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Exploring competency needs of an innovation leader

A qualitative study capturing the perspectives of innovation management practitioners on competencies and personal certification

Martina Eliasson & Erica Eklind
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Supervisor: Johan Brink

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School of Business Economics and Law, University of Gothenburg
Vasagatan 1, P.O. Box 695 SE 405 30 Gothenburg, Sweden.
Institute of Innovation and Entrepreneurship

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Contact: ericaeklind@gmail.com & martinaeliasson@live.se

Abstract

The innovation management profession is maturing, and standards and procedures for best practices are needed. Further, the current literature underscores the vitality of understanding the necessary knowledge and skills essential within the profession for continued development, and certifications for innovation management professionals are addressed as a possible way of providing standards to the profession. However, a knowledge gap exists concerning a universal competency framework for innovation leaders and innovation management professionals. The purpose of this study is to address this current knowledge gap by exploring the perceived competency need of an innovation leader. Moreover, an additional purpose is to examine the effects of personal certification for innovation leaders.

A systematic literature review was conducted to create an initial competency framework for innovation leaders as of the current state of the literature. Semi-structured interviews were conducted with active innovation leaders to clarify the competency needs of an innovation leader and explore the effects of a personal certification for these professionals. Two sub-questions emerged due to the respondents' ambiguity regarding their role perception and what they perceived as their necessary competency needs. These questions aimed to explore the role perception and the organizational influence on the innovation leaders' roles. In general, there were no unified, precise results on exactly what the competency needs are for an innovation leader. Instead, it was concluded to be contextually determined where organizational factors such as the type, purpose, and level of innovation maturity within the organization influenced the demands of the role. The studied third-party personal certification was concluded to infer effects such as increased self-confidence, improved innovation knowledge, and an increased legitimacy and credibility to their role. Moreover, a general result was that the fuzziness of the role created a desire for many to validate their innovation knowledge for themselves and their surroundings. Accordingly, certifications were concluded as a potential means to validate and clarify their role.

Keywords: Innovation Leaders, Innovation Management Professionals, Theoretical Framework of Competencies for Innovation Leaders, Personal Certification

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Definitions

Body of knowledge

For this study, a body of knowledge refers to the skills and concepts considered fundamental for all individuals employed in a particular occupation. Certification programs and assessments are based on a body of knowledge (Landry, 2016).

Body of knowledge for innovation management professionals

This body of knowledge is a document developed by the association Innovationsledarna in 2015, and the Research Institutes of Sweden (RISE) has adopted it as the basis for the certification of innovation management professionals. Its purpose was to be used as a guide for the professionals, including 12 knowledge areas covering different responsibilities and tasks and various clauses of ISO 56002:2019 (Innovationsledarna, 2020).

Innovation leader

For this study, an innovation leader is defined according to the following job role description, which includes: "being responsible for, and actively contributing to, leading and organizing of innovation initiatives and promoting the conditions and abilities to support innovation activities in all types of organizations - private or public, large or small, in all sectors, areas, and functions." (Innovationsledarna, 2015).

ISO standard

ISO standards are provided by the International Organization for Standardization, a worldwide federation of national standards bodies (ISO member bodies). An ISO standard is a set of specific requirements, guidelines, or specification to ensure consistency and quality in products, services, and processes.

ISO 17024:2012 Certification for persons: General requirements for bodies operating certification of persons

"Certification for persons is one means of providing assurance that the certified person meets the requirements of the certification scheme. Confidence in the respective certification schemes for persons is achieved by means of a globally accepted process of assessment and periodic re-assessments of the competence of certified persons." (ISO, 2012)

ISO 56002:2019 Innovation management system - Guidance

"The ISO system provides guidance for the establishment, implementation, maintenance, and continual improvement of an innovation management system for use in all established organizations." (ISO, 2019)

Professionalization

"Professionalization is a process whereby occupations have become, or seek to become, publicly recognized as professions according to the degree to which they meet the alleged criteria. Professionalization can be seen as having two strands. One strand is concerned with the improvement of status. The other strand is concerned with the improvement of the capacity of members to enhance the quality of service which is provided." (Siegrist, 2001)

Third party certification

The qualifications for the certification has been reviewed by an independent third-party organization, ensuring that the demands are meet in terms of the requirements of standards for example ISO 17024:2012 or other form of specification (RISE, 2022).

1.Introduction

The introduction chapter covers the thesis topic, including background information and discussions on innovation management and professionalization. The roles of innovation management professionals are introduced, and certifications as a part of the professionalization. The chapter also presents the research problem, purpose, and research questions, followed by the thesis' delimitations and collaboration partner in the last sections.

1.1 Background

In today's rapidly changing business environment, organizations must prioritize fostering innovation and being responsive to external factors to achieve economic growth, maintain a competitive advantage, and improve overall performance (Chutivongse & Gerdsri, 2020; Damanpour & Schneider, 2006). Innovation management is crucial for organizations to achieve favorable internal conditions for change, including capabilities for initiating change, maintaining momentum, and implementing system-wide redesign (Goodman & Dingli, 2013; O'Reilly & Tushman, 2013). Although innovation is known to enhance long-term growth and renewal, organizations should acknowledge the necessary competencies and formalized procedures required to develop innovation opportunities (Robbins & O'Connor, 2023). Today, innovation management is recognized as an ideal area for professionalization (Robbins & O'Connor, 2023), and professionalism has long been recognized as a critical driver of organizational innovation (Drazin, 1990; Hage & Aiken, 1967).

Jones et al. (2016) argue that the innovation management profession is maturing and recommend implementing standardized practices for innovation through certification programs, standards, or best practices. The current development infers that widely shared standards, definitions, and qualifications will become more commonplace among academic communities and practitioners (Conn & Ritala, 2019). Personal certifications are mentioned as a part of this standardization process (Cumberland et al., 2018). Personal certifications and their associated body of knowledge have been instrumental in professionalizing numerous fields, including information technology, human resource management, project management, and quality management (Blomquist et al., 2018; Joseph & Marnewick, 2018; Landry, 2016).

The literature presents numerous benefits of certifications, such as elevated professional status, greater autonomy for practitioners, a strong occupational identity, and a deeper understanding of the profession's requirements (Landry, 2016; Park et al., 2014; Robbins & O'Connor, 2023). Moreover, professionalization fosters innovative knowledge in organizations (Robbins & O'Connor, 2023). While the qualifications, skills, knowledge, and experience for innovation management roles are increasingly recognized, there is currently no widespread or formal codification of these requirements (Robbins & O'Connor, 2023).

The literature highlights a need to understand the necessary knowledge and skills needed within the profession for continued development (Fertig et al., 2019; Robbins & O'Connor, 2023). Recently, international innovation management communities have introduced initiatives addressing this knowledge gap concerning an internationally agreed competency framework for innovation leaders and innovation management professionals (Innovationsledarna, 2023; ISPIM, n.d.), providing evidence for the current relevance of the topic.

1.2 Problem Discussion

At an organizational level, the importance of innovation management work is exemplified through adhering to the standardized innovation management system ISO 56002:2019 (ISO, 2019). These guidelines aim to establish a framework for defining, leading, and organizing systematic innovation work. The standard also promotes professionalization by providing guidance for management and organizational practices, similar to previous standards for quality and project management (Tidd, 2021). In addition, ISO 56002:2019 is a further step in legitimizing innovation management professionals and creating a foundation for their work (Jones et al., 2016; Hyland & Karlsson, 2021).

At an individual level, the literature recognizes that an organization's internal innovation capabilities are improved by human capital (Robbins & O'Connor, 2023). Research emphasizes the importance of individual competencies and behavior in overall organizational performance (Carmeli et al., 2006; Goodman & Dingli, 2013; Robbins & O'Connor, 2023). Despite the vast amount of literature on innovation management, it tends to focus on organizational-level factors rather than individuals' practices (Crossan & Apaydin, 2010). Although previous studies have identified informal roles at the individual level, the studies have not adequately addressed the generally required skills for the innovation process (Dörner & Gurtner, 2009). As a result, linking these findings to formal professionalization is challenging (Maier & Brem, 2018).

Understanding the behaviors and abilities of innovation management professionals at an individual level is difficult due to the absence of a universal definition of the practice. Therefore, studying the factors that drive and enable innovation management behavior is crucial. This will aid organizations in identifying relevant individuals and help professionals develop their skills accordingly. It will also contribute to a deeper understanding of the profession's current state. The term "innovation" has multiple meanings, and determining the competencies required to be an effective innovation leader is complex. Landry (2016) discusses the innovation term's fuzziness and puts it in relation to the term "competency." The lack of a coherent theory reconciling the definition of "competencies" signals the need for clarification (Landry, 2016). The following description presented by the Office of Human Resources at the National Institutes of Health (NIH) will be used for the continued study of this research.

> Competencies are the knowledge, skills, abilities, and behaviors contributing to individual and organizational performance. Knowledge is information developed or learned through experience, study, or investigation. Skill is the result of repeatedly applying knowledge or ability. Ability is an innate potential to perform mental and physical actions or tasks. Behavior is the observable reaction of an individual to a certain situation. The target proficiency level for each competency will vary based on an individual's position and the organization's needs. (NIH, n.d.)

In summary, innovation is vital for an organization's competitiveness and survival. Innovation management systems are developing to enable systematic and effective innovation work within organizations. The literature is coherent regarding the importance of innovation capabilities on the organizational level. There is a lack of clarity regarding an innovation management professional's specific responsibilities and requirements. As the field continues to evolve, it is crucial to comprehend how practitioners perceive their roles and the factors contributing to their success.

1.3 Purpose and Research Questions

The purpose of this study is to explore how practitioners perceive the competency needs of their roles as innovation leaders. As previously mentioned, there is no universal codification of the required qualifications, knowledge, skills, and experiences (Robbins & O'Connor, 2023). A role definition of innovation leaders by Innovationsledarna (2015) will be used as a reference point for the existing requirements of the role. The research question intends to provide deeper insight into the competencies perceived as essential for the innovation leader.

RQ1. What are the perceived competency needs of an innovation leader?

The study revealed that the innovation leaders' role perceptions differentiated. To address this, additional sub-questions were formulated to shed light on RQ1.

A: What is the role of an innovation leader, considering perceived purposes and attributed activities?
B: How can the organizational context influence the role?

An additional purpose is to explore the initial effects of personal certification for innovation leaders, since personal certifications can affect the professionalization of innovation management (Cumberland, 2018; Landry, 2016).

RQ2: What are the effects of a personal certification for an innovation leader?

The literature review can provide a theoretical framework of competencies for an innovation leader on an individual level based on current literature. Further, creating a competency framework for the active practitioners of the profession seeks to create an understanding of the individual's position where they operate, including the activities they ascribe the role. The result will hence imply a theoretical contribution through an initial competency framework, as well as implications of an innovation leader's doing and what effect the personal certification might have for the professionals working within innovation management.

1.4 Delimitation

As per the study's definition of an innovation leader and the selection criteria for the respondents, the study excludes innovation management professionals working in more informal roles. Moreover, the setting of the conducted interviews leads to a limitation to Swedish organizations and innovation environment. This study is also limited to the business innovation management perspective, and other dimensions of disciplines are not considered in this research. The purpose of creating a current state picture of the innovation management profession is limited to the individual's perspective and ability to perceive their role and doing in their organization. The study aims to include all the good competencies of an innovation leader per the study's definition. However, whether these stem from personal traits or/and a developed skill will not be considered. Lastly, a limitation of the study is that the chosen respondents are all in line with the definition provided by Innovationsledarna, either as certified individuals or otherwise recognized by the same association as high-performing innovation leaders.

1.5 Collaboration Partner

Another framing of this study was the collaboration with the Research Institutes of Sweden (RISE) and their unit for certification development. Together with the Association for Innovation Management Professionals in Sweden (Innovationsledarna), RISE has developed a certification for innovation management professionals under ISO 17024:2012 (Certification of Persons). The certification rules were based on a job role description provided by Innovationsledarna (2015). RISE has served as the third-party certification body for this certification since 2017, making it the first third-party certification in Sweden. The third-party personal certification aims to provide quality assurance for individuals' ability to lead innovation work systematically and continuously.

2. Literature Review

The literature review discusses innovation, innovation management, and how organizational context affects innovation conditions. It explores different organizations and strategies, organizational culture, and innovation adoption. The review also examines the professionalization of innovation management, including formal and informal roles, and the certification of innovation professionals. Finally, it covers this study's developed theoretical framework of competencies for an innovation leader, including emotional intelligence, creative thinking, project management, and individual skills.

2.1 Innovation

Innovation has been a widely discussed topic for many years, starting with its first definition by Schumpeter in 1934. Over time, innovation has evolved and is now perceived as a continuous process rather than the actions of individual actors (Hidalgo & Albors, 2008; O'Sullivan, 2000). O'Sullivan (2000) further adds to this definition by stating that innovation also incorporates an underlying learning process. New learnings develop the way one conceives a problem and the possibilities of its solution. Despite this agreement on innovation being a process, it is still a complex term with many interpretations. One of the most common distinctions within innovation is between incremental and radical innovation, where the former refers to improvements within existing markets or industries, and the latter refers to entirely new changes (Morris et al., 2014; Pisano, 2015). According to Rogers (2003), innovation encompasses the creativity needed for novel ideas and the persuasion to adopt these. This definition underscores the importance of individual, team, and organizational attributes and efforts to develop innovation capabilities. The degree of innovation adoption and attitude can be a determining factor in transforming an idea or invention into a true innovation (Denti & Hemlin, 2012). The extent to which innovation enhances performance is partially contingent upon the complexity and uncertainty of the organization's environment. Tidd (2001) concluded that a strong fit between the type and degree of the innovation work performed (radical, incremental), the organizational configuration (structure, processes), the current organizational performance (growth, market share), and environmental contingencies (uncertainty, complexity) implies a higher level of performance.

2.2 Innovation Management

Innovation is a crucial factor for the sustained competitiveness of businesses and an ongoing endeavor for organizations to facilitate (Hidalgo & Albors, 2008). Managing innovation processes is referred to as innovation management and enables organizational agility in response to internal and external opportunities (Şimşit et al., 2014). For organizations to succeed with innovation management, they must be mindful of the five classes of issues that often lead to poor innovation management, as identified by Şimşit et al. (2014), including: top management, organizational, financial, adaptation, and implementation issues. Using innovation management techniques results in multiple benefits for different types of firms.

Hidalgo and Albors (2008) highlight some advantages as: effective knowledge management, increased flexibility, and efficiency, facilitated teamwork, and increased productivity.

One of several frameworks within the innovation management literature displaying the innovation process and its organizational context within an organization is the innovation penthalon framework. The framework aims to divide the complex topic of innovation management into manageable and understandable parts. The Innovation Pentathlon Framework includes the innovation funnel, separated into three steps: idea generation, selection of the most promising ideas, and implementation. The Innovation Pentathlon Framework also shows the connection between the innovation funnel and the firm's strategic intent and the link to the organizational culture (Goffin & Mitchell, 2017). The framework demonstrates the interdependency within any organization working with innovation and, thereby, the importance of integrating innovation into all parts of the organization. Even though aiming to separate the parts to facilitate innovation work, the model acknowledges the complexity of every area and the overlap between them. However, Klein and Sorra (1996) underline the challenge of implementing innovation and describe how implementation failure, rather than innovation failure, is typically responsible for organizations failing to realize the anticipated benefits of an adopted innovation. Nonetheless, when working with any innovation, the penthalon framework can facilitate an understanding of where and how innovation efforts can be improved (Goffin & Mitchell, 2017).

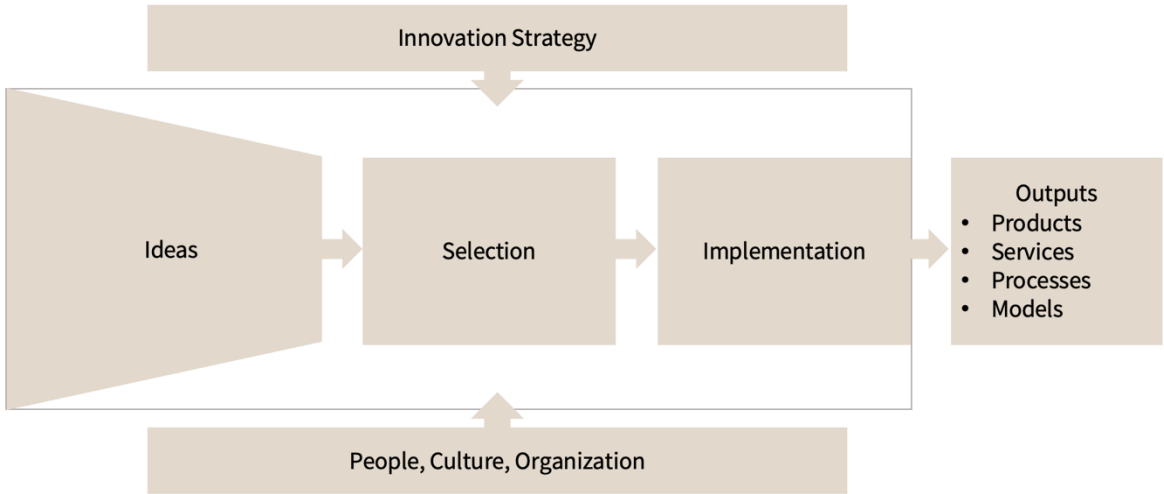

Figure 1. The Innovation Pentathlon Framework. Inspired by Goffin and Mitchell, (2017).

2.3 Organizations and Innovation Strategy

With the current business environment demanding a highly flexible and dynamic approach to change and innovation management, today's organizations must adhere to the new needs and remain agile internally. The organization's structure and characteristics play a crucial role in determining the success of innovation. The ambidextrous organization is the simultaneous focus of a firm's exploratory and exploitative business. The focuses require independent thinking regarding the strategic intent (cost and profit versus innovation and growth), the needed competencies (operational versus entrepreneurial), the organizational structure (formal versus adaptive), and the culture (O'Reilly & Tushman, 2004). The managerial leaders in these organizations must deal with leadership focusing on today's and tomorrow's needs, which can occasionally lead to strategic paradoxes. On the one hand, tolerating uncertainty, embracing change, and acting consistently inconsistent are behaviors that should be favored to commit to the explorative part of doing business needed to cope with the dynamic nature of the business landscape (O'Reilly & Tushman, 2004; Smith et al., 2016). On the other hand, an exaggerated focus on the explorative business will demand a more exploitative focus to survive short term, as Smith et al. (2016) explain.

To solve conflicting priorities, Pisano (2015) underlines the importance of setting overarching innovation priorities that can support the overall business strategy and help find synergies across goals. Thus, even though not all employees are related to the explorative business, for example, they can still embrace the interdependence of opposing strategies (Pisano, 2015). Govindarajan and Trimble (2010) further develop this idea by pointing at the significant advantages of initiating a partnership between the internally dedicated innovation team and the performance team who is managing the ongoing operations. In addition, the organization must allocate an innovation leader for the dedicated innovation team that can take on a positive and collaborative approach to the performance engine to mitigate the potential conflicts between long-term interests and short-term needs (Govindarajan & Trimble, 2010). In line with these concerns, Rosing et al. (2011) presents the ambidextrous leadership style, which emphasizes the need to be flexible between these focuses on maintaining an effective innovation process.

Another line of thought on how the construct and motivation for an organization affect its innovation capability is that the explorative focus may also need new ways of thinking about investment opportunities. Christensen et al. (2008) indicate that some organizational tools used to evaluate investment opportunities are at risk of creating a systematic bias against innovation. However, as the projected value of innovation is more difficult to compare to the scenario of doing nothing than if only continuing with the exploitative business, organizational methodologies of investment opportunities can fail to consider the decline in performance due to the absence of innovation investment (Christensen et al., 2008).

An additional implication stemming from the need for innovative organizational performance is for the internal leaders to create an environment where innovation is achievable. According to Denti & Hemlin (2012), leaders are a vital element in promoting organizational innovation and should encourage intrinsic motivation, foster a positive team climate, facilitate problem-

solving, and maintain high-quality work relationships with team members. Other organizational characteristics facilitating innovation are stated to be enabled by the leaders' way of defining expectations for creative performance and granting autonomy to individuals and teams (Denti & Hemlin, 2012). In general, leadership is identified as a crucial factor for driving change and innovation within organizations. Leaders can influence innovation by using their prominent position to communicate a shared vision, support change, and develop a specific organizational culture. They can also simplify complex organizational dynamics, helping subordinates to understand changes and provide guidance and support (Vaccaro et al., 2012). Zhou and Wu (2018) examined how humility, defined as the leader's "other orientation", could foster employee innovation behavior and concluded that it positively impacted their innovation behavior. Another individual driving innovation management in the literature is mentioned as an "internal change agent," described by Vaccaro et al. (2012). These individuals identify new trends and needs within the organization for which innovation management may be desirable (Vaccaro et al., 2012).

2.3.1 Organizational Innovation and Culture

As there are significant advantages to gain when improving its innovation capabilities, it is sometimes necessary for a business to deal with challenges of change to achieve this. Goodman & Dingli (2013) present ten challenges of change for an organization which are then grouped into three categories covering challenges of initiating change, sustaining momentum, and system-wide redesign and rethinking. The challenges include aspects of the people involved and their characteristics, where employee factors and culture are crucial for an organization's change management success. For example, employees related to change initiatives must be able to make a case for the change by understanding needed new skills or development to the tacit work of the business (Goodman & Dingli, 2013). An additional condition of the environment that regulates growth (concerning the employee's role) is that personal fear and anxiety can challenge the possibility of the organization sustaining momentum and continuing to develop. Thus, an organization will need to provide facilitating conditions on an individual level to be able to initiate and sustain change (Goodman & Dingli, 2013; Talukder, 2014). An additional important aspect connected to the organizational culture is to actively convert the successful innovation achievements into the organization's culture (Morris et al., 2014).

2.3.2 Organizational and Individual Innovation Adoption

To further understand the role of the organization's characteristics upon the individual employee, the topic of organizational innovation adoption is essential to highlight. The term *adoption* refers to the decision of any individual or organization to make use of innovation (Frambach & Schillewaert, 2002). Talukder (2014) describes organizational adoption as the process through which the organization adopts a new idea to achieve organizational advantages. The process constituting the innovation adoption process is described by Rogers (2003) as the process by which a person or decision-making unit transitions from being first introduced to one innovation, to forming an opinion about it, to choosing to either adopt or reject it, to put the idea into practice, and finally to affirming that decision. Examples of the advantages resulting from organizational adoption could be increased profits, efficiency,

effectiveness, and strategic domination (Talukder, 2014). Similar to the importance of managing change and facilitating change acceptance throughout the organization, the organization must also support intra-organization adoption where all employees adopt an innovation. Talukder (2014) motivates the importance of innovation adoption on an individual level within the company by stating that no innovation can be considered a success until adopted by every individual internally.

Frambach and Schillewaert (2002) present several determinants affecting the adoption process, adhering to organizational and individual perspectives. The first part of the process is concentrated on the organizational factors, and the individual adoption is presented as a result stemming from the organization's adoption decision. For organizations, both important adopter characteristics and decisive perceived innovation characteristics added to the adoption decision and continued use. The organizational characteristics that influence the adoption decision are the organizational size, the structure, and the organizational innovativeness or strategic posture. (Frambach & Schillewaert, 2002)

For individual acceptance, there are organizational facilitators such as training, social persuasion, and organizational support – but personal characteristics are also illustrated as essential for personal innovativeness and attitude towards innovation (Frambach & Schillewaert, 2002). Another perspective Frambach & Schillewaert (2002) presents how individual acceptance also relies on the network externalities and peer usage within the organization. Talukder (2014) also highlights that employees' innovation adoption is driven by their social environment and the moral support, encouragement, and motivation that steer their adoption of innovation. Other than the social environment, factors that influence the individual are said to be their beliefs and seen effects, which are decisive for their attitude toward innovation (Frambach & Schillewaert, 2002). Their attitude, in turn, influences the behavioral intentions toward innovation adoption, both positively and negatively (Frambach & Schillewaert, 2002). Finally, the attitude towards innovation adoption is presented by Talukder (2014) to be an aggregate belief of organizational, individual, and social factors that together contribute to encouraging individual adoption and usage of the innovation.

2.4 The Professionalization of Innovation Management

Professionalization, in general, refers to the process in which occupations strive to gain public recognition as professions based on how well they fulfill the established criteria. Professionalization has two strains: one is to improve the status of the members, and the second emphasizes enhancing members' abilities to improve the quality of services provided (Siegrist, 2001). The literature also emphasizes that professionalization increases the legitimacy and credibility of a particular field. Finally, professionalization creates possibilities to identify specificities of the practice and critical activities and establish shared values within a profession through guidelines or standards (Jacob & Boisvert, 2010). With the development of new knowledge-intensive professions emerging from the changing business landscape, professional associations have had a role in defining their unique competency territory (Muzio et al., 2011;

Morris et al., 2006). These association function through defining bodies of knowledge and skills for the respective professions (Morris et al., 2006).

Today, innovation management as a profession is emerging (Hyland & Karlsson, 2021; Robbins & O'Connor, 2023), resulting in several formalized business roles as innovation managers and innovation officers (Maier & Brem, 2018). The professionalization of innovation management refers to the efforts to establish itself as a formal, professional function by recognize and define standards and competencies within the occupation (Robbins & O'Connor, 2023). For innovation management, the development of standards has had a crucial part in the development of the professions in terms of creating a body of knowledge (for example, the ISO 56002:2019 Innovation Management Systems Guidance), which has enabled a legitimatization for the profession and a clarification of what innovation roles entail (Blomquist et al., 2018; Hyland & Karlsson, 2021; Joseph & Marnewick, 2018; Laundry, 2016; Robbins & O'Connor, 2023). Maier and Brem (2018) explain that organizations have formalized additional innovation management activities during the last fifteen years. A higher degree of professionalization often offers the professionals a more prominent voice in decision-making and increases organizational possibilities to foster and maintain talent (Robbins & O'Connor, 2023). Additionally, the professionalization and formalization of innovation management were recognized to positively affecting innovativeness (Maier & Brem, 2018; O'Connor & DeMartino, 2006). Robbins and O'Connor (2023) explain that professionalization offers the development of specialized innovation management knowledge as an organizational capability. Additionally, the development enables leaders to better understand the tasks and promote a greater understanding of innovation concepts throughout the organization (Robbins & O'Connor, 2023).

Mabry and Barnes (1980) identified two main types of organizational roles: formal and informal. Informal roles arise from social relationships within the organization, whereas formal roles are officially assigned to an individual through a job description and come with specific, outlined duties. The formal role is a function of an organization's official structure and is embedded in reporting structures. Instead, informal roles are undertaken by individuals that are often performed outside of and in addition to their official job responsibilities (Mabry & Barnes, 1980). Pollok et al. (2019) argue that informal roles remain critical in innovation management due to a lack of formalization, which involves undertaking activities that necessitate creativity, risk-taking, and development.

Up to date, informal roles are more extended in the academic literature compared to formal ones. Therefore, to understand the emerging innovation management profession, the development and identification of informal roles is essential to highlight as formal roles today, to some extent, have emerged from informal ones (Maier & Brem, 2018). The academic literature has evolved over the past fifty years in understanding the functions of informal roles in the innovation process (Goduscheit, 2014; Witte, 1977). A prominent informal role existent in the current literature is the innovation champion. The innovation champion is described as essential for organizations (Gemünden et al., 2007) and performs several important tasks within an organization's innovation process. For example: addressing challenges, identifying potential

value, enhancing innovativeness, overcoming barriers, and ensuring project success (Hamadi et al., 2018; Kelley & Lee, 2010; Sergeeva, 2016), supporting the knowledge generation of other people internally (Gemünden et al., 2007), and taking on personal responsibility for ideas connected to radical innovation (Schon, 1963). The importance lies in the individual's characteristics, activities, and social context (Dörner & Gurtner, 2009; Shea, 2021; Sereeva, 2016). Therefore, the importance of competencies and characteristics of individuals in understanding innovation processes is crucial (Goduscheit, 2014; Pollok et al., 2019). However, the existing literature primarily focuses on identifying informal roles rather than the generally required skills for the innovation process (Dörner & Gurtner, 2009).

2.5 Certification of Innovation Management Professionals

The emergence of informal roles indicates the demand for professionalization within innovation management and refinement of the role definitions. Robbins and O'Connor (2023) also highlight that innovation management is ideal for professionalization. Cumberland et al. (2018) reason that employers keep seeking ways to elevate the skills of their employees and build prestige for the industry, making it meaningful to develop certification programs to provide educational development for the profession's members. Landry (2016) specifies that both organizations and individuals can use certifications to create a more formal, knowledge-based area of the profession – thereby further underlining the role of certifications in standardizing skills and knowledge within a profession. Certifications are often generated by third-party bodies and are used by an individual to demonstrate, often through personal history and tests, the desired competencies and knowledge in line with the body of knowledge (Blomquist et al., 2018; Landry, 2016). Project management is an example of a profession that displays the potential role that certifications can have in the professionalization journey. The necessary skills with respect to a defined body of knowledge helps set the profession's requirements (Landry, 2016).

There can be several layers to the individual motivations to pursue a certification, consisting of intrinsic and extrinsic motivations, reactive and growth factors. The extrinsic factors are exemplified by increased status, financial gain, or career progress, while the intrinsic motivations are referred to as professional growth, self-development, and achievement (Blomquist et al., 2018). The growth factors are exemplified by gaining knowledge, gaining respect, and networking, and the reactive factors focus more on the current situation of the job market, possibilities of career advancement, or whether certification is required by the employer (Cumberland et al., 2018). The underlying motivation for individuals to pursue learning activities affects their commitment and performance within the process (Fertig, 2011).

However, there are also potential drawbacks to consider on the topic of certifications. For example, certification cannot guarantee that the person in question is proficient at doing their job (Jacob & Boisvert, 2010; Landry, 2016). The concept can lead to a "paper chase" concerning recruitment processes (Starkweather & Stevenson, 2011), and certifications could lead to restricted diversity and reduced training offerings due to its standardizing result (Jacob

& Boisvert, 2010). A problem of identifying and verifying expertise within a field is also highlighted in the literature (Jacob & Boisvert, 2010).

2.6 Theoretical Framework of Competencies for an Innovation Leader

To explore the competency needs of an innovation leader, the following sections aim to encompass the currently described competencies in the literature through a theoretical framework. With the study's aim to explore the needed competencies of an innovation leader, a comprehensive compilation of literature was essential to gain a current overview. Table 1 illustrates the overview of the identified competencies, with the four competency areas: Emotional Intelligence, Creative Thinking Competencies, Project Management Competencies, and Individual Competencies. An overview of the identified literature can be found in Appendix A.

2.6.1 Emotional Intelligence

Winton and Sabol (2022) identify emotional abilities as a crucial intra-personal factor contributing to an individual's creative personality, openness to experience, and expression of innovative ideas. In the current literature, emotional intelligence is being discussed as an influencing factor of performance, a managerial need to achieve effectiveness, a factor influencing task/relationship conflict within teams, and as having a positive relationship to academic success (Sosik & Megerian, 1999; Zulfadil & Machasin, 2020). In simple terms, emotional intelligence encompasses the capacities associated with proficiently managing the assessment and communication of emotions, regulating emotional responses, and employing emotions (Salovey & Mayer, 1990; Zulfadil & Machasin, 2020). Goleman and Boyatzis (2017) refer to emotional intelligence as "EI" and are determined to compromise the four domains of self-management, self-awareness, social awareness, and relationship management.

Self-awareness

Goleman and Boyatzis (2017) include emotional self-awareness as an influential factor for one's emotional intelligence. Bratton et al. (2011) investigate the role of self-awareness and leadership performance, where skilled managers are determined to be those who exhibit a high level of intrapersonal and interpersonal awareness and can leverage this to demonstrate strong transformational leadership. Although self-awareness heavily relies on one's ability to be aware of one's capabilities and emotions, the term is also explained to include the perspective of understanding others too (Bratton et al., 2011).

Self-management

The competencies related to self-management mentioned by Goleman and Boyatzis (2017) are emotional self-control, adaptability, achievement orientation, and a positive outlook. Hero et al. (2017) mentions self-management as a subcategory of individual innovation competency factors. Self-management and self-efficacy are sometimes recognized as synonyms (Celik, 2013; Hero et al., 2017) and are described as the ability to organize and execute a course of action required to manage prospective situations. Denti and Hemlin (2012) explain self-

presentation as an individual mediator between leadership and increased innovation capabilities, which modify the person's behavior to reflect the expectations from the social context. Emotional stability is included in the competency of emotional self-control presented by Goleman and Boyatzis (2017), underscored as an essential competency that positively impacts intrapreneurial behavior by Huang et al. (2021).

Self-efficacy

Even with self-efficacy sometimes being mentioned as a synonym to self-management (Celik, 2013; Hero et al., 2017), the frequent occurrence of the competency led to it being a keyword on its own for the framework. Hero et al. (2017) refers to self-efficacy as an individual's perception of their ability to control internal or external actors in a particular situation. Liao et al. (2022) determines creative self-efficacy to mediate between intrapreneurship and opportunity recognition. Celik (2013) differentiates between domain-specific and general self-efficacy, contrasting the individual's belief in their ability to handle a specific responsibility or a range of stressful or challenging demands. Self-efficacy can develop through social learning when having role models for the particular skill to imitate and gradually becoming confident and able to perform independently (Chell & Athyade, 2011). The self-efficacy level can work as a part of knowledge development and contribution to the learning environment, as well as improve intrapreneurial performance on an individual level (Chell & Athyade, 2011; Huang et al., 2021; Shea, 2021). Denti and Hemlin (2012) mention that high levels of self-efficacy can lead to increased motivation, greater eagerness to pursue individual ideas, and more effective use of cognitive resources, and through this, act as a mediator between transformational leadership and innovation capabilities.

Social Awareness

The individual level of empathy and organizational awareness constitutes one's social awareness (Goleman & Boyatzis, 2017). Empathy and emphatic leadership are stated by Kock et al. (2019) to positively affect the innovative behavior and job satisfaction of the followers as it leads to lower stress, anxiety, and increased feelings of safety. Feelings of safety and decreased stress are two significant factors contributing to someone's creativity and innovativeness, making the affective state of the employed in a company highly connected to their innovative performance (Kock et al., 2019). Vladic et al. (2021) present inclusive leadership as an extension of relational leadership created by factors such as empathy. Inclusive leadership is then concluded as an enhancer of firm innovation capability.

Relationship Management

Relationship management encompasses competencies such as conflict management, teamwork, inspirational leadership, influence, coaching, and mentoring (Goleman & Boyatzis, 2017). The importance of relationship management is highlighted in the role of team leaders in achieving team emotional intelligence. A higher level of emotional intelligence in team leaders results in a greater ability to coach and mentor team members (Lee & Wong, 2019). Similarly, Sosik and Megerian (1999) suggest that higher individual emotional intelligence scores lead to increased cohesion within the team. Leaders can instill the confidence of individualized

consideration by developing close relationships with followers, creating inspirational motivation, and a shared vision for achieving organizational goals (Jaiswal & Dhar, 2015).

Relationship management is also a critical aspect of overall organizational performance, as knowledge sharing is affected by the level of emotional intelligence within the organization (Zulfadil & Machasin, 2020). A high level of relationship management competency enables the cognitive resources, empowerment, and support needed to foster an innovative climate within an organization (Jaiswal & Dhar, 2015). Since innovation projects often include cross-disciplinary teamwork (Hero et al., 2017), teamwork and inspirational leadership competencies in relationship management are crucial for innovation-specific workgroups. Moreover, working with different professional communities means significant advantages within innovation management (Podmetina et al., 2018).

Furthermore, networking is crucial for managing relationships, particularly in implementing successful innovation projects. Networking skills infer an ability to develop, maintain and use networks to create beneficial coalitions and alliances critical to innovation (Hero et al., 2017). Innovation project promoters, or "relationship promoters", can identify and engage with the right actors to ensure successful innovation and establish market relationships (Gemünden et al., 2007). Shea (2021) notes that relationship management skills are also crucial for the pre-implementation stage of the innovation process. Additionally, Klerkx and Aarts (2013) identified the relationship champion as a critical type of innovation champion in an inter-organizational context, focusing on overcoming internal innovation barriers through networking. The resources and social capital derived from an individual's network of relationships can create relational trust, which increases the performance connected to innovativeness (Parra-Requena et al., 2022).

2.6.2 Creative Thinking Competencies

Creative thinking competencies, including creativity and innovativeness, are essential for innovation and, therefore, necessary competencies for practitioners. The componential theory explains that creativity and innovation require specific social and psychological components for individuals to excel in these areas. The theory defines *creativity* as generating novel ideas that align with organizational goals and innovativeness in executing those ideas (Mafabi et al., 2015). Additionally, in line with the conclusion that individual creativity directly feeds organizational innovation, the level of individual creativity is affected by the organizational work environment and the individual's motivation to do the task (Amabile & Pratt, 2016; Liao et al., 2022).

Creativity

According to Khalili (2016), creativity is a crucial competency for organizations that aims to establish a competitive advantage through innovation. Concerning innovation, creativity is partly often linked in the literature to the "fuzzy front end" of the innovation process, which incorporates the successful implementation of creative ideas within an organization. According to Amabile and Pratt (2016), to achieve favorable effects from creativity, it is imperative to

consider how employees, the enablers of creative and innovative outputs, perceive their organization's leadership, practices, and policies that can either encourage or hinder innovation. Khalili (2016) links transformational leadership, creativity, innovation, and an innovation-supportive climate, where leaders with a transformational leadership style are said to be the main drivers of employees' creativity. The leaders' openness and creativity allow the surrounding to analyze their issues from several angles and look for new solutions to problems (Khalili, 2016). In addition, an organization's explorative and exploitative focus can be utilized to achieve a climate fostering employee creativity (Hong et al., 2018).

Innovativeness

Innovation is the accomplishment of introducing something new, for example, a process or a product, while innovativeness is the personal trait of continuous innovative behavior. Further, innovativeness is acknowledged as a requisite for the success and survival of organizations, and personal innovativeness is identified as an individual receptiveness to change for a member in an organizational context (Frambach & Schillewaert, 2002; Parra-Requena et al., 2022). Gawke et al. (2019) define *employee innovativeness* as "the set of work behaviors that create (i.e., idea generation), introduce (i.e., idea promotion), and apply new ideas (i.e., idea realization) within a work role, team, or organization in order to benefit job performance, team performance, or the performance of the organization" (p.811). Additionally, the literature indicates that the innovativeness of individuals in organizations has a positive relationship with strategic renewal and venture behaviors and can successfully transform the behaviors of individuals into intrapreneurial initiatives (Gawke et al., 2019; Huang et al., 2021).

2.6.3 Project Management Competencies

Project management skills entail a range of abilities, such as: setting specific and challenging team goals, defining learning objectives, coordinating activities, sharing information and tasks among team members, and implementing a strategic plan systematically and sequentially. There is also a significant responsibility in taking on the team itself, requiring social skills and to provide the resources and feedback needed for the team to excel (Chatenier et al., 2010; Cobo, 2013; Hero et al., 2017). In general, project management expertise and competencies are vital factors for realizing project success (Joseph & Marnewick, 2018). Therefore, being accountable and leading a company's innovation work are identified as necessary competencies for an innovation leader.

Innovative Teamwork

Innovative teamwork can be identified in many ways. Podmetina et al. (2018) identified innovative teamwork competency as necessary for innovation, including team-working, multi-tasking, and problem-solving skills in the definition. The authors also highlight that these interpersonal skills are independent of the work context and, thereby, fully transferable, only relatable to the individual. Cobo (2013) also discusses collaboration and teamwork as necessary for innovation, both contributing to teams when solving problems and producing innovations. Hero et al. (2017) also touches upon these competencies when examining individual innovation competencies that influence innovative teamwork capability, emphasizing communication

skills as important. Within the innovative teamwork competency, the ability to share knowledge and ideas internally, establish team goals, manage inter-organizational collaboration processes, and deploy cultural awareness becomes important (Podmetina et al., 2018).

Innovation Process Competency

Podmetina et al. (2018) identify innovation process competency, and include business mindset, technology, and negotiation skills. Rosing et al. (2011) describes the complexity of innovation processes as stemming from the fact that creativity and implementation do not follow a linear path and cannot, therefore, be separated into distinct phases or stages. Instead, it demands alternation dynamically throughout the innovation process (Rosing et al., 2011). The shifts during the innovation process could demand different innovation process skills and abilities depending on the current focus. Rosing et al. (2011) further underline how this leads to different leadership styles being relevant. Podmetina et al. (2018) indicate that a project management ability and a constant goal overview are essential. The innovation process competency is further motivated as vital for those in an open innovation project management role since it enables the capacity to balance business objectives.

Moreover, negotiation skills are mentioned as essential for managing the trade-offs within the innovation project and spreading an understanding within the group to achieve a mutually agreeable outcome (Di Marco et al., 2012; Podmentina et al., 2018). As the stages of the innovation projects can infer conflicting goals, and given the complexity of innovation projects, negotiations at both inter-organizational and intra-organizational are critical to obtaining the expected goals (Barchi & Greco, 2018; Pedersen et al., 2022). Additionally, in connection to negotiation and the social skills required to drive innovation processes involving multiple internal actors, the competencies of an internal change agent are relevant (Vaccaro et al., 2012).

Agile Project Management

Agile project management is gaining popularity within the project management literature. Ahsan and Ho (2022) recognized an existent academic gap within professional project management bodies, where an understanding of the competency requirements of agile project management needs to be improved. The profession demands the capability of dealing with uncertainty, short development cycles, lack of physical deliverables and competencies that become increasingly significant in a high-demand and dynamic environment (Ahsan & Ho, 2022). Having an agile mindset, meaning the ability to quickly manage issues under pressure, promoting agile values and behaviors, and helping teams to adopt an agile mindset are mentioned by Ahsan & Ho (2022) as competency indicators in their competency framework. The individual's resourcefulness influences their performance, including competencies such as iterative continuous improvement behavior, analytical mindset, and problem-solving abilities (Ahsan & Ho, 2022).

2.6.4 Individual Competencies

With the purpose of determining individual competencies for a successful innovation leader, the chosen definition of competencies becomes a determinant in what is considered a competency and what is not. As per the definition, the "knowledge, skills, abilities, and behaviors that contribute to individual performance" (see problem discussion) leave room for several abilities on an individual level. For this theoretical framework, flexibility, resilience, risk-taking, intrapreneurial leadership, proactiveness, opportunity recognition, and cognitive skills are considered individual competencies important for an individual's performance within innovation management.

Flexibility

Flexibility is an identified critical competency and personal attribute for an individual active in innovative processes (Huang et al., 2021). Hero et al. (2017) define *flexibility* as having a stretch mindset, which involves being willing to shift one's approach and critically evaluate ideas. Neessen et al. (2019) emphasize that the increased decentralized decision-making processes have led to the demand for flexible employees and for leaders to change and adapt to changing business environments accordingly. Exploration and exploitation are two approaches by which organizations adapt to unpredictable and dynamic environments. Selecting between the two requires practical entrepreneurship based on strategic importance and an organization's existing resources, indicating the need for individual ambidexterity and flexibility (Bonesso et al., 2014; Farnese, 2016; Huang et al., 2021; Martines-Sánchez et al., 2009; Van Assen, 2020). Flexibility is essential for switching between the two leadership behaviors and navigating in the fast-changing innovation processes, where creativity and implementation are not pursued linearly, as previously commented (Rosing et al., 2011).

Resilience

Resilience on an individual level has increased in interest due to the importance of organizational resilience regarding survival and renewal in complex and uncertain environments (Fey & Kock, 2022; Mafabi et al., 2015; Monenkemeyer et al., 2012; Morais-Storz et al., 2018). Resilience in an employment context refers to the ability to recover from adversity, conflict, failure, favorable events, progress, and increased responsibility (Luthans, 2002). Further, resilience impacts an employee's ability to cope with stress from organizational change and shapes their attitude towards it (Abukhait et al., 2020; Mafabi et al., 2015). Oeij et al. (2016) explain that *innovation resilience behavior* can be defined as the capability to endure and overcome significant incidents that allow continued performance toward the objectives of the innovation project. Moenkemeyer et al. (2012) identify that an individual's innovator resilience potential depends on six components: self-efficacy, outcome experience, hope, self-esteem, risk propensity, and optimism. The identified components indicate the degree to which an individual has the potential to perform future innovation tasks.

Risk-taking

The relationship between innovation activities and risk-taking is acknowledged in the literature, both as a driver for innovation and as a mediator for other important variables of innovation performance (Cobo, 2013; García-Granero et al., 2015; Giaccone & Magnusson, 2022; Urbano et al., 2022). Risk-taking involves taking actions or making decisions that can result in adverse outcomes but are motivated by the potential for positive outcomes. The changing business environment requires employees to seek opportunities and take risks to introduce the necessary changes (Blanka, 2019; Neessen et al., 2019; Urbano et al., 2022). The ability to take risks also depends on the organizational support (Neessen et al., 2019), as more innovative and creativity-oriented climates increase risk-taking (Farrukh et al., 2022).

Intrapreneurial Leadership

Intrapreneurial leadership includes promoting entrepreneurial thinking and innovation within an established organization to enhance competitiveness and performance. It encourages a creative mindset and risk-taking among employees within the existing business structure (Farrukh et al., 2022; Huang et al., 2021; Neessen et al., 2019). Intrapreneurial leaders advocate opportunities, modify them as needed, and guide the individuals involved (Blanka, 2019). Additionally, it involves individuals that foster a culture of innovation and allocate resources, and their support is necessary to pursue identified opportunities. Intrapreneurial leadership also includes trust skills, as trust is critical in this leadership environment (Podmetina et al., 2018). Huang et al. (2021) emphasize how intrapreneurial leaders play different roles depending on where they work in the innovation process. Additionally, individual-level research has indicated the significant role of individual employee capabilities and knowledge in the success of intrapreneurial incentives (Huang et al., 2021; Neessen et al., 2019).

Proactiveness

Proactiveness infers the ability to take initiative, develop innovative ideas, cope with uncertainty, and adapt to changes in complex environments (Hero et al., 2017). Proactiveness is essential in dealing with expected difficulties concerning innovation (Farrukh et al., 2022; Huang et al., 2021; Urbano et al., 2022). Additionally, proactive behaviors are crucial for cultivating innovation, and an innovative and creativity-oriented organizational climate is essential for driving proactiveness (Farrukh et al., 2022). A more entrepreneurial environment in an organization positively correlates with proactiveness (Neessen et al., 2019), similar to organizational empowerment, which Blanka (2019) describes as a crucial element for proactiveness in organizations. Accordingly, empowerment enables employees to cultivate proactive behavior by implementing a structure prioritizing employee autonomy and commitment in decision-making. Proactiveness is also identified to cope with explorative and exploratory innovation leadership strategies by proactively anticipating future needs or opportunities and focusing on desired outcomes (Kiss et al., 2022).

Opportunity Recognition

Hero et al. (2017) defines *future orientation* as an innovation competency as "the ability to foresee and anticipate, to make plans for and to organize future possibilities" (p. 110). The

authors further divide the competency of future orientation into two parts: future thinking and alterness to new opportunities. The literature highlights opportunity recognition as an essential driver of innovation and organizational learning. On an individual level, it means creating and participating in new opportunities by anticipating and acting on future needs and challenges (Farrukh et al., 2022; O'Connor & Rice, 2001). Neessen et al. (2019) describe that opportunity recognition is vital to create new innovative products, services, processes, and businesses. Neessen et al. (2019) also discuss findings that indicate that employees' affective (emotional attachment), and normative (sense of obligation) commitments to their task have a positive relationship with their overall commitment to the organization. Moreover, employees who identify strongly with the organization, such as feeling a sense of belonging, are likelier to engage in opportunity recognition behavior.

Cognitive Skills

Cognitive skills are identified to be essential for innovation and refer to critical thinking, analytical thinking, managing complexity, problem-solving skills, absorptive capacity, and diverse thinking (Ahsan & Ho, 2022; Cobo, 2013; Farrukh et al., 2022; Hero et al., 2017; Neessen et al., 2019). Ahsan and Ho (2022) define *problem-solving* as the "ability to solve project-related problems in an iterative process to redefine problems, identify possible strategies and solutions to understand customer needs" (p. 5). The same authors also define *analytical mindset* as the "ability to apply logical and critical thinking to analyzing situations, financial and organizational data, and trends to find alternative solutions" (p.5). Lastly, problem-solving is said to be an especially essential behavioral competency in organizational contexts characterized by radical, innovative, and discontinuous change and that an individual's success within the competency is dependent on them possessing sufficient independence to generate innovative ideas (Farrukh et al., 2022; Podmetina et al., 2018).

2.6.5 Summary of the Theoretical Framework

The literature review regarding the competencies for an innovation leader resulted in the following theoretical framework. Table 1 thereby presents to summarized overview of the identified competencies on an individual level in the current literature (see Appendix A).

Table 1. Summary of the identified competencies for an innovation leader.

Competency area	***Sub-competency***
Emotional Intelligence Competencies	Self-awareness
	Self-management
	Self-efficacy
	Social Awareness
	Relationship Management
Creativity Thinking Competencies	Creativity
	Innovativeness
Project Management Competencies	Innovation Teamwork
	Innovation Process Competency
	Agile Project Management
Individual Competencies	Flexibility
	Resilience
	Risk-taking
	Intrapreneurial Leadership
	Proactiveness
	Opportunity Recognition
	Cognitive Skills

3. Method

The methodology section aims to present the chosen research strategy and design. The chapter will provide a comprehensive overview of the research process, including the qualitative approach and exploratory stance used. It further presents the research phenomena formulation, systematic literature review, semi-structured interview data collection, data analysis, and a research quality discussion.

3.1 Research Strategy

A qualitative approach was adopted for this study as the aim was to develop a deeper understanding of the perceived competency needs of innovation leaders. Since the study aimed to develop a rich understanding of the existing individual perceptions, the qualitative approach was motivated (Bell et al., 2019). In addition, a systematic literature review was conducted to formulate the purpose and provide an understanding of the existing gap within the research literature. An exploratory stance was then taken to explore and contribute to filling the gap within the current literature, where the lack of a coherent description of the required qualifications, knowledge, skills, and experiences for roles in innovation management was emphasized (Robbins & O'Connor, 2023).

When using a qualitative approach in a business environment and exploring phenomena, there can be difficulties in isolating the units of analysis clearly and unambiguously (Langley, 1999). Interpreting the results of qualitative research can also constitute a challenge, especially in connection to the human subject (Flick, 2018). For example, it could be challenging to distinguish between the subjective perception of the innovation leaders regarding their role and what is their position due to their organizational context. However, this study also aimed to consider the context of the practitioners (RQ B) and how it could influence their competency needs. This demanded for a multileveled analysis, carried out by not only analyzing the individual's aspects, but also viewing them in the light of the implications for the role created by their context. The grounded theory was considered appropriate to explore the role perception of innovation leaders and create a theory regarding this in accordance with the result. The implications of grounded theory strategy involved deriving theoretical patterns, themes, and categories directly from the data rather than pre-determining them prior to data collection and analysis (Rahmani & Leifels, 2018). The grounded theory strategy demands detailed data from multiple similar incidences, in this case, innovation leaders, and was hence well-adapted to the ambiguous data within this research (Langley, 1999).

Furthermore, an abductive stance was taken in the study due to the iterative method of data collection and analysis (Bell et al., 2019). The grounded theory strategy relates to the abductive stance by constantly comparing the data to achieve a new theory from the data and allowing for new insights and knowledge to be integrated with the analysis during the research process (Rahmani & Leifels, 2018). This was an essential element for the research since the understanding increased and resulted in more specific questions and additional levels of

analysis emerging throughout the research process. The initial purpose of further understanding the needed competencies of an innovation leader led to insights regarding the existing ambiguity of the role perception in general. In turn, the separate viewpoints of their purpose within organizations led to differences in what the respondents emphasized. For example, which activities they included in their role and hence which competencies they perceived necessary to fulfill them.

3.2 Research Design

The qualitative approach favors a constructivist and interpretivism epistemology, while quantitative research leans towards positivism and objectivism (Bell et al., 2019). With the explorative nature of the research questions, this research design was influenced by the interpretive approach. Additionally, this approach is supported by a social constructionist ontology, as described by Bell et al. (2019), which suggests that the reality being studied is constructed through human interpretation and is not an objective fact itself. The choice of ontology and epistemology was thereby deemed coherent to develop a deeper understanding regarding the individual innovation leaders' perceptions. For the research design, the interpretive focus resulted in open research questions where semi-structured interviews were conducted to gain rich data and shed light on various perceptions of the role definition, the ascribed activities, and the competencies needed for these.

Moreover, the Gioia method was utilized throughout the design of the research method. It helped bring "qualitative rigor" to the study, aiming at creating new theories through the data while keeping the creative potential for new concept generation. Since the research questions developed with the progression of the research, the method of Gioia was also suitable since it allows for the flexibility of interpretative research. As previously commented, the emergence of new understanding during this research led to a shift in focus during the empirical data collection to incorporate the role perception of the innovation leaders rather than just their perceived competency needs. This method was thus used due to its profoundness of initiating the analysis without much previous thoughts or clarity of the data. Instead, the purpose was to find the lower-level meanings of each informant's perceptions and formulate new theories through the grounded theory strategy. Multiple data sources were utilized to gather rich and detailed accounts of the competencies needed for an innovation leader. The semi-structured interviews formed the central part of the research. However, systematic literature reviews were conducted to formulate the topic and guide the questions being asked (Gioia et al., 2013).

The research design was similar to a cross-sectional design, aiming to understand the timely independent phenomenon of innovation leaders as an entity rather than a process. The data of the interesting variables were thus collected simultaneously to create a comprehensive coverage of the phenomenon at a single point in time (Bell et al., 2019). With the presented research design, the study resulted in a non-isolated perspective of the innovation leader's position and purpose and the current general state of the professionalization.

3.3 Research Process

The research process presented in Figure 2 illustrates the process of this study after receiving the research area from RISE, until the finalized theoretical implications. Due to the chosen research stance, much of the process was iterative. The data collection and analysis focal points were adjusted, with new insights emerging throughout the process. Specifically, the interconnectivity of the role, the activities, and the contextual factors were discovered and inferred a broadened perspective for the data collection rather than solely looking at the needed competencies of the role. The Gioia research method and the grounded approach enabled this iterative process since the found patterns and coding were to be derived from the data and not predetermined in the research questions. Finally, the analysis process resulted in the aggregated categories through which the empirical data and analysis were presented.

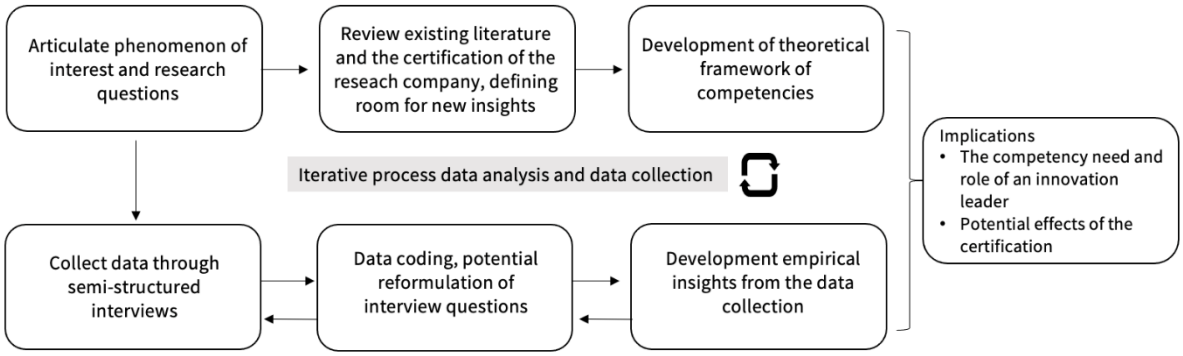

Figure 2. Illustration of the research process. Inspired by Vertue and Haig (2008).

3.4 Secondary Data Collection

The secondary data collection is based on a comprehensive and systematic search of existing literature to provide an overview of the current state of innovation management, existing individual competencies, and the professionalization within innovation management. A systematic literature review consists of three steps. Firstly, the research question should be defined. Secondly, defining suitable keywords and search for relevant literature. Lastly, analyzing the literature and structuring it reasonably to increase the readability and accessibility of the current research state (Bell et al., 2019; Hiebl, 2021).

3.4.1 Systematic Literature Reviews

A systematic literature review approach increased the study's transparency and replicability. Within this process, keywords were specified to identify relevant research (Bell et al., 2019; Hiebl, 2021). Two systematic literature reviews were conducted, as described in Table 2, which were motivated by a two-step approach to the literature for this paper. Since there is already extensive literature on organizational- and team-level innovation management, the initial literature search aimed to comprehend innovation management, the interplay between organizational and individual capabilities, and the development of innovation management. Moreover, the initial systematic literature review identified multiple concepts containing and identifying innovation competencies on an individual level. A second systematic literature was

conducted to further investigate the concepts identified, illustrated by the keywords of the second search (Table 2). An overview of the identified literature for the created theoretical framework can be found in Appendix A. The literature identified was then structured in a top-down approach, starting with a broader understanding of the current state of the literature and ending with the theoretical framework for the individual competencies identified.

The literature review was based on academic literature and peer-reviewed articles in the field of innovation management, as well as literature and articles from relevant published books used during the master studies. Due to the importance of using reliable search engines to ensure the research's quality and status, the following databases were utilized: Web of Science, Super Search from Gothenburg University Library, Google Scholar, and JSTOR. Using only databases and keyword-based searches can miss relevant research for this study, which increases the importance of searching in several databases (Bell et al., 2019; Hiebl, 2021). In addition, the research institution provided relevant literature concerning certification and professionalization.

Table 2: Illustration of the keywords used in the systematic literature review.

Keywords 1st search	
Innovation management	Professionalization and competencies
• Organizational innovation • Innovation adoption • Employee innovation • Ambidextrous organization • Open innovation • Innovation performance • Innovation processes	• Innovation management professionalization/professionals • Innovation leadership • Individual innovation competencies • Innovation skills • Innovation capabilities • Innovation intraprenurship • Informal roles + innovation management • Certification + innovation management
Keywords 2nd search	
Innovation "OR" innovation management + individual + competencies "AND"	
• Intraprenurship • Problem-solving • Innovativeness • Creativity • Innovation process • Risk-taking "OR" risk management • Proactiveness "OR" proactive • Networking	• Flexibility • Resilience • Self-awareness • Self-management • Self-efficacy • Social awareness • Teamwork • Opportunity recognition

3.4.2 Inclusion and Exclusion Criteria

At an early stage of the literature search, inclusion and exclusion criteria were established. The criteria for inclusion and exclusion are open to interpretation, but it is essential that they are precise and transparent. It should be clear why these criteria are in place and how compliance with them was ensured (Hiebl, 2021). The inclusion criteria were chosen based on the broad field of innovation management that can cover different aspects and industries, and the inclusion criteria ensure that the articles under consideration focus on innovation management

within a business context. Only publications available in English were included to minimize language barriers. Due to the individual-levelled focus of the paper, the competencies found within the innovation management literature on an organizational level were excluded. Both steps of the literature review included the same criteria. However, as some business literature did not cover the basic definition of example, "self-awareness," some referenced sources in the found business literature were used to develop the competency's description further.

3.5 Primary Data Collection

The primary data collection is based on a semi-structured interview approach. Bell et al. (2019) explain that interviews are valuable for collecting detailed, in-depth respondent data in a qualitative study. This section aims to provide descriptions of the selection criteria, the interview guide, and the set-up for the interviews - to clearly state how primary data collection was conducted.

3.5.1 Selection of Respondents

According to Bell et al. (2019), it is vital to ensure that the respondents are directly relevant to the formulated research questions when selecting respondents for a study. A theoretical sampling method was used for this study, which is a crucial feature of grounded theory since the approach aims to identify categories and propose the interrelationships that arise during the data analysis, with a continuous process of sampling and theoretical reflection (Bell et al., 2019; Gioia et al., 2013). The main selection criterion was that the respondents aligned with the definition of an innovation leader by Innovationsledarna (2015). A diverse group of respondents was chosen to capture a more holistic view of individuals possessing the competencies of an innovation leader, including a sampling of both certified-, and non-certified innovation professionals. The respondents were also operating in various industries and sectors, and the certified individuals had all undergone the certification for a "Certified Innovation Management Professional" issued by RISE during the last three years.

The most appropriate and coherent respondent group for the selection of non-certified individuals was individuals nominated to "The Innovation Leader of the Year" by Innovationsledarna in 2021-2022. This selection maintained the overarching criterion of "individuals regarded as innovation leaders" according to the same role definition while separating the respondents into two groups: certified and non-certified individuals. Meaning, all respondents were judged as innovation leaders by a third-party. The selection resulted in fourteen respondents of the study, separated by certified (C) and non-certified individuals (N) in Table 3.

The selection criteria include several limitations. Firstly, individuals in similar roles as the respondents may also provide valuable insights and perspectives relevant to the research questions but are not included in the study. Secondly, a possible international perspective could be lost since the study is done in a Swedish context. Specifically, the analysis covering the innovation leader's role in the public sector could be argued to be highly influenced by the

Swedish context. Further, the respondents have different positions and managerial levels, which could influence their perception of their role and influence.

Table 3. An overview of respondents for the primary data collection.

Respondent	Professional Title	Sector	Date	Length	Conducted
N1	CEO – Part owner	Private	2023-03-07	47 Min	Online
C1	Innovation leader	Public	2023-03-07	42 Min	Online
N2	Senior advisor	Public	2023-03-08	38 Min	Online
C2	Senior business developer	Public	2023-03-08	38 Min	Online
C3	Intraprenur	Public	2023-03-09	59 Min	Online
C4	Innovation Lead	Private	2023-03-09	42 Min	Online
C5	Innovation Lead	Private	2023-03-10	53 Min	In Person
N3	Head of innovation and insight	Private	2023-03-13	47 min	Online
C6	Campus developer	Public	2023-03-15	42 Min	Online
C7	Venture capital	Public	2023-03-20	72 min	Online
C8	Law enforcement	Public	2023-03-21	62 min	In Person
C9	Innovation Lead	Private	2023-03-21	55 Min	Online
C10	Innovation leader	Public	2023-03-22	71 min	Online
N4	Manager for public sector innovation and collaboration	Public	2023-03-23	45 Min	Online

3.5.2 Interview Guide

The semi-structured interviews were used as a primary source for the study to provide in-depth and detailed data. To ensure that relevant data was collected, the interview guide must be in line with the research questions and revised during the process as new insights are generated (Bell et al., 2019; Gioia et al., 2013). The interviews generally focused on open, exemplifying, and specifying questions to capture the respondents' perspectives in greater depth, as described by Bell et al. (2019). In Appendix B, exemplifying questions from the interview guide of this study are displayed. Since the study's main aim was to explore the competency need of an innovation leader, a large part of the interview aimed to understand their subjective understanding of their role and essential competencies. Additionally, questions were developed to further understand the competencies outlined in the theoretical framework, used if the respondents raised the topic. Lastly, for the certified individuals, questions regarding the effects and their motivations for pursuing the certification were asked. On the other hand, the non-certified individuals were asked about the possible effects of certifications for innovation leaders.

3.5.3 Interview Setting

Firstly, the potential respondents identified through the selection criteria were contacted by e-mail or through LinkedIn. The interview set-up was conducted in one of two ways: over Microsoft Teams or in person. All interviews were conducted by both authors, mostly online, providing advantages such as remote interviewing, directly transcribed conversations, and the possibility of scheduling interviews with respondents in different locations. Conducting some interviews in person allowed for a more personal connection with respondents and the ability

to observe nonverbal signals and body language (Bell et al., 2019). A possible drawback of mixing these interview settings could be that the different setups can have different results. For example, some respondents may be more comfortable extending their answers in person rather than in an online meeting.

All interviews were conducted in Swedish since all respondents were native Swedish speakers. However, keywords for competencies were discussed in Swedish and English to ensure an understanding with the terms used in innovation management. The interviews were recorded since the interviewer had to be attentive and continuously adjust the questions per the responses. One risk connected to interviews is becoming too closely aligned with the respondent's viewpoint and losing the critical perspective necessary. One author took notes during the interviews to manage this risk and to ensure that all perspectives to the answers were collected (Gioia et al., 2013). When the report was written, all used statements were translated into English.

3.6 Data Analysis

The Gioia method used for the data analysis infers a coding method of identifying first-order concepts that leads to second-order themes, which then result in aggregated dimensions (Gioia et al., 2013). Although coding offers several advantages in structure and identifying critical themes within the data, it has been criticized for potentially fragmenting the data, losing exciting information, and potentially inferring a subjectivity bias. Lastly, the ways to define the key concepts can lead to confusion and inconsistency (Bell et al., 2019). An objective and less fragmented coding approach was employed to mitigate these concerns. The coding was derived from the data collected during the interviews, following a grounded theory research approach. The grounded theory approach is proficient in capturing the complexity when analyzing theoretical work in domains that lack extensive research done by others (Bell et al., 2019). Since there is no widespread codification of qualifications, knowledge, and skills for roles within innovation management, this was an appropriate approach.

The qualitative data analysis program Atlas was used for coding, and the analysis was done by both authors to increase the quality of the research. Firstly, all transcripts were transferred into the program shortly after the interviews. The principle of open coding was used to disintegrate, examine, contrast, and categorize data in the form of codes. Each identified influential statement from the respondents was highlighted and provided with identified first-order codes, which resulted in 136 codes from all the interviews. The first-order codes were not pre-determined but instead based on each transcript's findings to avoid subjective bias that could come from the already established theoretical competency framework. Secondly, when all interviews were conducted, the first-order codes were combined into second-order themes, including similar aspects identified by seeking similarities and differences. Lastly, aggregated categories identified were used to structure the data, and then used to demonstrate the results in chapter four. The approach presented in Appendix C, including first-order terms, second-order themes, and aggregated categories, resulted in the data analysis structure. Conducting the data analysis through the described process increased the study's viability since a fundamental

element in qualitative research is to rigorously present the linkages in the coding (Gioia et al., 2013).

3.7 Research Quality

Several measures must be considered while researching to ensure high research quality. Bell et al. (2019) suggests four metrics for evaluating qualitative research's trustworthiness: credibility, transferability, dependability, and conformability. Thus, the research quality is assessed separately for each criterion in this section.

3.7.1 Credibility

The study's credibility regards how believable the findings are (Bell et al., 2019). In other words, the accuracy between the stated findings and the reality of the respondents. Since the researcher ultimately interprets the results in a qualitative study, the critique of the approach being too subjective becomes relevant. To increase this study's credibility, the respondents were asked whether the interpreted meaning of what they communicated was correct. Moreover, Bell et al. (2019) mention triangulation to achieve high credibility, which refers to using more than one data source to study a social phenomenon. Some triangulation was achieved by cross-checking the qualitative data for this study in the iterative process between data collection and data analysis. Moreover, including individuals who were both certified and non-certified from different sectors and industries was also a way of triangulating the phenomenon and ensuring higher credibility to the result. Finally, as a common critique of qualitative research is that it lacks transparency (Bell et al., 2019), excerpts from the data are used to support the interpretations and analysis and increase the study's credibility (Hammerberg et al., 2015).

3.7.2 Transferability

A study's transferability is determined by how the findings can or cannot be applied to another context (Bell et al., 2019). To achieve this for the research study, one should create a thick description of the study and its context for others to base their judgment on its transferability (Bell et al., 2019). Even though the respondents of this study were anonymous by name, the context and selection criteria of their participation were still described thoroughly. The selection criteria for this study could be representative of the population of, for example, certified innovation leaders. However, it cannot be generalized to all professionals working within innovation. The issue connected to generalization is common in qualitative research, as presented by Bell et al. (2019). However, using a theoretical framework within this study was also an action to increase the transferability that could apply to broader contexts as it aims to identify competencies necessary for professionals working within innovation management.

3.7.3 Dependability

Dependability refers to the degree to which the findings in a study are likely to apply at other times than the research period. One way for this study to achieve dependability was to ensure that all the material and steps from the research process were kept and easily accessible (Bell et al., 2019). The interview guide is attached to the report (Appendix B), the coding scheme for the data analysis (Appendix C), and the several steps in the data collection and literature review are accounted for. Moreover, the transcripts were reviewed afterwards and sent to the respondents to increase the trustworthiness of the findings. All respondents approved their transcripts.

3.7.4 Confirmability

Confirmability is an essential measure of the research quality since it concerns the study's objectivity. The researcher's personal values and theoretical inclinations should not be allowed to affect any part of the study (Bell et al., 2019). This study's conformability was increased by involving the respondents in approving the results from their interviews and by involving another researcher in the field when developing the research methodology. Through this contact, the researchers had to be aware of their potential biases and continuously practice reflexivity. Even though complete objectivity is recognized to be impossible to achieve in business research, the described measures were undertaken to ensure that the researcher acted in good faith (Bell et al., 2019).

3.8 Ethical Consideration

When conducting research with the primary data collection done through interviews, there are several ethical considerations to consider in protecting the rights of the respondents and enhancing the credibility and trustworthiness of the result. Some important aspects to consider were informed consent, privacy, the integrity of the respondents, preventing deception, and fair data analysis (Bell et al., 2019). The participation requests presented the main topics of the interview to prevent deception. Through this description, they understood what the interview would include. Another important aspect was ensuring the respondents' privacy and anonymity (Bell et al., 2019). For this research, it was decided not to mention any respondents by name and instead create a code for each respondent.

Furthermore, an issue with qualitative research is that the interpretation of the data lies with the researchers (Bell et al., 2019). Clarifying questions were asked during the interviews to avoid biases or misunderstandings, and all notes were sent to the respondents for verification. Secondly, it was important to communicate that the research institution would also use some of the data provided and receive their consent regarding this fact as well.

4. Empirical Findings

The empirical findings chapter provides the result of the study's research questions. To understand the competency needs for an innovation leader, it was first necessary to present the organizational influence and what the respondents include in their role. Therefore, these results are addressed first. Followingly, the competency need attributed to their role can is introduced. Lastly, the result concerning the effect of the personal certification is presented.

4.1 The Innovation Leader Role and the Organizational Context

Based on the empirical data collection, the respondents emphasized how their roles were influenced by the type and size of the organization in which they are employed. As a result, many respondents identified several influencing factors in how they can operate as an innovation leader. Other than different approaches to dealing with innovation internally, the factors were also related to the organizational type and size.

4.1.1 Organizational Size

Some respondents implicated that the organization's size affects how they can operate in the innovation process. For example, smaller companies are mentioned to have less bureaucracy and less organizational inertia; therefore, the whole organization is more closely linked to innovation and development. In contrast, larger companies are mentioned as having access to more resources to innovate.

> *My role is easier in a small organization, more fast moving, more manageable. (...) Innovation becomes easier to push through with a smaller organization, becomes very beneficial. A larger company is more viscous. There are resources and one side, but there is also bureaucracy. But if you look at a small organization, we can have an idea in the morning and implement it in the afternoon. It can go incredibly fast. (C1)*

Additionally, it was established that both growing and mature companies should focus on keeping their ability to innovate in the long run. Meanwhile, smaller companies need to focus on becoming more future-oriented in business development, compared to mature organizations which need to focus on elevating and implementing innovation in their viscous business structures.

4.1.2 Organizational Type

An overall result was how the organizational type affected the possibility for the innovation leader to act and work with innovation tasks. Generally, this could be attributed to the distinct responsibilities and objectives of a public, versus a private organization. The organizational type has hence been identified to greatly impact the innovation process, especially concerning the goals and missions in relation to innovation and risk perception.

Some respondents explained that the core business tasks and priorities in the public sector must come first, and that innovation should not be too high of a priority. This was especially true for

authorities with other ascribed important values. However, they need to keep up with the constantly changing environment, and innovation is understood as a necessary means of achieving that goal. Respondents from the public sector also emphasized the need to implement various public visions, which often involve qualitative, more politically motivated goals. Unlike the private sector, the public sector is not as market-driven, and innovation was mainly discussed as improving efficiency rather than gaining a larger market share. As a result, finding time to work on innovation tasks required going beyond the regular duties of their role. Similarly, in the private sector, it could be challenging to allocate time and resources toward internal and external innovation as other priorities take precedence and can give quicker payoff.

> *Another risk is time. If we are to look for new solutions, it will take more work from us. And time is money. We often have to "put out fires". Unfortunately, there are a lot of them in the public sector (...) But working preventively by trying to find new ways to solve things is very difficult. It's because every time we prioritize something like that, it means that you might have to stop something else. So, it's very much about what the common priorities are for innovation and how much drive there is. (C1)*

Further, the respondents also discussed the varying importance placed on systematic innovation, often depending on which sector they worked within. Systematic innovation is a broad concept with varying interpretations among the respondents. However, it generally referred to integrating innovation processes and methods into an organization's business structure. Working more systematically is a way to structure the innovation process and stimulate organizational development. Overall, the systematic approach to innovation was discussed as highly necessary by the respondents working in the public sector. A general result was that a way of managing the systematization of innovation was to separate the innovation unit from the core operation of the organization. However, not all respondents agreed on to which degree innovation and its processes should be systematized. Respondent N2 explained that systematizing the innovation process does not necessarily lead to the creation of innovation but that it could provide a framework for unfolding innovation.

> *The systematization has no intrinsic value, it is almost more important that the system exists than that it works in reality (...) the systematization exists so that you can look at it in your organization and see how you can do it better, that's the most important thing (...) Using these theories and methods will increase your chances. The system is important to have a common language in the organization around what we do, why we do it and how we do it. (C7)*

The respondents also considered the organizational type to influence their risk perception partly. The public sector was mentioned to put a greater emphasis on cost due to their need to prioritize value creation and positively impact society as a whole. At the same time, private companies also focus on cost-effectiveness to profitably deliver desirable consumer products, services, or processes. Public companies face challenges in using capital efficiently but recognize the importance of challenging their traditional structures for innovation. Private companies tend to focus too much on continuous development and cannot always have the risk of investing in "more radical" ideas. However, it was emphasized that becoming more future-oriented while managing risks is essential for all organizations.

> *I don't think that with innovation you should increase risk very much, but I think that you should fail fast. Fail hard, learn fast. Keeping costs down… Actually, a lot regarding how to build an innovation process is much more cost effective since you work in small sprints and learn as you go… I usually say that the risk of not innovating is much higher than the risk of innovating, because then you can really, in the long run of course, lose market share and not secure yourself a position for the future. (C4)*

Many respondents also highlighted the importance of management and leadership in promoting innovation within organizations. It was noted that management must provide the necessary support, control, and commitment to enable work within innovation. Also, the management must create a culture that supports innovation and demonstrates a clear commitment. However, some respondents pointed out that management may need more training and experience in innovation management to identify innovation as necessary to begin with. Despite this, according to several respondents, the directives and prioritizations should come from management, even if not clearly framed as innovation. The leadership can set a clear path to involve and motivate everyone to contribute ideas and align with the company's vision. Overall, the climate in the organization and the relationships built within it are seen as crucial factors in promoting innovation.

> *The motivation from the leadership is important, and that you get the strategic alignment. Also, it must be anchored throughout the organization. It is difficult to get an organization to commit to new innovation if it does not feel that the management really wants it. (C7)*

4.2 The Innovation Leader Role and Identified Key Activities

The activities the innovation leaders perceived as included in their role were relevant when identifying the competency needs for an innovation leader. These activities were important since they influenced the competencies perceived as necessary. The structure of this section will follow a similar approach as the Innovation Pentathlon Framework presented earlier in this paper. The penthalon framework comprises five parts which will be utilized to present the activities: innovation strategy, people and culture, idea generation, selection, and implementation.

One result of the empirical data collection was that several respondents identified that the innovation leader should be a facilitator of the whole innovation funnel rather than working particularly in only one or some of the steps. This implied that the perception of a good innovation leader could be that they should have a system overview and participate in the activities of generating ideas as well as selecting and implementing them in the organization. The respondents explained that the innovation leader must be self-leading and dare to make their own syntheses, moving away from the business as usual to fulfill this role perception. In contrast, some respondents identified their activities and roles as belonging to specific stages of the process and did not mention this overarching process leadership as ascribed to their role. Another perspective concerning this was brought up by respondents who suggested that there might be a need to include several innovation leaders in the process who are responsible for different activities or stages. Additionally, to succeed with this approach, innovation leaders need to be involved in activities that build more flexible and adaptable processes. As explained

by respondent N3, “The innovation leader is described to have a need to work with the overall innovation process. The innovation leader is a process leader over the whole thing”.

4.2.1 Activities Attributed to the Organization’s Innovation Strategy

In relation to the organization’s innovation strategy, the innovation leader was identified to contribute to and participate in several activities to enhance the organization’s ability to innovate. The innovation leader can influence the innovation strategy by identifying new possibilities, presenting these to top management, and analyzing and generating insights to develop ideas in the innovation process. They could also have a role in executing innovation, avoiding that innovation ends up in silos or in too small initiatives. As exemplified by C7, "There is a need to understand the whole innovation system beforehand, to understand what possibilities can be identified."

The success of an innovation process requires the right team with diverse competencies. For example, someone who leads the process, understands consumer needs and insights, and can visualize and sell the concept. The innovation leader’s activity was described as connecting and networking with different people to generate the right teams for the task. The early stages of an innovation process demanded more activities from the innovation leader in connection to exploration, creativity, and communication with many people. In contrast, the later stages required more control and execution. The activity of an innovation leader should work to anticipate obstacles and provide support throughout the process. The activity of including people who can complement the innovation leader with the competencies necessary to carry out the process was also addressed.

> *A little bit of everything, I think, in the whole range. It’s connected, it’s not a silo way of thinking that we have lots of ideas and then someone has to take over. It rarely turns out well. The role probably changes in that you become some kind of facilitator person (…) You must be there all the way as support, but maybe have different hats on or different roles in the different steps or processes. (C9)*

4.2.2 Activities Attributed to the Organization’s People and Culture

The importance of culture is continuously emphasized in the empirical data. The innovation leader should create spaces that generate a culture where there is acceptance of making mistakes and thinking out loud and create a common ground to stand on. As underlined by C10, “You need to create a craving for innovation with the co-workers.” The overall understanding is that there is a need to create an environment that fosters innovation, encourages employees to develop new ideas, and encourages employees to take risks and fail. It is also discussed that there exists resistance to change and a lack of understanding of the value of innovation within management and other employees. The innovation leader’s activity was to create a better understanding of these concepts and how they can benefit the organization and the long-term value of innovation.

You don't need a lot of control or specific models. Rather, it is about the climate in an organization, and relationships you build in the organization. If the organization is controlling, the result will be worse. For example, you have an open climate and allow for discussions of ideas or know the way to respond to an idea (…) If you have that type of climate, then you allow for the space. It's not just about innovation culture, but rather how the organization works in general. If you as an authority have started to think along these lines, then you have come quite far, I think – (N2)

4.2.3 Activities Attributed to the Organization's Idea Generation

The idea generation phase frequently involved establishing systems or forums for generating, collecting, and managing ideas throughout the organization. Many respondents exemplify their idea-generating activities as workshops and hackathons to encourage and include employee and customer participation in the process. Creating an understanding is crucial for the idea-generation process to catalyze innovation and enable and encourage all employees to innovate. By doing so, the innovation leaders can create conditions for developing ideas in the best way. These activities are essential since innovation leaders often cooperate with several different people. Respondent C8 explains that "these activities can be challenging because often you do not know all the people in the organization, and it can be hard for people to open up about problems or new solutions if they do not understand the concept of innovation." The described activities of an innovation leader also involved responding to employees' ideas and piloting them to someone who can take care of them. Overall, the respondents highlight the activity of the innovation leader to create a space where ideas can be brought up and collected efficiently.

One strategy is the innovation hub that we have, our platform, that we encourage people to use for contributing with their ideas. And that we are clear that we take the best ideas forward and that the idea giver can then be involved in that process. (C4)

4.2.4 Activities Attributed to the Organization's Selection Stage

After generating ideas, the innovation leader contributes to several activities in navigating the key ideas/projects for the organization to pursue. The selection phase involved activities that evaluate ideas and projects determine their potential value and select which ideas to develop into solutions for testing and verification. Another activity of an innovation leader discussed by the respondents was managing the selection process, ensuring it progressed effectively and efficiently. This also includes understanding who in the organization should be involved in the selection phase, depending on the scope. These activities may also involve introducing and promoting ideas to management and stakeholders. Finally, Respondent C3 exemplified their activities in the selection phase by stating, "It is quite often about prioritizing and making a choice from what is most important right now to develop and test so that we can verify the concept."

4.2.5 Activities Attributed to the Organization's Implementation Stage

Most of the respondents' activities could be derived from the idea generation and selection phase rather than a later implementation focus. According to the respondents, the implementation phase involved taking products to market or implementing them internally, which was often considered the most challenging part of the innovation process. The

innovation adoption is often staggered due to a lack of understanding of the implementation phase in the earlier stages of the difficulty in scaling up the idea. Thus, to ensure a successful implementation, the innovation leader should reduce barriers and mitigate risks. The respondents emphasized allowing employees to work with their idea throughout the process to increase successful implementation. Although the implementation was often considered the responsibility of other people in the organization, the innovation leader should be involved in activities to support and help them prioritize and navigate the process. In addition, the innovation leader should involve management efficiently and contribute to visualizing and storytelling the strategy to stakeholders, management, and employees.

> *Definitely in the idea generation and selection – I'm the one who runs them in the company today. Historically, I've been more involved in the implementation… I like delegating it more, and instead taking responsibility for my ideas. But the implementation must often land with someone else, but I can give ideas and contribute to that process, and help others prioritize. More realistic that you get to work with your own ideas rather than implementing them (…) becomes more grounded in reality (N1)*

The section has presented the identified activities the innovation leaders perceived in the role. Some identified that the innovation leader should facilitate the whole process. Meanwhile, some respondents had more explicit activities that could be recognized in the five parts of the Innovation Pentathlon Framework. Followingly, the activities from the empirical finding are summarized in Table 3.

Table 3. Summary of the activities in the specific areas identified of an innovation leader.

Area	***Activities***
Innovation strategy	• Contribute to the organization's innovation strategy and process. • Listen to the needs of employees and stakeholders to recognize areas of innovation. • Execute innovation initiatives effectively. • Analyze and gather insights to generate new ideas for innovation. • Develop and update the innovation process to ensure it remains effective. • Build teams with diverse skills and expertise to handle different phases of the innovation process.
People, culture	• Create a culture of innovation and facilitate an understanding of innovation. • Setting direction and creating an environment where employees are encouraged to test new ideas.
Idea	• Create innovation platform/forum to collect and mange ideas. • Workshops and idea generating activities.
Selection	• Evaluating potential ideas/projects to determine their potential value and people needed for execution. • Prioritizing and making choices about what is most important to develop and test. • " Selling" and making ideas/projects attractive to management and stakeholders
Implementation	• Ensure successful implementation by reduce barriers and mitigate risk. • Delegate relevant tasks to the team, providing guidance and support and monitoring progress and results. • Visualizing and storytelling of the innovation strategy to stakeholders, management, and employees

4.3 The Innovation Leader Role and its Perceived Purpose

The purpose of the innovation leaders' role was relevant to establish which competencies they needed to fulfill that specific role. With separate purposes, several common competencies could be attributed to either the purpose of leading the people within the process or the process itself. Nonetheless, even with the identified purposes during the study's process, there was no unanimous answer to what the purpose of an innovation leader is today. The innovation leaders frequently referred to their profession or the specific role as complex and multifaceted. There was also a fuzziness regarding the role of an innovation leader within the organizations, where the definitions could differ internally and from one organization to another.

Where the purpose was perceived as organizing and leading the innovation process, there was more emphasis on structuring, educating, having a systematic approach, leading the idea identification, and generating a business case upon it to deliver to the management.

> *I don't think there should only be one person who is an innovation leader in certain situations. However, it is often thought that the person who comes up with ideas and is creative must be the innovation leader. I don't agree with that. An innovation leader in itself does not have to be the most creative, not if you are very good at refining or finding ideas and seeing the possibility of change. (N2)*

On the other hand, within the purpose of leading the people, creating a culture that fosters innovation capability, and coaching others' development was also apparent—especially the importance of creating social conditions for facilitating innovation and communication for the rest of the organization.

> *My work is very much about building the company's innovation capacity. Contributing to a culture where an employee can come up with ideas and be listened to. That there is an environment where it is allowed to make mistakes and it is allowed to make assumptions that you want to test. (C3)*

Within the purpose of leading people, the coaching aspect of an innovation leader was discussed. In this perspective, the innovation leader could be improving the organization's innovation capacity by educating others or helping to develop both the people and the organization. This competency was also regarded as helping others out of their comfort zones to grow as individuals.

> *You can learn a lot in innovation management technically and have different tools, but you have to have an ability to be able to enthuse a group. You have to be an "intermediate room leader", be a broker and get people to dare to delegate tasks. That it really becomes reality and not just a lot of talk. (C10)*

The role's more personal aspect also stresses the innovation leader's purpose to contribute to a network and link the needed people in the process together. Within this perception, some innovation leaders underlined the bottom-up approach of innovation and how it is vital to connect to and listen to the people within the organization that meet the operative, concrete challenges daily. The purpose of the innovation leaders in these cases was hence also described as being attentive to and supporting the innovative ideas that came from the bottom of the organization.

4.4 The Perceived Competency Needs of an Innovation Leader

The competencies discovered as a result of the empirical data collection were many. However, the way the innovation leader perceived their role often reflected which types of competencies they would emphasize. The respondents did not typically define their role as fulfilling either found purpose solely. Instead, the result of the separate purposes stemmed from the activities outlined by all respondents, where these could be attributed to either leading the process or leading people. Similarly, as the respondents' role perception could include both purposes, the mentioned activities could also work to fulfill both purposes. For example, the activity of having an idea-generating workshop could both be addressed to the purpose of leading people through aiming to create a culture and inspire the employees (rather than focusing on achieving a specific result) – but also leading the process in conducting the workshop to solve an identified issue actively. Nonetheless, the main competency needs could differ depending on their head purpose of the activity.

4.4.1 Competencies within the Purpose of Leading People

Several skills, abilities, and behaviors have been mentioned as necessary within the described purpose of leading people. To succeed in fulfilling this purpose, one of the underlined competencies was a high level of emotional intelligence. Multiple respondents described the necessity of genuinely understanding other people: their needs, what inspires them, how to change a behavior, and how to get them going in a team. Emotional intelligence was also discussed in relation to quickly understanding different groups and adjusting accordingly.

Adjusting to different group constellations entailed a need to be able to consider possible hierarchical factors or social considerations involved in decisions or groups. Being people-oriented while managing a process was explained to constitute the most important factor of change or to enable a culture that is open to change. Further, it was also mentioned sometimes to be perceived as a radical thing to do today since efficient processes can forget about the human factor. The topics that came to light within emotional intelligence were the need for empathy, the social skills in understanding relationships and people, and the ability to connect and create networks to facilitate innovation.

> *There are quite high demands on competence, i.e., psychology. Both how humans work, and how you can change a person… Or not a person, but a behavior. And like, why does change happen and why does change not happen and how do you make change possible? It sounds so fluffy, but you realize that it's all about other people. You can have great ideas, but there will be no change unless you manage to win over and convince those who are going to change. (C8)*

Moreover, abilities within emotionally smart leadership were frequently noted. Pedagogical abilities were described to incorporate understanding how others perceive changes in one's leadership style when leading people. In this leadership style, innovation leaders also emphasize the behavior of trusting the team and displaying this confidence through their leadership. For example, respondent C10 says, "This means that you have to create a completely different level of trust and confidence. You have to create a relationship." In

addition, an openness towards other perspectives and an eventual need to lead people by breaking down social barriers or stigmas were highlighted.

> *I think because I'm not working in tech or technology, but people - it's about trust and confidence. There are so many people who should feel that they connect with us and dare to think and have courage, and then you have to show trust. (C6)*

Furthermore, the innovation leader must facilitate others' innovation too, and multiple respondents highlight their purpose to infer a need to build a socially secure and inclusive environment where everyone's voice is heard and valued. The ability to create a psychologically safe place is discussed in relation to openness, norm-breaking, and basic psychological skills. In some cases, coaching skills were an essential competency for leading people, where the innovation leader must be credible as a transmitter.

> *I think that it is innovation leadership in part, and leadership in general, to create security, a safe space, a process that takes into account that you should feel seen and heard. Our work must become an arena for that. (...) Therein lies much of what I think will be psychological security. It is also an important competence, to be able to build that security. (N4)*

An additional facilitating role of the innovation leader was discussed in the ability to engage a group, motivate others, inspire a team, and create inclusive processes for innovation. In connection to this, the necessity of giving enough space for others to explore, trusting others, and sustaining their engagement connected to their ideas by not interfering too much was addressed.

> *But also, that you can bring people along and inspire them. If you conduct a hackathon or innovation workshop, that you really do it in a fun and inclusive way where people feel that they can actually participate and contribute. (...) So, it's a bit like that, being able to find the form where you get the best out of the workers...(C5)*

Some respondents also highlighted how they might need to show the way themselves and expose their fears and worries to create a trusting environment and facilitate change acceptance of the team around them. Another perspective on creating an inviting environment for innovation was emphasized through the innovation leader's purpose of spreading good examples. The ability to encourage innovation and the people within the organization was also referred to as an indirect result of the innovation leaders' actions. Emotionally smart leadership was also mentioned as an improved way of conducting innovation leadership. The role was considered to have developed from involving a "cool 15-minute brainstorm" (N4) to instead inspire the groups they worked with through their genuine interest and morals.

> *My colleagues are also better at exposing their own fears and worries (...). Then I can sit on the side and think "God you admit that?" - but then also see 30 minutes later that they have brought the group along in a completely different way. You should probably be honest that it is not a quick fix, that there's a need to build completely new power to solve it. That is a complete determinant regarding whether you too will get this back from the participants or not. (N4)*

An additional competency frequently stated as vital for an innovation leader was communication skills, or a highly developed communicative ability. Communication excellence was also a competency included in the purpose of leading people, as it was often underlined as the difference between enabling innovation and not. The skills referred to getting everyone onboard, generating and communicating insights from multiple target groups, and being able to adapt the conversation based on who is listening. Another perspective on communicative skills was a more focused view of the ability to persuade leadership or sell an innovation idea to the rest of the organization by figuring out "what they want to hear" (C5).

> *It's a lot about adapting the language to the person you're talking to. I think you improve that all the time. What we in our team may find exciting is e.g., trend scouting or design sketches or visualization of the concept or insights - that may not be what our management team wants to see. (N4)*

The competencies and abilities within communication were also brought up in connection to dealing with change resistance. The purpose of leading people includes that the innovation leader must possess the ability to convince people to guide them through change resistance. The methods of convincing were described in several ways, where logical arguments or clear directives from the above management did not usually engender success. Instead, the ability to "appeal to the hearts and the minds of those who will work with it" (C8) or creating a sense of urgency and relating the change to a tangible problem the organization could grip were instead underscored as successful. The ability to lead in change was also a general competency commented on, especially concerning a tendency to manage well in uncertainty.

> *What I think is important is being able to lead in change. Being able to be in a bit of change, as they are a lot of what innovation is about. You don't know the end result and how it changes during the journey. You have to be able to navigate and build processes that go and change and be flexible. This particular leadership to be able to lead in change and... Uncertainty! Perhaps one of the most important skills. (C5)*

4.4.2 Competencies within the Purpose of Leading the Process

When instead discussing the purpose of an innovation leader as leading the process within an organization, additional competencies emerged. The identified activities for the role of an innovation leader within the innovation funnel inferred different competency needs.

Within the activities related to the organization's innovation strategy, one main competency needed is analytical thinking. Being able to thoroughly analyze the organization's situation, internally and externally, helped with opportunity recognition and the aspect of putting together diverse teams to enable the innovation process' success. Analytical thinking was an ability deemed necessary in several phases of the innovation process. For example, to drive the selection work of ideas, analyze potential barriers, and deal with risk to ensure successful implementation.

> *I think you have to have systems view and be able to ask yourself what problem it is that you want to solve. "Is this the right problem?". And then in relation to that, actually being able to make some own syntheses - some own conclusions about what the problem is and dare to leave the official part in what are our problems/solutions/possibilities. (C2)*

With the idea exploration and creative phases, an innovation leader was discussed to need creative thinking and leadership skills in planning, organizing, and executing workspaces where ideas could progress. In addition to the earlier specified emotional intelligence skills, the methodological competencies within innovation were remarked as favorable to structure and bring the process forward in the initial stages. For example, as mentioned by respondent C1: "Understanding methodology is an important factor. It becomes a key to finding new ways of approaching things". Additional competencies underlined as essential to drive the process were being a fast learner, having a broad perception of the process, and being a generalist. This was perceived as important abilities, as the innovation leader's role could be more or less involved in every step of the innovation process and therefore needs to navigate and move forward with an idea quickly. Within this role of the innovation leader, the competencies of being future-oriented and result-oriented were also addressed.

> *By being a generalist, I feel that it becomes easier to work with innovation. Being able to familiarize yourself quickly and easily with a subject, understand what it is about, even if I don't go into depth, I can push the process. When I step in and start, I can quickly get an idea of different industries even though I have not worked in them, due to my previous experiences. I fairly quickly get an idea of what it's all about, the questioning and curiosity, drives questions forward. (N1)*

When leading an organization's innovation process, multiple respondents commented on the separate need to focus on the ongoing core business and the explorative focus of innovation. Moving between these focuses demanded flexibility and being an ambidextrous leader. For some, this entailed being the advocating voice for the future's needs, and for others, it was a matter of helping to find a balance internally between the focuses. Multiple respondents explained that there were separate demands on them and the organization depending on the internal innovation priority and focus.

> *I work more on the exploratory side. For me, it's more about finding how we should balance it in our organization, so that we don't just end up optimizing the core business, and developing the existing, but also focus on the future as well. Ambidextrous organizations, I have talked about that a lot internally and I have also trained a lot about it and talked about the fact that we must prioritize both parts. The core business sometimes eats up the other. And I try to say that we must have both parts. (C5)*

As many innovation leaders incorporated a purpose of dealing with risk in their role, relevant abilities were leading in change and leading in uncertainty. The activity of mitigating risk was sometimes addressed in relation to the need to be self-confident, assertive, and efficient at dealing with conflicts. Within these competencies and the purpose to drive the process, the resilience of different kinds and personal drive was frequently mentioned. The ability to stay motivated, be persistent, and have an unwavering sense of direction in one's work, even when facing setbacks or conflicting opinions, were important factors for innovation leaders.

I think that security comes from some solid, artisanal competence, that you have done it and you have experienced it and that you have done it. That you worked with challenges where the answer was not given. So, on the contrary, I can see with people who have difficulty leading innovation, you may have a habit of not exploring, and that you become insecure when you don't have a clear framework like that. Being able to create these frameworks yourself so that you get the knowledge you need is important. (C2)

A general behavior continuously mentioned along the purpose of leading and enabling the innovation process was to remain curious. Partly, the fact that many were curious was observed as a likely factor in wanting to work within innovation in the first place. It was also seen as an enabling factor to their work within innovation, their professional development, and a reason behind their openness. Further, some emphasized a personal trait in wanting to "stand out from the crowd and want to do different" (N1). Openness and curiosity were, in general, also addressed as a competency related to facilitating and improving the innovation process. In addition, curiosity and openness were discussed to be especially important when working in unknown environments and landscapes. Involved activities were actively listening to others, taking in what they say, and being curious and open to how ideas or initiatives can be utilized.

But the qualities…curiosity, talking to people you don't usually talk to, and that kind of curiosity and open mindedness is important, not being offended by anything - and you can only have that if you are really interested in something. (C9)

4.5. The Innovation Leader Role and Effects from the Certification

A general result was that most innovation leaders perceived the profession as more or less fuzzy. In some cases, the empirical data showed how certification influenced the respondents by both validating their existing knowledge and providing them with new tools and methods to operate as an innovation leader. In addition, other effects mentioned were increased legitimacy as an innovation leader and credibility to their role.

An initial discussion in the empirical data was how the respondents perceived that their previous job roles had included innovation but that it had not been explicitly stated as a part of the job assignment. More recently, however, many perceived that their roles and duties had become more evidently connected to innovation. Although, the profession was still perceived as fuzzy due to its broad nature and diversity in role definition. Even though many respondents did indeed have a title where innovation was included, several underlined that it is only sometimes true for some innovation leaders. They argued that in cases with lower level of understanding of the profession within organizations, similar positions to lead an innovation process may not have direct innovation distinctions. Nevertheless, the certification was mentioned to have shed light on the profession and helped clarify an innovation leader's role.

The term "innovation" was sometimes considered a buzzword that some argue has been overused, leading to confusion about its meaning. Respondents highlighted the difficulty of using the term "innovation leader" due to a lack of understanding in their organizations. However, the certification and the body of knowledge helped clarify innovation's practical

meaning and application. The certification helped set a standard and provide a quality stamp of methods to use in practice. Through the provided body of knowledge, the certification influenced the innovation leader's role by being able to lead innovation more effectively.

> *The certification can certainly be good because it is such a fluffy area for many. So, it's probably good to box it in a bit and professionalize the profession. Also, to get what is needed in place to create the conditions to drive innovation. I think that this is often why it doesn't go so well…Since you don't have the conditions in place to drive innovation. (N3)*

Certified individuals discussed their perceived standards connected to innovation management, set through the certification, concerning the systematization of innovation. The respondents argued that the certification and body of knowledge provided them with processes, methods, and inspirations to lean on in their daily work as innovation leaders. In contrast, non-certified respondents highlighted the importance of innovation being an open model without fixed methods. There were also some downsides to the certification mentioned throughout the empirical data. For example, the inability to test specific soft skills needed for an innovation leader and the risk of excluding others within the profession if a certification would be regarded as a necessary standard for innovation leaders.

> *The certification is based on what can be measured (…) It's hard to measure qualities like courage and being confidence. For example, it is difficult to certify my qualities, because I have a high degree of trust in my employees. It includes so many characteristics that are difficult to verify – which may even be typical of innovation leaders. It's a lot about soft skills, it's about a complex area that did not exist before. (N2)*

Moreover, multiple individual effects were observed in the empirical data. The certification's overall impact was an increased knowledge and development of competencies related to innovation management. The certification was identified to have increased their perspectives on innovation and how processes can be handled. Further, the process created a personal confirmation that they possessed the innovation competencies. Therefore, the certification contributed to a higher self-confidence while pursuing their work. However, some certified and non-certified respondents also mentioned that an increased general innovation job experience impacts their self-confidence and is essential for their knowledge of innovation management.

> *It could be that you feel safe and confident, having something to fall back on. Anyone who leads innovation may not have an innovation education at all. But these are roles that are emerging a little more (...) you get a sense of security that you are certified and know the area. (N3)*

Further, as a third-party certification, respondents explained that carrying the certification brings a sense of responsibility, and the need to maintain the knowledge after the certification is very beneficial.

> *You are a bit on your toes, feel that you have a responsibility from behind as well. Maybe that you want to actively develop it more, have that mind-set. I don't think that just for the sake of the certification, it probably hasn't contributed to any development, but rather that it feels like there is a responsibility with it as well. (C9)*

Another prominent effect noted was that the certification creates legitimacy regarding internal and external credibility to other stakeholders. Overall, the certification led to a more valued voice, being accepted in the organization and an increased status of innovation-related tasks. Additionally, the certification had generated new opportunities, helped them to inspire others, and increased their risk propensity. In contrast, some argue that their certificate did not provide specific effects. It was, instead, the competencies acquired that were an essential aspect for them. Lastly, many respondents mentioned how the certification did not fulfill a wished effect, which was to be included in a more tangible community of innovation leaders.

> *Yes, the certification had an impact, I think so when I was a formal project developer for an (…), it helped me to have a validation and a quality seal, a kind of stamp of authority when you went in and helped companies. That you know what you are talking about. (C7)*

In summary, the effects connected to increased knowledge and, therefore, higher self-confidence were considered more valuable for some. For others, external legitimacy and increased acceptance were more critical. In general, personal certifications were discussed to enable several positive effects by the certified as well as the non-certified respondents. Nonetheless, personal work experience could enable the same effects through validation and legitimization of one's abilities for some.

5. Analysis

The analysis section aims to present topics related to the role perception of innovation leaders, including their activities, purpose, and organizational influence. It will also examine how these contextual factors can lead to a perceived need for competency in the role. Finally, the chapter discusses the effects of certification for an innovation leader's role.

5.1 How can the Organizational Context Influence the Innovation Leader Role?

A general finding was that the organizational type and size could affect the innovation leaders in their doing and their perception of their innovation leader role. Through this influence, the organizational context shaped the competencies needed to perform for the innovation leaders. The literature states that the organization's innovation performance relies on a fit between the type and structure of the organization, the type of innovation, and the current organizational environment (Frambach & Schillewaert, 2002; Tidd, 2001). Specifically, Tidd (2001) concludes that the uncertainty of the company's environment affects the degree and type of innovation performed, which influences the necessary organizational configuration. Similarly, the empirical data indicated how the innovation leaders' role definition and doing was influenced by the organizational type and the demands on the organization from its environment.

Robbins and O'Connor (2023) explain that professionalization increases the specialized innovation management knowledge and leads to a greater understanding of the task its practitioners pursue. The literature emphasizes that professionalization can enhance the organizational understanding of the practitioners' purpose, role responsibilities, and innovation concepts. The innovation leader role is identified to be formed by the set boundaries of the organizational type and size rather than being a substantial work role by itself. Meanwhile, as O'Sullivan (2000) discusses, innovation is still a very complex area with several interpretations and constitutes an ongoing learning process. The innovation leader role's flexibility and abstractness are found in the literature and the empirical data. There is a need for the role to be highly flexible due to the constantly changing business landscape and the nature of innovation itself (Tidd, 2001), which is also supported by the respondents' interpretations.

The literature discusses how the individual innovation adoption is influenced by organizational characteristics such as its structure, size, and organizational innovativeness (Frambach & Schillewaert, 2002). These factors were also addressed in the empirical data as influential for their role perception. Regarding size, smaller organizations were mentioned as more manageable for creating an innovative culture and innovation strategy. A small organization could also more easily eliminate organizational difficulties. In the literature, some innovation management problem areas could also be facilitated by the adaptability possible in a smaller organization. For example, solving conflicting priorities and organizational inertia increases with the possibility of having a flexible, adaptive, and dynamic approach toward innovation management (O'Reilly & Tushman, 2004; Pisano, 2015; Şimşit et al., 2014). Meanwhile, larger

organizations were described in the literature and the empirical data to infer the benefit of possessing more resources to favor the innovation process (Goduscheit, 2014). As a result, the smaller organization's innovation process becomes less complex and more feasible. Morris et al. (2014) further emphasize that agile innovation capabilities and internal change capacity are essential in managing the organizational environment. In the empirical data, the larger organization was thought of as less agile and having more bureaucracy – while an idea could be appearing in the morning and implemented in the afternoon for a small company.

The organizational type also influenced the role and ability of innovation leaders to set the direction for innovation work. Specifically, respondents emphasized differences between public and private organizations. This was especially true regarding the strategic direction resulting from the organizations' underlying purposes. The public sector's need (to prioritize its primary purpose of maximizing societal benefit) can be related to the strategic paradoxes between focusing on today's and tomorrow's needs (O'Reilly & Tushman, 2004; Smith et al., 2016). Hence, even though innovation was perceived as necessary, the efforts were often more reactive and perceived as time- and cost-consuming. Relating this to the strategic paradox, there was a smaller focus on long-term innovation as well as higher degree innovation efforts. This was also true for the private sector; however, the reason behind it differed. For the private sector and its competitive nature, the strategic paradox inferred a constant need for incremental innovation and sustaining the organizations competitive edge by focusing on tomorrow's needs. In addition, the respondents from these organizations perceived a more considerable risk in not innovating for long-term purposes due to their need to maximize profits. The literature, too, stresses the importance of sustained competitiveness through strong innovation capabilities (Hidalgo & Albors, 2008). Respondents generally described that innovation leaders in public organizations must navigate bureaucracy and work creatively with limited resources. In contrast, the respondents emphasized that innovation leaders in private organizations can focus on generating value and profitability with more available resources.

The management sets the overall business strategy, indicating the importance of finding synergies across long- and short-term goals (Pisano, 2015). However, many respondents highlighted challenges regarding the top management innovation approach, including a need for higher understanding and a missing overarching innovation strategy. Due to top management's lack of clear incentivization and direction, the innovation leader had to navigate within their organization and prioritize specific areas or cases. The literature also notes that a lower managerial understanding and guidance could result in less focus on innovation in the overall strategy and investments (Christensen et al., 2008).

As mentioned, the top management and the organizational innovativeness also influences overall innovation adoption in the organization (Frambach & Schillewaert, 2002). Respondents stressed the need for a clear over-arching innovation strategy that aligns with the organization's vision. This could also facilitate getting all employees on board with innovative incentives and placing less of this responsibility within the innovation leaders' roles. A lack of such structures and strategic alignments from the management required the innovation leaders themselves to generate innovation adoption throughout the organization. Innovation adoption relies highly

on the social environment's support, encouragement, and motivation (Talukder, 2014). In cases where the organization did not provide this, the innovation leader incorporated more of it into their role. In contrast, today's increased decentralized decision-making processes infer a need for employees and leaders to be more flexible and adaptive to the changing business environments and not rely only on set structures (Neessen et al., 2019). Even so, some respondents explained that their work was positively impacted by the degree of innovation systematization implemented in the organization. This influence stemmed from a need for more explicit directives for innovation set by top management and how systematization created room for innovation in the organization's strategy. The space made for innovation through innovation systematization enabled their role and activities. The current state of the empirical data inferred a need to focus more on change resistance and increased understanding for the top management and employees overall. As Talukder (2014) emphasizes, an intra-organizational approach is needed to achieve change acceptance and reach successful innovation that everyone adopts. Today, many innovation leaders perceived that they have a significant part in creating individual-level acceptance throughout the organizations due to the current state of the organizational innovativeness.

5.2 What Activities are Ascribed to the Innovation Leader Role?

The conditions that the organizational context creates for the innovation leader role was found to infer several activities needing to be handled. When discussing risk areas leading to poor innovation management, several issue classes are observed in the literature. The issue areas mentioned were top management, organizational inertia, financial resources, innovation adoption, and implementation (Christensen et al., 2008; Denti & Hemlin, 2012; Frambach & Schillewaert, 2002; Şimşit et al., 2014; Talukder, 2014). As presented previously, the level of organizational commitment to solving the presented issues affects the innovation leader's role and, thereby, the activities they must perform. For example, the lack of top management directives and clear structures for innovation created a need for several activities connected to facilitating innovation adoption and spreading the culture of innovation.

Moreover, several respondents addressed how traditional financial evaluations of innovation projects could endanger the willingness to invest in innovation. In some cases, this could imply a need for the innovation leader to manage the risk of the explorative business separately from the ongoing operations – a solution similar to the dedicated innovation team explained by Govindarajan and Trimble (2010). Govindarajan and Trimble (2010) also underscore how the dedicated innovation team's leader is vital in mitigating the potential conflict between long-and short-term interests between the innovation team and the performance engine. This is an activity that could be compared with the ambidextrous role that some respondents mention. Moreover, it could also be paralleled to facilitating the shift between explorative and exploitative business focus aligned with the theories of a flexible leadership style (Rosing et al., 2011). Collaboration and synergies between the different organizational focuses should be encouraged (Pisano, 2015). In the empirical data, the innovation leader was described as a central connection point to achieve this. In addition, within the activity of creating a culture of innovation and facilitating the issues of inertia and adoption, innovation leaders' importance as

leaders is prominent (Denti & Hemlin, 2012). The activities mentioned by the respondents connected to this were teaching, acting as a role model, acting as a supportive function for others' ideas, and using their knowledge within innovation methods and processes. They should be able to steer the way forward and sometimes dare to shut down a non-viable idea. Since employees' innovation adoption is driven by their social environment, encouragement, and moral support (Talukder, 2014) – much of the mentioned activities in the empirical data could be said to contribute to this.

As pointed out in the empirical data, much of their activities focused on the innovation funnel's initial stages. Especially, idea generation and coordinating other initiatives internally within the selection phase were significant focuses of the respondents. As described by Rosing et al. (2011), there is a complexity in managing creativity and implementation simultaneously since they do not follow a linear process and cannot be separated into distinct phases. Therefore, the separate phases may pose a need for different sets of skills and abilities or even persons depending on the current focus (Rosing et al., 2011), which the respondents also confirmed. However, issues that were less frequently mentioned by the respondents as incorporated in their activities as innovation leaders were managing the challenges connected to the implementation stage. Even though highlighted in the literature as a considerate problem area for innovation management (Klein & Sorra, 1996; Şimşit et al., 2014), the innovation leader role in this study was not typically ascribed with duties to handle implementation. The covered activities connected to the implementation stage were within the visualization of the business case or in preparing implementation, proactively mitigating risk, and reducing barriers.

There was also a connection between the described activities of the respondents and the informal roles within innovation management from the literature. The need to involve critical individuals to overcome innovation barriers has long been recognized (Dörner & Gurtner, 2009). Thereby, many of the necessary activities connected to the innovation process have been dealt with before the emergence of formal roles in the profession. For example, the innovation champion is deemed necessary to drive more radical innovation by taking on personal responsibility for an idea (Schon, 1963). Further, champions are described as taking on the activities of addressing challenges, identifying potential value in ideas, enhancing overall innovativeness, assembling the right team, overcoming barriers, and ensuring project success (Hamadi et al., 2018; Kelley & Lee, 2010; Sergeeva, 2016). The ascribed activities of an innovation champion are thus highly similar to much of the responsibilities or tasks that the respondents ascribed to their innovation leader role. For example: identifying potential value in ideas could be compared to the described activities of creating forums to manage ideas and evaluate potential ideas and projects.

Furthermore, several respondents commented on the activities of connecting and networking within their role as part of the task of generating the right team for the projects. The importance of this activity can be compared to Goodman and Dingli's (2013) theory. They highlight how employees related to change initiatives must predict the demand for new skills associated with the tasks and be able to make a case for the change to the rest of the organization. Further, to achieve change acceptance, a part of the innovation leaders' task was to educate people about

innovation and how it can benefit the organization and create long-term value. Other activities were also for them to create an open culture and set an example internally. Educating the organization is also present in the literature connected to informal roles– where supporting the knowledge generation of others is ascribed (Gemünden et al., 2007). In general, the set of activities perceived to be included in the innovation leader role could differed among the respondents depending on their specific position in their respective organizations.

5.3 What are the Competency Needs of an Innovation Leader?

Although there were variations in the emphasis on specific competencies between the competency framework developed from previous literature and the empirical data from the interviews, many of the topics covered were similar. The empirical analysis resulted in two separate purposes for an innovation leader, leading people or leading the process. One similarity regarding the competency need of an innovation leader was the great emphasis on social skills, which was mainly approached as emotional intelligence in the literature. The several domains of EI, namely: self-management, self-awareness, social awareness, and relationship management (Goleman & Boyatzis, 2017), can be compared to described abilities of the respondents as well. Much like how Bratton et al. (2011) describe how intra- and interpersonal awareness can be leveraged to demonstrate strong transformational leadership, the empirical data underscored how a deep understanding of your surroundings, your abilities, and skills, as well as the specific innovation team's dynamic, facilitates successful innovation work and change acceptance. Competencies addressed within relationship management in the literature, such as influence, coaching, teamwork, and conflict management (Goleman & Boyatzis, 2017), were frequently emphasized as important by the respondents as well. Within the purpose of leading the people of the innovation process, many competencies regarding the social skills of the innovation leaders were thus highlighted.

Further, the ability of self-management (Goleman & Boyatzis, 2017; Hero et al., 2017) can be paralleled with many of the competencies that were addressed within the purpose of leading the process and general leadership skills (organizing and executing a course of action required to manage prospective situations). The study's frequently mentioned resilience need for innovation leaders could be relevant in line with these competencies. In comparison, the competencies of emotional stability and self-control highlighted in the literature to positively impact intrapreneurial behavior (Goleman & Boyatzis, 2017; Huang et al., 2022) are also applicable. Within self-control, a positive outlook and an achievement orientation are also underlined in the literature (Goleman & Boyatzis, 2017), aligning with what was referred to as positivity towards the task and result orientation in the empirical data. In leading the process, the empirical data was rather focused on competencies similar to the project management skills of dealing with uncertainty and an agile mindset (Ahsan & Ho, 2022). Moreover, in relation to the resilience competency, the competencies described within this purpose were more in line with the resilience in an employment context described by the literature. The competencies concerning this purpose were focused on managing with increased responsibility and the capability of overcoming incidents to continue performance towards the innovation project's objectives (Luthans, 2002; Oeij et al., 2016).

A vital competency from the empirical data was motivating others and engaging a group for the innovation process to work. Accordingly, they require leadership skills such as planning, organizing, and leading in change and uncertainty to lead the people of the process. Further, the social skills dealt with within this task were conversational skills and flexibility in adapting to whom they were addressing. The skills apparent in the empirical data within this competency were also in line with the negotiation skills noted in the literature, where getting the group to a mutual understanding of the project's goals is mentioned (Di Marco et al., 2012; Podmentina et al., 2018). While the literature review provided a comprehensive understanding of emotional intelligence and social skills by drawing on various studies and academic research, the respondents tended to touch upon the same areas in a less detailed manner. In the literature, both emphatic leadership (Kock et al., 2019) and humble leadership (Zhou & Wu, 2018) were described to foster employee innovation behavior as well as the job motivation of the followers. When the respondents discussed how to engage and motivate a group, answers emphasized empathy towards their group and emotional humility towards the task as decisive factors. These leadership traits were sometimes anchored in their personality but sometimes also conscious leadership strategies.

Further, within relationship management, the literature states that a high level of emotional intelligence in team leaders results in a more remarkable ability to coach and mentor (Lee & Wong, 2019; Sosik & Megerian, 1999). The literature also notes how a relational focus with each follower can help create a shared vision and organizational confidence (Jaiswal & Dhar, 2015) and the relational trust that increases innovativeness performance internally (Parra-Requena et al., 2022). In addition, networking competency is crucial for implementing innovation projects (Hero et al., 2017). The empirical data about leading people remarked the competency to coach other individuals to create an innovation capability within organizations. A perspective to this was a "new type of leadership" where an innovation leader could gain from exposing their feelings towards the task to create a connection to the group and gain engagement.

Moreover, networking was commonly referenced as a needed ability among the respondents, stating it was needed both internally and externally to reach innovative results. In the literature, self-efficacy was mentioned as a potentially influential factor in a leader's level of networking skills. Self-efficacy determines one's perception of their ability to develop and use networks to create beneficial alliances for innovation and relational trust (Hero et al., 2017; Parra-Requena, 2022). By the respondents, the importance of self-confidence was frequently attributed to the innovation leader role instead, both in connection to their purpose of leading people and in leading the process. Moreover, as discussed in the literature and the empirical data, their experience and self-efficacy constituted personal determinants between only recognizing an opportunity and having intrapreneurial behavior in pursuing it (Liao et al., 2022). The topics of self-confidence and self-efficacy can be attributed to both identified purposes of an innovation leader. In the empirical data, perspectives addressed how their innovation-, and conflict experience made them more confident in leading people. These voices are more in line with the definition of self-efficacy concerning an individual's perception of their ability to control internal or external actors in a particular situation (Hero et al., 2017). On the topic of

self-efficacy, a relevant point of analysis is also how the literature states that it is both a basis of knowledge development and improves intrapreneurial performance as well as that it can be developed through social learning via role models (Chell & Athyade, 2011; Huang et al., 2021; Shea, 2021). Within the purpose of leading the people, the innovation leaders' own self-efficacy level can hence influence their team's performance through this coaching and leadership role many of the respondents discussed. In general, the respondents' descriptions of social-, and persuasion skills were often similar to the described competencies of an internal change agent. Such a person is described in the literature as responsible for identifying new needs and trends for the organization and driving the innovation management for it (Vaccaro et al., 2012).

When instead discussing their potential in leading the process, respondents mentioned self-confidence much like it is discussed in the literature regarding general self-efficacy (Celik, 2013; Denti and Hemlin, 2012). Self-efficacy is regarded as a belief in being able to deal with a range of challenging demands (Celik, 2013), such as identifying potential innovation needs in the organizations or building a business case about it to present to top management. In other cases, the increased self-efficacy gained through experience contributed to their performance by increasing their motivation, their willingness to pursue individual ideas and inferred a more effective use of cognitive resources – acting as a mediator between transformational leadership and innovation capabilities (Denti & Hemlin, 2012). Moreover, the degree to which an innovator has the potential to perform future innovation tasks is described as dependent on self-esteem, outcome experience, self-efficacy, hope, risk propensity, and optimism (Moenkemeyer et al., 2012). Several of these factors are present in the empirical data, stating that they perceive themselves as more positive than others. In addition, they also discussed outcome experience to have affected them in becoming better innovation leaders due to previous experience with similar cases.

Another important competency mentioned in the empirical data was creativity. Several respondents addressed creativity to be vital in the innovation process. Although, some underlined that they did not have to constitute the primary source of it within the projects. They needed the ability to evaluate ideas, critically analyze issues from several angles, and remain open to other perspectives. Creative thinking was covered, however, as necessary in creating successful working processes. In the literature, creative thinking competencies were also underlined as influential in reaching innovation project success (Amabile & Pratt, 2016). A point of view that was apparent in the empirical data and the literature was that employees must perceive that the organizational practices and policies encourage innovation (Amabile & Pratt, 2016). With an innovative culture and organization, the individual's creativity can be utilized. Further, the literature underscores how the leaders' openness and creativity enable finding new solutions to existing problems (Khalili, 2016). This capability was very apparent in the empirical data under the purpose of leading the process too.

However, one perspective that was not as apparent in the empirical data was how individual creativity is directly linked to one's motivation to do the task. Nonetheless, both the literature

and the respondents mentioned how the organizational work environment influences individual creativity (Amabile & Pratt, 2016; Liao et al., 2022). Thereby, the creative thinking competency needed by an innovation leader could be within both purposes. To lead people, they should contribute to the innovative culture and find creative ways of incentivizing creativity. When leading the innovation process, creativity is needed to generate novel ideas aligning with organizational goals and innovativeness in executing those ideas (Mafabi et al., 2015). As many of the respondents experienced that they led the process mainly within the fuzzy front end, the level of creativity became a necessary competency for leading the process.

When focusing on the purpose of leading the process, project management competencies are more emphasized in the literature review than explicitly so by the respondents. Even so, the competencies in connection to the innovation funnel were, for example, a personal drive, engagement, resilience, and the social skills needed to get everyone on board the process. Meaning even if these were not addressed as project management skills, they were much similar to these competencies found in the literature. For example: sharing knowledge and ideas internally, establishing team goals, managing collaboration, having negotiation skills, and a possess an agile mindset (Ahsan & Ho, 2022; Podmentina et al., 2018). The respondents did not mention the necessity of having an agile mindset explicitly. Instead, they approached flexibility in innovation management methods or social team management as a good competency. Nonetheless, the literature and the empirical data aligned in the fact that an innovation leader must be capable of managing with uncertainty to be successful (Ahsan & Ko, 2022).

However, flexibility was specified in the literature within the intrapreneurial competencies, stating that it is a critical personal attribute for an individual active in the innovation process (Huang et al., 2021). Flexibility was further defined as a stretch mindset: the willingness to shift one's approach and critically evaluate ideas (Hero et al., 2017). Although not mentioned as flexibility specifically, these were abilities that most respondents addressed as an essential part of their purpose of leading the process. Flexibility was also described in relation to ambidextrous leadership, where it was needed to shift between the focuses of today and tomorrow. In the literature, the same capability was rather emphasized as proactiveness. Working proactively in the innovation process is underlined as necessary for anticipating future needs and expected difficulties, which is needed to achieve exploratory leadership (Farrukh et al., 2022; Huang et al., 2021; Kiss et al., 2022; Urbano et al., 2022).

One competency area where the literature and the empirical data were highly aligned was the need for resilience when working with innovation management. The abilities to recover from adversity, conflict, failure, progress, increased responsibility, and coping with organizational change (Abukhait et al., 2020; Luthans, 2002; Mafabi et al., 2015) were addressed in the literature as well as the empirical data. The respondents also highlighted how their drive, resilience, and risk acceptance had increased with their experience. The literature notes how increased resilience impacts employee attitudes toward risk-taking (Abukhait et al., 2020; Mafabi et al., 2015). Generally, risk-taking within innovation projects is described as a willingness to accept uncertainty and the possibility of negative consequences while pursuing

potential rewards (Giaccone & Magnusson, 2022; Kelley & Lee, 2010). The respondents highlighted risk-taking as important for fulfilling their purpose as an innovation leader. However, the phenomenon was often mentioned with their role description. Some tended to become more risk-raking since they perceived it as part of their organizational role. Also, their willingness to take on risk had increased with their experience of which opportunities are viable and which are not.

Furthermore, the literature addressed cognitive skills to be essential for innovation and include critical thinking, analytical thinking, managing complexity, problem-solving skills, and diverse thinking within this competency area (Ahsan & Ho, 2022; Cobo, 2013; Farrukh et al., 2022; Hero et al., 2017; Neessen et al., 2019). In the empirical data, there were often references to their ability to quickly understand situations, projects, groups, and tasks – from which they could develop a process suitable for the specific needs and possibilities of the given situation. These descriptions were in line with the specific definition of an analytical mindset by Ahsan and Ho (2022), who defined it as the "ability to apply logical and critical thinking to analyzing situations, financial and organizational data, and trends to find alternativeness solutions" (p.5). Moreover, even when problem-solving skills and analytical thinking were not specifically underlined as the respondents' competency areas, their perception of the purpose of an innovation leader frequently emphasized the role of contributing with these sets of abilities. They could be mentioned in the purpose of leading people and the process. For example, they used their past experiences and innovation management methodologies to analyze and steer the process forward in complex environments through iterative processes.

The literature and the empirical data could agree on similar topics regarding the competency need of an innovation leader. However, the particular purposes identified in the empirical data can explain separate competency needs. Therefore, there is an underlying need for the innovation leader to grasp which purpose they must fulfill in their specific context and adjust accordingly.

5.4 What are the Identified Effects of the Personal Certification?

As discussed previously, the general effects of the certification of Innovation Management Professionals varied depending on the organization where the respondents worked. The differences described in the empirical data could depend on a still ongoing professionalization, and a general lack of understanding towards the innovation concept within their organizations. In terms of developing knowledge and competencies in innovation management, the certification was identified to increase the innovation leaders' perspectives on innovation, handling processes, and self-confidence. Similarly, the literature states several motivations for pursuing certification, such as professional growth, self-development, and accomplishing achievement. Further, a certification can be attained to challenge one's capabilities and to create a sense of worth (Blomquist et al., 2018). Cumberland et al. (2018) further differentiate between growth and reactive factors, where the growth factors are more apparent from the respondents' perspectives. In comparison, non-certified explained that their general job experience could impact their self-confidence as innovation leaders, which was not stressed in the literature.

Multiple respondents clarified that the certification has created more credibility and legitimacy internally and externally. The development described in the empirical data leads to a stronger voice and higher status in innovation-related tasks – much like the motivations presented in the literature by Blomquist et al. (2018). Likewise, Robbins & O'Connor (2023) describe that professionalization offers practitioners a prominent voice in decision-making. However, the authors also explain that it could increase the organizational possibilities to foster and maintain talent, which was not as apparent in the empirical data. Even though several respondents emphasize that the certification has brought attention and created somewhat more understanding of their roles, many could still not use the title "innovation leader" in all forums. It was considered difficult for people outside the practice itself to understand. The lack of external understanding of the certification could explain why the innovation leaders were not motivated by reactive motivations, as mentioned by Cumberland et al. (2018). The motivations in the empirical data were rather attributed to growth factors, such as gaining knowledge and respect.

As presented in the literature, the professionalization of innovation leaders is emerging and often compared to the development of project management, whereas the certification and body of knowledge have significantly impacted the process (Laundry, 2016; Muzio et al., 2011). Multiple respondents perceived that their job roles had recently become more visibly connected to innovation. However, the definition of the profession remains vague due to the broad nature and diversity in role definition. Many respondents refer to the systematization of innovation management, and the body of knowledge for innovation management professionals has helped clarify innovation's practical meaning and application. Certified individuals have found that the standards provide them with standardized processes, methods, and inspirations to rely on daily. However, some downsides to the certification were discussed by both certified and non-certified individuals, such as the inability to test specific soft skills and the risk of excluding non-certified individuals. Standardization was addressed as potentially leading to

homogenization and a reduced training offering due to the specified skill demand. The challenge of specifying the needed expertise for a field is also mentioned in the literature to increase the difficulties in verifying job expertise and proficiency (Jacob & Boisvert, 2010; Landry, 2016). In contrast, however, the personal certification did provide a sense of proficiency for several respondents.

The respondents explained that the certification had helped them better understand their roles and provided valuable support in performing their tasks and responding to organizational issues. When summarizing the empirical data and viewing it in the light of the definition of professionalization by Siegrist (2001), the effects of personal certification can be argued to relate to both of the strands of professionalization: improving the status of the individual and improving the quality of the service provided. As a main finding of the study was that it led to an improved credibility and legitimacy to their role, it relates to how professionalization's first strand deals with an improvement of status. The other strand of professionalization concerns an improvement of the profession's members' capacity and quality of service. The effects of certification mentioned as improving their innovation knowledge and their self-confidence in carrying out their day-to-day tasks could be related to this second strand.

Moreover, the certification significantly impacted the individuals' perception of their role, as it increased their understanding of their responsibilities and boosted their self-confidence as innovation leaders. The literature underscores the importance of comprehending the competencies and traits of individuals in relation to innovation processes (Goduscheit, 2014; Pollok et al., 2019). In line with the literature, a general perception of the innovation leaders was that the body of knowledge was important for validating their knowledge and clarify their role perception.

6. Discussion

The discussion section aims to comprehend the topics of the role perception (activities, purpose, and organizational influence) and discuss how these contextual factors affects the perceived competency need of the innovation leader. Finally, a discussion will be carried out regarding how a personal certification can affect the role of an innovation leader.

6.1 The Contextuality of Innovation Leaders' Competency Needs

As presented in the empirical data and analysis, a clarification regarding the innovation leader's role perception is needed before discussing their perceived competency needs. The study was initiated by researching the competencies needed for an efficient innovation leader. Due to the present literature gap regarding a unified codification for the individual qualities needed, the theoretical framework of competencies for an innovation leader was established and summarized in Table 1. However, the complexity of the role that emerged during the research process indicated a need to analyze the differences in role perception further.

A part of what influenced the separate role perception of the innovation leaders was attributed to different contextual factors apparent in the empirical data. The increased rigid structures, complexity, and bureaucracy influenced the innovation leader's role while working in a larger organization. In comparison, their work of driving innovation was facilitated by the level of flexibility and adaptability in a smaller organization. Moreover, the organizational type meant separate organizational structures, purposes, and operation activities. All these factors influence the purpose and the activities of an innovation leader. The underlying reason for the organization's existence frames the role and the innovation leader's flexibility. The top management's directives and innovation focus were also indicated to sometimes have been determined by the organizational purpose. In turn, a significant result was how top management's innovation focus severely influenced the organization's level of innovation culture and acceptance. These contextual factors gave reason to the innovation leaders' different internal purposes. For example, the innovation commitment of the top management gives the strategic direction that enables the objective to be anchored in the whole organization. A lack of this strategic direction could indicate that the innovation leader must complement the top management and deal with larger innovation management issue areas. For example, enabling innovation adoption and fighting innovation inertia. It could also be discussed that the level of organizational innovation maturity and understanding could result in the same effect on the innovation leader role. The situational context can hence be argued to outline the possibilities for the innovation leader's role. Thus, also indicating which competency needs are attributed to their specific role perception.

The different objectives of innovation leaders in organizations also inferred separate activities to be carried out within their roles. The innovation leader's activities result from the organizational context and the organization's underlying motivation for their role. The empirical data also underlined how innovation leaders' activities could differ concerning their organizational demands. This indicates that the organizational innovation maturity level is also

decisive for their specific activities. Moreover, the two identified purposes (leading people or leading the innovation process) could also be identified to originate from particular organizational needs. For an organization with higher social barriers for innovation, the purpose of leading the people and creating change acceptance is more prominent. On the other hand, in a more adaptive organization where innovation is integrated into its overarching strategy and understood, the purpose of leading the process is more necessary. For the latter, the role purpose infers a competency need where problem-solving, analytical thinking, and being a generalist are vital. Instead, with the purpose of leading the people, social skills and communicative abilities were highly proficient. Some competencies could be attributed to both purposes. In these cases, they are still utilized to fit the position of the specific innovation leader. For example, resilience and proactivity could be viewed both in the light of leading people *and* leading the process. Resilience was mentioned as being able to deal with differentiated opinions and social conflicts *and* the capability of believing in your own ideas, managing risk, and progressing with the process even when obstacles occur. Finally, proactivity could be viewed from the perspective of anticipating future needs and obstacles and how to adjust communication with different target groups.

The results from the study could create both practical and theoretical implications as to what the innovation leaders' roles entail, and what the perceived competency needs for these can be. Throughout the study, various competencies were identified. However, there was a discussion on whether the competency description can be utilized as a comprehensive framework (Table 1) of competency needs. The theoretical framework provides a first contribution to synthesizing and collecting the existing knowledge from the literature. Although many competencies have been established and deemed necessary, the empirical results suggest that competency needs are highly contextual. Consequently, the competency needs of an innovation leader are better served by understanding their purpose and identifying the specific competencies that can address the respective objectives rather than relying on a joint competency framework for all innovation leaders. Further, the organizational motivation to incorporate an innovation leader role to lead the people internally towards an increased innovation capability or to lead the innovation processes also indicates an important implication of the study. The contextual factors creating the need for the separate purposes of an innovation leader could also be used as a guide for organizations to identify and determine their current innovation needs. For example, a larger organization with rigid structures and organizational inertia may have to consider utilizing an innovation leader with the purpose of increasing the innovation culture and acceptance throughout the organization. Moreover, there may be a need for both purposes depending on the current state of an organization. The result also presented in the empirical data is that the different competency needs of the different purposes cannot always be fulfilled by one individual, which can infer a practical implication for the profession.

A concluding discussion regarding competency needs is that it can be complex and difficult to summarize an entire profession into a few competency areas. In addition, if this is especially true for innovation management, which requires a multifaceted and multi-leveled understanding that can be hard for organizations to grasp. The profession might be even more challenging to monitor and standardize since innovation is multifaceted and multi-leveled for

an organization to comprehend, and since the profession is seemingly highly affected by its context. Unlike project management, which has more defined processes, innovation management requires greater flexibility and adaptability to handle unknowns. This means that understanding and standardizing the necessary competencies for innovation management could be particularly difficult. To address this challenge, it may be necessary to make the profession and its competencies more flexible and adaptable to reflect the dynamic nature of innovation. This could involve continuously adding new skills and competencies relevant to the organizational landscape or separating different roles due to their contextual factors.

6.2 Identified Effects from Personal Certification: Improved Credibility, Increased Knowledge, and a Tangible Role Perception

The identified effects on an individual level from the empirical data could be summarized as increased innovation knowledge, legitimacy, credibility, and more tangible role perception. Moreover, certification was identified as a potential means of increasing the professional status of the practitioners and the profession overall. Further, the certification has the potential to constitute a solid career step for an otherwise fuzzy profession. In some cases, this career step or more tangible role perception was perceived as a way of creating space for the profession within the organizations, which could also influence future generations.

The necessity of the certification and its effect could stem from the lack of official innovation education within the interviewees' generation. Several underlined their lack of innovation education and how the certification had become relevant after practical innovation experience. The effect of the certification was hence to validate their practical knowledge, in a sense, towards the existing body of knowledge available for the profession. The perceived wish to validate their knowledge could also come from the general lack of innovation knowledge described to exist within the organizations.

Furthermore, today's general increased innovation needs and that it is relevant for all types of organizations could also influence the professionalization and the wish for the innovation leaders to validate their knowledge. However, previous innovation experience was also mentioned as a way for the professionals to validate and create legitimacy for their role. Hence, any validation could be enough for the innovation leaders to reach the legitimacy they perceive necessary for operating in their role. Nonetheless, their innovation experience was sometimes in roles to which innovation was not officially connected. To reach the legitimacy perceived as needed in certain situations to carry out their role, they could either have externally acknowledged innovation experience or the certification validating their proficiency. The certification could have a more considerable impact in situations and industries where innovation is not universally understood or typically associated.

Some perspectives could be argued as potential limitations to the certification. Firstly, being certified cannot be directly equal to being proficient in a job. The reason for this could partly be how this study discussed the contextual dependency on the role definition for an innovation leader – but also how certification could be limited in verifying expertise in general. Secondly,

this study underscores soft skills as important for an innovation leader. A potential drawback of certifications is also the limitation in measuring these more abstract and subjective skills. In line with the study's delimitation of not considering the differences between personal traits and developed abilities, a potential discussion regarding a certification's possibility of measuring specific competencies better than others falls outside the scope of this study. Lastly, an argument regarding the risk of excluding others from the profession's belonging could be discussed. This risk could be more significant within new roles that have emerged within innovation management, which currently need more external validation to their role description. Since many active innovation leaders felt that the certification helped them gain credibility, there is a risk of being left outside if they do not obtain it.

In line with the arguments regarding difficulties in measuring soft skills and trait-based competencies, one could argue that innovation and its nature demand continued open processes without fixed methods. However, the same reason that makes innovation challenging to certify and innovation management into a profession where the competencies may be even harder to recognize and define universally may constitute the same cause that makes a certification attractive to the field. No matter the definitional difficulties, the described effects could still constitute a way of reaching the validation needed within the profession's current state and be a tool to make use of in the professionalization of innovation management.

6.3 Research Quality Discussion

For this study's research quality, objectivity, and transferability are relevant to discuss further. When considering the study's objectivity, it should be noted that all respondents were aware of the certification and that the majority had already obtained it. This may have caused them to be more prone to mention competencies closely related to the tested knowledge areas in the attributed body of knowledge (Innovationsledarna, 2020). Moreover, the authors had a theoretical framework in place before conducting interviews, which could have unconsciously influenced the data analysis. However, the study employed a GIOIA method carefully to ensure that the theoretical contributions were based on the raw data, which helped to minimize this concern. Further, both authors worked parallelly and continuously reviewed the interpretation of the data. Regarding the study's transferability, an interesting discussion is whether the results of the different purposes of an innovation leader and the contextuality of an innovation leader's role perception and competency needs would hold true for other roles within the innovation process. As motivated in the research quality section, the theoretical framework instead aimed to identify competencies that could be more broadly applied to individuals working within innovation management, whereas the empirical data is more in line with the scope of the study, which could restrict the transferability. Nonetheless, the ambiguous role perception still speaks for a diverse segmentation within the scope of active innovation leaders, which positively influences the transferability of the findings.

7. Conclusions

The final chapter of the thesis aims to present the final conclusions stemming from the analysis of the research and the answers to the study's research questions. Followingly, the possible theoretical, and managerial implications of the research findings are presented. As a last section to the conclusion chapter, ideas for future research on the topic are conferred.

There is an absence of a universal, internationally agreed-upon competency framework for innovation leaders. To bridge this gap, this study investigated innovation leaders' perceived competency needs and conducted a systematic literature review to create an initial framework from the current literature (Table 1; Appendix A). Through the qualitative semi-structured interviews, the described aim was achieved, and two main research questions were answered: the competency needs for innovation leaders and the effects of personal certification. The fact that the role perception differentiated among the innovation leaders implied a need to further identify the existing role perceptions. The analysis of innovation leader competency needs involved examining their current roles and how organizational context impacts them.

Addressing RQ1 regarding the competency need of an innovation leader, it became apparent that there is no single answer as to which competencies are universally needed for an innovation leader today. Instead, the study revealed that an individual's context and perception of their role significantly impact their required competencies. While there were some similarities between the theoretical framework and empirical data, an innovation leader's competency needs can differ depending on their role perception. This study identified two distinct purposes for an innovation leader: leading people and leading the innovation process. Each purpose requires different competencies. Leading people, for instance, necessitates social skills to manage change acceptance and culture, while leading the innovation process involves an overarching organizational responsibility to facilitate the process.

The way innovation leaders perceive their role can result in different sets of activities associated with their job. This suggests that the current state of the profession is not entirely established and is still contextually influenced to the shown extent. An innovation leader's responsibilities can vary significantly between different organizations. Therefore, the study concludes that the innovation leader's role is influenced by the organization's purpose and overall innovation maturity. Additionally, organizational circumstances such as size and existing structures affect the innovation leader's possibilities within their role. These differences in activities and organizational context also result in varying competency demands for innovation leaders.

Addressing RQ2 regarding the effects of personal certification, the main conclusion is that a personal certification can validate the knowledge of innovation leaders and help them develop relevant skills for their profession. Additionally, the validation and support in their role definition can increase self-confidence to carry out their organizational tasks and legitimacy. On a larger scale, certification can contribute to the standardization of the profession by

improving organizational understanding of the role and standard methods and processes used in innovation work.

Finally, the effects of personal certification may be linked to the two strands of professionalization. This suggests that personal certification could serve as a means of professionalizing innovation management by improving the quality of the profession's members and increasing the profession's status.

7.1 Theoretical Implications

This study has three main theoretical implications. Firstly, the theoretical framework suggested in section 2.6 (summarized in Table 1) provides an overview of the current literature on innovation management competencies at an individual level. Establishing a unified competency framework for the innovation management community is necessary to guide future work, as there is currently no such framework. Secondly, the empirical data has contributed to a theoretical understanding of the role perception of an innovation leader. This study provides insights into the current formalized innovation roles by addressing the lack of a standardized set of competencies for innovation management professionals. This can be useful for relevant innovation associations to continue developing a standardized set of competencies for innovation management professionals. Thirdly, the study proposes that obtaining certification as an innovation management professional can enhance the perception of the role legitimacy among practitioners and their surroundings. Furthermore, the perception held by innovation leaders that their competencies need validation could have theoretical implications for the current status of professionalization and how it is being implemented in practice. The study's limited empirical data restrict the generalizability of the findings. Nevertheless, considering the limited existence of individuals fitting the study's selection criteria, the results could still apply to the chosen population.

7.2 Managerial Implications

The study's managerial implications can be leveled into implications for the community at a higher level and an organizational and individual level. At a higher level, the presented theoretical competency framework and the empirical findings can help innovation management communities work towards a unified innovation management competency framework. The finding's contribution to their ongoing initiatives could help understand what an innovation leader's role entails. When viewing the result from the perspective of certifying organs, the current role perception and competencies found can contribute while reviewing the relevance of their body of knowledge. At an organizational level, the study's findings regarding the organization's influence on the innovation leader's role can contribute. This study can help organizations understand their current state and improve their innovation focus by identifying the competencies required in their specific organization. Further, as the study indicated, the role of an innovation leader within an organization can be multifaceted or broad – and an implication could be that one person might not be enough considering the organization's widespread needs. At an individual level, innovation leaders in organizations may favor from

understanding their purpose and which activities might be attributed to their role because of their purpose. Specifying the current role perceptions and competency needs can also contribute to a deeper understanding of individuals aiming to work within the profession. Knowing the job requirements and skills needed to excel in a profession can contribute to their development. Moreover, a managerial implication is that certifying employees in innovation management can boost internal understanding and recognition of innovation-related work.

7.3 Future research

This study has researched several interesting fields within the topic of innovation management professionals, and there are several promising strands for future research. One suggestion for future research is a quantitative study that examines the applicability of the competencies identified in the theoretical framework. Another possibility is to investigate potential patterns of competency needs and activities for innovation leaders based on different types of organizations. For instance, is there a specific purpose for an innovation leader in the public sector? The same kind of analysis could be performed for organizations with varying levels of internal innovation maturity. Additionally, since this research was conducted in Sweden, it would be worthwhile to explore the distinct competency needs from an international perspective and whether innovation leaders' role perceptions and activities differ across countries. In the future, it could be valuable to research if the perceived effects of certification remain the same as professionalization continues to progress. To test the dependability of the findings, it would be interesting to see if innovation leaders (1) are still as contextually influenced and (2) if they still desire to validate their knowledge and establish legitimacy through certification five or ten years from now.

8. References

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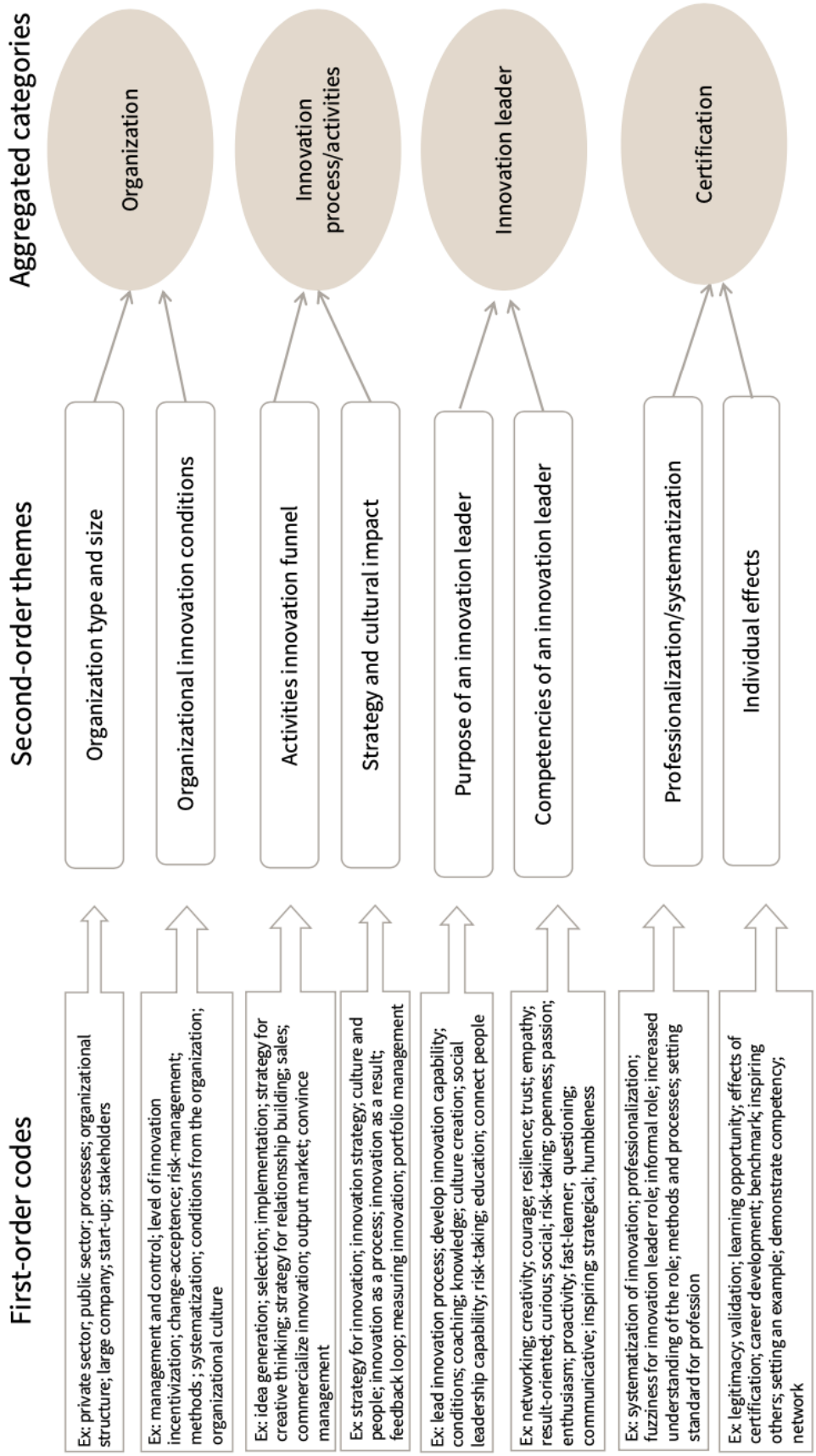
Appendices

Appendix A. References to the Theoretical Framework of Competencies

Competency area	Sub-competency	Identified by (search 1)	Competency explanation (search 2)
Emotional Intelligence Competencies	Self-awareness	Chatenier et al. (2010); Urbano et al. (2022); Goleman & Boyatzis (2017)	Bratton et al. (2010)
	Self-management	Chatenier et al. (2010); Hero et al. (2017); Huang, et al. (2021); Ahsan & Ho. (2022)	Goleman and Boyatzis (2017); Celik (2013); Denti & Hemlin (2012)
	Self-efficacy	Chatenier et al. (2010); Liao et al. (2022); Neessen et al. (2019); Huang et al. (2021); Blanka (2019);	Hero et al. (2017); Celik, (2013); Chell & Athyade (2011); Denti & Hemlin (2012), Shea, (2021)
	Social Awareness	Chatenier et al. (2010); Ahsan & Ho (2022)	Goleman & Boyatzis (2017); Kock et al. (2019); Vladic et al. (2021)
	Relationship Management	Chatenier et al. (2010); Podmetina et al. (2018); Hero et al. (2017); Neessen et al. (2019); Ahsan & Ho. (2022); Blanka (2019)	Goleman & Boyatzis (2017); Lee & Wong (2019); Sosik & Megerian (1999); Jaiswal & Dhar, (2015); Zulfadil & Machasin, (2020); Goduscheit (2014); Klerkx & Aarts (2013); Parra-Requena (2022); Shea (2021); Gemünden et al. (2007).
Creativity Thinking Competencies	Creativity	Chatenier et al. (2010); Hero et al. (2017); Podmetina et al. (2018); Khalili (2016); Liao et al. (2022); Mafabi et al. (2015)	Amabile & Pratt (2016); Hong et al. (2018)
	Innovativeness	Neessen, et al (2019); Podmetina et al. (2018); Huang, et al. (2021); Farrukh, et al. (2022); Gwake, et al. (2019); Mafabi et al. (2015); Blanka (2019)	Parra-Requena et al. (2022); Frambach & Schillewaert (2002)
Project Management Competencies	Innovation Teamwork	Podmetina et al (2018); Hero et al. (2017); Neessen et al. (2019); Ahsan & Ho. (2022)	Cobo (2013)
	Innovation Process Competency	Podmetina et al. (2018); Hero et al. (2017); Ahsan & Ho (2022); Rosing et al. (2011); Chatenier et al. (2010)	Di Marco et al. (2012), Pedersen et al. (2022); Barchi & Greco (2018), Vaccaro et al. (2012)
	Agile Project Management	Ahsan & Ho. (2022); Huang, et al. (2021)	
Individual Competencies	Flexibility	Hero et al. (2017); Podmetina et al. (2018); Huang, et al. (2021); Rosing et al. (2011); Van Assen (2020); Neessen et al. (2019)	Farnese, (2016); Martines-Sánchez et al. (2009); Bonesso et al. (2014)
	Resilience	Neessen, et al. (2019); Chatenier et al. (2010); Ahsan & Ho. (2022)	Monenkemeyer et al. (2012); Morais-Storz et al. (2018); Fey & Kock (2022); Luthans (2002); Abukhait et al. (2020); Oeij et al. (2016)
	Risk-taking	Podmetina et al. (2018); Neessen et al. (2019); Huang, et al. (2021); Urbano et al. (2022); Farrukh, et al. (2022); Ahsan & Ho. (2022); Sergeeva (2016); Shea (2021); Hamadi et al. (2018); Klerkx & Aarts (2013); Kelley & Lee (2010); Blanka (2019)	García-Granero et al. (2015); Giaccone & Magnusson (2022); Cobo (2013)
	Intrapreneurial Leadership	Podmetina, et al. (2018); Huang, et al. (2021); Urbano et al. (2022); Farrukh, et al. (2022); Gwake, et al. (2019); Ahsan & Ho. (2022); Blanka (2019)	
	Proactiveness	Neessen, et al. (2019); Huang, et al. (2021); Urbano et al. (2022); Farrukh, et al. (2022); Hero et al. (2017); Blanka (2019)	Kiss et al. (2022)
	Opportunity Recognition	Hero et al. (2017); Neessen et al. (2019); Liao et al. (2022)	O'Connor & Rice (2001)
	Cognitive Resources	Hero et al. (2017); Neessen et al. (2019); Podmetina et al. (2018); Ahsan & Ho (2022)	Cobo (2013)

Appendix B. Interview Guide

Topic	Question types	Questions
Introduction	Introducing questions	• What is your current job role? • How would you describe your role in English? • How is your job role linked to innovation? • How have you worked with innovation throughout your career?
Competencies	Open questions	• What are the main competencies that you think have been necessary to succeed as an innovation manager? • Is there any competency that you think is more important in your specific role than it can be said to be for an innovation manager in general?
	Specifying questions	• Are there any specific competencies that you think are particularly crucial for leading innovation work/ contributing to a work environment conducive to innovation work/ leading an innovative project team?
	Exemplifying questions	• If you put yourself in the situation of entering an organization together with another partner as an innovation leader within this organization, what competencies would you feel the other partner should have in order to best complement you?
Competencies Theoretical Framework	Specifying questions	• The innovation process is often described as having 3 stages (Idea generation, selecting ideas (selection), implementing and executing the idea): if you were to place your role/influence, where in the process would it be? • What strategies do you use to deal with difficulties in your job role? • If there are problems in innovation work, how do you deal with them?
	Exemplifying questions	• Have you faced much resistance to innovation within your organization? If so, how did you drive change-acceptance? • How do you work actively to identify new opportunities?
Certification (certified)	Background questions	• Why did you choose to get certified? (Justify, how did the reasoning go) (with the aim of identifying the own driving forces for professionalization, and specifically certification).
	Result focused questions	• Has the certification had any effects/results/impact? • How have you developed as a result of the certification? • How can certification affect the *previously mentioned* problems/challenges you face in your role?
Certification (Non-certified)	Background questions	• What do you know about the possibility to be certified as an innovation leader today? • What is your experience/What do you think about certification as a concept? • You have chosen not to be certified; do you have any particular thoughts on this?
	Result focused questions	• What could you imagine the outcome of this certification to be? • On an individual level/organizational level/does it contribute to the "world" in any sense? • As a development opportunity? • As a part of the professionalization of a profession?
Closing questions	Closing questions	• Would you like to summarize the most common challenge you face in your role?

Appendix C. Data Structure