. Homewood: Dow Jones-Irwin.
- Tuomi, J. & Sarajärvi, A. (2002) *Laadullinen tutkimus ja sisällönanalyysi*. Helsinki, Tammi.
- Ucbasaran, D., Wright, M., Westhead, P. & Busenitz, L. W. (2003) 'The impact of entrepreneurial experience on opportunity identification and exploitation: Habitual and novice entrepreneurs', in *Cognitive approaches to entrepreneurship research*, Oxford: Elsevier Science Ltd. pp. 231-263.
- Van der Vegt, G. S. & Janssen, O. (2003) Joint impact of Interdependence and Group Diversity on Innovation. *Journal of Management*, 29(5), 729-751.
- Wales, W. J., Covin, J. G. & Monsen, E. (2020) Entrepreneurial orientation: The necessity of multilevel conceptualization. *Strategic Entrepreneurship Journal*, 14(4), 639-660.

Wang, L. (2021) S&P 500 Perfect Earnings Record Is on the Line With Peak Growth. [online source]. Available: <https://www.bloomberg.com/news/articles/2021-07-10/s-p-500-perfect-earnings-record-is-on-the-line-with-peak-growth>.

Wiklund, J. (1999) The Sustainability of the Entrepreneurial Orientation Performance Relationship. *Entrepreneurship Theory and Practice*, 24(1), 37-48.

Wiklund, J. & Shepherd, D. (2003) Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13), 1307-14.

Wolrey, C. G. & Jules, C. (2020) COVID-19's Uncomfortable Revelations About Agile and Sustainable Organizations in a VUCA World. *The Journal of Applied Behavioral Science*, 56(3), 279-283.

Appendices

Appendix 1. Research questions.

Mindset & background

- Why did you end up working with innovations?
 - Which of your characteristics suit innovation work?

The nature of innovation & your own organization

- How do you characterize successful innovation work?
 - How it should be led and managed?
- Are innovations managed successfully in your organization? Why?
- Is the importance of innovation work understood in your organization?
- What are the characteristics of innovation work in your organization?

The challenges of innovation work

- What are the challenges of innovation work when the changing business environment is considered?
- What challenges and pressure has the Covid-19 pandemic brought the innovation work in your organization?
- Who sets the pressure on innovation work (e.g., competitors, customers, owners)

Company success & entrepreneurial thinking

- How innovation work affects business performance?
- How do you characterize an entrepreneurial leader?
- According to you, what is the relationship between innovation work and entrepreneurial thinking?