IT IMPLEMENTATION SUCCESS IN DUTCH MUNICIPALITIES GEMEENTE MEDEMBLIK – A CASE STUDY

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ABSTRACT

Digitalization has become increasingly important in both the private and public sectors. This thesis focuses on the public sector and its research field. The specific case researched is the municipality of Medemblik. This is a fusion municipality with a recent organizational restructure in 2023. This study aims to investigate the motivational aspects of employees for working with digitalization projects, building further upon the Technology Acceptance Model by Davis (1985). The research question for this study is: How do organizational and implementation variables influence the adoption of digital technology in a Dutch municipality organization in 2024? This research uses a mix of semi-structured interviews, the Multi-Leadership Questionnaire, and documentation, 26 employees were interviewed. Afterward, the interviews were transcribed and processed via the Gioia methodology (Gioia et al., 2013). In doing so, aspects like leadership, project management, training and support, organizational culture, perceived efficiency, and employee involvement were researched. This research suggests that phasing training methods throughout the implementation stages of a newly introduced digital technology achieves the highest user acceptance. It indicates that most users find the perceived efficiency gain and perceived value to be the driving factors for perceiving the system as more useful. Additionally, it suggests that employee involvement in the selection is beneficial in forming a positive attitude toward the system among users. However, a strategy for dealing with reactions that do not overlap with management decisions is lacking within the researched case. In this scenario, there tends to be much skepticism about using that specific system, and employee involvement can be a barrier to attitude towards using the system. Suggesting that if employees perceive their involvement as effective, they are more likely to have a positive attitude toward the system. Furthermore, project methodologies, in general, seem to be limited in use within the municipality, and only long planning is used for project management. The municipality has been advised to structure this process. The municipality is overall advised to form a clear vision and structure for dealing with these projects by defining musts in the project documentation, methodology, and the division of roles within digital technology projects.

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1. INTRODUCTION

Digitalization constantly reshapes how we analyze and process information (*The World*, 2022). This is not exclusive to private sector companies since digitalization involves society, and the public sector is influenced by digitalization. There are many definitions for digitalization. However, we define it as changing physical processes into digital ones (*The World*, 2022). Companies use these digital technologies for various reasons, including systems, artificial intelligence, blockchain, and virtual reality. Digital technologies support organizations in different ways. Some technologies aim to introduce or improve features such as sales, finances, purchases, inventory management, archiving, project management, and many more (Bartram, 2023). Some new digital technologies only affect a sub-process of an organization, while others directly impact the main process. For this research, only technologies that directly impact the main process within the organization will be analyzed.

When a company switches to a digital solution, certain challenges arise. During the beginning stages of digitalization, Davis (1985) suggested a model that proposed important variables for implementing a new system within an organization. The model was called the Technology Acceptance Model, published in 1985 (Davis, 1985). Since 1985, this model has received many iterations and was specified for certain industries (Limmen, 2024). However, while many unique industries have been researching and adding to the literature surrounding the TAM model, specific models for certain industries are still missing. Before Davis (1985) developed the original Technology Acceptance Model, Hill et al. (1977) released their research in which they developed the Theory of Reasoned Action. This theory states that the variable's beliefs, attitudes, intentions, and behaviors have a key role in a potential user's decision to actually use the technology.

My previous research looked at technology adoption for a highly dynamic production environment of the lifting industry (Limmen, 2024). However, more dynamic environments are not directly represented by the original TAM model or its revisions. Still, the Technology Acceptance Model is generally tested, used, and improved within both the public and private domains. Nevertheless, reasons for successfully adopting digital technology differ between public and private sector organizations. Since both sectors have different values that motivate their employees to work with the system, as described by Harper and Utley (2001). Therefore, the implementation success of these systems also differs in the public domain. This is logical because some fundamental differences exist with the private domain Johnson (2020). Following the trend of the iterations of technology acceptance models, more tailored models for specific domains and settings are suggested. Since the original Technology Acceptance Model is widely usable, it does not show certain unique variables in these specific settings. Since digitalization is a reoccurring theme, even in small municipalities in the Netherlands, it becomes evident that they would benefit from a tailored model considering their specific scenario.

The public domain is interesting to research because it is a dynamic organization like the one from Limmen (2024), but they have significantly different societal goals. Since the private domain, in general, aims to generate as much profit as possible, the public domain focuses mostly on maintaining a high service level for its target audience's users (or inhabitants). The reason for digitalization also reflects this difference. For example, in the public domain, digitalization is often aimed at enhancing service delivery within the municipality and improving transparency. This differs from the previously mentioned goals of the private domain. Johnson (2020) compared employees in the public and private domain, which is interesting since the TAM model is user-based Davis (1985). According to Johnson (2020), employees from the

public domain have a higher degree of public service motivation than employees from the private domain. Furthermore, Johnson (2020) states that market-driven goals less influence the employees from the public domain and focus more on society. While public organizations focus on these social values, these are generally difficult to measure and can change over time, for example, when new technology or political situations arise. Moreover, motivational factors were reviewed in a study by Wright (2001). In this study, Wright (2001) examines motivational factors for working in public organizations compared to private organizations. He notes that whereas private sector motivation has been widely researched, the motivational aspect behind public service remains relatively less explored since most models and frameworks are based around the same framework as private organizations (Wright, 2001, as cited in Perry and Porter, 1982). Also, he suggests that workers within public sectors may be driven more by selfless aspects than those working under other conditions. This is opposed to employees in private sectors who mainly expect extrinsic rewards like pay and job security. Nevertheless, managers' attitudes towards rewards differ little between these two types of organizations, according to Wright's findings (2001).

Additionally, Wright (2001) also argues that a model specific to the public domain is needed. The revised conceptual model should directly speak to the unique features of public organizations and their workers. This theory must incorporate current psychological theories of work motivation to understand better what motivates public sector employees. For instance, this study suggests that altruistic motives may drive public sector motivation and satisfaction from contributing to wider society welfare, an area given less attention by private sector establishments (Wright, 2001). Wright (2001) criticizes the existing literature for heavily relying on theories that do not fully capture the specific context of the public sector. Wright (2001) recommends conducting more empirical research within the context of the public sector. Additionally, Wright (2001) highlights the gap in understanding how motivational factors differ in public settings. Wright advocates for empirical studies to explore these motivational differences across sectors, considering the procedural constraints and goal content specific to public sector roles (Wright, 2001).

Johnson (2020) further states that employees in the private domain are often more active in innovation than in the public domain. Combining these data suggests that different employees work in the public sector instead of the private sector. It would be very interesting to see the differences between their motivations for using a new system within their organization. Organizations have different reasons for digitalizing. Meanwhile, private sector companies often aim to become more efficient. The public sector often does not just want to improve its efficiency; its main motivation is to improve its public services. For these reasons, it is interesting to see which factors play a role in implementing a digital technology system in a small municipality. This research will add to the literature of implementing a system within the public domain, showing important variables that influence this industry.

The Technology Acceptance Model has been a model central to digital technology adoption since its original release in 1985 (Davis, 1985). It determined 3 factors that have an effect on actual system use, which are perceived ease of use, perceived usefulness, and attitude toward using. Of course, after the research of Davis (1985), iterations of the Technology Acceptance Model were proposed, such as the TAM2 model in 2000 by Venkatesh and Davis (2000). Being the first longitudinal study of various stages of the adoption of the new digital technology, Venkatesh and Davis (2000). This research stated that apart from the perceived usefulness and perceived ease of use of the system, there are social influences that have an effect on

technology acceptance. In the research of Venkatesh et al. (2003), also specific variables about the potential user have been included in the model, such as age, gender and experience. Venkatesh et al. (2003) also combined other frameworks in their Unified Theory and Use of Technology, providing a broad and generalizable model. Since 2003 the model has been used and iterated upon many times. Often providing so-called "Extended Technology Acceptance Models," or ETAM in short. Researchers like Abdullah and Ward (2016) propose these extended models by focusing on specific technologies, such as e-learning. Providing tailored models to specific technologies. There are also ETAM models proposed for specific industries, such as Alhashmi et al. (2019), which focus specifically on the healthcare sector. Looking at these "TAM" studies over time, we can see that in the beginning, a generalizable model was the main aim of most research. More recently, the research field regarding technology acceptance started to focus on more tailored or "extended" approaches.

1.1 LITERATURE OVERVIEW

Organizations encounter difficulties in successfully deploying digital technologies as the need for digital transformation grows (Bughin et al., 2018; Margiono 2020). Although there are several causes for this difficulty, it frequently results from a lack of knowledge about digitalization in general and the incapacity of an organization to modify its procedures to take advantage of new technology (Bughin et al., 2018). This study investigates the following elements that could impact this situation: perceived efficiency gain, leadership, training and support, performance expectancy, and system reputation. Being present in such an environment during the change when it comes to implementing technology, these elements are considered essential. Leadership involvement in digitalization is important because digital transformation is essential for firms to maintain competitiveness in today's rapidly evolving business environment (Bughin et al., 2018). Understanding how leadership affects digitalization initiatives can help organizations identify the skills and tactics needed to navigate the challenging terrain of digital transformation (Vial, 2019). By being present in such an organization during the research and accessing documents related to these digital adoptions, we can also investigate the organization of the research of Margiono (2020). Doing so will allow us to analyze the organization's digital culture in relation to the measured variables.

For comparing the private organization from Limmen (2024) to a public organization, the motivational framework insights proposed by Cope and Rainey (1992) can be used to understand the differences between these two types of organizations. For example, Cope and Rainey (1992) discuss so-called motivational techniques for work motivation among employees in the public domain. Cope and Rainey (1992) further state that people choose to work at government organizations for a different reason than private organizations. People who work for private organizations often have a motive for wanting to do challenging work and deem private organizations to have more growing possibilities in general.

Davis's (1985) research became a basis for many studies on technology adoption. After its release, the model has gone through many iterations. This study will use the original TAM model as a basis. Meaning that the first version of the TAM model is used. As mentioned, the TAM model has had many iterations with many external variables defined. However, the TAM model does not provide a specific model for every industry. Meaning that it does not allow for the specification of specific use cases. For example, a municipality that has gone through a recent organizational restructure. Another variable that has been little researched is the impact of leadership styles on digital transformations. While in a general context, this has been researched, again, the variable can potentially differ between industries. Different leadership styles can have such an impact on the TAM model. Examples of this are as transformational,

transactional, and laissez-faire. These leadership styles can bring contrasting outcomes when implementing digital transformations. Another interesting aspect is the situational leadership variable, which was also discussed by Tortorella and Fogliatto (2017). The situational leadership variable suggests that leaders should adjust their styles based on the team's competence and commitment level. Leadership can play a crucial role in the success of digital transformations, as was shown by the team leaders' importance in Limmen (2024). This makes it an interesting variable to explore. The different aspects of user training have also not been researched for every industry since different types of training might apply to different types of employees. However, equipping employees with the necessary skills and support to handle digital transformations is emphasized by the variable of training and support (Venkatesh et al., 2003).

Utilizing predefined support and training programs can assist employees in seeing the value of the new digital technologies. Having additional support accessible to assist them can resolve specialized challenges to increase their efficiency with the system (Venkatesh et al., 2003). Moreover, the accessibility and quality of the support and training can affect the user's attitude toward the system and help them see its unused functionalities. This helps show the employees the digital technology's significance and helps effectively actualize advanced changes (Bradford & Florin, 2003). According to Venkatesh et al. (2003) and their Unified Theory of Adoption and Use of Technology (UTAUT), performance expectancy can help users appreciate and utilize these unused functionalities to encourage innovation further. This variable refers to an individual's conviction that using a digital technology will improve their work processes.

There are also more recent contributions to the Technology Acceptance Model, for example, by Almulla (2021). Their research focused on adopting e-learning systems, which was not around the time of implementing the first technology acceptance model. In their research, Almulla (2021) showed that computer self-efficacy and perceived enjoyment influence perceived ease of use and the perceived attitude towards using. Another digital technology on the rise is artificial intelligence; implementing these technologies has therefore been tested as well in recent literature, for example, by Na et al. (2022). In their research, Na et al. (2022) distinguish technological, organizational, and environmental factors. The study has contributions that can be applicable even without the artificial intelligence spectrum. This shows the importance of organizational support for these changes and the organization's culture in adopting new technologies. While artificial intelligence is a recent technology, many studies regarding this technology and the Technology Acceptance Model are conducted in different branches. Another example of this is the e-commerce setting-focused research of Wang et al. (2023). In their research, the effectiveness of the original Technology Acceptance Model was tested. In doing so, Wang et al. (2023) suggested two variables to affect perceived usefulness and perceived ease of use. These include the subjective norms within an organization, the perceived social pressure behind using the technology, and trust.

In the current research field of the Technology Acceptance Model, we see that the factors from this research have been researched in both contexts outside of the Technology Acceptance Model or in different settings. The more generalizable approach of Venkatesh and Davis (2000) and Venkatesh et al. (2003) has proven to be helpful for many digital technologies and industries. However, as can be seen from the trend since the release of these models, unique variables to certain technologies or industries are not covered by these, potentially missing drivers or barriers for successful system adoption within these scenarios. The same can be said for the specific context of small public organizations like the Municipality of Medembik. While being a relatively small municipality with 46000 inhabitants (Inwoners Gemeente Medemblik, 2024), it houses more than 300 applications, many of which are currently renewed. Additionally, the municipality is dealing with a recent organizational restructuring. Therefore,

this research will explain how digital technologies are implemented in a small municipality undergoing a recent organizational restructuring. Moreover, it will suggest a TAM model with specifics of such an environment embedded to possibly implement digital technologies via high user motivation among the employees.

Furthermore, looking at previous literature, we see that the frameworks for technology adoption are used simultaneously in both the private and the public sectors (Wright, 2001). Since employees have different motivational factors for working in the private and public sectors, the importance of the variables deemed "important" could also differ based on the specific organizational conditions. Certain important variables could be missed when using the conventional technology implementation models. This may result in unfinished or uneducated implementation projects (Ashraf et al., 2010). These are reoccurring themes within the public sector, costing taxpayers money and keeping unmaintained systems live. The research discussed above gives a general comprehensive insight into utilizing these variables within the context of IT implementation. However, what variables still apply in specific scenarios like small municipalities? This is the defined research gap for this study.

1.2 RESEARCH OBJECTIVE

This research will focus on the effect of training and support, perceived efficiency, and variables specific to the organization on the perceived usefulness, perceived ease of use, and actual system use on implementing new technologies. Previous studies like the Technology Acceptance Model (TAM), Venkatesh et al. (2003), and Jarvenpaa et al. (2006) have already developed frameworks for understanding technology adoption. However, as mentioned in chapter 1.1, there remains a research gap in the specification of these models to the municipal contexts, particularly for small municipalities. While the same digital technologies can be used in both public and private sectors, environmental factors are stated to be of importance within the adoption processes of digital technology (Ghasemtabar et al., 2019). The characteristics of public and private sectors differ in that recard, as is shown by Harper and Utley (2001). Furthermore, while existing literature such as Eryadi and Hidayanto (2020) and Limmen (2024) explore perceived efficiency gains and the value of implemented systems, their application to the public sector and, more specifically, to the unique environment of Dutch municipalities is not covered. In addition, the motivational aspect of the users fundamentally differs from that of their private sector counterparts (Wright, 2001). As such, this research aims to fill these gaps by suggesting a specified model tailored for a small Dutch municipality organization using these frameworks and context.

This situation allows for comparative research between the companies discussed in private sector companies and municipalities dealing with digital transformation systems. Furthermore, the municipality departments are still using unsupported and unclosed software, meaning that the results of this research could help them effectively tackle these kinds of problems. This research will, therefore, target the adoption of digital technologies in municipal departments, investigating aspects like training, efficiency gain, organizational culture, manager turnover, and project management. Combining these aspects into a central research question for addressing the research gap is as follows:

- How do organizational and implementation variables influence the adoption of digital technology in a Dutch municipality organization in 2024?

This is a complex and very broad question, which is not easy to answer. For this reason, expectations based on existing theory will be chosen and tested within the municipality to determine their effect. These expectations can then be either met or not met.

The following reading plan is proposed for this research. Chapter 2 will highlight the existing literature and variables deemed important for technology implementation and existing models by previous research, as well as forming a conceptual model based on this theory. In Chapter 3, the research design will be discussed. This case will discuss how data is collected, processed, and analyzed. Afterward, in Chapter 4, we will discuss the extracted themes via the Gioia methodology and the extracted results using the aggregated theme as the subchapters, further elaborated by quotes and the Multifactor Leadership Questionnaire results. Following these results, we will see which expectations are met in the conclusions in Chapter 5. Then, we will look at the theoretical implications of the research by investigating what the results and findings of this research contribute to the current literature and the limitations of the current study. These will be discussed in Chapter 6. In Chapter 7, we will look at the practical implications of the results and findings, along with the recommendations for the municipality of Medemblik.

2. THEORETICAL FRAMEWORK

While this research focuses on factors that influence technology acceptance within a small municipal organization, technology acceptance generally revolves around the level of acceptance of an introduced technology in an organization. On the employee level, this revolves around two critical factors, as Davis (1985) described: perceived usefulness and perceived ease of use. While being influenced by other external variables, these two variables influence the user's attitude towards using, eventually leading to a degree of actual system use. While Davis's research (1985) was founded some time ago, its findings are still applicable and in use today. Further developments in the technology acceptance model led to new iterations such as TAM2, TAM3, and UTAUT. While the work of Davis (1985) has many contributions to these later developments, models became more generic as a result. It shows well-defined general models for technology acceptance within organizations but does not allow for more tailored approaches considering industry-specific scenarios. This chapter focuses on the existing literature that can be used to analyze how training and support, organizational culture, manager turnover, and project management facilitate the adoption of digital technology. We can suggest a consensus for understanding the factors influencing digital technology adoption by researching these variables.

The Technology Acceptance Model (TAM) is an important framework Davis (1985) developed for this study. This research will use the original TAM model, focusing on its two critical factors: "perceived usefulness" and "perceived ease of use." According to Davis (1985), these factors are the main drivers for user acceptance of new technologies. Within the TAM framework, leadership can influence these perceptions through various channels, which will be investigated as separate and organizational variables. These variables can be placed in the TAM model as certain external variables. These potential variables of importance are highlighted in the TAM model by Davis (1985), opening the door for testing other variables.

The first potential variables considered are Perceived Efficiency Gain and Perceived Value of the system. Since in both Eyadi and Hidayanto (2020) and Limmen (2024) the effect of Perceived Efficiency Gain and Perceived Value is deemed important, it is therefore interesting to research this in the specific (small) municipal context. Leadership can potentially impact these perceptions by promoting the benefits of new technologies and aligning them with organizational goals. This research investigates how leadership influences employees' perceptions of the efficiency and value added by new technologies within public sector settings. The second variable highlighted is "Organizational Culture." Organizational Culture is a broad term, but Harper and Utley (2001) distinguish "people-oriented" and "production-oriented" cultures. They suggest a balanced approach between people and production-oriented cultures could foster IT success. Third, the role of Leadership Styles is discussed as a variable. The leadership style of a middle manager within the municipality will be compared to their behavioral patterns during the implementation of a new digital technology. This will be done using previous literature discussed by Tortorella and Fugliatto (2017), who categorize leadership into laissez-faire, transformational, and transactional styles. Furthermore, the Multifactor Leadership Ouestionnaire will assess these leadership styles. This research investigates how different leadership styles affect the effective adoption and use of new technologies. Apart from the leadership styles, the Manager Turnover in the municipality will also be highlighted. Mosadeghrad et al. (2013) state that manager turnover often leads to lowered focus and strategic collaborative guality management. Leadership changes can disrupt strategic initiatives and affect the sustainability of digital projects. This theoretical framework will analyze the current literature on these topics and their relevance to digital technology adoption.

2.1 TAM MODEL

Before Davis (1985) developed the original Technology Acceptance Model, Hill et al. (1977) developed the Theory of Reasoned Action. In their research, Hill et al. (1977) stated that four classes of variables determine the acceptance of technologies. These are beliefs, attitudes, intentions, and behaviors. According to Hill et al. (1977), these variables are central to understanding the potential user's decision to use a technology. In order to answer the research question discussed in the Introduction, the Technology Acceptance Model based on the findings of Hill et al. (1977) is used. The Technology Acceptance Model was invented by Davis (1985), showing factors relevant to successfully using the systems. The Technology Acceptance Model (shortened to TAM model for ease of use) has been created to fulfill two objectives: to understand user acceptance when implementing a new technology. Furthermore, Davis (1985) also wants to provide a practical method for testing this user acceptance. When looking at the TAM model as listed below, we see that Davis (1985) distinguishes two main factors when it comes to using technology, these being "perceived usefulness" and "perceived ease of use." These factors can be investigated within the municipality organization to provide a revision of the TAM model.

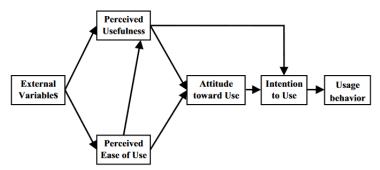


Figure 1: Technology Acceptance Model by Davis (1985)

The first iteration of the Tam model was proposed by Venkatesh and Davis (2000), who named the model TAM2, which was also the first longitudinal study for the Technology Acceptance Model conducted on a larger sample size. With this research, Venkatesh and Davis (2000) tested the Technology Acceptance Model in various stages of implementing new digital technologies. These ranged from pre-implementation, one month after the implementation,

and 3 months after the implementation. Important findings for this Technology Acceptance Model were the revealed effects of the cognitive instrumental processes, which are answered as the social influences that come to par with implementing digital technology. The TAM2 model can be seen in Figure 2.

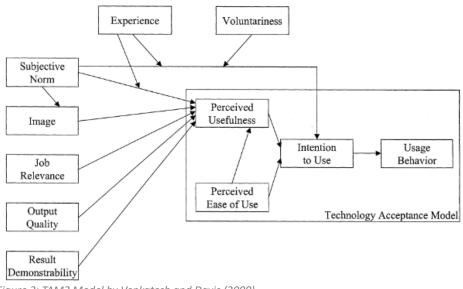


Figure 2: TAM2 Model by Venkatesh and Davis (2000)

At the time of the release of the TAM2 model, various models were focusing on technology acceptance within organizations. Venkatesh et al. (2003) aimed to combine these models into a unified model, incorporating the most critical part of their findings. Their research released the Unified Theory of Acceptance and Use of Technology, as seen in Figure 3. In this research, Venkatesh et al. (2003) state that Employee Training and support are important variables when adopting an organization's new system or technology. This research further states that this variable directly relates to users' behavior. By doing so, training and support also influence the effective implementation of technologies within the organization. Apart from training, Venkatesh et al. (2003) also introduced variables related to the potential user, like gender, age, and experience. Another interesting research paper on this subject is the one from Jarvenpaa et al. (2006). This research shows that the vendor's reputation can influence a customer's perception of the platform's usefulness. Another interesting finding in this paper is that Jarvenpaa et al. (2006) show that the size of a store or brand can influence a customer's perception of the platform and its usefulness. It is interesting to see if, within a municipality organization, a system's popularity and general size are also important factors for using systems.

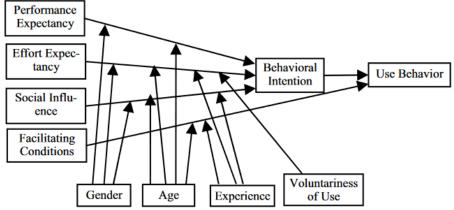


Figure 3: Unified Theory of Acceptance and Use of Technology by Venkatesh et al., (2003)

The early iterations of the Technology Acceptance Model show that these researchers focused on creating a more generalizable model, which was and is still in use in many organizations. From 2010 onwards, the Technology Acceptance Model and its later iterations were mostly tested for other upcoming technologies to test its effectiveness. An example of this is Mugaheed Al-Rahimi et al. (2013). Their research evaluated the Technology Acceptance Model of using social media for collaborative learning. Showing the effectiveness of the original Technology Acceptance Model by verifying the originally found variables by Davis (1985), perceived ease of use and perceived usefulness were shown to be driving factors behind one's intention to use social media. Later, as new digital technologies developed, new specified versions of the Technology Acceptance Models were introduced; an example is the research of Na et al. (2022). In which they investigate the effectiveness of the original Technology Acceptance Model. In doing so, Na et al. (2022) distinguish organizational, technological, and environmental factors. Noticeably, the original Technology Acceptance Model by Davis (1985) is the main model evaluated in most of these studies. Shows a development in the idea behind these "acceptance models." While it was more about the generalizability of technology acceptance initially, the need for a specified version of the Technology Acceptance Model arose as time developed. One can also see that the setting becomes more apparent in the most recent literature on the Technology Acceptance Model, for example, with Wang et al. (2023), where e-commerce was researched in the adoption process of artificial intelligence. These researches, therefore, potentially bring factors unique to certain settings to light, by the specification trend among the Technology Acceptance Model. As Harper and Utley (2001) discussed, employees have different goals from working in either a production or peopleoriented culture. This means that the potential organizational variables, as also discussed by Na et al. (2022), can be an important factor for technology acceptance. Since the original Technology Acceptance Model is the friendliest towards potential external variables, by being clearly defined, this model is often used in research that evaluates the Technology Acceptance Model for a certain unique technology or setting.

2.2 PERCEIVED EFFICIENCY GAIN & PERCEIVED VALUE

The scalability of a system is distinguished as a first-rank priority when adopting a new system within an organization by Eryadi and Hidayanto (2020). The research of Limmen (2024) further investigates this variable and distinguishes two types of user motivations stemming from this: perceived efficiency gain and perceived Value. The perceived efficiency gain focuses on the value the implemented system offers to the employee's process and workflow. It suggests that the perceived efficiency gain by the to-be-implemented system is a driving factor in perceiving the system as useful. Researching this variable for the public domain is interesting because, according to Johnson (2020), the employee within a public domain finds other motivations that are more important than those of an employee in the public sector. The perceived value variable is about how the to-be-implemented system is perceived to add value to the business (Limmen, 2024). This variable suggests that it is important in an organization categorized as a small- to medium-sized company. In the case discussed in Limmen (2024), the company has high employee embedment. Employees care about how well the business is doing. This variable is interesting to research within the public domain because a system might add value to the public organization, which could be a motivational factor.

2.3 TRAINING & SUPPORT

While training and support were not implemented in the first TAM model by Davis (1985), they are covered in later iterations of the TAM model by Venkatesh et al. (2003). In their research, Venkatesh et al. (2003) state that when an employee receives training, this drives user behavior. However, in Limmen (2024), this effect was not measured because training was not present in the sample size. Another effect is shown from the interviewee's first interaction with the system. Limmen (2024) states that the first interaction with the system made the employees perceive the system as more useful and easier to use. Bradford and Florin (2003) combined these findings by stating that training is important for familiarizing the user base with the system's functionalities and showing its value to the business. While Venkatesh et al. (2003) did research in the Public Administration field, this was in 2003. Since 2003, many innovations have arisen within the digitalization spectrum. Therefore, measuring the effect of training within a municipality 21 years after the research of Venkatesh et al. (2003) might add new insights. It does, however, allow us to use the items of Venkatesh et al. (2003) to measure the level of training and support available. These can then be further investigated by holding the semi-structured interview. The items used to identify the level of training received by the employees are (Venkatesh et al., 2003):

- Guidance was available to me in the selection of the system.
- Specialized instruction concerning the system was available to me.
- A specific person (or group) is available for assistance with system difficulties.

2.4 ORGANIZATIONAL VARIABLES

2.4.1 Organizational Culture

When looking at the TAM model of Davis (1985), we see the term "external variables," leaving the impression that these variables are of an external nature. Of course, internal variables can also be important to IT implementations. In their research, Harper and Utley (2001) show that an organization's internal culture influences its journey toward integrating digital technology. Dutch municipalities have multiple layers, from the top-management level to executive staff; see Appendix 2 for reference. Harper and Utley (2001) suggest three important variables for successfully integrating digital technologies into organizational culture. These are shared beliefs, behaviors, and mindsets within an organization. Harper and Utley further separate two types of cultures: people-oriented and production-oriented cultures. Production-oriented culture focuses on output performance as its main driver, while people-oriented cultures focus on the employee/personal side. Harper and Utley (2001) define people-oriented culture values as autonomy, trust, team orientation, flexibility, and open information sharing. Harper and Utley (2001) further suggest that prize collaboration, transparency, and collective objectives create a positive environment for IT initiatives to prosper. In the setting of people-oriented culture, adopting digital technology is viewed mostly in a collective way. It mainly revolves around a collective endeavor to improve how the organization operates and interacts with its community. When working in a production-oriented culture, output performance is often the main reason for adopting a system in the private sector. Harper and Utley (2001) also define organizations that cling to outdated workflows and centralized decision-making. This can hinder the integration of new digital technologies. Organizations that cling to outdated workflows often resist change, meeting new technologies with skepticism. This scenario, therefore, raises concerns about disruptions to established routines and positions. Harper and Utley (2001), also suggest that the extent to which an organization promotes a culture of continuous learning, embracing trial and error, sharing insights, and remaining adaptable will directly affect their ability to navigate digital technologies to the ever-changing demand. Harper and Utley (2001) further state that companies can score in production- and peopleoriented cultures. The mix between them leads to the highest IT success, meaning a balanced score for both the production and the people leads to the highest success for projects implementing digital technology. In the context of Dutch municipalities, it is interesting to see the different values and pressures within the organization. Often revolving around greater efficiency, transparency, and civic engagement. The influence of organizational culture on the implementation of digital technologies is, therefore, an interesting research field since organizational variables change over time. That is even without an extra factor when the head of the government changes.

The research of Ghasemtabar et al. (2019) provides a case of how technology adoption related to organizational culture relates to the implementation success of digital technologies. Ghasemtabar et al. (2019) found that just as culture can affect the success of the implementation of new digital technology in organizations, the underlying organizational culture also exerts an influence on the implementation of new digital technology. Ghasemtabar et al. (2019) also added that an organization's culture has a role in every stage of the technology acceptance process. This ranges from the first stage of perceiving and accepting technological changes to using and integrating the technologies into day-to-day operations.

In their research, Ghasemtabar et al. (2019) highlight the role of community and cooperation in digitization success. They state that technology adoption is more likely to be successful when there is a sense of belonging with fellow workers and a collaborative effort. This proves especially so in the public sphere when technology implementations often require a lot of cooperation within as well as across different units and layers of management.

2.5 MANAGER TURNOVER

Mosadeghrad et al. (2014) discuss the impact of top management turnover on implementing strategic collaborative quality management in their study. They short this term to SCQM. They specifically research this in the field of healthcare. Their research further shows the importance of management continuity, specifically in project management. Mosadegrhad et al. (2014) also indicate that top management turnover threatens the long-term success of the SCQM intervention and makes it very difficult to sustain its benefits. Bozkus (2023) further discusses this in their book and defines stability to be an important factor during the adoption process of digital technologies in general. Bozkus (2023) also states that digital transformations have human components, for which leadership plays a crucial role. Mainly in managing the employees anxiety for changes, but also in maintaining a supportive and innovative environment to utilize the new technology most. Dealing with a high manager turnover during these implementation phases can be stressful for employees (Bozkus, 2023).

While the research of Mosadeghrad et al. (2014) is conducted in the healthcare sector, it does provide insights that can be incorporated into other research fields in both the private and public domain. Manager turnover is an aspect that is happening not just within the healthcare sector but also in other industries, such as municipalities. Mosadeghrad et al. (2014) further discuss the consequences of high managerial turnover rates, suggesting that it compels managers to cling to the so-called "status quo." Mosadeghrad et al. (2014) state that this status quo limits innovation, project advancement, and strategic planning. In the context of project management, Mosadeghrad et al. (2014), therefore, state that this status quo can lead to a project stagnating, limiting the project's capacity for innovation and adaptation. Bozkus (2023) complements these findings in their research by stating that consistent leadership helps keep the digital transformation in line with the organization's strategic goals. Frequent leadership changes in managers can, therefore, disrupt the momentum of the implementation of these new digital technologies.

Bozkus (2023) also discuss other challenges that come into play when dealing with management changes. Due to this vision change, employees can experience stress, anxiety, tension, or even conflicts. Madesgrhad et al. (2014) state that it is important to consider these potential problems in project management because team dynamics and the overall morale of the project team play a big role in work execution and, eventually, project success. Another plus of stable leadership, according to Mosadeghrad et al. (2014), is being able to form a strategic policy and plan to make significant longer-term changes for innovative projects. Having stable leadership is also a trust factor for employees during organizational changes, especially when an organizational structure changes, as mentioned in Mosadeghrad et al. (2014). Overall, Mosadeghrad et al. (2014) see leaders' role as creating a work environment that promotes learning, innovation, and general resilience to guide their employees through challenges, such as organizational restructuring. This perspective somewhat differs from the distinction between leadership styles in other literature, such as Tortorella and Fugliatto (2017). However, it aligns well with other literature focusing on an always-changing leadership perspective depending on the situation (Seyal, 2015).

Mosadeghrad et al. (2014) further discuss leadership dynamics and its impact on organizational culture. As well as the organization's readiness for change. Mosadeghrad et al. (2014) state that successful implementation of quality management requires initiative, sustained support, and a commitment from top-level management. Doing so, he instigates that leaders should offer their support towards project efforts and remain involved in these projects. Doing so will allow them to align these projects with the organizational goals they set; according to Mosadeghrad et al. (2014); having a disruption due to leadership changes can, therefore, adjust these strategic goals and reprioritize the projects, stagnate some of the projects. This can change the outcome or level of project success Mosadeghrad et al. (2014). The insights from the research of Mosadeghrad et al. (2014) are especially relevant to the project management field. Since they are mostly formed regarding strategic direction, clarity, and predefined project objectives, frequent leadership changes can break the alignment with organizational goals, requiring solid succession planning and strategic communication mechanisms to ensure a seamless transition and maintain project momentum.

Mosadegrad et al. (2014) further address the importance of stakeholder involvement and communication regarding management changes. The literature defines Management leadership styles differently (Northouse, 2015). According to Tortorella and Fugliatto (2017), there are differences across cultures in leadership, as well as differing visions, values, and views. However, Robins and Judge (2011) state that a common way of identifying leadership among cultures is "a leader's ability to lead a team to a shared goal." Tortorella and Fugliatto (2017) further distinguish three leadership styles: laissez-faire, Transformational, and Transactional. There is some disagreement in current literature about which styles are the best for IT implementations.

Van Eeden et al. (2008) state that having a mix of these leadership styles leads to the best result in implementing a new system. Hersey and Blanchard (1969) state that one's leadership style should change depending on the situation in their Situational leadership framework. However, Seyal (2015) states that transformational leadership styles lead to higher IT adoption, innovation, and organizational change. The Multifactor Leadership Questionnaire grants valuable insights to determine the type of leadership a leader has. There are different versions of the Multifactor Leadership Questionnaire. In this research, the employee variant will be used since the research is based on the user-based TAM model. In this variant, the employee will answer questions about their leader; combining their scores will form a profile of the leader's leadership style in day-to-day operations. These can be compared to the results of the semi-structured interviews, allowing the analysis of a leader's general leadership style and behavioral patterns when using the newly implemented system.

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2.6 PROJECT MANAGEMENT

The effect of project management on actual project success has often been researched in various types of projects. One such research study by Mir and Pinnington (2014) shows that project management is important within organizations, especially project-based companies. Mir and Pinnington (2014) further elaborate on how the aspects of project management, like planning, contribute to project success. However, the findings of Mir and Pinnington (2014) show that project management goes beyond just planning. One of the discussed aspects is leadership within the project management. According to Mir and Pinnington (2014) leadership for enhanced project success a project manager needs to develop a project-centered culture that enhances relationships between external and internal customers.

Apart from the leadership and planning aspects of project management, Mir and Pinnington (2014) show the project's inherent risk. The identification of such risks and consideration of them for project management will increase the project's success since unexpected events because of these risks will be less likely. Therefore, Mir and Pinnington (2014) state that the proactive management of potential risks can decrease the likelihood of project failure. Additionally, Mir and Pinnington (2014) highlight the importance of identifying stakeholders before starting a project management. They state that effectively communicating with these stakeholders increases project success and allows for potential problems to be identified beforehand if efficient communication is there with the stakeholders. This transparency not only fosters trust but also makes project execution easier and raises the chance of success.

Lastly, Mir and Pinnington (2014) stress the importance of KPIs or Key Performance Indicators. Mir and Pinnington (2014) state that identifying these KPIs enables continuous improvement within organizations and following projects. Therefore, according to Mir and Pinnington (2014), organizations should invest efforts, funds, and time to manage these KPIs and align them with the organization's strategy to reflect the perspectives of the selected stakeholders. These aspects are further elaborated by Gomes and Romão (2016), who focus on an organization's structure. By doing so, they formulate rigid, demarcated, and bureaucratic organizational structures. According to Gomes and Romão, carrying out significant changes and implementing new practices is difficult. Forming project teams and finding critical success factors for a project, mentioned as benefits management, can help large organizations' project management focus on improving the change (Gomes & Romão, 2016). This makes it more likely that the system will be perceived well, which aligns with the findings of Mir and Pinnington (2014).

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2.7 CONCEPTUAL MODEL

Considering the theory from the "Theoretical Framework" chapter, we can define a conceptual model, as shown in Figure 4. The positive relations marked with a "+" were tested previously within the Technology Acceptance Model and will not be further researched in depth within this research. Therefore, they will be accepted and used as a basis.

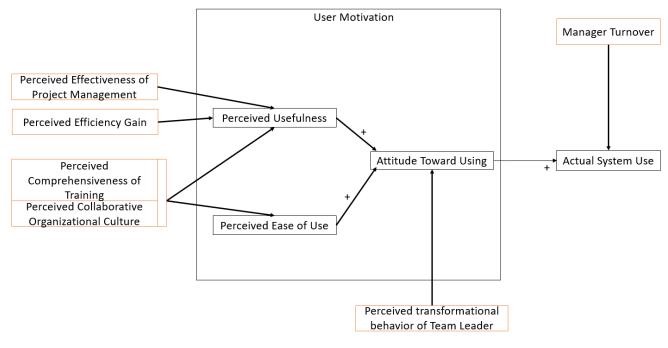


Figure 4: Conceptual Model

The variables shown in the conceptual model will be tested via the interview questions in the Data collection chapter. However, the team leaders' leadership styles have been researched to analyze the organizational variables. These can not depict all 18 team leaders but rather the team leaders currently dealing with an adoption process of digital technology. Therefore, a Multifactor Leadership Questionnaire will be conducted. The Multifactor Leadership Questionnaire results will be added to link the perceived themes in the semi-structured interview to the 45-item traits from the Multifactor Leadership Questionnaire. Even though the Multifactor Leadership Questionnaire gives us category scores in return, it is important to note that the Multifactor Leadership Questionnaire results will be complementary to these results. This research will provide an in-depth, comprehensive analysis of the current scenario of a small municipality that has gone through a new organizational culture. Therefore, the Technology Acceptance Model specified during this research aligns with the current trend of specifying adoption models to specific contexts. This is in contrast to the original idea of the Technology Acceptance Model. While widely used, this will provide a more tailored approach for technology acceptance within the unique scenario of a small municipality doing this qualitative research.

Analyzing the model and theoretical framework, we can form expectations:

- 1. The more transformational a team leader is perceived, the higher the attitude towards using the system.
- 2. The higher the efficiency gain is perceived, the higher the perceived usefulness of the system.
- 3. The more comprehensive the training is perceived, the higher the perceived ease of use.
- 4. The more effective the project management is perceived, the higher the actual system use.
- 5. The higher the manager turnover, the lower the system's use.
- 6. The more collaborative the organizational culture is perceived, the higher the perceived ease of use.

While the whole context can be found in the subsequent chapters of the variables discussed in the expectations, we will briefly review why and how these are formed. As stated, the first expectation is "The more transformational a team leader is perceived, the higher the attitude towards using the system." This expectation is formed by looking at existing literature, such as Seval (2015), who states in their research that transformational leadership inspires and motivates employees and leads to higher IT adoption, innovation, and organizational change. The expectation, "The higher the efficiency gain is perceived, the higher the perceived usefulness of the system," is formed when looking at Eryadi and Hidayanto (2020) and Johnson (2020). Both researchers define the perceived efficiency gain from different perspectives: scalability for future purposes and how the system adds value to their processes. According to these researches, these variables affect how the usefulness of the technology is perceived. Researches like Venkatesh et al. (2003) state that effective training and support drive user behavior and their perception of the system. Therefore, the expectation "The more comprehensive the training is perceived, the higher the perceived ease of use" is formed. The fourth expectation is "The more effective the project management is perceived, the higher the actual system use." Is formed when looking at researchers like Mir and Pinnington (2014); in their research, they define that effective project management practices like risk management, planning, and clear communication are factors that positively influence the adoption of digital technologies, making sure that these technologies will be used in the organization. The management turnover expectation "The higher the manager turnover, the lower the system's use" is formed by looking at existing research like Mosadeghrad et al. (2014). Within these researches, it is stated that frequent change in management during digital technology implementation leads to a change in vision and stability for these projects, causing the effective use of the system to be lower by not fully utilizing and aligning the system with the organizational goals. At last, the expectation "The more collaborative the organizational culture is perceived, the higher the perceived ease of use." It was developed by researchers like Harper and Utley (2001). In their research, they show that by having a collaborative structure in place within organizations, employees are more likely to see the use of these new technologies and the improvements made by implementing them.

3. RESEARCH DESIGN

For this research, the municipality of Medemblik is typed as a single-case design, so it will be seen as a single case. However, when we look at Yin's (2009) insights, we can find multiple units of analysis within the municipality. This indicates that this research will focus on the bottom left part of the model, as shown in Figure 5.

The nature of this study is exploratory, aiming to evaluate and specify a model for technology adoption for organizations in a similar context. For such an approach, qualitative research was used to get an in-depth view of technology acceptance within small municipalities. This approach allows for researching a specific case using empirical data. In doing so, a model can be suggested that is tailored to that specific case. Because there is established literature for this research field, like the Technology Acceptance Model, this study might apply to other industries. This is not the focus of this research, instead, it will focus on developing a model that consists of variables extracted from responses of the specific case of the municipality. For such an exploratory approach, qualitative methods are, therefore the most applicable to this study (Hammarberg, Kirkman, & de Lacey, 2016)

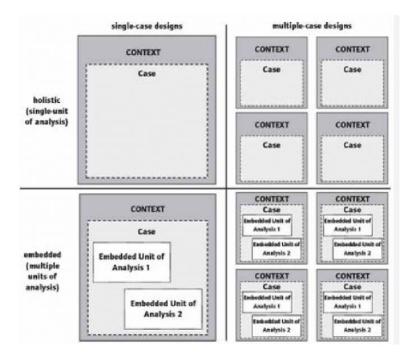


Figure 5: Different Case Designs by Yin (2009)

With the research goal in mind, these can be defined as all departments currently integrating a new system or replacing an old one. Therefore, the municipality can be typed as an embedded single-case design. Multiple methods method are used to analyze this case properly. First, interviews with the employees currently dealing with such a change have been held. Also, a questionnaire has been distributed to analyze the team leaders' leadership styles. Lastly, available documentation about the current IT infrastructure has been used to understand the field in which these projects operate. The municipality of Medemblik is suitable for this case since many departments are in the process of renewing their systems. Furthermore, the process of this thesis is focused on Punch's design (2014). Using this approach, we can execute this research on a predefined process.

3.1 CASE

For this research, the Municipality of Medemblik was selected. The municipality is located in North Holland within the West-Friesland region; for a more specific location, Figure 6 can be consulted. The Municipality of Medemblik is an interesting case for this research for several reasons. First, the municipality is implementing several new technologies, each having an effect on the daily work routine of their employees, influencing their main processes. While being a relatively small municipality, it consists of several smaller municipalities, composed of the Municipality of Wognum and the Municipality of Noorder-Koggenland, which joined in 2007. In 2011, the Municipality of Andijk and the Municipality of Wervershoof joined the Municipality (Medemblik Actueel, 2020). The manager turnover variable can also be discussed well in this case since the municipality has high turnover rates for its managerial positions. Some of the departments are now having their fifth manager within two years and making it suitable for investigating the effect of manager turnover on the implementation of digital technologies within the municipality. Furthermore, The municipality of Medemblik houses more than 300 applications among its 18 teams. These applications have been mapped per department and domain as much as possible. However, during the initialization of this project, a technical administrator noted that new applications were still found. Additionally, a technical administrator noted that with the adoption of new digital technologies, users are familiar with the system in different ways. During the initialization of the project, interviews with a team leader were also held. During these talks, it was noted that project management tools are not mandatory for the most part; only long-term planning is. Requiring aspects like a project plan, a steering committee, and a problem owner for each project. The lack of such guidance within the team might correlate with the managerial turnover rate within the municipality organization. However, these factors make this municipality a very interesting case for this research. While the municipality was originally a fusion municipality, a more recent event has made the case even more interesting: the new organizational culture within the municipality, to which new departments were created and new managers appointed. This started in 2023. In this research study, over 300 digital technologies are active in the municipality. Managers are generally quite new, most within six months. Within the last two years, the team managing these digital technologies has hired its fifth manager within two years.



Figure 6: Municipallity of Medemblik (Medemblik, 2013)

3.2 DATA COLLECTION

Multiple methods are used to provide an in-depth analysis of the discussed case. The methods used include semi-structured interviews, the Multifactor Leadership Questionnaire, and archival research. While the semi-structured interviews are the main driver for analyzing this case indepth, the mentioned Multifactor Leadership Questionnaire and documentation about the project are also used to develop organizational and implementation variables.

3.2.1 Interviews

A semi-structured interview was chosen for the interview type. This type of interview will allow us to steer the interview in a direction based on both the responses and the preset themes. As mentioned before, we will use the Multifactor Leadership Questionnaire to research the manager's leadership style as a variable for the research Bass and Avolio (1995). This questionnaire comprises 45 statements to be answered via a 45-item Likert Scale. This questionnaire will be sent to the employees in advance, and a semi-structured interview will follow. Guest et al. (2006) deemed that 12 interviews are sufficient for a qualitative study, so this can used as a minimum when doing the research. However, for this research, 26 interviews were held; this increased number was chosen because the various teams within the municipality needed to be represented accordingly. Within the interviews, it is important to interview the same number of employees per department to ensure they have a balanced influence on the research result. Of these 26, a minimum of 20 will be employees; the other 6 will be from the higher management layer of the municipality of Medemblik, as shown in Appendix 2. These interviews will later be processed via the Gioia method. We can use empirical data to test the relationship formed by previous literature in a relatively littleresearched industry (Gioia et al., 2013). To use the Gioia method, transcriptions of the interviews need to be made. Then 1st, 2^{nd,} and Aggregated themes can be built.)

3.2.2 Multifactor Leadership Questionnaire

In order to extend the general questions of the leadership of the team leaders of the municipality, the Multifactor Leadership Questionnaire is conducted. The Multifactor Leadership Questionnaire has multiple versions measuring leadership styles, each focusing on different organizational roles. This research focuses on the user's motivational aspects of digital adoption. Therefore, the "Rater Form" version of the Multifactor Leadership Questionnaire is used. This is a 45-item list on which the interviewees decided their agreement level by selecting 0 to 4, meaning the range is from "It never happens" to "It happens very often, if not always" (Bass & Avolio, 1995). These will be distributed before the interviews based on the employees 'perception' of their team leaders' leadership traits. Therefore, team leaders will not complete this questionnaire since it is about their employees' perception. Previously, it was established that this research was about factors that influence the implementation of digital technologies within the municipality. Since past research, the types of systems have also been deemed a factor for digital technology implementations; we will have to narrow this down (Almulla 2021). For this research, we look at digital technologies, also called software, that will change the main processes of departments in their administrative activities.

Taking both the research questions and discussed theory into consideration, the following variables can be selected:

Independent Variables	Dependent variables	Setting	Units of analysis
Perceived Effectiveness of Project Management	Perceived Ease of Use	Dutch municipality organizations	Dutch municipality organizations
Perceived Efficiency Gain	Perceived Usefulness		
Perceived	Intention to use the		
Comprehensiveness of	system		
Training			
Perceived Collaborative			
Organizational Culture			
Perceived			
transformational behavior			
of Team Leader			
Manager Turnover			

Table 1: Variables

Questions are developed for the interviews to analyze the independent variables in Table 1. Because the interviews are semi-structured, these questions are more of a guide than a strict script. During the interview, the interviewer can steer using both the responses and interview questions. The interview questions can be seen in Appendix 4.

3.3 DATA TRIANGULATION

This research is a qualitative study, researching a relatively small number of small municipalities in the Netherlands. Doing such qualitative research, social desirability bias can occur. Answering questions to be viewed more favorably is an aspect of this. This can occur because of the high manager turnover in Medemblik, as interviewees can feel pressured to answer the questions in a way that can be viewed more positively in light of the new management. To mitigate this bias, interview results will be anonymized to tackle this bias as much as possible. Since the public domain is a dynamic environment, time can also be a form of bias, as interview responses might be rushed. To tackle this bias, interviews will be planned via email. The Leadership Questionnaire will be attached to this email so this can be filled in beforehand. This saves time during the interview and allows us to go more in-depth for the semi-structured interview. Data triangulation will be applied to keep this research as reliable as possible; doing so will structure the data collection as follows.

- 1. Interviews: The semi-structured interview method was used to interview 26 employees. The municipality of Medemblik has 330 employees, of which approximately 90 are currently involved in adopting new digital technology.
- 2. Archival Research: Documents such as project reports, emails, and progress documentation will be consulted to form a timeline for the system's introduction. The municipality of Medemblik checks the used content and published results before publication.
- 3. Archival: Analyzing the planning and documents regarding the adoption of digital technology will yield more insights into the system's use. This Dutch Municipality organization will be monitored for four months, during which time its planning and progress regarding the adoption of digital technologies will be monitored.

3.4 DATA ANALYSIS

To develop interview results, they must be transcribed (Gioia et al., 2013). These transcriptions will then be marked for certain interview quotes and analyses. After doing this with all the transcriptions, they can be extracted into 1st order themes (Gioia et al., 2013). This will identify the concepts and ideas of the interviewees. Grouping these first-order themes enables them to find certain patterns within the interviewees. These are so-called 2nd order themes (Gioia et al., 2013). Grouping them even further into aggregated themes shows overarching concepts within the organization. These overarching concepts are aggregated themes (Gioia et al., 2013). These aggregated themes will show the influence of the discussed variables in the chapter Theoretical framework. These will show if these variables are presented in any way. Furthermore, it will also show whether they are barriers or drivers to other variables suggested. These results will then allow answering each sub-question by looking at these themes. Furthermore, these results will allow us to compare them against previously established literature and test if they also apply to this scenario. A saturation is developed when no more of these themes can be extracted from the interview results. These themes then allow for analysis of itself, giving detailed information about the important variables within the organization. However, the meaning of these themes can be even further deepened with the results from the Multifactor Leadership Questionnaire scores. Combining the results of both interviews lets us compare the behavioral aspects of leadership in day-to-day operations and the use of the system. Doing so will also allow for analyzing which behavioral patterns were present and which were missing for the employees. Documentation regarding these leadership behavioral patterns and the general importance of the found variables will also add to this. When analyzing the results, we can explain certain phenomena within the organization. For example, to explain an aggregated theme, we can zoom in on the 2nd-order themes or even give a specific example using a 1st-order theme.

3.5 ETHICS

Before the data collection was started for this research, a request for the ethical commission of the University of Twente was made under the number 240963. In order to conduct this research in line with the ethical commission standard, we ensured that the interviews were anonymized and could not be led back directly to the interviewee. Personal identifiers will, therefore, be also removed from the transcripts. Before the interview, participants will also be told about their rights, ensuring that the data will be anonymized. If they do not feel comfortable afterward about their data being used, they can contact the researcher via their email address to revoke their data from being used. Furthermore, the data will be stored safely on the university platform, an area remote from the municipality storage, so other employees within the organization cannot access the data. They will all be notified of the interview request minimally two days before the interview, along with the general goal. In this interview, their rights will also be listed, as described above. This will be repeated within the interview, ensuring they are well-informed and as least stressed as possible.

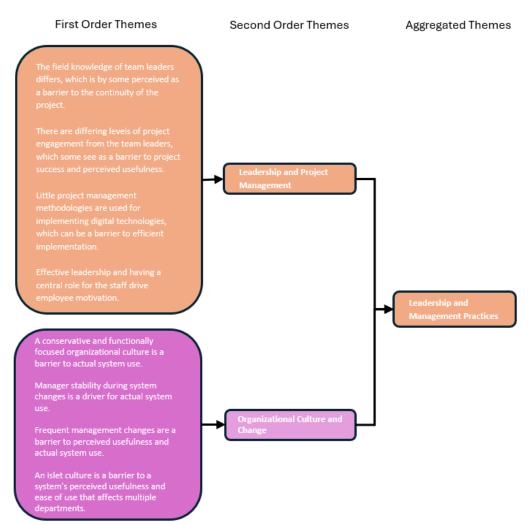
4. RESULTS

In Chapter 3 of this thesis, it was already revealed that 26 interviews were conducted from departments that had gone through or are implementing new digital technology within the municipality of Medemblik. Most of these interviews were conducted with the executive staff, which is a total of 20 interviews. The other six interviews were conducted with the higher management layers. The interviews from the higher management layers will not directly influence the user's motivation for the suggested model. It will give insights into the case's processes, projects, and workflow, allowing for a more in-depth approach. The results of these interviews will allow us to check our previous expectations and form a comprehensive analysis of important factors for digital technology adoption to answer the main question of digital technology in a Dutch municipality organization? One of the variables researched is leadership; the Leadership Questionnaire was used to measure the general leadership style of a team leader in the municipality of Medemblik. This general leadership style analysis is complementary to the results gathered from the interviews. Therefore, the results are shown in Appendix 3.

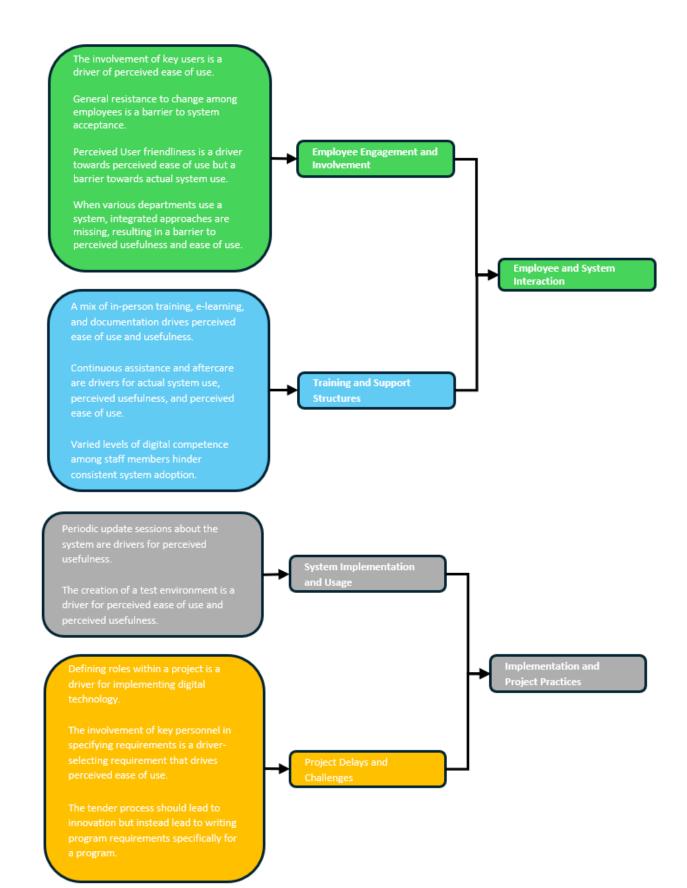
The results were gathered via a mixed methods approach, where a semi-structured interview and the Multi-Leadership questionnaire were held. The results of the research methods have been processed into a model that focuses on the motivational aspects of integrating new digital technology for employees within the municipality. In doing so, we focused on five departments within the municipality, each giving insights into their projects in varying implementation status. With the received results, themes could be formed using the Gioia methodology, first, second, and aggregated themes (Gioia et al., 2013). These are shown below in Figure 7. After this, the results will be discussed using the second-order theme.

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Figure 7: Extracted themes using Gioia Methodology



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4.1 EMPLOYEE INVOLVEMENT IN SELECTION

Adopting digital technologies within an organization is difficult, even without considering the type of digital technologies an organization is implementing. Even though all interviewees were dealing with adopting digital technologies that changed their main administrative process, there were differences within these projects. These differences, sometimes small, have led to a range of experiences among the interviewees, with both similarities and differences in their experiences.

A significant observation from the interview responses is that end users of the new digital technology are almost always unfamiliar with it. While all employees had worked with a similar system before, this was often an outdated system that needed to be replaced because it was no longer sufficient for their work processes or because the contract's end date was evident and a system should be tendered again. As can also be seen by a quote from interviewee 16: "I was not familiar with the system we were going to implement since our current system is really outdated." Employees, in general, seem to have some degree of a say in the new system's requirements. This can be further seen in the quote of interviewee 6: "I was actively involved in selecting the requirements for the new system." In order to select a system with these wishes, a program of requirements was formed.

An interesting observation from the interviews was the note of digital illiteracy among the Municipality of Medemblik employees. Multiple employees stated that they did not have any trouble dealing with new digital technologies in the organization, but their team members did. As interviewee 6 stated: "Digital illiteracy should not be a challenge to use this system. However, I predict that for some of my team members, it will be a problem." It is possible that none of the interviewees has trouble with digital illiteracy; however, it is noticeable that they did see it as an area of attention for their department.

While multiple employees mentioned being heavily involved in the implementation, some mentioned this was in vain. The main system was to be renewed in a department in the municipality of Medemblik. A program of requirements was made, and two system suppliers were selected as potential candidates from the tender process. One of these systems was a newer iteration of their existing system, and one was a completely new system. As a next step, employees tested both systems and voted for the one most aligned with their current workflow and future wishes. Since some key functionalities were missing, they unanimously voted for the newer iteration of their current system. However, the management team chose the other system, causing outrage among the department employees. This is further shown by a quote from interviewee 8: "Why would you ask us to choose a system and then completely ignore our choice? It seems they just wanted a fitting response for their already made a choice." As to why the management team chose this, interviewees were quite clear; another department was working with this system, so it suited them best for financial reasons. Now, 4 to 5 years after this initial decision, the new system is still not implemented due to the functionality gap between their old and new application. This application was, however, used by multiple teams, and this sentiment was not shared among all of them.

Taking this extreme example out of the equation, we can see that employees perceive the system as more useful when involved in its selection. As interviewee 8 states, "Because I was involved, I could actively state my wishes and requirements for my work processes; this was taken into consideration, and I think I will be able to do my work pretty well in this system." The data shows that team leaders and employees see an employee's active participation during the project. Quotes of employee 11 emphasize this, for example, "We expect employees to be active in providing feedback and suggesting solutions to the problems introduced with the new

system." This shows that much of the new system's responsibility is directed more towards the users than the team leader. Therefore, the perceived effectiveness of employee involvement in formulating the program of requirements and the system selection is highlighted as a driver for the successful adoption of digital technologies.

4.2 LEADERSHIP AND MANAGEMENT PRACTICES

Multiple respondents mentioned that the current organizational culture influences the progress of the current processes and the general innovation strategy for digital technologies. When looking specifically at the implementation project of digital technologies within the Municipality of Medemblik. 2 project types can be defined: departmental and interdepartmental projects. As noted by interviewee 7, "the {new system} will be used by multiple departments, not just the {department}. This includes {employees from other departments} across various departments who will also undergo training by the {supplier}".

When asked about the importance of guidance of the team leader, responses like Interviewee 11 were common. Interviewee 11 stated that the project's success cannot be a direct output of the guidance, project methodology, or leadership characteristics of the team leader or the project leader but emphasizes the collective teamwork of the employees of the departments. However, there are challenges related to the involvement of multiple departments in an implementation. An interviewee pointed out that while their department is well-involved, other departments are less involved and are, therefore, finding it difficult to support the upcoming change in the system. This discrepancy can lead to gaps in requirements for the department, support wishes, and overall perceived usefulness and ease of use of the system. This can potentially hinder the overall effectiveness of the system implementation.

During the interviews, it was noted that team leaders in the municipality of Medemblik are only very rarely heavily involved in the actual project. This is perceived by both team leaders themselves as well as the employees of their departments. While sometimes they act as the project leader, most of the time, they are positioned in the steering committee, only being updated on the general process of the project rather than knowing in-depth what the employees are currently doing and struggling within the project. This was noted in multiple interviews, for example by a quote of interviewee 19: "There is no vision or policy for how and in what role team leaders should be involved, now they get to decide on their varying having almost every role in the project team, to being not involved at all. "

Instead, a separate project leader will be appointed during these implementations. These are either appointed from inside the organization, on loan from other departments, hired externally, or appointed via the supplier of the system. The interviewees do not seem to think their team leaders should be more involved during the implementation. However, they note that someone from the supplier system of the organization should not be the one to make the crucial decisions during the implementation. This can also be seen in a quote by interviewee 4: "When the supplier takes the role of project leader, our internal deadlines are not deemed as important, rather send an invoice for additional time." Instead, someone internally (or hired) should guard the principles for the system's users.

Leadership plays an interesting role in the organizational culture and facilitating change within the municipality. The leadership of most managers dealing with digital transformations is suggested to be transformational, as shown in the Multifactor Leadership Questionnaire and interview results. One of the interviewees described their team leader as open to discussions and arguments, making decisions based on his vision and higher-level input. Interviewee 14 stated, "He is always open to arguments and discussions sharing their vision." This leadership style seems to link to transformational traits, which were present in most interviewee responses about their team leader. Even though the interviewees see their team leaders as "transformational," they do not see a direct lead to them having a role in implementing their new system. Instead, the interviewees see another role for their team leader: one that motivates and inspires the team to work and evaluate the to-be-implemented system. As interviewee 18 stated, "Effective leadership involves motivating staff and ensuring a smooth transition to the new system." The team leaders all exhibited this type of behavior during general activities at work but took a more hands-on approach when it came to actually implementing the system.

Many teams in Medemblik's municipality are currently working on implementing a new system. The general organizational culture at the Municipality of Medemblik seems somewhat conservative. According to the interviewees, it focuses mainly on maintaining functionality rather than pushing for innovation. As interviewee 13 stated, "The organizational culture is conservative, focusing on maintaining functionality rather than pushing for innovation.". This cautious attitude ensures stability and consistency but can limit the exploration of new functionalities and optimizations. This behavioral pattern is further seen when making the program requirements for the tendering.

Some employees noted that the program requirements would sometimes be too specific to one program, most of the time the one they are currently using. This means that the current functionality was kept for the municipality's employees. However, chances for innovation are few when a requirement could indicate "a button to be on the same place as their current system," as noted by interviewee 14. The current work pressure for employees in the municipality can be another factor that limits innovation attempts. As to the employees' perception, their agenda is just full of their regular work, leaving no time to spare. While this might be subjective, allotting dedicated time to actively see improvements is a potential solution to improve their innovational capabilities further. These findings have been aggregated into the "Leadership and Management Practices" theme.

When analyzing the leadership style of the team leaders that adopt digital technologies, we can look at the Multifactor Leadership Questionnaire results in Appendix 3. The results of the Multifactor Leadership Questionnaire reveal a set of team leaders within the municipality. The team leaders shown in Appendix 3 correspond with the interviewees of their teams. It shows variations among team leaders from different companies within the municipality, which is expected. When looking at the scores, we see that all of the team leaders scored high on the transformational scale. With Team Leader A's score of 90.63% in idealized attributes and 87.5% in idealized behaviors. This suggests a sense of self and that the team leaders take action to their beliefs. Furthermore, it suggests that the team leader takes action for the good of the department overall and has skills that allow him to do well in that regard. Team leader B achieved the highest score for this scale, scoring 100%. Team leader C scored 84.38% in attributes but only 40.63% in behaviors. They could improve in showing their own beliefs and will for the group. Team leader D's score of 73.44% in attributes and behaviors shows the smallest behavioral signal of this leadership style among the team leaders.

The Multifactor Leadership Questionnaire also has an inspirational motivation scale that measures a leader's ability to inspire and motivate their employees. For this scale, Team Leader E scores the highest at 87,5%. However, the other team leaders also score high, around 75%. I suggest they show a leadership style that generally motivates their employees. The intellectual stimulation scale does not encourage creativity and encouragement within the

departments. All leaders showed signs of doing so. However, Team Leader D distanced from that by scoring 62,5% on this scale. The intellectual stimulation scale measures how well a team leader inspires creativity and innovation in their staff members. Team Leader A received the highest score among the team leaders, 81.25%. Team Leaders B & C scored 75%, while Team Leader C scored only 62,5%. This means that the behavior is only limitedly recognized by the employees. Next, the individual consideration shows how much managers treat their staff members as individuals. Team Leader B scores the highest in this regard with a score of 87,5%, showing to act as a manager that can use personalized approaches with their employees. Team Leaders A and C scored 75% and 84,38%, while Team Leader D scored 65,63%.

Another scale in the Multifactor Leadership Questionnaire is the individual consideration scale. This scale measures the team leaders' ability to consider the department employees as individuals. Team Leader C shows the most behavior on this scale, scoring 78.13%. Team Leaders A, D, B, and E each received 50%, 53.13%, 68.75%, and 75%. According to these findings, Team Leader C is exceptionally good at identifying and honoring staff accomplishments, while the other team leaders are only mediocrely successful. Management by exception (active) evaluates leaders who proactively resolve issues before they become major issues. Team Leaders B, C, D, A, and E received 25%, 18,75%, 34,38%, 50%, and 28,13% of the total points. When looking at the scores, we can see that Team Leader A scored the highest in this proactive approach; tackling issues is an active behavioral pattern for them.

The next scale of the Multifactor Leadership Ouestionnaire is the contingent reward scale. The contingent reward scale measures the ability of team leaders to recognize and reward positive behavior within the department. Team Leader C scored the highest on the scale, with a score of 78,13%. Team Leader A scored 50%, meaning the behavior was only slightly noticed. Then, there is also the management by exception (passive) scale. This scale reflects a department leader's faith in a department's ability to resolve issues independently. It also shows the leader's tendency to act on problems only when nothing else can solve them. The score sheet made it clear that Team Leader B had the highest score for this scale, at 68,75%, indicating that the interviewees see some of this behavior within their team leader. Team Leader D received the lowest score of 26,56%, while Team Leader C received 50%. Team Leader A scored 31,25% in this scale. All team leaders scored relatively low in the Laissez-Faire leadership behavioral attributes, which add another dimension to an off-hand approach and are not present even when the most important problems arise; all team leaders differed between 15,63% and 25%. All scores can be further investigated in Appendix 2. Without a conclusion on the meaning of these results, we can see that they align with the interview findings in recognizing the team leaders mostly as transformative leaders.

4.3 PROJECT MANAGEMENT

Effective implementation of digital technologies is generally perceived as difficult by the interviewed employees of the municipality of Medemblik. There are multiple reasons to start, depending on the project type and how other project actors are involved, which leads to various experiences. During the interviews, some noted that periodic update sessions about the system during the implementation are drivers of the perceived usefulness of the system. Interviewee 11 stated: "Periodic update sessions about the system make me see for what instances it could be useful." The interviewee responded that these updates could be in a test environment where they can test the system themselves or during periodic meetings where the added functionalities are shown. As interviewee 15 noted, "Creating a test environment helps me see the added functionalities and what it can mean for my work." Interviewees also commented on the project's responsibility. They noted that the responsibility for making the system functional within IT projects often relies heavily on the executive staff. Some perceived this as difficult; however, other interviewees noted that this is how the projects should be. As interviewee 16 guoted, "If you are not prepared to stride for your work in the system, then complaining afterward is just dumb. I believe we have a culture where we can talk to the team leader if something is wrong, but letting the team leader handle everything is unrealistic". Multiple interviewees noted that defining roles within a project helps specify who needs to do what. The involvement of key personnel in specifying requirements is therefore assumed to be crucial. Within the municipality of Medemblik, specifying these requirements is not handled similarly in all projects. Higher-up manager interviewee 23 stated: "There is no vision or policies in place to guide our employees and team leaders on how such a project should look, how its process should be defined, and to what vision of the organization it has to place itself."

Therefore, different project workflows are executed within Medemblik's municipality. Each of the responsibilities lies in different places; for example, the project leader role can be assigned to the supplier of the system, a hired external employee specifically for that project as an interim, or even the team leader themselves. The level of wanted (and unwanted) cooperation with other departments also seems to differ between the projects. While this is not such a big deal for departmental projects, since only one department is involved, it is deemed a problem for systems used by multiple departments. Mostly, it specifies who is responsible for what. For example, a supplier project leader was appointed in one of the to-be-implemented systems. While their presence and involvement are well received overall, the interviewees do not receive the protection of the deadlines. In fewer instances, team leaders assume the roles of commissioner, team leader, and project leader. While interviewees stated that decision-making and guiding deadlines are much easier, aligning with the organization's goals, vision, and best practices is more difficult. Since the system is not fully adopted, progress seems to be based on added functionalities rather than common goals and project management methodologies, as their insights drive the selection of requirements that meet practical needs.

Multiple interviewees state that overall project methodologies seem missing, and project managers lead projects to their best practices rather than align them with an organizational vision, which seems to be missing in general. What is perceived similarly by the interviewees is the lack of project methodologies within the municipality of Medemblik. All of the projects that the interviewees are involved in have general long-term planning for certain aspects of the system to be delivered. However, the organization does not use general project methodologies like Scrum and Lean. According to the interviewees, in the past, these methodologies were in use; however, after the coronavirus pandemic, they have just "forgotten" to use them for the actual implementation projects.

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Within the organization of the municipality of Medemblik or any municipality in the Netherlands, digital technologies need to be tendered if digital technologies are above a monetary and periodical threshold. For this tendering, system requirements are made. According to interviewee 12: "The system requirements are made by the users of the to-be tendered system as well as multiple controlling functions of the municipality." Interviewees, in general, often noted that these controlling departments are sometimes noticed late in this process. Giving them only limited time to look at these system requirements from their perspective and see, for example, how this application will fall into the IT landscape of the Municipality and what the influence would be. Furthermore, the tender process intended to foster innovation sometimes falls short. In certain projects, overly specific system requirements are formulated and tailored to particular programs. This can restrict the flexibility needed for broader innovation. As interviewee 19 stated, "The tender process should lead to innovation but instead sometimes leads to writing program requirements specifically for a program." In another scenario, these system requirements are not specified enough, and doing so leads to a decrease in functionality within the new application, slowing the acceptance and using the new system down. A quote from interviewee 4 states: "I believe this system was selected because other departments were working with them without critically looking at what functionalities will be missing. the main functions will fit, but the detailed things in my work often make a system that much more efficient."

The internal and external project managers seem to use the effect of certain "key users" to tackle both feedback and training of existing and new employees. In general, the interviewees see the role of key users as a supportive structure that is useful and efficient. Interviewee 3 states: "The key users help us to effectively ask questions about the system, without going all to the supplier, making sure I get a quick answer." Interviewed key users seem to underwrite this statement but also see that they get less work done by being assigned this role. It becomes especially frustrating when issues are not resolved quickly, and these key users get many questions from their coworkers while there is nothing they can do about it. Employees must appreciate classical instructions and personalized 1-to-1 support when talking about training. Further undescribed by "I don't dislike e-learning, but it should only be there after the actual implementation as a backup" by interviewee 19.

Multiple interviewees further state that the less digitally minded employees within the municipality have trouble with these e-learning modules. As interviewee 6 states, "E-learning does work, but if the employee clicks one thing different than the instruction, they are immediately in panic." What furthermore becomes clearer during the interviews is that the perceived efficiency gain and perceived service improvement are clear drivers for adopting such a system. Among the two departments, some employees were interviewed, and both departments are migrating towards the same system. One of the departments worked mostly in analog or using task lists in Excel, while the other had a previous system. Their responses differ a lot between departments, with interviewee 16 stating: "The system made our process much more fluent; we can register things easily now. It is not perfect, but I am convinced it will be after the implementation is complete". While employees from the other department had a harsher judgment of the system and its functionalities since, in some fields, the new system was a downfall from their old system. Interviewee 8 said, "We have to do so much more by hand now and use so many more clicks; it is in no way an improvement; it looks user-friendly, but functionality is less useful and offers less quality.

From interviews, it also became clear that the employees experienced little aftercare after the system had been used for a while. This is experienced by both the interviewed managers and the interviewed employees. This lack of aftercare is deemed mostly a problem when new

employees enter the company since when adequate training is not available or the system has been updated, new users tend to use the system slightly differently than intended. This causes information to be filled incompletely or in the wrong fields, causing data integrity to plummet over time and decreasing the usefulness of the actual system to the employees. An interesting observation of one of the systems is the duplicates in suppliers in the system. Decreasing the effectiveness of the system by increasing the search time. For the aftercare, the interviewees had a mix of responses; some thought that e-learning was sufficient for the aftercare, while some thought that classical approaches were the best for handling the aftercare of the system.

The interdepartmental projects have an added difficulty over the departmental projects within the municipality. That is to keep every department up-to-date, involved, and active during the implementation. As interviewee 7 stated: "While our department is well-involved, other departments are less involved and are finding it difficult to support the upcoming change in the system." In this case, the municipality seems to have tackled this issue by emailing the subsequent departments for the projects and inviting them for feedback and meetings. However, general turnout seems to differ between the departments that deal with these projects. This observation can lead to gaps in the system requirements and support. This affects the overall effectiveness of the system and the calculated costs since more customization might be necessary after the system is implemented. Regarding this observation, interviewees plead for a vision and policy to keep all departments involved in these interdepartmental projects during the implementation.

Another interesting aspect of the interview responses was the perceived organizational culture. Most interviewees described it as an open environment where opinions are easily shared. At the same time, the organizational culture with IT in mind is seen as conservative. As interviewee 6 stated: "The organizational culture is conservative, focusing on maintaining functionality rather than pushing for innovation." This cautious approach ensures stability and aims to maintain the current functionalities of the system, but at the same time, limits the opportunities to both work more efficiently and improve the service quality of the municipality. As previously mentioned, the higher management layers describe the municipality's lack of vision and policy regarding digital innovations. All of the interviewees also experienced this.

Some of the interviewees noted the newly introduced organizational structure since 2023. With this change, the departments were rearranged, and team leaders were put in place to manage these departments. In the previous situation, these departments had coordinators instead of team leaders. Who were both involved in the specialized work field of the department and had a managerial side role. After the new organizational structure, these coordinators were often put in the place of team leaders. In this function, the team leaders were supposed to be more about managing a department and less about the content of that department. In the first 2 years, many of these newly appointed team leaders left, and new ones were hired. Often, they were enlisted with little knowledge of the work field of the specialized department. This change was, in general, perceived well among the municipalities. As interviewee 22 stated: "Because we have appointed team leaders now who focus on managing the departments, they have this managerial role as a central function rather than as a side function as it was with the coordinators." During the implementations of digital technologies, this was mostly the same. Most of the interviewees only saw a limited steering role for their team leader as opposed to them being heavily involved content-wise for the project. The project leaders of these projects did not oppose this view. However, some mentioned that it would be nice if team leaders knew something about the specialized work field of the departments to spar about how the changes in the system translate to the work floor rather than just the overall work process.

An interesting note from the interviewees was that, in general, there was not much allocated time to even think about innovation; rather, they were just happy to finish their work on time. Interviewees stated that allocating some dedicated time for exploring improvements could enhance their capacity for innovation. As interviewee 9 describes: "The current workload for my colleagues and me is high enough so that we don't have time to think how to improve."

5. CONCLUSIONS

With the interviews and Multifactor Leadership Questionnaire results, we can see if the expectations set in Chapter 2.7 are met. We will go through them one by one. Some findings were in addition to the set expectations, which will be discussed in the Theoretical Implications section of this thesis. In this gualitative research, there are limitations to the result. The small sample size compared to quantitative research is noticeable. While this study's goal is to provide an in-depth analysis of a specific setting, it could not have been tackled beforehand. Consequently, this research's results cannot be immediately generalized among all municipalities. Furthermore, this research is based on interviews, which provide in-depth insights into the municipality but are more prone to bias. Since interviewees might give a socially desirable response to questions revolving around aspects like leadership aspects, possibly providing a somewhat skewed image. Because this research is gualitative, the research is only conducted using a limited sample size; in this case, one organization has conducted 26 interviews. The specific context and internal dynamics might differ among other municipalities. The participants of this research used some questions as a form of selfreporting, talking about their experiences and attitudes towards projects and the generally perceived vision of these projects.

Despite these limitations, this research provides insights into adopting digital technologies for a small municipality dealing with organizational restructuring. Analyzing the organizational and implementation variables has allowed for understanding which variables play a role and how they differ from existing Technology Acceptance Model studies. Using empirical data, this research suggests that having a phased training, empowering new users through a vision of potential efficiency gain and value, and effectively involving them in the selection process of the new system can lead to a more successful use of digital technology in general. Doing so, this research can be a potential foundation to compare them in other municipalities to test the proposed model in Figure 8 to a higher degree and help make adopting new digital technologies more successful within these small municipalities. Below, the expectations following the gathered results will be analyzed in order to form the model proposed in Figure 8.

The more transformational a team leader is perceived, the higher the attitude towards using the system.

When analyzing the results, one can see that all team leaders are categorized as transformational leaders. All scales have varying degrees, but they are still assumed to be all transformational leaders. Most of the team leaders were not deeply involved in implementing the system. They had a more general management function in their department. Seemingly, they are only present on the surface level of the implementation, knowing only about the implementation process rather than the details. Team leaders who were somewhat present during the implementation in the steering group were able to inspire and motivate their employees to some extent, fostering a more positive attitude towards the new system. For instance, Team Leader B scored highest on transformational leadership attributes and had employees who reported a higher willingness and positive attitude towards the new system than team leaders led by less transformational leaders. This finding suggests that even a little involvement of transformational leaders can benefit. This seems to align with Seyal's (2015)

statement that transformational leadership leads to higher IT adoption and innovation. However, this expectation is unmet since all team leaders are transformational, and we still see varying attitudes towards using and successfully using the system.

The higher the efficiency gain is perceived, the higher the perceived usefulness of the system.

In this research, perceived efficiency is suggested to be a main driver for employees' perceived usefulness of the new system. Employees who believed that the new system would streamline their processes, grant new insights into their work overall, and reduce the time of their work tasks, perceived the system as more useful. On the other hand, interviewees who stated that their current system was not working properly named this reduced efficiency as opposed to the old system as a barrier, further supporting this finding. Another interesting sample from the results was when an interviewee noted that the new system allowed faster data entry and retrieval. This was an efficiency improvement for them over the previous system. This perceived efficiency directly made the interviewees perceive the system as more useful. Confirming the expectation that efficiency gains are drivers for implementing a system in the municipality. This seems to be in line with the finding from Limmen (2024), which suggested the importance of perceived efficiency gain in technology adoption.

The more comprehensive the training is perceived, the higher the perceived ease of use.

For this research, these expectations were not met. The results showed not the comprehensiveness of the training provided to be a driver but rather the phases to which training was used. The results show that initially, all employees want to have a central session in a group to learn about the functionalities of the new system, strengthened afterward by individual sessions with the key users. Everyone did not deem system documentation necessary, and there were mixed responses to the use of e-learning. However, multiple interviewees noted that e-learning is great for reference when someone forgets something. The interviewees generally deemed system documentation outdated and a "waste of time" because no one would read it anyway. This was as well in comparing the teams. For instance, Team Leader A's department had a structured and comprehensive training plan in which employees were trained to effectively use the system, scoring higher cases of use than the departments that used a more ad-hoc approach. While these findings technically do not align with the expectations, they do show the importance of phasing the training for the employees; doing so will reduce resistance and increase adoption rates. This is consistent with Venkatesh et al. (2003), who stressed the importance of training in technology adoption. However, it grants deeper insights into the phasing of such.

The more effective the project management is perceived, the higher the actual system use.

The results show that this expectation is met. Interviewees stated that project management methodologies were not used in any of the projects within the municipality. Instead, long-term plans are formed with the eventual deadline in mind. A downside of this method is that the roles of the members of the project groups are, in some cases, not defined. This leads to the stagnation of the projects since some employees do not know what to feel responsible for. This effect can be recognized in most interviewee responses, especially when interdepartmental IT projects are launched. In the interdepartmental projects, members from other affected teams are suggested not to feel involved, causing them to be somewhat uncooperative since they are also not assigned a role. These findings support the expectation that effective project management leads to higher actual use of the system, ensuring that the implementation process is smooth and that most of the system's functionalities are utilized.

This is also shown in the findings of Mir and Pinnington (2014), where the importance of effective project management in achieving project success is shown.

The higher the team leader turnover, the lower the system's use.

The results also showed a clear signal for team leader turnover since the new organizational structure in the municipality of Medemblik in 2023. The turnover in team leaders and strategic managers was relatively high. During this time, IT projects were ongoing within the organization. This manager turnover negatively impacted the perceived usefulness, specifically because the new team leader introduced a different vision. Because of this new vision, the new team leader influenced the employees' perception of the system's usefulness since they looked at the to-be-implemented system differently than their predecessors. Therefore, frequent leadership changes disrupt continuity and create uncertainty among employees. The interviews revealed that departments experiencing high manager turnover struggled with consistent communication, lacked stable support, and faced difficulties in maintaining momentum for system implementation. They also noted difficulty experienced with the new role of the team leader within the organization since the team leader needs to be sufficient in managing rather than have knowledge of the specialized field of the department. While in general, none of the employees find this necessary, responses did show that for specialized projects, more in-depth involvement of the team leaders would help as opposed to only helping with the process management of the implementation. This is in line with the research by Mosadeghrad et al. (2013), which found that high turnover rates are detrimental to the continuity and success of strategic initiatives. The expectation is, however, not met since the effect is suggested to be on the perceived usefulness rather than the actual system's use. It was further noted that independent of the team leaders, because they are often limited in the implementation itself, the organizational culture revolves around the teams within the municipality.

The more collaborative the organizational culture is perceived, the higher the perceived ease of use.

All of the interviewees mentioned that, with the new organizational structure, collaborating in these IT projects has become challenging, further being troubled by the lack of defined vision and policies from the management layer of the top managers. We see a noted islet culture when looking solely at IT projects and the IT landscape. As seen in Chapter 4, this island culture hinders interdepartmental projects, where it influences the departments, making them less involved and influencing their attitude towards using the system. Therefore, the expectation is not made since it focuses on perceived ease of use. Another interesting incidental discovery was the influence of employee involvement in the selection of the system. Perceived effectiveness of employee involvement is suggested to be a driving variable for an employee's attitude toward using the system. If the employees are involved in the selection and disagree with the higher levels of the organization, this influences their attitude toward using the system. Furthermore, if the system is not their preferred one, it leads to feeling uninvolved and unimportant and lowers their will to use that specific system. The collection of these measured variables can be used to answer the main question of this research. In contrast, the tested variables are already highlighted in the expectations above. We can further visualize this to suggest a version of the model specific to this use case that can be tested in both different municipalities and cases alike. While it provides insights into some tested variables within the municipality, the results must be tested on a larger scale to see and generalize the model's effectiveness. However, for this research, Figure 8 gives a comprehensive insight into both the discussed variables in this chapter and the effect in the context of a model on user motivation and successful system implementation, therefore suggesting an answer to the main research question: How do organizational and implementation variables influence the adoption of digital technology in a Dutch municipality organization in 2024?

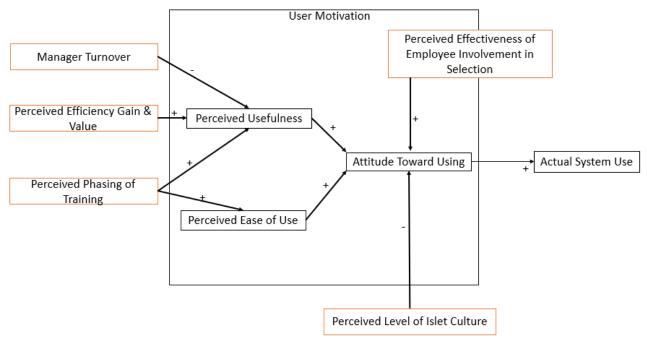


Figure 8: Suggested specified TAM Model

6. DISCUSSION

This research grants some unique insights into a relatively small municipality in turbulent times, being both a fused municipality and, more recently, a new organizational structure. The public sector is generally a highly dynamic environment, meaning that you have to deal with a lot as a municipality, again with the recent organizational structure changes, changes in politics, and the rapid development of the IT Field. Municipalities must continuously maintain and upgrade their (IT) services to adapt to these changing scenarios. Researching such an environment is interesting from both a practical and theoretical standpoint. Additional insights for such a small municipality during these rapid technology-improving projects are relevant worldwide as IT becomes increasingly important in our lives. It further bridges the gaps from the first generic TAM models released to an updated version of this model to be developed for specific fields. Specifying such models for organizations helps the research field to research these specified variables in various fields. It gives organizations a grip on successfully implementing digital technologies.

When looking at the results from this research, we can see that the model in Figure 8 suggests several important external variables. In this suggested model, the basis of the TAM model was used by Davis (1985). In their model, Davis (1985) defined the importance of Perceived Usefulness and Perceived Ease of Use. These variables have their driving relation to Attitude Towards Using, after which a relation to actual system use is made. These variables have been shown effective even in later versions of the TAM model. So these have been used as the basis. Instead, Davis's (1985) invitation for the research of external variables for this research was used. (1985) shows that external variables can be related to Perceived Usefulness and Perceived Ease of Use. However, these proposed variables are not shown in Davis (1985) since they were not made specific to this industry. The proposed model in this research shows several variables that act as external variables in the streamline on which Davis (1985) initially showed his model. When seeing the later iterations of the TAM model, we can see some aspects of Figure 8 represented, even if not completely the same. This is the variable of employee involvement in selection in Figure 8 and the variable of voluntariness in Venkatesh and Davis (2000). While not exactly the same, they represent some of the same attributes to let employees feel involved. The training aspect provides different insights from similar studies in the private sector, but does add to the findings by Klein and Knight (2005). Who states that tailored training programs in different stages of the implementation process are a way to create both awareness and introduce advanced features later. This study emphasizes the importance of phasing different training scenarios, ranging from classical and personal guidance training in the start phases of the project to e-learning and documentation for periodical training for both the training of new employees and refresher courses. The perceived efficiency gain and perceived value earlier, distinguished by Eryadi and Hidayanto (2020), are represented well in this study, even adding deeper insights. This research shows an even deeper specification of the perceived value variable within the municipality. As shown in the results, this mostly revolves around the municipality's perceived service level improvements as a motivator as the core component of the perceived value. This differs fundamentally from the research of Limmen (2024), where the perceived value mostly concerns the motivation to be profitable rather than improving their services. It adds to the current knowledge of project management methodologies within organizations. While the project planning defined by Mir and Pinnington (2014) is there in the organization, the formulation of Key Performance Indicators, risk analysis, and project methodologies are still missing in the organization. Further adding to the theoretical field by showing the current process of these processes within a relatively small municipality.

When looking at the leadership aspect, it is difficult to specify what exactly is added to the current research, for example, the research of Tortorella and Fugliatto (2017). Because the team leaders are not involved in these IT projects, their role is minimized to the steering group part, making it difficult to state the effect of their leadership. We can say something about the involvement of the team leaders, though, since some employees mentioned they found the current positioning of the team leaders somewhat difficult because they are only involved on the process level of IT projects, which does contribute to the discussed people-oriented culture discussed in Harper and Utley (2001). This can be further seen in the discussion about the selected system. For instance, a separate system is chosen for a reason within the production-oriented culture rather than the people-oriented culture, such as financial reasoning. We see less employee acceptance, adding this insight to this theoretical field.

This research furthermore adds to foundational research by Wright (2001). In their research, Wright (2001) showed motivational factors for the public sector, such as goal ambiguity, public service level motivation, and procedural constraints. Insights from this research give further depth to Wright (2001), by suggesting that the public service level motivation has two sides. First, the level of quality that is added to their public service level, as well as the efficiency gain, is mostly in departments with low use of digital technologies before the implementation. It also suggests the addition of employee involvement in the program selection, which can be beneficial to working with the new system and positively influence the employee's attitude towards using the system. However, when expectations are not met by the employees involved in the selection process, their attitude towards the new system is suggested to be lowered. This causes employees to have other expectations of their influence, which might be the opposite of why the management team wanted their involvement. However, when clearly managing the expectations of the involved employees, employee involvement is suggested to be a driver for the employee's attitude towards using the system.

Furthermore, this research also adds to Davis (1985) and Venkatesh et al. (2003). It adds deeper insights into the first Technology Acceptance Model of Davis (1985) by introducing the external variables shown in Figure 8. Looking at the more recent Unified Theory of Acceptance and Use of Technology of Venkatesh et al. (2003), we see the role of the suggested variables in this research. While Venkatesh et al. (2003) distinguish so-called facilitating conditions, this variable generally encompasses a wide range of variables, while within this study, we see more specific variables named as opposed to the more generic and, therefore, broader applicable. Therefore, both types of research have their own unique insights, contributing towards a stronger overall research field for both generic and specific applicability of user technology acceptance.

In summary, this research provides insights into what variables are important when adopting digital technologies in small municipalities dealing with turbulent reorganization practices. It utilizes the basic principles of the Technology Acceptance Model alongside variables that influence the way employees perceive usefulness, ease of use, and attitude toward the new digital technology. Some of the interesting findings of this research suggest the distinction between what perceived value is of private versus public sector and what of the perceived value is actually important for perceiving the system as more useful among employees of a municipal organization. Further adding to the field of training, by not only suggesting the comprehensiveness of the training to be of importance, but suggesting that the phasing of the actual training is of importance. The last highlighted finding is the management of expectations within the employee involvement in the implementation of digital technology, or rather the selection process beforehand. Showing that simply asking the employees for their opinion, can lead to false expectations about their influence on the choice of system.

6.1 FUTURE RESEARCH

Taking the limitations of Chapter 6 into consideration, we can also suggest future research avenues. First, the current suggested model of Figure 8 could be tested in a larger sample size across multiple municipalities. Doing so will help generalize the model in Figure 8 for more municipalities to use in this rapidly developing IT landscape. Another interesting future research avenue is to test the most applicable project methodologies within multiple municipalities that have a more active role as team leaders for system implementations. As a last idea, it is also interesting to do similar research for a municipality with a well-defined vision on dealing with IT and innovation projects and see if these factors are also deemed important there.

7. PRACTICAL IMPLICATIONS

This research also provides unique practical insights for municipalities similar to the Municipality of Medemblik. This chapter will discuss the practical implications of each of the variables found in Figure 4 to name these structurally. First, this research gives a general insight into the employees' views on how they would like training to be structured when implementing new systems and their refresher courses to maintain user efficiency. While the organization is steering towards e-learning forms of training, as is represented by the conducted interview, most interviewees stated that phasing in certain training is perceived as a better way, starting with classical approaches to know the bigger picture of a new system, followed by personal guidance on the work floor by key users. E-learning is also welcomed but at a later stage, mostly for refresher courses and new employees' onboarding process. These refresher courses are deemed somewhat lacking in the current structure, leading to system misuse, lowering data integrity, and, therefore, the system's usefulness.

Furthermore, during the interviews, it became evident that a vision and policy for both working with these IT projects and the digitalization/innovation direction of the municipality is not clear. This was confirmed during the interviews with the organization's strategic managers. As a practical insight, the organization could steer the IT projects to include certain aspects of SCRUM and Lean project management, or at the very least, provide the KPIs and risk analysis as Mir and Pinnington (2014) advised. This vision and policies should include the definition of roles within the projects and a strategy to have high involvement in interdepartmental projects. During these projects, it was noticed that employees were often involved in the selection process after the system supplier had been through the tendering process. This process ensured that the department was involved. However, there is a side note for this methodology if, for instance, for monetary reasons, the decisions of the involved employees are not quiding towards a system decision, this form of employee involvement can become a negative factor in implementing the new system, simply because it is not their system of choice, causing them to feel unimportant and the implementation to a possible halt. Suppose the municipality wants employee involvement in the system selection process. In that case, they should form a strategy and manage the expectation of the importance of the employees' opinion for the implemented systems. This has to be done to keep the support for the system relatively high and streamline the next implementation process. Visioning the perceived efficiency gain and value for their specific choice can be a factor to help them do so since, in most interviews, this appears to be the main motivational factor for employees to perceive the system as more useful. Additionally, explaining why certain choices were made using reasons applicable to the people-oriented culture, as discussed by Harper and Utley (2001), can help communicate their reasons for making a certain decision.

The new organizational structure is often a point of discussion mentioned by the interviewees. This shows both the improvements and challenges of the organization's new structure. First, the change from highly content-knowledge coordinators to more managerial-minded team leaders is a big change for some. Since some of the ability to spar with their team leaders about the contents of their specialized work field is minimized during projects, this sometimes is deemed difficult since both the project leaders and the external (supplier) team leaders cannot spar about details with them. The organization would do well to form a vision and strategy about the involvement of the team leaders in these projects, so they have a predefined role with predefined tasks. Another way to introduce the roles of team leaders to the organization is to have a central leader for each team. While it is generally perceived well that the team has a managerial role for questions, overall collaboration with other teams seems to have decreased. This is for general work tasks, not a problem and keeps the efficiency high; however, when regarding interdepartmental projects or tasks, interviewees note that overall collaboration, as well as seeing how other departments do their work with which systems, has been very limited and has resulted in an islet culture. This islet culture halts collaboration in that way, lowering the attitude towards changes in general since employees are not exposed to other work processes. The municipality would do well to form a general consensus about what systems are in use by what departments and what functionalities they bring; sharing these perspectives might allow teams to see what functionalities they could use to help their team.

8. APPENDIX 1 – MULTIFACTOR LEADERSHIP QUESTIONNAIRE RATER FORM

MLQ Multifactor Leadership Questionnaire Rater Form (5x-Short)

Name of Leader:	Date	
Organization ID #:	Leader ID #:	

This questionnaire is to describe the leadership style of the above-mentioned individual as you perceive it. Please answer all items on this answer sheet. **If an item is irrelevant, or if you are unsure or do not know the answer, leave the answer blank.** Please answer this questionnaire anonymously.

IMPORTANT (necessary for processing): Which best describes you?

____ I am at a higher organizational level than the person I am rating.

____ The person I am rating is at my organizational level.

____ I am at a lower organizational level than the person I am rating.

____ I do not wish my organizational level to be known.

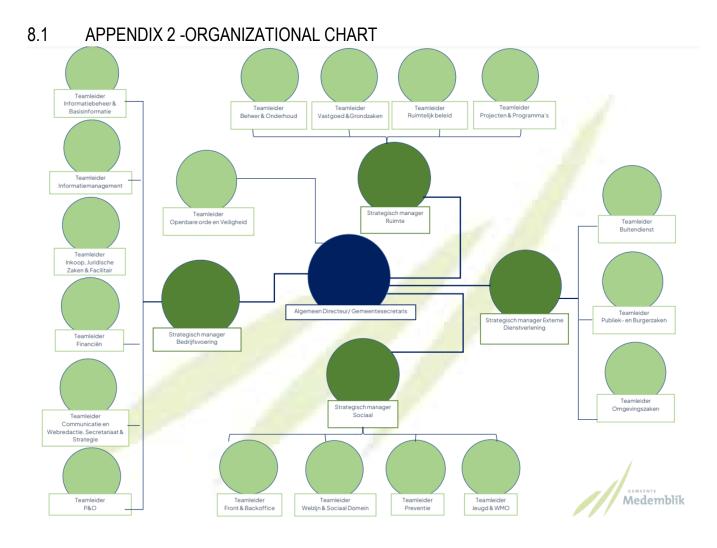
Op de volgende pagina's staan vijfenveertig beschrijvende uitspraken. Beoordeel hoe vaak elke uitspraak past bij de persoon die je beschrijft. Gebruik de volgende schaal:

	Helemaal Niet	Eens in de zoveel tijd	Soms	Redelijk Vaak	Heel zo ni				
	0	1	2	3		4			
De	e persoon die ik	beoordeel:							
1.	Geeft mij assis	stentie in ruil voor mijn inz	et		0	1	2	3	4
2.	Onderzoekt kr	itische aannames opnieuw	om na te gaan of	ze gepast zijn	0	1	2	3	4
3.	Komt niet tuss	enbeide totdat de probleme	en ernstig worden	L	0	1	2	3	4
4.	Richt de zich o	op onregelmatigheden, verg	gissingen, uitzond	leringen en afwijkingen van norme	n0	1	2	3	4
5.	Vermijdt betrokken te raken bij belangrijke problemen0						2	3	4
6.	Praat over hun belangrijkste waarden en overtuigingen0					1	2	3	4
7.	Is absent wann	neer nodig			0	1	2	3	4
8.	Zoekt naar andere invalshoeken bij het oplossen van problemen0						2	3	4
9.	Praat optimistisch over de toekomst0 1 2 3 4						4		
10	. Maakt mij trot	Maakt mij trots om met hem/haar te werken0 1 2 3 4						4	
11.	. Geeft specifiel	Geeft specifieke voorwaarden voor wie er verantwoordelijk is voor prestatie doelen						4	
12	Wacht tot dingen fout gaan voor dat hij/zij actie onderneemt0						2	3	4
13	. Vertelt enthou	siast over dingen die bereil	kt moeten worder	I	0	1	2	3	4
14	. Specificeert he	et belang van een sterk gev	oel van doelgeric	htheid hebben	0	1	2	3	4
15	. Spendeert tijd	aan uitleg geven en coache	en		0	1	2	3	4
						(Conti	inue	d =>

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N	Not at all	Once in a while	Sometimes	Fairly often	Freq if not	alw			
	0	1	2	3		4			
16.	Maakt duide	elijk wat men ontvangt bij	het behalen van presta	tiedoelen	0	1	2	3	4
17.	Laat zien da	t hij/zij een "Als het niet s	stuk is, hoef je het niet	te repareren mentaliteit heef	t"0	1	2	3	4
18.	Geeft meer	dan alleen eigen belang m	aar denkt ten goede va	n de groep	0	1	2	3	4
19.	Behandelt n	ne als een individu ipv als	een nummer uit een g	oepup	0	1	2	3	4
20.	Demonstree	rt dat problemen pas chro	nisch moeten zijn voor	er actie ondernomen wordt.	0	1	2	3	4
21.	Gedraagt zie	ch op een manier die ik re	specteer		0	1	2	3	4
22.	Concentreer	t zijn/haar volledige aand	acht op omgaan met fo	uten, klachten en defecten	0	1	2	3	4
23.	Neemt de m	orele en ethische consequ	enties in acht van zijn/	haar beslissingen	0	1	2	3	4
24.	Houdt alle g	emaakte fouten bij			0	1	2	3	4
25.	Toont een g	evoel van kracht en vertro	ouwen		0	1	2	3	4
26.	Verwoordt e	een overtuigende visie op	de toekomst		0	1	2	3	4
27.	Richt mijn a	andacht op mislukkingen	om aan normen te vole	doen	0	1	2	3	4
28.	Ontwijkt he	t maken van beslissingen.			0	1	2	3	4
29.	Beschouwt	mij als iemand met ander	e behoeften, capaciteit	en en ambities dan anderen	0	1	2	3	4
30.	Laat me problemen vanuit veel verschillende invalshoeken bekijken						2	3	4
31.	Helpt mij om mijn sterke punten te ontwikkelen0 1 2 3						3	4	
32.	Stelt nieuwe	e manieren voor om te kijl	en hoe een opdracht n	oet worden voltooid	0	1	2	3	4
33.	Vertraginge	n bij het beantwoorden va	n een dringende vraag		0	1	2	3	4
34.	Benadrukt h	et belang van een collecti	ef missiegevoel		0	1	2	3	4
35.	Spreekt tevr	edenheid uit als ik aan de	verwachtingen voldoe		0	1	2	3	4
36.	Spreekt het	vertrouwen uit dat de doel	len zullen worden bere	ikt	0	1	2	3	4
37.	Is effectief i	n het voorzien in mijn we	rkgerelateerde behoeft	e	0	1	2	3	4
38.	Gebruikt lei	derschapsmethoden die be	evredigend zijn		0	1	2	3	4
39.	Zorgt ervoo	r dat ik meer doe dan ik h	ad verwacht		0	1	2	3	4
40.	Is effectief i	n het vertegenwoordigen	van mij bij hogere auto	riteiten	0	1	2	3	4
41.	Werkt met r	nij op een bevredigende n	nanier		0	1	2	3	4
42.	Verhoogt m	ijn verlangen om te slager	1		0	1	2	3	4
43.	Is effectief i	n het voldoen aan de eiser	n van de organisatie		0	1	2	3	4
44.	Verhoogt mijn bereidheid om het harder te proberen0 1 2 3						4		
45.	Geeft leidin	g aan een groep die effect	ief is		0	1	2	3	4

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8.2 APPENDIX 3 - MULTIFACTOR LEADERSHIP QUESTIONNAIRE RESULTS

Characteristic	Scale Name	Team Leader A	Team Leader B	Team Leader C	Team Leader D	Team Leader E
Transformational	Idealized attributes or Idealized influence attributes	81,25%	100,00%	84,38%	73,44%	90,63%
Transformational	Idealized behaviors or Idealized influence behaviors	62,50%	68,75%	81,25%	73,44%	87,50%
Transformational	Inspirational Motivation	75,00%	75,00%	84,38%	73,44%	87,50%
Transformational	Intellectual Stimulation	81,25%	75,00%	75,00%	62,50%	78,13%
Transformational	Individual Consideration	75,00%	87,50%	84,38%	65,63%	78,13%
Transactional	Contingent Reward	50,00%	68,75%	78,13%	53,13%	75,00%
Transactional	Management by exception (active)	50,00%	25,00%	18,75%	34,38%	28,13%
Passive avoidant	Management by exception (passive)	31,25%	68,75%	50,00%	26,56%	28,13%
Passive avoidant	Laissez-Faire	25,00%	25,00%	25,00%	15,63%	15,63%

Scale Name	Team Leader A	Team Leader B	Team Leader C	Team Leader D	Team Leader E	Stdev	Median
Idealized attributes or Idealized influence attributes	13	16	13,5	11,75	14,5	1,22	13,5
Idealized behaviors or Idealized influence behaviors	10	11	13	11,75	14	0,94	11,75
Inspirational Motivation	12	12	13,5	11,75	14	0,59	12
Intellectual Stimulation	13	12	12	10	12,5	0,88	12
Individual Consideration	12	14	13,5	10,5	12,5	1,25	12,5
Contingent Reward	8	11	12,5	8,5	12	1,75	11
Management by exception (active)	8	4	3	5,5	4,5	1,63	4,5
Management by exception (passive)	5	11	8	4,25	4,5	2,44	5
Laissez-Faire	4	4	4	2,5	2,5	0,56	4

8.3 APPENDIX 4 - INTERVIEW QUESTIONS

0.3 APPEINDIX 4 - INTERVIEW QUEST	
Types of Training Used	Based on Venkatesh et al. (2003). What types of training did you receive before actually using the system?
	How did this training work for you?
	To what extent was Guidance available for the use of the system?
	To what extent was specialized instruction available for the use of the system
	To what extent was a specific person available to assist with system difficulties?
	Did you find some parts of training still missing?
Manager's Leadership Style	How would you describe the general level of IT proficiency among your colleagues? How would you describe the leadership style
	exhibited by your manager during the system's implementation?
	How involved was your manager during the initial stages of using the system?
	How did your manager enforce the use of the system after its implementation?
	How did your manager communicate the value of the system to the organization and your department?
	What was communicated about the system's value or efficiency gain for your personal daily operations?
Manager turnover	Did you experience any management changes while implementing the new IT system?
	If so, how did this turnover impact the IT implementation process?
	How did these changes affect your and your colleagues' perceptions of the system's usefulness and ease of use?
Project Management	Were there any Key Performance Indicators (KPIs) set for using this new system? Please describe them.

	1
	How were you involved in the project management for this new technology? How well did the project management communicate the critical benefits of adopting this new system?
Perceived Efficiency Gain	When the system was first introduced, how did you perceive its potential to increase the efficiency of your work operations? How have these perceptions influenced how
	you and others view the system's usefulness and ease of use?
	When the system was introduced, to what extent did you perceive it as a system that could add value to the organization itself?
	To what extent did this influence the perceived usefulness and perceived ease of use of the system?
Organizational Culture	How would you describe the organizational culture at your workplace during implementing the new system?
	In what ways do you think the organizational culture influenced the acceptance and effective use of the new system?
	Can you provide examples of how specific cultural attributes either facilitated or hindered the integration of the new technology?

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