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Context Adaptation in Public Administration Change Processes: A Case Within the Swedish Transport Administration

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Abstract

The purpose of this paper is to explore context adaptation of change processes in the setting of public administration. This is done by adopting a contingency approach. Thus, the research question guiding this study is: *How is context adaptation enacted in change processes and what are the behavioural implications?* Drawing on empirical findings from the Swedish Transport Administration, the study illustrates the enactment of context adaptation and its behavioural implications through the phases of change. The analysis identifies key contextual factors and contingency variables, demonstrating that context adaptation is enacted by managers and employees. Notably, certain context adaptation led to contradictory behavioural patterns. This study hence contributes to public administration literature by exploring the enactment of context adaption in change processes which represents an understudied phenomenon in this field.

Keywords:
change context;
context adaptation;
public administration;
change management;
contingency approach

Practical Relevance

- Context adaptation is enacted continuously throughout the change process by managers and employees.
- Managers and employees acknowledge organizational structures as strong and not adaptable.
- Since higher-level roles create conditions for lower-level roles, the management needs to be aware of their crucial role in creating conditions for context adaptation for employees.
- Behavioural implications include contradictory behavioural patterns.

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Introduction

Organizational change refers to substantial shifts in direction, structure, or processes that affect significant parts of an organization. These shifts may involve the implementation of new technologies, transformation of organizational culture, or efforts to ensure compliance with specified work procedures (Edmondson, 2018). Change is an inevitable aspect of organizational life, requiring a transition from the current state to a desired future state in order to align strategic objectives with operational realities (Edmondson, 2018; Todnem By, 2005). Such transitions - described as movements "from here to there" (Supriharyanti and Sukoco, 2022, p. 46) - occur within specific organizational contexts (Hughes, 2011). Understanding and adapting to these contexts is critical for successful change implementation. Contextual adaptation enhances the likelihood of achieving desired outcomes (Al-Haddad and Kotnour, 2015), particularly in environments characterized by rapid change and complexity, such as Scandinavian public organizations (Brorström *et al.*, 2023). Despite the extensive number of change management frameworks, scholars argue that many lack sensitivity to context-specific challenges within public administration (Kuipers *et al.*, 2014). Hence, there is a need to examine context adaptation in the enactment of public sector change processes (Cloutier *et al.*, 2016).

Addressing these context-specific challenges requires a deliberate focus on adapting change processes to the organizational context. This study focuses on change processes in a public organization, specifically dealing with traffic management. This operation involves monitoring infrastructure, managing traffic flows, and disseminating information to ensure safe and efficient transportation. As a vital component of Sweden's transportation system, traffic management plays a key societal role (Swedish Civil Contingencies Agency, 2024). Within this sector, Lofquist and Isaksen (2019) emphasize that change initiatives must be tailored to the unique operational context, as standardized approaches are often insufficient. Practitioners in traffic management have identified several recurring challenges in change implementation: (1) insufficient understanding of contextual and human factors (Long et al., 2012), (2) limited stakeholder involvement (Touko Tcheumadjeu et al., 2022), and (3) uncertainty regarding the impact of new systems on traffic operations (Liu et al., 2022). These issues underscore the need for deeper insights into how change processes can be effectively adapted to specific contexts within public administration, and traffic management in particular.

Therefore, this study adopts a contingency approach to explore context adaptation in public administration change processes, specifically related to traffic management at the Swedish transport administration. The contingency lens is applied as theoretical lens to enable an analysis of context adaptation in terms of processes and structures. According to this lens, processes and structures of an organisation must be adapted to the context for the organization to be successful (Donaldson, 2001). This context-adaptation process is built on the assumption that humans are boundedly rational, and consequently they operate within cognitive and informational limits. This means that humans are simplifying change processes and seeking satisfactory solutions, rather than finding the optimal one (Turkulainen, 2022). With attention to context adaptation and its behavioural implications, this study is guided by the following research question: *How is context adaptation enacted in change processes and what are the behavioural implications?* This abductive study therefore advances knowledge of context adaptation in change processes in a public administration setting. By applying the contingency lens, this study scrutinizes the human dimensions in the enactment of context adaptation through the different phases of change.

Theoretical Background

Organizational change approaches

Organizational change encompasses two distinct dimensions: naturally occurring change and managerial efforts to produce change (Edmondson, 2018). This paper focuses on the latter, the management of change. Research in public administration and traffic management applies various theoretical approaches to organizational change, notably planned and emergent (Bamford and Forrester, 2003; Biedenbach and Söderholm, 2008; Todnem By, 2005). The planned approach is common in traffic management, particularly in implementing new

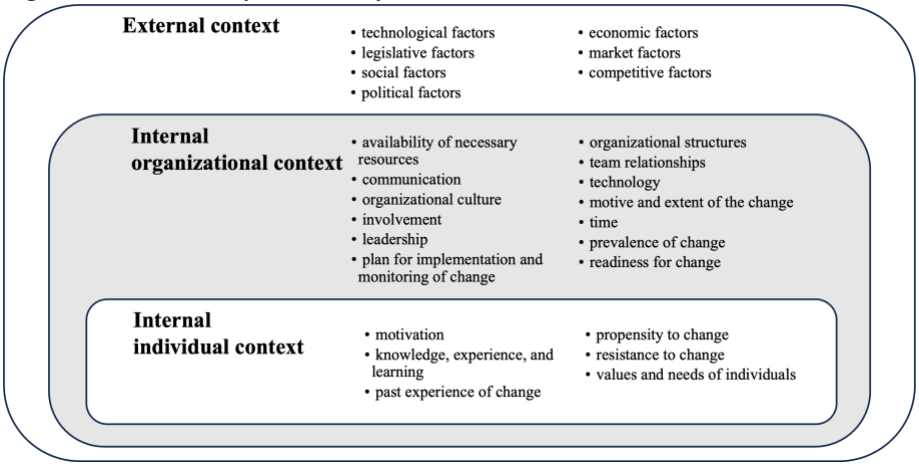
technologies through a top-down strategy (Lofquist and Isaksen, 2019; Long *et al.*, 2012; Stathis *et al.*, 2022). Lewin's (1947) model—unfreeze, move, refreeze—illustrates planned change, assuming stable conditions allowing movement between equilibrium states. Critics argue that this approach overly depends on top management dictating timelines, goals, and methods (Todnem By, 2005). The emergent approach, conversely, is addressing a bottom-up processes where technology development emphasizes human-technology interactions (Nylin *et al.*, 2022; Patriarca *et al.*, 2016; Reyes-Muñoz *et al.*, 2023). Here, change is viewed as a continuous, adaptive process characterized by experimentation and rapid responsiveness (Bamford and Forrester, 2003; Biedenbach and Söderholm, 2008; Burnes, 1996, 2004; Dawson, 1996; Edwards *et al.*, 2020). Higher-level management acts as a facilitator rather than a controller of change (Bamford and Forrester, 2003).

In the public sector, one important driver for organizational change is digitalization which include leveraging new Information and Communications Technologies (ICT) to transform strategies and operations. These initiatives remain challenging despite extensive research and practice (Li, 2020; Molin and Norrman Brandt, 2023; Norrman and Näslund, 2025). Public organizations have increasingly adopted the use of portfolio, programme, and project management logics to achieve organizational change (Bonomi Savignon and Costumato, 2024). Challenges mentioned for succeeding with these changes include, for example: lack of strategic communications, failure to define a clear roadmap, and to plan and execute the right steps (Li, 2020). Although context is briefly mentioned in these studies, surprisingly little research focus specifically on context adaptation.

Context

An organization's context encompasses its internal and external environments (Kuipers *et al.*, 2014), see Figure 1. Internal context refers to organizational and individual factors (Alfes *et al.*, 2019; Anderson and Young, 1999). Organizational factors include the availability of necessary resources, communication, organizational culture, involvement, leadership, plan for implementation and monitoring of change, organizational structures, team relationships, technology, motive and extent of the change, time, prevalence of change and readiness for change (Anderson and Young, 1999; Balthu and Clegg, 2021; Brandes and Lai, 2022; Brazzale *et al.*, 2021; Dawson, 1996; Øvretveit *et al.*, 2012). Individual factors encompass motivation, knowledge, experience, and learning, past experience of change, propensity to change, resistance to change and values and needs of individuals are mentioned as individual contextual factors (Anderson and Young, 1999; Brandes and Lai, 2022; Chaudhry, 2020). External context, on the other hand, covers technological factors, legislative factors, social factors, political factors, economic factors, market factors and competitive factors (Abeygunasekera *et al.*, 2022; Dawson, 1996; Dmitrijeva *et al.*, 2020; Silver *et al.*, 2016).

Figure 1. Illustration of contextual factors



Understanding context involves analysing not only processes and structures but also incorporating the human dimensions which shape organizational change (Pettigrew et al., 2001). Organizations are composed of several contexts that are interpreted by humans (Frishammar, 2006; Khaw *et al.*, 2023; Pettigrew *et al.*, 2001; Tsoukas and Chia, 2002). Therefore, when studying the enactment of context adaptation, it is important to take into account both processes, structures and the human dimensions.

Contingency approach

The contingency approach is applied as theoretical lens to enable an analysis of context adaptation in terms of processes, structures and human dimensions. This approach focuses specifically on variables that affect organizational performance (Donaldson, 2001; Galbraith and Nathanson, 1978). One key assumptions within the contingency approach is that organizations function as open rational systems, meaning purposefully designed and managed to achieve specific goals (Turkulainen, 2022). This perspective implies that organizational processes and structures are not fixed but should be adapted to fit environmental conditions and strategic objectives. This means that there is no single best way to organize; efficiency depends on alignment with internal and external contingencies (Donaldson, 2001; Thompson, 1967; Woodward, 1966). If contingencies shift and structures remain static, performance declines, requiring adaptive change to realign structures and processes (Donaldson, 2001). Thus, organizations must continually seek the "one best way for each" (Burnes, 1996, p. 15) organization. This study differentiates between contingency variables, which are immutable and require adaptation, and contextual factors, which organizations can influence as part of change efforts. Another key assumption is that humans are boundedly rational, and operate within cognitive and informational limits (Turkulainen, 2022). This means, that while they strive to make rational choices, their capacity to gather, interpret, and process information is limited. Instead of identifying optimal solutions, they simplify decision-making by setting achievable targets and selecting satisfactory options. Therefore, when studying the enactment of context adaptation, it is important to include the behavioural implications, including managers' and employees' perceptions and accordingly how they shape the change process.

Context adaptation within organizational change

Within the field of organizational change, various models have been developed to facilitate context adaptation. First, Luthans and Stewart's (1977) model of planned change involves four steps: (1) contingency audit, (2) strategy development, (3) implementation, and (4) result evaluation. Evaluations feed into a database to inform future strategies. Second, Dunphy and Stace's (1988) situational model factors in both type of change and leadership approach, recommending strategy variation for an "optimal fit" with a dynamic environment (Dunphy and Stace, 1993, p. 905). Third, Hailey and Balogun's (2002) Change Kaleidoscope broadens earlier models by integrating a wider set of contextual features and offering repeated evaluations during the change process (Balthu and Clegg, 2021; Hailey and Balogun, 2002). Unlike earlier models, which assume stable contexts, the Change Kaleidoscope recognizes that both context and change strategies must evolve during implementation.

Despite such context adaptation frameworks in a public sector setting, it remains unclear how the human dimension, together with processes and structures, shape the change process. Existing public administration literature emphasizes that managers can have a significant effect on how employees perceive change. Seijts and Roberts (2011) argue that the management-level can shape both the context and the process of organizational change by establishing structures to enhance employees' opportunities to actively participate in the change process. Khaw *et al.* (2023), highlight that thoughtful and inclusive communication strategies can foster positive engagement, whereas a poor framing of the change process may trigger adverse reactions. Hameed *et al.* (2019), underscore the importance of a clear purpose, noting that managers must address the critical question: 'What do I gain from this change?' Furthermore, Seijts and Roberts (2011) demonstrate that managers play a crucial role in fostering desired behavioural change by providing employees with the necessary support and resources. However, limited attention has

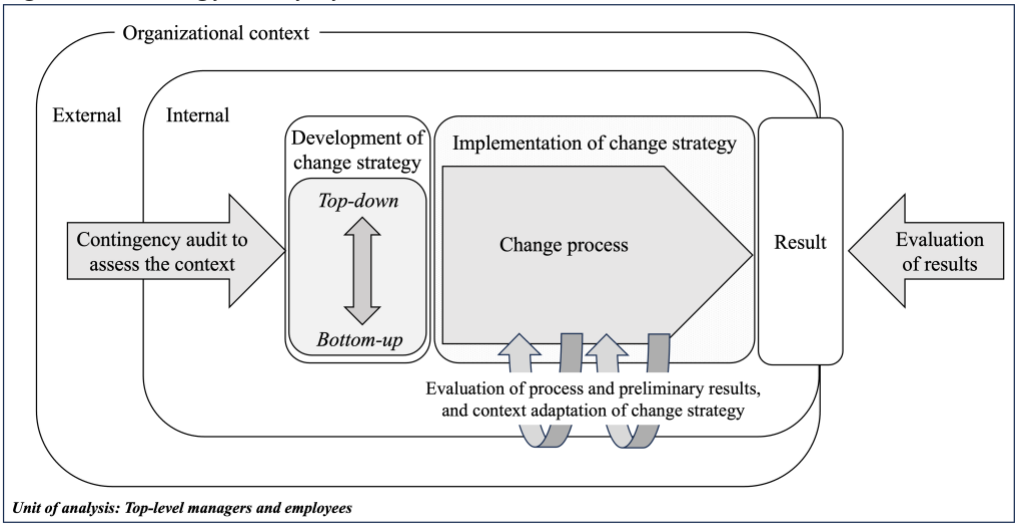
been given to the enactment of context adaptation and its human elements in terms of bounded rationality when managers operate within cognitive and informational limits (Turkulainen, 2022).

Conversely, for employees, existing literature highlights both positive and negative behavioural implications when context adaptation is enacted, particularly in relation to factors such as communication, involvement, planning, and managerial support. In terms of communication, employees report negative perceptions when they feel insufficiently informed in a inaccessible manner (Jones *et al.*, 2008) , whereas timely and transparent communication about the change is perceived positively (Seijts and Roberts, 2011). When it comes to involvement, employees who are encouraged to participate in the change process, and whose input is valued and utilized, are more likely to remain positive about the change (Seijts and Roberts, 2011). When it comes to planning, employees may experience changing roles, heavier workload, and intensified training as challenging (Jones *et al.*, 2008). Finally, employees who are supported by the management feel empowered and are more open to organizational changes (Seijts and Roberts, 2011).

Orienting frame of reference

For this study, the orienting frame of reference synthesizes the theoretical background and form the basis for exploring how context adaptation is enacted in change processes and what the behavioural implications are, see Figure 2. Based on the theoretical lens of contingency, the orienting frame of reference highlights the organizational context consisting of different internal and external contextual factors (including contingency variables) (Alfes *et al.*, 2019; Anderson and Young, 1999; Kuipers *et al.*, 2014; Silver *et al.*, 2016). The contextual factors can be assessed with the aim to find the fit between context and change strategy (Dunphy and Stace, 1988; Hailey and Balogun, 2002; Luthans and Stewart, 1977). However, the contingency variables cannot be changed but the organization can adapt to them while the contextual factors can be influenced. Changes based on planned change is related to the top-down perspective while emergent change relates to the bottom-up perspective (Biedenbach and Söderholm, 2008; Todnem By, 2005). During the change process re-evaluations could be performed to adapt change strategy to the changing context (Balthu and Clegg, 2021). Finally, an evaluation of the final result is made after the implementation (Hailey and Balogun, 2002; Luthans and Stewart, 1977). Adaptation is initially assumed to take place during the development of the change strategy and then during the change process through the implementation of the change strategy. Assessment of whether the adaptation is sufficient is assumed to take place during initial assessment of the context (including previous evaluations), implementation of change strategy (the change process) and evaluation of results. Aligned with the contingency approach, the orienting frame of reference (see Figure 2) is based on the assumption that humans are boundedly rational and operate within cognitive and informational limits (Turkulainen, 2022). This implies that humans are simplifying change processes and seeking satisfactory solutions, rather than finding the optimal one (Turkulainen, 2022). As a result, the behavioural implications address both top-level managers' and employees' perceptions of context adaptation when the change process is enacted.

Figure 2. Orienting frame of reference



Method

The empirical context

The context for this study is The Swedish Transport Administration (STA). This public authority is publicly funded through taxation, and political authority plays an important role through annual appropriations letters, government mandates, and resource allocation. Their vision "Everybody arrives smoothly, the green and safe way", combined with reduced financial budgets, illustrate the contemporary complex challenges STA as a public authority is facing. STA is responsible for the long-term planning of the transport system for road, rail, shipping and air. STA is also responsible for building, operating and maintaining state roads and railways, and ensuring that this infrastructure is used efficiently. Organizationally, the authority is divided into several business areas and central functions and has approximately 9000 employees (Trafikverket, 2025).

The specific empirical context for this study is Business area Traffic management. The Business area is responsible for providing traffic management and traffic information to the Swedish road and rail network. Operations are conducted at traffic control centres spread across the country were operative employees with different roles work shifts to maintain delivery 24/7, around the clock. The Business area Traffic management has approximately 2000 employees. Organizationally, the nationwide department for business development and asset management is responsible for running projects, while it is employees at the traffic control centres in the operational activities that are the recipients of the changes. In specific, the change process that has been explored in this study entails development of working routines and IT system that were implemented at traffic control centres. The purpose of the developed working routines and IT system was to improve the quality of the traffic management delivery (meaning satisfied travellers, road users and businesses that use roads and railways) with existing personnel resources. Operative employees were the staff group that was primarily affected by this change and prior to the change implementation, training was carried out for the operational employees.

A top-down, planned approach to organizational change is adopted at STA. Projects apply the project model, XLPM (Semcon, 2024), that describes project activities, decision points, and, responsibilities to ensure that set goals are achieved. Regarding change management, a framework for change management is used that is based on a change management model developed for public administrations (Ekonomistyrningsverket, 2007). The framework include phases corresponding to the three phases described by Lewin (1947): prepare for the change, implement the change and reinforce the change (Ekonomistyrningsverket, 2007). However, given the challenges of implementing changes in operational activities with shift work, the organization has begun to consider whether the changes should be more adapted to the context.

This context offers a compelling case to study due to the pronounced challenges of adapting change processes to the context of 24/7 operational activities with shift work, together with the enactment of change processes involving both managers and employees.

Designing and conducting the study

This study adopts an abductive qualitative approach to increase understanding of how context adaptation is enacted in change processes, including the behavioural implications, in the field of public administration in the empirical context of traffic management. The qualitative approach is motivated by the fact that qualitative research is contextually anchored and allows the researcher to become an interpreter of the people included in the study (Pettigrew, 2013). This is in line with that change within public administration needs to be understood as a contextualized phenomenon using a qualitative approach (Alvehus and Loodin, 2023). The abductive approach include an iterative process of understanding the "parts" in relation to the "whole" in order to capture deeper meanings (Prasad, 2018). In the analysis this is manifested by going back and forth between the empirical data and theory to refine interpretations and engage with theory continuously (Bell *et al.*, 2019; Ketokivi and Choi, 2014). We abductively involved theory on organizational change, context, contingency approach, and context adaptation to analyse and understand the findings an enable theory elaboration (Ketokivi and Choi, 2014).

The empirical data consists of 21 face-to-face semi-structured interviews. Informants were purposefully selected to represent different perspectives of actor groups in the organization in order to enable comparisons of perceptions across ongoing processes (Bell et al., 2019). The top-level management perspective is represented by six top-level managers in the Business area. The employee perspective is represented by six employees who lead projects, six operational employees at traffic control centres and three operational employees at traffic control centres who get an increased opportunity to participate in changes (this role can be temporary as project member or more permanently as instructor or educator), see Table 1. Operational employees' participation in interviews was requested and approved through their immediate manager meaning that operational employees were provided based on availability. When the informant was invited to the interview, the subject of the interview was introduced, and it was described what the research would be used for. The interviews were conducted during the period August 2022 to August 2023.

Table 1. Informants

Perspective	Actor group	Nr	Description of the informants' role
Management	Top-level managers within the business area	TM1	Head of department
		TM2	Head of department
		TM3	Head of department
		TM4	Head of department
		TM5	Head of department
		TM6	Head of department
Employee	Employees who lead projects, for example business developers and project managers	PL1	Business developer/Asset manager
		PL2	Business developer/Project manager
		PL3	Project manager
		PL4	Project manager
		PL5	Project manager
		PL6	Project manager
	Operational employees at traffic control centres who have increased opportunity to participate in changes (also called Operational employees +)	OE+1	Operational employee, Project member
		OE+2	Operational employee, Instructor
		OE+3	Operational employee, Educator
	Operational employees at traffic control centres who are affected by the changes control centres who are affected by the changes	OE1	Operational employee
		OE2	Operational employee
		OE3	Operational employee
		OE4	Operational employee
		OE5	Operational employee
		OE6	Operational employee

To collect information from informants but still be able to be flexible to ask follow-up questions, semi-structured interviews were chosen (Ruslin et al., 2022), see Appendix 1. The research question and the orienting frame of reference formed the basis when the interview guide was developed. The interview guide contained a sequence of questions and, if necessary, follow-up questions were asked during the interviews (Kvale, 2022). Open questions were asked and in each interview the informant had the opportunity to describe their specific context, their role in changes and define change management. As the last question before the interview ended, the interviewer asked if the informant had something further to add that was not recovered during the interview. A pilot study involving four interviews was conducted to test the interview guide. The interviews lasted approximately 45 min and were conducted via Skype. The interviews were recorded and later transcribed in full.

Analysing the empirical data

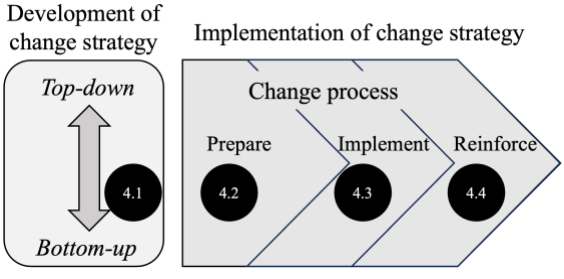
The empirical data was analysed in several steps following the procedures of the hermeneutic circle (Darby et al., 2019). The hermeneutic circle represents an iterative process of understanding the "parts" in relation to the "whole" in order to capture deeper meanings (Prasad,

2018). The contingency approach encompasses a variety of units of analysis (Turkulainen, 2022). In this study, the chosen unit of analysis is top-level managers and employees, and their perceived challenges of context adaptation when the change process is enacted. In the first step, intratextual analysis was used to interpret each informant. Directly after each interview, short summaries were written to capture initial interpretations. Each informant's experience was then summarized, including identified contextual/contingency aspects and activities of adaptation to the context of change. Secondly, intertextual analysis was carried out to find differences and similarities in the different informants' perceptions of context adaptation. The analysis was conducted by using descriptive coding on the intratextual summaries with priori codes (contextual factors, contingency variables, current adaptations, challenges, phase of change) but also letting codes emerge from the data were used to categorize similar pieces of data (Miles et al., 2014). Thirdly, the codes were used to group data to find differences and similarities across informants, forming the basis for identifying overarching themes in the empirical material (Miles et al., 2020; Ryan and Bernard, 2003). The NVivo software was used for coding and identifying themes. Since all priori codes in regards of contextual factors were not identified by the informants they are not included in the analysis. However, we identified two contradictory behavioural patterns that is discussed in section 4.5. During the analysis of the empirical material, tables and figures were used to organize the data but also to display the data and visualize similarities and differences between the actors' perceptions (Miles et al., 2020). Several quality-enhancing activities to ensure trustworthiness was conducted during the analysis of the empirical data. One such activity was a reference group (7 people at manager and employee level, 3-4 meetings per year) at the studied organization where key people were given the opportunity to discuss the preliminary results and provide feedback on interpretations.(Grant and Lincoln, 2021; Pettigrew, 1990; Rodham et al., 2015).

Results

When studying enactment of context adaptation in the change processes, there were differences as to how the top-level managers and employees experienced context adaptation. The differences were demonstrated in terms of the importance of contextual factors and the behavioural implications. In this section, these differences will be explored in detail when the results are presented. Building on the orienting frame of reference, context adaptation is assumed to take place during development and implementation of change strategy in the phases of the change process. In the following sections, the presentation will follow the phases that the Swedish Transport Administration apply in change processes, see Figure 3. The phases covered are development of change strategy, preparation for the change, implementation of the change and reinforcement of the change (Ekonomistyrningsverket, 2007).

Figure 3. Outline for presenting results



The presentation of the analysis of the empirical data is summarized in tables, see Table 2 for an overview. The presentation will be based on the contextual factors (influenceable) and contingency variables (immutable but can be adapted to) that top-level managers and employees have identified. These will be listed in tables along with the behavioural implications, the

perceived current context adaptations and challenges. As illustrated in the table, a contextual factor can be linked to several contingency variables.

Table 2. Structure of tables to summarize the analysis of empirical data

Actor	Contextual factor	Contingency variable	Current adaptation	Challenges
Top-level managers	• Contextual factor A	• Contingency variable A1 • Contingency variable A2		
	• Contextual factor B	• Contingency variable B1		
Employees who lead projects				
Operational employees +				
Operational employees				

Development of change strategy

In the phase of development of change strategy, it is apparent that in STA this is an activity mostly involving a top-down perspective, meaning only top-level managers are involved. The foundation of this phase is guided by top-down methods to drive change within the organization. Both the STA´s project model and their change management framework are based on a planned, top-down, approach to change. Top-level managers are involved in development of change strategies mainly in the role of sponsor or as a participant in the steering group for projects. Top-level managers contribute to the decision of change strategy with perspectives mainly related to planning the implementation, for example: managing dependencies between projects to ensure that implementations do not collide, that there are plans for information and training those affected by the change, that the plan for implementation include pilots to test changed working methods and systems on a smaller scale before full-scale implementation and to balance the need for change with availability of necessary resources. Although the organization is guided by this top-down perspective, it is not always clear to the top-level managers themselves what their role includes in change processes. This is illustrated by top-level managers below:

> We need to get commitment from the organization, a cross-functional steering group could be needed. It needs to be clarified what it means to be a sponsor and participate in a steering group. You should not be a passive representative, but you should actively ensure that the needs of your business area or department are taken care of. (TM6)

> It is not appropriate to implement a change with a new IT system at the same time as new infrastructure is to be put into use. In the middle of the holiday period, it is also not appropriate to introduce changes. You need to ensure that the employees are trained before implementing the change. You can choose to implement changes in stages, as pilots. (TM1)
>
> We have staffing challenges. This means that we are quite stressed in the situation and people may ask for a change and want a change, but then we don't have the resources to drive the change. Which means that there will be some kind of catch 22. We want a change, but we don't have time for the change because we don't have the resources and capacity to do it. (TM3)

This shows that top-level managers identify that the contextual factor *organizational structures* influence the development of change strategy, see Table 3. The overall structures in the project model and framework for change management are not perceived to be adaptable (and therefore contingency variables) to the specific change process (meaning that the structures offered by the models and frameworks are mandatory), nor is the fact that the operational activities are conducted through shift work. To have access to the necessary resources in the long term, initiatives are underway in the organization to create stable staffing. However, for the specific change this is a factor that cannot be influenced and is thus a contingency variable. The behavioural implications highlight current context adaptation and challenges. What is adapted is that steering groups can be staffed with relevant participants, that change processes are adapted to the operational activities by planning phased implementations, scheduling between projects and to balance the need for change with availability of necessary resources, operational staff. Remaining challenges that top-level managers perceive are clarity regarding roles and responsibilities in steering groups and manage shortage of operational staff.

Table 3. Development of change strategy

Actor	Contextual factor	Contingency variable	Current adaptation	Challenges
Top-level managers	• Organizational structures	• Structures in project model and change management framework	• Steering groups with relevant participants • Phased implementations • Scheduling between projects	• Roles and responsibilities in steering groups
		• Operational activities with shift work		• Availability of necessary resources, operational staff
		• Availability of necessary resources, operational staff	• Balance need for change with availability of necessary resources, operational staff	• Balance need for change with availability of necessary resources, operational staff

Prepare

During the first phase of the change process, prepare, focus is on communication and dealing with potential concerns about the change to create change readiness. Top-level managers acknowledge that it is important to be aware of the potential concerns of operational employees at this stage. Furthermore, it is perceived as a challenge that it is not possible to gather the entire staff at the same time to inform about changes, due to operational activities that take place around the clock. Although there is a focus on communication, the top managers do not seem to have the solution for how it can be adapted based on the operational activities as they perceive communication as challenging. This is illustrated by a top-level manager below:

> It is important to capture the operational employees' feeling of insecurity, which can consist of many different factors. It is much easier to gather the entire staff and say that now we are going to implement a change, you will get training, you will get to test new working methods and systems. But this is very difficult in an operational business that is ongoing around the clock. (TM3)

Employees who lead projects identify that it is important to communicate about the upcoming change to create a shared vision of what is to be achieved and thereby set expectations among the operative employees. Furthermore, planning of the implementation starts by clarifying who is responsible for what and which activities need to be done. These plans become increasingly detailed over time. The employees who lead projects also acknowledge the operational employees at traffic control centres as recipients of the change, which has its basis in the distribution of responsibilities in the project model and change management framework used for change initiatives. Employees who lead projects have responsibility up to a certain stage and then hands over to recipients which are traffic control centres and asset management. Even if employees who lead projects focus on communication, the purpose of communication seems to be about clarifying boundaries and expectations rather than creating involvement. This is illustrated by three employees who lead projects below:

> I think that with our communication being so extensive, we should have some help to reach out. I miss that, some type of platform or system to support collaboration and involvement. (PL2)

> I think it is my position to communicate on an overall level in this phase. It's about managing expectations and keeping the communication going. (PL3)

> I think that the change starts the same day as the project starts. You start talking about what is going to happen and you get a common picture through dialogue. Then you make plans that become more and more detailed over time. In the project, we used RACI (responsibility assignment matrix) to clarify to the receiving organization what the expectations are. (PL5)

Operational employees with increased opportunity to participate in changes (OE+) observe that changes are decided and driven top-down, which can be perceived as the need for change not stemming from the operational activities. During the prepare phase, it is perceived as important by OE+ that they are given the opportunity and conditions to train their colleagues before the change implementation. These employees participate in risk analyses carried out by the employees who lead projects. Although communication and involvement are important in this phase, employees with increased opportunities to participate in changes perceive that their involvement is not sufficient and that they often need to request additional information. This is illustrated by three OE+ below:

> I perceive my role is rather insignificant in this phase. Changes are decided higher up in the organization before you even know if resources are available. A risk analysis is carried out. (OE+1)

> I perceive that we are missed in this phase. We should be more involved. We should be able to give opinions and be able to participate and influence. (OE+2)

> We sometimes receive information beforehand, meaning me and my training colleagues. Then it becomes our role to teach what we have been briefed on or just read about. I perceive that I need to seek additional information because my colleagues come and ask me about how the change will affect them. (OE+3)

Operational employees identify that communication and participation are important in this phase, however, communication is often in the form of information and the lack of availability of personnel resources makes it difficult for operational employees to be involved. Although communication is important, operative employees feel that they only receive information at this stage. This is illustrated by an operational employee below:

> For me, it is important that we (operational employees) receive information that something is to be changed, or that something is to be introduced. I think we need suitable information. We often receive the information by email. (OE3)

Table 4 summarizes the prepare phase. Top-level managers identify *organizational structures* and *values and needs of individuals* as contextual factors that influence at this phase. The mission of the organization is providing traffic management, meaning the operational activities with shift work is a structure that top-level managers cannot change hence it is a contingency variable. The current adaptation consists of communication and leadership to respond to

concerns of operative employees. The perceived challenges consist of the issue that it is not possible to gather, and inform, all operative personnel at the same time. Employees who lead change identify the context factors *communication* and *plan for implementation and monitoring of change* to influence at this stage. Like top-level managers, employees who lead projects cannot alter the fact that the operation is an operational activity with shift work. At this stage, employees who lead projects perceive goals, and vision for the project and "rules of the game" regarding structures in the organization are not adaptable. What is adapted, however, is communication about goals and vision to manage expectations of the change, and that employees who lead projects also work actively to clarify roles and responsibilities in the change work. Perceived difficulties for employees who lead projects are finding ways to communicate and involve operational employees. Employees with OE+ identify that the contextual factors *communication* and *involvement* influence at this stage. When it comes to goals and vision for projects, they are perceived as fixed by these employees. OE+ are responsible for training their colleagues and at this stage they request information and training materials to understand the impact on roles, working methods and IT systems. Furthermore, these employees participate in risk analyses. The perceived challenges are about the opportunity to participate in change and contribute with own expertise. Operational employees identify that the contextual factors *availability of necessary resources* and *communication* influence at this stage. The availability of operational personnel is identified as a factor that cannot be influenced; hence it is contingency variable. Operational employees do not perceive that they can influence the communication about changes. Information is mostly received by e-mail. Like OE+ in changes, operational employees experience challenges related to the involvement.

Table 4. Prepare

Actor	Contextual factor	Contingency variable	Current adaptation	Challenges
Top-level managers	• Organizational structures	• Operational activities with shift work		• Communication and involvement as it is not possible to gather all employees
	• Values and needs of individuals		• Communication and leadership to manage concerns of operational employees	• Communication and involvement as it is not possible to gather all employees
Employees who lead projects	• Communication	• Operational activities with shift work • Goals and vision of the project	• Communication about vision and goal to handle expectations	• Find ways to communicate and involve operational employees
	• Plan for implementation and monitoring of change	• Areas of responsibility of organizational parts and actors	• Clarifying responsibilities of organizational parts and actors	
Operational employees +	• Communication	• Goals and vision for projects	• Request information and training materials to understand the impact of the change on role	• Anticipate the impact of changes on operational activities
	• Involvement		• Participation in risk analyses	• Participate and contribute with expertise
Operational employees	• Availability of necessary resources	• Availability of necessary resources		• Involvement
	• Communication	• Communication	• Receive information mostly via email	• Be involved instead of getting information

Implement

During the second phase, implement, tensions arise between maintaining operational delivery and having available personnel resources to implement changes. The top-level managers acknowledge that their role is to strengthen and support the change in this phase without being involved in the actual implementation. Perceived challenges are, among other things, that planning is required, and it takes a long time to train operative employees before the implementation because they work in shifts and the training needs to fit into their schedule while the operative work needs to continue undisturbed. This is illustrated by top-level managers below:

> I contribute by strengthening, supporting, and clarifying the change, but not working with the implement-phase. I perceive this phase as more difficult as it depends a lot on the change management during implementation. (TM1)

> We cannot shut down the business to implement an improvement or a change. The railway needs to operate all year round, around the clock. There are many aspects to consider in this phase, for example safety, employees and change management. I think you must be extra careful with these aspects when implementing changes in an operational activity. (TM6)

> To train all operative employees it requires many days and weeks, as planning is required to fit it into their schedule. (TM3)

In this phase, employees who lead projects work further to clarify who is responsible for what, carry out tests of new IT systems and working routines, and then implementation of the change. There is an awareness that unexpected issues can arise and that the better prepared you are for this in the change project, the easier it is to handle these situations. In the implement-phase, when the project result is to be implemented, an interface appears where the employees who lead projects hands over to the first line managers of the traffic control centres to implement the change. This is illustrated by employees who lead projects below:

> Somewhere along the way there is a shift in who is most likely to do things in this phase. It goes from being the project manager to being the first line manager. You make plans and agree on how it is to be done and are clear about the ownership. A deployment that is well planned and well tested beforehand should be undramatic. Of course, there are many things that happen and there can be many things that need to be addressed. Then things happen and then you must fend them. (PL5)

OE+ feels, despite their increased opportunity to participate, that this involvement is not sufficient to make use of their expertise on operational activities that is available. Although the change affects the operational employees, their operational knowledge is perceived not to be used to a sufficient extent in changes projects. This is illustrated by an OE+ below:

> It is through me and my colleagues' experience of what happens in the operational activities that we can contribute with feedback to projects. This is why it is so important to involve operational personnel in a change that will affect them because we have the experience from the operational activities. You don't know how a new process or program will work until you've tried it operationally. You can carry out risk analyses and try to come up with possible scenarios, but you can assume that there will be scenarios happening that cannot be imagined. (OE+1)

Since operative employees in the initial phase mostly received information via e-mail, and were not further involved, they feel that the change now coming is fixed and that they cannot influence developed IT systems and working routines. This is illustrated by operative employees below:

> I am not involved in the development, we get IT systems and changed working routines when they are already developed. It may happen that a colleague of mine is involved in developing, for example, a new IT system, but usually this is not the case. We (the operative employees) will get it when it is already finished. (OE1)

Table 5 summarizes the implement phase. The top-level managers identify contextual factors *communication*, *leadership* and *organizational structures* to be influential in this phase. The fact that the business is operational, and that operational delivery must be maintained during this phase are seen as contingency variables that are not adaptable. Current adaptations are mainly consisting of planning (for which the project is responsible) to ensure training for operative employees before implementation. Perceived challenges include human aspects of change, and that the implementation of changes takes place in the operational activities that must be sustained. Employees who lead projects identify the contextual factors *plan for implementation and monitoring of change* and *organizational structures* to be influential at this stage. Even in this phase, organizational structures for the areas of responsibility of organizational parts and actors are perceived as not adaptable. Current adaptation consists of clarifying the responsibilities of organizational parts and actors and comprehensive planning for implementation of change. Challenges experienced include managing issues that arise during the implementation and handovers between organizational units, to the operational activities in this phase. OE+ identify that the contextual factors *involvement* and *plan for implementation and monitoring of change* to influence at this phase. Furthermore, they perceive they cannot influence how they are involved; it is managed by the project. Adaptations made at this phase is implementation of training for colleagues as well as participation in risk analyses and risk mitigation. Perceived challenges consist of the difficulty of anticipating the impact of changes on operational activities before the change has been tested in real life environment. Operative

employees identifies that the contextual factors *involvement* and *knowledge, experience, and learning* influence at this phase. How operational employees are involved, and the development of IT systems is perceived as not adaptable. In this phase, operative employees participate in training before implementing the change.

Table 5. Implement

Actor	Contextual factor	Contingency variable	Current adaptation	Challenges
Top-level managers	• Communication			
	• Leadership			• Change management
	• Organizational structures	• Operational activities with shift work • Maintain operational delivery	• Plan for implementation and monitoring of change	• Implementation of changes in operational activities that must be sustained
Employees who lead projects	• Plan for implementation and monitoring of change		• Plan for implementation	• Manage issues that arise during to implementation
	• Organizational structures	• Areas of responsibility of organizational parts and actors	• Clarifying the responsibilities of organizational parts and actors • Handovers between organizational parts	• Handovers between organizational parts
Operational employees +	• Involvement	• How they are involved	• Participation in risk analyses and risk mitigation	• Participate and contribute with expertise
	• Plan for implementation and monitoring of change		• Conducts training for colleagues	
Operational employees	• Involvement	• How they are involved		• Participate and contribute with expertise
	• Knowledge, experience, and learning		• Training	

Reinforce

In the phase of institutionalization (called reinforce by STA) there seems to be a shift in who is most active in the change, as the operational employees at this stage provide feedback while the employees leading changes plan for the end of the project and the handover to asset management. Top-level managers acknowledge that their role is to support the change in this phase and follow up if adjustments need to be made to achieve the expected benefits of the change. This is illustrated by top-level managers below:

> I think we must be there all the time and follow and support if more information or if adjustments are needed. (TM1)
>
> In this phase, I want to follow up and really see that I get the benefit that was intended with the change. (TM3)

Employees who lead projects perceive at this phase that their assignment is nearing the end and that it is time to hand over to the asset management where their task is to manage the new IT system (or the new way of working) and thus take care of the backlog from the project and continue with continuous improvements. Although this is a phase to institutionalize the change, the focus for employees who lead change is to identify remaining activities to manage and finish the project. This is illustrated by employees who lead projects below:

> The projects are usually finished by then. I find that sometimes I get information in this phase just because they know who you are, but you are not that involved anymore. (PL4)
>
> There is always something that comes up, something that needs to be adjusted. As a project manager, I am on stand-by, you stay, but need to let go quite soon. It's not until you let go that those last things happen. Then you can capture the last residual activities that are handed over to the asset management to handle. (PL3)

OE+ recognize that how much effort is needed in this phase depends on previous phases of the change process. These employees are often a channel for conveying feedback regarding the change implementation. This is illustrated by an OE+ below:

> I perceive that if operational personnel have received training and if the implementation works out well, then the need for reinforcements in this phase is little. If, on the other hand, it is lacking, major efforts may be needed in this phase. (OE+1)

Operational employees acknowledge that they are involved in this phase as they provide feedback on the implemented change. The operative employees' expectation is that their feedback will lead to adjustments and further development, but this is perceived to happen too slowly. This is illustrated by an Operational employee below:

> I perceive that there is an ambition to follow up implementations. I perceive that my colleagues, or our group, are quite quick and willing to give feedback if we notice something that we don't understand or don't feel is working well. We bring it up at our functional meetings. (OE5)

Table 6 summarizes the reinforce phase. Top-level managers identify the contextual factors *leadership* and *motive and extent of the change* to influence institutionalization. Current adaptation consists of following up: partly to see if adjustments are needed but also to see that expected benefits are achieved. Employees who lead projects identify the contextual factors *plan for implementation and monitoring of change* and *organizational structures* to be influential at this phase. Organizational structures for the areas of responsibility of organizational parts and actors are identified as not adaptable since the mandate to decide on changes to these structures is at a higher organizational level. Current adaptation consists of monitoring the change implementation and the process of handing over the project to asset management. These handovers between organizational units, at this phase to asset management, are experienced as challenging. OE+ identify the contextual factors *involvement* and *team relationships* to be influential at this phase. How follow-up of the implementation is organized by the project is perceived to be not adaptable. The current adaptation consists of conducting additional training if needed and being the channel to provide feedback to the project on the implemented change to draw attention to whether adjustments need to be made. A perceived challenge is where feedback should be addressed when projects end, and asset management takes over the further development. Operational employees identify the contextual factor *involvement* to be influential at this phase. Operational employees perceive that how the follow-up of the implementation is organized by the project is not adaptable. The current adaptation consists of giving feedback on the implemented change. This is often done within the immediate team and conveyed to the project via OE+. A challenge is when the given feedback is not perceived to be handled within a short time.

Table 6. Reinforce

Actor	Contextual factor	Contingency variable	Current adaptation	Challenges
Top-level managers	• Leadership		• Follow up to see if adjustments are needed	
	• Motive and extent of the change		• Follow-up to see that expected benefits are achieved	
Employees who lead projects	• Plan for implementation and monitoring of change		• Handle issues that involve adjusting or strengthening the implementation	
	• Organizational structures	• Areas of responsibility of organizational units and actors	• Hand over to asset management	• Handovers between organizational units
Operational employees +	• Involvement	• How follow-up of the implementation is organized	• Give feedback	• Where feedback should be addressed
	• Team relationships		• Additional training if needed	
Operational employees	• Involvement	• How follow-up of the implementation is organized	• Give feedback	• Time perspective on handling feedback

Behavioural implications

In this section, behavioural implications such as identified challenges and two identified contradictory behavioural patterns will be presented. When summarizing the context adaptation challenges during the change phases (see Table 7), it becomes clear that implementation of changes in operational activities that must be sustained is a challenge. Even if it is only top-level managers who point this out as a challenge, it is still clear that employees see this as a natural part of their context, so obvious that it is not pointed out.

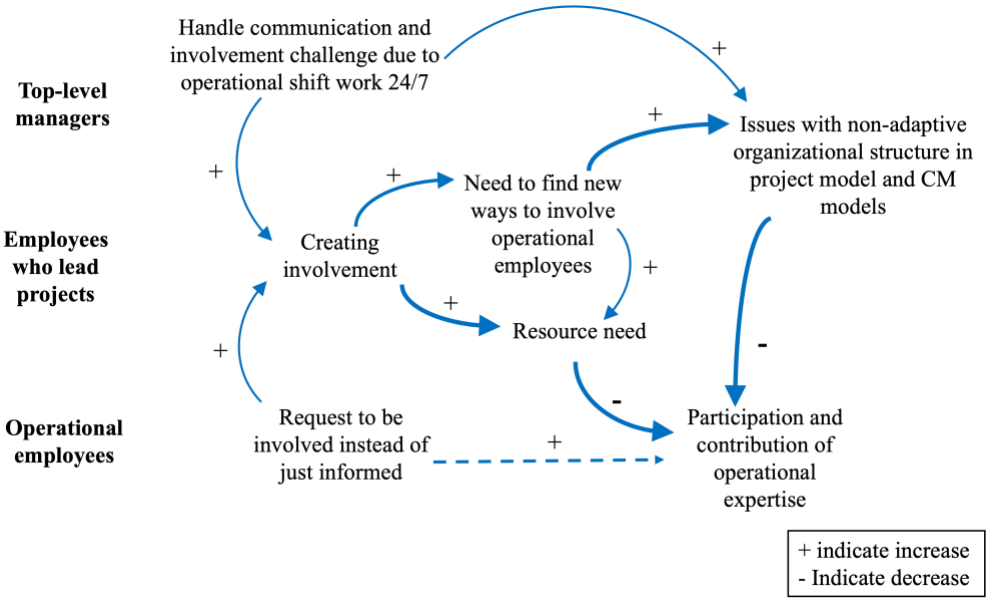
Table 7. Challenges related to change process phases and actors

Actor	Development of change strategy	Prepare	Implement	Reinforce
Top-level managers	• Roles and responsibilities in steering groups • Availability of necessary resources, operational staff • Balance need for change with availability of necessary resources, operational staff	• Communication and involvement as it is not possible to gather all employees	• Change management • Implementation of changes in operational activities that must be sustained	
Employees who lead projects		• Find ways to communicate and involve operational employees	• Manage issues that arise during to implementation • Handovers between organizational units	• Handovers between organizational units
Operational employees +		• Anticipate the impact of changes on operational activities • Participate and contribute with expertise	• Participate and contribute with expertise	• Where feedback should be addressed
Operational employees		• Involvement • Be involved instead of getting information	• Participate and contribute with expertise	• Time perspective on handling feedback

The first contradictory behavioural pattern consists of managers and employees agreeing on the important contingency variable that sufficient available necessary resources (operational staff) are lacking (see Table 3 and Table 4). Top-level managers further emphasize the difficulty of balancing the need for change with availability of necessary resources (operational staff) (see Table 7). This contradictory behavioural pattern can be equated with what one of the top managers perceives as a 'catch 22' - change is needed, yet the resources to implement it are insufficient. Despite this dilemma, the perceived urgency of change appears to outweigh concerns about resource limitations when decisions regarding change are made.

The second contradictory behavioural pattern concerns communication and involvement (including participation and contribute with expertise) (see Table 7), which is considered as challenging by all actors. The contradictory behavioural pattern, see Figure 4, is based on the double-sided request on involvement and participation, counter-acted by structural restrictions and lack of resources. Employees that lead projects have identified that new ways of creating involvement of operational staff are needed, which can be interpreted as current organizational structures and working methods (such as STA's project model and framework for change management) are not being sufficiently adapted to the context of operational activities. Since organizational structures are perceived as uninfluenceable by top-level managers and employees that lead projects, no contextual adaptation actions are not taken, which results in a lack of involvement of operational employees.

Figure 4. Illustration of contradictory behavioural pattern in the preparation phase



Discussion

This section discusses the findings of the study related to how context adaptation is enacted in change processes, including behavioural implications, offering insights that may inform and inspire future research.

To begin with, the study identified several expected findings related to the top-down, planned approach to change that characterized the studied change process. The findings support some of the established critiques of the planned approach to organizational change - specifically, that such approaches can lead to an overreliance on top management (Todnem By, 2005). In this case, top-level managers found it challenging to balance the need for change with available resources and to provide appropriate structure. The planned approach to change is consistent with previous literature within traffic management when implementing new technologies and working methods (Lofquist and Isaksen, 2019; Long *et al.*, 2012; Stathis *et al.*, 2022). The findings of this study also confirm previous research on ICT implementation in public administration in terms of that these change initiatives are challenging (Li, 2020; Molin and Norrman Brandt, 2023) and that public administrations adopt project management logics to achieve organizational change (Bonomi Savignon and Costumato, 2024).

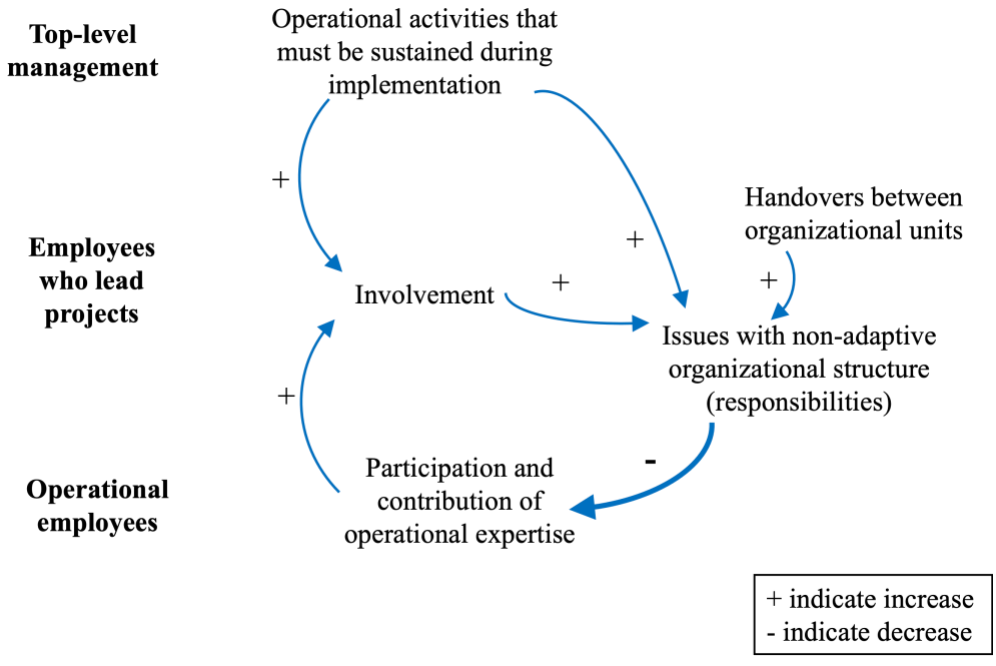
Next, each studied phase of change will be discussed, starting with development of change strategy. In this phase top-level managers identify three contingency variables that require adaptation (see Table 2): (1) structures in project model and change management framework, (2) operational activities with shift work, and (3) lack of availability of necessary resources (lack of operational staff). One of the adaptations that top-level managers do, although it is perceived as a challenge, is to balance the need for change with availability of necessary resources. The contingency approach offers a useful lens for understanding why this balancing act gives rise to the first contradictory behavioural pattern. Although top-level managers collect, interpret, and process information that confirms the lack of resources, they tend to simplify decision-making by opting for satisfactory solutions such as prioritizing the need for change rather than the optimize balance between change and resources (Turkulainen, 2022). This lack of context adaptation affects the three subsequent phases of the change process and can be interpreted as management shaping the process and thus the employees' ability to be involved in the change process (Seijts and Roberts, 2011).

During the prepare phase, communication and involvement (including participation and contribute with expertise) is considered challenging by all actors (see Table 7), which is highlighted by the second contradictory behavioural pattern. Operational employees+ identify communication and involvement as contextual factors, meaning communication and

involvement is perceived as influenceable. Operational employees identify communication as a contingency variable which is defined by other actors. This difference in perception can explain why Operational employees+ are more positive to changes while Operational employees are more negative. Operational employees+ are included in early communication about the change (Khaw *et al.*, 2023; Seijts and Roberts, 2011) and has the task of being involved (Seijts and Roberts, 2011) while Operational employees form negative perceptions since they feel to be insufficiently informed (Jones *et al.*, 2008), and miss out on the critical question: 'What do I gain from this change?' (Hameed *et al.*, 2019).

In the implementation phase, differences in top-level managers' and operational employees' perceptions of challenges are highlighted (see Table 7). While top-level managers focus on maintaining operational delivery, operational employees' request to be involved and contribute with their expertise. In addition, employees who leads projects focus on organizational structures that result in a shift in responsibility since implementation should be handed over to asset-management. This shift between organizational units, decreases their focus on creating involvement of operational employees in this phase. Also here, issues with the non-adaptive organizational structure and related responsibility gaps contradicts operational participation. This can be illustrated as a behavioural mismatch, or vicious cycle (Woiceshyn *et al.*, 2020), where the change implementation is not done together with operational staff but rather through management directing (Todnem By, 2005), enhancing the management driven planned approach to change, see Figure 5.

Figure 5. Illustration of behavioural mismatch in the implement phase



The last phase, reinforce, illustrates (see Table 6), what also can be seen in the other phases, that the higher-level roles create conditions for the lower-level roles. For example, operative employees identify how the follow-up of implementation is organized as a contingency variable as they cannot influence it. Instead of the operative employees, it is the employees who lead projects that are responsible for the follow-up of implementation, and it is theirs to adapt. Correspondingly, goals and vision of projects is a contingency variable in the prepare phase for employees who lead projects and operational employees when these were decided in the previous phase by top-level managers. Furthermore, top managers and employees who lead projects have greater opportunities to make adaptations which then dictate the conditions for adaptation actors further down the organization, the operational employees. This analytical

finding highlights the value of applying a contingency approach to facilitate the analysis of both processes and structures, as well as their behavioural implications. While public administration literature emphasizes that the management-level can shape both the context and the process of organizational change (Hameed *et al.*, 2019; Khaw *et al.*, 2023; Seijts and Roberts, 2011). This study expands knowledge by illustrating that context adaptation is enacted continuously throughout the change process by both managers and employees, and that higher-level roles create conditions for lower-level roles.

Concluding Remarks

This paper contributes to public administration, specifically change management within traffic management, an area of research that benefits society by ensuring functioning travel and transportation. This is done by adopting a contingency approach to answer the research question: *How is context adaptation enacted in change processes and what are the behavioural implications?*

This study shows that managers and employees continuously adapt change processes to the context, building on the notion that different contextual factors can be important to different actors at different phases during a change initiative (Balthu and Clegg, 2021). In the setting of change processes in public traffic management, contingency variables were found both at the top-level manager level and at the employee level of which the most prominent contingency variables are operational activities with shift work (24/7), maintaining operational delivery during change implementation, limited availability of necessary resources (operational staff) and factors related to communication and involvement. This study further shows that actors higher up in the organization have greater opportunities for context adaptation but at the same time dictate the conditions for actors further down the organization highlighting that context adaptation are conducted continuously by managers' and employees' actions.

This study contributes with three main theoretical implications. First, this study contributes by applying a contingency approach to contextualize the enactment of context adaptation and its behavioural implications through the phases of change in a public administration (Hameed *et al.*, 2019; Haug *et al.*, 2024; Turkulainen, 2022). Second, this study contributes by demonstrating both contextual factors that the actors identify as adaptable (contextual factors, such as organizational structures, values and needs of individuals, communication, plan for implementation and monitoring of change, involvement, leadership, knowledge experience and learning, team relationships, motive and extent of change) but also which factors the actors identify as not adaptable (contingency variables, such as structures in project model and change management framework, goals and visions for projects, availability of necessary resources, communication, operational activities with shift work, maintain operational delivery, how operative employees are involved , areas of responsibility of organizational units, how follow-up of the implementation is organized). Third, this study contributes by illustrating that context adaptation takes place at several levels in the organization by different actors. Some contextual adaptation led to contradictory behavioural patterns and mismatches that this study highlights. Furthermore, higher-level roles create conditions for lower-level roles, in regards of context adaptation.

Our study contributes with three managerial implications: (1) context adaptation is conducted by managers and employees continuously throughout the change process, (2) managers and employees acknowledge organizational structures as strong and not adaptable. Since higher-level role creates conditions for lower-level roles, management need to be aware of their crucial role in creating conditions for contextual adaptation for employees, (3) contradictory behavioural patterns and mismatches can arise during context adaptation. For example, in regards of balancing the need for change and the necessary available resources which can have consequences regarding lack of involvement.

Like all studies, this study has limitations. First, the study is carried out at an organization that adopts a top-down approach to change, which limits the possibility of conclusions for other approaches to change. Secondly, the study includes interviews with top-level managers, employees who lead projects and employees in the operational activities, while managers at

other levels and employees with other roles are not included. Thirdly, this study is based on the interpretation of interviews in a specific context, which reduces the possibility of generalizable conclusions.

Future research is proposed to include managers at different organizational levels and employees in diverse roles in various contexts in organizations that adopt various approaches to change. Future research is suggested to expand the scope and compare e.g. Sweden with other countries, public administration with private sector and traffic management with other operational activities. To increase knowledge on how the context adaptation is perceived by different actors, future research is suggested to adopt different theoretical perspectives, for example interaction, critical discourse analysis or institutional theory and focus on the identified contradictory behavioural patterns. Since involvement was identified as an important contextual factor, future research is suggested to focus on studying levels of involvement needed for different types of change in operational activities. Finally, future research is suggested that focuses on how evaluations and learning from previous changes contribute to adaptation of future change initiatives.

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Appendix

Appendix 1. Questions in interview guide

Question nr	Questions
1	What is your role and position in the operations at Business area Traffic managament?
2	How long have you been working at the Swedish Transport Administration?
3	How do you view your role in change processes affecting the operational activities at Business area Traffic managament? a. What mandates do you have? b. What responsibilities do you have? c. What motivates you?
4	What is your experience with previous change processes affecting the operational activities at Business area Traffic managament?
5	At which stage(s) are you involved in change processes affecting the operational activities at Business area Traffic managament?
6	Do you feel you have the opportunity to be involved to the extent needed? Yes – How? No – What do you think is the reason?
7	Which roles do you interact with during change processes affecting the operational activities at Business area Traffic managament? a. What is the purpose of the interaction? b. How do you interact with them? c. What do you interact with them about?
8	How would you describe the context you operate within at Business area Traffic managament?
9	How do you perceive the context affects change processes, such as projects affecting the operational activities at Business area Traffic managament? a. What in the context complicates change processes? b. What in the context facilitates change processes? c. What in the context is "neutral" in change processes?
10	Do you perceive that the context's impact on change processes varies in the three phases: unfreeze, move, refreeze? a. Yes – How? Enablers or obstacles? What are the consequences if this is not managed? What would need to be done to manage the consequences? b. No – What do you think is the reason?
11	Do you perceive that change processes are adapted based on the context in the operational activities? a. Yes – How? b. No – What obstacles exist?
12	How would you define change management?
13	How do you perceive change management within Business area Traffic managament? a. What works well? b. What works less well?
14	Do you perceive that those leading changes (e.g., project managers, managers, and change agents) at Business area Traffic managament are aware of the context and adapt the change process accordingly? a. Yes – How? b. No – What do you think is the reason? What are the consequences?
15	Is there anything regarding your experience of the context at Business area Traffic managament during change processes that I have not asked about? a. Yes – What? b. No