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Critical Success Factors for the Success of Strategic Projects in the Finnish Public Sector

A Context-Specific Framework Integrating Governance, Procurement, and Regulation

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ABSTRACT:

This thesis has examined the critical success factors that best contribute to success in Finnish public-sector strategic projects. The basis for the study is that success in public projects cannot be solely evaluated through time, cost and scope. In addition to producing short-term results (time, cost, and scope), public projects are expected to create long-term value, support organizational strategic objectives, utilize public resources effectively and provide added-value for society as a whole. As such, the study will apply a six-criterion model for evaluating project success including: efficiency, effectiveness, relevance, sustainability, value-for-money and broader societal impacts. In terms of methodology, the research has been completed in two phases. The first phase involved conducting a systematic literature review in order to identify the most commonly cited critical success factors from previous studies on public projects; governance; procurement; risks; sustainability etc. A preliminary framework consisting of five major domains was then constructed: Governance & Leadership; Procurement; Risk & Front-End Planning; Digital & Data Governance; Sustainability & Lifecycle Value. In the second phase, a qualitative web-based survey was used to gather information from professionals who have worked in the Finnish public sector. The survey resulted in the completion of four web-form surveys, which were analysed using thematic content analysis. Findings indicate that success in Finnish public-sector strategic projects is dependent upon having a combination of several interrelated elements rather than relying on a singular element. Most importantly, they included: effective governance/governance and clear active governance; effective front-end definition/preparation; procurement capabilities that go beyond low-cost/lowest price criteria; capable personnel/people and communications; consideration of lifecycle value/sustainability during project development. Findings also indicated that these factors are influenced by the specific nature of the Finnish public sector's regulatory environment. Specifically, legislative requirements/procedural rules/transparency requirements and limited flexibility once key decisions have been made all impact how project development occurs in the public sector. In conclusion, multi-criteria success in Finnish public-sector strategic projects appears to occur when projects are well-defined at their outset, actively managed throughout the project life cycle, supported by skilled individuals and teams, and acquired through procurement processes that consider both long-term value creation and compliance with relevant regulations. Overall, the primary contribution of this thesis is to present a revised Finland-specific framework of critical success factors for strategic public-sector projects that

incorporates practitioner experience/evidence from academic literature. Practical recommendations for enhancing the planning/delivery of strategic public-sector projects within Finland are presented.

KEYWORDS: public-sector projects, project success, critical success factors, procurement, governance, Finland

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1 Introduction

Strategic Projects of the Public Sector in Finland are one of the essential means to implement long-term political objectives within fields of action as transport, digitalization, climate policy and social services. Due to their size, complexity and political visibility, Strategic Projects of the Public Sector in Finland mostly take place in a strictly regulated area that is influenced by EU procurement regulations and national law, among other things, the Act on the Openness of Government Activities (621/1999), the Language Act (423/2003), the Act on Information Management in Public Administration (906/2019) and the Act on Public Procurement and Concession Contracts (1397/2016). These Laws determine transparency, data management and the obligation to provide information about the process of creating Strategic Projects of the Public Sector in Finland. The enforcement of accountability and equal treatment support the implementation of successful Strategic Projects of the Public Sector in Finland, however, these laws limit the freedom of decision-making in the area of governance and the design of procurement processes.

The Standardized Contractual Frameworks further specify how risks, responsibilities and the performance of Strategic Projects of the Public Sector in Finland will be handled. In Finland, the General Terms of Public Procurement (JYSE 2014 Supplies and Services) and the General Terms and Conditions of Public IT Procurement (JIT 2025) are very often used in public contracts. They determine the distribution of risks, the monitoring of performance and the remedies in many Strategic Projects of the Public Sector in Finland, particularly in the field of IT and Service Procurement (General terms of public procurement in supply contracts, 2022; Ministry of Finance, 2025). Furthermore, the Finnish Competition and Consumer Authority monitors compliance with competition law and public procurement law and thereby strengthens the integrity of the procurement process, however, it also increases the consequences of any errors made during the process (OECD, 2024).

Under these conditions, Strategic Projects of the Public Sector in Finland are expected to create not only the intended outputs, but also a greater public value, while being closely monitored and supervised by the laws and institutions of the Public Sector in Finland.

Policy papers published in Finland emphasize that public procurement is not just a managerial procedure but a strategic management tool. The Ministry of Finance defines "strategic management of procurement" as all measures taken at the organizational level that help contracting authorities to achieve their strategic objectives when using external resources and relying on the supplier market (Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023). Strategic management of procurement is seen as crucial to the effectiveness, sustainability and responsibility of how public funds are used (Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023). Monitoring reports show that contracting authorities in Finland publish thousands of notices on purchases exceeding the thresholds and contracts awarded each year, and that the number of publications has been rising over time (Ministry of Economic Affairs and Employment, 2021; Ministry of Economic Affairs and Employment, 2018). Taken together, these findings highlight that strategic projects procured through the Public Sector in Finland represent a significant portion of the activities undertaken by the Public Sector in Finland and the use of public funds.

Time and again it has been shown in public sector projects and public private partnerships that "success" means so much more than only on time, within budget and meeting all specifications. Evaluations carried out after the implementation of public projects mostly define success according to several criteria. Alain de Janvry (2013) lists no less than six: efficiency, effectiveness, relevance, sustainability, value for money, and positive additional impacts on society (Du et al. , 2023; Volden & Welde, 2022). In addition to this broadened understanding of what success is, ex post

evaluations recommend evaluating public projects from a broader perspective by looking at other stakeholders besides sponsors (financially). Nevertheless, there is a rich section of the empirical evidence from which Critical Success Factors (CSFs) have been inferred, the CSF literature is still essentially fragmented with various lists of factors in relation to governance, procurement processes, management of risk and sustainability issues. Studies on the effectiveness of Public Private Partnerships (PPP) Implementation, the Cost Management of Public Housing and Risk Modelling on PPP have identified many factors related to the success of such projects. For instance, a sound allocation of risk; efficient public sponsors; contractors involved early on in the process; transparency in the governance arrangements. Nevertheless, the most literature was found not to provide researchers or practitioners with a singular clear framework detailing key success factors.

The literature on Public Procurement as Sustainable and Circular has gained another perspective on the subject. Strategic procurement capability, cooperative governance, and lifecycle-based procurement can create long term value for public procurers and their suppliers, literature suggests. Studies conducted both abroad and in Finland have shown that public agencies can transform innovation and sustainability through procurement criteria, dialogue and new contractual forms. According to these studies, although the procurers can use procurement policies to create long term value, they also highlight some of the practical barriers to doing so. A lack of capability, incentives and follow up are examples.

Finally, research concerning patent registrations has shown that the emergence of new technological opportunities can alter existing systems of public values within the public sector (Dansyon et al., 2023). The authors further noted that an examination of emerging technologies requires especial attention to values.

Finland's governance, procurement, and regulation interface has poorly specified CSFs, which is contrary to the growing literature that talks about CSFs of strategic

projects in the public sector. Finland was able to achieve high ambitions in the case of examples of sustainable procurement, circular contracts and smart city innovation contests. Furthermore, this was possible when their governance arrangements, procurement strategies and capabilities were aligned. The lessons learned however are dispersed and not compiled into a Finland-specific framework (Pihlajamaa & Merisalo, 2021; Ministry of Economic Affairs and Employment, 2021). Moreover, comparative research on public values in digitalization PPPs calls for more context-sensitive research that takes account of national legal and administrative traditions (Breugh et al., 2025). Consequently, there is limited guidance on which critical success factors (CSFs) hold the utmost significance for multi-criteria success within the Finnish context, as well as how they may be prioritized and implemented in practice under stringent legal and contractual constraints. With the aforementioned background information in mind, this thesis focuses on the critical success factors (CSFs) of strategic public projects in Finland. The purpose of research in the context of the project success is to investigate how governance, procurement and regulation affect each other and project success; and to analyse the need for a CSF framework illustrating current international research as well as Finnish ones.

The study is guided by the following research question:

Which critical success factors most enable multi-criteria success in Finnish public sector strategic projects, and how do practitioners prioritise and enact them in practice?

To address this question, the thesis combines a structured literature review with practical experience of Finnish practitioners. The general goal is to develop a Finland-specific, context-sensitive CSF framework linking governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance, and sustainability and lifecycle value to a multi-criteria understanding of public project success.

1.1 Challenges in Finnish Public-Sector Strategic Projects

One major issue in managing risk and uncertainty is the way that procurement procedures, documentation requirements, and standardized contract provisions in rule-bound environments limit iterative investigation and flexible contracting. Therefore, as new information becomes available, it is difficult to adapt project concepts (Act on Public Procurement and Concession Contracts, 1397/2016; General terms of public procurement in supply contracts, 2022).

A second major problem lies in aligning procurement strategies and control mechanisms to the complexity of engineering, infrastructure and digital tasks. Research into the procurement of engineering services has shown that there can be negative consequences from mismatching between the level of task uncertainty, contractual incentives, and organizational control modes, and that these can lead to inefficient transaction structures (Granheimer, Karrbom Gustavsson, & Eriksson, 2024). In addition, empirical research into successful PPPs has identified critical success factors (CSFs) such as proper risk allocation, effective communication and competent public sponsors. At the same time, however, empirical research has demonstrated that rigid contractual frameworks and limited public capacities can impede the realization of these CSFs (Fathi, 2024; Thai et al., 2025). In Finland, JYSE, JIT and national oversight define the range of possible contractual options for projects. Hence, as with all other procurement strategies and capabilities, the feasibility of a procurement strategy or capability can either reduce or increase the constraints imposed by regulation (Hua, 2025; Taheriruh et al., 2025).

Third, new governance and procurement issues arise from data-intensive and digital strategic projects. Research on strategic projects in the public sector has identified a number of issues in relation to organizational readiness, legality and ethics of implementing artificial intelligence and advanced analytics in the public sector (Zuiderwijk et al., 2021; Madan & Ashok, 2023). Furthermore, research on how “digital champions” in the public sector can be beneficial showed that stiff organizational structures and cultures that are characterized by risk aversion and cyclical budgets may hinder the success

of a digital innovation effort even when the strategic objectives or vision is well-defined (Wilson & Mergel, 2022). The research focus on data governance and smart cities has also pointed out that uncoordinated proprietary data agreements, equivocal role allocation regarding data ownership, lack of transparency in data flow, etc. can negatively affect the long-term sustainability of smart city initiatives and the levels of public trust in the same (Franke & Gailhofer, 2021).

Fourth, sustainability and lifecycle value creation remains a challenging area for strategic projects. There is increasing recognition by public buyers of the environmental and social impacts of purchasing but it is still difficult for them to express these as operational tender requirements, evaluation criteria and contract management practices (Treviño-Lozano, 2021; Berg et al., 2022). Circular procurement pilot schemes - including circular furniture contracts and integrated circular infrastructure contracts - have demonstrated the potential of using a lifecycle approach, but they have also identified a number of obstacles that include governance arrangements, incentive mechanisms and follow up systems (Lingegård et al., 2021; Lingegård & von Oelreich, 2023). This indicates that sustainability-oriented CSFs in Finland will depend on a combination of technological tools like lifecycle costing, leadership commitment, inter-organization collaboration and continuous capacity building, as illustrated by KEINO and similar initiatives (Ministry of Economic Affairs and Employment, 2021; Berg et al., 2022).

Finally, because of the multi-criteria nature of what makes a public project successful, it becomes difficult to evaluate how well projects perform and which ones should be given priority. The evaluation of both PPPs and traditional public projects emphasizes trade-offs among short-term efficiency, long-term sustainability, stakeholder satisfaction, and the broader social implications of public sector actions (Du et al., 2023; Volden & Welde, 2022). Studies examining project sustainability and PPP governance have shown that although the efficiency, sustainability and stakeholder relationship are interrelated they are also rarely explicitly stated as such in project designs or in the governance structures put in place for each project (Blak Bernat et al., 2023; Feng et al., 2022). Digitalization has

introduced new challenges for the practitioners who must navigate the public values literature's emphasis on the tradeoffs between efficiency, transparency, privacy and inclusion (Breugh et al., 2025) to achieve their goals. As a result, in Finland where there is an increasing number of strategic projects, project managers and procurement professionals must prioritize multiple — and at times conflicting — success criteria under very strict regulatory requirements. Identifying and making operational those CSFs that will allow them to make these trade-off decisions is therefore critical.

1.2 Research Gap and Problem Statement

In addition to the literature already cited (Du et al., 2023; Fathi, 2024; Franke & Gailhofer, 2021), since 2020 there has been a large amount of additional literature published on public projects, public-private partnerships, digital governance, and sustainable procurement, which provides further information relevant to identifying critical success factors (CSF's) for public-private partnerships. There are also a number of very important gaps in this body of literature with respect to Finnish specific research. In particular, systematic reviews and empirical studies have identified several key CSF's for the success of public-private partnerships, such as: effective risk allocation; successful collaboration between the public and private sectors; competent project sponsors; adequate governance structures; and integrating sustainability into each phase of a project (Almarri & Boussabaine, 2025; Du et al., 2023; Fathi, 2024). Empirical studies relating to cost management within public housing have found that, among other things, early contractor involvement, team competence, and a well-planned front-end process are critical to achieving the most favorable financial outcome in public-housing projects (Obi et al., 2021). Literature on digital governance has emphasized that three essential dimensions for the development and implementation of public digital services include: data governance; AI leadership; and public values (Breugh et al., 2025; Franke & Gailhofer, 2021; Madan & Ashok, 2023). Literature focused on sustainability-oriented practices has emphasized that three critical components of sustainable public procurement are: intermediate support structures; lifecycle learning; and circular procurement (Berg et al., 2022; Lingegård & von Oelreich, 2023; Lingegård et al., 2021).

This existing body of literature represents four potential gaps in Finnish specific research in the fields of public-private partnerships, digital governance, and sustainable procurement.

Gap 1: Absence of an integrated CSF framework under Finnish regulation.

Although the Finnish examples of competence networks, sustainable procurement pilots and municipal hackathons present some useful examples of innovation and sustainability in public procurement processes, most of them have been described as single-case studies, without the use of a comprehensive critical success factor framework specifically adapted to the Finnish legal and contractually relevant environment.

In Finland, while intermediary-led capability-building initiatives especially those related to sustainable public procurement have enhanced organizational learning and procurement competencies, the available research has yet to incorporate these findings into a comprehensive and systematic CSF framework for strategic projects (Berg et al., 2022). Circular procurement pilots and smart city hackathons describe specific governance and procurement arrangements, but fail to extract and generalize CSFs applicable across the Finnish regulatory environment (Lingegård & von Oelreich, 2023; Pihlajamaa & Merisalo, 2021; Lingegård et al., 2021).

The call for more context sensitive public value research in digitalization PPPs underlines the necessity of developing a country-specific framework which takes into consideration the legal and administrative traditions in each country (Breaugh et al., 2025).

Gap 2: Limited linkage between CSFs and multi-criteria success.

There is an international study base on CSF and the research on the CSF's usually focuses on specific elements of success such as cost, time or stakeholder satisfaction whereas there is also current research being conducted using multi-dimensional frameworks for success which includes, efficiency, effectiveness, relevance, sustainability, value-for-money and wider effects (Du et al., 2023; Volden & Welde, 2022). These frameworks

have been rarely implemented into practical CSFs that public project managers can implement within statutory procurement constraints. Finland has recognized strategic and sustainable procurement with recognition of multiple policy objectives; however, empirical evaluation have typically emphasized process improvements (such as the increase in use of environmental criteria, or improved coordination) rather than conducting systematic multi-criteria assessments of outcomes (Ministry of Economic Affairs and Employment, 2021; Berg et al., 2022; Taheriruh et al., 2025). Therefore, the relationship between CSFs and a holistic multi-criteria perspective on project success is very weak.

Gap 3: Conceptual six-criteria models of success are rarely tied to CSFs in legally constrained settings.

Building on the analyses of public project success and PPP performance, the six-criteria framework for success (efficiency, effectiveness, relevance, sustainability, value-for-money, and wider societal impacts) has been conceptually developed (Volden & Welde, 2022; Du et al., 2023; Blak Bernat et al., 2023). However, few empirical studies identify and prioritize all the CSFs by using the full suite of six criteria when identifying and prioritizing success factors. There is also very limited research concerning how governance- and procurement-related CSFs - including contract choice, risk-sharing arrangements, or data-governance models - relate to these six criteria within environments that are regulated through prescriptive procurement law and standardized terms, like JYSE and JIT (Act on Public Procurement and Concession Contracts, 1397/2016; General terms of public procurement in supply contracts, 2022; Ministry of Finance, 2025).

Gap 4: Little is known about how to measure decision quality at the front end when there are regulatory issues or uncertainty.

According to prior research, in public projects, it matters little if the second half of the project was completed as intended. The first part of the project will be impacted by: poor early-stage planning; inadequate risk assessment; and inappropriate selection of control processes (Mackhaphonh et al. , 2021 ; Kuchta et al. , 2023). Recent studies have

found that for public sector enterprises to successfully implement their project governance models they must take into consideration three key factors that include: (i) interactive information processing; (ii) dynamic control; and (iii) alignment of governance modes (Aravindh et al. , 2023 ; Andersen & Young, 2023). Nevertheless, Finland's public organizations do not yet use an integrative method to determine which of the previously stated CSF's would receive top priority within the first phase of the project, primarily because of the need to comply with statutory purchasing guidelines; the potential influence from outside governing entities; the requirement to maintain a balance between innovative thinking and adherence to existing laws (OECD, 2024 ; Taheriruh et al. , 2025 ; Ministry of Economic Affairs and Employment, 2021).

These four identified gaps form the basis of the overarching research question of this thesis: what is the consolidated, evidence based understanding of those CSFs that will most positively impact multi-criteria success within Finnish strategic projects? Furthermore, how do practitioners prioritize and utilize the identified CSFs throughout the project lifecycle, constrained as they are by the various governance, procurement and regulatory environments of Finland? This thesis addresses this gap through the synthesis of recent research into a CSF framework relevant specifically to Finland and empirical analysis of how Finnish practitioners perceive, prioritize and enact CSFs in the context of their strategic projects.

To provide an answer to the problem presented, the research will pursue seven interconnected goals. The goals will be used to construct the literature review, and the empirical study, and are similar to those outlined in the approved thesis proposal.

Objective 1 - A Structured Literature Review

The purpose of this structured literature review is to gather, and analyze, current academic research that addresses the various areas of CSFs (governance, procurement, risk management, sustainability, and digital/data governance) in public sector and PPP project delivery. It is anticipated that the outcomes from the structured literature review

will provide a synthesis of the evidence base for identifying key CSF areas as well as providing an analysis of how the findings can assist in addressing identified knowledge gaps pertinent to future Finnish strategic projects.

Objective 2 — Construct a preliminary Finland-specific CSF framework

Based on the findings of the literature review, the preliminary CSF framework will organize the CSFs into appropriate areas, and link the areas to a multi-criteria view of public project success. The expected outcome will be a preliminary CSF framework specific to Finland which establishes a connection between the identified CSFs and the six-criteria view of public project success.

Objective 3- pilot test qualitative web-based questionnaire

A qualitative web-based questioner, utilizing the preliminary csf framework will be constructed and tested by using a group of Finnish practitioners involved in the process of developing strategic projects. Following this, the questionnaire will be reviewed for use as a pilot test. A pilot-tested, revised version of the web-based questioner should result in a version of the questioner that is simple, fair, and able to gather data from practicing professionals regarding their experience with CSFs.

Objective 4—collect empirical data via a semi-structured online survey

Semi-structured web-based surveys will be used to gather data from Finnish Project Managers, Procurement Specialists and other relevant individuals that are part of the Strategic Public Projects. The data collected from this study will be deidentified (anonymized), coded; providing insight on how practitioners define, prioritize and implement CSF's for their respective areas of accountability.

Objective 5 — Analyse & combine literature review findings with empirical data findings

Data collected from the web-based surveys will be analysed and compared to the preliminary CSF framework to identify areas of similarity or difference between theoretical (literature review) and practical applications (empirical) of CSFs in Finland. A more fully developed CSF framework that includes both empirical and literature review findings will result from this analysis. Additionally, it will provide evidence that such a framework can be applied to real-world strategic public projects.

Objective 6 — Convert findings into a tool usable by practitioners

The refined CSF framework will be converted into a practical tool (e.g., a checklist, or guidelines), that can be easily used by project sponsors, steering committees, and procurement departments. The expected outcome will be a practical, and easy-to-use CSF tool for Finnish project sponsors, steering committees, and procurement departments.

Objective 7 — finalize results and prepare for dissemination

The completed thesis will include key study results and practical recommendations for the actors involved in public sector project governance and procurement in Finland. Successful completion of the thesis and preparation of the dissemination materials is likely to lead to further opportunities for future research collaboration with practitioners in Finland.

1.3 Scope and Delimitations

This Thesis' Objectives are restricted to a narrow range of strategic public-sector projects implemented in Finland (primarily by State Agencies and Ministries) and which have been either financially costly (i.e., major investments); have a long-term social or economic impact; or both. Examples of these types of projects are: Major Infrastructure Investment Projects; Digital Transformation Projects (e.g., digital services, big-data analytics); Sustainability Projects; Service Reform Projects. The focus of this Thesis is, therefore, on strategic projects in the public sector (and not on routine or minor projects);

whereas smaller-scale non-strategic projects are often mentioned in the literature as examples of "routine" or "small-scale" projects (Volden & Welde, 2022; Du et al., 2023). The analysis is specifically based on the legislation governing the contracting process between the public sector and private sector companies operating in Finland (including, amongst others, the Act on Public Procurement and Concession Contracts [1397/2016], the Act on the Openness of Government Activities [621/1999], the Act on Information Management in Public Administration [906/2019] and the Language Act [423/2003]); and also includes commonly-used contractual frameworks (JYSE 2014 and JIT 2025) (Act on the Openness of Government Activities, 621/1999; Act on Information Management in Public Administration, 906/2019; General terms of public procurement in supply contracts, 2022; Ministry of Finance, 2025). Consequently, the CSF Framework developed as part of this research has a specific context – i.e., it was developed for use within a Nordic Administrative System (characterized by a high degree of Legalism, well-established Oversight Institutions and High Transparency) and it does not seek to make claims regarding its applicability in other jurisdictions (OECD, 2024; Ministry of Economic Affairs and Employment, 2021).

This research is constrained by a methodological requirement that the sources used are peer reviewed or government/official publications from 2020–2025. In addition to providing up-to-date information about project governance, digital innovation and sustainability through procurement, AI and Digital Governance, and CSF's relevant to PPPs (Madan & Ashok, 2023; Franke & Gailhofer, 2021; Berg et al., 2022; Hua, 2025; Du et al., 2023), there is also an emphasis on relatively new literature to provide an opportunity for synthesis with some of the foundational work in these areas. It should be acknowledged that the use of this time constraint could limit the potential evidence base of the study to relatively newly emerging themes (AI Governance and circular procurement) and potentially devalue the impact of long-term trend development within the field of managing public projects in Finland.

Empirically, the research is based on a qualitative purposive sample of Finnish

Practitioners working on Strategic Projects, including Project Managers, Procurement Specialists and Senior Officials. Whilst the number of Web-form survey conducted is sufficient to achieve Analytical Depth, it is insufficient to achieve Statistical Generalization across all Sectors and Levels of Government in Finland. Therefore, the empirical component of the research seeks to illustrate how CSFs are prioritized and enacted in Practice (rather than seeking to estimate Quantitatively the Prevalence and Impact of CSFs) (Andersen & Young, 2023; Bourne et al., 2023). Because the available evidence is fragmented and sector-specific, this thesis develops a cross-cutting framework intended for adaptation in different organisational contexts.

These Delimitations were Intentional. They enabled the development of a Focused Inquiry into CSFs at the Intersection of Governance, Procurement, Regulation, Digital/Data Governance and Sustainability in Finland; which corresponds with the Research Question and Objectives of this Thesis. Additionally, the above Delimitations imply that the Findings of this Thesis should be regarded as Context-Specific Contributions to Theory and Practice; which provides a Structured Basis for Comparative and Sectoral Research in the Future rather than Definitive Prescriptions for All Settings.

1.4 Structure of the Thesis

This thesis will be divided into five chapters. Chapter 1, will introduce the subject area of this study – i.e. the strategic projects of the Finnish public sector, as well as the legal and institutional conditions within which they operate. In addition, it will outline the major obstacles, gaps in research, research question, objectives, scope, boundaries and general layout of the thesis.

Chapter 2 will provide an overview of the existing body of knowledge on strategic public sector projects. The chapter will be organized based upon five CSF domains that have been identified recently in research: (1) governance and leadership, (2) procurement strategy and capability, (3) risk and front end planning, (4) digital and data governance and (5) sustainability and lifecycle value (Fareed et al., 2025; Berg et al., 2022; Franke & Gailhofer, 2021; Du et al., 2023).

Within each of the five domains, the chapter will synthesize findings of the 2020-2025 corpus of literature, identify relationships and tensions between the CSFs, and link the CSFs to multiple criteria of success.

Chapter 3 will detail the design and methodology of the research. The chapter will explain the structured literature-review approach used in the research, describe the selection process for Finnish strategic projects, and describe the data collection and analysis processes, including the coding procedures for CSFs and success criteria. The chapter will also discuss the ethical considerations and limitations of the empirical approach used in the research.

Chapter 4 will present the empirical results from the practitioner web-form survey. The chapter will examine how Finnish practitioners perceive multi-criteria success, which CSFs they deem to be most important, and how they prioritize and operationalize these factors throughout the project lifecycle under the constraints of governance, procurement, and regulation.

Chapter 5 will integrate the literature and findings to Finland-specific CSF framework. The upcoming section will outline the strong associations between the critical success failure (CSF's) and the Six Success Criteria. The chapter will also demonstrate how governance, procurement, risk and front-end planning and digital, data governance and sustainability are intertwined with each other and illustrate the implications for the management of strategic public sector projects and public administration in Finland. In chapter 5, the main contributions of the thesis will be summarized, some implications for the management of Finnish public sector organizations will be discussed, and suggestions for future research will be provided.

2 Literature Review

This chapter discusses the last years' literature on public sector project success and Critical Success Factors (CSFs) and focuses on strategic projects, public-private partnership (PPP) and sustainable procurement/governance. The purpose of this study is to lay the theoretical basis for analyzing Finnish public sector strategic projects and answer the research question concerning which CSFs primarily enable multi-criteria success and how practitioners prioritize and implement those CSFs in their daily work. The review bases itself on a curated collection of recent Nordic and international studies on public project success, PPP performance, public procurement, risk and front-end governance, digital and data governance and sustainability in public projects.

Section 2.1 begins by defining public sector project success as a multidimensional concept that extends well beyond the classical "iron triangle" of time, cost and scope. Using a combination of the results from ex post evaluations of public projects, sustainable PPP operation and sustainability-orientated project management, the thesis will adopt a six-criteria success model that includes efficiency, effectiveness, relevance, sustainability, value for money and wider societal effects (Volden & Welde, 2022; Du et al., 2023; Blak Bernat et al., 2023). This model will be used as the overall success model for the empirical analysis.

Sections 2.2 to 2.6 describe the five CSF domains that have appeared frequently in the last few years' public sector and PPP research. The domains of governance and leadership are described through literature on project governance structures, steering arrangements and leadership styles supporting public project success (Fareed et al., 2025; Bourne, Bosch-Rekvelde, & Pesämaa, 2023). Procurement strategy and capabilities are discussed through literature on policy-led and sustainable public procurement, competence development and circular or innovative contracting models (Berg, Alhola, Peltonmaa, & Tietari, 2022; Harland, Eßig, Lynch, & Patrucco, 2021; Lingegård, Havenvid, & Eriksson, 2021; Taheriruh, Jääskeläinen, Loijas, & Harrison, 2025). Risk and front-end

planning are discussed using literature on planning phase uncertainty and front-end governance in large public projects (Kuchta, Canonico, Capone, & Capaldo, 2023; Mackhaphonh, Jia, & Xu, 2021; Irfan et al., 2021). Digital and data governance are described based on literature on data governance for smart cities and digital transformation in public administration (Franke & Gailhofer, 2021; Wilson & Mergel, 2022; Zuiderwijk, Chen, & Salem, 2021). Finally, sustainability and lifecycle value are described using literature on sustainable PPP operations, circular public procurement and socially or environmentally orientated public procurement (Du et al., 2023; Lingegård & von Oelreich, 2023; Treviño-Lozano, 2021).

Section 2.7 summarises the various strands by discussing the interdependencies between the different CSFs in the five areas, e.g. how procurement decisions, governance structures and data practices collectively contribute to long term sustainability and value for money in PPP and infrastructure projects (Feng, Hao, & Li, 2022; Almarri & Boussabaine, 2025; Fathi, 2024). Section 2.8 finally describes some of the knowledge gaps in the existing literature, e.g. the relatively little empirical work applying a multi-criteria success approach to public sector strategic projects in a Nordic legal and administrative environment and the necessity for a greater contextual understanding of how the different elements of governance, procurement, risk management, digital and data governance and sustainability can be integrated into practice in order to create public value (Thai, Phu, & Thao, 2025; Al Saadi, Abdou, & Alkass, 2024). These knowledge gaps form the empirical part of the thesis and the development of a Finnish public sector specific CSF framework in the coming chapters.

2.1 Defining Public-Sector Project Success

The concept of "success" is much harder to define in public-sector projects compared to those driven primarily by a profit motive. In general, a profit-driven project will be most commonly evaluated based on the financial performance of the project and the amount of shareholder value created. It is rare for there to be multiple key decision makers for a

private project, therefore there are fewer stakeholders to consider when assessing whether or not the project was successful.

However, public projects will need to take into account the interests of many stakeholders who have differing priorities. Those interested in a public project include elected officials, various levels of government, public service providers, members of the public and users of services, regulatory agencies and auditors.

These stakeholders will evaluate public projects based on not just their financial performance, but on how well the projects serve the public interest and the extent to which they embody values such as equity, transparency and accountability (Irfan et al., 2021; Volden & Welde, 2022).

Additionally, public projects operate within a set of rigid legal and process-based constraints. In Finland, for example, public entities must follow procurement laws, openness and access to information laws, and laws regarding the management of information (Act on Public Procurement and Concession Contracts, 1397/2016; Act on the Openness of Government Activities, 621/1999; Act on Information Management in Public Administration, 906/2019). Not only do these laws determine what can be done during the design and delivery phases of public projects, but they also affect how the success of a project is defined after it has been delivered. For example, public project success can be evaluated in the context of audits, evaluations and other forms of public review.

In recent years, there has been increasing attention paid to the idea that the assessment of success for public projects and PPP's should go beyond simply evaluating a project's time, cost and scope. For instance, Irfan et al. (2021) argue that a successful public sector project meets all three traditional criteria (time, cost, and scope), while at the same time producing sustainable results and meeting the needs/expectations of its stakeholders. Further, they argue that success should be considered as a multi-dimensional concept including dimensions like efficiency, organizational benefits and readiness for the future.

Volden and Welde (2022) presented an ex post-evaluation methodology to evaluate public sector project outputs based on several criteria. In addition, Volden and Welde (2022) showed that it is possible for a project to succeed according to one or more of these criteria while failing to meet other criteria. Du et al. (2023) proposed a Sustainable Operation Framework for Public Private Partnerships for Transportation Infrastructure, that integrate efficiency, Service Quality, User Satisfaction, Safety, Risk and Environmental Performance throughout the entire Life Cycle of the infrastructure. Bernat et al. (2023) linked Project Success with Sustainability, Stakeholder Engagement, Learning and Long Term Organizational Benefits in the Virtual Projects context.

This research has formed the foundation for this thesis, therefore this thesis defines Public Sector Project Success through the lens of Six Criteria. Public Sector Strategic Projects in Finland are evaluated based on how well they accomplish Efficiency, Effectiveness, Relevance, Sustainability, Value for Money and Broader Social Impacts (Du et al., 2023; Volden & Welde, 2022; Irfan et al., 2021; Blak Bernat et al., 2023). The above six criteria form a common success criteria frame work for the whole thesis.

2.1.1 Traditional vs. Multi-Dimensional Views of Success

The conventional view has been that success in the public sector is unique to success in the private sector. The basis for this conventional view of success in traditional public works projects is rooted in the "iron triangle," which defined success in terms of the project's ability to meet its budgetary expectations, meet its timetables and produce a product that satisfies the customer's needs. While the "iron triangle" appears suitable for projects where the end result can be seen (i.e., engineering and construction projects), measuring success in public sector projects is more complex. Volden & Welde (2022) note that while some projects may complete their budgets and timetables, these same projects could be considered failures if the benefits of those expenditures to the general population are minimal, the problems they were intended to address remain unsolved, or the use of public funds resulted in unintended negative consequences. In contrast to traditional project evaluation models, Volden & Welde (2022) presented a

model that evaluates both project management success and societal value. This model included most of the common measures of success in managing a project; however, it also added many other measures that should be employed when evaluating whether a public sector project is successful, including outcomes and impacts to society. A second example of an evaluation model used to assess success in PPP transportation projects is one developed by Du et al. (2023). Du et al. (2023) employed a similar approach to evaluate the success of PPP transportation projects, but in addition to providing financial metrics relative to the total lifecycle cost of service delivery, Du et al. (2023) identified several new metric categories, including: reliability and availability of service delivery; user satisfaction with service delivery; safety associated with service delivery; and environmental impact associated with service delivery.

Another reason a single metric cannot be utilized to evaluate the success of public sector projects is due to the involvement of numerous stakeholders and utilization of various valuation perspectives. Volden and Welde (2022) indicated that public investments are created to accomplish several goals and involve numerous stakeholders whose perceptions of what constitutes success differ greatly. Therefore, success must be identified at multiple levels of analysis. These include project delivery; outcomes; and overall societal impact. Irfan et al. (2021) further supported this argument through incorporation of stakeholder satisfaction; organizational reputation; and sustainability in addition to traditional performance metrics. In general, the above studies emphasize the need to create a multi-criteria definition of project success for public sector projects, and indicate that a single success metric is not adequate.

Therefore, a narrow definition of project success based on the "iron triangle", is inadequate for strategic public sector projects in Finland. Public organizations are expected to implement policy objectives and therefore must consider how public sector projects affect citizens, the environment and public finance over time. Additionally, public sector organizations operate under laws and regulations that require them to act transparently, treat everyone equally, and use public funds responsibly (Act on Public Procurement and

Concession Contracts, 1397/2016; Act on the Openness of Government Activities, 621/1999). A broader, multi-criteria, definition of project success is needed to accurately represent these realities, and to provide guidance on how to identify critical success factors for public sector projects operating in a rules-based environment.

2.1.2 The Six-Criteria Success Model in the Literature

The Six Evaluation Criteria Used in the Thesis Are Consistent with Multi-Dimensional Project Evaluation Approaches Found in Literature on Public Projects, PPPs and Sustainable Project Management. Each Criterion Represents a Specific Aspect of Performance in Public Sector Strategic Projects.

Efficiency:

Efficiency is the ability of a project to use economic and productive resources to produce the best possible output. In a Public Sector Strategic Project Efficiency Can Be Described as Using Resources Efficiently to Provide Outputs Within Budget and Timeframe, But Also Minimizing Unnecessary Process Delays, Rework, and Administrative Burden. Cost and Time Performance Are Common Dimensions of Success Used in Post-Project Evaluations Because They Are Visible to Politicians and Media (Volden & Welde, 2022). Du et al. (2023) Identify Operational Efficiency Indicators Such as Maintenance Performance, Service Availability, Reliability Over the Entire Life Cycle of a PPP. While Many Contributions Have Addressed Efficiency and Value for Money, These Contributions Have Demonstrated That Efficiency Must Be Considered Beyond the Construction Phase.

Effectiveness:

The effectiveness of any successful public sector initiative is measured how well the intended objectives were achieved and whether the anticipated benefits were produced. A public sector project's promise pays off through improved services and infrastructure performance as well as enhanced administrative capability throughout the Planning phase and beyond. According to Volden and Welde (2022), perhaps the two most important criteria for determining project success are achieving goals and realizing benefits.

According to Du et al. (2023), effectiveness has other definitions apart from these two. These incorporated "Service Quality", "Reliability" and "Compliance" with the performance standards contracted throughout the contract term. A few measurements of effectiveness could be achieving policy goals; increase in key performance measures like reduced travel times, better service access; improved user satisfaction with project outcomes; and better stakeholder satisfaction with project outcomes.

Relevance:

Relevance Measures How Well a Project Responds to Genuine Needs and Fits with Policy Priorities. A Project May Be Efficient and Effective Within Its Own Terms, However, If It Addresses a Marginal Problem, Then Relevance Will Not Exist. Volden and Welde (2022) Note That Relevance Involves the Alignment of a Project with Strategic Objectives, Legislation and Societal Challenges at Both Decision-Making and Implementation Times. In Public Sector Strategic Projects in Finland Relevance Includes Long-Term Strategies and Government Programmes, Sectorial Reforms, Citizen Needs and Other Relevant Factors. This Criterion Links Closely with Effectiveness and Wider Societal Effects, Since It Questions Whether the "Right" Problem is Being Solved.

Sustainability:

Du et al. (2023) took a different approach by adding explicit measures of sustainability into their framework for PPPs. They included emissions; noise; safety; resilience (resilience is related to ability to function under adverse conditions); and the traditional metrics of economic performance. According to a study from Blak Bernat et al. (2023), practice also meant sustainability. According to the firm, responsible business practices and sustainability products will be needed by organizations, spaced either geographically or organizationally. According to Berg et al. (2022), Finland incorporates sustainability into the strategic projects of the country. The sustainability issues have been linked with the national targets of Finland. For instance, reaching climate neutrality, the circular economy, and social sustainability, etc. The long term durability and flexibility of outputs generated by a project, positive or negative health and safety outcomes, impact on local

ecosystems, consumption of resources, total energy used and per unit of output during the life cycle of the project, all these indicators can be considered as sustainable. As such, sustainability will likely have an increasing impact upon value-for-money over time, because it encompasses wider social impacts.

Value for Money:

Value for Money (VfM) Combines Cost, Quality, and Risk Into an Overall Judgement About Whether Public Resources Are Used Wisely. In PPP Frameworks VfM Is Typically Assessed Through Comparison of Different Delivery Models and Examination of Lifecycle Costs, Performance Standards, and Allocation of Risks Between Public and Private Parties (Du et al., 2023). VfM Is a Central Guiding Concept in Finnish Public Procurement Law and Policy Which Emphasizes Competition, Transparency and Balanced Use of Quality and Price Criteria (Act on Public Procurement and Concession Contracts, 1397/2016; Berg et al., 2022). Indicators of VfM Include Lifecycle Cost Comparisons, Reference Projects or Benchmarks, and Evidence That the Selected Solution Offers a Better Combination of Costs and Benefits Than Reasonable Alternatives. Therefore VfM Links Directly to Efficiency and Effectiveness, but Also to Relevance and Sustainability When Longer-Term Costs and Benefits Are Considered.

Wider Societal Effects:

Wider Societal Effects Are Those Effects Which Extend Beyond the Direct Objectives and Immediate Users of a Project. Volden & Welde (2022) View These Effects - On Regional Development, Employment, Social Cohesion, Trust in Public Institutions, Innovation - As Important Parts of the Overall Success Picture of a Public Project. In Infrastructure and PPP Contexts Wider Effects May Include Changes in Land Use, Induced Economic Activity, Behaviour Change and Perceived Fairness in Distribution of Benefits and Burdens (Du et al., 2023). For Strategic Projects in Finland Wider Societal Effects Relate to Constitutional Values of Equality and Openness and to Aims Such as Balanced Regional Development and High-Quality Services Across the Country. Indicators of Wider Societal Effects Can

Include Regional Spillover Benefits, Accessibility for Vulnerable Groups, Contributions to Innovation Systems, and Measurements of Citizen Trust in Public Institutions.

2.1.3 Connections to PPP, Digitalisation, and Sustainability Literature

The variety of ways in which people view the success of a project as evidenced in this study are analogous to the types of studies previously referenced in PPP, Digitalization, Sustainability-Oriented Research. For instance, Transportation Infrastructure constructed through Public Private Partnerships (PPP), Du et al. (2023) considered project success from an integrated set of indicators of its operation (availability, reliability, maintenance standards); economics (life cycle costs, financial sustainability); environment (pollution, resources utilized); users (customer satisfaction, safety). This integrated approach (operational, economic, environmental, user-based) to measure project success is equivalent to the dimensions used to evaluate PPP project success (efficiency/effectiveness; sustainability; value-for-money; and impact on society at large). As such, Du et al. (2023) demonstrate that measuring PPP project success can be limited to the construction phase alone and should be measured over the entire life cycle of the project.

The research is on Sustainable/Circular Purchasing, particularly in Public Procurement context which focuses on Lifecycle Thinking as well as Environmental and Social Results or Supplier Market Growth. Berg et al. (2022) highlighted how Finland's public sector initiatives on sustainable public purchasing make use of evaluation criteria and contract provisions to incentivize life-cycle cost-efficiency, environmental performance and social responsibility. Berg et al. (2022) showed that their criteria regarding sustainability are similar to efficiency, sustainability, value for money and to some extent wider societal impacts. Berg et al. (2022) showed that a design process for procurement could include success criteria.

Breaugh et al. (2025) provided a review of PPPs with regard to Digitalization in Government and demonstrated that public values (such as efficiency, accountability, fairness and transparency) influence perceptions of what constitute digitally successful projects.

Breaugh et al. (2025) indicated that due to the interdependence among these values, tension exists with respect to determining what constitutes success when assessing digital projects. Breaugh et al. (2025) emphasized that multi-criteria success is related to relevance, wider societal impacts and the sustainability of digital public services. These findings support those of Blak Bernat et al. (2023) who demonstrated how stakeholder engagement and knowledge management affect both project performance and sustainability outcomes in virtual teams.

In addition, research on Critical Success Factors (CSFs) also supports the notion of a multi-faceted success concept. Al Saadi et al. (2024) identified categories of CSF for PPP Project Briefs which include regulatory/legislative factors, financial/economic factors, risk-related factors, public sector capacity factors, procurement factors, stakeholder factors and social/cultural/ethical factors. Almarri and Boussabaine (2025) categorized Smart City PPP CSFs into partnership and collaboration factors, financial sustainability factors, contractual obligation/outsource factors, smart integration factors and contract governance factors. Obi et al. (2021) determined that the top CSFs for cost management in public housing projects were competence/team quality, collaborative practices, early contractor involvement and effective planning and management. Fathi (2024) determined that PPP success depends upon adequate risk allocation and favourable stakeholders.

Obi et al. (2021) and Fathi (2024) found that the categories of CSFs for cost management and PPP success corresponded to each other. Specifically, they found that success factors themselves were multi-faceted and cut across the legal, financial, risk, capacity, procurement, stakeholder, and social domains. Furthermore, the success factors were linked to the respective success criteria: legal and regulatory factors corresponded to relevance and value for money; financial and risk factors corresponded to efficiency and value for money; stakeholder, social, and ethical factors corresponded to sustainability and wider societal effects; and capacity and collaboration factors corresponded to effectiveness across the lifecycle.

Finally, Anelli et al. (2025) provided evidence that EU procurement directives promoted the use of two decision-making approaches, the most economically advantageous tender (MEAT) and multi-criteria decision analysis (MCDA) methods. Both MEAT and MCDA methods reframed award decisions from being solely based upon lowest price to being based upon the best quality-price ratio. Additionally, their review of MCDA applications in public procurement indicated that price, quality, risk, sustainability, and other criteria were commonly combined in structured evaluation processes. Therefore, Anelli et al.'s (2025) study links the theoretical multi-criteria success models to the practical decision tools employed by public buyers, especially in the EU and Finnish contexts where MEAT and quality-price trade-offs are common.

Therefore, taken together, PPP, digitalization, sustainability, and CSF studies provide convergent evidence for a multi-criteria, lifecycle view of public sector project success. Additionally, these studies demonstrate that success criteria and success factors should be viewed as multi-faceted and connected, providing a basis for the six-criteria success model applied in this research.

2.1.4 Implications for Finnish Public-Sector Strategic Projects

The six-criteria model is especially suitable for examining strategic projects in Finland's public sector. Firstly, the model follows the legal/institutional expectations that are stipulated for Finnish public authorities, such as: open, transparent decision-making (Act on the Openness of Government Activities 621/1999); responsible handling of information (Act on Information Management in Public Administration 906/2019); and lawful, fair, competitive, and cost-effective procurement (Act on Public Procurement and Concession Contracts 1397/2016) based on quality and VfM. In addition, the legal basis for these expectations also includes the competition, non-discriminatory, and justificatory aspects of decision-making.

Secondly, the model corresponds to the policy agenda of Finnish public administration

that emphasizes sustainable development, climate targets and digitalization in combination with good quality and equitable public services (Berg et al., 2022; Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023). Sustainability and relevance are important elements to understand if strategic projects really do meet these long-term goals and effectiveness is necessary to determine if the stated policy intentions are successfully transformed into actual improvements. Thirdly, the six-criteria framework is flexible enough to apply to different types of strategic projects, including: large-scale physical infrastructure projects; digital and data-based projects; and cross-branch reform projects. Furthermore, the six-criteria model provides a shared language for evaluating the success of these projects while at the same time allowing for the selection of project-specific indicators for the assessment of success. Finally, the six-criteria model provides an organized structure for relating the success factors to their outcomes in a rule-based environment: governance and leadership; procurement strategy and capability; risk and front-end planning; digital and data governance; and sustainability and lifecycle value can all be evaluated based on their contribution to success factors related to efficiency, effectiveness, relevance, sustainability, VfM, and wider social effects.

The six-criteria model forms the outcome framework used for the analysis of CSFs in the remainder of this literature review. Sections 2.2-2.6 provide an overview of governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance, and sustainability and lifecycle value as CSF-domains. The role of the CSFs is to deliver "on-time and within budget" but also to support multi-criteria success in strategic projects of Finnish public sectors. Section 2.7 examines the interaction between the CSFs and Section 2.8 reviews the existing knowledge gap regarding the link between the CSFs and the multi-faceted understanding of the success of public projects. This knowledge gap is motivation for the empirical part of the thesis.

2.2 Governance and Leadership as Critical Success Factors

Governance and Leadership Influence Project Success - The Importance of Formal Governance Structures in Managing Projects - How Front-End Governance Influences Long-Term Project Performance - The Role of Leaders in Creating Relational Governance - The Interaction Between Governance Arrangements and Project Goals - The Impact of Legal Frameworks on Governance Design and Leadership Behaviour - The Importance of Balancing Stability and Flexibility in Governance Systems - The Value of Interactive, Learning-Oriented Risk Governance in Strategic Projects - How Legal Constraints Affect Governance Capabilities - The Role of Senior-Management Commitment, Strategic Steering Models and Cross-Functional Steering in Integrating Sustainability into Procurement Processes - How Governance and Leadership Shape Project Outcomes - Interconnected Ways Governance and Leadership Influence Project Success Criteria.

To be able to govern strategic projects one has to find a balance in the sense of whether the governance systems for strategic projects are either; (1) so formalised and predictable that they allow for transparency, accountability and operational efficiency, or (2) if they have the flexibility and adaptability needed to accommodate the constantly shifting political agendas, stakeholder expectations and external events. Governance plays a key role in decision making within strategic projects, as well as identifying and managing risks, as well as coordinating all relevant stakeholders throughout the duration of the strategic project. Due to specific regulations such as the Act on Public Procurement and Concession Contracts (1397/2016), and the Act on Information Management in Public Administration (906/2019), strategic projects in Finland also experience added constraints when compared with similar types of projects in other countries.

The need for good governance is further underscored by recent research on public sector projects, which emphasizes that governance should be understood through a multi-criteria lens of project success that includes aspects of quality, relevance, sustainability and value for money in addition to cost and schedule criteria (Irfan et al., 2021; Volden & Welde, 2022). In addition to formal governance structures, leadership behaviour has been recognized as a critical moderator of the relationship between governance and

project success. Transformational leadership, characterized by vision, intellectual stimulation and individualized consideration, is shown to enhance the positive impact of governance mechanisms on public project success (Fareed et al., 2025). Moreover, there is evidence that well-designed governance systems are insufficient on their own and require leaders who can translate rules into action, communicate strategic purposes to team members, encourage learning-oriented approaches to work and facilitate team motivation in order to produce success across several criteria simultaneously including efficiency, effectiveness/relevance, sustainability/value for money.

An additional aspect of governance structures in relation to strategic projects are relational aspects of governance between the Government and the private Sector based on their relationships within collaborative agreements between organizations. Examples of this include how much Trust is developed between Public and Private sectors, how much Information they share and collaboratively find solutions to problems together as Feng et.al (2022), indicated there was a positive relationship between Government Relation Orientation and Project Sustainability in PPPs. Relational Governance provides a further Mechanism to support Formal Governance Arrangements in Strategic Projects enhancing Project Sustainability; improving Stakeholder Satisfaction; contributing to Broader Social Impacts; providing longer-term efficiencies and Value for Money through Reduced Conflict and Increased Opportunities for Collaborative Problem-Solving. Successful achievement in strategic projects rely heavily on Inter-Organizational Collaboration however legalistic Procurement Practices may Restrict or Limit Communications and Learning necessary to achieve successful Collaboration. Leadership typically facilitates the transition from legalistic procurement practices to collaborative Work.

Earlier studies found key factors that affect the functioning of risk management Processes in construction. Furthermore, more recent studies have shown public sector governance and leadership contribute significantly to public sector leaders' collection and sharing of data to identify and evaluate strategic risk. Enterprise wide risk management (EWRM) is recognized to be successful through the collaborative action of stakeholders

that make use of dynamic interactive information processing practices (risk dialogue, cross functional communication etc), and not through static risk registers alone (Ander- sen & Young, 2023). Organizations that utilize this type of collaborative approach are more efficient due to the development of early estimates and lower chances of overruns with respect to cost and time. By ascertaining that their risk responses are aligned with the organization's strategic objectives and customer priorities, organizations adopting this collaborative approach create increased value for money and relevance for their customers.

As said before Finland offers a particularly difficult environment for governance and leadership because of the rigid legal system in which all Finnish public sector organisations operate. The legislation of Finland that regulates sectors (sectoral regulation) and purchasing of goods/services (procurement law) generates regulatory restrictions in terms of authority of decision making, sharing of information, flexibility of contracts and standardization of contractual terms (Act on Public Procurement and Concession Contracts, 1397/2016; Act on Information Management in Public Administration, 906/2019). Even though the regulatory framework helps in creating transparency, predictability, and accountability in organizational decision-making, it significantly constrains project sponsors, and managers' ability to change governance structures, project ideas, or performance measurement criteria after the beginning of the procurement process. The tactical success factors related to governance which were brought out within the highly regulated environment, include the political / administrative buy-in from the outset of a project, development of a comprehensive decision frame-work prior to procurement commencement, and ways of accommodating change in desired outcomes under legislative constraints. The six success criteria will be positively impacted by these competencies by lowering the procedural risk, enhancing the Value for Money (VfM), and sustaining legitimacy and social impacts.

Additionally, current Finnish studies on the strategic and sustainable procurement point out several common themes. For example, Berg et al. (2022) showed the significance of

the leadership commitment to sustainable procurement, the development of organizational capabilities and cross-functional steering in integrating sustainability into the procurement process. In addition, a further study published by the Ministry of Finance & Association of Finnish Local and Regional Authorities (2023), highlights the importance of the senior management commitment to sustainable procurement, strategic steering models, clearly defined procurement roles and regular communication with both internal and external stakeholders. These types of behaviours contribute to increased effectiveness, relevance, sustainability and value for money as they connect directly to the organization's strategic direction, support to life cycle thinking and improvement in relationships with suppliers. Moreover, these types of behaviours allow public sector organizations to integrate social and environmental objectives into strategic projects and therefore provide greater benefit to society. Leadership/Governance Influence on Project Success Using Six Measures A Leader's Ability to Achieve Early Conceptual Definition of a Project Determines Value for Money/Efficiency. Early conceptual definition of a project helps to determine efficiency and value for money.

A well-thought leader evaluates the feasibility of implementing a project before a project undertaken, as it makes a project successful. Also, monitoring a project during implementation will enable value for money and economic efficiency. The project implementation can also be influenced by interactive risk governances. In turn, this influences project success. A leader's capability to effectively supervise and control project implementation risks determines the degree of value for money and efficiency achieved (Kuchta et al., 2023; Volden and Welde, 2022; Andersen and Young, 2023). The effectiveness and relevance of projects will depend on a leader's strategic orientation, effectiveness and relevance. Strategic orientation of a leader will depend on maintaining strategic orientation with all stakeholders involved in a project irrespective of the number of change in a project's objective or policy environment. A leader's effective strategic orientation helps him constantly assess stakeholder needs and expectations. Whether Governance Arrangements Embed Social/Environmental Objectives Influences Sustainability/Wider Societal Impacts Sustainability/wider societal impacts depend upon whether governance

arrangements have been established to embed social/environmental objectives. Another consideration is whether public sector leaders foster relational forms of governance in multi-agency collaborative projects (Feng et al., 2022; Berg et al., 2022).

However, there are numerous examples in the literature of tension between different concepts. Documentation and transparency are promoted through formal governance structures that require documentation of all activities performed during a project, adherence to procedures required for each phase of a project, and auditing evidence related to all action taken during a project. However, the formal nature of governance arrangements creates barriers to rapid decision-making processes and reduces an organization's response time to changing conditions when implementing innovative digital/sustainability-oriented projects. Authority based leadership approaches may encounter difficulty promoting inter-functional collaboration between independent workgroups. An analytical capacity and a culture of openness regarding discussions regarding uncertainty must exist before successful application of interactive risk governance. Neither of these conditions are consistently present in organizations. (Kuchta et al., 2023; Andersen & Young, 2023). Megaproject governance challenges occur globally but especially so in Finland where policymakers must adapt evolving/policy goals to rigid procurement laws. As part of Finland's procurement laws, most public sector projects cannot deviate from their original scope or evaluation criteria without undergoing either retendering or formal negotiations with contractors under the provisions of the Public Procurement Act (Public Procurement Act (Act on Public Procurement and Concession Contracts, 1397/2016)).

Collectively, the literature indicates that some of the most important governance and leadership CSFs for Finnish strategic projects are:

1. Structured Front-End Governance that Ensures Clear Concepts Early Alignment, and Systematic Appraisal (Mackhaphonh et al., 2021; Kuchta et al., 2023)
2. Governance Mechanisms That Link Project Goals to Multi-Criteria Success, Making Trade-Offs Between Efficiency, Effectiveness, Relevance, Sustainability, Value

- for Money, and Wider Societal Effects Explicit (Volden & Welde, 2022; Du et al., 2023)
3. Processes for Managing Shifting Goals Within Legal Constraints Including Transparent Decision Gates and Documented Scope Revisions (Bourne et al., 2023; Act on Public Procurement and Concession Contracts, 1397/2016)
 4. Interactive and Learning-Oriented Risk Governance Supported by Open Dialogue, Cross Functional Communication and Continuous Updating of Risk Information (Andersen & Young, 2023; Kuchta et al., 2023)
 5. Transformational and Relational Leadership That Enhances Collaboration Across Organizational and Sectoral Boundaries and Complements Formal Contracts in PPP and Hybrid Models (Fareed et al., 2025; Feng et al., 2022)
 6. Organizational Leadership Support for Sustainability, Digitalization and Public Value Objectives, Combined With Strategic Management of Procurement at Organizational Level (Berg et al., 2022; Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023)

Although existing studies provide a good conceptual foundation, no study examines the CSFs described above in the specific context of Finnish law and contracts. Therefore, there is still an urgent need to empirically investigate how Finnish practitioners perceive and implement governance and leadership in their strategic projects and how they view the CSFs described above impact the six success criteria in practice. This constitutes a central motivation for the empirical part of the thesis and serves as a transition to the next section on procurement strategy and capability.

2.2 Procurement Strategy and Capability

Procurement Strategy & Capability represents an area of great significance to strategic projects in the public sector. Procurement strategy & capability represents the manner by which the needs of a project, legal obligations, and policy goals are converted into procurement practices, contracts, and long-term supplier relations. It goes beyond

simply identifying the best procedure or contract type; it also includes aligning procurement choices with multiple criteria for success (Efficiency, Effectiveness, Relevance, Sustainability, Value for Money, etc.) and addressing wide-ranging societal impacts while being subject to the rules of the act on public procurement and concession contracts (1397/2016), standard terms of business of JYSE 2014 and JIT 2025, and oversight from agencies such as the Finnish Competition and Consumer Authority.

The Procurement Capability (Skills, Organizational Routines, Institutional Learning) represents what enables a contracting authority to implement a strategy that supports compliance with laws and achieving public values. Literature highlights the importance of aligning procurement strategies with task characteristics for complex professional services. Granheimer et al. (2024) identified that when engineering tasks contain high levels of uncertainty, are highly interconnected, and are knowledge-based, the use of rigid fixed price contracts that include strict output controls can negatively impact quality, increase risk related to suppliers, and create disputes. Conversely, flexibility in control mechanisms such as process/social control, collaborative problem solving and using different types of contracts at different stages of a project can positively impact results of a project and increase Innovation. These findings indicate that “Value for Money” in procurement is more than simply minimizing prices. Instead, achieving “Value for Money” requires alignment of incentives, control mechanisms, and contract types with degree of uncertainty associated with the task and level of cooperation required.

The selection of the procurement procedure for each project should take into account a logical evaluation of three different factors. Those three factors are: (1) Technical uncertainty regarding the work being performed; (2) Asset specificity associated with the work; and (3) Type and breadth of inter-organization collaboration that may be required to achieve the desired objectives. According to the Ministry of Economic Affairs & Employment, 2021 many contracting authorities continue to use relatively unchanging price-based tendering processes when it comes to the procurement of complex projects. Such approaches significantly limit possibilities for obtaining favourable results, inhibit new

and innovative solutions and do not allow for the creation of long-term value. Another major success factor for contracting authorities when it comes to acquiring materials or services is their ability to procure those items and/or services. As identified by Taheriruh et al., 2025, there are four components of innovative public procurement capability. They include market intelligence; functional specification skills; dialogue competence; lifecycle costing; and post-award contract management. Authorities capable of utilizing these competencies will thus be able to define their requirements early in the project development process; interact with the possible supply base at an earlier juncture than they might otherwise experience; choose from the most applicable procedures; and effectively manage contracts over their lifespan.

Additionally, as demonstrated by the KEINO report *Developing together: the Finnish way of promoting sustainable public procurement*, organizations that have centralized procurement departments, cross-functional collaboration, and strategic leadership are generally more successful at incorporating sustainability criteria and advanced procedures (e.g. competitive dialogue, innovation partnerships) in their projects (Berg et al., 2022).

On the other hand, the Ministry of Economic Affairs and Employment, 2021 demonstrates that smaller municipalities are often resource-constrained, and as such, they do not have the same level of capability as larger municipalities. The lack of resources and the inability to collaborate across departments limit the ability to meet the expected levels of effectiveness, relevance, sustainability, and societal impacts, even when the contracting authority meets all of its legal requirements (Ministry of Economic Affairs and Employment, 2021).

Legal and Contractual Frameworks The legal and contractual frameworks within which contracting authorities operate shape their operational space to pursue a desired procurement strategy. The Procurement Act (1397/2016), the JYSE 2014 (and the JIT 2025) Standard Terms and Conditions provide contracting authorities with transparency, equal treatment and legal certainty. They can however lead to cautious behaviour. Capability

studies and monitoring reports show that many contracting authorities tend to opt for processes that they consider 'safe', e.g. open procedures with simple selection criteria, whereas alternative, possibly more flexible options (competitive dialogue, negotiated procedure, etc.) could better meet the actual needs of each individual project (Ministry of Economic Affairs and Employment, 2021; Taheriruh et al., 2025). A consequence of this tendency towards using low-cost criteria, little opportunity for dialogue and rigid application of standard conditions, is that it reduces the potential for contracting authorities to realise long term effectiveness, relevance, sustainability and added value for money, especially in projects that call for iterative development, innovation or lifecycle management.

Research into sustainable and circular procurement demonstrates possibilities and challenges related to the creation of more complex procurement strategies. Lingard and von Oelreich (2023) describe how switching from a conventional purchase model for furniture to a circular service contract model can support reuse, reduce waste and generate lifecycle value. This can only happen, however, when the purchaser has sufficient capabilities to create, execute and monitor advanced contracts, and to encourage supplier dialogue. Lingard et al. (2021) have shown that integrated long-term contracts for infrastructure that include circularity requirements can improve sustainability and life cycle performance. These types of contracts require sophisticated specification design, monitoring and early market involvement. Trevino Lozano (2021) shows how limited availability of data, limited guidance and limited monitoring capacity may result in ineffective implementation of social criteria, including human rights criteria, in tender documents for road infrastructure projects. Likewise, capability constraints are reported in Finnish monitoring reports where social-sustainable criteria are either poorly utilized or poorly implemented (Ministry of Economic Affairs and Employment, 2021). Overall these studies demonstrate that in order to achieve broader societal benefits beyond establishing criteria there must be strategic and operational capability to apply those criteria during the entire lifetime of the contract.

The procurement strategy for Digital and IT-procurements is mainly affected by the need to manage risks and adaptability. Hua (2025) has demonstrated that traditional waterfall-style procurements - characterized by complete upfront specifications and fixed-price contracts - are unsuitable for procuring projects with rapid changes in requirements and technologies. However, incorporating agile elements through staged contracting, iterative deliveries and outcome- or function-based specifications can positively affect the effectiveness, relevance and value-for-money of projects. However, the described hybrid approach puts significant demands on the procurers' capabilities. Contracting authorities need to have the capability to specify functional requirements, formulate incremental payment schemes, use agile methods while at the same time maintaining transparency and treating all bidders equally as required by the Procurement Act (1397/2016) and the security and interoperability requirements contained in JIT 2025. Research on PPP-procurement provides further insights into how the procurement strategy influences the performance of PPP-projects. Fathi (2024) identifies risk allocation, clarity of contracts and communication as three major success factors for PPP-success. Feng et al. (2022) demonstrate that government relationship orientation and project governance influence sustainability outcomes in PPPs. Almarri and Boussabaine (2025) emphasize the importance of suitable risk-sharing arrangements, transparent and competitive bidding, clear performance specifications and robust governance arrangements as essential factors contributing to successful implementation of Smart City Infrastructure PPPs. Thai et al. (2025) highlight the importance of capable public sponsors, uniform legal frameworks and adequate oversight mechanisms in order to guarantee both economic efficiency and sustained service quality in PPP-infrastructure projects. Since PPPs are still rarely applied in Finland and due to PPPs being politically relevant in Finland, these studies suggest that increased utilization of PPP-delivery models requires that the procurement authority possess sufficient procurement capability to design contracts balancing the interests of public and private entities as well as creating performance incentives and risk-sharing arrangements compatible with the goals of the public entity. As far as the six success factors for procurement described in Chapter 2.1 are concerned, both procurement strategy and procurement capability determine all aspects of all six

success factors. For example efficient procurement and obtaining the best possible value-for-money depend on whether the chosen contract type, control mechanism, incentive scheme is suited for characteristics of tasks and their respective risk profiles (Granheimer et al., 2024; Lingard et al., 2021). Effectiveness and Relevance of procurement depend upon the competence of organizations to identify problems, produce descriptions of required functions, participate in market dialogues, assess alternatives for implementing procurements so that procurements do not only provide formal outputs but also meet real needs. Sustainability and other external effects of procurement depend on the competence to integrate environmental, social and human rights objectives into evaluation criteria of contracts as well as into contracts themselves so that they can be monitored and enforced over contract duration (Trevino Lozano, 2021; Lingard & von Oelreich, 2023).

The body of literature provides evidence that the key procurement strategy and capability CSFs for Finnish strategic projects are:

1. Fit between the contract form, control mode and task uncertainty, as well as the capacity to apply more flexible or relational forms of contract when there is a high degree of uncertainty associated with the task (Granheimer et al., 2024).
2. Organizational capability to engage with stakeholders early in the project life cycle through market dialogue and discussions about the need, feasibility and potential innovations before tendering (Taheriruh et al., 2025; Lingegård et al., 2021).
3. Ability to develop and utilize advanced procedures and award models (for example competitive dialogue, innovation partnership, MEAT criteria), while adhering to the requirements outlined in Act 1397/2016.
4. Capability to define, implement and monitor sustainability and social criteria for the entire duration of the contract (not just at tendering), and not only during the initial stages of the project (Lingegård & von Oelreich, 2023; Treviño-Lozano, 2021).

5. Capability to carry out and oversee IT and digital procurements through the use of agile or hybrid approaches that comply with procurement legislation and JIT 2025 (Hua, 2025).
6. Strategic leadership and the necessary support mechanisms (such as KEINO-type networks) to assist contracting authorities in making the transition from a narrow focus on achieving the lowest price to multi-criteria procurement (Berg et al., 2022).

There are no studies contained within the current corpus of research that either develop or test a Finland specific CSF framework for procurement strategy and capability under the constraints of Act 1397/2016, JYSE, JIT and national oversight. This lack of research is what motivated the empirical web-form survey with Finnish procurement professionals in this thesis.

2.3 Risk and Front-End Planning as Critical Success Factors

Strategic public sector project planning and front-end risk management is one of the most important aspects of CSFs for strategic public sector project development. All of this occurs within a legally mandated procurement system with strict rules of the procurement act 1397/2016 governing what can be done at the option assessment phase and in the pre-contractual phase as well as with additional provisions and standards contained in JYSE 2014 and JIT 2025, which provide the basis for allocating risks and defining roles and responsibilities post-contract formation. These strategic projects are also expected to achieve success criteria across multiple dimensions such as efficiency, effectiveness, relevance, sustainability, value for money and broader social implications. There is considerable literature on planning-phase uncertainty, front-end governance, enterprise risk management, collaborative contracting, Public Private Partnerships (PPPs), and circular procurement all of which demonstrate that many of these outcome measures are determined by decisions made prior to the commencement of implementation (Kuchta et al., 2023; Mackhaphonh et al., 2021).

2.3.1 Foundations of Risk, Uncertainty, and Front-End Decision Quality

The literature indicates that there is an inverse relationship between the amount of uncertainty present at the conceptual stages of a public project and the overall success of the project in terms of its multiple measures of success. Five categories of planning-phase uncertainties were determined by Kuchta et al. (2023): Vague Objectives; Ambiguous Information; Changing Stakeholders Expectations; Politically Volatile Conditions -- All of these were shown to have a significant effect on project performance through Cost Over-runs; Schedule Delays; and Under-Delivered Benefits. Uncertainty can exist outside the Technical Specifications of Project Design and include such things as defining the problem or issues being addressed; determining what type of project to develop; and identifying how the project will be implemented -- All of which can have a direct influence on both Efficiency of the Project, Value-for-Money, Overall Effectiveness and Societal Impact of the Project.

Additionally, the Literature regarding Front-End Governance indicate that Success is dependent upon the degree to which the correct project is developed and defined during Concept Phase. Support for this Position has been provided through Mackhaphonh et al.'s (2021) Development of A Front-End Governance Framework for a Large Scale Public Project located in Laos. Additionally, Mackhaphonh et al. (2021) Identified Two Broad Categories of Assessments Used to Evaluate the Success of a Project: First, Measures of Project Management Success (Time; Cost; Quality); Second, Measures of Public Value Based Upon Three Related Dimensions: Relevance; Sustainability; and Effectiveness. Success is Achieved When Needs Analysis; Systems Analysis; and Decision Making Processes/Processes are Applied to Determine Whether Project Objectives Align with Broader Societal Priorities Collectively, the literature reviewed above indicates that front-end decision quality is a key Critical Success Factor (CSF). Decisions made in the early stages of a project regarding objectives, scope, delivery model, and governance structures establish path dependencies that can be difficult to reverse at a later date in a project. Although there are no specific numeric estimates provided in the literature reviewed as to the degree to which early stage decisions influence lifecycle outcomes,

the findings of both Kuchta et al. (2023) and Mackhaphonh et al. (2021) indicate that front-end decisions have a disproportionate effect on performance in the later stages of a project across all six success dimensions.

In Finland, front-end planning is an analytical process as well as a legal one. All functional requirements, selection criteria, evaluation models, and contract forms used in front-end planning must conform to the provisions of the Procurement Act (1397/2016). This enables greater transparency and equitable treatment; however, it also means that front-end decisions concerning the types of contracts to utilize in a project (e.g., a design-build contract, an alliance, or a service contract with performance-based payments) are subject to formalized procedures. Therefore, front-end risk and planning activities in Finland are not simply informal preparatory steps; rather, they are part of the formalized governance structure associated with public investment and must be planned within the context of applicable laws and regulations.

2.3.2 Early Planning Failures as Drivers of Downstream Problems

The existing body of literature clearly shows that the main cause of project failure at the planning stage is early-stage weaknesses. As a consequence, the majority of project failures happen at this point rather than at later stages. Kuchta et al. (2023), for example, have shown that uncertain goals, politically unstable expectations and unspecified concepts can all generate changes to the scope of a project, rework and greater conflicts among stakeholders as a project progresses. These early-stage problems create inefficiencies in terms of both cost and time for a project and also inefficiencies in terms of its overall effectiveness to achieve the intended outcomes. Additionally, these early-stage problems always determine if a project continues to remain relevant to meet the need it was initially intended to meet.

Thirdly, another approach has been put forth in the form of the Laos Front-End Governance case study. Mackhaphonh et al. (2021) indicated that when projects begin without first systematically assessing their needs; aligning them to the appropriate national or regional developmental strategies; or evaluating possible alternative solutions, then

these projects will likely become "white elephant" investments which provide little to no meaningful social or environmental results. Therefore, Mackhaphonh et al. (2021) indicate that during the planning phase of a project, the following three factors should be assessed to ensure selected projects are not just relevant but sustainable: Concept Assurance; Systematic Goal Setting; and Stakeholder Involvement throughout all phases of a Project. Although there are similarities between Finland's Strategic Projects and the findings presented above regarding issues related to Finland's Strategic Projects are due to the different institutional contexts. On one hand, the mechanisms of strong legalism and oversight provided by the Procurement Act (1397/2016); Act on the Openness of Government Activities (621/1999); etc., and institutions like the National Audit Office and the Finnish Competition and Consumer Authority, provide good documentation practices and formal procedure compliance. On the other hand, these mechanisms may mitigate some of the risks associated with strategic projects (e.g. corruption/arbitrary decision making). However, these mechanisms may support creating an environment in which attention shifts from assessing the quality of the problem definition and conceptual choice, toward documenting procedures. Documentation will therefore be seen as an end in itself, as opposed to a tool to facilitate critical thinking and reflection. Smaller contracting authorities experience challenges in developing structured front-end analyses because of limitations in time and resources available. Larger contracting authorities formally develop structured front-end analyses. However, even though larger contracting authorities formally develop structured front-end analyses, larger contracting authorities' ability to complete structured front-end analyses may be limited by having numerous separate and often inflexible budget cycles and responsibilities across various government agencies. Whether contracting authorities are large or small, it appears that projects tend to begin procurement before the uncertainties associated with establishing needs; selecting feasible alternatives; and assessing long term impacts are resolved. Based upon a CSF view, early objective clarity; explicit uncertainty management; and Concept Assurance appear to be key elements required to achieve success with Finland's Strategic Projects.

2.3.3 Risk Allocation, Contract Choice, and Collaborative Front-End Models

Early-stage risk allocations related to contractual terms and formats may influence various aspects of a project's operation. Aravindh et al. (2023) analyzed data from several studies to demonstrate that using collaborative approaches along with an alliance contract would be able to positively impact performance related to schedules, costs, stakeholder satisfaction due to collaboration in addressing problems and shared risk. The results presented in these findings show that contracts based on models allowing continuous learning and cooperative risk sharing may have additional benefits for increased efficiency, good value, etc., as well as society.

Further research was conducted in the area of PPP. Fathi (2024), examined relationships of risk allocation, communication and trust on the performance of PPP projects; while Feng et al. (2022) demonstrated that government relationship and project governance work together to achieve sustainable goals and complete PPP projects successfully. Thai et al. (2025) indicated that there are three important factors including competence of the public sponsor, clearness of roles and correct allocation of risk necessary for PPPs to deliver long-term high-quality services. Overall, it appears from the studies provided previously that the risk allocation is not merely a technical matter but rather a front-end governance decision that has significant influences on both the motivation of collaborating parties and their ability to address emergent issues. In the Finnish context, JYSE 2014 and JIT 2025 establish default allocations of liability, warranty and responsibility for reducing transaction costs in procurements but may result in traditional risk sharing patterns being locked into place. The heavy reliance on fixed price contracts in Finland may pass cost risks from the client to the supplier but may limit innovation and make it difficult to adapt to new information when it arises. While the initial efficiency benefits may be evident this may ultimately impact the effectiveness and sustainability of the project. Framework agreements and alliances are possible under Finnish procurement law but need to be carefully planned at the front end of a project: the authority needs to explain why they selected a particular approach, clearly state what criteria will be used to select a contractor, and create a governance structure that is both compliant with the law and encourages joint risk management. If the approach is tailored to the risks inherent in the

project and its complexity then they can enable multiple criteria success, if they are based on what is perceived to be the safest route to legal compliance or routine, then they may achieve the latter but not necessarily the former and wider social benefit.

2.3.4 Dynamic Goals, Stakeholders, and Institutional Risk

Risk & Front end planning change. As the objective of the project evolves and expectations from outside stakeholders evolve. Bourne et al. (2023) identified that on large-scale projects, the objective of the project does not always stay the same. A new set of stakeholders can appear; the objective of the project can change because of a change in government priorities or a change in the external environment. This can result in additional change orders, increased costs, or delayed completion. It can also lead to broader considerations regarding how the public value created through this project. With regard to CSFs, one should not assume that the objectives of a project will remain constant through-out its life cycle. Thus, one needs to establish governance structures that can address any potential changes that may occur through out the life of the project. In addition, according to Bourne et al. (2023), governance structures must include mechanisms to facilitate adaptation and learning in the social context. Not only do you want to create public value, but you also want to make sure your project is able to provide relevant services to society and have a positive influence on society as a whole. Although you may be producing considerable output relative to cost, if your project fails to adapt to changing public needs, you will ultimately fail to generate long term public value.

The same types of pressure are present in all of the strategic projects in Finland. Specifically in transport, digital infrastructures and climate change projects. For instance, National Climate Policy, EU regulations, technology advancements and community requests can affect stake holder expectations and continually evolve over extended periods of time. However, most Finnish public projects follow a consistent framework governed by statutory requirements and auditing processes. The benefit of using a consistent framework and predictable auditing processes lies in their consistency and predictability. However, they also pose some limitations. When the objectives of a project evolve and there

is no corresponding evolution of the governance structure, it may get “stuck” on dated assumptions. Alternatively, such a situation will demand costly replanning efforts that will additionally lower confidence in the project and diminish effectiveness in implementing the project.

Mackhaphonh et al. (2021) recommend a systematic approach to front-end processes including establishing goals, conducting a needs assessment, aligning with strategic objectives and reviewing those processes. Something similar can be achieved in Finland via implementation of staged decision-making and regular assessments of needs, options and risks as described in Act 1397/2016.

2.3.5 Implications for Finnish Strategic Projects

The literature on the uncertainties of the planning phase, front-end governance, risk allocation, and moving goals provides insight into many of the risk and front-end planning CSFs that are most relevant for Finnish strategic projects:

1. Well-defined and grounded objectives before procurement that have been developed through structured analysis of alternative solutions and that are aligned with overall strategic objectives (Kuchta et al., 2023; Mackhaphonh et al., 2021).
2. A systematic approach to managing uncertainty in the planning phase that includes typical underestimates of costs and risks and focuses on institutional, political, and long-term operational risks as opposed to technical risks alone.
3. Integrated governance of risks in the front-end process with governance structures and procurement strategy, so that the selection of contract type, control mode, and risk sharing reflect both the complexities of the project and the societal goals that the project aims to achieve (Aravindh et al., 2023; Fathi, 2024; Feng et al., 2022).
4. The fit between the distribution of risks, the selected contract model, and the complexity of the project, and the willingness to utilize collaborative contractual forms or phased contracts in situations where there is high levels of uncertainty.

5. The utilization of market dialogue and feasibility analysis, as permitted by law, particularly when utilizing circular procurement or when aiming to achieve ambitious sustainable development objectives (Lingegård et al., 2021; Lingegård & von Oelreich, 2023).
6. Mechanism to allow for changes to "moving goals" while respecting the Procurement Act, such as using staged decision making, documenting scope changes, and providing open communication regarding changes to the project (Bourne et al., 2023).

These CSFs are easily mapped to the six success criteria. Front-end planning will provide clarity on how to achieve cost-effectiveness or better value-for-money by reducing unnecessary incremental expenditure. The ability to undertake an early risk governance process will also minimize the creation of misaligned incentive structures. Conducting a needs analysis, aligning strategy, and having processes in place to adjust objectives, will provide relevance and create broader societal impact (i.e., the belief that project deliverables address existing and emerging public sector needs). Early integration of environmental and social risks into planning; as illustrated through the use of circular procurement, will support sustainability. In general terms, the ultimate effectiveness of a project is heavily influenced by the cumulative effects of these CSFs across all stages of a project's lifecycle. While the above findings form the basis for developing a framework specific to Finland under Act 1397/2016, JYSE and JIT that includes CSFs related to front-end planning and risk management, there are no study in the corpus that have developed a framework for Finland integrating CSFs associated with front-end planning and risk management. It is based on this rationale that the Finnish practitioner survey utilizing a web-based survey format was conducted in this thesis.

2.4 Digital and Data Governance as Critical Success Factors

The structure and operations of digital and data governance refer to the formalized practices and procedures through which public organizations obtain, deploy, use and collect digital technology and data in order to meet their goals. In the case of a strategic project, the definition of digital and data governance would include the development and deployment of artificial intelligence (AI) and analytic tools, design of digital services,

managing citizen access to and stewardship of data, ensuring data interoperability, maintaining confidentiality of personal data, and integrating public values into all aspects of public service. Studies examining the impact of AI, digital government, and data governance suggest that the implementation of digital technologies can significantly affect whether or not they will result in increased efficiencies, effectiveness, relevance, sustainability and cost-effectiveness of both public services and broader societal impacts. Legislation related to the principles of digital and data governance in Finland is based upon several key laws including the act on information management in public administration (906/2019), the act on the Openness of Government Activities (621/1999), and the Procurement Act (1397/2016). The first two Acts provide definitions for how public authorities should manage their information and define the rights citizens have to gain access to their own information. The third act defines how digital systems must be procured by public authorities and describes how the decision making processes for algorithmic decisions must be clearly documented and explained. Thus, for Finnish strategic projects, digital and data governance is a "critical success factor" (CSF) because it represents where three critical elements -- legal requirements, technical capabilities, and public values -- come together.

2.4.1 Digital Transformation, AI Adoption, and Public Values

Previous studies have shown how many different types of factors can affect the implementation and diffusion of Artificial Intelligence (AI) in public administrations: technological, organisational, institutional, and value-related. Positive enabling factors for implementing AI include quality data, adequate IT infrastructure, sufficient management support, and employee skills and readiness to implement AI. However, Madan & Ashok (2023) have also described many negative obstacles to implementing AI in public administrations. For example, unclear strategies for the implementation of AI; insufficient capacity to implement AI; lack of clarity in respect of regulatory certainty; etc. Zuiderwijk et al. (2021) have also identified concerns regarding the transparency, accountability, legitimacy and bias of the AI-supported decision-making process. To make successful use

of AI in public governance implies the explicit consideration of public values and legal guarantees along side its technical performance.

From the CSF-viewpoint, the findings from the literature suggest that the success of a strategic project aimed at realising strategic objectives through digital and data-governance will largely depend upon other aspects than just the type of technology used. Notably, the existence of a clear strategy for using AI; compliance with applicable law and ethical guidelines; timely detection of possible risks and biases in AI; and deliberately made value-based choices concerning fairness, transparency, and explainability. Only when these conditions are met, could AI and analytics contribute to increased efficiency, effectivity and value-for-money in public services. Poor governance, however, could undermine the long-term applicability, feasibility and wider societal relevance of AI and analytics — particularly if AI produces transparent, biased or disputed results.

The conclusions drawn here also have far-reaching consequences for future strategic projects in Finland. The Finnish legislation is based on three Acts that together impose strict requirements. The Act on Information Management (906/2019) lays down specific requirements relating to the architecture of public information systems, interoperability and security. In turn, the Openness Act (621/1999) sets a high threshold for openness. Together with the Public Procurement Act (1397/2016), these Acts imply that when developing new public service functions, including those using AI, will require rigid legal standards governing data processing, documentation and liability for algorithms. One key CSF for public organisations in Finland therefore is to translate the broad legal and value-related framework requirements into concrete design solutions for their respective systems, procurement specifications and contracts — thereby allowing them to benefit from the efficiency and cost-effective opportunities offered by AI and analytics whilst protecting confidence in public services, legitimate control over these services and individual rights. There are also issues with values related to digital partnerships. Breaugh et al. (2025) surveyed PPPs (Public Private Partnerships) in order to further develop digitalisation for the state. Their conclusion was that common values that are often cited as desirable in establishing PPPs in order to promote digitalisation of governmental tasks (e.g. openness, responsibility, involvement, equality) tend to be poorly represented in

practice. As a result, public sector actors in PPPs for digitalisation are generally required to strike a balance between competing interests relating to innovation, productivity and added value — and maintaining democratic oversight and equal treatment in digital PPPs. This understanding leads to the conclusion that digital PPPs relating to smart mobility or social welfare technologies — among others — need CSFs that define roles and responsibilities clearly; allow for sufficiently close supervision of algorithmic uses and data; provide feasible mechanisms for resolving disputes and granting redress — in order to produce multiple benefits rather than simply producing immediate financial gains.

2.4.2 Data Governance, Smart Cities, and Sustainability

The social ramifications of digital infrastructure vary depending upon how an organization defines access to data, who owns the data, and how the data is managed; therefore, it is evident that the way in which data governance is implemented is vital to the social ramifications of digital infrastructure. Franke and Gailhofer (2021) note that the selection of data governance model will dictate what use of data is permitted, for what purposes it can be utilized, and under what circumstances; in addition, they provide evidence that each selection made in terms of regulation provides the opportunity to establish transparency, citizen participation, and environmental sustainability. Franke and Gailhofer (2021) discuss four ideal types of data governance models (civic data rights, proprietary, shared/open, and data stewardship); in addition, they also provide seven data governance principles: data sovereignty, regulatory stewardship, transparency, solidarity, sufficiency.

The critical success factors (CSFs) of data governance illustrate that the earlier decision-making processes relative to architectural design, standardization, and roles of data will significantly impact both the successful implementation of digital governance and data governance. In order to achieve the three dimensions of effectiveness (the services operate effectively at the organizational boundaries), relevance (the services meet the real needs of citizens), and value for money (reducing waste by eliminating redundancy and reducing lock-in), definitions of how data should be shared among organizations, defined

roles and responsibilities for ensuring data quality, and mechanisms for citizen access to data are essential. Furthermore, the selections made with regards to data governance will have direct implications for sustainability and other societal ramifications; such as, the structure(s) for sharing data can either encourage or discourage energy efficiency, modal shift, and targeted social policy initiatives; however, if the structure(s) for sharing data are opaque or exclusive then they will likely reduce public trust and reduce public oversight of data usage.

Studies related to co-creating digital public services reinforce the above description. Edelmann and Virkar (2023) illustrate that integrating environmental and social elements into the design of digital public services requires increased engagement from a broader group of stakeholders, longer term planning and coordination, and new forms of collaboration among public agencies, citizens, and firms. The co-creation process can promote the long-term sustainability and legitimacy of digital services, but only when the process is structured to foster continued engagement, capacity building, and learning over time. Therefore, one of the data governance CSFs includes the ability to integrate sustainability and participation into the design of data platforms, interfaces, and performance metrics, and not treat them as an afterthought.

In addition to the above research results and the emphasis on transparency and information management from the Finnish law and regulatory framework, another layer of understanding is provided. For example, the Openness Act (621/1999) was passed to encourage an open society through promoting public information and open data platforms. The Information Management Act (906/2019) has similar provisions for digital service providers requiring that their digital services are interoperable, secure and have a complete lifecycle. Together with the Public Procurement Law (1397/2016), both the Openness Act and the Information Management Act require that when making data governance related decisions during procurements, they should include this within the contract documents and specifications. Both of these regulations could promote efficiency and value for money, but at the same time could restrict flexibility because if there is too

much caution when interpreting legal and security issues it may limit the extent to which changes or adaptations may be made to existing projects. Therefore one major CSF for public sector organizations in Finland will be developing data governance frameworks that provide compliance with legal requirements while also providing opportunities for innovative solutions, collaborative work across organizations and long term sustainability of data usage.

2.4.3 Digital Government Leadership and “Digital Champions”

Research indicates that Leadership and Change Agency are the two primary factors that Public Organizations have to address when encountering Obstacles in Digital Transformation. Wilson and Mergel (2022) conducted analysis of "Digital Champions" at Public Organizations, identified Tactics employed by "Champions," (such as, Creating Cross-Boundary Networks, Reframing Problems, Testing Small Scale Experiments, Gradually Institutionalizing New Practices). In addition, Wilson and Mergel (2022) provided evidence showing how digital champions function in Hierarchical Risk-Averse Environments and that success of digital champions depends upon both Formal Authority and Informal Influence.

In addition, to providing Common Criteria for Successes (CSF), this research emphasizes that it is imperative to develop Digital Leadership Capabilities; these capabilities include communicating Technical Possibilities as Compelling Organizational Narratives, Navigating Political and Bureaucratic Barriers to Obtain Resources for Experimentation. Furthermore, Digital Champions can contribute to increasing Efficiency and Effectiveness through the creation of More Integrated Services and User-Centered Services; Digital Champions can increase Relevance and Broader Societal Impact through Engagement with Users and External Partners; and Digital Champions can contribute to Value for Money by Redirecting Investment Away from Stand-Alone Duplication Systems toward Shared Solutions (Edleman and Virkar, 2023; Wilson and Mergel, 2022).

Furthermore, the Findings mentioned previously Relate Well to the Specifics of the Environment in Finland Where Legalism and Audit Culture Dominate. As a result of the Procurement Act (1397/2016), the Openness Act (621/1999) and the Information Management Act (906/2019) create an environment where Errors in Digital Projects Can Lead to Complaints or Formal Review. Therefore, this may discourage Innovation and Risk Taking Especially in Smaller Municipalities That Do Not Have Specialized Personnel Capacity. Therefore, under such circumstances, Digital Champions Who Are Aware of Both Technology and Legal Rules Constraints Can Likely Represent a Particularly Important Set of CSFs. Digital Champions Can Interpret Regulations in a Way That Allows Controlled Experimentation (Such as Via Pilot Procurements Or Modular Contracting); Document Decision Making To Ensure Compliance With Accountability Requirements; And Build Internal Support for A More Collaborative Approach to Performing Work Using Data.

Additionally, another Source of Insight Comes From Studies On IT Public Procurement. Hua (2025) Demonstrated That Success of IT Procurement Requires That Procurement Teams Coordinate Processes of IT Procurement with Agile Development Methodologies; Establish Close Relationships with Users and Vendors; And Manage Complex Environments for Risk and Oversight Associated with IT Procurement Successfully. Although Cases Studied Were Not from Finland, Study's Findings Suggest That Digital Leadership in Procurement — I.E. Readiness to Adapt Processes; Readiness to Participate in Modular or Outcome-Based Contracting; and Readiness to Cooperate with Technical Teams — Is a Csf for Multiple Criteria Successful Digital Projects. Therefore, for Finland, this implies that Champion Roles Must Be Present in Not Only IT Divisions But Also Procurement Divisions and Steering Committees So That Legal and Oversight Requirements Do Not Block Need to Modify Procedures in Digital Projects.

2.4.4 Implications for Finnish Strategic Projects

The literature concerning AI, digital government, data governance and IT procurement identifies a number of "Critical Success Factors" related to the digital and data

governance dimensions of the above mentioned strategic projects of the Finnish Government. These are as follows:

1. The existence of frameworks for the use of artificial intelligence and data governance that comply with public values and legal provisions of Act 906/2019, Act 621/1999 and Act 1397/2016 and define clear transparency, accountability and requirements for managing bias (Madan & Ashok, 2023; Zuiderwijk et al., 2021).
2. Roles and competences defined for data stewardship and interoperability so that sufficient resources are made available to monitor and document data quality and security within and between organisations (Franke & Gailhofer, 2021).
3. Common requirements for openness, interoperability and data sharing have been established in the procurement process or through contractual agreements that allow the application of JIT 2025 contract clauses to prevent vendor lock-in, and to enable future reuse and integration of digital solutions (Franke & Gailhofer, 2021) .
4. A mechanism has been developed to address the transparency, bias and accountability of algorithms, which includes audit mechanisms, assessment mechanisms of the impact of algorithms, and mechanisms to allow users to contest automated decision-making processes (Zuiderwijk et al., 2021; Breaugh et al., 2025).
5. Digital champions and capable steering committees comprising representatives of law, technology and strategy, who can exercise control over the experimental character of pilot-testing of new methods for contracting, modularising digital systems and implementing these in phases (Wilson & Mergel, 2022; Hua, 2025) .
6. Involvement by stakeholders in co-designing digital services to guarantee that digital services remain relevant, legitimate and sustainable over time (Edelmann & Virkar, 2023) .

7. Mechanisms have been implemented to prevent vendor lock-in and realise long-term value from digital systems where applicable through open standards, data portability and shared platforms (Franke & Gailhofer, 2021).

These CSFs are directly related to the six success dimensions defined in this research. Digital and data governance that is well managed will provide improvements to efficiency by automating and improving the reuse of data; improvements to effectiveness by enabling integrated data-based services; improvements to relevance by enabling digital services to be designed in accordance with user needs and public values; improvements to sustainability by managing energy, mobility and resource usage through data; improvements to value-for-money through reducing duplicate work and lock-in; and contributing to broader societal benefits by promoting transparency, citizen participation and trust in government.

However, the literature identified above has not produced a Finland specific CSF framework for digital and data governance that relates to the Acts 906/2019, 621/1999, and 1397/2016 and utilizes standard contracts such as JIT 2025. The absence of a contextually focused guide further supports the rationale for conducting empirical web-form survey with Finnish practitioners as part of this thesis.

2.5 Sustainability and Public Value / Lifecycle Value as Critical Success Factors

There has been an increased expectation from stakeholders of public value and sustainability with regards to public sector projects. Sustainability is no longer just about minimizing the environmental impact of an organization, it now also encompasses long-term social and economic dimensions of sustainability from inception to end-of-life for all public sector projects. This broader interpretation of sustainability is evident within the literature on projects (e.g., Lingegard et al., 2021; Lingegard & von Oelreich, 2023; Trevino-Lozano, 2021; Du et al., 2023). In particular researchers conducting studies related to circular/sustainable procurement, social sustainability, PPP performance and data-

intensive smart cities systems indicated that environmental, social and economic impacts require effective management throughout the life-cycle of each project (design to end-of-life). As such, it would be beneficial to address both lifecycle aspects of public value and sustainability as a cross-domain Critical Success Factors (CSF) which relate to governance, procurement, risk and digital/data governance. Thus, sustainability, cost/value for money and other wider societal implications would influence efficiency and effectiveness in terms of lifecycle costs and benefits. Within Finland, these expectations occur in a legal/institutional environment emphasizing transparency, equality in treatment and responsible use of public monies. The Procurement Act (1397/2016), along with national policy objectives, highlight the importance of sustainable public procurement. However, the Procurement Act does not elaborate on how to convert broad sustainability aspirations into specific CSFs in strategic projects.

Sustainable public procurement (SPP) and circular public procurement (CPP) are two approaches that integrate sustainability and lifecycle thinking into procurement and contracting. Research in the area of circular public procurement in infrastructure has demonstrated that integrated long-term contracts can be developed to promote reuse, reduce waste and improve the lifecycle performance of the project, as long as the contracting authority has the knowledge and skills required to develop circularity requirements, measure the performance of their contractors and establish effective communication with their contractors (Lingegard et al., 2021). Similar results were found in studies on circular furniture contracts. While purchasing products on a single-use basis versus creating service-based contracts can help promote reuse and waste reduction, the contracting authority needs to have a good understanding of how to develop specifications for their contracts, manage their contracts effectively and measure the performance of their contractors (Lingegard & von Oelreich, 2023).

This suggests that sustainability-related CSFs are primarily influenced by the organizational knowledge and skills and governance structure of the contracting authority rather than the technical characteristics of the solution. When contracting authorities have the

knowledge and skills required to create lifecycle objectives, choose the most suitable form of contract and measure the performance of their contractors, they will be better positioned to develop projects that will achieve excellent levels of efficiency (resource utilization), sustainability (environmental improvement) and value for money (long term cost-benefit ratios). If contracting authorities do not possess the necessary knowledge and skills to address these tasks, then their sustainability aspirations may remain symbolic and have limited impact on the final outcome of the project.

Human Rights and Social Sustainability are also key elements of public value. Research on procurement of road infrastructure has shown that merely including human rights and social clauses in contracts is insufficient. Unless contracting authorities have a clear vision of how these clauses can be enforced, unless they have reliable data and unless they have the ability to monitor contractor compliance, these clauses will have little practical impact (Trevino-Lozano, 2021). The same is true of Finnish monitoring data that states that social sustainability criteria are employed differently and rarely monitored by contracting authorities (Ministry of Economic Affairs and Employment, 2021). This means that important aspects of the overall social effects of a project, e.g. labor conditions, equality and impacts on communities, are not being consistently regulated as part of the success of the project.

As seen from a CSF point of view, the challenge is to move from simply formalizing social and human rights language in tender documents, to developing the organizational capabilities to enforce, monitor and implement such requirements throughout the duration of the contract. This has a direct influence on the relevance and wider social effects of a project, since projects that neglect social effects, although they may be successful in terms of efficiency and value for money, will not meet the broader constitutional and policy goals of society.

The literature on PPP and Smart Cities examines the relationship among Public Value, Sustainability and Governance. Feng et al. (2022) find that when governments are more

relationally oriented in their relationships with stakeholders, they achieve higher levels of Social and Environmental Sustainability and traditional performance metrics. Almarri and Boussabaine (2025) identify Financial Sustainability, Partnerships, Collaboration, Smart Integration and Contract Governance as critical for creating a balance among Innovation, Environmental Objectives, Social Benefits and Economic Viability for successful Smart City PPPs. Du et al. (2023) outline frameworks for measuring the Sustainable Operations of Transport PPPs through the combination of Life Cycle Efficiency, User Service Quality and Environmental Indicators (e.g. Emissions and Resource Use).

Together, the research demonstrates that the realization of sustainability and public value in complex contractual environments depends upon how the risk allocation, performance measurements and relational governance are defined and executed. They affect all six success criteria: efficiency and value for money via lifecycle performance; effectiveness and relevance via alignment with policy goals; sustainability via environmental and social outputs; and wider social effects via trust, fairness and long term developmental impacts. For Finland, where the use of PPP-type delivery models is selective and highly scrutinized, the research indicates that CSFs concerning sustainability must be adapted to be compatible with the strict procurement and oversight rules that apply in Finland.

Digitalization and Data Governance have an equally important role to play in the achievement of Sustainability and Public Value. There is considerable evidence from research into AI in Public Administration, that the availability of data, the capacity for analysis and the structure of governance can lead to improvements in the efficiency and effectiveness of Public Administrations, but may also be associated with concerns about transparency, bias and legality (Madan & Ashok, 2023; Zuiderwijk et al., 2021). Research into Data Governance in Smart Cities has highlighted how decisions taken about the access rights to data, when it should be accessed and why it should be accessed will affect the degree of Environmental Sustainability, Citizen Participation and Trust within those Smart Cities (Franke & Gailhofer, 2021). Co-creation research in the area of Digital Public Services has

found that including all relevant Stakeholders in the design of Digital Services and explicitly considering the Environmental and Social implications of the Design Process can promote Long Term Sustainability and Legitimacy of Digital Systems (Edelmann & Virkar, 2023). The availability of Digital and Data Options for Contracting Authorities in relation to Strategic Projects in Finland is however limited and constrained by two legislative Acts: the Act on Information Management in Public Administration (906/2019) and the Act on the Openness of Government Activities (621/1999) which amongst many other requirements mandate Interoperability, Data Security and Openness. These mandates can support the realization of sustainability and social impacts (e.g. provide data for planning Energy or Mobility), while simultaneously requiring that the digital sustainability and public value are formulated as tangible design principles, procurement standards and governance frameworks. The CSFs in this context are therefore the ability to identify open interfaces, data-sharing standards, and accountability mechanisms that support both sustainability objectives and legal compliance.

Examples of national initiatives in Finland illustrate both the development of new themes and the shortcomings of current initiatives in terms of Digital Sustainability and Public Value. KEINO's initiatives related to sustainable and innovative public procurement (KEINO Academy, thematic buyer groups) have given some organizations the opportunity to develop more strategic approaches to sustainability, create peer-to-peer networks and pilot new procurement models (Berg et al., 2022). The national reports on sustainable and innovative public procurement indicate that KEINO's initiatives have raised awareness among several sectors, e.g. Construction and Energy, concerning environmental criteria and lifecycle considerations (Ministry of Economic Affairs and Employment, 2021). However, these reports also emphasize that the extent of implementation of these initiatives vary greatly among contracting authorities, where smaller contracting authorities tend to lag behind considerably; that there is very little systematic follow-up of sustainability and social effects after contracts have been signed.

In summary, sustainability and public value represent a CSF domain that intersects with all project phases and with the other CSF domains described in this thesis. Sustainability and public value are closely related to sustainability, value for money and wider societal effects, but they also affect efficiency, effectiveness and relevance, through lifecycle performance, legitimacy, and alignment with policy goals. In the Finnish context, where contracting authorities are expected to operate in a strictly regulated environment, the main challenge is to incorporate sustainability and public value objectives into the governance, procurement, risk management and digital/data management activities in a manner that is compliant with legislation and feasible in practice.

In light of these factors, some of the most important Sustainability and Public Value Criteria for Finnish Strategic Projects in the Public Sector can be summarized as follows:

1. Capability to establish and coordinate Circular and Lifecycle-Oriented Contracts, which support a sustainable approach and contribute to achieving best value for money, by enabling the formulation of circularity conditions, definition of lifecycle performance indicators, and the maintenance of ongoing communication with suppliers throughout the contract term (Lingegård et al., 2021; Lingegård & von Oelreich, 2023).
2. Ability to incorporate Environmental and Social aspects into the award decision-making process and to include these elements into the Contract Management Process, beyond merely requiring them to be included in Tender Documents, and to clearly assign and resource responsibility for tracking and follow-up (Ministry of Economic Affairs and Employment, 2021; Treviño-Lozano, 2021).
3. Capability to balance the achievement of Best Value for Money with Sustainability in PPP and Smart-City type Projects through the appropriate distribution of risks, performance standards and Relational Governance practices that support achieving long-term Environmental and Social Outcomes (Almarri & Boussabaine, 2025; Feng et al., 2022; Du et al., 2023).

4. The ability to incorporate public values such as fairness, transparency, participation etc. when integrating digital or data-intensive projects such as AI and smart city systems with sustainability as well as society's broader impacts (Madan & Ashok, 2023; Franke & Gailhofer, 2021; Zuiderwijk et al., 2021; Edelmann & Virkar, 2023).

5. Organizational capability to utilize KEINO-type support, networks and National Guidance to transition from symbolic sustainability criteria towards the implementation of lifecycle oriented management and continued development of Procurement Practices (Berg et al., 2022; Ministry of Economic Affairs and Employment, 2021).

6. Strategic Leadership that views Sustainability and Lifecycle Value as core objectives alongside Efficiency and Value for Money, and where organizational strategies, procurement practices and project-level decisions are aligned with Finland's and EU's Sustainability Goals.

Although several examples of recent initiatives and cases have been developed, there has yet to be an established Finland-specific CSF Framework that incorporates Sustainability, Public Value and Lifecycle Considerations within Procurement Law, Standard Contracts and Oversight Arrangements. Therefore, this further emphasizes the necessity for empirically based research that illustrates how Practitioners in Finnish Strategic Projects evaluate and prioritize Sustainability-related CSFs in practice.

2.6 Finland-Specific Capability Evidence

The main part of the above discussion has focused on identifying CFS areas for public sector strategic projects primarily based on international literature and supported by Finnish examples. In this chapter we focus more specifically on capability evidence from Finland itself. Finland has a comprehensive legislative and contractual basis for public procurement, which includes the Act on Public Procurement and Concession Contracts (1397/2016), the Act on the Openness of Government Activities (621/1999), the Act on

Information Management in Public Administration (906/2019), and standard contractual conditions such as JYSE 2014 and JIT 2025. As well as legal foundations for KEINO's work, national oversight bodies – including the Finnish Competition and Consumer Authority and the National Audit Office – add to transparency, fairness and predictability of process within the legal frameworks for contracting with the state and the public sector (Johanson et al. 2024; OECD 2024). On the other hand, this framework limits the scope of action for managers and increases the perceived risk of complaints, which affects the approach taken by organizations to issues such as governance, procurement, risk, digitalization and sustainability.

Programmes and initiatives aimed at developing capabilities have sought to mitigate these risks. In addition, national guidance and capability centres have facilitated a transition in focus from simply being legally compliant in terms of the way that procurement is conducted to conducting it strategically and based on the value created by the projects (Berg et al. 2022). However, the available evidence still reveals that capabilities are unbalanced between different sectors and levels of government and that the relationship between the legal frameworks and multi-criteria success is not yet adequately understood.

KEINO, the Competence Centre for Sustainable and Innovative Public Procurement, is a prominent source of Finland-specific evidence of the existence of such capabilities. KEINO's task is to support contracting authorities in their efforts to utilize procurement strategically in order to achieve environmental, social and innovation objectives. KEINO performs this function by way of the organization of the trainings, mentorship, buyer groups and peer-learning networks, inter alia in the fields of the bioeconomy, circular economy, digitalization, mobility, health and wellbeing (Ministry of Economic Affairs and Employment, 2018; Berg et al., 2022). Evaluations of KEINO's activities have shown that contracting authorities participating in KEINO Academy and buyer groups are more likely to adopt lifecycle perspectives, utilize advanced procurement procedures (such as

competitive dialogue), and integrate sustainability criteria into procurement strategies and tender documentation (Berg et al., 2022).

On the other hand, national monitoring shows that such advanced practices are not yet commonly practiced. The Ministry of Economic Affairs and Employment, 2021 states that while pilot projects and showcase procurements have demonstrated what is feasible, most contracting authorities, particularly smaller municipalities, continue to use simple procedures, award criteria that are dominated by price, and insufficient post-award follow-up of sustainability commitments (Ministry of Economic Affairs and Employment, 2021). Such patterns have direct implications for the six success criteria mentioned earlier. While contracting authorities may realize narrow value for money in individual procurement transactions and thus achieve efficiency, effectiveness, relevance and sustainability will remain under-realized if strategic and lifecycle aspects are poorly governed.

As further information about innovative public procurement capabilities within Finland is added to the capability picture it will help define how these competencies have been developed. A more recent conceptualisation of innovation procurement competency as an aggregation of procedural, relational and enabling competences; i.e. market intelligence, functional specifications, dialogue skills, lifecycle costing and strategic direction (Taheriruh et al., 2025) indicate that the development of these competences relies heavily on networks of competent actors, training and co-design processes. The authors of the paper also indicate that the distribution of these competences varies greatly from contracting authority to contracting authority. Contracting authorities that possess greater levels of competence have a greater ability to link their procurement activity with their strategic objectives, select the most suitable procurement method for each task, manage the risks and potential innovations involved in each procurement and therefore improve the overall effectiveness, relevance and value for money achieved through each procurement. Additional national examples can also be found in research related to innovation contests and co-creation processes. Pihlajamaa and Merisalo (2021) studied smart city hackathons held in Tampere and concluded that while they produce large

numbers of ideas, only a small percentage of the total amount produced through hackathons actually result in the production of tangible solutions such as procurement contracts. As noted in previous research the successful transition of generated ideas into procurement contracts or solution implementations were based upon formally defining the problems being addressed through clearly articulated objectives, a defined strategic framework and established formal processes to incorporate winning ideas into regular procurement and project planning practices (Pihlajamaa & Merisalo, 2021). Therefore, this study highlights the importance of establishing clear definitions for problems being addressed along with ensuring that there is adequate follow through at an organizational level as common factors that contribute to effective outcomes for innovation-related projects in terms of achieving effectiveness, relevance and wider societal benefits. In addition to the above mentioned sources of empirical evidence, national guidelines and best practice frameworks document additional evidence-based understandings of what is expected of contracting authorities in terms of developing necessary competences. The Ministry of Finance's best practice document outlining a model for strategic management of public procurement (the "22-steps" framework), highlights the need for senior-management commitment, clearly-defined roles within the procurement function, strategic steering models, systematic utilization of data and integration of sustainability objectives into procurement strategies (Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023). Innovation-procurement guidelines identify that public procurement should aim to promote productivity, quality, sustainability and effectiveness rather than merely aiming to lower prices (Ministry of Economic Affairs and Employment, 2018). Although these documents connect procurement and project governance with all six success criteria (effectiveness, relevance, sustainability, cost-effectiveness, time-effectiveness and value-for-money), they relate to these criteria at a general level and thus cannot be considered empirical tested CFS-frameworks.

In addition to the positive characteristics mentioned above there are a variety of weaknesses and capability gaps identifiable in the Finland-specific evidence. Capability studies conducted by the Ministry of Economic Affairs and Employment (2021), along with

other capability studies identify that many contracting authorities implement the Procurement Act in a risk-averse way and therefore utilize open competition procedures based primarily on lowest-cost pricing in preference to alternative approaches (such as competitive dialogue, negotiated procedures and innovation-partnerships) (Ministry of Economic Affairs and Employment, 2021; Taheriruh et al., 2025). The OECD's Annual Report on Competition Policy Development in Finland (OECD, 2024), identifies fear of complaints and subsequent legal disputes as a primary cause of caution when implementing procurement strategies. This has led to a prioritization of procedural security in preference to both innovation and broader public value.

The risk-averse nature of the Finnish public sector will likely hinder performance across all four domains of CFS. For instance, the risk-averse attitude will probably reduce the inclination of contracting authorities to formulate challenging sustainability criteria. In addition, it may constrain contracting authorities' enthusiasm for engaging in early market consultation to enhance their ability to manage risks and plan on the front-end. Furthermore, the risk-averse attitude among contracting authorities will possibly lead to a reduced interest in testing new forms of modular or outcome-based digital contracts that could improve efficiency, effectiveness and relevance. Finally, the risk-averse attitude toward digital contracts might divert focus away from developing competences needed to monitor results and learn from experiences. This would likely worsen the prospects of achieving sustainability, value-for-money and social impacts.

In general, Finland's specific data shows an ambivalent image of capabilities regarding public-sector strategic project delivery. A good legal and contractual basis for public procurement and contract administration has been secured by Finland through its aim to provide transparency, equal treatment, and predictable processes. Advanced practices in sustainable and innovative procurement as well as national initiatives (KEINO etc.) have developed islands of best-practice in terms of guidance documents outlining expectations for strategic management of procurement and projects. Nonetheless, there are great disparities in the distribution of these capabilities within contracting

authorities and sectors; specifically between large organizations and small municipalities. There is an incomplete diffusion of state-of-the-art methods for procurement and lifecycle-thinking, no systematic tracking of social and environmental impacts is conducted, and contracting authorities still conduct public procurement according to the Procurement Act with a high degree of risk aversion.

The following capabilities have been identified by the observations from the previous sections and can be used to provide insight for the empirical section of the thesis:

1. **Legal and Contractual Foundations:** Strong legal and contractual foundations allow for transparency and predictability within the purchasing process, however, these strong legal and contractual foundations also limit the flexibility of decision-making at the beginning of a project and the ability to adapt throughout a project (Johanson et al., 2024; OECD, 2024).
2. **Capability for Dialogue Based and Innovative Procedures:** The capability to utilize dialogue based and innovative procedures varies among contracting authorities in Finland, with most small contracting authorities utilizing traditional open procedures and price-based awards for their contracts, even though there is government support for more strategic contracting practices (Ministry of Economic Affairs and Employment, 2021; Taheriruh et al., 2025).
3. **Building Capability through KEINO and Competence Networks:** Initiatives such as KEINO and competence networks assist in developing procurement, sustainability and innovation competency's among contracting authorities in Finland, however, the degree to which contracting authorities participate in these initiative's is dependent upon resources and selective, creating pockets of excellence versus a system wide improvement (Berg et al., 2022).
4. **Follow Up of Sustainability and Social Outcomes:** Systematic follow up of sustainability

and social outcomes after a contract has been awarded is limited, therefore limiting the linkage between formal criteria and realized broader societal impact (Ministry of Economic Affairs and Employment, 2021; Treviño-Lozano, 2021).

5. Connecting Innovation Contests and Pilot Projects: The connection between innovation contests and pilot projects and the procurement process and strategic objectives vary, resulting in some loss of potential improvements in both effectiveness and relevance (Pihlajamaa & Merisalo, 2021).

6. Oversight and Fear of Complaints: Fear of complaints and oversight encourages contracting authorities to interpret the Procurement Act cautiously, which may favor procedural efficiency and a narrow definition of value for money, however, this may hinder contracting authorities from pursuing ambitious multi-criteria success (OECD, 2024).

The capability evidence from the previous sections identifies significant CSF's and constraints related to the Finnish setting; however, the evidence is fragmented and domain specific. Therefore, an integrated empirically supported CSF framework that addresses governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance and sustainability under Finnish legal and institutional conditions is required to address the identified gaps and is one of the primary goals of the current thesis.

2.7 Integrated Finland-Specific CSF Framework (Synthesis)

Sections 2.1–2.7 have explained a multi-criteria approach to public sector project success and discussed the five CSF domains of governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance, and sustainability and lifecycle value and provided Finland-specific evidence of capability. This section links together these components to provide an integrated CSF framework for Finnish public sector strategic projects. The integrated CSF framework is designed to connect the five CSF domains to the six success criteria under the legal and institutional conditions established above.

Literature on CSF frameworks for evaluating success in PPPs and infrastructure development has created various CSF groupings such as legal and regulatory issues, financial and economic issues, risk-related issues, public sector capacity, procurement-related issues, stakeholder-related issues, and social or ethical issues (Al Saadi et al., 2024; Almarri & Boussabaine, 2025; Fathi, 2024; Thai et al., 2025).

Megaproject governance research demonstrates how formal structures, stakeholder engagement, and evolving goals combine to influence both project performance and societal impacts (Bourne et al., 2023). Public project multi-criteria evaluation frameworks, for example, those developed by Volden and Welde (2022) distinguish public project management success from public value, and assess both using a set of structured criteria. These models demonstrate that CSFs can be grouped into coherent domains and related to multiple performance dimensions. However, they were developed for a specific legal regime and procurement law, information management, standard contract terms and oversight regimes that were investigated in the current study. Therefore, the study develops an integrated framework that is specifically grounded within the regulatory environment of Finland and uses the six success criteria as a common performance lens. From a conceptual perspective, the proposed integrated CSF framework can be seen as consisting of three interlinked layers. The context layer includes the legal and institutional environment in which all strategic projects are conducted: the Procurement Act (1397/2016), the Act on the Openness of Government Activities (621/1999), the Act on Information Management in Public Administration (906/2019), standard terms, such as JYSE 2014 and JIT 2025, and oversight from entities like the FCCA and the National Audit Office (Johanson et al., 2024; Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023; Johanson et al., 2024). These tools establish rules and regulations for governance, procurement, risk, digitalisation and sustainability, and thus frame what is legally permissible in relation to these areas of the project.

The domain layer comprises the five CSF domains identified in previous sections.

Governance and leadership relate to formal structures, decision-making processes, and leader behaviour influencing alignment, accountability, and collaboration (Bourne et al., 2023; Mackhaphonh et al., 2021; Fareed et al., 2025; Feng et al., 2022; Andersen & Young, 2023). Procurement strategy and capability include the degree of fit between procedures, contract types, and task characteristics and the organisational competence for market dialogue, specifications, and contract management (Taheriruh et al., 2025; Granheimer et al., 2024; Lingegård et al., 2021; Berg et al., 2022). Risk and front-end planning include problem definition, analysis of alternative solutions, risk allocation and mechanisms for addressing changing goals (Thai et al., 2025; Kuchta et al., 2023; Mackhaphonh et al., 2021; Aravindh et al., 2023; Fathi, 2024; Bourne et al., 2023). Digital and data governance include frameworks and standards for artificial intelligence and data governance, interoperability, openness, and digital champions (Hua, 2025; Madan & Ashok, 2023; Franke & Gailhofer, 2021; Edelman & Virkar, 2023; Wilson & Mergel, 2022; Zuiderwijk et al., 2021). Sustainability and lifecycle value relate to circular procurement, social sustainability and longer term public value throughout the project lifecycle (Berg et al., 2022; Lingegård et al., 2021; Treviño-Lozano, 2021; Feng et al., 2022; Almarri & Boussabaine, 2025).

The Outcome Layer — Six Success Criteria —

Efficiency, Effectiveness, Relevance, Sustainability, Value for Money, Wider Societal Impacts. All six Success Criteria are affected by each of the five CSF Domains. However, different Success Criteria are more heavily influenced by specific Domain(s).

1. Governance and Leadership significantly impact Relevance, Effectiveness and Wider Societal Impacts.
2. Procurement Strategy and Capability have the most significant effects upon Efficiency, Value for Money and Sustainability.

3. Risk and Front End Planning mostly impact how effectively the right Projects are identified and defined as Projects.

4. Digital and Data Governance both positively and negatively impact Efficiency, Effectiveness and Wider Societal Impacts through their positive/negative impacts on transparency of Service Delivery.

5. Sustainability and Lifecycle Value have direct relationships to Sustainability, Value for Money and Wider Societal Impacts. They have indirect relationships to Efficiency and Effectiveness due to Project Lifecycle Performance.

In addition to these Direct/Indirect Influences there are Interactions/Cross-Domain Patterns within this Framework. Front End decisions about Governance, Risk Management and Resource Allocation can limit Procurement Choices and Digital/Data Arrangements at Later Stages of a Project (Kuchta et al., 2023; Mackhaphonh et al., 2021; Andersen & Young, 2023; Bourne et al., 2023). If an early stage problem statement is narrowly defined and alternatives are limited, then the traditional contract model has little room for Circular/Digital Innovations. Conversely, if Uncertainty, Stakeholder Needs and Sustainability Goals are Recognized Early enough, then Collaborative Contract Forms, Staged Procurements and Modular Digital Architectures may be Adopted. There are close ties between Procurement Strategy/Capability and Digital/Sustainability Governance. The Ability to Create Long-Term Contracts that Integrate Multiple Components, along with the Ability to Engage in Meaningful Market Dialogue will Influence the Degree to Which Environmental and Social Objectives can be Embedded and Enforced Over Time (Hua, 2025; Lingegård et al., 2021; Treviño-Lozano, 2021).

Similarly, the specifications of Openness, Interoperability and Data Sharing in Tender Documents and Contracts can Impact the Degree to Which Digital/Data Governance

Principles are Implemented in Practice (Franke & Gailhofer, 2021; Edelman & Virkar, 2023).

Choices related to Procurement Strategy/Capability and Digital/Data Governance can concurrently impact multiple Success Criteria such as Efficiency, Value for Money, Sustainability and Wider Societal Impacts. Relational Governance and Leadership are Inter-domain Concepts. Relational Leadership can Enhance the Effectiveness of Formal Governance Systems. Relational Leadership can Increase Cooperation Among Parties Involved in Joint Risk Management. Relational Leadership can Facilitate Digital and Sustainability Collaborations (Wilson & Mergel, 2022; Edelman & Virkar, 2023; Feng et al., 2022). Poor Relational Leadership can Result in Ineffective Implementation of Formally Established Governance Systems.

This emphasizes that CSFs should be viewed as a system and not as separate lists: clear definitions of the scope of projects, effective market engagement, good risk governance, proper digital stewardship, and effective sustainable practices are mutually reinforcing if coordinated, and they are mutually undermining if they are not coordinated. Section 2.7 Finland-specific capability evidence demonstrates that, although there are established legal foundations, guidelines, and capability programs for advanced CSFs, the usage of the latter varies significantly among different agencies and municipalities (Ministry of Economic Affairs and Employment, 2021; Berg et al., 2022; Taheriruh et al., 2025; Pihlajamaa & Merisalo, 2021). There are examples of advanced CSFs being applied in some agencies and municipalities (Pihlajamaa & Merisalo, 2021), while in others advanced CSFs are not being utilized (Berg et al., 2022; Taheriruh et al., 2025). In Finland, while the strict procurement laws combined with the active monitoring by procurement authorities promote caution in public procurement practices, it also discourages public organizations from testing alternative governance models or contract forms (Act on Public Procurement and Concession Contracts, 1397/2016; OECD, 2024). Therefore, the potential of the integrated CSF system to positively impact all six success criteria is not being realized.

The new, integrated CSF framework used in this thesis combines literature based and context sensitive approaches. The framework includes Finnish specific legal constraints and capability patterns but also reflects the international evidence regarding CSFs as well as evaluation frameworks. While it is a conceptual/analytical model (not an empirical one), the empirical portion of the study will use the CSF framework for developing the themes for the web-form survey and for the analysis that identifies which CSFs are considered by practitioners to be the most important, and how those priorities are developed and implemented in practice.

This study's integrated CSF framework is comprised of six categories of CSFs based on Kuchta et al. (2023), Mackhaphonh et al. (2021) and Andersen & Young (2023) who have identified the following key themes:

Cluster 1: Front-end Governance, Risk and Strategic Alignment – The CSFs related to defining a clear problem statement, identifying alternative solutions, ensuring that the solution aligns with the organization's strategy, and establishing an initial risk governance process while complying with the requirements outlined by Acts 1397/2016, 621/1999 and 906/2019.

Cluster 2: Procurement Strategy and Market Engagement – The CSFs that relate to the fit between the delivery model and the controls required to ensure that the tasks associated with that delivery model are performed effectively; using dialogues and innovative methods to identify new solutions; designing contracts that will enable both lifecycle performance and innovation; Granheimer et al. (2024), Taheriruh et al. (2025); Lingegård et al. (2021).

Cluster 3: Digital and Data Stewardship – The CSFs that relate to developing an Artificial Intelligence (AI) framework and a data governance framework to enable interoperability, openness and responsible data use while complying with information management and

openness legislation; Madan & Ashok (2023); Zuiderwijk et al. (2021); Franke & Gailhofer (2021); Hua (2025).

Cluster 4: Sustainability and Lifecycle Management – The CSFs that relate to circular procurement, social and human rights clauses, and monitoring environmental and social performance over time while embedding them into the contract and governance arrangements; Lingegård & von Oelreich (2023); Treviño-Lozano (2021); Feng et al. (2022); Berg et al. (2022).

Cluster 5: Leadership and Relational Governance – The CSFs that relate to transformational leadership, cross-boundary collaboration, government relations orientation in PPPs, and the role of digital champions in facilitating change; Fareed et al. (2025); Feng et al. (2022); Wilson & Mergel (2022); Edelman & Virkar (2023).

Cluster 6: Capability Building and Learning Mechanisms – The CSFs that relate to developing competence, creating networks, and developing feedback loops such as KEINO and other national programs which provide continued improvements in procurement and project governance; Berg et al. (2022); Taheriruh et al. (2025); Ministry of Economic Affairs and Employment, 2021.

These categories provide the theoretical basis for conducting the empirical research and will guide the formulation of the questionnaire items, the coding of the practitioners' views, and the evaluation of how the various CSFs are prioritized and implemented in the Finnish strategic projects.

2.8 Summary and Link to Research Gap

The previous section of this thesis highlighted Finnish research that is relevant to multi-dimensional measures of success and critical success factors for strategic projects in the public sector. In Chapter 2.1, a six dimension model was developed for measuring

success in Public Sector Projects: Efficiency, Effectiveness, Relevance, Sustainability, Value For Money and Wider Society (Irfan et al., 2021; Volden & Welde, 2022; Du et al., 2023) The model highlights how the success of a project can be measured by both the typical metrics used to measure successful outcomes in project management but also with reference to greater public value.

Sections 2.2-2.6 examined the five CSF domains. Governance and leadership were found to be fundamental and significantly affect decision-making, risk and information management and coordination of stakeholders over time. Specific examples included front-end governance, mechanisms for dealing with changing goals, transformational leadership and relational governance in PPPs as being particularly important for effectiveness, relevance and wider society (Mackhaphonh et al., 2021; Bourne et al., 2023; Fareed et al., 2025; Feng et al., 2022; Andersen & Young, 2023).

Procurement strategy and capability were established as key for converting policy objectives and project needs into contract forms and supplier relationships. Examples of task-control fit, innovative procurement competences, sustainable and circular procurement demonstrated that capabilities related to problem-solving, engagement of markets, selection of procedure, and contract management were essential for efficiency, sustainability, value for money and wider society (Granheimer et al., 2024; Taheriruh et al., 2025; Lingegård et al., 2021; Lingegård & von Oelreich, 2023; Berg et al., 2022; Treviño-Lozano, 2021).

Studies indicated that risk and front-end planning are determinants of project outcomes long before actual delivery. Planning phase uncertainty, front-end governance, risk allocation, and dynamic goals demonstrated that early definition of objectives, explicit treatment of uncertainty, suitable risk-sharing and mechanisms for managing changes to objectives are key CSFs for all six success criteria, particularly effectiveness, relevance, value for money and sustainability (Kuchta et al., 2023; Mackhaphonh et al., 2021; Aravindh et al., 2023; Fathi, 2024; Thai et al., 2025; Bourne et al., 2023).

Finally, digital and data governance emerged as a specific CSF domain, mainly for those projects which involve AI, data analytics and smart-city systems. Literature on AI adoption, data governance and digital champions illustrated that the importance of developing clear governance frameworks, data stewardship, algorithmic accountability and leadership capable of navigating both legal and organizational barriers (Madan & Ashok, 2023; Zuiderwijk et al., 2021; Franke & Gailhofer, 2021; Edelmann & Virkar, 2023; Wilson & Mergel, 2022; Hua, 2025) affects the level of efficiency and effectiveness achieved through automation and integration and also has significant impact on relevance, sustainability, value for money and wider society through transparency, fairness and trust.

Sustainability and public value were finally examined as a cross-domain CSF area. Research on circular procurement, social sustainability, PPP sustainability and digital co-creation illustrated that lifecycle-oriented contracts, social and human rights clauses, relational governance and participatory digital service design are critical for achieving sustainability, value for money and wider society while also interacting with efficiency and effectiveness (Lingegård et al., 2021; Lingegård & von Oelreich, 2023; Treviño-Lozano, 2021; Feng et al., 2022; Almarri & Boussabaine, 2025; Du et al., 2023; Berg et al., 2022; Edelmann & Virkar, 2023).

Section 2.7 focused on Finland-specific capability evidence. It demonstrated that Finland's regulatory and contracting framework – Acts 1397/2016, 621/1999 and 906/2019, together with JYSE 2014, JIT 2025 and oversight by FCCA and NAOF – offer a solid base for transparent and predictable procurement and information management (Johanson et al., 2024; OECD, 2024). Capability building programs such as KEINO and national guidelines for strategic and sustainable procurement have allowed certain organizations to implement more modern practices (Berg et al., 2022; Ministry of Finance & Association of Finnish Local and Regional Authorities, 2023; Ministry of Economic Affairs and Employment, 2018). National monitoring and case studies however demonstrate that the diffusion of these capabilities in Finland is uneven, the follow-up of social and

sustainability aspects are limited and that there is still a prevailing risk aversion culture that prefers safe and low-cost tendering processes above multi-criteria strategic approaches (Ministry of Economic Affairs and Employment, 2021; Taheriruh et al., 2025; Pihlajamaa & Merisalo, 2021; OECD, 2024).

Section 2.8 synthesized the results of these reviews into a comprehensive, Finland-specific CSF framework. The framework contains a context layer (regulatory and oversight environment), a domain layer (five CSF domains) and an outcome layer (six success criteria). It illustrates how CSFs in the different domains and layers interact due to the conditions of Acts 1397/2016, 621/1999 and 906/2019 and the standard contracts such as JYSE 2014 and JIT 2025, and how they can support or hinder multi-criteria success in general (Johanson et al., 2024; Kuchta et al., 2023; Madan & Ashok, 2023; Lingegård et al., 2021; Berg et al., 2022). The framework further includes Finland-specific capability evidence to illustrate where CSFs exist and where they do not exist or are weak. In total, the literature and Finland-specific evidence reviewed in this chapter identify three major gaps. Firstly, there is no integrated, Finland-specific CSF framework that systematically connects governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance, and sustainability and lifecycle value to the six success criteria under the combined limitations of Acts 1397/2016, 621/1999, 906/2019 and standard terms like JYSE 2014 and JIT 2025. Secondly, the connection between CSFs and multi-criteria success is poorly understood in a legally binding environment: most studies deal either with compliance and process or with one dimension of performance, but not with how practitioners manage efficiency, effectiveness, relevance, sustainability, value for money and wider societal effects in their decisions (Volden & Welde, 2022; Du et al., 2023; Berg et al., 2022). Finally, there is little empirical guidance on how the CSFs of front-end quality, risk governance, digital and data governance and sustainability are prioritized and implemented in Finnish strategic projects, particularly when considering the risks of audits and complaints.

The present thesis fills these gaps by using the integrated CSF framework described in

section 2.8 to analyse empirical data collected during web-form survey with Finnish practitioners. The framework will be applied to develop the web-form questionnaire, to determine the sampling and questioning of the five CSF domains and to provide a lens for analysing how practitioners view, prioritize and realize CSFs in practice. Chapter 3 describes the research design, including the methodological decisions, the data collection methods and the analytical procedures, and explains how the integrated CSF framework and the six success criteria will be operationalized in the empirical study.

3 Methodology

This chapter outlines how the empirical component of the thesis was planned and implemented. The key emphasis is placed on the critical success factors (CSF) for strategic projects within Finland's public sector. Researching CSFs for Finnish public sector strategic projects is informed by the research question: what CSFs are most effective at achieving multi-criteria success in Finnish public sector strategic projects; and, how practitioners prioritize and use them in their everyday activities? There are two primary elements to the thesis. First there is the literature review that is outlined in Chapter 2. Second, there is a qualitative online questionnaire study undertaken using professionals employed in Finland's public sector.

A total of four full surveys were collected from the survey. The above data are considered qualitative data based on the respondents' experiences as professionals rather than quantitative data representative of all other possible public sector workers. An essential element to the study is providing insight into how practicing professionals define project success in their own words and the success factors that they view as being the most significant in their practical experience. The remainder of this chapter will be organized as follows. In section 3.1 I will outline the research methodology/design and overall approach. Section 3.2 details the web-based expert survey, specifically the target group, design of the questionnaire, and data collection. Sections 3.3 through 3.5 address aspects of the analysis of data, credibility/trustworthiness/ethical considerations, and provide an overview of the major methodological limitations of this study.

3.1 Research design and Approach

3.1.1 Overall Research Strategy

This thesis is a qualitative and exploratory study in the field of industrial and public-sector management. The purpose is to build a context-specific understanding of CSFs for strategic projects in the Finnish public sector. It does not pursue hypotheses or measure the strength of relationships between variables.

The core empirical material consists of open-ended textual responses to a web-form questionnaire. Respondents were asked to provide descriptions of both successful and less successful strategic projects and to reflect on governance, procurement, risk and front-end planning, digital and data governance, and sustainability in relation to a six-criteria model of project success. Their written answers form a small but information-rich dataset.

Methodological literature usually distinguishes between quantitative and qualitative approaches by both purpose and type of data. Quantitative research uses numeric data and is often used to “quantify attitudes, opinions, behaviours and other defined variables and generalize results from a larger sample population” (Mohajan, 2020, p. 50). By contrast, qualitative research deals with phenomena by analysing experiences, behaviours and relationships without using statistics or numeric data (Basias & Pollalis, 2018). It is often described as a word-based approach that answers questions such as what and how, rather than how many (Basias & Pollalis, 2018).

A qualitative approach is more suitable than a quantitative one here because the amount of responses to be studied is very low ($n = 4$), thus does not allow for statistical generalization. Also, the two central topics of this research — multi-criteria success and critical success factors — are quite broad and heavily influenced by the specific conditions at each location. Qualitative approaches can provide greater insight into how professionals personally define success and critical success factors based on their own descriptions, while providing an opportunity to develop a systematic and open methodological framework.

3.1.2 Conceptual Framework and Role of the Literature Review

The purpose of Chapter 2 was to develop a conceptual framework to guide the development of the empirical study. As such, the chapter identifies five Critical Success Factor (CSF) domains that support the empirical design:

1. Governance and Leadership
2. Procurement Strategy and Capability
3. Risk and Front-End Planning
4. Digital and Data Governance
5. Sustainability and Lifecycle Value

In addition, Chapter 2 provided an additional six criteria-based model to evaluate the success of public projects; namely, efficiency, effectiveness, relevance, sustainability, value for money, and broader societal impacts. Taken together, both of these models offer a systematic framework from which public sector project planners, managers and evaluators can use when planning, governing and evaluating their own strategic projects. Again as previously noted, this empirical framework is being utilized within the methodology in two ways. It provides the basis for the on-line web-form questionnaire. The nine themes that are found within the questionnaire correspond with the five CSF Domains and also reference each of the six criteria for project success. Thusly, it allows respondents to consider important success factors relative to a more comprehensive and multi-criteria approach to defining successful project outcomes beyond just cost and schedule.

Second, the conceptual framework also serves as the basis for the coding and analysis of responses provided in the web-form questionnaire. In Chapter 4, the themes and codes will be organized using the five CSF domains and six success criteria, while also providing space for additional emergent categories to arise inductively from the data. The study will thereby combine a theoretical framework with the ability to allow practitioner's voices and language into the study. Therefore, the literature review will not only provide background information, but it will also shape the questionnaires to the extent to which the empirical questions are framed and how the answers are subsequently analyzed and interpreted.

3.1.3 Qualitative and Interpretative Logic

The empirical study follows a qualitative and interpretative logic. The aim of the study is to understand how Finnish public sector practitioners define "success" and "critical success factors" in strategic projects, and how they perceive trade-off's between efficiency, effectiveness, relevance, sustainability, value for money, and broader social benefits in their everyday professional activities.

Qualitative research is particularly suited for complex topics, which are influenced by their environment and have not been studied extensively previously. In general, it is used to understand how and why individuals behave, perceive, experience, etc., in actual life situations (Bazen et al., 2021). Therefore, this approach has been particularly effective in the present study.

Critical Success Factors of Strategic Public Projects are generally defined with respect to organizational capabilities, political priorities, legal requirements and structural elements of institutions. That is why a qualitative perspective was preferred over a solely quantitative perspective. A qualitative approach provides for the ability to examine these questions in detail through open-ended answers as opposed to a limited number of pre-defined categories or measurement points. Therefore, the research methodology utilized an Interpretative Perspective. The four respondents were considered knowledgeable professionals who reflected both their individual experiences and the broader reality

of Finnish Public Administration. The web-based questionnaire provided them with sufficient opportunity to provide reflective, descriptive answers free from constraints of time and restrictive response formats.

It is also worth noting why quantitative methods were not selected in this case. Quantitative research has its strengths when the objective of the research is to identify causal relationships between clearly defined variables and to generalize findings based on a large sample size (Mohajan, 2020). However, in this study, the relatively small, purposeful sample size, the open and context-dependent nature of the questions, and the focus on meanings over measurements, all lead to the conclusion that qualitative, interpretative research would be best-suited to address the objectives of the study (Basias & Polialis, 2018; Bazen et al., 2021). The strength of the study is to generate practical knowledge, which complements the systematic literature review and contributes to developing a Finland-specific CSF framework.

3.2 Web-Form Expert Survey

The empirical basis for the thesis is an empirical study conducted through a web-based survey of experts using a web-form. The purpose of this chapter is to describe the target group, the sampling strategy, the respondents, the questionnaire design and structure, and the data collection process. The choice of the survey method was based on the possibility of reaching practitioners in various organizations and locations and collecting detailed open-ended comments efficiently.

3.2.1 Target Group, Sampling Strategy and Respondents

Target Group:

The target group for the empirical study consisted of practitioners working with strategic projects in Finnish public sector organizations. Examples of these include, but are not limited to, ministries and central government agencies, cities and city organizations,

regional development agencies and higher education or expert institutes. Common positions among the intended participants included project managers, program managers, project owners or sponsors, development managers, and specialists in procurement, strategy, or digital services.

Sampling Strategy:

The sampling strategy was a purposive one. Approximately thirty experts and organizational contacts were identified based on the research question and the Finnish context who would likely have first-hand experience with strategic projects, public procurement, and governance. The focus was on achieving a range of viewpoints within different organization types and positions of work, rather than creating a statistically representative sample. Purposive selection of information-rich cases is commonly seen in qualitative research when the purpose is to increase understanding rather than create numerical generalization (Basias & Pollalis, 2018; Bazen et al., 2021).

Recruitment and Response:

Email invitations were sent to the identified experts and city/municipal offices. The message explained the purpose of the study, presented the concept of critical success factors in strategic public projects and provided a link to the web-form questionnaire. During the data collection phase, reminder emails were sent. Overall, four complete responses were received. This is a low response rate in comparison to the initial invitation list and is insufficient for statistical analysis. Each of the respondents did provide comprehensive answers across all nine themes and referenced multiple projects and events. Small sample sizes are typical in qualitative research when the data collected are rich and the intention is to better understand complex experiences rather than to estimate population parameters (Bazen et al., 2021). Therefore, the four responses obtained for this thesis will be regarded as in-depth expert opinions that can be analyzed using thematic analysis.

Anonymity and Description of Respondents.

To maintain confidentiality, no specific individuals or organizations will be named in the thesis. The respondents will be referred to by codes R1-R4 in the empirical chapters. Based on the background information and the content of their answers, they can be characterized generally as working in municipal/city, regional/development, and higher-education/expert institute environments. Only at a very high level, these contextual details are utilized so as to avoid the risk of identifying the respondents.

As part of the transparency in the thesis, there might be included a simple overview table (Table 3.1) with three columns: respondent code (R1-R4), role (a general characterization such as "project manager" or "development manager"), and organization type (such as "municipality", "regional organization", "university of applied sciences"). None of the respondents' job titles or the names of organizations will be detailed.

3.2.2 Questionnaire Design and Structure

The web-form questionnaire was built from the conceptual framework established in Chapter 2. The goal was to transform the five CSF domains and six success criteria into practical, open-ended questions that could help practitioners connect to their own work and experiences.

This survey questionnaire addressed nine different subjects which were all explored by means of two open-ended questions per subject; one about the "enablers" (positive factors) and another concerning barriers or gaps (negative factors):

1. Understanding multi-criteria project success:

- a) What are the conditions for a strategic project to be considered as a success? In your view, what defines success when looking at the criteria of efficiency, effectiveness, relevance, sustainability, value for money and social impact?

- b) How can a project be defined as an unsuccess — although the time and budget objectives are achieved?

2. Governance and Leadership:

- a) Factors related to governance and leadership that facilitate success.
- b) Barriers or shortcomings in governance and leadership that hinder success.

1. Procurement Strategy and Capability:

- a) Approaches, capabilities, or tools used to support procurement for success.
- b) Obstacles, rigidities, or gaps in procurement capability.

4. Risk and Front-End Planning:

- a) Practices that take place in the early stages to support successful project outcomes.
- b) Failures or omissions in the early stages of planning that can diminish success.

5. Digital and Data Governance:

- a) Digital and data governance practices that enable success.
- b) Problems in digital or data management that can impede success.

6. Sustainability and Lifecycle Value:

- a) Ways in which environmental, social, or lifecycle aspects have been incorporated to create success.
- b) Sustainability or lifecycle considerations that were not explored or followed-up.

7. Legal and Regulatory Environment:

- a) How the legal and regulatory environments in Finland support project success and CSFs.
- b) In what ways do the legal and regulatory frameworks limit or complicate CSFs.

8. Prioritization of Critical Success Factors:

- a) Which CSFs respondents prioritize in their own context.
- b) CSFs that are not being pursued in practice, although they are important.

9. Balancing the Six Success Criteria:

- a) How do you have to decide on trade-off decisions between e.g. efficiency, effectiveness, relevance, sustainability, value for money, and social impact as regards your project(s).

b) In what ways are there conflicts or compromises between these success criteria.

All questions were left open. The respondent could therefore answer as he/she wished, bring up whatever he/she deemed most important, and include practical examples from the projects when appropriate. Reference was constantly made to the six success criteria and the major CSF domains throughout the questionnaire so that the respondent was able to relate each question back to the multi-criteria success model described in chapter two. At the same time, the way the questions were worded was intended to encourage respondents to go beyond the usual time-cost-scope way of looking at project performance. Prior to the distribution of the questionnaire, it was discussed with the supervisor, and tested by an experienced practitioner (familiar with the Finnish public sector). After this discussion/test run, slight wording adjustments were made to clarify and ensure that all respondents could easily understand the questionnaire regardless of type of organisation.

3.2.3 Data Collection Methodology

The survey was completed using an internet-based standard form tool that allows for easy dissemination of the link and simple exporting of responses for analysis. An informational page regarding the purpose of the study, the voluntary nature of the survey, the estimated time to complete the survey, and the proposed utilization of the collected data for a master's thesis were located at the beginning of the survey. The link to the survey was distributed via email to approximately 30 organizations and experts contacted within the Finnish public sector. The survey remained available for a few weeks in Spring 2025 (specific dates can be added to the final document). Reminders were sent to the respondents throughout the duration of the survey period to encourage participation.

Respondent participation was entirely voluntary and anonymous. Submission of the survey was taken as informed consent. Respondents were advised that they could skip any question they did not wish to answer and that there were no right or wrong answers.

They were encouraged to respond as specifically as possible based on their individual project experiences. Responses could be submitted in either Finnish or English based upon the respondents' choice.

All responses after the survey period had expired were transferred from the survey platform into Word and Excel and analyzed. Those that were initially in Finnish were then translated into English as this would allow the data to be coded and reported in one language; however, it also allowed for maintaining the original response. The final dataset was housed in a secure password protected account where only the author or the supervisor (when necessary) had access to the data. Sections 3.3 through 3.5 will continue from here, discussing how the data was analyzed, the quality and ethics of the research, and outlining the primary methodological limitations of the research design.

3.3 Data Analysis:

This section describes the preparation, coding and synthesis of the four web-form responses, and links the results back to the research question and the conceptual framework.

3.2.4 Preparing the Data

Following the end of the survey period, all responses were exported from the online form into Word and Excel files for analysis purposes. All four respondents were assigned a unique, anonymous identifier (R1-R4) for use in the subsequent findings chapters. There were no translations required since all of the questions and responses were in English. The responses were reviewed multiple times to develop an overall understanding of how the respondents discussed project success, critical success factors, and the Finnish public sector environment. The process of reviewing the responses closely parallels qualitative guidelines that suggest that analysis begins with close readings of the "word-based" data to determine how participants express their experiences in their own terms (Basias & Pollalis, 2018; Bazen et al., 2021). Initial impressions were documented regarding the occurrence of common ideas that may reflect the five CSF domains

(Governance and Leadership, Procurement Strategy and Capability, Risk and Front-End Planning, Digital and Data Governance, Sustainability and Lifecycle Value) and the six success criteria (Efficiency, Effectiveness, Relevance, Sustainability, Value for Money, Wider Societal Effects). These impressions served as a bridge between the conceptual framework and the subsequent coding.

3.2.5 Coding Framework and Thematic Content Analysis

The responses were analyzed by employing thematic content analysis to establish whether there were identifiable common patterns in how practitioners discuss the critical success factors and multi-criteria success. Unlike many studies, which may have focused on quantifying how frequently specific terms or phrases occurred, the purpose here was to examine the meanings and patterns behind how practitioners discussed these topics. Consistent with the nature of this research, Bazen et al. (2021) indicate that qualitative methods can be particularly helpful for understanding complex real world phenomena through the experiences and perspectives of those who experience them.

Coding in this project followed an inductive/deductive hybrid approach. Initially, all primary codes were established deductively from the conceptual model presented in Chapter 2. These included the five CSF domains; six success criteria; and some other categories including both the legal and regulatory environment and explicit prioritization of CSFs. However, at the same time, coding was open to developing new inductive codes based on themes that emerged directly from the data. If a respondent had referenced issues that could not be adequately explained by the initial framework, new inductive codes would then be generated. Examples of such inductively derived codes include organizational culture and risk attitudes; inter-organization cooperation; resource constraints; lack of personnel skills; and conflicts between various success criteria (e.g., low price procurement vs. broader social impacts).

All coding was performed manually within Microsoft Excel. Relevant portions of each response were highlighted and assigned a short code name that represented the core

idea contained within that portion. Similar to Saldaña's (2016) now commonly cited definition, a code was defined as a single word or brief phrase representing the fundamental meaning of a segment of qualitative data. In addition to providing codes for individual pieces of qualitative data that reference specific CSFs (such as active steering group, early market dialogue, clear responsibility for data), codes also provided references for particular success outcomes (i.e., citizen confidence; service outcomes; budget constraints; etc.).

Following completion of the first round of coding, like-coded segments were organized into broader thematic categories. For example, coded segments referencing clearly stated goals, reasonable scope, and early identification of problems were merged under the category of Front End Clarity. Likewise, coded segments referencing award criteria, life cycle cost, and flexible procedures were merged under Procurement for Value and Adaptability. Finally, coded segments referencing stakeholder involvement, regional economic development, and job creation were categorized as Broader Regional/Societal Impacts. Once the themes were identified, each of the themes was evaluated against the six success criteria. The evaluation assessed whether the respondents (explicitly or implicitly) linked a given theme to the six success criteria. The evaluation re-associated the empirical evidence to the multi-criteria success model developed in the literature review and permitted a more organized assessment of which CSF contributes to success.

Finally, the themes were compared across the four respondents to identify the CSFs and issues that were present in multiple responses and those that appear to be more context-dependent. Since there were only four respondents, the objective was not to generalize or to establish a quantitative representation of the frequency of particular themes, but to identify similarities and differences in how various practitioners construct success and CSFs in their respective contexts (Basias & Pollalis, 2018; Bazen et al., 2021). The comparisons among the themes constituted the foundation of the empirical chapters.

3.2.6 Relating Back to the Research Question

At the final stage of analysis, the major themes identified in the previous stages were synthesized to provide an answer to the research question: which of the critical success factors are the most important in enabling multi-criteria success in Finnish public sector strategic projects? And how do practitioners prioritize and act upon them in practice? For each of the themes analyzed, the study asked the type of CSF it represented within the five domain areas, how the respondents described the impact of each of the CSFs on one or more of the six success criteria, and to what extent did each of the CSFs receive emphasis across the four responses. These analyses will serve as the structural bases for the presentations of the empirical findings and their implications for Finnish public sector strategic projects in Chapters 4 and 5.

3.3 Trustworthiness and Ethical Issues:

This section discusses the measures taken to address the quality and ethical merit of the study. The focus of the discussion will be on credibility, transferability, dependability, confirmability and research ethics in the context of a small qualitative expert survey.

3.3.1 Credibility and Transferability

The credibility in this research is related to the degree to which the findings are supported by empirical evidence and meaningful in the context of Finland's public sector. Factors supporting credibility include: first, the participants were professional individuals who were actively engaged in the planning and implementation of strategic projects. As such their responses were grounded in actual practice, not solely in theoretical constructs. Secondly, the questionnaire required the respondents to provide descriptions of both successful and unsuccessful examples of project and practices. This provided much clearer and more experiential responses compared to a more generic or abstract response format. Thirdly, the coding and theme development process was conducted according to an identifiable and structured framework consisting of the CSF Domains and

Success Criteria presented in Chapter 2. Simultaneously, the analytical process also permitted the emergence of new themes as identified through the data when appropriate. Lastly, all interpretations presented throughout the Findings Chapters were consistently connected to verbatim quotes from the respondents. This assists the reader in understanding how the themes were developed from the data.

Given that this research consisted of only four participants, it did not seek to generate statistically generalizable results. Generalization typically occurs through quantitative methods using large samples and numerical data (Mohajan, 2020). This research sought to develop transferable knowledge, as defined within qualitative research. Transferability has been described as "the process of abstraction applied to information obtained from specific persons, places, and times so that it can be applied to other populations that have not been investigated" (Drisko, 2009, p. 103). In accordance with Drisko's definition, this study has provided sufficient contextual detail regarding the Finnish public sector environment; organizations participating in this study; and major thematic areas identified during the data analysis. Therefore, readers will have a basis for determining if, and to what extent, these findings may be applicable to other organizations operating under similar environmental conditions.

3.3.2 Dependability and Confirmability

Dependability relates to how well and consistently the study was conducted. A clear order of procedure is shown in this thesis for why and when each step was taken. These steps are: developing the literature-based framework for conceptualizing the stages of public-sector project management process from the literature review; designing the web-based survey on that basis; selecting respondents by purposive sampling and collecting data from them; coding and processing their responses; and bringing the analysis together using themes from the coding. This is consistent with qualitative research's expectation that the study will provide logical coherence between the research questions and the line of reasoning used to address them (Flick, 2022, p. 3). Also, this structure allows another researcher to follow the same process as they see fit.

Confirmability relates to how much the findings reflect the views of respondents rather than the interests or bias of the researcher. Even though the personal experience of the researcher with public sector project management may have motivated this study therefore influenced it, the researcher kept the analysis close to the empirical materials. Codes were based upon actual words/ideas used by respondents. Themes were based upon combinations of multiple coded sections, not single comments. Support for interpretation of results is provided by quotations from chaps. 4 & 5. Description of coding and analysis protocol is also presented in this chapter in order to show how raw data gave way to final interpretation.

3.3.3 Research Ethics

The researcher included principles of research ethics in each step of the research. As indicated by Mohajan (2020, p. 68), "research ethics relates to the moral correctness of an action that may benefit others while protecting the rights of the people involved in the study from potential harm. Research cannot be done without ethics". The primary ethical issues for this research were obtaining informed consent, maintaining confidentiality, and treating the data with respect.

The initial page of the web-form indicated the purpose of the study, the expected duration of the study, the voluntary nature of participation, and the proposed uses of the data in a Master's Thesis. Completion and submission of the web-form was accepted as informed consent. The respondents were able to opt-out of answering specific questions if desired. Direct personal identifiers were not collected in the data set utilized for analysis.

Anonymous and confidential reporting was conducted when reporting the findings. The respondents were identified only as R1-R4, and no organization names were referenced. When discussing project examples in the findings, the details that would allow for the identification of a specific organization or individual were either deleted or generalized. The exported survey data are stored on a secure, password-protected server, and are accessible to the author and, if needed, the supervisor.

There were many examples of negative comments regarding "governance", "procurement limitations" and "examples of failed project outcomes". As such, particular attention was given to the wording of all questions within the survey to minimize potential criticism of identifiable persons or organizations. Standard ethical considerations common to most Master's thesis studies in the field of Human Resources Management were followed during the course of this research. Since no special approval from a local ethics committee was needed, basic principles of obtaining informed consent, maintaining participant confidentiality, and treating participants with respect were adhered to at all stages of the research.

3.4 Methodological Limitations

The selected methodology has a variety of limitations that must be taken into consideration when assessing the validity of the results. The most apparent limitation is the extremely limited number of respondents. Since only four completed surveys were returned, the findings cannot be generalized to all Finnish public sector organizations. Larger samples and numerical data are generally more appropriate for quantitative studies that seek to "generalize results from a larger sample population by the way of generating numerical data" (Mohajan, 2020, p. 50). This study does not attempt to generalize results; instead, it is an exploratory qualitative study.

Another restriction is connected with a method of random selection and voluntary participation. The questionnaire was made using a purposeful sampling (that is respondents were selected based on their likely knowledge and expertise). Therefore, those who took part can very well represent individuals with greater interest in "strategic" projects, development activities, or public sector reforms compared to other civil servants. Moreover, there can be missing viewpoints among units which tend to be less active or have few financial means.

The third limitation relates to the type of data. The data consist of self-reported experiences and perceptions obtained through a self-administered internet survey, rather than observations, internal documentation, or performance metrics. Respondents obviously emphasize issues that are significant from their point of view, and some facets of organizational practice may be less evident to them. For example, project owners, project managers, and experts in procurement or digital services each view different aspects of the same governance system.

The four responses demonstrate sufficient practical understanding of the content. In addition, each response mentions at least one project. The respondents' experience is from a variety of public sector organizations. Thus, the responses provide a valuable practical insight into how the concepts of multiple criteria success and Critical Success Factors (CSFs) are conceptualized and given priority by Finnish strategic project practitioners. Careful reading of the results in this chapter combined with the systematic literature study presented in Chapter 2 create a robust foundation for developing a Finland-based CSF framework for strategic projects conducted in the public sector. Furthermore, it provides an indication of areas where additional research could be carried out using larger samples or through other complementary methodologies.

4 Results

This chapter presents the empirical results from the study. The data was analyzed from the four completed responses to the qualitative web-form survey presented in Chapter 3. The four respondents have all had hands-on experience of strategic projects in the Finnish public sector, and therefore the responses were viewed as qualitative expert material, not as part of a statistical sample. The objective of the chapter is to illustrate how these practitioners describe project success, identify the most critical success factors they believe are important, and express the trade-offs between the various success factors they face in their daily work. The chapter will address the central research question of the thesis: What are the most effective critical success factors for achieving multi-criteria success in Finnish public-sector strategic projects, and how do practitioners prioritize and implement those critical success factors in their day-to-day activities?

In an empirical sense, the chapter will contribute primarily to the objective of obtaining practitioner perspectives on critical success factors in Finnish strategic projects. Additionally, the practical material collected in this chapter will provide the necessary basis for developing the findings of the next stage of the thesis; the empirical findings are integrated with the literature-based framework and further developed into a refined Finland-specific understanding of project success and what drives it. The empirical findings are interpreted using the conceptual framework developed in Chapter 2 and operationalized in Chapter 3. As previously explained, project success is perceived in this thesis as a multi-dimensional concept that includes (among others) efficiency, effectiveness, relevance, sustainability, value for money and wider societal effects. The empirical analysis is organized around five critical success factor domains: Governance and leadership, Procurement strategy and capability, Risk and front-end planning, Digital and data governance, Sustainability and lifecycle value. In addition, the chapter examines how respondents rank these factors, and how they describe the conflicts between the six success criteria in the Finnish rule-bound environment.

The chapter is organized as follows. Section 4.1 introduces the empirical material and explains how the empirical material supports the overall research goals. Section 4.2 analyzes how respondents define successful and not completely successful strategic projects, thus making the six-criteria success model more tangible in practice. Section 4.3 provides the major critical success factors identified in the responses, ordered according to the five domains used in this thesis. Section 4.4 then proceeds to cross-cutting findings by examining which of the factors respondents emphasize the strongest, where they see imbalance, and how they describe trade-offs between competing success criteria. Finally, Section 4.5 provides a synthesis of the main empirical findings and establishes the basis for Chapter 5, where the findings are compared to the literature and used to develop a refined Finland-specific critical success factor framework.

4.1 Overview of Empirical Material and Link to Research Objectives

The qualitative data of this chapter consist of the answers to all the questions in the Qualitative Web Form Survey (Chapter 3) from four respondents who all have direct knowledge of Strategic Projects within the Public Sector of Finland. Respondents describe both positive and negative examples of projects using the nine areas of the questionnaires, provide their opinions on governance and procurement arrangements, provide insights into risk and front-end practices, describe their perspectives on digital and data related issues, and evaluate how Sustainability, Value for Money and wider Societal Effects are dealt with in practice. Due to the limited number of respondents, the quality of the responses is high because each respondent has used experiences from more than one project and evaluated various dimensions of Success and Failure.

Respondents are referenced anonymously through codes (R1-R4) throughout the chapter to ensure anonymity. The background information to the survey suggests that one respondent is employed within a Higher Education or University of Applied Science context, one respondent is representative of a Regional Development Organisation or Business Promotion Organisation and one respondent was employed as a Project Manager within a Public Sector Project Environment. One respondent stated no specific job title

within the survey; however based upon written responses the respondent appeared to be focused upon Governance and Organisation Perspective. As outlined within the Ethical Approach in Chapter 3, organisation names and other identifiable information have been excluded. A summary of the respondents at this general level is provided in Table 4.1.

Table 1 Overview of survey respondents

Re-spond-ent	Organisation context (high-level, based on survey responses)	Role/designation (as reported in survey)	Main focus of strategic project experience reflected in responses
R1	Higher-education / University of Applied Sciences context	Team Leader	RDI and competence-development projects; data/AI and register-based work; sectoral development initiatives
R2	Regional development / business-promotion organisation	Business Development Manager	Multi-stakeholder regional development projects; business engagement, ecosystem-building, start-ups, employment-related impacts
R3	Public-sector project environment (organisation type not explicitly stated in survey report)	Project Manager	Strategic projects with strong procurement and contract-management emphasis; competition/market constraints; limited flexibility for changes
R4	Public-sector environment (organisation type not explicitly stated in survey report)	Designation not reported	Governance- and organisation-oriented perspective; emphasis on shared goals, responsibility, systematic progress, and lifecycle economy

The web-form design means that each response cuts across several projects and experiences rather than documenting a single case. As such, they create a very concise but rich source of data on the commonalities in strategic public projects within the Finnish legal, organizational and procurement frameworks. Thus, the analytical potential of this source of data will be less about the number of individuals answering and more about the amount of reflective material from the respondents on the various themes throughout the questionnaire. Therefore, the purpose of this chapter is not to make a statistical generalization. Rather, this chapter identifies the common elements, the differences and the most important aspects of what successful practitioners define as success and the critical success factors.

As for the purposes of the thesis, Chapter 4 has a well-defined task to perform. The structured literature review and the preliminary Finland-specific CSF framework were established in Chapters 1 & 2; Chapter 3 was used to translate the framework into a qualitative web-form instrument. This chapter represents the empirical component of the thesis and shows how practitioners view, prioritize and implement critical success factors in their Finnish strategic projects. In that way, this chapter meets the empirical goals of the thesis and provides the practitioner-oriented material that will be necessary for comparing the results of the survey against the literature-based framework, and refining that framework in Chapter 5.

Therefore, the findings of this chapter should be viewed as evidence testing and sharpening the analytical model previously developed in the thesis. Specifically, this chapter demonstrates how the respondents interpret multi-criteria project success, which critical success factors are identified in all five domains, and where practitioners perceive the major tension and imbalance currently existing in their practices. In that way, Chapter 4 serves as the central empirical link between the conceptual framework of Chapter 2 and the integrated discussion and framework refinement of Chapter 5.

4.2 Practitioners' Conceptions of Multi-Criteria Project Success

The first theme of the survey asked what a "successful" strategic project looks like, in the words of respondents, for their organisation when time and budget are considered in conjunction with service impact, sustainability, value for money and wider social impacts. The next question was to specify a project that did not meet their success definition, even if a firm time and budget were respected. When considered together these two questions provide an empirical base for analysing how practitioners themselves understand multi-criteria success in public-sector strategic projects in Finland.

4.2.1 What a successful strategic project looks like

The first part of the survey asked participants a very general question; however, there was no lack of depth. Participants were asked to explain what they considered to be "a successful strategic project" in their organization based on criteria that included service impacts, sustainability, value for money and social contribution. To further explore this question, the participants were asked to consider a second group of projects (that did not meet all three of the above mentioned criteria) and to describe those as unsuccessful. Together, both of these questions provided an empirical foundation for understanding how professional members of the Finnish public sector define multi-criteria project success.

An analysis of the four participant responses reveals that strategic projects delivered on time and within budget can be deemed as successful by participants. But it is much more than just delivery of outputs. Success, rather, the participants characterized as being related to a range of long-term outcomes including enhanced organizational or regional capabilities, and a clear link to higher level strategic goals and objectives.

R1 stated the success of a project supported by the Ministry of Education and Culture with regards to artificial intelligence (AI) and big data in construction. Although the success of this project was measured via several technical guidelines and educational tools,

it is also possible to identify other measures which would relate to building the strategic capability of an organizations construction technology unit. A successful project therefore leaves behind something that will last. Beyond completing a sequence of task assignments, a successful project has created something that will have value at some point in the future. R2 defined success similarly to R1. R2 stated that a successful project creates long-term value; this value may exist through enhanced service(s), new process(es) for delivering service(s), increased capabilities within an organization, or larger influences such as start-up activity, job opportunities, etc.

R4 analyzed success from an internal organizational perspective. The project must be well planned and organized for it to be a success. Likewise all of us must share the same vision that directs our efforts and supports one another. Although the terminology he used was somewhat different from R2 and R1, the message was the same. There's more to success than just delivery.

Practitioners' answers regarding success when viewed by means of the Six Criteria Model indicate that their definition of success encompasses a wide range of layers. Although efficiency is still considered as a factor with respect to their perception of what constitutes success (especially when respondents refer to "good" planning; "financial discipline," etc., and making effective use of resources), it is not the only factor. Effectiveness is indicated by the fact that respondents expect that projects will create real outcomes (e.g. improved capabilities, better ways of working, or the desired benefits). Relevance was evident in the connection made by many respondents between project work and larger strategic and/or societal requirements. The concept of "value for money" is evident within the idea of using resources effectively while creating benefits which last. Finally, the impact on society at large is most apparent when respondents reference regional development; job creation; growth of ecosystems; and business growth.

According to the findings of this research, many of the studied individuals view the sustainability concept as much broader than merely the environmental. Sustainability is indicated through the concept of continuation, which gives long-term value (continuing to

generate) and/or continued production of results after formal project termination. The first argument suggests that players perceive sustainability as possessing both. The participant's context, both environmental and temporal, was first contextualized, and secondly, I will show that the subjects of this study had a larger definition of what it means for something to be sustainable than just from an environmental perspective. This means that the participants believe sustainability refers to generating value over time.

Table 2 Multi-criteria success as described by respondents

Success criterion	How respondents describe it in successful projects	Illustrative examples / phrases	Re-spondents
Efficiency	Disciplined use of time, budget and organisational effort; orderly implementation	“efficient use of the budget”; “well planned and well organised”	R2, R4
Effectiveness	Achievement of intended results, including stronger capabilities, improved practices, or meaningful project outcomes	“strategic competencies were improved”; “long-term changes”; “results and effectiveness”	R1, R2
Relevance	Alignment between project goals and wider strategic or societal needs; impacts considered from the outset	“impacts should have been addressed in the project goal setting”; “the strategy is already in the project goals”	R3
Sustainability	Durability and continuity of benefits beyond the formal project period	“lasting value beyond the project’s lifetime”	R2
Value for money	Efficient use of resources combined with durable and embedded benefits	“clear value for money”; lasting and scalable outcomes	R2

Wider societal effects	Benefits extending beyond the focal organisation, especially to regional development, employment and ecosystem-building	“strengthening the local ecosystem”; “future employment”; “benefiting society as a whole”	R2
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4.2.2 Projects not considered fully successful despite time and budget

The follow-up questions helped explain the second half of the definition of the success concept. When describing projects that they would not describe as being fully successful, the majority of the respondents did not indicate that the first thing that came to mind was just the fact that the project failed relative to schedule or budget. Instead, they indicated that the major reason that they could not consider the project as having succeeded at all was because the overall value had not been achieved and/or that the project had not delivered the anticipated long-term results expected from a large-scale strategic effort.

One respondent stated that some strategic projects aren't considered to have achieved full success "not because of time or budget overruns, but because the longer term impact is insufficient" (R2). As this respondent noted, while a strategic project may meet all of the formal output requirements and remain formally under control, it can still fail to achieve its intended longer-term impacts and benefits because it does not create the type of durable services, business activity, follow-up mechanisms or scalable models that are expected at the end of a strategic initiative. The respondent also identified several barriers to creating the long-term regional impacts and value for money that were anticipated, including limited continued funding, weak integration into the broader ecosystem and unclear paths to either subsequent development or commercialization (R2). Although numerous respondents reported similar challenges and frustrations, they did so with differing characteristics. A respondent described how politically-driven decision making affected his ability to maintain coherence across all aspects of large-scale projects. He explained that "goals were not in sync," therefore he could not meet time

constraints or resource restrictions established for his projects. The respondent also identified politically-driven decision making as creating an unstable environment that allowed for many changes in projects while they were being implemented. (R3) Another respondent noted that frequent changes made during the implementation of a project result in increased cost and negatively affect other elements of the project. (R4) Overall, the data indicate that projects can be classified as "not completely successful" because of poor goal alignment; multiple changes occurring during implementation; or there is no linkage of original objectives to ultimate project implementation.

The data collected through the survey show significant differences between completing a project in terms of formal completion requirements versus completing a project successfully in terms of strategy. For example, if a project meets the most stringently defined performance criteria and yet is determined to be either incomplete or unsuccessful in its strategic execution, it may be due to at least one of three reasons: (1) the project has failed to produce the desired long-term outcomes; (2) the project's goals have not been aligned sufficiently; or (3) the products produced through the project have not been linked to any organization-wide structures intended to provide ongoing support to these products post-project close-out. Therefore, the results obtained from this study support the major hypothesis of this thesis: Time and Budget are both necessary and sufficient conditions for Success for Public-Sector Projects in Finland.

Figure 4.1 represents the difference that respondents expressed regarding successful strategic initiatives compared to those that are not fully successful even though they met the time and budget expectations of the stakeholders.

Successful strategic projects	Not fully successful (even if time/budget met)
<ol style="list-style-type: none"> 1. Clear shared goal and commitment; good organisation and responsibility 2. Active steering and regular follow-up 3. Lasting value beyond the project period (capabilities, services, ways of working) 4. Disciplined use of budget and resources 5. Stakeholder engagement supports uptake and long-term impact 6. Lifecycle thinking and broader benefits (region, ecosystem, citizens) 	<ol style="list-style-type: none"> 1. Outputs delivered but weak long-term impact after project end 2. Goals not aligned; changes during execution 3. Weak embedding: unclear follow-up responsibility or limited continuation resources 4. Low flexibility once decisions/contracts are fixed 5. Focus on numbers/cost control over meaningful outcomes 6. Trade-offs handled narrowly (e.g., lowest price dominates over lifecycle value)

Note: Conceptual summary derived from Theme 1 responses in the web-form survey.

Figure 4-1 Successful and not fully successful strategic projects as described by respondents (R1–R4)

In summary, the answers provided here demonstrate how all of the practitioner respondents have an understanding of project success that is consistent with the Six-Criteria Model for Project Success presented in this thesis. Their conceptualization of project success extends well past the traditional iron-triangle criteria (time, cost, and scope) and places greater emphasis on longer term value; strategic alignment; continued achievement of successful outcomes; and organizational or social benefit. These findings establish a strong connection to the latter sections of this thesis, which will examine those critical success factors that are viewed by respondent practitioners as being most important for delivering a broad, multi-criteria type of success in real-world practice.

4.3 Critical Success Factors by Domain

The core of the analysis is what are the critical success factors for respondents regarding multi-criteria success of the strategic projects of the public sector of Finland. The areas of questionnaire related to governance and leadership, procurement strategy and capability, risk and front-end planning, digital and data governance, and sustainability and lifecycle value provided an opportunity for respondents to identify both the factors that

enable success and those that hinder success within each area. Respondents' answers were categorized and grouped according to themes using the hybrid deductive-inductive method as mentioned in Chapter 3. This section outlines the major themes per domain and how they relate to the six success criteria.

4.3.1 Governance and Leadership

According to the five domain framework discussed in this thesis, governance and leadership were among the largest factors cited as contributing to multi-criteria project success. Governance, in the responses of practitioners, was not discussed as simply the organisational form surrounding the project. On the contrary, they considered it as a very handy notion. The project may be guided or directed by others who have responsibility for doing so; tasks are allocated among people within the organization who are responsible for managing the project; and decisions are made regarding this project; and you can maintain a strategic-directed focus throughout project implementation. The material presented here views governance and leadership as tools for achieving alignment and coherence among the goals of the project, the resources available to manage the project, and the expectations of all the stakeholders involved.

Practitioner feedback also suggested two general conditions which contribute to effective governance. First, there needs to be active steering. Second, the active steering should be done by competent steering individuals. One practitioner stated that a successful steering process would include having a "steering group consisting of professional, active and relevant members" which could direct the project towards achieving desired outcomes; make necessary decision(s) at appropriate times; hold meetings frequently enough; and request the project management team to provide specific progress updates (R1). A second respondent described a functional steering group process in a similar manner, citing the importance of "leadership from a qualified chairperson," including consideration of impact; transparency; and clear linkage between project objective(s); results produced by the project; and resources consumed by the project (R2). The above comments indicate that governance is generally most valuable when it

actively guides the direction of a project. Thus, a steering group may matter not due to its existence as a formal body, but rather its ability to give the project guidance; maintain some level of order; and assist the project in maintaining consistency in its progress.

A second enabling condition identified in the responses is the need for clarity regarding roles and a shared purpose among participants. The respondents repeatedly emphasize the notion that strategic projects are more effective when all relevant parties have a clear understanding of the overall objective and their respective role(s) in achieving that objective. This was previously mentioned as a success condition in earlier descriptions, where one respondent emphasized the importance of a common goal to which all relevant stakeholders were committed, and another respondent emphasized the importance of clearly defined organization and responsibilities as critical to project progression (R4). The same logic is presented in the governance responses in a more operational format: Good governance is associated with clear roles, transparent follow up, and a logical link between project objectives, actions and reporting (R2). Thus, respondents view governance as both supervision and the creation of a coherent organizational culture based upon a strategic objective.

One of the additional positive themes that surfaced throughout the data collection process was the aspect of stakeholder participation and communication.

According to one participant, the actions taken by project members that create a sense of connectedness to the external business and societal world constitutes the element of 'governance' in the context of a project. This participant elaborated upon the role of workshops/events that provide 'practical and useful information' to businesses as a method for creating long-term relational connections which would lead to long-term results (R2).

Examining this through a lens of stakeholder management strategy may not be the best choice as it has governance implications. Management uses internal control systems to ensure reliable financial reporting. Governance involves putting in place a system

through which the outside world can understand what the project is setting out to achieve and what it will eventually achieve. In addition to stakeholder management issues, the ability to communicate/report on project progress and document achievements/learnings was found essential in achieving success in implementing strategic projects (R1, R2). The replies collectively suggest that effective governance occurs when there is both clear organisational understanding internally AND effective documentation of communication/involvement with any relevant stakeholders.

The second element of governance issues reflected in the responses is equally important. The central challenge with governance seems to arise from the absence of clear definitions of accountability/responsibility. It also seems that the distribution of authority is poorly defined. According to Respondent 3, a project manager will be assigned on certain projects but they generally do not have the authority to direct the directorate. Consequently, no individual is responsible for carrying out all project components successfully. Rather, the different project components are often allocated to several people / entities. In saying this, there is far more than merely a lack of formal governance. Responsibility and power have not matched up well, is the main problem. If many actors are responsible and no actor has real authority, then the project may formally remain active but control of it will be strategic. Another instance of a governance limitation flagged in the responses entailed a postponement in making decisions or making decisions with caution. There are governance problems when decisions are not taken in a timely manner, when it is not clear which course of action to pursue, or when the level of steering is so low that no timely responses can be made to problems that present themselves (Respondents 2 & 4). While it is true that delaying decisions will impact the timing of the project, similar delays also have negative impacts on project performance in strategic projects. Strategic project performance can be undermined as misalignments are allowed to continue, value for money is reduced due to increased uncertainty or work-around is required and reduced stakeholder confidence decreases potential for better positive impacts.

In addition to the aforementioned issues with decision-making and resultant risks to

achieving intended outcomes, an additional governance-related challenge identified by way of these responses pertains to failure to follow-up on decisions made post-decision. Specifically, one respondent noted a lack of communication between project stakeholders/partners, limited meeting frequency and poor financial oversight resulted in significantly less meaningful/sustainable results from projects regardless of their original quality (Respondent 2). It is clearly evident that governance challenges do not begin at the inception of a project. Challenges may develop during the implementation phase if monitoring and learning processes fail to sufficiently identify and manage emerging concerns. The final governance-related challenge identified through the responses was that project managers may redirect their attention from maintaining consistency with long-term strategic goals toward managing the day-to-day operations of the project. One respondent stated that some projects are managed solely to ensure continuous workflow without providing lasting change or resulting in increased impact (Respondent 2).

Collectively, the responses indicate that governance and leadership contribute to project success primarily through their influences on project effectiveness, relevance, value for money, and social impact, with some indirect influences on project efficiency. Effective steering, clear roles, timely decisions and regular follow-up facilitate alignment between project goals, activities and resources and enhance the likelihood that projects will produce sustainable outcomes rather than short-term outputs. Conversely, fragmented ownership, weak authority, slow decision-making and weak monitoring increase the probability that projects will comply with procedures but fail to demonstrate success in a strategic sense. In this manner, the empirical data provide support for the preliminary framework established in Chapter 2 and add specificity to it by illustrating the particular governance mechanisms that practitioners believe are most significant in the Finnish public sector.

Table 3 Governance and leadership CSFs and linked success criteria

Theme	Short description	Main success criteria affected	Re-spondents	Illustrative expression
Active and competent steering	Steering group actively guides the project, meets regularly, requires interim results, and makes decisions when needed	Effectiveness; relevance; value for money; wider societal effects	R1, R2	“professional, active suitable steering group”; “well-functioning steering group work, led by a competent chairperson”
Clear roles and ownership	Responsibilities are visible and authority is aligned with accountability	Effectiveness; relevance; value for money	R2, R3, R4	“looks after the whole project”; common goal, organisation and responsibility
Timely and decisive leadership	Decisions are made in time and steering responds when change is needed	Efficiency; effectiveness; value for money	R1, R2, R4	governance should “make decisions when change is needed”
Stakeholder engagement and communication	Governance includes practical dialogue, reporting, and communication with relevant stakeholders	Effectiveness; relevance; wider societal effects	R1, R2	“clear, practical benefits for businesses”; competent reporting and communication
Monitoring and follow-up	Progress, meetings, interim results and budget follow-up are systematic and transparent	Efficiency; value for money; effectiveness		

4.3.2 Procurement Strategy and Capability

Procurement strategy and capability were two of the most obvious themes that emerged empirically across the four case studies. Procurement was viewed as a way in which project needs, legal requirements, budget constraints and broad success criteria were translated into contracts, supplier relationships and implementation conditions. Therefore, respondents viewed procurement as a core component of project management strategies rather than simply as an administrative exercise.

In relation to what enables procurement, the responses indicated that there are two major factors. First, the procurement approaches that enable cooperation and practical problem-solving were considered important. One respondent provided an example of an alliance type procurement approach that had been used previously in an infrastructure project. This respondent highlighted how close cooperation between the client and the principal contractor during the development stage of the project facilitated the project moving forward more efficiently and that the same cooperative ethos continued during the implementation phase. The respondent highlighted that this reduced disputes "because the client is involved in the decision-making of the project in the project group" (R1). This example suggests that, from the practitioner's perspective, procurement can be a key factor in supporting project success when the chosen procurement model facilitates a cooperative working relationship between parties as opposed to using only formal contractual mechanisms to keep parties apart.

The second key theme which emerged from the respondents' comments concerning procurement involved the importance of preparation and competition within procurement. R2 indicated that most of the procurements conducted by their organization fell under the National Threshold and therefore open competitive tendering was not legally required. However, he said his organization followed its own internal rules to ensure fairness, competitiveness and best practice throughout the procurement process. For instance, he said they typically sought out at least three quotations from different

suppliers. He believed that this provided them with a good value-for-money outcome, while maintaining an efficient and flexible process.

Another respondent made a similar comment when he said that "procurement works well...when there is good competition and well-prepared request for quotation" (R3).

In general, the comments suggested that procurement capability was not perceived as being dependent upon very complex processes. Rather, what appeared to matter most were fundamental yet important practices; namely clear tender preparation, reasonable requirements and the potential to generate genuine competition.

A third positive theme emerging from the comments was the influence of lifecycle economy in procurement decisions. R4 said that they attempted to incorporate lifecycle economics into both project and procurement decision-making. While the data does not provide a detailed description of how lifecycle economics is practiced within the procurement environment, the fact that R4 mentioned lifecycle economics as one aspect of their decision-making process is significant. It demonstrates that at least part of the sample viewed procurement quality not solely in relation to the cost of goods purchased initially, but also in terms of overall value-for-money; including aspects related to sustainability and long-term value. This provides further evidence of the link between procurement and long term value, particularly in strategically focused projects where ongoing benefits post-contractual are anticipated.

On the other hand, the negative side of the responses are also important. Two recurrent issues have been identified; firstly, the lack of sufficient preparation prior to the commencement of procurement and secondly, the occurrence of late changes during the contract execution phase. Rigid procurement procedures, lack of clarity and uncertainty in the definition of the scope of the project have resulted in inefficient and costly procurements. Furthermore, procurement has become an obstacle for achieving project goals and objectives. Rigid interpretations of rules and limited opportunities for adaptations during the implementation phase of the project may lead to administrative burdens and delayed decision-making processes, even though the formal procedures have been followed (R2). Another respondent also mentioned that in cases where the number

of potential bidders is very small and where the re-tendering or waiving of requirements is a time-consuming task, it may be almost impossible to introduce changes to the original contract (R3).

The Finnish point of view involves more than just doing what technically is legal. The essence of procurement is the freedom to operate within legal and regulatory compliance (or authorized operation). Obeying the law or complying with legislation is not good procurement. Best procurement practices state that the procurement must be done to help the real project and not only the formal processes.

Third were the responses (and perhaps themes) arising from asserts by surveyees, about the pressure on procurers arising from the recourse to lowest-price purchasing. In the view of respondent R4 “there are too many lowest price procurements” and “the lifecycle cost of the product or service is usually ignored”. This fits in well with the discussions in Chapter 4 regarding trade offs when lowest price becomes the most important determinant of value for money. Nevertheless, respondent R4 did not consider this a big issue. Instead, he viewed the lowest price as a factor that affects the decision of procurers. Accordingly, the lowest price becomes a battleground for an issue of what really is value for money which concerns strategic public projects. In strategic public projects, if lowest price becomes the most important criterion to make procurement decisions, it may run counter the objectives of such projects – namely quality, life cycle consideration and long term public benefits.

Overall, the responses collectively indicate that the procurement strategy and capability can contribute to project success through various mechanisms including, but not limited to, efficiency, value for money, sustainability and social value. Co-operative models, meaningful competition, good tender preparation and the focus on lifecycle economy are seen as contributing positively to procurement quality. Conversely, poor preparation, continuous changes, strict adherence to rules, limited competition and sole reliance on the lowest price are seen as negatively impacting the contribution of procurement to the

overall success of a strategic project. In summary, the empirical findings reported above support the preliminary framework that was outlined in Chapter 2, but further refine this framework in that the empirical findings demonstrate that, in practice, procurement capability is primarily experienced as the ability to connect legal compliance with practical implementation conditions and the longer term project value.

Table 4 Procurement-related CSFs and linked success criteria

Theme	Short description	Main success criteria affected	Respondents	Illustrative expression
Cooperative procurement models	Procurement arrangements that support close cooperation, shared problem-solving and ongoing client involvement during implementation	Effectiveness; value for money; sustainability	R1	“the client is involved in the decision-making of the project in the project group”
Internal rules supporting competition	Use of organisational procurement rules below threshold values to ensure equal treatment, competition and practical flexibility	Efficiency; value for money	R2	“efficient and flexible”; requests for offers from at least three suppliers
Well-prepared requests for quotation	Clear and realistic tender preparation that allows meaningful competition and workable implementation	Efficiency; effectiveness; value for money	R2, R3	“good competition and well prepared request for quotations”

Attention to lifecycle economy	Procurement choices that consider costs and value beyond the initial purchase price	Sustainability; value for money	R4	“life cycle economy”
Weak preparation and late changes	Poor initial planning and changes during execution that create additional work, delay and cost growth	Efficiency; value for money	R1, R3	“too little time to make offers and orders properly”; plan changes during execution
Rigid interpretation and low flexibility	Strict procedural reading that limits adaptation and slows decisions during implementation	Effectiveness; value for money; sustainability	R2, R3	“changes almost impossible to make”
Lowest-price focus and weak competition	Narrow price-based selection and low supplier competition that may undermine lifecycle value and broader benefits	Sustainability; value for money; wider societal effects	R3, R4	“there are too often lowest price decisions”; few contractors; local employment concerns

4.3.3 Risk and Front-End Planning

Risk and front end planning represent a second critical area of the empirical data. As demonstrated by the responses provided, the success of the front end is directly correlated to the degree of clarity exhibited in the early thinking about the project; that is to say, the degree of clarity exhibited in defining the problem; the degree to which the project is developed prior to its implementation; and the degree to which uncertainties are identified prior to contractual and organizational commitments being made.

Therefore, the responses provided demonstrate that respondents treated the front end as a practical phase of the project during which the project outcomes are heavily influenced. This is entirely consistent with the logical analysis provided in Chapter 3, where "Front End Clarity" was expected to be one of the primary themes generated through the coding process.

One response suggested, "careful early preparation" is vital, indicating what must be put in place. The responder explained that, in research and development work, "it is useful to try out and develop the approach prior to taking on the full project so you can see whether your target audience understand your planned questions or methods, and find out 'the important things that have been missed'" (R1). While the example from the respondent is about the development and implementation of a survey, the principle is much broader; with front end preparation, you will improve the quality of your project significantly by spotting misunderstandings and missed out things as early as possible, i.e. when you can still do something about them. Yet another respondent stressed the need for "defining problems clearly and precisely right from the start"; and in fact, he recommended that defining problems clearly and precisely right from the start is the best way to minimize fragmentation in a team effort. He also reiterated the need to identify and analyse possible options and uncertainties, namely operational, financial and stake holder related, early on so as to be able to design a contingency plan to mitigate the impact of those risks beforehand. Another respondent underlined the advantage of having a process when organizing a project where: responsibilities are defined at the very start of the project; each participant has a good understanding of their roles and expectations. (R4). Together these responses indicate that respondents believe that effective front-end planning includes some or all of: clear definition of problems; realistic preparation; early recognition of risks; and clear assignment of responsibilities.

A secondary facilitating factor for implementing the project was an early consensus with regard to what would have to be done, who would do it, and what kind of practical circumstances had to exist before anything could be done. The respondents seemed to

indicate that developing front-end documentation and planning is about developing sufficient common ground among all parties involved such that their subsequent project work will proceed in a coherent manner. All of these elements – clear objectives; realistic scope; and good preparation – are described in the study as important in contributing to better service outcomes and more sustainable results. To the extent that the front end of a project contributes to the quality of a project, it appears in this dataset to influence both the efficiency, effectiveness and relevance of a project's results by reducing the likelihood that the project will continue under unclear assumptions or unconnected goals. The respondents who provided negative comments also supported this interpretation. Of the two major limitations identified in the data regarding the development of front-end planning were lack of flexibility when trying to change direction in a project after it begins, and inadequate preparation prior to beginning.

The problem identified most often throughout the study as being the biggest barrier to changing direction in a project after it has begun is how difficult it is to make changes to projects while they are still active. R3 stated, "In many cases, almost no changes [can] be made" to the scope of a project or to contract terms due to restrictions related to triggering another formal competitive process. This indicates there is a significant constraint within the Finnish public sector that was previously mentioned in previous studies. The decision making authority during the front-end of a project carries significant weight, and consequently, options for adjusting those decisions later in the project may be significantly limited.

Another limitation is poor preparation. One response indicates that when the planning is poor and key decisions are delayed until later, the pressure to deliver the project on time will increase and the potential for problems with cost, schedule and outcome will also increase (R1). An additional limitation of front-end planning is poorly defined responsibilities in the early stages of the project. If the responsibility for planning is diffuse or poorly coordinated, it will be increasingly difficult to achieve consistency between the initial problem definition and later implementation (R1).

The findings demonstrate a pragmatic perspective on front end planning as vital part of the strategic management process of public sector projects. The responses of those interviewed all highlighted that it is necessary to have quality at the beginning phase of defining the project including all stakeholders in the same set-up as well as having a clear set of roles from the very start. Aside from this, those surveyed pointed out that once procurement has started, or even earlier when a project gets implemented, it is difficult to resolve bad decisions from the early stages. In terms of the research methodology for this study, these findings were significant because they indicated that in the Finnish Public Sector, Risk and Front-End Planning can be considered in broader ways than just a technical exercise. Rather, they appear to act as an initial governance capability which influences multiple aspects of project success (including efficiency, effectiveness, relevance and value for money) simultaneously.

Table 5 Risk and front-end planning CSFs and linked success criteria

Theme	Short description	Main success criteria affected	Respondents	Illustrative expression
Clear problem definition	Early agreement on the core problem and project purpose so that partners understand the same objective	Effectiveness; relevance; value for money	R2, R4	“clear and precise problem definition at the outset”
Early preparation and refinement	Time and effort invested in testing, refining and improving the planned approach before full implementation	Effectiveness; efficiency	R1	identifying “what essential issue has been missing”

Early risk recognition	Consideration of operational, financial and stakeholder risks before implementation begins	Efficiency; effectiveness; value for money	R2	“risk assessment early” with mitigation measures
Clear responsibilities from the start	Early clarity on roles and expectations in the project organisation	Efficiency; effectiveness	R4	each actor knows what is expected from the start
Limited flexibility after early decisions	Procedural and contractual constraints make later changes difficult once implementation is underway	Efficiency; effectiveness; value for money	R3	“changes almost impossible to make”

4.3.4 Digital and Data Governance

In comparison with the three previous chapters, digital and data governance are significantly less prominent in the responses. This is an empirical discovery in its own right. The data collected through the survey clearly does not mean that digital and data challenges are absent from the strategic public sector projects in Finland; however, the data suggests that there is considerable variation in how clearly these issues are reflected in respondents' experiences of their individual projects. Therefore, this section remains intentionally cautious and focuses on the actual examples that respondents provided.

The best way to use all the data is as a '5 dimensional results matrix' that uses the building register data; owner type, frame material and volume are variables; they were derived from a very large national register database (R1) and therefore the digital and data elements of capability relate to the fact that you could create the framework for analysis and decision based upon the structure of the register. although it was not developed into a larger data governance model - the development of a very complex results matrix using

publicly available data indicates the opportunity for the increased strategic effectiveness of projects with increased levels of complexity in their analytical requirements and evidence based decision making. Practically speaking, organizations may be able to improve the probability of achieving project success on their digital and data governance needs through access to appropriate data sets, structuring the appropriate data, and providing information that will enable better decision making.

In addition to "clarity of responsibility," another theme that emerged from the data is "clearness of responsibility." Data collector R4 states that defining roles and responsibility among all stakeholders clearly and ensuring there is a designated person who will maintain each piece of data is critical. Clearly defining roles and responsibilities for data maintenance is very important when data are being collected, shared and used by multiple stakeholders at various stages throughout a project. Defining roles and responsibilities for data should never be viewed as a small detail in this type of situation.

The practice of digital and data governance isn't simply about either systems development or technology. Establishing clear authority (or "ownership"), defining who has individual or group responsibility for that area of oversight, and proper management of the information using traditional organization wide processes are all part of what constitutes effective digital and data governance in reality. The research cited previously would appear to indicate many organizations view the practice of digital and data governance as more of a process oriented issue related to how an organization operates rather than a technical specialty related to organizing the projects within an organization.

Some respondents provided insight into potential constraints with regard to practical applications. Specifically, respondent R4 stated that the most frequent "weak link" in such projects is people. When "Incomplete Entries" exist within systems containing those entries, they contribute to lower quality data (R4). This is helpful in identifying limitations because it focuses attention on routine data management rather than focusing on the technology itself. Results indicate that the utility of systems and databases are

greatly influenced by how thoroughly and consistently they are managed. Therefore, even though a technical infrastructure may exist, issues associated with poor quality data, lack of available entries, etc., can significantly limit the utility of digital tools and other information-based assets.

However, two respondents also indicated that digital and data challenges had not been major components of their strategic projects or that they had very little experience with digital and data projects (R2 and R3). This is a point that should not be dismissed. It suggests that digital and data governance is not considered to be equally important in all types of strategic projects as they are represented in the survey. Therefore, the domain should not be presented as being more empirically developed than it currently is. The most robust conclusion supported by the data is that, where digital and data governance are relevant, respondents attribute them to the practical use of good quality data, clear responsibility for managing information, and regular maintenance of data quality. Conversely, when the conditions above are weaker, digital and data elements will have much less of a meaningful contribution to the success of projects.

Collectively, the responses suggest that digital and data governance affect project success primarily through effectiveness and efficiency, and to a lesser extent through sustainability, where good data support long-term planning or analysis. Nonetheless, the empirical material in this domain is smaller than in the other four domains, and that limitation should be recognized. Thus, while digital and data governance will continue to be a part of the CSF framework in Chapter 4, digital and data governance are, within the current data set, primarily presented as aspects of responsibility, data quality, and the practical utilization of register-based data, rather than through broader digital transformation themes.

Table 6 Digital and data governance CSFs and linked success criteria

Theme	Short description	Main success criteria affected	Re-spondents	Illustrative expression
Use of register-based data	Structured use of public register data to support analysis and more informed project understanding	Effective-ness; efficiency; sustainability	R1	“5 dimensional result matrix” based on the Finnish Building Register
Clear data responsibility	Defined responsibility areas for maintaining particular datasets and information resources	Efficiency; effectiveness	R4	“clear responsibility areas”
Everyday data quality	Attention to complete and accurate entries in routine work so that data remain usable	Efficiency; effectiveness	R4	“the weakest link ... has usually been people”; “incomplete entries”
Limited salience in some project contexts	For some respondents, digital and data issues were not central in their project experience	—	R2, R3	digital/data issues not central or only limitedly present

4.3.5 Sustainability and Lifecycle Value

The results illustrate that whilst sustainability and lifecycle value were both identified within the two responses, they were identified in differing ways. For instance, some respondents specifically referenced these terms through specific policy or project initiatives. On the other hand, some respondents did so in a more general way e.g. expectations, funding requirements, and/or limitations. As such, the differences are very relevant. They suggest that sustainability and lifecycle value are not absent from strategic

public projects, however, there is no consistency of application of sustainability and lifecycle value amongst organisations or types of projects.

One example of an obviously positive connection between sustainability and actions was when a respondent referenced an example of a sustainability action being implemented through their work or involvement with a specific project. The respondent referenced a project implementing Energy Efficiency Standards in New Buildings in Finland in 2014, 2017 and 2020. In referencing this project, the respondent also made connections to other areas including training/development, social/environmental issues, energy efficiency/carbon neutrality as ways to improve sustainability; cost effective means of improving sustainability; and the contribution of sustainability to society as a whole (R1). This example is important because it relates sustainability to actual practice within the community and links it to long-term societal benefit(s) rather than just stating an official goal.

A second respondent indicated that "environmental and social factors" have been aligned with the "goals and objectives" of many projects and that they are also included in the funding criteria for those projects (R2). This suggests that in certain project contexts, sustainability has been embedded into the project from its inception, as opposed to being considered separately at a later time.

In addition, another respondent also stated that "equality obligations" are part of each and every one of their projects (R3), thus there seems to be an understanding among this respondent that community responsibility is just one of those many things you have to do when doing a legitimate public sector project. Another respondent used similar wording to describe participation and commitment (R4) in regards to how they implement sustainability-related objectives.

There appear to be three general ways in which the responses suggest that sustainability will have a positive impact on this particular area. First, there is evidence that

sustainability should be incorporated into project objectives and funding requirements from inception. The research indicates that when environmental and social elements are included within the objectives or funding parameters for a project, sustainability has a greater opportunity to influence implementation and not simply exist as a formal declaration. Second, the study found an underlying normative or regulatory base. For example, references were made to "equality obligations". While this research does not suggest that all types of sustainable solutions are in use throughout the entire lifecycle of a particular project, it demonstrates that a number of stakeholders have started treating some of the sustainability-related values as standard expectations for the context of their public works. In addition, this research indicates a substantial level of both theoretical and practical support and involvement in sustainability initiatives. The data collected by this research indicate that sustainability seems to be far more effective when based on criteria that go beyond simply being formally adopted, and when the stakeholders participating in a given project actively participate and exhibit genuine interest in the project's completion. This further supports the idea that this research found sustainability to be viewed as something other than purely environmental or technical; rather, it was seen as a means through which one could achieve desired outcomes, influence funding decisions, reflect society's values and inform everyday practice.

In addition to these potential catalysts for sustaining long term value creation through sustainability and lifecycle planning, the responses highlighted several potential barriers to realizing this goal. A number of respondents identified people's mindsets regarding sustainability and the time required to incorporate it into organizational or political agendas, limited availability of public funding for supporting sustainability initiatives, and limitations in terms of knowledge and education as primary constraints (R1) and other respondents noted that more sustainable options tend to be more costly at outset or provide a lower rate-of-return over the long run (R4). These responses suggested that sustainability and lifecycle value would often be limited by a combination of cultural/organizational factors, capability constraints, and economically-oriented decision making. Therefore, although respondents generally agreed that sustainability is important, they

also acknowledged that even when sustainability is deemed desirable, it may be sacrificed due to short-term affordability concerns, limited knowledge about what might constitute sustainable solutions, or lack of political support.

When evaluated relative to the six success criteria provided above, the empirical evidence collected suggests that sustainability/lifecycle value has been most strongly associated with each of the three criteria -- sustainability/lifecycle value itself, value-for-money, and societal-wide impacts. Additionally, a relationship was found between sustainability/lifecycle value and another two CSFs — effectiveness and relevance. Formal incorporation of sustainability into a project's goals, funding structures and implementation processes will increase the duration of legitimacy of the overall project's outcomes. However, if it is undermined by budgetary pressure or limitations on the use of information or political backing/support then the outcome is usually not total failure. Rather, it seems to lead to significant reductions in ambition and a transition of focus to achieve short-term deliverables. The research results reinforce previous Chapter 4 research results where respondents differentiated between formal completion of a project and achievement of strategic success of a project through attainment of its intended project outcomes. Therefore, similarly to all of the other areas researched in Chapter 4, the key determining factor in this particular area as well is not simply the explicit reference to sustainability. Rather, it is whether or not the use of sustainability ultimately leads to authentic decision making processes followed by continued stakeholder involvement. Therefore, taken collectively, the study data support the retention of sustainability/lifecycle value as an independent CSF domain within the previously proposed framework. At the same time, however, the data also indicate that this domain must be viewed with caution. Sustainability/lifecycle value appeared to be most clearly articulated in this dataset when sustainability was formally linked to a unique set of project-based objectives/goals, funding mechanisms/equity obligations/commitments among stakeholders, and actual decisions made during project development regarding increases in upfront investment costs relative to anticipated future returns. Therefore, while the general findings support the original framework proposed in Chapter 2, they also indicated that in reality sustainability is frequently influenced by a variety of factors including capabilities

constraints, affordability concerns, and institutional commitments and therefore cannot be treated solely as a distinct technical discipline.

Table 7 Sustainability and lifecycle value CSFs and linked success criteria

Theme	Short description	Main success criteria affected	Re-spond-ents	Illustrative ex-pression
Sustainability embedded in goals and funding	Environmental and social aims are built into project goals and/or funding criteria from the beginning	Sustainability; effectiveness; value for money	R1, R2	“aligned with the project goals and aims”; linked to funding criteria
Equality and public-value baseline	Equality obligations and related public values form a normal basis for project work	Sustainability; wider societal effects	R3	equality obligations as a natural basis for projects
Participation and commitment	Sustainability-related aims are supported through stakeholder participation and commitment in implementation	Sustainability; wider societal effects	R4	participation and commitment as relevant conditions
Knowledge, attitudes and organisational support	Sustainability is hindered where knowledge is weak, attitudes are negative, or political/organisational support is limited	Sustainability; relevance	R1	“people’s attitudes”; lack of knowledge or education

Cost and pay-back constraints	More sustainable solutions may be deprioritised when initial costs are higher or payback is perceived as too long	Value for money; sustainability	R4	higher costs and long payback times
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4.4 Prioritisation of Critical Success Factors and Perceived Imbalances

In addition to describing outcomes and domain-specific enablers and barriers, the respondents were asked to identify which success factors they personally consider most important in the strategic projects they know best, and which factors they feel receive too much attention compared with others that matter more for long-term results. These questions speak directly to the second part of the research question: how practitioners prioritise and enact critical success factors in practice within the Finnish public-sector context.

4.4.1 Most important success factors

In order to get at what practitioners actually believe are the most important things for the success of strategic projects within their own organisations, the survey included a "prioritization" question. This type of question has a particular advantage over the ones that ask respondents to rate separately each of the six success criteria. When we look at the answers to this question, we are looking at how practitioners think about their actual project work. While there isn't one consistent ordering of priorities, the types of items that were selected most frequently are very similar to those found in the domain sections.

Respondents most commonly selected governance/leadership, organisational capability, communication/collaboration, and procurement competition/purchasing scale. There was a respondent who emphasized capability and organizational discipline much more than the other respondents. This respondent stated that success depended on having

"the right people" in place (competent and sufficient human resources for different roles), and then ensuring that they had a common understanding of their role in the project and worked with "clear and measurable targets", as well as "reporting, documentation and communication". Therefore, people, structure, and information systems are interrelated.

The second respondent also picked a high number of possible priority areas. The second respondent noted that "strong and effective governance", "the stakeholders are actively involved," "there is clear objectivity and risk management" , "communication and collaboration are effectively undertaken", and "financial and operational control" were all required for success. These selections are consistent with the larger results found in section 4.3. Although, the first item (governance) is prioritized, it is viewed as being dependent upon other closely related items (such as, e.g., stakeholder involvement, an unambiguous sense of direction, risk management, and the ability to communicate). In this context, success is the result of a well-working overall management system, rather than due to the existence of any single component.

A third respondent put much greater emphasis on the procurement process than the first two. Procurement strategies and the competitive environment were most important for the respondent. "High competition" resulted in both "better cost and better project," and "the purchasing value is bigger." It appears that procurement is viewed as the single most important aspect of a project's success by this respondent. This is particularly true in situations where competition, contract terms, and available suppliers have a significant impact on the ability to carry out a project. This respondent placed no emphasis on governance or communications. In fact, their responses indicate they operate in an environment in which the procurement process is primarily responsible for determining a project's success.

The fourth respondent had also emphasized the governance-related aspects. In addition to mentioning in Finnish "yhteinen tahto ja päämäärä" (common will and

purpose), "hyvä organisointi" (good organisation) , "vastuuttaminen" (assignments of responsibilities) and "järjestelmällinen eteneminen" (steady progress), he provided a very short but clearly strategic view of what is required for a project to succeed.

These responses indicate that practitioners weigh the greatest amount of importance on a relatively small number of recurring conditions. The most prominent pattern relates to governance and leadership, specifically strong steering, shared purpose, organization, responsibility and systematic progress (R2, R4). A second pattern relates to human and organizational capability, specifically competent staff, sufficient resources, clear metrics, reporting and documentation (R1, R2).

A third pattern relates to communication and stakeholder engagement, which are considered to be important for maintaining alignment between project activities and the overall outcome(s) of the project (R1, R2). Procurement competition and purchasing structure appear as a distinct priority in one response, indicating that, in some projects, the design of procurement is seen as the primary practical means of achieving success (R3).

From the standpoint of the six success criteria, the prioritization of these conditions appears to primarily support effectiveness, relevance, efficiency and value for money. Strong governance, a shared direction and clear objectives contribute to the likelihood of the project being relevant and successful in achieving its intended outcome(s).

Competent staff, communication and reporting contribute to the quality and efficiency of the project. Financial discipline and procurement competition are most directly linked to the success of the project in terms of efficiency and value for money. Wider societal impacts are less directly referenced in the prioritization answers, but remain present where the respondents reference stakeholder engagement and regional outcomes.

Similar to the findings from the domain sections, the prioritization answers provide evidence that practitioners prioritize those factors that contribute to the coherence, organization and control of the project. Additionally, the prioritization answers demonstrate that the context of the project influences the prioritization of factors. Not every respondent emphasized the same domain, nor did every factor matter equally in every case. It is essential to consider this when interpreting the results. The objective of this study is not to develop a definitive ranking of the critical success factors for all Finnish public sector projects. Rather, the objective of this study is to identify those factors that are most prominently evident in this limited sample of practitioner responses.

Within that scope, the findings suggest that high levels of governance quality, capable people, clear objectives, communication and procurement design represent significant practical requirements for success.

Table 8 Practitioners' prioritised success factors

Re- spond- ent	Prioritised factors (summary)	Main CSF domains involved	Main success criteria empha- sised
R1	Competent and sufficient human resources; clear goal and result metrics; competent reporting, documentation and communication	Governance and leadership; risk and front-end planning; digital/data-related information practices	Effectiveness; efficiency; value for money
R2	Strong and effective governance; active stakeholder engagement; clear objectives and risk management; effective communication and collaboration; financial and operational discipline	Governance and leadership; risk and front-end planning; procurement strategy and capability	Effectiveness; relevance; efficiency; value for money; wider societal effects

R3	High competition; large purchasing value	Procurement strategy and capability	Efficiency; value for money
R4	Common will and goal; good organisation; assignment of responsibility; systematic progress	Governance and leadership	Effectiveness; relevance; efficiency

4.4.2 Balancing and Trade-Offs Between Success Criteria

In addition to examining whether the respondents and their organizations could implement the six success criteria (in terms of the extent to which the six were perceived to be implemented), the survey also asked how they tried to achieve them. It is important to examine how organizations attempt to meet these criteria since this represents a transition from conceptualizing success to attempting to attain success within an environment where various objectives and values are competing.

It appears that all respondents recognized that achieving balance among the six criteria is necessary; however, the approaches taken varied. While some respondents noted that balancing is simply a component of general project work, others felt that there was insufficient flexibility under existing law, regulation and formal procedure to allow for genuine discretion.

There were four major approaches to addressing the six evaluation criteria based on responses from participants. One participant (R1) provided an explanation of how they utilized balancing when developing their project. R1 explained that the balance was created by combining individuals who had differing viewpoints. The use of balancing resulted in having more than one perspective included in the development of their project. These multiple perspectives could then be considered in both the development and execution phases of the project. In addition, R1 stated that there would be no single viewpoint from either the technical or organizational side of the project. A second participant (R2) responded very briefly to the question; however, his response mirrored R1's. R2 stated that "good project management" is necessary for balancing to occur. However, as

previously noted, R2 defined good project management as encompassing elements including governance, stakeholder engagement, risk management, communications and operational discipline. Participant R3 stated that balancing would be impossible because of "the legal cornerstones." This response implies that for some types of projects, legal or regulatory requirements may limit the ability to place greater emphasis on some of the six criteria. The final participant (R4) described a more deliberate attempt at establishing a balanced project. R4 suggested that prior to beginning a project, a complete plan should be established. The plan should include reviewing and ranking all six evaluation criteria in relation to their perceived importance..

Therefore, while respondents' answers indicate that balancing can occur through cross-functional involvement, manager's judgments, and/or through more planned processes, many respondents believed that their ability to balance the criteria is significantly constrained by the broader regulatory context in which Finnish public sector projects are conducted. In relation to when respondents provided additional specific examples of how the six success criteria are balanced through their work, there were three major trade-offs identified. Firstly, one of the major trade-offs was between the lowest price and total lifecycle value. For example, R4 stated that "There are too many lowest price decisions" and that "lifecycle economics are always overlooked". These comments illustrate that although respondents felt that long-term value was a significant consideration, cost considerations have been more likely to influence decision making. Consequently, efficiency and best value for money will likely be viewed in terms of least expensive purchase price; sustainability and lifecycle value will continue to receive insufficient emphasis.

Secondly, there was an additional trade-off, namely between formal adherence to procedures and practical flexibility in project implementation. Several respondents emphasized their appreciation for the need to adapt to changed conditions but at the same time indicated significant difficulties with this regard. Respondent R3 noted that "in many cases it is almost impossible to make changes." Another respondent expressed a

similar opinion about the complexity of the Finnish public sector's processes when he stated that "the Finnish public sector has heavy, lengthy and restrictive processes." This demonstrates clearly a contradiction in the Finnish public sector context between accountability/fairness/lawful process on one hand and flexibility to act upon changed data/information/situations. Therefore, project teams require to achieve short term efficiency/effectiveness/value for money, as well as achieving longer term value.

Thirdly, the third trade-off was associated with the size of procurement and the larger community implications thereof. R3 stated that "because the scope of the purchasing value eliminates all small local businesses from participating in projects this does not promote local job creation." This comment illustrates that procurement decisions made primarily based upon improving efficiencies/strengthening purchasing power could negatively impact the degree of local involvement/participation in the local economy. Additionally, there were several references to target-setting in the responses. R2 criticized the establishment of "numerical or quantifiable objectives that are poorly defined" which can cause "an overemphasis on quantity rather than quality." While there is no inherent flaw with measuring results, there is a potential flaw if the easiest-to-quantify indicators become given greater weight than overall project results.

Overall, the responses demonstrate that it is not just a theoretical discussion whether or not achieving all six success criteria can be accomplished. Rather, the achievement of the six success criteria is a real-world/governance issue. Respondents clearly acknowledged that the primary responsibility for achieving efficiency/effectiveness/relevance/sustainability/best value/wider social effects simultaneously rested with strategic public sector projects. However, they also demonstrated various examples of limitations they encounter in actual practice. Some examples include: procurement regulations; legal constraints; lowest price logic; complex bureaucratic processes; and limited performance metrics. The prior sections of Chapter 4 (governance clarity/front end preparation/procurement capacity/lifecycle thinking) provide much insight into why respondents consider these issues as relevant. They represent not only effective project

management techniques but also ways in which to address tradeoffs between controlling costs in the short term and ultimately attaining success from a broader strategic perspective.

Figure 4.2 summarizes the major trade-offs that respondents identified when attempting to balance the six success criteria in strategic public sector projects in Finland.

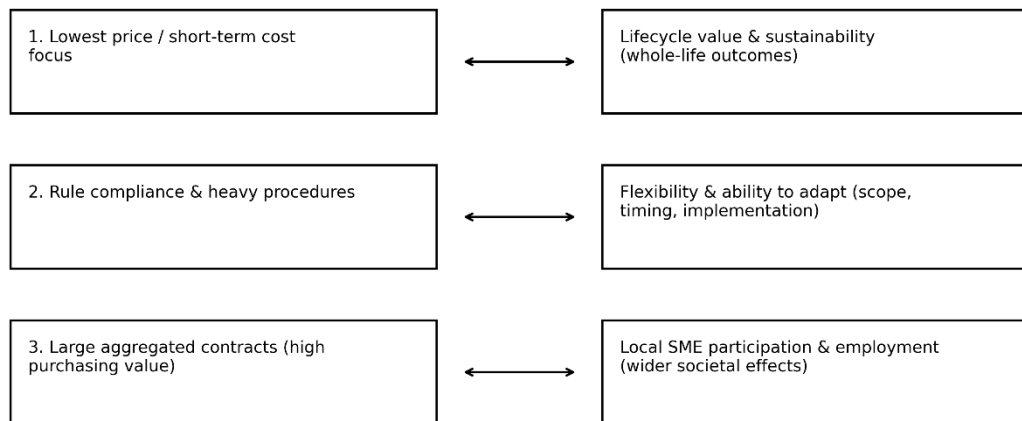


Figure 4-2 Key trade-offs described by respondents when balancing success criteria.

4.4.3 Factors perceived as overemphasised

There was no question - only the restatement of the provided information below. I have rewritten your text in a manner that sounds more like you spoke it, while still conveying all of the same information.

The second set of questions included "Do you think some of the factors that are considered important in the strategic projects you have knowledge about, are given too much emphasis compared to others that are more relevant to long-term success? Even though the answers are very short, there is a consistent theme apparent: many of the respondents perceive an imbalance of giving too much weight to the short-term, measurable,

and administratively easy-to-manage issues, at the expense of the broader strategic impacts.

According to one of the participants, who said, "Strict cost control, and micro-managing", were specific examples of what gets an over-emphasis when talking about the typical kinds of things (R1). This seems to imply, in some cases, there can be so much detail on the specifics of managing money that this could take priority over developing capabilities, learning, and longer term success. R2 said he believed "the establishment of quantitative/numeric performance goals that are not well calibrated for a particular situation, will have companies focusing on the number itself rather than what that number represents" (R2). He criticized the use of poorly designed measures as the primary driver behind making decisions for where to allocate resources. Additionally, R3 noted that, "When a company has such large purchasing dollars, that smaller, local businesses are unable to compete against them for contracts in a project; therefore eliminating jobs in that community" (R3). R3 illustrated how a decision-making process by a company regarding their purchasing dollars can create negative social effects. Finally, R4 pointed out a different kind of imbalance stating that "too many organizations place an emphasis on meeting today's or tomorrow's immediate needs vs., taking into account the needs of communities in the future, and/or the long-term potential of a project". (R4). This suggests that projects are too narrowly defined and implemented in terms of today's needs and too broadly in terms of long-term relevance and sustainability.

Collectively, the answers to these questions show that the factors which were identified as being emphasized excessively by participants do not appear to occur at random. Rather, the dominant theme within those areas most often referenced (i.e., strictly controlling costs; utilizing a variety of numeric performance measurement systems; relying on a large scale purchasing based approach to the management of resources; and defining problems primarily through a very short term focus) appears to center upon forms of control. The participants did not indicate that the factors they listed were unimportant; however, they noted that they became dysfunctional if they dominated all aspects of

decision making, and displaced other relevant criteria for measuring long-term significance, sustainability, total lifetime cost/value, local community benefits/impacts, and meaningful results. Therefore, this section supports the trade-off model discussed in Section 4.4.2. A key barrier to establishing successful strategic projects within the Finnish Public Sector does not exist simply because it is difficult to determine what are the correct Criteria for Success (CSF); rather, the primary barrier lies in preventing overly restrictive definitions of "efficiency" and "control" from becoming the sole definition(s) of "project success."

4.5 Synthesis: Empirical Refinement of the CSF Framework

The results from this chapter show that whether it is a small or large number of practitioner response samples, strategic project success in the public sector encompasses far more than the traditional "time-cost-scope" model. All of the practitioners involved in this study agreed that a project is successful when it creates lasting benefits. That means the value that is generated by a project continues long after the project has been officially closed out. Practitioner evaluations of their own projects would suggest that they have little confidence in their ability to create long-term positive impacts from their projects. These same practitioners suggested that the goals of their projects were poorly defined; and/or, the output(s) of their projects did not result in the incorporation of those output(s) into the organizations on-going normal operating processes. Thus, the empirical evidence suggests that the Six Criteria Success Model used as the basis for this study is appropriate; and, further, that practitioners view success as being much more than just good delivery performance. In addition to the Five CSF Domains identified previously -- Governance & Leadership; Procurement; Risk & Front End Planning; Digital & Data Governance; and Sustainability & Lifecycle Value -- there appear to be a multitude of other factors which contribute to success when utilizing multiple evaluation criteria. In regards to Governance & Leadership, practitioners indicated that an effective steering mechanism; clearly defined role assignments; and follow-up activities were key contributors. Procurement was approached by preparing well before a project begins; conducting competitive bids; and focusing on reducing costs via competition rather than simply

looking at the initial bid price. Early goal setting; creating realistic expectations about completing a project; and identifying potential risks and responsibilities at the earliest possible time were highlighted by respondents in regards to Risk & Front End Planning. There appeared to be some limitations in relation to Information regarding Digital & Data Governance but there were indicators that defining clear accountabilities for organizational data and maintaining high data quality standards on a daily basis will be key. Respondents noted both supportive conditions (establishing sustainability within funding criteria/project goals); and barriers (attitudes/knowledge base toward sustainability; sustainable options perceived as being too expensive/time consuming) in relation to Sustainability & Lifecycle Value. Overall, the findings provided strong general support for the prior Finland-specific CSF Framework developed using prior literature; while providing greater clarity as to what elements are most critical to practitioners in their everyday project work.

This empirical material includes some of the same characteristics that have been identified as general to empirically grounded research in Finland. Therefore, the above mentioned theoretical framework should be made clearer with reference to the specifics of empirical work conducted in Finland. Respondents regularly referred to regulation and the constraints of regulatory frameworks as they relate to their ability to achieve multiple performance metrics in real world application. They discussed the legal, and procedural pillars of their activity, the heavy weight of formal processes, and their inability to adjust or alter course once the procurement, and implementation phases had been completed. A small number of respondents indicated they were aware of trade-off possibilities associated with aggregated procurement (large) vs. local employment, and short-term quantitative control vs. long-term qualitative outcomes.

Therefore, while the respondents' comments indicate that there are potentially 'critical' success factors in the Finnish Public Sector (the 'real-world' impact of which will depend on the manner in which the decision-making process regarding governance, procurement, and front-end decision-making occurs), none of these success factors can operate without a neutral environment. Again, as was mentioned earlier, this neutral

environment is very heavily influenced by a combination of the need for legal compliance, procedural caution, and limited opportunities for altering/adjusting prior decisions. This would help explain why the respondents emphasized so much governance discipline, front-end clarity, procurement capability, and lifecycle thinking in a constrained environment. These appear to be some of the few practical options available to protect multi-criteria success in such environments.

In addition, the empirical data gathered during Chapter 4 is not a replacement for the literature-based framework developed in Chapter 2. Rather, it adds clarification. Specifically, it identifies the aspects of the literature-based framework that are most critical from a practical perspective, identifies areas of perceived conflict from respondents perspectives, and identifies context elements most representative of Finland. In turn, Chapter 5 builds on this synthesis to develop a refined Finland-specific CSF Framework using both empirical data and literature-based information. Additionally, Chapter 5 offers practical advice for practitioners and stakeholders involved in developing strategic public sector projects.

Figure 4.3 summarizes the primary empirical patterns identified in Chapter 4. Practitioner prioritized critical success factors function in a rule bound Finnish public-sector

environment and contribute to success in all six criteria of success employed in this thesis.

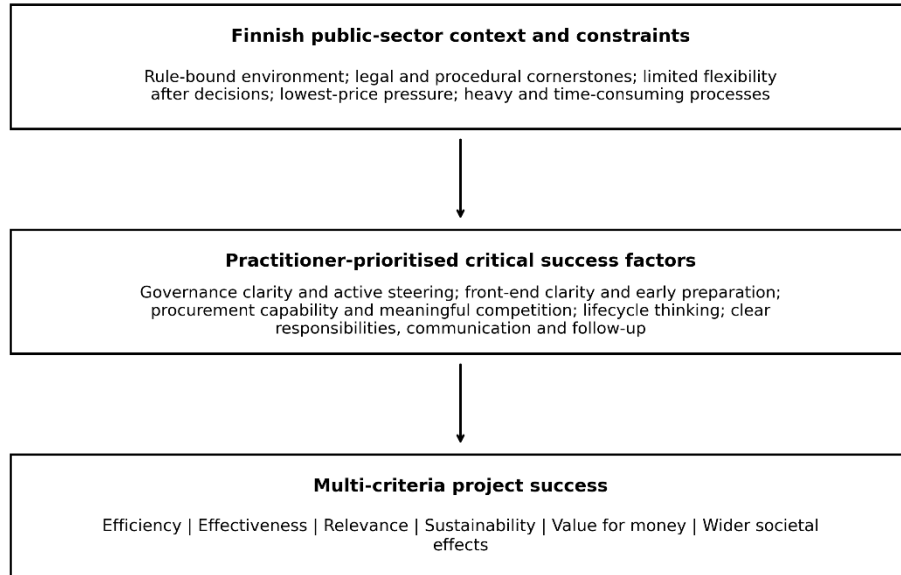


Figure 4-3 Empirical synthesis of context, prioritised CSFs and multi-criteria project success.

5 Discussion and Conclusions

This report investigates what matters most to achieve success in strategic public sector projects in Finland. Research was done to find out how professionals evaluate and apply the most important success criteria in their own project work. To some extent, success appears to rely mainly on the quality of a few interrelated success criteria that include: Good government and good proactive management; A clear definition of the project (a clear definition of the purpose of the project); A realistic plan of the project (including timelines etc.) developed during the front end of the project; Procurement capabilities that allow for more than just low-cost purchasing; Effective communication and collaboration among professionals; Lifecycle value (i.e. sustainability).

The importance of effective governance and proactive management in developing a project during the front end of the project was supported both by prior research and by empirical data. Prior research shows that a lack of clarity regarding the scope of a project idea (or uncertainty) and/or ineffectiveness of project development during the front end of the project have a negative impact on long term success of public sector projects and therefore less public value. Respondents repeatedly indicated that there needs to be an active governing body to actively govern the project during the entire duration of the project rather than to let governance become formal/ceremonial.

It can be said that an organization's ability to procure needed goods and services (procurement), is likely to be one of the most significant factors determining success with regards to Strategic Projects in the Public Sector in Finland. Literature reviews and practical guides have been written in Finland stating that procurement should support an organizations' strategic objectives and that it should represent a good use of tax payer dollars. The results presented in Chapter 4 provide evidence that this conclusion is supported by answers from practitioners. Procurement was directly related to whether or not the project had a successful outcome. Practitioners stated that successful procurement led to: Multiple competitive bidders; Development of a full Request For Proposal

(RFP); Reasonable contractual terms; Assessment of all potential direct/long term consequences associated with each acquisition. Conversely, failed procurement has caused: Non-flexible contractual terms; Lack of preparation; Limited discretion/judgment; Reliance upon choosing the "lowest bidder," without appropriate evaluation as to the value being provided to taxpayers through their expenditures.

Public sector projects need much more than just policies and procedures. While more than policies and procedures, numerous other factors contribute to the Success of public sector Projects. The Literature Review and survey found that a good team, Management Support and Cooperation among stakeholders were essential to the Success of public sector Projects. Although all respondents understood Sustainability and Lifecycle Value concepts, translating them into practice was not always straightforward. This has been demonstrated in project Goals, Funding Rules, equality commitments and stakeholder expectations where the ideas of Sustainability and Lifecycle Value have appeared. However, similar to most areas of working in the public sector, there have been obstacles to implementing sustainable and long term thinking due to budget constraints and resource limitations. A major discovery from this research was that it provides insights into the Culture of the public sector in Finland. One aspect of the Culture of the Finnish public sector is a strong emphasis on Fairness, Documentation and Process. These values are beneficial to ensure fair and consistent delivery of Projects. However, these same values can be limiting to Changes made to Projects once they have commenced. In summary, in order for public sector Projects to achieve Success at the beginning of the project life cycle they need to include Clear Objectives; clearly defined roles; good procurement; and long-term thinking. In general, the results of this study indicate that Success does not occur as a result of one single factor or action. Instead, Success occurs when several key factors function well together. Projects will succeed if they are well-defined and developed early on; Actively Guided during their Development; procured using good procurement methods; and managed by competent staff. On the other hand, Projects will fail if their Development lacks clarity of role definition; poorly

prepared; Cost becomes the primary focus; and processes become more Important than long-term public benefit.

5.1 Main Findings and Answer to the Research Question

Multi-Criteria Success Factors:

A combination of three key aspects (Governance & Steering, Project Planning & Procurement, Organization), were determined to be essential factors contributing to the successful implementation of Strategic Projects in the Finnish Public Sector. It is noted that none of the individual factors alone are determinative; rather it is the combined effect of several interrelated factors that contributes to Multi-Criteria Success.

Based upon the authors findings the following have been identified as having significant impact:

Clear Governance & Steering: The authors contend that active steering and clearly defined projects are the two most influential factors which contribute to multi-criteria success

Front-end preparation: Preparation of the front end has been shown by the authors to be an important factor. A poorly prepared front end may lead to costly changes in the future when executing the project.

procurement capability: In the Finnish Public Sector procurement capability is identified by the authors as one of the most important factors to achieve successful projects. According to the authors, procurement plays a significant role in implementing strategy and using public resources efficiently.

Organizational capability: Irrespective of whether this is formalized or not, organizational capability is highly influential. Authors emphasize the importance of having capable employees, good communications and proper follow up.

In addition to identifying those successful elements described earlier in this paper, this study demonstrates how each of these aspects functionally relate to each other within the context of the public sector in Finland. According to the researchers, formalization

of the public sector directly impacts upon how the critical elements identified here, and elsewhere, work together. As explained above, while formal systems (e.g. Legislation, Guidelines) serve as a foundation for public projects; they do not negate the importance of qualified employees, effective communication and consistent monitoring and evaluation. Both theoretically and practically, it was demonstrated by the research team that this is true. The study found that achieving multi-criteria success in public-sector projects depends on the interconnectedness of five elements: quality governance; quality preparation; procurement capability; organizational capability; and the creation of social value. These five factors cannot achieve success without contributing to the success of the other four factors. Therefore, the study recommended that all five elements be evaluated as a single entity. Furthermore, the study noted that if any of the five critical factors fail to be managed successfully, then the potential for multi-criteria success will likely be negatively affected. Alongside the necessity of successful management of strategic public-sector projects, the researchers also established an interdependent relationship between a manager's ability to identify solutions within informalized (non-regulatory) settings and the manager's ability to identify solutions within formalized (highly regulated) settings. Consequently, public managers working in highly formalized and heavily regulated environments must use a holistic and integrative project management methodology. Public managers must create multifaceted solutions that take into account the varying interests of numerous stakeholders and conflicting objectives. For instance, public managers may be called upon to develop solution sets that simultaneously address budgetary constraints while promoting sustainable development. Ultimately, public managers are responsible for finding ways to reconcile short-term financial considerations with long-term social consequences. Moreover, beyond identifying solution sets that can accommodate competing demands, public managers are also charged with ensuring that those solution sets will be adaptable enough to respond to changes in the surrounding environmental conditions. Due to the highly formalized regulatory context in which public managers operate, public managers possess different skill sets and competencies than do private managers. Specifically, public managers must be able to establish collaborative relationships with various stakeholders throughout all levels of

government, as well as with multiple interest groups. While public managers must also exhibit knowledge of the formal regulatory frameworks under which they operate, public managers must also develop innovative solution sets that can meet the needs of multiple conflicting demands and operate in a constrained resources environment. Overall, public managers are accountable for their decision-making processes toward both elected officials and constituents.

Thus, public administrators are faced with a number of obstacles as they implement strategic projects in their respective governmental agencies. In order to achieve these goals, the administrators have to navigate through a structured, legally-based system that provides multiple stakeholders with conflicting demands. They also have to provide innovative solutions which meet the needs of multiple stakeholders. Furthermore, public managers must contend with many uncertainties and ambiguities inherent in the process of planning and implementing strategic projects. Additionally, public managers are responsible for answering to elected officials and citizens. As such, they have to be able to adapt to rapidly changing situations and demonstrate sufficient technical expertise to successfully manage complex large-scale projects.

The goal of this Chapter is to present a comprehensive review of the current state of public administration's progress as it relates to the development of public administration; to survey the latest theories and best practices associated with the strategic management of projects; to analyse the extant body of literature on the successful implementation of strategic government projects; to report on the synthesis of the results of this study regarding the successful factors for implementing strategic government projects successfully in Finland; to indicate potential avenues for future research in the field of strategic government project management; to list the limitations that were identified and the opportunities for further research; and to present the implications for those engaged in the development of strategic government projects as public administrators.

This thesis offers insights into the successful implementation of strategic projects in Finland. Future research might consist of comparative studies examining differing countries. Longitudinal studies would assist in answering questions about whether sustained improvements can occur over time. Potential areas of investigation for future research might include determining whether specific project attributes (for example, size) affect the effectiveness of success factors described above. An additional avenue of investigation for future research might be to examine if results of this study can be applied to private sector applications. Due to growing trend toward collaboration with private companies in order to achieve strategic objectives, this line of inquiry would be useful.

5.2 Discussion of Results

These research results provide evidence that there is no need to treat the critical success factors of Finnish public sector strategic projects separately. Instead, these critical success factors interact with each other. How governance and procurement affect lifecycle value, how front-end clarity and later flexibility interact, and how organisational capability affects the successful interaction of these arrangements is not found to be clearly separable. Therefore, the results are better explained as a connected set of patterns rather than five separate domains.

In addition, the empirical results also provide some evidence that the specific characteristics of the Finnish public sector context influence how these factors interact. The empirical findings provided no evidence that Finnish projects failed due to a lack of attention to governance, procurement, sustainability or data. The findings indicate that while these factors exist in the Finnish public sector, the empirical results demonstrate that how they are managed in a structured administrative environment will determine their effective contribution to the success of a strategic project. Therefore, the same factor that supports success in one context will only serve as a formality in another context. As such, the discussion below will focus on the combination of factors that seem to be most influential to achieving multiple criteria for success rather than isolating each of the individual domains.

5.2.1 Governance, Front-End Clarity and Organisational Capability

The strongest overall finding of the empirical results indicates that there is a very high correlation between good governance quality, early clarity of the project and high organisational capability. In the empirical data, governance quality, early clarity of the project and organisational capability did not appear to be discrete practical issues in terms of the empirical findings. Projects were described as having been successful when the goal of the project had been defined at the outset, the responsibility of the parties involved had been defined and the steering process had been active and ongoing. The projects were further described as being successful when they had received adequate support for the implementation of the project from capable individuals and with adequate follow up. If none of these conditions existed, then the respondent believed that the subsequent difficulties that arose would have been more difficult to resolve. This interpretation is consistent with the academic literature related to public projects that demonstrates that if the planning phase of a project is uncertain and/or the concept of the project has not been well-defined, then these uncertainties and/or conceptual issues will continue to affect the success of the project over its lifetime. Therefore, the front-end work of a public project is not merely an initial technical phase. The front-end work of a public project defines much of the relevance, feasibility and governability of the project. Most public projects do not fail due to what occurs during the execution/delivery phase of the project. Instead, many public projects fail because the project was not sufficiently clarified prior to the commencement of the execution/delivery phase. This is one of the few instances in which there appears to be a consensus between the academic literature and the empirical findings of this thesis. (Kuchta et al., 2023; Mackhaphonh et al., 2021).

These results have added a very practical dimension to the empirical evidence of this study. The majority of the respondents were describing their understanding of "governance" in practice terms rather than in formal hierarchical terms. Their views included

active Steering Committees, making decisions at the right time, having shared objectives, defined roles, realistic preparation for meetings, and regular follow-up. It appears that in many cases in Finland, governance is viewed by public sector staff as a means of maintaining consistency within a project over time.

Consistency in a project will depend significantly on how early on the parties involved can understand each other's objectives, their responsibility areas, and their constraints. Where all of these elements are clear at the outset, effective governance can better assist in achieving goals regarding effectiveness, relevance, and cost-effectiveness. However, where these elements are unclear, even if the governance process has been properly established, there is still the possibility of a loss of focus over time. As such, the original objectives, priorities and deliverables can slowly begin to lose clarity.

Likewise, there can also be an element of similarity in regards to organizational capabilities. The study has provided some evidence regarding the types of structures and processes which lead to effective governance and planning; specifically, both will only have strength in terms of supporting project delivery based upon the competency of those employed by the organization, and the tools or mechanisms available for supporting their work. The respondent's views highlighted key elements in order to achieve success with respect to their perception of employee competency, accuracy of reports, quality of communication, and follow-up as being necessary conditions for achieving positive results from completed projects. As such; therefore, while a solid structure is important for the ability to complete strategic public projects successfully, so too is a organizations' (organizational) capacity to enable its stakeholders to understand clearly the objectives of the project, coordinate efforts amongst all relevant stakeholders involved, deal with uncertainty throughout the duration of the project, and ultimately, see the project progress through each phase of the process.

5.2.2 Procurement, Lifecycle Value and Sustainability

The findings pertaining to sustainable development were also connected to what the researchers have called the “procurement” research area. Until recently, procurement was generally considered to be a back office administrative function and thus not seen by organizations as a way that they could be contributing to longterm sustainable development or greater social good. Based on their analysis, the researchers decided that planning, genuine competitive bids, contract terms that meet the specific needs of a project, and considering a range of factors, not just cost, are also essential components of effective procurement. Nonetheless, the researchers also said that the practical application of life-cycle value can be very difficult. Respondents faced many difficulties to implement life-cycle values according to the researchers. The barriers included poor planning, overly restrictive regulations, little, if any, flexibility once you are in a contract, high front-end capital costs and using price as the sole measure. Many participants cited potential constraints to implementing life cycle principles but almost all stated that they believe there is an organizational structural limitation within each organization that would inhibit their ability to implement life cycle principles and practices. The key reasons behind these architecture related limitations were (1) budgetary restrictions on a short-term basis, (2) lack of flexibility in taking decisions. This section describes the Finnish national context. It calls on companies to create procurement strategies that align with their objectives while delivering value to taxpayers through the judicious use of public funds. It also provides leadership and resource management support to promote sustainable development. According to the national buying rules in Finland, companies that want to use procurement strategies to pursue sustainability objectives have a reasonably pleasant environment. The findings presented in this research align with those findings. This suggests that organizations, if they do not strategically procure it is likely they will not receive the maximum return on investment. Conversely, through a proper procurement process, organizations can achieve maximum use of social and economic resources through the proper procurement process.

5.2.3 Rule-Bound Context and Trade-Offs

The third major point for discussion is the Finnish rule-bound environment and the trade-offs it produces. One of the most important contributions of this thesis is its view of legal and procedural conditions as part of the explanation of why certain success factors matter as much as they do in practice. The results of the study indicate that in Finland, strategic projects have to function in an environment where transparency, legality, equality of treatment, documentation, and quality of information are not discretionary; they are built into the institutional environment of public activity. There are two important implications of this environment. First, there will be a greater requirement for early clarification. If there is little later flexibility, mistakes made at the beginning will be difficult to correct. This provides a partial explanation of why the respondents emphasized so heavily the importance of preparation, clear roles, realistic definitions, and disciplined governance.

A final consideration is that a regulated organizational structure will create conflicting and contradictory interests while trying to meet several performance-based objectives. In addition, an organization may need to make a decision regarding whether to buy products or services at the cheapest price as opposed to the total life cycle cost of those products or services. An additional example would be when an organization purchases many products or services from a vendor located outside of its local area thus providing employment for residents of the local community; yet the organization still has to follow each applicable procedure for procuring goods or services. This demonstrates the potential for the general public to have opposing interests and shows how regulatory structures will help organizations achieve strategic project results in the public sector in Finland. Additionally, there should also be regulatory frameworks to manage conflicts of interest that could exist among the general public, in order to ensure that strategic project objectives are accomplished. Therefore, in addition to speed, the most efficient method to provide effective delivery of public sector programs and projects includes transparency, accountability, legitimacy, etc. Sustainability is far more than simply

policies regarding decisions concerning project choices subject to limitations imposed upon by resource constraints such as budget/finance, procurement policy/law. As such, this research provides greater insight into the degree of boundedness as (limits to) flexibility provided through organizational regulations.

This research provides evidence of how specific the findings are relative to the Finnish context of this thesis. The research shows that in Finland there are several critical success factors that are highly dependent upon the need to develop strategy capabilities to withstand intense scrutiny. Governance, procurement, front-end planning and data management were found to be significantly important as they allow both successful and defensible projects. As such, the top three factors identified in this thesis are not independent managerially based practices (i.e., tools) but mechanisms to protect both the strategic direction of projects as well as protect the broader interests of society under potential rapid failures in procedure-based implementation and/or legitimacy.

Therefore, in conclusion, the discussions presented in this chapter illustrates that the major challenge facing strategic projects in the Finnish public sector is not only finding the "right" individual Critical Success Factors (CSF's). The challenges facing strategic projects is finding ways to manage the interdependency amongst all of the potential CSF's in a way that satisfies all of the CSF's under rule bound conditions. Projects that succeed are not those who ignore the limitations created by organizational rules. Successful projects are those who understand and intentionally create solutions to satisfy these limitations. Therefore, achieving multi-criteria success is dependent on two things. First, on being able to complete the objectives that project managers want to complete. Second, on having the capability to navigate through the institutional constraints/requirements that govern public projects.

5.3 Refined Finland-Specific CSF Framework

The results of this research study provide a more detailed model of specific critical success factors for the public sector related to the planning and delivery of strategic projects in Finland. While the model does not represent an entirely new set of critical success factors for planning and delivering strategic projects in the public sector; it illustrates how those previously identified critical success factors have significant importance due to the institutional setting of Finland. Thus, the model represents both an extension of previous research (as it extends upon prior literature) and a context-specific representation, as the empirical evidence from chapter four influenced its development.

The model provides three levels of analysis:

The context level is an illustration of the institutional framework of the Finnish public sector. The institutional framework is characterized by a rule-bound approach to managing public funds and providing services, high expectations regarding transparency and accountability in the use of such resources, and a relatively fixed structure at all stages of decision-making, contracting, and implementing. The findings of this thesis demonstrate that the above-mentioned contextual elements are not merely background variables; however, rather they impact how salient various critical success factors will be in actual practice, as well as how easily recognizable each factor will be throughout the course of the project.

The central layers of the CSF framework are the critical success factors that the researcher found to be the most relevant factors to include in the empirical results. These included; clear governance and effective steering, clear front end planning and realistic preparations, procurement capabilities focused on life cycle costs, competent personnel who have defined job descriptions and responsibilities, and consistent monitoring during the execution phase.

The elements presented could never be considered separately because they are mutually supportive. Thus there is a need for an early understanding of how effective

governance is developed. Furthermore, when evaluating effective procurement it is not just about ensuring compliance with regulations, it is about considering lifecycle costs. In addition, Sustainability is supported by both Management and Action Taken in Practice. Therefore, the model demonstrates the relationship between these factors. However, when utilized collectively as demonstrated through the model, these factors can create a significantly greater synergy than if each factor were to be used individually. The outermost portion of the CSF Framework Model is the Success Outcome Layer. During this study the six measures of success identified for use, fall within the Success Outcome Layer; i.e., Efficiency, Effectiveness, Relevance, Sustainability, Value For Money, Social Benefits. The CSF Framework Model supports the fact that none of the success outcomes listed above will ever be able to be produced independently. Rather, they will develop as a result of all the good Governance, Adequate Planning, Successful Procurement Processes, Competent Employees and Ongoing Monitoring in the Public Sector Environment. One of the major advantages of utilizing the CSF Framework Model is that it provides a way to evaluate success in tangible terms. In addition, the CSF Framework Model suggests that depending upon formal mechanisms such as tools (i.e. RFP's), Contracts, etc. will be insufficient to produce results. Achieving success will depend heavily upon continuous disciplined coordination among important organization and management functions in a highly structured public sector environment.

5.4 Practical Implications

This study offers some straightforward best practices for managing strategic projects within the Finnish public sector. In general, it is critical that the organization clearly define what problems are to be solved; what the purposes of the project will be; what the primary objectives of the project will be; what potential risks exist; and what limitations may be present to the project prior to entering into either procurement or implementation. Additionally, roles and responsibilities of all parties involved should be defined early in the project development process. Second, project governance should be engaged and practical rather than solely procedural (e.g., meeting-based and report-driven). The effectiveness of the project governance process has a direct impact on both the ability of

the project team to carry out their duties effectively and to support informed decision-making, as well as to keep the project on course. Thirdly, procurement should be viewed as being an integral component of overall project management. Procurement can not simply be focused on compliance with applicable regulations or on achieving the lowest cost possible. Rather, it should include consideration of long-term value and suitability of contractual options. Lastly, success with respect to this type of project ultimately rests upon people. While having established procedures and effective processes are beneficial to ensure successful completion of a project, they do not substitute for skilled personnel, open communication, follow-through, and adequate documentation.

In addition, the findings point out that there should be explicit recognition and consideration of trade-offs. Many times, public-sector strategic projects will have very high performance levels for most of the measures of success, but will not have equal levels of performance for each measure. The typical area where trade-offs occur is when there are competing objectives (short term vs. long term). Additionally, there may also be competing objectives that exist within specific areas (e.g. large scale procurement vs. local community participation), however, it can occasionally be possible to eliminate all or nearly all trade-offs. What is even more important than eliminating trade-offs is to recognize trade-offs at the outset of a project, and address them in a transparent and collaborative fashion. This means that stakeholders in Finland's public sector should be able to clearly articulate how they make decisions regarding what their priorities are, by identifying what objective(s) are prioritized over others and why.

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