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IMPACT OF MANAGEMENT CULTURE AT OPERATIONAL LEVEL MANAGE-MENT IN PUBLIC SECTOR

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Merja Pykäri

ABSTRACT

The aim of this study is to point out how the management system supports the management culture in the public sector. The study provides framework to improve on the dynamics of leadership models and management culture in a public organization.

The objective of the thesis was to identify the current state of the commissioner's management culture and its impact on operational management, assess the level of maturity of the organization and how the management system has been described in the past. These themes were prioritized based on an evaluation of the quality of operations commissioned by the Ministry of Finance.

This study is made based on The Common Assessment Framework (CAF). This framework is developed specifically for the public sector and organization internal audit has been made using this model in 2023. Qualitative methods were used to conduct the study. The primary data was collected through the results in reports during the external evaluations between 2020 and 2022 and end-report 2023, semi-structured interviews and internal observation. The employee satisfaction survey 2023 was utilized as secondary data. Using a qualitative approach, the study utilized interview methods to gather data and findings especially at operational level.

The study showed the importance of management culture to operational management by answering the research questions and provided the information how the management system supports the leadership.

Keywords: CAF, public sector, management, leadership, organizational culture, management system, maturity

CONTENTS

1 INTRODUCTION

1.1 Introducing the case company

The commissioner of this thesis is Government ICT Centre Valtori. Valtori provide sector-independent ICT services as well as information and data communications technology services and integration services for Finnish government and government agencies. Valtori is an agency that operates in the administrative branch of the Ministry of Finance and operations are based on law Act 1226/2013 and 10/2015. (Ministry of Finance 2023a and Act 1226/2013 and 10/2015.)

The Ministry of Finance set a project (2012 – 2015) for collecting the state's sector-independent Information and Communication Technology tasks and services to Valtori. At the starting point for Valtori's establishment, Valtori received a fragmented portfolio of services from agencies that had not been standardized. In addition, the transfer of staff was not managed in such a way that the skills structure and staffing levels were in line with Valtori's mission statement. The strategy chosen for Valtori's transition would have required careful planning of the post-transition transformation process and a separate investment budget to align services and operating model. When Valtori was set up, no provision was made for post-transition transformation, and it was assumed that it would be made in line organization. (Deloitte 2021a).

In total, approximately 80 government entities were transferred to Valtori. These tasks included services that do not require significant sector-specific skills, which are based on commonly used equipment, software solutions and technologies. The migration was carried out through agency-specific migration projects, in which the sector-independent ICT tasks, persons, agreements and other production-related factors were identified for migration. The first migration was carried out in March 2014, with the last migration taking place in June 2016. 1st March 2014 is when Valtori's operations commenced. (Valtori 2023.) Currently Valtori has approximately 1500 employees and 25 offices throughout Finland.

Valtori renewed a strategy by implementing an extensive operational and organizational reform in autumn 2021. The strategy defines Valtori's longer-term objectives and priorities. According to the renewed strategy, Valtori's mission is to provide secure and compatible ICT services to the state government. Valtori's vision is to be an ICT partner that enables customer success. The four main objectives of the strategy are customer satisfaction, meaningful work, excellent performance, and cost-effective operations.

Due to this organizational reforms 2016 and 2021, management responsibilities have changed substantially. Stabilization of Valtori's organization and management culture started by selecting the new CEO. This topic is relevant for social effectiveness of public administration especially after change of paradigm concerning new ways of working during covid-19. The importance of Valtori's role is underlined by the fact that the services provided by Valtori have a major impact on the efficiency of the daily work of government staff and, indirectly, on the e-services provided to citizens. On the other hand, Valtori's role as an enabler of critical functions for society emphasizes reliability and security. Valtori needs to ensure that it has the necessary capacity to engage in eco-systems, together with ministries and agencies, service centres, universities and research institutes, and ICT service providers. (Deloitte 2021a.)

The Ministry of Finance objective is to find out how the organizational reform effects on Valtori's management and organizational culture (Pöyhiä 2022.) The public sector includes central government and local government. The central government sector includes state administration, universities, the Social Insurance Institution, unincorporated state enterprises and social security funds. Municipalities and joint municipal authorities comprise the municipal administration, the municipal school system, as well as the unincorporated service institutions and establishments of municipalities and joint municipal authorities, such as health centers, hospitals, day-care centers and unincorporated enterprises of municipalities and joint municipal authorities. (Sitra 2023.)

1.2 Aim, objective, and research questions

The author has 4 years of experience in working for the case company and has first hands experience on feeling impact of the reorganization. This led to interest to conduct this research to improve the management culture within the operational level within the case company.

The aim of this study is to point out how the management system supports the management culture in the public sector. The purpose of the study is to identify the current state of the company's management culture and its impact on operational management. The study will assess the level of maturity of the organization and how the management system has been described in the past. The conclusions will be the assessment of how the management system supports the management culture and recommendations for areas for improvement, particularly in operational management.

This is achieved in line with the following objectives:
- to recognize what is the current situation of the management system.
- to understand how the management system has been described in the past and
- what is the maturity level of the organization.

To fulfill these objectives, the main research question is what is the impact of management culture at operational level management in the public sector?

Target of this study is to explore the current management system and to point out main topics to develop in management culture at operational level. In addition, to find out main development areas at operational level by provide some tools for management team to improve the operational management in the organization.

This study is continuation of research made in 2021 and analyzing final report 2nd May 2023 commissioned by the Ministry of Finance made by Deloitte. The focus of this study is on organizational culture and management system at operational level. The study focuses on topics related to current management process at operational level. Conclusion of this study can be identified the

most important development issues to improve organizational culture and management culture.

The current study has been structured as follows; chapter one of the thesis is an concerned with the introduction of the study. The next chapter is the literature review, in which concepts and theories relating to management and leadership are explained. Chapter three presents a discussion of methodological choices, and it includes research methods and approaches, data collection procedures, and data analysis. Chapter four presents the results. The last chapter five collects the data, and it provides the answer to the research questions, evaluation of the outcomes relative to literature and research limitations, as well as a recommendation for future studies.

1.3   Research methods

This study uses a qualitative method to gain the holistic view of current management system.

The research process consists of different steps that can be presented linearly. It is common for the author to return to previous steps. Often, the author re-examines the topic, aim and object after familiarizing with the literature. In qualitative research, the author must adopt an objective point of view, even though subjective information is collected during the process and the author can work actively in the researched environment. Individuals form their views in relation to different experiences. Neutrality must be preserved throughout the process. (Puusa & Juuti 2020, Chapter 2.)

The aim of qualitative research is not to find the truth about what is being studied. The aim is to use interpretations to show something about the activity that is outside the scope of direct observation. It emphasises three aspects of the subject: the context, the intention of the phenomenon and the process. Context describes the context, for example, the time, place and social network in which the general cultural or professional context of the issue or phenomenon under study is situated. It also describes the research context in which the data was collected. Intention means that the author observes the motives of the subject in the research situation, for example to conceal,

downplay or modify facts. Process refers to the relationship between the research design and the research data in order to understand what is being researched. (Vilkka 2015, 118–121.)

The process, methods, data collection, and target group for this study has been presented at Figure 1. The process follows the steps of qualitative research methodology.

PROCESS

Target evaluation
Scope
Knowledge base
Methods
Data gathering
Analysis
Implementation
Reporting
Evaluation of the results

METHODS

Quality methodology
a combination of case study and
development task

TARGET
GROUP
Role-
based
managers

DATA COLLECTION

a systematic literature review
semi-structured interviews
Benchmarking
Quality reports
Interviews
Observation
Private diary and self-reflection

Figure 1 The research process, methods, and data collection

During the assessment, the phase will be following generic quality research assessment criteria. Preliminary data analysis is done during the process. The final analysis is made based on logical inference and interpretation. The target group will reflect on the research report. The methods of the development work are appropriate to the topic, the interest of the author and the current development needs of the target company. A qualitative development study will allow the developer to play an active role.

1.4   Phases and schedule

This study followed phases of the master's thesis process. The process started with preparation activities like nominated thesis supervisor, required data secure procedures and contract with commissioner. Author also

completed a course in academic writing and in qualitative methodological research.

Idea and planning phase covered literature review and related internal reference material. During implementation phase were conducted both interviews, data gathering and analysis and results and conclusions. Reporting, evaluation and presentation phase covered presentation at the seminar after the supervisor has approved it. Language and plagiarism check, assessment and maturity test included to the reporting, evaluation and presentation phase as well.

Figure 2 shows the phases and schedule of this study.

Phase	Milestone

1. Preparation phase
  • Steering
  • Contact Statens IT
  • Data secure forms
  • Academic writing course
  • Qualitative research methods -course
  • Topic
  • Research questions
  • Valtori research contract
	31.3.2023
	
	(31.12.2023)

2. Master thesis plan approved	28.4.2023

3. Idea and planning (10cr)
  • Reference material
  • Literature review
	31.10.2023

4. Implementation (10cr)
  • Questionnare development
  • Interviews
  • Survey and analysis
  • Research results and conclusions
	29.2.2024

5. Reporting, assesment and presentation • Finalization and submission	11.3.2024
6. Thesis approved	31.3.2024
7. Presentation	11.4.2024

8. Documents
  • Opponent form
  • Language check
  • Plagiarism check
  • Feedback
  • Submit to Wihi
  • Assessment
  • Maturity test
	30.4.2024

9. Project end	30.4.2024

Figure 2 Phases and schedule of the research

Organization started an improvement program during this research process, and the latest employee satisfaction survey has been implemented at the end of year 2023. The organization will continue to conduct the improvement program till the end of year 2024. This study will provide additional information

on the current state and practice of operational management to support the development program.

As shown in figure 3 interviews were scheduled for the November - December 2023 and data analyses during the December 2023 – January 2024. Some of the findings for improvement can be proceeded during the Thesis process, outcomes and improvement topics will partly to be implemented during improvement program 2024.
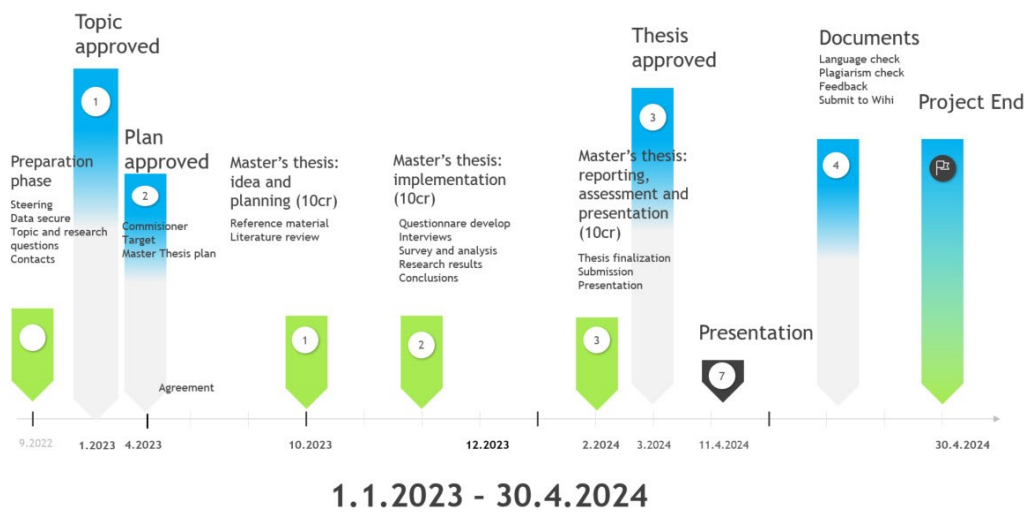

Figure 3 Thesis timeline plan

1.5 The scope

The focus of this study is on leadership and management culture at operational level. Change management touched as part of research, although it is not specifically addressed in this study. Strategic management and economics are excluded from the study. The recruitment process, the private sector, competence management, the complaints process, and internal controls, which had been highlighted in final report are excluded from this study. Competence development is part of HR, but needs more attention, therefore this could be a separate research topic. The complaint process is part of the customer experience department and Valtori's customer advisory board nominated by the Ministry of Finance supports customer steering and the development of operations. This forum discusses and monitors the development of operations and services, service quality, customer

satisfaction, service pricing, cost development, and matters related to service deployment. (Valtori 2023).

The purpose of this study is to focus on selected elements that support practical management work based on the Common Assessment Framework (CAF) as shown in figure 4.
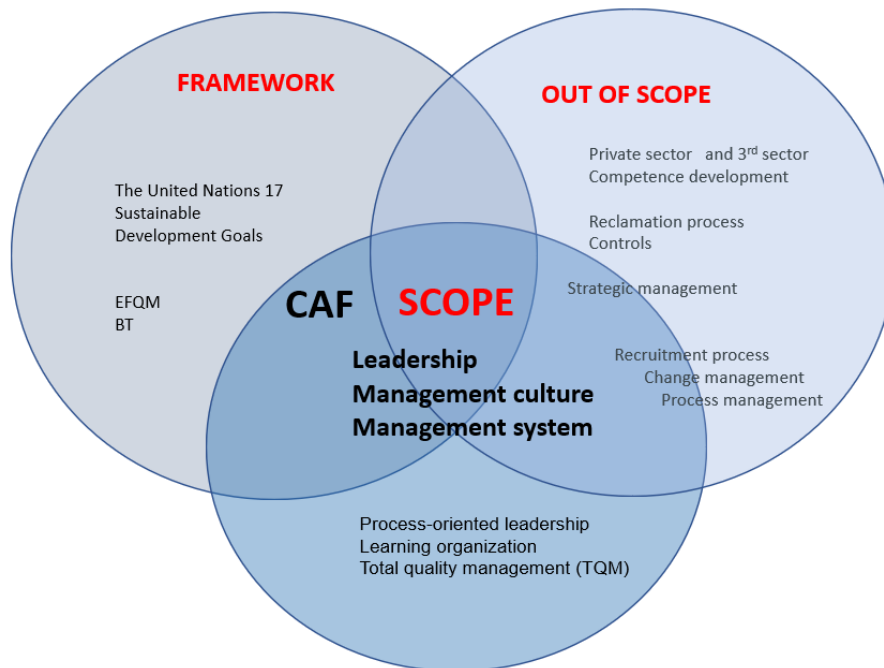

Figure 4 Scope of the research

This study is unable to encompass the entire management areas. The overall picture by service area, for example, the assessment of the scope and quality of services, the state of service models and cost-effectiveness, productivity is mentioned briefly in this study. Procurement and supplier management processes and customer satisfaction are defined shortly.

These processes are covered during the improvement program. Valtori's customer advisory board nominated by the Ministry of Finance supports customer steering and the development of operations. This forum discusses and monitor the development of operations and services, service quality, customer satisfaction, service pricing, cost development and matters related to service deployment (Valtori 2023).

2   ORGANIZATIONAL AND MANAGEMENT CULTURE

Organizational culture usually refers to the set of norms of behaviors, values, policies, and other similar factors that make up a company. The organizational culture describes and guides the way a workplace community tends to operate. People create the organizational culture, simultaneously drive decision-making. (Virtanen & Stenvall 2011, 11.) Management culture consists of norms, expectations, habits, and behaviors that influence the management style of an organization. The aspiration of management is to cover operational result. It is to be taken info consideration that there are different perspectives on management and leadership. Management is traditionally focused on target based performance management. Leadership is more people-oriented proactive network management and interactions. There can be leadership without a leader, but there cannot be a leader without leadership. (Virtanen & Stenvall 2011, 12.)

The Organization for Economic Co-operation and Development (OECD) are under pressure to improve the public sector performance. Performance information (PI) is a key institutional factor that can contribute to improving the public sector efficiency (Curristine et al. 2007, 2). There is no common blueprint for improving the public sector efficiency. OECD countries have therefore adopted a variety of approaches, such as decentralization, workforce structure, size and human resource management arrangements, and the adoption of a purposeful approach. The purpose of a non-profit organization is to change individuals or society. The role of the leader is to put the mission statement into practice. The relevance of the topics needs to be considered. The focus should be on the strengths of what someone does better than someone else. It is necessary assess opportunities and needs and identify skills and commitment first. (Drucker 2008, 21-25).

Although most OECD countries have implemented structural reforms, empirical evidence of their impact on efficiency is still limited. This is due to a lack of resources to conduct evaluations, a shortage of studies on the antecedents of change, also due to the complexity of efficiency measures. Increasing the use of performance information in budgetary processes aims to

shift the focus of decision-making from inputs to outputs. (Curristine et al. 2007, 2.)

2.1 Organizational culture

Organizational culture, i.e., corporate culture, is visible in the daily words and actions of individual employees. It is the result of everyone's values, beliefs, and attitudes, which together form the culture of the workplace. There are several sub-cultures within a workplace, which may be based on organizational structure, a common theme, technology, or a set of values. Developing a corporate culture is about making behaviors visible and discussing them, nurturing what unites them and allowing for diversity. (Sivonen 2022, 95–97.) Workplace culture and its subcultures can be judged, for example, by the tone and activity of conversations in different communication channels or people behave in different informal settings. The culture of discussing about difficult issues, the timing of work, what kind of people are valued and rewarded effects to the organizational culture.

The existence of a public organization is based on a law or a regulation, how people are valued and tasks are regulated by statutes and instructions. The selection of public organization management tools and the construction of the management system are influenced by the task and activity areas defined in the regulations. The special features of the organization are different compared to a company or a business institution, where market-based business management is applied.

The principle of the constitution is to ensure the continuity of public functions and a large citizen coverage. Political guidance, binding regulations, principles of good governance, ownership guidance, transparency of operations and difficult measurement of results characterize public management and require continuous development. The shaping of the situation requires interaction with the external environment. A special feature of public management is the scope of the perspective, in addition to one's own organization, in relation to customers, stakeholders, other authorities and the media. (Ahonen et al. 2015, 44-45.)

A special feature of public management is the balance between political management, owner control and civil servant management. The guidance extends within the work processes to the preparation of the details of individual tasks. The accuracy and rhythm of the definition of goals and results distinguishes a public organization from companies and business establishments that are market-based in terms of their processes and nature. Customers also participate more actively in the monitoring and evaluation of goals and results. Evaluation of effectiveness is more relevant in public administration than performance and productivity. (Ahonen et al. 2015, 46-48.) The public administration management system must be clear and simple simultaneously must be followed with discipline. The management of a public organization requires a wide range of professional skills. A more customer-oriented service concept is a prerequisite both for internal management and for stakeholders as customers (Ahonen et al. 2015, 52.)

The criteria for good management are intended as a basis for assessment. Targets and measures are defined in the organization for guiding and developing management. In everyday life, objectives are translated into practices and operating models. An evaluation criterion is a measure of what is meant by good management. A set of criteria is not a description of the management system or a management manual. (Ahonen et al. 2015, 52.)

The five main components for good management are trust and respect, cooperation and networks, diversity and individuality, competence and development, and renewal and inclusion. Trust is promoted by openness and transparent operations, sharing of information and responsibilities, ethics, a culture of safe discussion (psychological safety), fair decision-making and appreciation. In utilizing cooperation and networks, the organization should value working relationships, jointly agreed working methods, appropriate and goal-oriented actions, and be aware of the implications of political guidance and good governance principles for management. (Ahonen et al. 2015, 52.) Diversity and individuality need to be seen as an asset by staff, recognising and building on the strengths of diversity.

The prerequisite for competence development is both high-quality competence management and continuous learning and renewal and

collaboration between different actors. Real change is created as a cooperation between all actors through the personal experiences of individuals. The knowledge, experience and ideas of staff are harnessed, for example by experimenting with new ways of working, coordinating reforms and ensuring the dissemination of agreed approaches, including through impact assessments on staff well-being. Management shows its appreciation of staff by providing opportunities to lead development together (Ahonen et al. 2015, 82-90.)

Demography studies the development, size and structure of the population, as well as changes occurring in the population, for example terms of population size, age, sex, marital status and regional distribution. Demographic change (transition) refers to changes in birth rate and death rate as a country develops. As the standard of living rises, mortality rates fall first, leading to rapid population growth. As the workforce shrinks and the dependency ratio declines, the length of working lives plays an important role in ensuring economic sustainability (Ahonen et al. 2015, 106-112.)

According to Ahonen et al., age management should seek opportunities and identify the strengths and needs of employees of different ages. The traditional education-work-pension career model has been replaced by more complex career models, where competence development is spread over different stages of a career and several periods of work. At the same time, the distinction between work and retirement is becoming more complex. More flexible forms of work are enabling work and life to be reconciled in many ways. (Ahonen et al. 2015, 107.)

Investing in staff wellbeing and job satisfaction, identifying, supporting and empowering employees of all ages, as well as good working relationships and interaction with supervisors and colleagues, are important for people of all ages. Employee-oriented solutions should be offered to all age groups as a way of reconciling work and life and promoting well-being. Particular attention should be paid to skills needs at career transitions. Supervisor support and work arrangements provide a platform for sharing tacit knowledge (Ahonen et al. 2015, 114-115.)

Managing complex environments in the organizations focuses on managing in a rapidly changing environment, for example, managing organizational culture, innovations, changes, knowledge, skills, and learning (Virtanen & Stenvall 2011, 30-31). In addition to these knowledge management includes information and data management. According to Virtanen & Stenvall, knowledge management is important individually and collectively. In individual management, the focus is on the knowledge and abilities of the individual. In collaborative knowledge management, the focus is on common practices and interaction.

In the late 1990s, the balanced scorecard (BSC) was extended to become a management and leadership model in government. The problem was that the BSC cards were built without planning how to implement them into the management system. To paraphrase Virtanen & Stenvall (2011) question whether the public administration had the expertise to apply the approach or if the scorecard approach was uncritically copied from the private sector to the public administration.

According to Virtanen & Stenvall (2011, 35) up to a certain limit, it is reasonable to assume that there are no significant differences between private and public management. The public nature or size of an organization has no bearing, for example, on the resolution of workplace conflicts or the motivation of staff. Non-profit organizations (NPO) do not have profit and loss responsibility, so it is more important than business to give up some activities. Like businesses, NPOs need to have an innovative strategy. Strategy translates purpose and objectives into action. (Drucker 2008, 27–32.)

Leadership is often described in terms of function and position in the organization. Leadership is about behavior between people, supporting others and removing obstacles. Leadership is the ability to articulate a common direction, the ability to take responsibility for the community, not just for oneself. Leading people is the ability to understand what is important to employees, and what are them expectations to succeed and how they can perceive shared goals. In legal terms, leadership is about decision-making responsibility and accountability. In business management, we talk about the results of activities. A key factor in leadership success is to imagine a common

starting point when a new frontline employee takes over as team leader. The community may already have years of shared history of misunderstandings, experiences of being heard, unresolved conflicts or successes, team spirit and good leadership. (Sivonen 2022, 130-135.)

According to Teelken et al. 2012 three key aspects affect leadership in the public sector: the role of the public sector leadership in different contexts, the impact of the role of the private sector on leadership style, and the impact of experts moving into management. The movement from performance to results is linked to the fact that the processes of public administration are less bureaucratic, more networked and innovative. Leadership has been entrusted to the different actors in public administration - government, managers, staff, trade unions and citizens. This emphasis on community responsibility is reflected in an emphasis on partnership and collaboration/co-management. (Teelken et al. 2012.)

2.2   Management culture

Like organizational culture, management culture refers to the set of norms of behaviors, values, and other similar factors that make up a company. Management consists of internal and external management, human factors management, environmental management, and governance management (Virtanen & Stenvall 2011, 15). Internal management refers to the management of work and the division of labor, as well as the reflection on structures and decision-making. Human factors management focuses on people management, behaviors and interactions, teamwork, and well-being at work. External management focuses on the management of the operating environment, e.g., strategy and objectives.

New public management is about outputs, results, and effectiveness, i.e., operating in a more cost-conscious way. New public management is characterized by a separation between policy and implementation, professional managers, an emphasis on efficiency and results, and a strong emphasis on standards and evaluation. There is also an emphasis on a more entrepreneurial approach, using the market mechanism, competition, and

contractualization. New public management has increased the demand for strengthening management skills. (Virtanen & Stenvall 2011, 46-47.)

Management competence requirements have been changed since last century. Conceptual thinking and the ability to see the holistic view, interdependencies, and interactivity are relevant (Virtanen & Stenvall 2011, 84-85). The goal orientation means that management work has a goal that guides the choices made by the manager, ensuring working conditions, enabling the balance between supply and demand, ability to innovate, developing own activities, and management at a more detailed level (Virtanen & Stenvall 2011, 88-118).

In Singh's (2021) master's thesis on Case of Posti Group Corporation it was apparent that the experience of respondents influenced their opinions in their process of interacting with supervisors and managers. The respondents pointed out a variety of leadership styles, which affect the management and organizational culture. Elements related to management styles included openness between managers and employees and the style and direction of interaction. (Singh 2021, 34-35.) The experience of leadership was also situational.

The results indicate that the management style of managers became more aligned when company objectives had to be implemented by the whole organization. This was to avoid individual interests. Interviewees argued that managers who described strong transactional leadership traits preferred to the vertical organizational structure to preserve the bureaucratic features. From a work experience perspective, respondents at the managerial level said they experienced challenges in trying to balance the interests of the company while creating a flexible teamwork environment. Respondents said that their long work experience helped them to cope with the different situations they encountered. (Singh 2021, 36-37.)

Maturity describes the level of development. In general, it could be argued that in any organization, more experienced managers are more successful in resolving conflicts they are within the team. However, despite their

experience, employees are motivated once a relationship of trust had been built between managers and teams.

Employees in Posti Group were more comfortable after building a trusting relationship, for example, to share their concerns and ideas with their managers. In addition, respondents confirmed that they were more motivated by the interactive flow of information. Respondents felt that their job satisfaction and job performance were strongly influenced by the ability of managers to manage their own and their subordinates' emotions. It was also felt that managers who built trust between themselves and members fostered positive relationships, and this was also reflected in team members. (Singh 2021, 36-39.)

Clear and timely information flow was important to employees, especially when it was related to strategic decisions. Information sharing within the organization was important instead of being published on a website or bulletin boards. At the employee level, regardless of position and responsibility in the organization autonomous decision-making without micro-management was perceived as increasing job satisfaction. As the organization has undergone major changes, there have been provided training to the management team and managers. Managers are confident in their ability to perform their duties and make the right decisions, at the regional level as well. (Singh 2021, 38.)

According to OECD institutional incentives and arrangements, which improve flexibility, increase efficiency. The decentralisation of operational and fiscal responsibility from central to subnational levels of government, inter-agency and intra-governmental coordination, human resource management arrangements and e-government, and methods to strengthen competitive pressures, for example through privatisation could improve the efficiency of public sector. Improving target setting has proved to be a useful tool to set short and medium-term priorities and to expect results from the public sector. In countries such as Australia, Canada, the UK, and the US, all individual ministries are required to develop strategic plans, including medium-term plans. (Curristine et al. 2007, 9). The purpose of the non-profit organization's existence must be identified. The organization needs to balance short and

long-term goals, just as a business does. For a nonprofit organization, the long-term mission can be eternal. (Drucker 2008, 110–113.)

Adopting a purposeful approach enables management to ask strategic questions about how services are delivered, whether the service is necessary, what the objective of the service is, and what the expected outcome is. Most OECD member states are struggling with reforms such as measurability and resistance to change. (Curristine et al. 2007, 19).

The WORK2030 (TYÖ2030) program has been part of the government program. The program developed new ways of working together. The aim was to influence employment, the economy, competitiveness, and Finland's brand in the world. The objectives of the program have been both to accelerate the renewal of working practices, to use of modern technologies in workplaces and to strengthen a working culture based on cooperation and trust. Additional goals to raise Finland to the forefront of work-life innovation and to raise well-being at work in Finland to the best in the world by 2030. (TYÖ2030, 2019-2023.)

Five solutions of the program for a prosperous and productive working life are:

Strengthening trust
- The survey show that, Finnish trust is one of our most valuable assets and an important competitive factor for organizations.

Increasing dialogue
- Shared dialogue strengthens trust and cooperation, which enables development and renewal. Sharing information increases resilience and the capacity for change.

Enabling people to learn together
- Continuous learning is a prerequisite for development. Learning increasingly takes place in interaction with others. Peer learning, i.e., learning from others and exposing oneself to new perspectives. Involving staff in the development of activities is one of the main ways of promoting competence in the workplace, according to research.

Unlocking creativity
- Innovation at work comes from daring to think differently. Innovation requires agility, experimentation, the courage to fail, and long-term development. Every individual has creativity, but research shows that creativity in organizations is held back by the uncertainty experienced by individuals.

Leadership development
- Too many people in the workplace have a history of poor management. It is important to find out how leadership is currently understood. Young people are looking for values-based content, a supportive atmosphere, and a well-functioning work community. (TYÖ2030, 2019-2023.)

2.3   Process-oriented leadership

Process orientation is a way to understand the division of labor in an organization in a new way, also in a public administration organization. Since the beginning of the 21st century, dynamic, holistic, and impact-driven organizations have been developed. As we move into the 2020s, the public sector organizations are also maturing towards process-based management.

Organizations look different from outside or inside, from various places and perspectives. Process orientation means defining and developing policies and management practices as a series of events - identifying, naming, and defining supply chains at various stages. In a process-oriented organization, responsibilities and information flows are more agile than in a hierarchical organization. This paradigm shift in the early 2000s was seen as leading to large-scale outsourcing projects to improve competitiveness and reduce costs. (Virtanen & Wennberg 2005, 34). Process thinking has also implied breaking down some existing structure or operating model. Strengthening quality thinking as a principle for service delivery is essential. Process management is not about defining and describing processes (Virtanen & Wennberg 2005, 113-114).

2.4   Learning organization

The framework of the learning organization fits into the framework of process-oriented thinking because it is based on systems theory and the view of the organization as a systemic entity (Virtanen & Wennberg 2005, 36). The same ideology works for process-oriented organizational development, where processes consist of a series of activities, which are made up of smaller sets of activities and tasks. Learning takes place during the process in groups, between people, and because of interaction.

When assessing the productivity of a knowledge worker, employee need to know what is expecting to do. The principles of self-direction, continuous learning and innovation characterize knowledge work. Quality is at least as important as quantity in determining the productivity of a knowledge worker.

The commitment of the knowledge worker to the core mission of the organization is relevant. (Drucker 2000, 163 – 170.)

Change is the norm in modern working life. Leadership often takes place in different structures, in networks. Building trust is important in network management. Network leadership is not based on the formal status of actors in the organization, but leadership is earned or taken (Ahonen et al, 2015 13 - 18). A leader's ability to identify the leadership style appropriate to different situations and to change their position requires situational awareness. Good management of well-being at work requires analytical thinking, good interpersonal skills, and the ability to cope with imperfections and criticism in working life. A good leader has the ability to listen to others and to take an interest in individuals and their needs and opinions. Leadership should be done in a way that is natural to each personality (Ahonen et al, 2015 19).

From the point of view of organizational development, it is essential that change is led and that there is an insight that change looks different when viewed from different directions (Virtanen & Wennberg 2005, 58-59). Management, middle management, and experts perceive change from different perspectives, and the interpretation of the direction, depth, or significance of change and leadership varies depending on the viewer. Public administrations need to adapt their activities to the demand for services. Activities must be demand-driven. (Virtanen & Wennberg 2005, 67–70.)

2.5   Total quality management

There are theoretical frameworks that help organizations to assess their current situation and identify areas for improvement. Total quality management (TQM) is complex and is determined by the company's own requirements and the principle of continuous improvement. Quality must be part of the long-term vision of the organization. (Eby 2017).
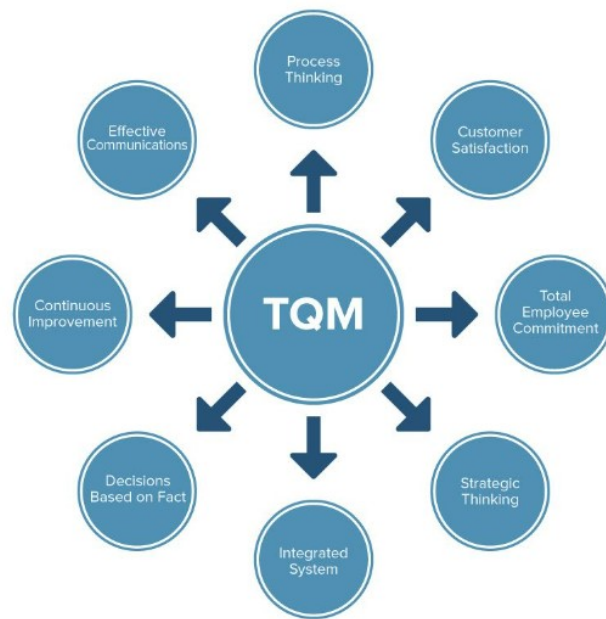
Figure 5 Total Quality Management (TQM) (ISO22000 Resource Center 2015)

As shown in Figure 5 TQM describes a management approach to long-term success through customer satisfaction. All members of an organization participate in improving processes, products, services, and the culture in which they work. Commonly accepted principles are customer satisfaction, employee engagement, evidence-based decision-making, effective communication, strategic thinking, integrated systems, shared vision, and stakeholders such as suppliers, partners, and customers. (Eby 2017.)

Based on the Lean concept "PDCA is an improvement cycle based on the scientific method of proposing a change in a process, implementing the change, measuring the results, and taking appropriate action." (Lean Enterprise Institute. 2023). Figure 6 shows the phases of PDCA-method (Lean Enterprise Institute. 2023).
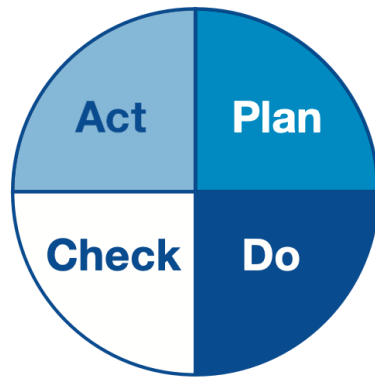
Figure 6 PDCA (Lean Enterprise Institute 2023)

Plan: The planning phase identifies problems that affect day-to-day activities. In this phase management and employees work together to find root causes and determine goals and methods to achieve targets.

Do: This is the solution phase, where strategies are developed to correct the problems identified in the planning phase. This is the stage where the effectiveness of solutions is operationally assessed rather than the results achieved are measured. In this phase, stakeholders and personnel are engaged to improve competencies.

Check: This is the review phase where the impact of the changes on operations is assessed.

Act: The action phase is the presentation or documentation of the results and actions. The dialogue between stakeholders to communicate and inform agreed new practices is important. (Lean Enterprise Institute 2023.)

2.6 Frameworks

There are several theoretical frameworks that can be used to assess the current state of organizational management and maturity level. The Common Assessment Framework (CAF) is used in this study. It is developed specifically for the public sector, which allows an organization to conduct self-assessment and long-term organizational development work. The CAF is a TQM-tool that is inspired by the major TQMs in general. The CAF provides an overall picture of the organization's activities and development needs. The tool provides a comprehensive picture of the current state of the organization's

activities and identifies future development needs. The CAF model can also be used as a management system. (EUPAN 2020.)

European Foundation for Quality Management (EFQM) is a business model, which is suitable for all business areas, public, private, or third sector, and provides methods for the effectiveness of the strategy execution and sustainable value creation (EFQM 2021.) All organizations need to change their management culture and utilize the added value of the staff. Modern organizations need to ensure the effectiveness of change management and identify opportunities and risks in the ecosystem.

CAF and EFQM models are structured and standardized instruments to improve organizational culture. They provide a holistic view to analyze and understand the ecosystem and to identify the coherence of the complex environment. The CAF is based on the EFQM assessment areas, the hallmarks of excellence, and the principle of continuous improvement. The CAF model can be used to assess practices and performance. The evaluation is conducted as a self-assessment. As a result of the self-assessment, the organization's strengths and areas for improvement are identified. After the self-evaluation, it is also possible to make an external audit. There are features included from EFQM as well.

Business Technology Standard (BT) are used more for technology, competence and service level assessments at operational level.

2.6.1 CAF Model

This study are made based on CAF model due to the internal audit made in 2023 based on this model. Management theories are influenced by different scientific disciplines. For example, management sciences research leadership from an organizational and performance perspective, sociology studies the behaviors of groups and communities, psychology focuses on the behaviors of individuals in an organization, education focuses on leadership skills and competence development and learning, and economics focuses on the economic management and cost-effectiveness of an organization.

The principle of continuous improvement is important in evaluating performance. Based on the CAF Manual "The European Public Administration Network (EUPAN) is an informal network of Directors-General of public administration in the Member States of the European Union, the European Commission (EC) and observer countries." They assess public administration challenges at the national and European levels. (EUPAN 2020.) CAF is the first European quality control tool. The network promotes cooperation and exchange of information between member countries in the development and management of public services. The Ministry of Finance has played a key role in assessing the performance of the central government and in the introduction of the CAF model as shown in Figure 7 (EUPAN 2020).
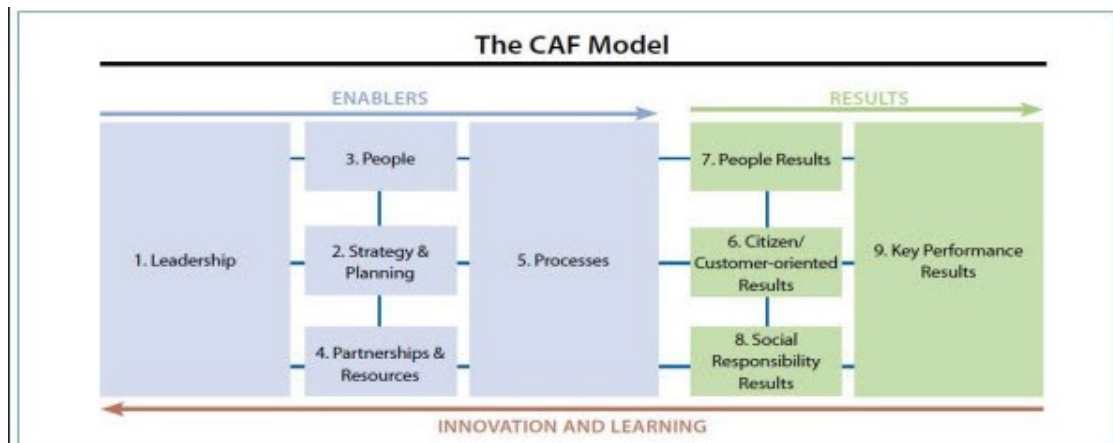

Figure 7 The CAF Model (EUPAN 2020)

The model evaluates both operations and outcomes and the cause-effect relationships between them. The main principle is continuous improvement and promoting good governance. Working methods, operations, and policies describe what the organization does and how to achieve the desired results. Results are assessed by performance indicators.

There are five areas of performance assessment: leadership, strategy and planning, people, partnerships and resources, and processes. There are four performance assessment areas: people result, citizen and customer-oriented results, social responsibility results, and performance results.

The self-assessment of the organization is the core of continuous improvement. Principles of excellence provide a holistic view to evaluate actions. Figure 8 shows principles of excellence. (EUPAN 2020.)

Figure 8 Principles of excellence (EUPAN 2020)

Principle 1: Result orientation. Effectiveness is a fundamental principle to achieve the objectives.

Principle 2: Citizen/Customer focus. The organization focuses on the needs of citizens and customers by involving them in developing products and services.

Principle3: Leadership and constancy of purpose. Visionary and inspirational leadership is emphasized in a changing environment. Leaders align the mission, vision, and values, as well as the organizational and management culture.

Principle 4: Management of processes and facts. Standardized processes deliver results more effectively and decisions are based on data analysis.

Principle 5: People development and involvement. The diverse groups of people form the core of the organization. Inclusion enables the full potential for development within the organization to be exploited. Trust, openness, respect, and commitment are built together.

Principle 6: Continuous learning, innovation, and improvement. The principle of continuous learning in a changing environment enables the organization and individuals to evolve and create new services and ways of working.

Principle 7: Partnership development. Interdependencies between stakeholders need to be built on a permanent basis to create added value for all parties involved.

Principle 8: Social responsibility. Public-sector organizations need to take on social responsibility, environmental sustainability, and the expectations and demands of society. (EUPAN 2020.)

2.6.2   EFQM Model

European Foundation for Quality Management (EFQM) model provides organizations a strategic framework and methods to improve and innovate and helps an organization to understand it is maturity, proceed with transformation projects and build organizational capability for improvement. The model provides data-driven analysis-based tools to help with the changes, transformation, and performance improvement. (EFQM 2021.)

Figure 9 EFQM Model (EFQM 2021)

Figure 9 presents EFQM Model, which offers a comprehensive framework to focus on the primacy of the customer over a long-term period and a stakeholder-centric view. In addition to this, the understanding of the cause-and-effect linkages between an organization and activities is relevant no matter the size of the organization or whether it is public, private, or third sector. (EFQM 2021.) The expectation is that any organization using EFQM Model follows The United Nations 17 Sustainable Development Goals (United Nations 2022).

The structure of the EFQM is based on three dimensions: direction, execution, and results. Assessment is based on three questions: Why? How? and What? First question why, identifies the direction, i.e., the justification for the existence of the organization and its purpose to fulfill. Second question, how, identifies the execution, i.e., how the organization is going to deliver the basic task, and the third question, what, states what the organization has achieved until now and what it intends to achieve in the future, i.e., results. (EFQM 2021.)

2.6.3 BT standard

According to Business Technology Forum "The Business Technology Standard (BT Standard) is an open-source management framework to plan, build and run information technology in today's technology-driven business world." The model has been developed over 10 years with global companies and public organizations and the current edition is the fourth from 2019. (Business Technology Forum 2023). Business technology standards assist organizations to develop new products, processes, and services by leading with data as shown in Figure 10.

Figure 10 BT standard (Business Technology Forum 2023)

Business technology is an approach to organize and manage technology development, and service delivery business model. It is a set of management practices, tools, organizational structures, and management models that ensure the optimal use of technology throughout the enterprise in a way that priority is given to meeting customer needs and expectations. (Business Technology Forum 2023.)

Figure 11 shows the priorities of the BT model: strategy and governance, sourcing and optimization, development, and services. The focus in this model is developing products, processes, services, designing, building, and managing information technology in a technology-driven business world.
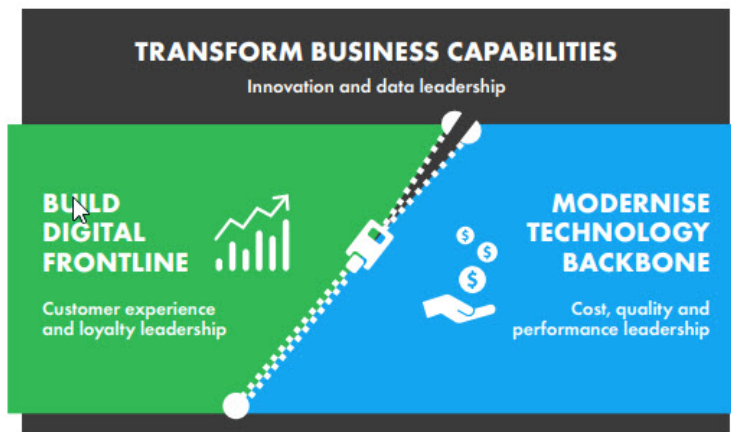

Figure 11 BT mindset model with three dimensions (Business Technology Forum 2023)

Figure 11 shows three dimensions of the BT model: transform business capabilities, build digital frontline, and modernize technology backbone. The digital service interface connects the business with the customer, partner, or employee in a multi-channel networked environment. It improves service speed, ensures service transparency, information reliability, integrity, therefore delivers a more pleasant customer experience. The technological foundation is built on systems and processes that support operational business activities. (Business Technology Forum 2023.)
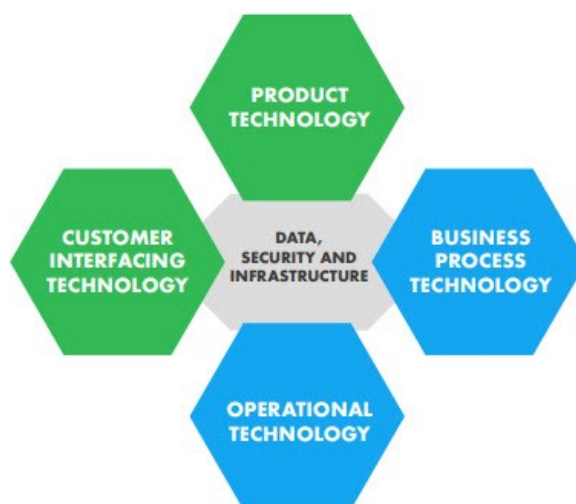
Figure 12 Business Technology domains (Business Technology Forum 2023)

As shown in Figure 12 the BT standard defines four categories of business technology: product solutions, business solutions, production solutions and digital business solutions. Each of these technology categories includes a wide range of overlapping technologies. The core are data, security, and infrastructure. (Business Technology Forum 2023.)

2.7 Valtori's internal and external evaluations

Valtori's development needs have been monitored on a long-term basis. The Ministry of Finance has already examined the situation and development needs of Valtori. A comparison has been made with other public operators.

The Ministry of Finance commissioned a study on Valtori and Istekki. The study included a maturity assessment and evaluated the efficiency of the organizations and the cost-effectiveness of the services (Deloitte 2020). The external evaluation of Palkeet and Valtori was conducted between October 2019 and February 2020 on behalf of the Ministry of Finance (Deloitte 2021a). Valtori / Statens IT benchmarking was made in February 2021. (Deloitte 2021b). Internal and external evaluations are listed in Figure 13.
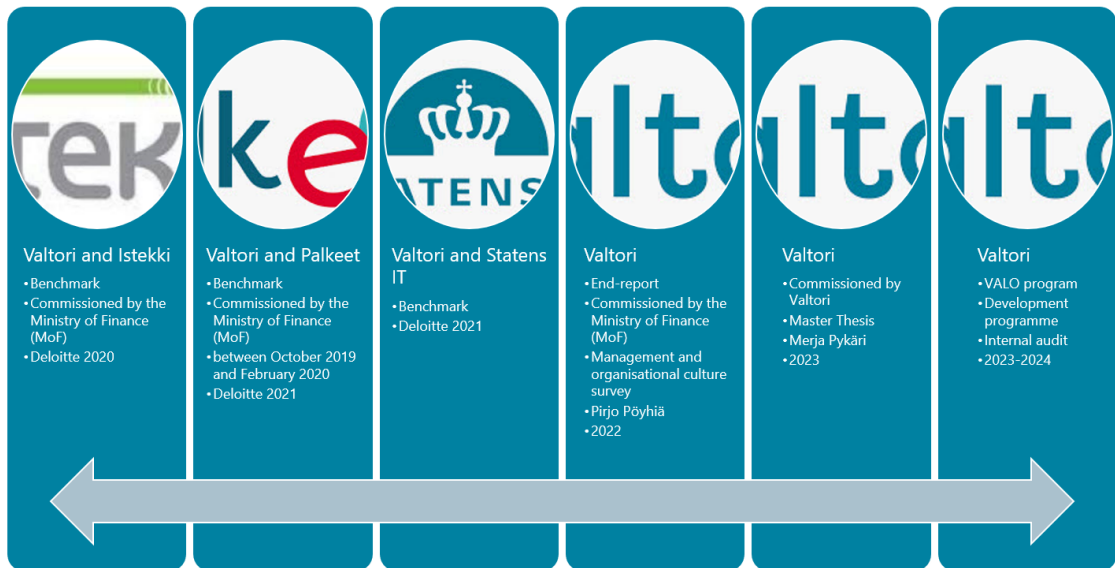
Figure 13 Internal and external evaluations

2.7.1 **Benchmarking Valtori and Istekki**

The Ministry of Finance commissioned a study on Valtori and Istekki. The study included a maturity assessment and evaluated the efficiency of the organizations and the cost-effectiveness of the services. As a result, a list of development measures was drawn up.

Istekki is a provider of basic IT and integration services in health and welfare technology services, which is specialized in securing healthcare, digital environments, and well-being in Finland, where the owners are publicly owned enterprises, municipalities, joint-stock companies, cities, and municipalities. (Istekki 2023.)

The maturity assessment covered the areas of governance steering and strategy, service delivery, organization, operations, and technology. In 2020, Valtori was behind Istekki, particularly in terms of service models and pricing, also in aspects of operational processes. In relation to organizational goals, both companies still had significant gaps in all areas. Valtori's strategic direction, scope of services, service models and procurement and supplier management were the areas where it deviated most from its targets. Similarly, Istekki's strategic direction and scope of services, as well as service management and risk management, were significantly below target. In addition, Istekki's organization, skills and culture differed more than Valtori's.

Istekki's systems and technologies were also significantly below the target level. (Deloitte 2020.)

When comparing Valtori's current situation in 2020 with the national ICT service centres, Valtori was ahead in risk management. Similarly, service models and pricing were well behind peers. In most areas of governance and strategy, service delivery, organization and operations, and technology, Valtori was on par with its peers. (Deloitte 2020.)

In 2020, Istekki's management system was at the performance level (scored 3 out of 5), which means that measurable targets are defined, monitored, and linked to the overall government targets. Performance management tools are linked to data from the systems. In Istekki, the management system and target setting, and measurement have developed in a determined way, but there is still much to be done. The management system consists of a wide range of documents, guidelines, information systems, process and organizational definitions and decision definitions. Line management responsibilities have been defined and process responsibilities have been identified and clarified.

To improve performance, the management system should be systematically reviewed to assess its integrity and clarity. In addition, changes to the management system to better support Istekki's capacity for change and customer orientation should be identified. In general, decision-making should be made more efficient and faster and decision-making capacity should be increased at lower levels. (Deloitte 2020.)

The results of Deloitte 2020 benchmark identified Valtori's key development themes:
- governance development (Ministry of Finance)
- clarifying the service offer
- developing customer orientation
- development of the partner network
- improving internal efficiency
- organizational and cultural development

The guidance aims to clarify Valtori's target state and role in relation to the direction and role of customers and other government ICT providers. Customer-specific solutions make it difficult to harmonize the organization's activities. Accelerating the transformation of customized solutions will allow significant clarification of the business model and operations, as well as freeing up Valtori's own resources. Customer orientation should be developed through productized services. The basis was seen as customer segmentation by service area and product modularization to enable suitability for as many customers as possible. (Deloitte 2020.)

The primary objective in developing the partner network should be to seek efficiency and flexibility in Valtori's service development and service production. Means to improve internal efficiency include the development of automation, portfolio management, project management and resourcing. The functioning of the management system in terms of assigning responsibilities and measuring effectiveness was identified as an area for improvement. Systematic development of competencies requires a sharp vision for the services to be delivered in-house and integrated with partners. Valtori-wide mapping of competences has not been conducted to enable systematic development. (Deloitte 2020.)

The results of the Deloitte 2020 report suggested below improvement actions
- building a governance model
- clarifying the division of responsibilities between MoF and Valtori followed by target setting
- improving reporting
- Aligning service area strategies, reducing the number of client-specific services, and clarifying operational models
- identification of customer needs
- defining metrics beyond internal efficiency outside Valtori
- developing a customer interface approach
- increasing partnership
- clarifying decision-making powers and devolving decision-making responsibility to lower levels of the organization
- clarifying overall responsibility and ownership of services
- harmonization of service descriptions and updating of SLAs
- developing competency levels through competency mapping and linking HR strategy to Valtori's strategy and service sector strategies
- breaking down divisional silos by breaking down organizational structures and operating models

Based on these results, prioritized measures and continuous evaluation create conditions for productivity and cost-effectiveness. (Deloitte 2020.)

2.7.2 External audit: Valtori and Palkeet

Palkeet is the Finnish Government Shared Services Centre, which provides financial and HR administration services to the government. The external evaluation of Palkeet and Valtori was conducted between October 2019 and February 2020 on behalf of the Ministry of Finance, based on the need to conduct an external evaluation of the cost-effectiveness of the service centres and the efficiency of the services they provide, with a view to further developing these services. This interim report has been complemented by service centre comparisons for Valtori. (Deloitte 2021a.)

The evaluation of the maturity focuses on assessing the level of service centre's strategy, service management implementation, service centre organization, processes, partnerships, and technology used. The maturity assessment is made using qualitative methods through interviews with the service centre management team, process owners and members of the customer advisory board, as well as through a review of the documentation provided by Palkeet. The maturity levels of the maturity model are based on Deloitte's experience of working with service centres globally. The maturity levels reflect the characteristics of the peer organizations in terms of the dimensions considered. (Deloitte 2021a.)

The overall level of maturity of Palkeet as a service centre is at proficient level. The highest maturity levels are achieved in the areas of pricing, culture and partner and supplier management. The lowest level of maturity is in the areas of strategic management and processes. The recommendation is to strengthen the strategic direction of the Ministry of Finance's human resources and economic management at the level of the State holistically. The development of the operating model should emphasize the review of the overall HR and economic management processes and stronger ownership and control of the processes by the Ministry of Finance at State level. (Deloitte 2021a.)

At the time of Valtori's creation, the chosen strategy for the transfer of services was a "lift and shift" model, where staff and services are transferred as such to the service centre. The advantage of this model is that it allows for quick benefits and the investments required are lower. The challenge of the "lift and shift" model is the fragmentation of services and service processes, which can pose challenges in terms of quality-of-service delivery and cost-effectiveness of operations. A prerequisite for the success of the strategy is the design and implementation of a post-transition transformation path. The transformation of Valtori would have required significant investment and human resources from both Valtori and the agencies. In retrospect, the risks associated with the chosen strategy have realized in the case of Valtori. (Deloitte 2021a.)

Based on the maturity analysis, Valtori is on average between developing and performing levels. Based on the assessment, the highest levels of maturity were in the areas of user support and service delivery, which are at a moderate level compared to the benchmark in the qualitative analysis. Service production is burdened by the scale of the service offer, which adds to the complexity of the approach. The main differences with respect to the target level are estimated to be in strategic direction, scope of services, service models and supplier management. Valtori's history as a service centre is still relatively recent and the low maturity is related to the capabilities that form the basis of service centre operations. (Deloitte 2021a.)

In a comparison of the maturity of Nordic service centres, Valtori is generally on par or slightly behind its peers. Valtori is most behind its peers in service models and pricing. Based on the evaluation, recommendations for action included developing strategic steering, clarifying the range of services, especially by reducing the number of customer-specific solutions, developing customer orientation, clarifying service models, and developing the network of partners. (Deloitte 2021a.)

Based on Deloitte's maturity assessment, the overall maturity level of the Palkeet is at a good level. Most of the dimensions of the assessment are at the performing maturity level, which is a satisfactory level on the maturity assessment scale. Palkeet has the highest maturity level in the areas of pricing, culture and partner and supplier management, which also have the

smallest gap to the target level. The lowest maturity level of all is in the areas of strategic management and processes, which also have the largest gap with the target level. To improve of maturity level of these elements, the organization need focus on prioritizing the development objectives. Based on the assessment of the current state of maturity and the setting of the target state in the maturity analysis, Deloitte has also assessed and identified the most important sub-area specific development proposals. (Deloitte 2021a.)

The significant difference with the target level is in strategic steering and processes. The moderate gap with target level can be identified e.g., in strategy and operational planning, scope of services and management system. Service models and service management, as well as risk management, organizational performance and competencies, systems and technologies and customer management are all below the target level in Palkeet. Pricing, organizational culture and partner and supplier management are closest to the target level.

As part of the evaluation, information was also collected on Nordic government peer organizations. The Danish State Service Centre for Financial and Human Resources Management Statens Administration (SAM) and the Norwegian Direktoratet for forvaltning og økonomistyring (DFØ) were included in the review. Both organizations have just participated in the Nordic Comparative Research of Public Sector Service Centres together with Palkeet. (Deloitte 2021a.)

The current state findings collected for the report are a snapshot compiled from interviews conducted between December 2019 and January 2020 and material provided by Ministry of Finance and Valtori. A total of 36 interviews were conducted and the interviewees represented Valtori's management and experts, the Ministry of Finance, Valtori's customers and Valtori's service providers.

Based on the maturity analysis, Valtori's maturity level is at a moderate level, falling between developing (scored 2 out of 5) and performing (3/5). The main differences between the current state and the estimated target state are in strategic steering, scope of services, service models, procurement, and

supplier management. The smallest gap with target level is in user support. (Deloitte 2021a.)

Maturity in different areas is also compared directly with other organizations. The peers are assessed by their own management team or by members of the management team, as opposed to an external assessment conducted for Valtori. The comparison can be seen as an orientation to identify the clearest differences and related potential good practices and areas for improvement. The service models and pricing are clearly behind peers. Strategic steering, scope of services, organizational culture, processes, systems and technology, customer management and procurement and supplier management are slightly behind peers. (Deloitte 2021a.)

Comparison in the Nordic service centres, Valtori lags its peer group most in service models and pricing. The peers have service offerings based on customer segmentation, and more clearly structured service delivery models. Their service models are also well understood both by the organizations themselves and by their customers. In this way, the service mix offered to the customer is not random but based on a consciously sought target state. In terms of pricing, the peers have a more developed cost awareness than Valtori. Valtori is ahead of its peers in risk management, although none of the organizations in the peer group is high in this area. In other respects, Valtori is on par or slightly behind its peers. (Deloitte 2021a.)

2.7.3 Benchmarking Valtori and Statens IT

Statens IT is the Agency for Governmental IT Services in Denmark established in 2010 as the result of a merger of eight ministerial IT operations organizations. Statens IT provides IT services to 21 ministries in the Danish Government counting approximately 37.500 users. The standardized and homogenized environment takes care of daily IT operations as Data Center services, network Services, workstations, and shared services (software). (Statens IT 2023). Valtori / Statens IT benchmarking was made in February 2021.

The maturity assessment covered the areas of governance steering and strategy, service delivery, organization and operations and technology. The scope of benchmarking was maturity assessment, Main KPIs & operational effectiveness, and Cost benchmarking of services (Deloitte 2021b.)

Maturity was at better level in all assessment areas in Statens IT compared to Valtori in 2021. Especially strategic steering was clearly behind in Valtori compared to Statens IT. Valtori was slightly behind in business planning, scope of services, service delivery models, service management and pricing as well as organization and competences area. Processes, technologies, procurement, and supplier management were slightly behind in Valtori compared to Statens IT. Risk management, end user support and service development were ahead in Valtori compared to Statens IT. While comparing organizations current situation to the targets there were many caps in Statens IT as well. Especially scope of services, risk management, organization and competences, processes, service development and procurement and supplier management. (Deloitte 2021b.)

Referring to strategic steering the level of Statens IT was between practicing and improving (scored 3.5 out of 5) in 2021. In practicing level, the target state is that SSC goals are established and measured and tied to the government's goals. Vision for the SSC is in practice. Scope of services and desired target stated are aligned. Service operations vision embedded in design of service delivery processes, methodologies, and policies. In improving level, the target is that vision and direction are defined and integrated into the culture of the SSC. Target state SSC goals are part of leadership decision-making and performance incentive. Steering focuses on continuous improvement. (Deloitte 2021b.)

The target (scored 4 out of 5) is set for Statens IT to be more active and coordinated with both customer demands and technological opportunities over time. The current situation of Statens IT was 3.5/5. Being a part of Finance Ministry Statens IT is part of a strategic steering framework aimed at setting strategic goals and measure the achievement of goals at all levels. This strategic steering is done within goals for the organization – strategic goals set every 3 years. The system works and are in place. There need to move

forward to set up a system that is also improving over time and mode adaptable to changes in customer requirements. (Deloitte 2021b.)

Referring to management system the level of Statens IT was between developing and practicing (2.5/5) in 2021. The target is to push ahead and be data-driven on a different scale. In developing level simple metrics are used by SSC leadership to identify process issues. Metrics are communicated to customers and access to metrics data is manual and limited within the SSC. Governance model in place and functioning across the SSC and at all levels, and metrics give basis for the decision making. In practicing level, a holistic performance management is defined within the SSC. Measurable SSC objectives are defined, tracked, and tied to overall government's objectives. SLAs and performance measures for the SSC are clearly defined and tracked. Performance management tools are tied to system data, but not fully automated. In 2021 Statens IT is using ServiceNow as a central Service Management system. A growing base of data concerning processes and facts about the individual customers are being generated. KPI's are automatically generated and displayed in dashboards – reviewed every day. They still need to develop this further – and we have more data that can be utilized. (Deloitte 2021b.)

2.7.4   External evaluation 2020-2022

The external evaluation examined Valtori's development over the period 2020-2022 and found positive developments in areas such as service pricing and customer satisfaction with the government's non-sector-specific ICT services (Tori services). Based on the research, the maturity level of Valtori's service centre operations is developed in only a few areas covered by the evaluation, but for the most part, there has been no change in the level of maturity. Clearest development has been in the area of customer orientation, which Valtori has raised to one of its strategic priorities. (Pöyhiä 2022.)

The Ministry of Finance has guided Valtori's development measures in several ways. These activities are guided by guidance letters and by the objectives and performance programme set for Valtori. The evaluation has identified six areas for development, which are the Ministry of Finance and Valtori's

management are recommended to take up for development in their development planning. The recommendations were also addressed to the Ministry of Finance. According to the evaluation, the Ministry should provide clear strategic guidelines and steer Valtori's service strategy. The Ministry set long-term objectives for the development of the agency during autumn 2023. (Pöyhiä 2022.)

As a result the ex-post evaluation is part of the implementation of the central government's common services group policy guidelines, where an external evaluation and cost-effectiveness comparison of service providers is carried out. The aim of the benchmarking is to produce a time series and monitor the evolution of service providers. The independent ex-post evaluation was carried out by Deloitte Consulting Oy on behalf of the Ministry of Finance.

This report pointed out that the lack of a coherent culture is still a problem at Valtori. The planned progress in developing this culture has not been achieved and the gap between management and staff remains wide. Decisions are largely taken by management alone, and communication and staff involvement in decision-making are not sufficiently effective. The management system is deficient, despite the development of indicators and target setting. The role of risk management as part of Valtori's management system is limited. (The Ministry of Finance, 2023b).

3   RESEARCH PROCESS

This chapter presents the research process and data gathering.

Operational management is a key area of the business, as part of Valtori's management culture, work, and policy design. (Tuomi & Sarajärvi 2018, 148 - 151.) From a developmental perspective, exploring management practices gives room for creativity, interaction, developer input, experimentation, goal setting and changes that could not have been anticipated or planned (Vilkka 2015.) The material is considered as a whole entity as an inductive content analysis, where results and theory are generated from the data. Research questions may evolve during the analysis. (Alasuutari 2012.)

Development research differs from quantitative research in that the phenomenon to be developed is examined in real-life conditions in cooperation with the research participants. The developmental research situation is more open, so that there are more variables to measure than with traditional research methods. (Pernaa 2013.)

To achieve the research objectives, this study follows a qualitative methods of case study and development task based on a systematic literature review, semi-structured interviews, and benchmarking. In addition to this change is compared to research made by Deloitte (2020, 2021a and 2021b) and the end report ordered by the Ministry of Finance Finland (Deloitte 2023). This thesis focuses on gathering concrete and practical data from the ecosystem and delivering empirical recommendations to improve the organization and management culture in Valtori. The information is gathered through different channels: interviews, observation, blended methods, and the combination of practice and theory.
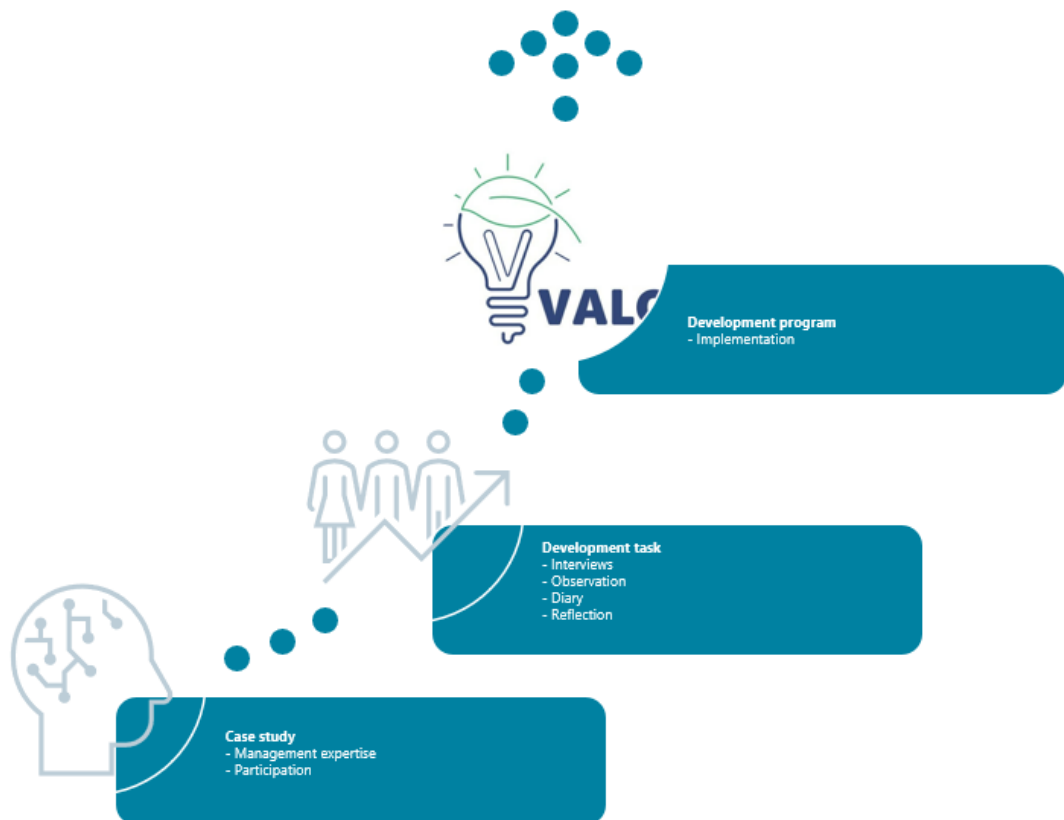

Figure 14 Research methods

The approach chosen to this study as shown in Figure 14 is a combination of case study and development task, where the subject area under study is characterized by management expertise, participation, and implementation of the output into the operational management of the client. The aim of case study is research deeply few objects or phenomena. The case is understood as being in some way delimited into a separate entity or unit. The data is captured from the stakeholder's interviews and observed actions in a real operational environment in the author's private diary.

A significant number of those interviewed had been in management positions for several years. The interviews helped to build up an overall picture of the current state of operational management. The findings and the areas for improvement identified by the interviewees will be worked as a part of new management system under Valtort's development programme (VALO). Online reflection was an important part of this study. Managerial implications and development proposals are presented to the development program.

Qualitative methods and blended approach allow to understand the subjective view of management and organizational culture. A systematic literature review approach throughout the research increases the effectiveness of the study. The frameworks also help to keep a holistic view during evaluation and to identify improvement suggestions. The literature review is valuable for understanding, systemizing, and defining the most relevant research questions in a transparent and repeatable manner. Literature review covers material related to leadership in the public sector.

3.1 Data collection

The interview can be divided into open, semi-structured and structured (questionnaire interviews or pre-prepared response options). Open interviews are based on questions derived from key themes or topics. Key themes are extracted from the research problem to focus on in the interview. Group interviews are also used in work-life development projects, where conceptualisation and understanding of concepts, approaches and processes are key. In addition to interviews, any written or digital material that has been systematically collected can be used as research material for a qualitative

research method. (Vilkka 2015, 122–125.) The aim of qualitative research is to provide a broad range of content rather than a large amount of material (Järvinen & Järvinen 2004, 145–147).

Qualitative research is characterized by a flexible and data-driven research design and relatively unstructured data, emphasizing the central role of subjectivity in research and exploring a small number of naturally occurring cases and using verbal rather than statistical forms of analysis. (Hammersley & Campbell. 2013.) To identify a genuine and interesting target for development and to design the study in a purposeful manner, the delimitation of the study is based on the understanding of key concepts and knowledge of the key concepts and previous knowledge on the topic. The approach and choice of appropriate methods is based on the client's need to map the current state of management practices in the organization. (Ojasalo et al. 2014, 41.)

The data collection is iterative and aims to produce information that can be discussed at a general level and to be evaluated in operational environments.

Observation is a method used to gather information about people's behavior. It is also possible to get information about topics that are not easy for the parties involved to talk about. Events are real-time during the observation process. Observing is done for a long time, even if only some of the observations are registered. Observation is used to support other research methods. (Hirsjärvi & Hurme 2022, 3.2-3.4.)

Qualitative method was chosen for this study. It offers an effective way of gathering the insights of the people's experience, attitudes and beliefs especially related to the management at operational level. The benefit of this approach is that various methods can be combined in the study. There were a lot of fresh up-to-date material, e.g. the external evaluation of Palkeet and Valtori made by Deloitte, analysis of Valtori and Statens IT practicaltities, end-report 2022 commisionned by the Ministry of Finance made by Pöyhiä, employee satisfaction survey 2023 and internal audit 2023, related to the organization.

A total of 7 managers participated interviews and three casual discussions were conducted face-to-face as well. Interviewees were selected from different levels of management with long experience in leadership and management positions in public administration. They represented broadly the operational management of the organization.

The theme of the interview was announced to the interviewees in advance. All interviews were conducted as Teams interviews via video. The interview were recorded and then transcripted. The interviews were conducted in Finnish language. The semi-structured questions are presented in Table 1.

Table 1 Research questions

THOUGHT-PROVOKING QUESTIONS
What is leadership? Who is a leader? What do you think management means?
What management culture means to you?
What are the components of the management system?
What is the maturity level of management in Valtori?
Will one leader be able to cope with all the tasks of management?
Do we evaluate the success of our management?
Do our management and front-line staff sufficient understanding to see the context in which leadership takes place in the organisation?
What leadership behaviours would you like to see strengthened? What kind of behaviour should be eradicated?

The author utilized a questionnaire table, where the the interviewees' roles and replies were documented and classified.

Multiple semi-structured interviews captured actual data from the operational environment on a daily basis. Interviews were partly conducted face-to-face and partly using the Microsoft Teams platform and questionnaires. The topics selected on the basis of the research framework, theory or a summary of previous studies. There are 3-5 main themes, and each theme is further developed with follow-up questions. Interviews were conducted with a predefined target group and stakeholders based on their roles in the organization. In addition, international partners and stakeholders were interviewed to understand their local organization and management culture. In addition to this, some service delivery specialists interviewed.

Qualitative data was analyzed in a disciplined, systematic manner to understand the current situation and provide data to improve organizational culture and daily-basis leadership. All collected data (interviews will be recorded, diary, and observation notes) was documented. Results are presented based on roles in the organization in the final report.

4   RESEARCH RESULTS AND ANALYSIS

This chapter presents the research results about the organizational and management culture, management system, and maturity of the current situation. Results based on reports commissioned by the Ministry of Finance Finland, internal reports and interviews and provide concrete suggestions to update the development of the management system, clarifying Valtori's mission and management.

Organizational culture, i.e., corporate culture, is visible in daily basis operations. It is the result of everyone's values, beliefs, attitudes, and actions. There are several sub-cultures within Valtori in different units and groups.

This study aims to point out the impact of management culture at operational level management and how the management system supports the management culture in the public sector. This was derived by identifying the current state of the commissioner's management culture and its impact on operational management. The study assessed the level of maturity of the organization and how the management system has been described in the past. The objective was to discover what type of management styles are in place currently at operational level recognize development items, and how to improve leadership and management.

The first change of paradigm was especially new ways of working during COVID-19. The second paradigm shift occurred during a rapid change in the way of working remotely or hybrid work. In the beginning, more attention was paid to the survival of individuals than to the change in management in the new situation.

Government IT service center operators like Valtori can also be found in other Nordic countries. However, it is difficult to find a counterpart to Valtori, as their service offerings, customer base, and service models are driven by law or the result of previous structures - unlike those of commercial operators. Denmark and Norway are more homogeneous compared to Finland. In Denmark, the customers are small agencies without their staff.

From the perspective of strategic steering, the challenge is that both the guidance of the Ministry of Finance and customer guidance (customer advisory board) focus on Valtori's role and activities. Besides legislation, the Ministry of Finance do not have means to guide Valtori's customers. There is no so-called group-level governance model to steer the whole organization. As a result, Valtori must design its services to fit its customers' environment, rather than directing the activities of Valtori's customers to enable them to use uniform services. (Deloitte 2023.)

Deloitte's end report pointed out the main benefits of Valtori can be identified as:

- Enabling interoperability within the government
- Enabling interoperability of information systems and working environments between agencies
- Improved control and ability to manage ICT activities across government by centralizing the development and production of business-independent services in a single actor, it is easier to manage and control this set of services across government.
- Agencies' resources to add value - Valtori's role as an integrator for basic IT will free up agencies' resources for the development of customer-specific sector-independent ICT services (TOSI) solutions and digitalization.
- Enabling new ways of working - a single service for the whole of government and interoperability of basic IT, enabling mobile working and the flexibility to collaborate across agencies and sectors.
- Cost savings through higher procurement volumes - Cost savings can be achieved through centralized procurement, especially in volume products (purchasing power) - with emphasis on workstations, mobile devices, and networking. Strong purchasing power also in services procurement.
- Preparing for and protecting against security threats. Preparing for and protecting against security threats requires increased resources and skills. Valtori, as a large player, is in a better position to do this compared to a situation where each customer agency acquires the necessary skills on its own.
- A meaningful working environment and career opportunities for government ICT professionals. A major ICT service provider can offer

meaningful career opportunities, e.g., technical subject matter expert roles and management and supervisory roles related to ICT service centers. (Deloitte 2023.)

In Denmark, Valtori's counterpart is Statens IT. The service centre is in three sites in Copenhagen, Århus and Soendenborg. Its customers are many ministries and agencies, with a small number of smaller agencies. Most of the larger agencies, which have significant IT management of their own, have been granted an exemption to procure their basic IT services directly from other sources. As a result, Statens IT has only about 33 000 end-user workstations to serve (compared to Valtori's more than 90 000). The organization's operating costs in 2019 amounted to €95 million, with a staff of around 500 people.

The service structure of Statens IT in Denmark is broadly like that of Valtori. Statens IT provides basic IT services, while the ministries and agencies are responsible for their own domain-specific solutions. Systematic customer segmentation does not exist, although a few larger customer groups have been identified and have their own separate service models (like Valtori's State Council service model for ministries). The Service Centre has International Organization for Standardization (ISO) certification for information security, which also requires additional administrative work. Statens IT does not provide any security network services and its clientele consists of non-sector-specific customers. This contributes to Statens IT is having a clearer and more coherent approach than Valtori.

In Norway, the government-level IT service center as in Valtori has not been implemented, but government agencies obtain their services to a substantial extent directly from the private market. In the case of Norway, the relevant comparison data for Valtori are the market players on the private side. The Norwegian Ministry of Finance also does not have the same control power enabled by law regarding the organization of IT services as in Finland or Denmark. In Norway, the decision-making power to organize tasks is responsibility of the administrative branches, consists of about 160 agencies. In Norway, smaller public IT service centers are the Norwegian Government Security and Service Organization (G.S.S.O), which serves the ministry, and a

service center operating under the Ministry of Education and Research, which offers services to the administration sector and a total of 220 institutions. (Deloitte 2023.) In Norway, they are mostly satisfied with the current model, and the development is related to the consolidation of procurement (e.g., joint framework agreements).

In general, the development plans of the Nordic reference service centers emphasize the development of customer relationship management (CRM), the clarification of the service offering by modularizing the selection, and the identification and development of the organization's core competencies in a changing operating environment. Competence development is seen as an increasingly integral part of strategic choices and strategy implementation. For example, in relation to core information systems, legacy/SaaS hybrid skills will be increasingly required in user services in the future, and the job description will change from pure IT production even more in the direction of specification, architect, and integrator work. A shortage of experts is typical, which in part drives public organizations to focus on the development of partner ecosystems. The role of customer segmentation as part of the service strategy is also emphasized. Coordinating the unique needs of customers and service portfolio requires the modularization of services and the development of supply chains. The scaling of the service portfolio to customers in different industries can also be developed with industry-specific outsourcing, in which case the production model for own production does not become too multifaceted and prevent scale advantages. (Deloitte 2023.)

4.1 Management culture and leadership

The public steering is already discussed and is clearly linked to the areas of the study. Next, the discussion in relation to the leadership continues, simultaneously the focus is on looking at the factors of the leadership style that impact the management culture.

It was clearly stated during the discussions that Valtori's core mission needs to be reiterated with emphasis on all stakeholders. The value proposition and raison d'être may have become blurred over the years. Therefore Valtori needs to look at what differentiates the organization. Operations should not be

taken for granted because there is no competition and no profit motive. All activities should be based on a basic business, such as a product-, service- , and solution portfolio, secure cloud solutions which are agile to deploy. It is also worth considering whether customers are sufficiently guided in the choice and responsible use of products, services, and solutions, or if the technology aspect is too far ahead. Service design has brought a more quantitative approach to this. The IT service provider is expected to provide the total customer experience, sell solutions, and manage the whole lifecycle of the service in a way that adds value to the customer. There is also a need to look at whether the lifecycle of technologies and services is sufficiently managed.

Some participants expressed concern that staff cynicism can sometimes be an obstacle to successful change, even when the implementation itself and the communication of the change are at an excellent level. Some staff may be fundamentally opposed to the change that is coming and, through their own attitude or lack of commitment, may hamper progress. It could be good to find new ways to empower staff to communicate, share their experiences, and learn from each other. At present, a small active group of people is altruistic in their desire to improve beyond the boundaries of their own area of responsibility, and there seems to be a 'laughing culture' within the organization, whereby even good observations are invalidated or sometimes even ridiculed by a larger group of colleagues.

In addition interviewees indicated that the expectations for new managers are quite high. It was commented that a new manager may find themselves in the middle of a cultural change where the group has not been managed with high quality for a long time. One idea is to participate in colleague's operational meetings and development forums. Understanding service management as a whole needs new thinking. It was pointed out that vision shared by top management is crucial for success and could be enhanced. IT organization has special features where continuous development of leadership skills would be required. Utilizing assessments in defining new models and technologies are seen highly supportive.

It was commented during interviews that currently the level of service management varies. External benchmarking is rather limited. The

benchmarking has been done mainly against comparable actors in public administration. It could also be useful to look at the business models of a private IT service provider. A better understanding of service management as a whole could be achieved by looking at it from different perspectives, for example through rotations between services and by intensifying regular dialogue between heads of services. A better understanding of the IT service provider culture could be enhanced at the management level, for example through company visits to IT service providers and benchmarking activities.

Some participants expressed concern that customer relationship management has become too fragmented and separated from service delivery. It is also important to consider whether there is a systematic approach to managing internal customer relationships and whether the communication and stakeholder engagement needs of internal customer segments are understood. Improved collaboration and more active dialogue between service production and the customer interface through regular meetings between customer service/ and production managers and production representatives will also increase internal understanding of the service portfolio and service strategy.

The identification of customer segmentations are at a good level, but the management of needs currently seems to far away from service delivery. There is also a lack of systematic management of customer expectations. The actors at the customer interface may promise the customer functionalities that are not technically feasible or that are unrealistic in terms of time or cost. There is a risk of implementing customized solutions. Stakeholders who drive the economy and operations are actively involved and their expectations are understood. There is transparency at the customer interface, though need to examine whether performance is assessed in relation to the real needs of stakeholders. The new organizational model supports the customer experience and interaction with the customer, but it has not been implemented at operational level. There is long a lag between customer processes and the digitalization of services, which would have a clear impact on stabilizing operations and is a prerequisite for end-to-end customer experience management. It would also be useful to assess whether all staff identify key partners or the roles between key partners and suppliers.

Cooperation between educational institutes could be further improved. External theses and dissertations could add value to Valtori's service portfolio, especially in the field of modern AI and automation. Although Valtori Akatemia has produced a lot of good and competent material that has remained at the disposal of the organization, the institutions' own internships should be made more actively used and organized in a more agile way in practice. This may create added value for both parties.

4.2 Management system

Management development is part of process-oriented organizational development. In the learning organization, it is crucial to lead changes of the management culture. Total quality management (TQM) encompasses a holistic management approach to developing a management culture. Management change follows the process of continuous improvment (PDCA).

Management activities are continuously evaluated. Procurement and strategic skills have become increasingly important. Currently there is a growing need for skills in corporate governance. Public control and ownership determines the decision-making power of the public sector organization and the instructions given to officials and employees. It was clearly stated that the legal competence of managers (transparency of decision-making, preparation, and presentation procedures) should be strengthened. Job descriptions could be simplified and generalize set targets and objectives with a focus on leadership. Public management in Finland is based on a long tradition where management positions were a reward for a long career. The tradition of valuing seniority over ability is breaking down. Another tradition of leaders having solid substantive expertise is beginning to break down.

While building sustainable value, it is worth considering whether the data collected on stakeholders' needs and feedback is being used as a whole. In strategic and operational performance management, it is more relevant to identify trends and the link between stakeholders and performance, as well as cause and effect relationships, rather than a snapshot. Current results help to predict future performance and support knowledge management. The

foundation for knowledge management needs to be carefully laid to make effective use of predictive models, data mining, and artificial intelligence (AI). In the discussions about leadership, it was expressed that leadership management is at least as important as performance management. Leadership principles describe how we lead and what we want to achieve. Leadership can be seen from the perspectives of managing how work is done, managing the content of work, managing the work community, and managing culture. Individual and workplace behaviors and attitudes define the culture of the organization and provide the basis for the work of the chairs. Also, it was stated that management at Valtori is interpersonal; some people regularly spar with others and collaborate actively, while others may have to work entirely on their own.

4.3   Standard procedures

In relation to standard procedures, there are currently many approaches in Valtori to make both technical and managerial changes. Almost without exception, the core business models should be standardized and everyone should be followed by them. For example, change and problem management are currently implemented at very different levels in different parts of the organization. The internal evaluation should look at the business's understanding of customer focus, revenue generation, and product development, as well as the importance of marketing and communications. Support functions also need to understand the capability of technology management to avoid cost escalation and the use of disparate solutions. In the early 2000s, process standardization was seen as leading to major outsourcing projects to improve competitiveness and cut costs. This has undermined the credibility of process management and the attractiveness of staff to develop the business. Standardized approaches support integration of continuous improvement projects with with digital innovation.

In management, as in other interactions, the development of an interactive communication culture and feedback varies considerably within Valtori. Feedback is collected regularly and in a structured way, though it was expressed by staff that the results are not sufficiently and concretely used.

The repetition of feedback surveys in the same format every year may be passive for some respondents.

Recognition of successful individual or team performance is difficult in public administrations. Formal projects are sometimes recognized for successful implementation, but the effectiveness of internal development is not assessed. Monthly based minor recognition no longer feels meaningful to staff. Some new ways of celebrating significant activities and efficiency gains should be carefully considered. Rewarding reinforces desirable behaviors.

4.4   Ownership

Good governance is supported by well-functioning administrative structures, management systems and other operating conditions such as clear ownership and responsibilities of services and functions.

The majority of the interviewees stated that Valtori needs to clarify ownership of services also by process and management point of view in addition to technical one. Identification of service or product responsibilities is documented in RACI (Responsible-Accountable-Consulted-Informed) - matrixes, but the total ownership of the product, service, or process varies. It was expressed that the organization should emphasize the management of expectations in addition to managing performance. It was pointed out that Valtori needs to highlight the holistic view. One concern expressed regarding the ownership of the services was the unclear responsibilities. Some respondents commented that organizations must change direction from internal IT management to service provider according to service descriptions. It was also brought up that Valtori should clarify ownership of services and centralize responsibilities more precisely e.g. by establishing a service ownership program. At the moment improvement is happening in units. One idea to ensure continuous improvement was to build an organizational diary. They have to ensure long-term strategic management despite of fixed-term contracts and changes in strategic management.

4.5 Maturity

During the evaluation development themes were identified to improve Valtori's operations. The themes contribute to the whole ICT portfolio of the government. The measures aim to address the problems identified and to ensure that Valtori's activities and role are developed along the lines defined by the law. The development of steering and management have been identified as a priority. The aim of the management is to clarify Valtori's target state and role in relation to its customers. Similarly, the role and responsibilities of the state ICT providers should be clarified. A clearer model of cooperation between Valtori and the Ministry of Finance, a clearer division of responsibilities, and a clearer set of policies and principles guiding Valtori's activities will help Valtori to act in accordance with its strategy. (Deloitte 2023.)

A prerequisite for Valtori as a service provider is to find ways to provide strong recommendations for agencies to use standard ICT services. Central government guidance and direction refers to a set of procedures, systems and methods that support leadership and management. This means methods and procedures to achieve the objectives that have been set. The Ministry of Finance and its branch of government are responsible for a corporate governance at the national level to define ICT strategy. (Deloitte 2023.)

The means identified to improve Valtori's internal efficiency include both improving the management system by increasing the measurement of effectiveness and by better linking Valtori's strategic indicators to operational activities and decision-making and developing service management and resourcing models within the enterprise resource planning (ERP) system, and overall automation of operations. (Deloitte 2023.)

There are no shortcuts to developing an organizational culture, but several details evolve over time as a common direction becomes clearer. Culture change can be systematically promoted together with staff to build an understanding of what Valtori's culture really is, and what it wants to be. Analyses can, for example, identify situations or events where the culture should be reflected differently in people's behavior. Clarifying the structure of teams and developing common operating models across sectors will

contribute to change. Developing competencies in the same direction across businesses also promotes cooperation through knowledge sharing and collaboration. (Deloitte 2023.) The organization is still in a period of change, and it is vital that the policies and decisions taken are based on long-term plans – not just on the current situation.

A comparison of the current situation shows that the maturity level of Palkeet is at an average Performing level. The other areas with the highest maturity level are pricing (scored 3.5 out of 5) and culture (4/5). The lowest maturity levels in Palkeet are achieved in the areas of strategic management (2/5) and processes (2/5). In line with these, it is precisely those areas with the highest levels of maturity, as well as partner and supplier management, which have the lowest gap to the target state. (Deloitte 2021a.)

Valtori's maturity level is on average more between developing and performing maturity. In Valtori, the only area that stands out is user support, with the highest maturity level (3.5/5). The lowest maturity level in the whole evaluation is achieved by Valtori's service scope (1.5/5). The other areas are evenly placed in between. In line with the high maturity level, user support is also assessed to be closest to its assessed target level. However, there are a number of areas where there is still a large gap between the current and target levels – strategic steering, scope of services, service models, and procurement and supplier management. (Deloitte 2021a.)

In parallel, in the areas in which Palkeet is most mature (pricing and culture), Valtori is at a developing level and still moderately far from the estimated target level. Valtori's most mature area, user support, is not the area evaluated in Palkeet, as it is not relevant to their operations. On the other hand, the area that Valtori has rated as the weakest in the whole analysis, the scope of services, is at an average level in Palkeet, i.e., good. Interestingly, the areas that are rated lowest in Palkeet (2/5) and have also been found to have a significant gap with the target level – strategic management and processes – are also rated in Valtori as only reaching an improving level (2/5). As in Palkeet, strategic management in Valtori is also far from its target level in relation to the other areas. To summarize, strategic management is an area where development measures should be specifically targeted, not only to raise

the level of maturity but also to achieve the target state in both Palkeet and Valtori. (Deloitte 2021a.)

Pöyhiä states that the strategy renewal and organizational change did not involve the entire management team, and Valtori's personnel was not more widely involved in the strategy work either. The customer advisory board and instructors were consulted during the update work. (Pöyhiä 2022.)

According to the minutes of the management team, "The strategy is built on top of the existing strategy and everything that has worked has been kept in it and only the necessary things have been changed. The main theme of Valtori's strategy is a satisfied customer, supported by meaningful work, excellent performance, and cost-effective operations." (Pöyhiä 2022.)

As an organization, Valtori is approximately three times larger compared to Statens IT. Both institutions' operation scope is to base IT services and integrations in addition to customer-tailored substance applications (legacy and shared service systems). Based on Deloitte's report (2021b) service delivery model is quite similar. About 80% of costs are external. The main service areas are Data Center services, network services, workstations, and shared services, lately exponentially growing cloud services.

5   CONCLUSIONS

This chapter provides the answers to the research questions with key findings, development proposals, followed by the potential future research.

As it was estimated during the process, many findings have been made during the internal audit. Therefore, it was beneficial to examine how the manager's experience and skills could be enhanced. Initially, the areas on which to concentrate were identified. According to the chosen themes, the examination of the current situation followed.

The literature review presented details of the elements that were prioritized concerning management and leadership. This was to generate wider comprehension of those subjects to support the improvements.

The primary data was collected from the themes of leadership and management at operational level. These findings and observations present the thoughts that are the most valued by the managers, in addition, improvement suggestions were expressed. This research will focus on the current organization and management culture at Valtori. The target is to identify improvement areas in daily-basis leadership and provide information for improvements to help with the changes, transformation, and performance improvement/ to improve the organization's performance and to achieve strategic targets.

5.1   Key findings

Aim of the study is to solve problems arising from practice or to reform practices by making suggestions to support Valtori's policy development program and to generate new knowledge on working practices. This thesis focuses on gathering concrete and practical data from the ecosystem and delivering empirical recommendations to improve the organization and management culture in Valtori. Research is done for Government ICT Centre Valtori. Valtori provides sector-independent ICT services as well as information and data communications technology services and integration services for the Finnish government and government agencies.

The gathered data and results are public. Data required for the research, especially customer-related information, is subject to confidentiality. For that reason, it is not possible to share all actual collected data directly in the master thesis or data has been anonymized.

The aim of this study was to point out how the management system supports the management culture in the public sector. The study provides a framework for improving on the dynamics of leadership models and management culture in a public organization. This is achieved in line with the following objectives:
- to recognize what is the current situation of the management system.
- to understand how the management system has been described in the past and what is the maturity level of the organization.

This study explored the current management system to point out major topics to develop management culture at operational level and to find out the main

development areas at operational level by providing some tools for the executive board to improve operational management in the organization.

The traditional management model is top-down and operationally controlled. In the traditional model, officials or employees should perform their assigned tasks rationally based on their expertise. Career advancement is based on expertise. From the point of view of expertise, the best content experts have the potential to be advanced to management. The managerial function does not assess the competence requirements of managerial tasks. A completely different type of expertise would be required for public management.

Organizational development is always an experimental activity, not a mechanical consultation or a mechanical application of management and change management methods. It is necessary to assess whether the current activities have been managed to a high standard, while at the same time improving the operating models. More attention should be paid to the management of continuous change, i.e. renewal. The implementation of the strategy in practice needs to be carefully assessed as it drives performance. The need for reform comes from different stakeholders and prioritisation is particularly important as not everything can be implemented quickly. The organization needs to assess whether there are methods and techniques to support performance improvement.

5.2   Impact of management culture at operational level management in public sector

Based on the literature, existing material and interviews, its obvious that the impact of the management culture on operational management is significant. Management is made by people. Leadership is a learned skill, it can be developed. Style of leadership habits are formed by the values, beliefs and attitudes of each individual, which together form the handwriting on the wall of every leader. Leadership coaching has become more diversified. A lot of leadership is also learned by example. The role of the top management model in operational management is considerable.

A particular feature of public management is the balance between political management, owner management and civil servant management. It sets the framework for management and influences the operating models and management culture. The precision and rhythm of objectives and results distinguish the processes and nature of public organizations from the private sector. Customers are also more actively involved in monitoring and evaluation. In public administrations, the evaluation of effectiveness is more important than performance and productivity.

Managing a public organization requires not only traditional management skills but also a wide range of professional skills. Improving the customer experience easily becomes a reason for change and a goal for improvement, leading to circular reasoning. Modern thinking means focusing on results, on how to measure results, and on the importance of the quality of service experienced by the customer in defining the principles of service delivery. Overall, it was commented that, is there sufficient communication with the customer about the continuity and usability improvements.

In the current organization, the business and customer interface are unnecessarily siloed from service production. It might be worth considering a more modern approach to building a more integrated and seamless supply chain. Customers should also modernize. In a work culture that emphasizes self-direction, the responsibility for the effectiveness of communication is seen as belonging to each member of the community. Communication is about the experience of culture in the work community: what can and cannot be talked about, who can and cannot talk, the tone of voice, how to talk, whose messages are shared, and who is silenced. The whole staff are producers and consumers of communication; everyone behavior affects the culture and communication climate that emerges in the workplace. All interaction is about influencing others and exercising power.

Talent management is currently fragmented in the organization. There is also a lack of competency profiles for the competencies required for different jobs. In particular, Valtori should design a career path model for specialists, as not everyone wants to progress from specialist to managerial positions. The lack of career paths risks driving specialists away from the organization.

A typical feature of a learning organization is that experts network with experts who are not part of their own administrative organization but may be from another area of government, suppliers, or partners from the private sector.

Traditional skills maintenance by assessing the training needs of individuals appears fragmented. While Valtori enables learning, individual training does not systematically lead to capacity building. There is a case for investing in the development of staff competencies, whether on their own initiative or in their own time, beyond the support of degree-based training, which would increase the individual's responsibility for competence development.

One important area of management is age management. The age management model should include alternative ways of working. Age management promotes equality and equity and enables listening and diverse encounters. Age diversity promotes a sense of community and openness and supports the pluralism of the organization. At its best, quality age management enables a shift in the focus of well-being at work towards a proactive and preventive approach. It also ensures that the needs of all age groups are heard and to ensure the use of tacit knowledge within the organization. The impact of age on career planning should start well in advance, at least 5 years before the planned date of change. There are a number of factors that influence career progression. Some people want to stay involved in society and be useful, while maintaining a sense of purpose, social interaction and rhythm in life. Others are motivated, for example, by customer feedback and appreciation. The employer may have encouraged them to continue working. For some, a sense of obligation, or "giving back", encourages them to continue. The meaning of the work and the feeling of being valued and listened to. Age management approaches, skills development and guidance for managers, and the integration of age management into the competence and development debate.

In today's society, different ways of working are normal. Some people wonder if flexible working patterns could change their work-life balance and they would never retire. On the other hand, it is easier to retire in hybrid times when employee don't have to go to work. But on the other hand, it is easier to

continue when the boundaries between leisure and work are blurred. Work capacity management works throughout a career by discussing work capacity and job tasks with the employee. Flexible work-life solutions allow organizations to implement individual solutions.

What is more relevant is the emphasis on public management skills. It is increasingly difficult to predict the challenges of the public sector leadership, as the scope and diversity of issues, values, skills, and backgrounds of employees differ.

5.3   How does the management system support the management culture?

The pressure for a coherent culture, organizational culture, and leadership culture has increased. Leadership is increasingly empowering and enabling. An expert organization management requires a management process and management service. The managerial function does not assess the competence requirements of managerial tasks. A completely different and new type of expertise would be required for management. Personality factors must be strengthened. In the discussion of what was to be improved, it was proposed to introduce a quality model for leadership.

The traditional management model is top-down and operationally controlled. In the traditional model, officials or employees should perform their assigned tasks rationally based on their expertise. Career advancement is based on expertise. From the point of view of expertise, the best content experts have the potential to advance to management.

Reporting and regular annual reports will guide and support performance management. Valtori may need to rethink what it means to manage Valtori's technology and what the role, responsibility, and impact of the information management function is. Is Valtori lacking technology leadership and is it providing sufficient guidance to customers on technology choices.

5.4   What is the maturity level of the organization

Valtori's maturity was last assessed for the situation in 2019, in the spring
2020 in the spring of this year. The main development areas identified for
Valtori at that time were in the service portfolio and in customer-oriented
service delivery. Since then, Valtori has developed its operations
in several areas under the guidance of the Ministry of Finance, with the
Change Programme as the main tool. Maturity assessment is based on
interviews with Valtori's management (self-assessment), customers and the
Ministry of Finance, and information gathered through a wider customer
survey. In a discussion about the management system, all of the interviewees
expressed that currently there is no coherent management system in Valtori.
The ERP system is also incomplete. In addition it was stated that operational
management should critically assess 24/7 service requirements and identify
the technological components that require greater 24/7 monitoring (e.g.
telecommunications, remote access). Inevitably, an entire product or service
will still not require 24/7 service capability. Contingency is crucial in a volatile
global political situation.

The management system is being described in an ongoing development
program. The success of the outcome will depend on whether the measures
are sufficiently concrete and communicated to staff in a sufficiently concrete
way. The effectiveness of the management system must be ensured by
regular reviews of the management system in relation to the operating
environment. Customer and supplier cooperation and the activities of internal
stakeholders should be reviewed both through internal reviews and external
audits. Anticipating changes in the operating environment identifying the need
for change when updating the strategy, and assessing the business model or
the organizational structure play an important role. Agile working methods
should be assessed when developing operations and management.

In general, two themes that came out most strongly were reporting and
management by knowledge. Is the reporting system supporting the way the
organization works and how are data, advanced analytics, and predictive
models being used to inform decision-making. Performance management
aims to drive results and data-driven improvement actions are identified in line

with the performance management system. The aim should also be to manage projects and improve processes in line with the performance management system. Overall, it was commented on how Valtori exploit artificial intelligence (AI) and automatization.

The recent Valtori Personnel Survey (VMBaro 2023) assesses leadership and management, job content and opportunities for influence, remuneration, skills, workplace culture, working and operating environment, interaction, and communication, and employer image and values. The survey also includes open questions on issues such as job rotation, well-being at work, inappropriate behavior, and harassment. The number of respondents to the survey was about 1240. The survey covers eight different areas of assessment. This study has analyzed both management and leadership, working culture, and employer image and values. The response scale is 1-5.

The majority of those who responded to the customer satisfaction survey, think that management and leadership are good level

- Support from the line manager in doing a productive job (4.18/5)
- Trust in the top management of the work community (3.28/5)
- Fair treatment of line manager (4.43/5)
- Organization of work (3.65/5)
- Top management setting an example and providing direction (2.99/5)
- Culture of experimentation (3.48/5)
- Management decision-making (3.11/5)
- Management's strategic orientations support the achievement of objectives (3.02/5)

Results regarding working culture are as follows:

- Enthusiasm (3,9/5)
- Appreciation of work and skills (4.11/5)
- Gender equality (4.31/5)
- Equality between people (4.21/5)
- Employee's own activity and contribution to the work community (4.24/5)

Employer image and values

- Commitment to the employer's objectives (4.26/5)
- Awareness of values (4.12/5)
- values implementation in everyday life (3.68/5) (VMBaro 2023.)

Although the results at organizational level are good, there is considerable variation within different units and groups.

Valtori's principles of management and leadership have developed. Leadership principles are leading together, developing and innovating, communicating and valuing. The principle of leading together is based on

trust, which means leading towards common strategic goals. In addition, co-management ensures that the expertise of the people of Valtor is reflected in the decisions taken. In practice, the principle of 'develop and innovate' means identifying, structuring, brainstorming and developing new knowledge together. It also creates an atmosphere in the working community and enables continuous development. In practice, the 'communicate and value' principle means respecting and valuing others, communicating clearly, dealing with difficult issues courageously, and engaging in open dialogue, listening and giving feedback.

5.5 Managerial implications

Valtori is a process-oriented organization. The transition to a process-oriented organization has been a major management challenge. It is not possible to become a learning organization without good leadership. Traditional civil servants have been challenged by the change from a traditional hierarchical organization to a process-oriented organization and management, which requires a new vision from those in leadership positions. According to the information obtained, process thinking has also required breaking down an existing structure or operating model. Has the civil service machinery in the the public sector had the maturity and courage to abandon something familiar.

It was also discussed in the interviews whether management processes are part of the management system, or are the processes of the management functions are recognized, described, and implemented with sufficient seriousness. The core technical Information Technology Infrastructure Library (ITIL) processes (Ivanti 2023) are at a good level and documented in ERP-system.

The development suggestions are related to the leadership, management culture, management system and maturity level. In the interviews related to leadership, the improvement ideas are listed in Table 2.

Table 2 Development ideas related to leadership

LEADERSHIP		
Target for development	Development proposals	Proposals for action
Supporting decision-making	Raising the appreciation of expert substance	Expert paths
Stakeholder cooperation	Dialogues between Valtori and customer representatives	Workshops where service production and customer representatives meet (customer service managers, manager from larger customers and best experts)
Public management	Leadership skills development program	"Certificate"

It is highlighted that decision-making needs to involve experts, especially when designing new services for customers and discussing technical solutions. Valuing the expertise of an expert is highly appreciated. The interviewees expressed several significant factors in leadership impacting engagement such as trust, respect, and appreciation. It was highlighted when an organization enables the employee to grow, it mirrors the employee motivation and productivity. Career progression from junior to senior expert must be ensured. Not all technical talents want to progress to management positions. Competency profiles and a competency bank need to be built and used, for example, in recruitment. Competency profiles can also be used to build competence and training pathways.

There was identified a need for closer cooperation and dialogue with the customer and other stakeholders. Dialogue between Valtori and customer representatives has to strengthen. Regular workshops, where service production and Valtori's customer representatives meet (customer service managers, manager from larger customers and best experts) could be one way to increase cooperation. In addition, customer representatives and decision-makers can be involved in the work. The accessibility of the manager must be ensured especially during remote and hybrid work. Leadership is always about people.

Organization must change direction from internal IT management to service provider according to service descriptions. Valtori should clarify ownership of services and centralize responsibilities more precisely e.g. by establishing a service ownership program. At the moment improvement is happening scattered throughout the units in organization and the systematic and coherent cooperation is missing.

Talent management is currently fragmented in the organization. A manager's certificate, where competences are recognised and acknowledged, is a good way to ensure quality management. Competences should be strengthened in areas such as: public administration skills, coaching, ethics in public service, financial management, employee relations, knowledge management, change and hybrid management, customer and partnership management. challenging interaction situations, presentation skills, process and quality management and organizational communication practices.

In the interviews related to the management culture, the improvement ideas are listed in Table 3.

Table 3 Development ideas related to management culture

MANAGEMENT CULTURE		
Target for development	Development proposals	Proposals for action
Implementation of the (new) supervisor's operating models (baseline)	The induction plan includes a good review of practices and cross-pollination also for old supervisors	Line manager's handbook practical participation in a colleague's activities
Strengthening overall understanding about service management	by seeing the function from different perspectives	Task rotation - e.g. heads of unit - internal rotation of small teams
Understanding the culture of an IT service operator	increase managerial experience in the operation of an IT service operator	- company visits - benchmark - Managerial exchange
Age management model	link age management to the discussion on competence and development	- Age management model - Alternative working models

The level of local management varies between departments and groups. Especially when new managers are starting out, it would be an advantage to have an operational handbook for line managers. Handbook for line managers would define the baseline how to work. Practical participation in a colleague's meetings (e.g., group meeting, team meeting or one-to-one discussion), workgroups and development days. Participation provides an opportunity to gain experience from the model.

Strengthening overall understanding about service management in all levels of organization by seeing the function from different perspectives.
Rotation of Heads of Unit would be beneficial to understand the whole supply chain. Internal rotation of small teams could increase co-operation in at operational level as well. Company visits, benchmark and managerial rotation would

help to increase managerial experience in the operation of an IT service oper-
ators in private sector.

Age management model has to be part of manager's handbook. Alternative
working models are crucial for all ages to achieve balance between working
life and private life. It also helps to extend careers and transfer tacit
knowledge in the organization. Age management approaches, skills
development and guidance for managers, and to integrate age management
into the competence and development debate.

In the interviews related to the management system, the improvement ideas
are listed in Table 4.

Table 4 Development ideas related to management system

MANAGEMENT SYSTEM		
Target for development	Development proposals	Proposals for action
Standardization of management practices	Management baseline	Minimum requirements and management criteria described
Measuring leadership success	Define objectives and indicators	360 assessment
Dedicated Quality Manager	defining a comprehensive quality responsibility for service management (e.g. ISO9001. The ISO 27001 standard addresses the information security perspective	Dedicated Quality Manager
Ownership concept	- Identification of service responsibilities	Service Ownership Program
	- Clarifying service ownership	
	- Clear operational processes and responsibility matrices describe responsibilities also from a non-technical point of view (at product/component level)	
Documentation of management history	Document the leadership roadmap and life cycle, because fixed-term contracts interrupt the continuity of leadership	Organization diary

To say that an organization has a management system in place, management
practices need to be standardized. In this case, the management system
constitutes a management baseline, which describes the criteria and minimum
requirements for management. This work is ongoing during improvement
program to produce the management handbook. It provides a framework from
strategic management to operational management. This is complemented by
the operational handbook for line managers.

In order to assess management, there must be a management baseline, objectives, and indicators to measure management. There has to be skills development and management training (e.g. JOKO) in place for all managers.

Generic performance measures do not give an overall picture of the quality of leadership. One way could be to appoint a full-time quality manager who is responsible for defining, monitoring, and taking corrective action across the organization, in line with the quality cycle. A quality manual would cover not only process quality assurance but also management quality. It might be useful to consider quality responsibility in service management (e.g. ISO9001). This standard allows companies to ensure that products and services meet the requirements of customers and public authorities. ISO 27001 addresses the information security aspect.

It was already pointed out in Deloitte's report 2020 that clarifying overall responsibility and ownership of services need to be done more precisely. A service ownership program would be one way to analyze the current situation and to improve process and methods to simplify and standardize this entity. At the moment improvement is responsibility of individual units. One idea to ensure continuous improvement is to build an organizational diary. Organization has to ensure long-term strategic management despite of fixed-term contracts and changes in strategic management.

In the interviews related to the maturity of the management system, the improvement ideas are listed in Table 5.

Table 5 Development ideas related to maturity level

MATURITY LEVEL		
Target for development	Development proposals	Proposals for action
Identification and development of maturity level	Systematic evaluation	Internal audit
	Service delivery model (SDM)	unit-specific audits
Impact assessment	Analysis of cause-effect relationships to support decision-making	

Internal audit has been made in 2023. Systematic evaluation must be part of ongoing activities and development. Service delivery model (SDM) could be

baseline for evaluate roles, responsibilities and tasks between internal and contracted services. Implementation of internal unit-by-unit assessments as supportive measure is recommended. Supportive measures to encourage creativity and innovation are needed. To motivate experts and manager for improvement actions, definition of supportive approaches is required. Internal reviews should examine whether the management culture supports staff's ability to see their own potential for development and improvement. Impact assesment, i.e. analyses of cause-effect relationships from different angles should do before decision-making.

5.5.1 Improvement program

The Ministry of Finance's (MoF) performance agreement sets the objective of good and accountable governance. The objective of the development program is to define management policies and principles, practices, and internal operating models and culture. Summarising the final report 2023, the Ministry states that for many of the measures proposed in the evaluation, development work has already started, including work on a service strategy in cooperation with clients. Other development actions prioritised and recommended in the study (e.g. management system development and supplier management) are included in the Valtori Operational Model Development Programme. (Ministry of Finance 2023b.)

During the timeline of the research development activities started. The starting point for development program was a self-assessment of the current situation using the Common Assessment Framework (CAF) framework in autumn 2023. The purpose of the program is to reform Valtori's management system, ensure good governance and accountability, update, streamline, and implement key business processes, improve and enhance Valtori's operational capacity, and create the conditions for an interoperable Valtori. The "Yhteen toimiva Valtori" (Interoperable Valtori) program was launched in autumn 2023 and will be completed by the end of 2024. The program is owned by the CEO.

The objectives of the management system are to have clear management responsibilities and a common management approach. Target is

- To define principles of leadership and management and to ensure they have been implemented.
- Management forums and their operating models have been comprehensively described and implemented.
- The use of public authority and the roles of management and front-line staff have been clarified.
- Procedures for quality decision-making in line with good governance have been described and implemented.
- Risk management and performance evaluation are part of ongoing management.
- Management objectives have been clarified.
- The official rules of procedure of the organization have been updated in line with the management system. (Valtori 2023.)

Aspiration is to develop organization-wide business models and culture, data-driven financial management, key processes that guide operations, the Collaboration Procedure (CP), and recruitment practices. The program will ensure the application of good governance and HR policies. Aim is to contribute to the achievement of performance targets in ensuring good and accountable governance and in developing the management system. Concentration is to streamline daily lives of Valtori employees and create organization where all funtions the daily lives of Valtori employees, create a whole of Valtori where all functions play together in a mutually supportive way, create a better service experience, contribute to the achievement of performance targets, and strengthen the trust of customers, partners, and supervisors in our operations (Valtori 2023.)

In the area of management system development, where the author is also a member, a management handbook is being developed. Handbook describes the basics of management, the services, the basic tasks, and the legislation governing the activities. The manual includes the principles of performance management and the strategy of the organization. It also presents a description of the management of operations, the organizational structure, the management forums, and the functions.

The conclusions will be further discussed in the operational model development program, in which the author is also involved. The development program will assess Valtori's management system and internal policies and culture. The final output of the management system sub-project of the

program will be a management handbook. The second part of the program will clarify human resources policy, planning, recruitment, and dismissal procedures. The project is expected to be completed by Dec 2024.

5.5.2 Change management

Change takes place at different levels: individual change, change in working practices, or a strategic shift in priorities at the organizational level. Organizational change is first reflected in the way things are done, then in the results, and only over time in the organizational culture and its management culture. The likelihood of success is increased by investing in change management.

Could more groups, teams, and individuals within an organization be encouraged to develop their own ways of working and interacting independently, while ensuring that they are aligned with the organizational culture and strategy. New types of creative leadership can be developed from existing organizational structures assuming there is sufficient courage to change the way they operate.

5.6 Evaluation of the research

In qualitative research, data can be collected in many ways. Research data can be collected through interviews, observation, and study literature or previous material. Observation also provides information about the social relations and culture of the community. In participant observation, the author observes by interacting with the subjects. The author participates as both an actor and a author in the operational activities of the community. These roles overlap in the research situation. (Vilkka 2015, 142–146.)

The study was carried out as a qualitative study. It was considered to be the most appropriate for this work, as the aim was to assess the current state of the management culture and the maturity of the current management system. Suggestions for improving operational management and management processes were provided.

In qualitative research, the author influences the bias of the research, as the creator and interpreter of the research design (Tuomi & Sarajärvi 2018, 148-151.) In this study, the author's bias is increased by the fact that the author knew the research subject well and actively participated in the development process. This should also be taken into account when evaluating the research. The ethicality and reliability of the research was increased by following good research principles throughout the process.

The data collection and analysis of the research work were carried out using qualitative research methods. Ethical guidelines were followed in the handling and storage of the collected data. Documents, previous reports, and interviews were used to collect data for this research. Interviews were conducted with persons in various levels of management positions in the company and their identity was kept confidential. Various methods were used to collect data in order to increase reliability. A total of seven people participated in the interviews.

Research ethics and credibility are interlinked and based on good scientific practice. Good scientific research is conducted with integrity, rigor, and general care in the conduct, recording, presentation, and evaluation of results. Reliable result requires strong trust. The creditability of qualitative research depends on the culture of the community, its size, and the research problem. In larger communities, the risks are lower. Research ethics and truthfulness must be taken into account in all phases of the research. This study has utilized previous research and benchmarking reports. Participant observation provides information about individuals, about individuals as members of their communities, and about their relationship with the author. As a source of error, it should be taken into account that the persons being observed may change their behavior when they know they are being observed.

The topic of the study was selected based on the interest of the developer and the development needs of the target company.

5.7   Potential future research and development proposals

The development programme provides a framework to support strategic management and decision-making. As usual, the external and internal changes impact the management culture and management system. The organization must assess the impacts of the changes made. It could be useful later on to examine the impact of the development agenda on operational management. Assessing the supply chain management, ownership and effectiveness of other major changes would also be a fruitful research topic. The success of change management in implementing a leadership culture and management system might be an intresting research area as well.

It would also be interesting to assess activities from a broader perspective of overall quality, in addition to the quality criteria of information security and data protection.

Impact of HR improvement activities concerning skills development and career path planning would be a research topic to study how could the public sector and central government be an attractive and modern workplace for the IT workers and professionals in the future. The impact of technology and knowledge management brought by AI and automation on operational management is also beneficial topic.

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ABBREVATIONS

AI, artificial intelligence

BSC, Business Score Card

BT, Business Technology Standard

CAF, the Common Assessment Framework

CEO, chief executive officer

COVID, coronavirus disease

CP, Collaboration Procedure

CRM, customer relationship management

EC, European Comission

EFQM, European Foundation for Quality Management

ERP, enterprise resource planning

EUPAN, The European Public Administration Network

HR, Human resources

ISO, International Organization for Standardization

ITIL, Information Technology Infrastructure Library

JOKO, management training

KPI, Key Performance Indicator

MoF, The Ministry of Finance

NPO, Non-profit organization

OECD, The Organisation for Economic Co-operation and Development

PDCA, Plan-Do-Check-Act -method

PI, Performance information

RACI, Responsible-Accountable-Consulted-Informed -matrix

SDM, Service delivery model

SLA, Service level agreement

SME Istekki/SSC Statens IT, Aino?

TOSI, sector-independent ICT services

TQM, Total Quality Management

VALO, Valtori's development program

VMBaro, Valtori Personnel Survey