Digital transformation of service provision and institutional trust in local government

Does digital transformation of local government offer a way for (re)building trust?

by

Tessa van Leeuwen

s2394995

t.vanleeuwen-3@student.utwente.nl

Submitted in partial fulfilment of the requirements for the degree of Master of Science, Public Administration, University of Twente

2022-2023

Supervisors

Dr. V. Junjan, assistant professor of Public Administration, BMS

Dr. H. van der Kolk, associate professor of Public Administration, BMS

Abstract

This research focuses on the imposed relationship between digital transformation of service provision and institutional trust in local government. After the recent COVID-19 pandemic, both concepts became even more critical for municipalities. Digital service provision often became, like keeping social distancing, the new standard. In addition, past experience has taught us that it takes time for governments to regain trust following a crisis. Therefore, by focusing on the relationship between digital transformation of service provision and the level of institutional trust in local government, it can be determined whether digital service provision indeed offers room for rebuilding institutional trust in local government. The research on the digital transformation of government is relatively scarce, specifically on a local level, as the perspective of digital transformation is relatively new. Institutional trust in government has been explored more extensively, but also in mainly research in the national application context. Thus, it would be both of societal and scientific relevance to explore the relationship between digital transformation and institutional on a local level.

Therefore, the following research question was addressed: What is the relationship between the level of digital transformation of service provision and the level of institutional trust of citizens in their local government in Dutch municipalities? Quantitative data analysis was performed to determine if a relationship between digital transformation of service provision and institutional trust in local government via the proposed mediator variable satisfaction with service delivery is present. Quantitative after-measurements through interviews with six municipalities about the digital transformation of their report public space processes were conducted for the variable of digital transformation of service provision.

The study found no direct or indirect relationship between the level of digital transformation of service provision and the level of institutional trust in local government. The study did find a positive effect of the satisfaction level with service delivery on the level of institutional trust. Therefore, it must be concluded that the digital transformation of service delivery is no panacea for (re)building trust in local government.

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Chapter 1: Introduction

Trust in institutions in the public, private and political domains are essential cornerstones of social cohesion in society (OECD, 2017). Recently, there has been a focus on the decline of citizens' trust in their government, not only within scientific studies but also in studies by political institutions. So states the recent coalition agreement of the national government in the Netherlands: "We want to repair the trust between citizens and government. That will only work if the government is trustworthy, is trusting of citizens, and has an eye for the human dimension" (Rijksoverheid, 2021, p.1).

Trust in government refers to the positive expectations of citizens regarding the intentions of their government regardless of the uncertainty about how they might act (Lewicki et al., 2006, p. 996). The idea that the level of trust in society, and government specifically, is declining is based on the statements in science, politics, and the media that the Netherlands is following the decline of trust in the US (Putnam, 2000). Fukuyama declared in 2010 that the Netherlands was no longer a high-trust society but fulfilled the requirements of a low-trust society (Fukuyama, 2010). However, statistics repeatedly show otherwise. According to the Central Bureau for Statistics, trust in political institutions has only grown over the last twenty years (CBS, 2021).

Meanwhile, governments are changing how they deliver their services by using digital technologies. In doing so, they aim for increased transparency, interoperability, and citizen satisfaction (Mergel et al., 2019). Digital transformation is the transformation of processes, people, culture, structure, and information systems due to the implementation of digital technologies. Therefore, digital transformation is also concerned with re-designing and re-evaluating the purpose and style of service delivery and changing the service delivery from analogue to online (Mergel et al., 2019).

As digital transformation often includes creating new forms of relationships with stakeholders and citizens (European Commission, 2013), this might offer room for rebuilding institutional trust in government. In addition, digital transformation of service delivery provides local governments with the tools to enhance service delivery performance and thus improve citizens' satisfaction with service delivery. The perceived performance of government services has entered both the political and the academic debate as a key factor in restoring trust (Van de Walle et al., 2002).

Therefore, this thesis will investigate the relationship between the level of digital transformation of service delivery and the level of institutional trust in local government and whether satisfaction with service delivery plays a significant role in this relationship. There is a growing focus on the role of service provider of Dutch municipalities within the field of Public Administration (Schaap, 2019). Thus, the choice for investigating the role of satisfaction with service delivery fits the public administration perspective of this research.

1.1: Research aim

This research aims to investigate if there is a causal relationship between the level of digital transformation of service provision and the level of institutional trust in local government. The above aim can be achieved by meeting the following objectives:

1. A review of the literature on digital transformation and institutional trust in (local) government in isolation and in relation to each other.
2. A conceptual framework and hypotheses about the relationship between the two constructs.
3. A research model to test the found hypotheses.
4. An analysis of the data to examine the relationships proposed in the conceptual framework.
5. A discussion on how the findings relate to the literature and the implications for theory and practice.

1.2: Research questions

The following research question was formulated to fulfil the research aim of determining whether there is a relevant relationship between the level of digital transformation of service provision and the level of institutional trust in local government.

- **RQ**: What is the relationship between the level of digital transformation of service provision and the level of institutional trust of citizens in their local government in Dutch municipalities?

To be able to answer the research question, the following sub-research questions were composed.

- **SRQ1**: What are the levels of digital transformation of service provision within Dutch municipalities?

This is a descriptive sub-question related to the independent variable of this research to get an overview of the current state of digital transformation of Dutch local governments.

- **SRQ2**: What are the levels of institutional trust of citizens in their local government in Dutch municipalities?

This is a descriptive sub-question related to the dependent variable of this research to get an overview of the current levels of institutional trust in Dutch local governments.

- **SRQ3**: Is the level of digital transformation of service provision within Dutch municipalities causally related to the level of institutional trust of citizens in local government?

This is a causal sub-question combining the dependent and independent variables. This question will analyse the causal relationship between the two variables through regression analysis.

1.3: Relevance

1.3.1: Scientific relevance

While the government's growing use of digital technologies has been going on for several decades, the perspective of digital transformation of government is relatively new (Mergel, 2019). Before, the focus was on the implementation of digital technology within the service delivery process (e-government). However, the process of digital transformation focuses on the impact of technology on the way the service is offered, the organisation, and the involved stakeholders.

As this way of looking at the implementation of digital services is novel, the research conducted on the relationship between digital transformation and institutional trust is scarce. The research that was conducted focuses on institutional trust in national governments rather than in local governments (Mahmood, 2019). For these reasons, it would be scientifically relevant to explore the relationship between digital transformation and institutional trust on a local level.

This research contributes to the theoretical knowledge on the relationship between digital transformation of service provision and institutional trust on a local level. The research specifically focuses on the role of satisfaction with service provision in this relationship. In doing so, it adds to the knowledge on the mechanisms behind institutional trust from a public administration perspective as this concept is currently mostly looked at from a political science, psychology, or sociology perspective (Bornstein & Tomkins, 2015).

1.3.2: Societal relevance

The recent COVID-19 pandemic has made the relationship between digital transformation and institutional trust in government even more relevant. The restrictions imposed by national governments functioned as an important external driver for digital transformation within local governments regarding service provision. Digital service provision often became, like keeping social distancing, the new standard. Experience has also taught us that it takes time for governments to regain trust following a crisis. After the financial crisis of 2008, for example, it took governments more than ten years to regain the trust of their citizens (Brezzi et al., 2021).

Therefore, by focusing on the relationship between digital transformation of service provision and the level of institutional trust in local government, it can be determined whether digital service provision indeed offers room for rebuilding institutional trust in local government. The findings of this research could motivate local governments to work on the digital transformation of their service provision.

1.4: Structure

To be able to answer the discussed research questions correctly, the following steps will be taken. Chapter 2 provides a theoretical framework based on the literature on the concepts of digital transformation, satisfaction with service delivery, and institutional trust and their application in local government. The theoretical framework includes a conceptualisation of the important constructs and the therefrom following research model and hypotheses. Chapter 3 lays out the research methodology, including the operationalisation of the constructs, sampling, and data analysis methods. Chapter 4 presents the results of the quantitative data analysis. Chapter 5 presents the results of the qualitative data analysis. Chapter 6 draws a conclusion based on the results of the quantitative and qualitative data analyses. Lastly, chapter 7 interprets the results, discusses their academic and societal implications, discusses the research's limitations, and provides recommendations for future research.

Chapter 2: Theoretical framework

This chapter examines the literature on digital transformation, trust and satisfaction. These concepts will first be discussed on their own and regarding their application in local government in sections 2.1-2.3. Additionally, these sections conceptualise digital transformation of service delivery, trust in local government, and satisfaction with service delivery. Section 2.4 discusses the concepts in relationship to each other. Lastly, a conceptual framework will be composed based on the studied literature.

2.1: Digital transformation

2.1.1: What is digital transformation of government?

Digital transformation of government is the process of implementing digital technologies in government organisations. Digital transformation includes the impact of digital technology on organisational processes, people, culture, and structures. For this reason, digital transformation requires the rethinking and redesigning of information systems and organisational processes and structures (Tangi et al., 2021; Vial, 2019). Digital transformation can enable governments to provide citizens with more tailored public services, forecast with greater accuracy, and simulate complex systems (Margetts & Dorobantu, 2019).

The approach of the socio-technical systems of Bostrom and Heijnen (1977) can help us further understand digital transformation of government. Government organisations can be viewed as socio-technical systems. Such systems are composed of the following elements: process, people, culture, structure, and information system (Bostrom & Heijnen, 1977). These components form two independent and interactive systems:

1. The technical system: the elements needed to transform input into output (processes, tasks, information systems).
2. The social system: the elements related to the environment the technical system is embedded in (organisational culture, values, and structure).

Every transformation must consider both the technical and the social system (Bostrom & Heijnen, 1977). Digital transformation is the transformation of processes, people, culture, structure, values, and information systems due to the implementation of digital technologies.

Digital technologies can be used within government organisations for various purposes. Nam (2014) summarised five types of digital technology use in government. The following types were found:

- <u>Service use</u>: using transactional services.
- <u>General information use</u>: looking up general information.
- <u>Policy research</u>: looking up information related to government policies.
- <u>Participation</u>: participating in discussion processes.
- <u>Co-creation</u>: co-creating policies, information and services with government and other services.

The dominant types of use for digital technologies are for the government tasks of service use and general information use (Nam, 2014).

2.1.2: Model of digital transformation of government

In the previous paragraph, digital transformation was introduced as a process. Defining the different stages of this digital transformation process helps us better understand how digital transformation evolves within (governmental) organisations. Janowski (2015) composed a four-stage Digital Government Evolution Model summarising these stages of digital transformation evolution. The Digital Government Evolution Model can be found in table 1. The model is based on three binary variables.

1. <u>Internal government transformation</u>: whether digitisation transforms the government's internal working and structure.

2. <u>Transformation affects external relationships</u>: whether the transformation affects the relationships between the government and its customers.

3. <u>Transformation is context-specific:</u> Whether the transformation depends on a particular application context.

Table 1: Digital Government Evolution Model (Janowski, 2015).

Stage	Application context	Characterisation		
		Internal government transformation	*Transformation affects external relationships*	*Transformation is context-specific*
Digitisation	*Technology in government*	No	No	No
Transformation	*Technology impacting government organisation*	Yes	No	No
Engagement	*Technology impacting government stakeholders*	Yes	Yes	No
Contextualisation	*Technology impacting sectors and communities*	Yes	Yes	Yes

Mergel et al. (2019) describe an additional stage between digitisation and transformation: digitalisation. Where digitisation refers to the 1:1 translation from analogue to digital services

without changes in the service delivery, digitalisation includes an adaptation of the service delivery process. This stage is also described in the work of Verhoef et al. (2021). Implementing this stage into the Digital Government Evolution Model would lead to the following extra distinctive variables.

4. <u>Use of digital technologies in the service delivery process:</u> whether digital technologies are used within the service delivery process.

5. <u>Adaptation of the service delivery process:</u> whether the service delivery process is adapted beyond digitising efforts.

With the addition of this fourth variable, the following five stages can be defined. An overview of the adapted Digital Government Evolution Model can be found in table 2.

- <u>Digitisation</u>: technology used in process.

- <u>Digitalisation</u>: technology impacting process.

- <u>Transformation</u>: technology impacting government organisation.

- <u>Engagement</u>: technology impacting government stakeholders.

- <u>Contextualisation</u>: technology impacting sectors and communities.

Table 2: Adapted Digital Government Evolution Model

Stage	Characterisation				
	Use of digital technologies in the service delivery process	*Adaptation of the service delivery process*	*Internal government transformation*	*Transformation affects external relationships*	*Transformation is context-specific*
Digitisation	Yes	No	No	No	No
Digitalisation	Yes	Yes	No	No	No
Transformation	Yes	Yes	Yes	No	No
Engagement	Yes	Yes	Yes	Yes	No
Contextualisation	Yes	Yes	Yes	Yes	Yes

2.1.3: E-government, e-governance, and digital transformation

Now that the concept of digital transformation is introduced, it is informative to lay out its fundamental differences compared to the closely related concepts of e-government and e-governance. The concepts all examine (to some extent) "how the public sector uses ICTs (Information Communication Technologies) to enhance service delivery, change organisational processes and culture, as well as its impact on value creation." (Mergel et al., 2019, p.2). This

thesis views all three concepts as processes of implementing digital technology within government organisations. However, the three processes all have a different continuum of stages. The concepts gradually take more elements of the socio-technological system into account.

E-government is the mere delivery of government information and services to citizens using electronic means (Fang, 2002). E-government related to service provision mainly focuses on making digital service provision more efficient for citizens. For this reason, the e-government process is mainly concerned with changes within the own governmental organisation. These changes mostly focus on changing the service delivery from analogue to online (Linders, Liao, & Wang, 2018). The style and purpose of the service delivery itself are not re-evaluated or redesigned (Mergel et al., 2019). E-government only focuses on the technical components of digitalisation. Changes in information changes will not lead to changes in tasks and processes.

E-governance is the application of electronic means for interactions between government and citizens (Backus, 2001). E-governance and digital transformation already have more in common as they both view citizens and other external stakeholders as co-producers, not just as consumers of services (Meijer, 2015). E-governance also partially takes the social system into account since the e-governance process also focuses on the relationships with external stakeholders. According to socio-technical theory, joint optimisation through the interaction between the social and technical systems creates conditions for successful organisational performance. Only the concept of digital transformation includes a focus on the interactions between these two systems. Therefore, the level of digital transformation of local government is the point of focus in the research, rather than the level of e-government or e-governance.

2.1.4: Conceptualisation digital transformation of service delivery within local government

For this research, the definition of trust in local government shall be based on the following definition of digital transformation based on expert interviews of Mergel et al. (2019): "Digital transformation is a holistic effort to revise core processes and services of government beyond the traditional digitization efforts. It evolves along a continuum of transition from analogue to digital to a full stack review of policies, current processes, and user needs and results in a complete revision of the existing and the creation of new digital services. The outcomes of digital transformation efforts focus, among others, on the satisfaction of user needs, new forms of service delivery, and the expansion of the user base." Summarising and specifying that definition results in the following definition:

> **Digital transformation of service delivery within local government**: a process that evolves along a continuum of transition from analogue to full stack review of policies, current processes, and user needs concerning service provision by *local government*.

Digital transformation is often seen as a shift in paradigm or a technological revolution regarding the use of digital technologies in government (Perez, 2010). However, in this research, the concept of digital transformation is seen as a process that evolves along a continuum. The continuum and its different stages are defined in 2.1.3. This conceptualisation is chosen, as this conceptualisation better allows for the measurement of the concept as a variable of a (local)

government organisation. This research will focus on digital transformation within service provision as service provision is one of the dominant types in which digital technologies are used (Nam, 2014). In addition, service provision fits the public administration scope of this research as service provision is seen as one of the main tasks of municipalities (Schaap, 2019).

2.2: Trust

2.2.1: What is trust?

Trust is a concept that various disciplines have examined. Disciplines view the concept of trust from different perspectives, such as the economic (North, 1990), physiological (Tyler, 1990) or sociological perspective (Zucker, 1986). Physiologists look at the tendency of individuals to trust one another. Sociologists look at the function of trust within society. Economists often perceive trust as nothing more than calculated risks. These different perspectives lead to a wide variety of definitions of trust. While a "widely accepted definition of trust is lacking" (Li et al., 2012), there are similar elements in the definitions from different perspectives. Rousseau et al. (1998) summarise these similarities in the following four elements. (1) vulnerability, (2) risk, (3) uncertainty, and (4) expectations. Trust is only relevant in situations that involve risk since the trustee can abuse their position of power. Expectation approaches focus on positive expectations regarding the other party's intentions regardless of the uncertainty about how the other might act. Therefore, trust requires a willingness to be vulnerable to the actions of others (Lewicki et al., 2006).

Trust is multidimensional and entails cognitive, emotional, and behavioural dimensions (Lewis & Weigert, 1985). First of all, trust is based on a cognitive process. Individuals differentiate between individuals and institutions that are trustworthy, untrustworthy or unknown. This choice is made rationally. The emotional component of trust complements the cognitive component. Situations that involve trust can evoke strong emotional reactions when trust is abused. The behavioural component of trust refers to the process of taking risks based on the assumption that the other involved actors are component and trustworthy. An essential function of trust is the reduction of complexity. Trust is a functional alternative for rational prediction to reduce complexity. Trust enables us to take risks and handle uncertainty (Edelenbos & Klijn, 2007). Trust is a framework condition for the existence of society (Blokstra, 2019).

The terms of trust and confidence are interwoven, but there is a distinction between the terms. While trust is based on the perception of integrity and shared values, confidence is associated with the perception of good performance (Hardin, 2006). In theory, civilians may have low confidence in the performance of a public institution but maintain a high level of public trust regarding the institution's intentions. Alternatively, civilians can have high confidence in the performance of a public institution but do not trust the public integrity of the institution (Llewelly, Brookes & Mahon, 2012). It is also important to note the difference between trust and trustworthiness. Trust is a characteristic of the trustor (in relationship to the trustee), and trustworthiness is a characteristic of the trustee (Urbano, Rocha & Oliveira, 2013). Trustworthiness is the ability to be deserving of trust. An individual can only trust another

person or institution if they are trustworthy. Trustworthiness is subjective and perceived by the trustor.

2.2.2: Trust in (local) government

Trust in government or public trust has been defined in section 2.2.1 as the positive expectation that governmental institutions will act in the public's interest. Trust in government is a growing point of attention (Elchardus & Smits, 2002). However, Blokstra (2019) concluded that little research has been done on trust in local government specifically. Grimmelikhuijsen & Knies (2017) support this statement as they write that government institutions such as municipalities are not often the object of research. The fact that municipalities are rarely the point of focus also shows in the gathering of data by the Dutch Centraal Bureau Statistiek (CBS). They measure citizens' trust in different (political) institutions, such as the police, the EU or the parliament. However, they do not measure the level of trust of citizens in the institution of the municipality (CBS Statline, 2021). The research that has been done found local trust in government to be significantly higher than national trust in government (LKO, 2018). Denters (2002) found a slight negative relationship between the size of a municipality and citizens' level of trust in their municipality.

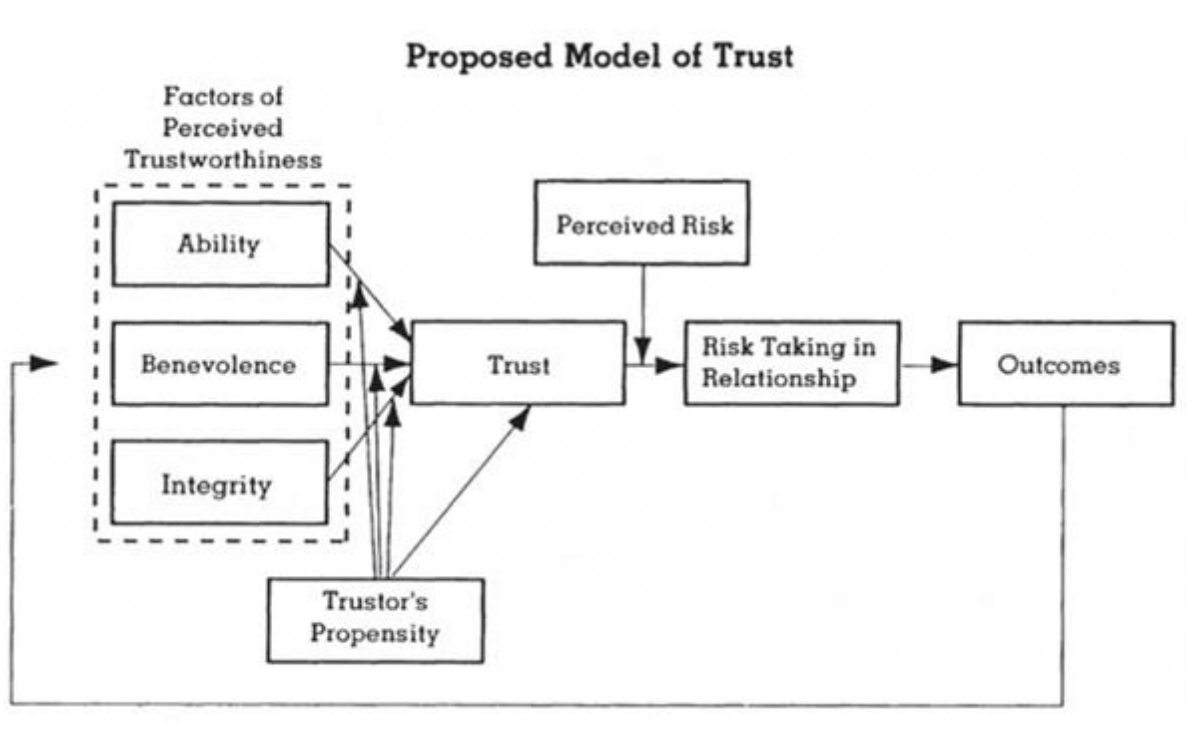Figure 1: Proposed model of trust (Mayer et al., 1995, p. 715)

While little research has been done on trust in local government specifically, Blokstra (2019) adjusted a commonly used model for the concept of trust in the context of local government. This commonly used model for the concept of trust is the model by Mayer, Davis and Schoorman (1995) is considered the standard trust production model (Blokstra, 2019). The

model was initially designed to explain trust within organisations but has often been used in more general contexts. The model focuses on the cognitive dimension of trust.

The factors ability, benevolence, and integrity influence the trustee's perceived trustworthiness. Predictability is a fourth factor that does not make up a part of the original model but is regularly mentioned in the literature (Dietz & Den Hartog, 2006). Ability refers to the skills and knowledge the trustee is perceived to have in a specific domain. Benevolence is the perception of trust from the trustee in the trustor. Integrity is the perception that the trustee upholds values that are in line with and acceptable to the trustor. Predictability entails consistency and regularity in the behaviour of the trustee. Lastly, next to the factors of perceived trustworthiness, the propensity of the trustor plays a role in the trust process. Some individuals are more prone to trust than others.
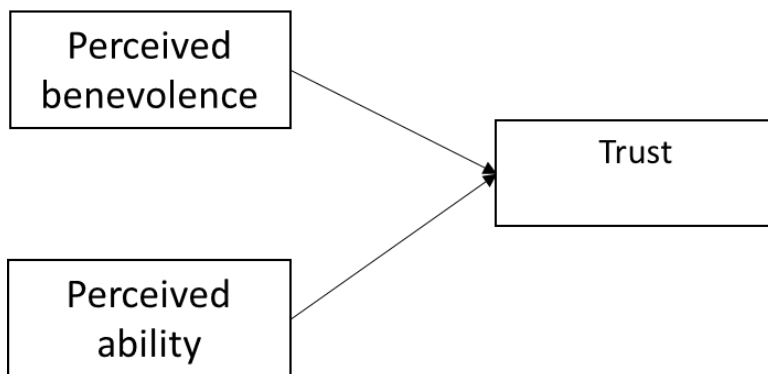
Figure 2: Model for trust in local government (Blokstra, 2019).

Blokstra (2019) adapted the model of Mayer et al. (1995) for the production of trust in the context of local government. In figure 2, his model for trust in local government can be found. The figure has been adapted by translating it from Dutch. He found that the original model could be simplified by removing the integrity factor of perceived trustworthiness and the trustor-dependent factor of propensity. The factors of benevolence and ability determining the level of perceived trustworthiness account for all the variations in the level of trust of citizens in their local government. The model displayed in figure 2 explains the variation in the level of trust similar to the composed standard model with 32 antecedents for trust. The level of perceived responsiveness represents benevolence. The level of perceived responsiveness is determined by the perception of a government that listens to and acts on behalf of its citizens. The perception of administrative competence represents ability. The level of perceived administrative competence is determined by the local government's reputation rather than the perceived competence.

2.2.3: Conceptualisation trust in local government

For this research, the definition of trust in local government shall be based on the following definition of trust by Rousseau et al. 1998, p. 395: "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour

of another". Specifying this definition to trust in local government provides us with the following definition:

> **Trust in local government:** a psychological state of a citizen compromising on the intention to accept vulnerability based upon a positive expectation of the intentions or behaviour of the institution of local government.

This definition focuses on the citizens' trust in the local government as an institution. Institutional trust is based on impersonal institutional mechanisms rather than on the individuals performing the tasks (Smith, 2010).

2.3: Satisfaction with service delivery

2.3.1: What is satisfaction?

The concept of satisfaction is generally looked at from the producer-consumer paradigm. Yi (1990) conceptualised satisfaction as an attitude-like judgement following a product purchase or based on a series of consumer-product interactions. Whether satisfaction is a one-time evaluative judgement following a purchase or a series of interactions over time is debated. However, most satisfaction research adopts the single-time transaction-based view (Anderson et al., 1994). The confirmation or disconfirmation of pre-consumption product standards is seen as the essential determinant of satisfaction (Erevelles & Leavitt, 1992; Oliver, 1980). The consumer will be satisfied if the product upholds the consumer's standards before consumption. The consumer will be dissatisfied if the product does not uphold these standards.

The most used model within this paradigm is the expectations-disconfirmation (ED) model of satisfaction response by Richard L. Oliver (Van Ryzin, 2006). This model describes satisfaction as a comparative process whose results derive from three elements: expectations, performance, and disconfirmation. The satisfaction or dissatisfaction judgment comes from the value of the discrepancy between the expectations and the perceived performance. In addition, Grimmelikhuijsen & Porumbescu (2017) found that the evaluation of expectations and perceived performance are not chronological processes but that these processes are continuously affecting one another.

Regarding satisfaction with technology products specifically, Fournier & Mick (1999) called for a balancing paradigm. This paradigm focuses on balancing eight found paradoxes of technology. These paradoxes are (1) technology facilitates freedom and invites enslavement, (2) technology facilitates control and creates chaos, (3) technology solves problems and creates others, (4) technology saves time and uses time, (5) technology leads people to feel intelligent and makes them feel stupid, (6) technology often seems new but is quickly obsolete, (7) technology assimilates and isolates people, and (8) technology engages and disengages human involvement. This perspective states that "satisfaction is the function of the success of continuing efforts to keep paradoxes in relative balance." (Fournier & Mick, 1999).

2.3.2: Satisfaction with (local) government

Satisfaction with (local) government has been mostly looked at from the producer-consumer perspective under the New Public Management approach. However, over recent years this

paradigm has generated dissent. Academics find the comparison of governments as merely producers and customers to be an oversimplification of reality.

Government organisations do not always seek to produce, supply, and provide but also seek to prevent, limit or shape consumption (Alford & Speed, 2006). When it comes to service delivery, the role of the citizen is not only to consume and provide feedback. They are also to participate and determine, in a collective manner, what will be produced, in what manner, and by whom. The relationship between citizens and government can be marked as a mutual obligation, a reciprocal relationship, instead of a one-sided relationship in the producer-consumer paradigm. Labelling citizens as just consumers hinders a healthy development of an active society (Abdullah, 2008). Therefore, Abdullah (2008) proposes the use of a Government-Citizen model. This model values accountability, transparency, public consultation, participation, and democracy just as much as service quality.

2.3.3: Conceptualisation satisfaction with service delivery

While the producer-consumer paradigm is receiving criticism, the expectancy-disconfirmation model (EDM) is still seen as a robust tool for assessing citizen satisfaction (Zhang et al., 2021). Van Ryzin (2006) also concluded this after testing the suitability of the ED model for government services. For this research, satisfaction with service delivery of local government will therefore be defined as:

> **Citizen satisfaction with service delivery**: an attitude-like judgement of citizens following from the evaluation of the discrepancy between the expectations and perceived performance of a series of interactions with local government services.

According to this definition, satisfaction with service delivery is based on a series of interactions with local government services. This phrasing has been chosen as it refers to all interactions with the service delivery, not only the service itself.

2.4: Digital transformation, satisfaction and trust in government

First, it is important to outline how different scholars have defined the mechanisms through which trust in government is produced. Christensen et al. (2020) found that satisfaction with service delivery is the most influential factor correlated with trust. Higher trust levels are achieved by governments that also have higher satisfaction rates for their service delivery. The modes of trust production provide theoretical background for how satisfaction with service delivery could affect trust in local government.

2.4.1: Trust and satisfaction with government

Christensen et al. (2020) found that satisfaction with service delivery is the most influential factor correlated with trust. Higher trust levels are achieved by governments that also have higher satisfaction rates for their service delivery. First, it is important to outline how different scholars have defined the different mechanisms through which trust in government is produced. These modes of trust production provide theoretical background for the way satisfaction with service delivery could affect trust in local government.

Thomas (1998) outlines three conceptions of trust: (1) fiduciary trust, (2) mutual trust and (3) social trust. These ways of conceiving trust all apply to the conception of trust of citizens in their government.

- Fiduciary trust**:** Fiduciary trust arises from individuals that place trust in another actor to act in his or her capacity. Such asymmetrical relationships are common in government. The principle (the citizen) needs to trust their agent (the government) to act in their interest.

- Mutual trust**:** Mutual trust is based on symmetric interpersonal relationships between individuals. Mutual trust plays a role when a citizen comes into contact with a street-level bureaucrat.

- Social trust**:** Social trust refers to the trust that is embedded in social systems. Social trust cannot be delineated from mutual or fiduciary trust. They are mutually supportive.

Lynne Zucker (1986) identified three modes of trust production. These are (1) character-based trust, (2) process-based trust and (3) institutional-based trust.

- Character-based trust**:** character-based trust is produced through personal characteristics such as gender, background or age (Zucker, 1986).

- Process-based trust**:** process-based trust is produced through repeated exchanges (Zucker, 1986). Positive exchanges support the production of trust. The emergence of process-based trust is a time-extensive process.

- Institutional-based trust**:** institutional based trust is produced through institutions that have become accepted as social facts (Zucker, 1986). Institutions provide certainty, which is beneficial to produce trust. Zucker (1986) identifies two types of institutional-based trust. The first type is specific to the membership of subcultures by organisations or individuals. The second type is produced through intermediary mechanisms such as laws, regulation and insurance.

When citizens are satisfied with the service delivery through the repeated positive interactions, they are more likely to expect the government to act in their capacity. Thus, satisfaction with service delivery triggers the mechanism of fiduciary trust conception and process-based trust production. However, for citizens' satisfaction to have a positive influence on trust, several prerequisites must be in place (Van de Walle et al., 2002):

- All citizens see the services involved in quality improvement projects as 'government' services;

- These services take up an (the most) important part of the perception of government, and are distinguished conceptually from the monolithic term 'government';

- Perceptions of service quality are based on facts, and not on pre-established stereotypes;

- Performance matters to citizens, and is as such the main criterion to evaluate government in general;
- Satisfaction evaluations will lead to more trust in government, and it is not the existing level of trust that influences satisfaction.

2.4.2: Satisfaction with government and digital transformation

The previous section outlined how service delivery satisfaction can positively influence local government institutional trust. This section will focus on how the digital transformation of local government could lead to higher satisfaction rates, but the mechanisms that could hinder a positive influence are also discussed.

Satisfaction with the service delivery of government is achieved when the expectations regarding the service delivery are met or exceeded by the citizens' perception of the service delivery performance. For the digital transformation of local government to positively influence the satisfaction level of citizens, the digital transformation must lead to a better perceived performance of service delivery. Digital transformation is often seen as capable of increasing government operations' efficiency, transparency and accountability (Gil-Garcia & Helbig, 2007). These effects of digital transformation could lead to higher satisfaction levels for citizens.

However, the level of satisfaction is also influenced by the citizens' expectations regarding the service delivery process. Digital transformation of service delivery outside of the public sector is influencing citizens´ expectations of the service delivery performance of the government. They expect similar high-value, real-time digital services (Mergel, 2019). If local governments fail to meet these higher expectations, the satisfaction rates will not rise. As the resources of public organisations are often more limited than those of private organisations, it is questionable if local governments can keep up with the higher expectations of citizens.

2.4.3: Digital transformation, satisfaction and trust in government

Pina et al. (2010) found that e-governance fails to reshape the relationship between citizens and governments because of the lack of integration of digital technology within the organisation. Technologies' potential to transform the relationship between citizens and governments is not met. The perspective of digital transformation could potentially fill this gap. As the change in looking at government organisations through their process of digital transformation has been chiefly happening over the last decades (Mergel, 2019), research on the relationship between digital transformation within government and trust in government is scarce.
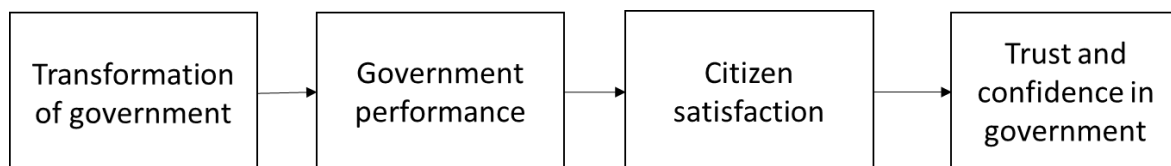
| Transformation of government | → | Government performance | → | Citizen satisfaction | → | Trust and confidence in government |

Figure 3: Model of the relationship between transformation of government and trust and confidence in government (Mahmood, 2016).

Mahmood (2016) also perceived a research gap regarding the relationship between digital transformation and trust in government. In his thesis, he developed and confirmed the above-displayed conceptual model regarding the relationship between the transformation of government and trust and confidence in government. This model adopts a citizen-centred perspective, meaning that all of the above constructs refer to the citizen's perception of the variables. The factors influencing the transformation of government are not displayed in this version of the model as they are not of relevance as the digital transformation of government is the independent variable of this research.

A successful digital transformation of a government organisation leads to enhanced government performance. Better performance of government responsibilities leads to higher citizen satisfaction with the function of government. Higher satisfaction, finally, leads to more trust and confidence in the government itself (Mahmood, 2016).

2.5: Conceptual framework and hypotheses

2.5.1: Conceptual framework
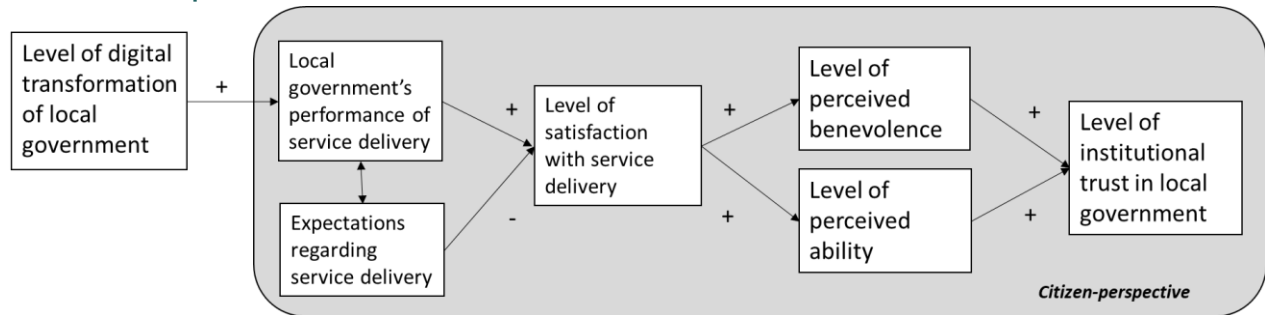
Figure 4: Conceptual framework

The above-described review of the literature on the topics of institutional trust, satisfaction with service delivery and digital transformation of government can be summarised in the conceptual framework displayed above.

The level of digital transformation impacts the level of institutional trust in local government via a causal chain of various concepts. Each of these concepts is viewed from the perception of the citizen. The level of digital transformation of government has been found to have a positive impact on the perception of the performance of service delivery (Mahmood, 2016).

A more positive perception of the performance of the local government regarding service delivery leads to higher satisfaction with the service delivery (Mahmood, 2016). Higher expectations of the service delivery process lead to a lower level of satisfaction according to the original expectancy-disconfirmation model (Oliver, 1996). However, more recent studies found a continuous interaction between the level of perceived performance and the level of expectations. A negative expectation of the performance will affect the perception of the actual performance, and the perception of performance can also affect previous expectations (Grimmelikhuijsen & Porumbescu, 2017).

Blokstra (2019) found benevolence and perceived ability to be the main driving factors of institutional trust. We assume that a higher satisfaction level, caused by a better service delivery process, results in a higher perceived level of benevolence and ability. The local government will better meet the needs of the citizens (benevolence) and get a better reputation (ability). These factors positively affect the level of institutional trust (Blokstra, 2019).

Personal antecedents such as age, gender, income, etc., were found to have no significant effect on the local government's level of institutional trust (Blokstra, 2019). For this reason, personal characteristics and socio-economic factors were not included in the conceptual framework.

2.5.2: Hypotheses
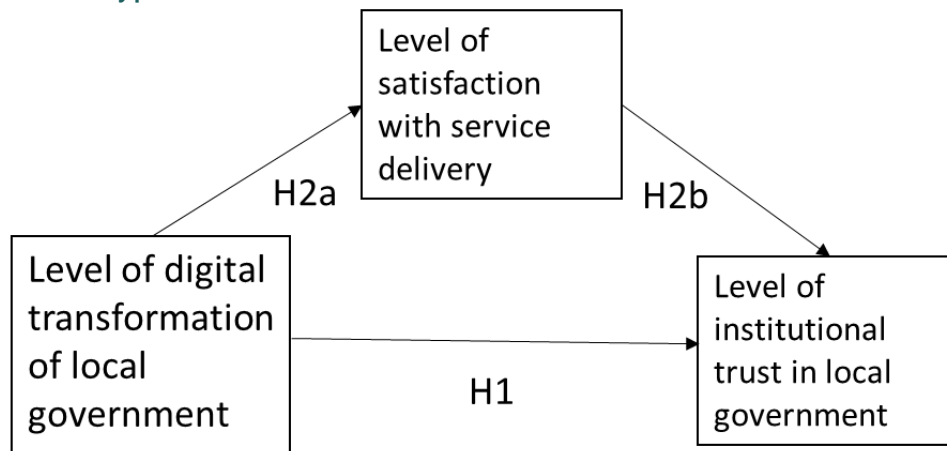
Figure 5: research model

The following research model is derived from the above-described conceptual framework. The concepts derived from the expectancy-disconfirmation model are excluded from the research model as these relationships are already widely researched (van Ryzin, 2006; Zhang, 2022). The concepts of perceived ability and perceived benevolence are not included in the research model for practical reasons. No secondary data sources were found suitable to test these concepts fittingly. Unfortunately, performing primary data collection is not possible due to time constraints.

This approach will lead to more theoretical knowledge on satisfaction with service delivery as a mechanism behind the relationship between digital transformation and institutional trust in government on a local level. The satisfaction with service delivery mechanism fits the concept of process-based trust production of Zucker (1986). Approaching this relationship from a public administration perspective adds to the novelty of the research as (institutional) trust in government is currently mostly looked at from a sociology or political science perspective (Bornstein & Tomkins, 2015).

The research model fits the framework of a simple mediation model. The direct relationship between the dependent and independent variables is reflected in hypothesis 1. Hypotheses 2a and 2b reflect the proposed indirect relationship between the level of digital transformation of

local government and the level of institutional trust through the mediator variable level of satisfaction with service delivery. By both analysing the proposed direct and indirect relationship, conclusions about the significance of the mediator variable can be drawn.

H1: A higher level of digital transformation of local government leads to a higher average level of institutional trust in local government.

H2a: A higher level of digital transformation of local government leads to a higher average level of satisfaction with service delivery.

H2b: A higher level of satisfaction with service delivery leads to a higher average level of institutional trust in local government.

Chapter 3: Methodology

In the previous chapter, a research model was conducted based on academic research in the fields of digital transformation of service provision, satisfaction with service delivery, and (institutional) trust in local government. This chapter will first describe the study's research design and data collection methods. Subsequently, the operationalisation of the constructs will be provided. Lastly, this chapter discusses the data analysis methods and their validity and reliability.

3.1: Research Design

This research can be categorised as a cross-sectional analysis, as the variables will be measured at one point in time for different municipalities. The independent variable and mediator variable were measured in 2018. The dependent variable was measured in 2022. Comparing cases that are mostly similar except on their score for the level of digital transformation of service provision can determine if a relationship with institutional trust in local government can be found. This comparative research will be performed using a pre-structured approach, meaning that the steps of the research design were outlined before commencing with the research.

This research is a sequential mixed methods study. Mixed methods studies combine quantitative and qualitative approaches into their research methodology design (Tashakkori, 1998). The study consists of separate qualitative and quantitative phases.

1. First, qualitative measurements in the form of interviews will be taken to check the validity of the quantitative measurement of the independent variable 'level of digital transformation of service provision'.

2. Subsequentially, quantitative data will be analysed to answer sub-questions one, two, and three.

This mixed approach provides the tools to validate quantitative measurement operations and instruments using qualitative research (Kelle, 2006). Deviations from the outcomes of the qualitative measurements of the independent variable from the quantitative data can be used for recommendations for an improved quantitative operationalisation of the variable.

Table 3: Units of analysis and observation and measurement scales

	Type of variable	Units of analysis	Units of observation
Independent variable (level of digital transformation of service provision)	Ordinal variable	Dutch municipalities	Dutch municipalities
Mediator variable (level of satisfaction with service provision)	Ratio variable	Dutch municipalities	Citizens of Dutch municipalities
Dependent variable (level of institutional trust in local government)	Ratio variable	Dutch municipalities	Citizens of Dutch municipalities

Table 3 provides an overview of the variables in the research model. The table includes the type of the variable, the units of analysis and the units of observation.

3.2: Data collection

3.2.1: Qualitative data collection

For the qualitative phase of this research, primary data was generated in the form of semi-structured interviews. Thus, a set with initial open questions has been composed, but there is still room for follow-up questions. These follow-up questions might differ per respondent based on their answers to the initial set of questions. The initial layout provides the means to ensure reliability between the respondents' answers. The possibility of asking differing follow-up questions provides the opportunity to gather more in-depth information from the respondents. The interviews were held online via Microsoft Teams and were recorded. The interviews took on average 30 minutes.

Service selection: report public space (Melding Openbare Ruimte)
The service of making and handling a report about the public space (Melding Openbare Ruimte) has been selected as the service focused on in the interviews with the municipalities. This service is chosen because the service offers room for ranging levels of digital transformation and is offered by all municipalities. Therefore, this service can function as a good foundation for making recommendations about a quantitative operationalisation for the measurement of the level of digital transformation of local government. In addition, the public space is one of the first direct indicators of the functioning of their local government for citizens. Managing the public space so that is clean, whole, and safe is seen as the local government's core business (Wesselink, 2013). Hence, the way the public space and reports about the public space are handled plays a role in the public perception of local governments.

The questions that were composed in advance aim first to obtain a good understanding of the process of making a report in the public space and the use of digital technologies within this process of the municipality of the respondent. The other questions focus on the process adaption, transformation of the internal organisation, and the changing relationships with stakeholders due to the implementation of digital technologies. The last questions are focused on the contextualisation of the implementation of digital technologies. The initial structure of the interviews can be found in Appendix A.

Case selection: municipalities with an average population size and degree of urbanisation
Cases must be selected as it is not possible to interview civil servants of all 344 municipalities in the Netherlands. Seawright and Gerring (2008) advise making a case selection based on similarities as this study explores a possible relationship between two variables. By selecting cases that are most similar except for the score on the independent variable, we might presume that the score on the independent variable causes the deviation on the dependent variable. On the other hand, a selection based on similarity means that the results cannot be generalised to other municipalities. To find most similar cases, Seawright and Gerring (2008) advise identifying matching criteria.

For this study, the matching criteria' size of the municipality' and 'degree of urbanisation' will be used to find similar cases. The criteria are used on the dataset 'Regionale Kerncijfers Nederland' from the Central Bureau of Statistics (Regionale Kerncijfers Nederland, 2022).

- Size of the municipality: research has shown that level of public trust is influenced by the size of the municipality (Denters & Goldsmith, 2014). This research will focus on middle-sized municipalities (50.000-100.000 citizens). This results in a list of 58 municipalities.

- Degree of urbanisation: research has shown that geographical differences influence political attitudes (Huijsmans, 2020). This research will focus on municipalities with a moderate degree of urbanisation. The degree of urbanisation is determined by the average number of addresses in a range of one kilometre of an address. Municipalities with an average score of between 1000-1500 addresses were included. This results in a list of 14 municipalities.

The choice of selecting the 'more or less average' municipalities is made to receive input for a broadly applicable quantitative operationalisation of the level of digital transformation of service provision. Bigger municipalities with more available resources might provide an inaccurate image of the digital transformation process of the average municipality.

Lastly, it needs to be ensured that the cases have a quantitative digital maturity score to compare the qualitative measurement to. For 12 of the 14 municipalities, this data is available. Ideally, all these twelve municipalities will function as the objects of observation. Therefore, the cooperation of the municipalities and finding enough respondents is essential. The respondent of each municipality should have a proper understanding of the process of making a report about the public space and the digital transformation of this process.

3.2.2: Quantitative data collection

The quantitative analysis will make use of secondary data. Data from the digital maturity assessment of municipalities of the Vereniging Nederlandse Gemeenten (VNG) from 2018 will be used to answer sub-question 1. Sub-question 2 will be answered based on data from the Local Voters Survey 2018. Sub-questions 3 will be answered using the digital maturity data from VNG, data from the Local Voters Survey 2018, and data from the Local Voters Survey 2022.

The research concerns Dutch municipalities and their citizens. Therefore, the respondents must reflect the citizens of these municipalities. The sample needs to correspond with the research population to ensure that the data and results represent the research population. As the municipalities themselves are both the object of observation and the object of analysis, no measures regarding the representativeness of the data need to be taken for sub-question 1. As already discussed, citizens are the object of observation for this research's mediator and independent variable. Quantitative data from the Local Voters Survey 2018 will be used to answer sub-questions 2 and 3. This data is collected by Centerdata by taking a random sample from the population register of the Central Bureau of Statistics (CBS). Centerdata checks if the data from the samples are representative of the population regarding characteristics such as gender, age, and social status. If the representativeness of the data is in danger, extra respondents are added (Jansen & Denters, 2018).

3.3: Operationalisation of the constructs

3.3.1: Operationalisation level of digital transformation of service provision

Proxy-variable: digital maturity score

The digital maturity level of a municipality will be used as a proxy variable for the level of digital transformation of service provision. The reason for using this proxy variable is the unavailability of secondary data measuring the level of digital transformation of service delivery in local governments in the Netherlands in line with the conceptualisation proposed in section 2.1. Due to time constraints performing primary data collection on this scale is impossible.

The last time the VNG conducted the research was in 2018. The research asked if 56 frequently used products were digitally available and, if so, on what maturity level (VNG, 2018).

- Level 1: No digital processes available, only information – 0%;
- Level 2: Pdf form download available (printer needed) - 33%;
- Level 3: Downloading, digitally filling in, and digitally sending the pdf form – 66%;
- Level 4: Pre-filled in form – 100%;
- Product is not perceptible.

They conducted both digital maturity scores for the products for citizens and businesses. This research will make use of the citizen-based score. The maturity score of the municipality is the average percentage of the perceptible products (0-100%). This variable is measured on the ratio scale.

Validation proxy-variable

As digital maturity is a proxy variable, it may not wholly align with the level of digital transformation of service provision. The digital maturity score provides information on the extent that products are offered digitally. However, the score does not provide any information on how the digitalisation affects the processes, people, and relationships in the government organisation. However, we assume that local governments with a high digital maturity have prioritised digital processes in the organisation. Consequently, these local governments are also more likely to pay attention to the processes, people, and relationships affected by digitisation. Measurements will be conducted to validate whether higher digital maturity levels indeed result in a higher level of digital transformation of local government before the quantitative data analysis.

The level of digital transformation service provision can be operationalised by turning all four dimensions described in the conceptualisation chapter into a binary variable.

The following five stages can then be defined.

- <u>Digitisation:</u> technology used in process.
- <u>Digitalisation:</u> technology impacting process.
- <u>Transformation:</u> technology impacting government organisation.
- <u>Engagement:</u> technology impacting relationships with external stakeholders.
- <u>Contextualisation:</u> technology impacting sectors and communities.

This operationalisation also fits the socio-technical systems perspective of Bostrom & Heijnen (1977). They view government organisations as socio-technical systems. Such systems are composed of the following elements: process, people, culture, structure, and information system (Bostrom & Heijnen, 1977). The stages of digitisation and digitalisation refer to the technical system (the transformation of information systems and processes). The stages of transformation, engagement and contextualisation refer to the social system (the transformation of culture, structure, and people).

Each stage consists of one or several criteria. For each criterion to turn true, one or several indicators must be present. A list of possible indicators specific to the case of making and handling a report about the public space has been composed. This list can be found in Appendix B. As an indication, the criteria and their indicators for phase 1 – digitalisation are listed below. The criteria are seen as binary variables and turn true when one or more indicators are present. A municipality will be categorised in the highest stage of digital transformation, for which they score true on all the corresponding criteria. This categorisation can be seen as an ordinal scale.

Phase 1: *Digitisation*

- *Criteria 1: Use of digital technologies in the process*
    - Access to online documents or information via digital networks for citizens

o   Access to online documents or information via digital networks for civil servants
o   Service accessible via digital networks
o   Internal digital communication between civil servants
o   Digital communication between citizens and municipality

3.3.2: Operationalisation satisfaction with service provision

The level of satisfaction with service delivery is operationalised based on the answers to question ue18a197 of the Local Voters Survey 2018. This question is formulated as follows:

Generally speaking, what do you think of your municipality's provision of services?

Please indicate your opinion by means of a grade, with 1 meaning "very bad" and 10 meaning "very good".

Satisfaction with service provision will therefore be measured on a ratio scale of 1 – 10. This operationalisation refers to satisfaction with service provision as a whole and does not differentiate between the different dimensions of the perception of service quality.

3.3.3: Operationalisation trust in local government

The level of trust in the local government is operationalised based on the answers to question v26c, v26d, v26e and v26f of the Local Voters Survey 2022. These questions are formulated as follows:

Please indicate for each of the following persons or institutions to what extent you trust them.

- v26c: the Local Council (de Gemeenteraad)
- v26d: the bench of Major and the Aldermen (College van Burgemeester en Wethouders)
- v26e: the Major (de burgemeester)
- v26f: municipal officials (gemeenteambtenaren).

The respondents can choose from the following answers: 1. not at all, 2. not much, 3. quite a lot, 4. a lot, 5. do not know.

Each of the items is measured on a 4-point Likert scale, with a fifth option to indicate that the respondent does not know to what extent they trust this person or institution. If a respondent answers one of the four questions with option 5, the respondent will be removed from the data set. Hence, the level of trust in local government is operationalised as the sum of the scores for the four items, with a minimum of 4 and a maximum of 16.

3.4: Data analysis

SQ1: What are the levels of digital transformation of service provisions within Dutch municipalities?

This question will be answered by analysing the quantitative data of the proxy-variable 'digital maturity score' collected by the Vereniging Nederlandse Gemeenten (VNG) in 2018. The data will be analysed using the IBM SPSS Statistics 28.0 program.

In addition, the semi-structured interviews with civil servants with knowledge of (the digital transformation of) the process of making a report in the public space will be analysed. The steps proposed in the book 'Research in Organizations' chapter 14, 'Analyzing qualitative data' (Ruona, 2005) were used:

1. The data is prepared by transcribing the interviews using the automated software Amberscript. The transcribed interviews are then checked for mistakes and readability.

2. The researcher reads through the transcripts to familiarise themself with the data.

3. The interviews are coded using a combination of inductive and deductive coding. The list of indicators per stage of digital transformation was used to compose an initial set of codes. The interviews were coded using this set.

4. Open coding was used to find new codes in the transcripts.

Consequently, the code book is continuously updated. The final codebook can be found in Appendix C.

The following prerequisites have been composed to categorise the municipalities. The numbers refer to the code numbers found in Appendix C.

- Level 1 - Digitisation: count (10100:10500) >= 1
- Level 2 - Digitalisation: count (11100:11300) > count (11400)
- Level 3 - Transformation: count (12110:12140) > count (12150) AND count (12210:12230) > count (12240)
- Level 4 - Engagement: count (13110:13120) > count (13130) AND count (13210:13250) > count (13260) AND count (13310:13320) > count (13330)
- Level 5 - Contextualization: count (14110) >= 1 AND count (14120) >= 1

The municipality is categorised in level n −1, where n is the first prerequisite that turns false.

SQ2: What are the levels of institutional trust of citizens in their local government in Dutch municipalities?

By using the answers to the survey questions for the four items, an index score (4-16) can be made up for each respondent. The average of those scores per municipality will say something about the level of trust in the local government. The quantitative data will be analysed by use of the IBM SPSS Statistics 28.0 program.

SQ3: Is the level of digital transformation of service provision within Dutch municipalities causally related to the level of institutional trust of citizens in local government?
Using the results of the hypotheses described earlier, we will see if the research model composed based on the literature can be rejected or accepted. Therefore, multiple regression analyses will be performed. In doing so, we can derive conclusions about the relationship between the level of digital transformation and the level of institutional trust and the possible mediator role for the variable 'level of satisfaction with service delivery'.

3.5: Assuring reliability and validity

Level of digital transformation – proxy variable
The digital maturity level of municipalities is composed by analysing the level of digitisation of 56 frequently used products and services. The requirements for the categorisation are discussed in section 3.3.1. These requirements are well-defined and leave little room for a researcher's interpretation. As discussed earlier, full content validity cannot be assured for this variable regarding the level of digital transformation of service provision as this variable is used as a proxy.

Level of digital transformation – after-measurement
To guarantee content validity, the list of indicators per stage of digital transformation needs to fully cover the characteristics of the defined stages of digital transformation. Additionally, the interview questions must focus on all these characteristics to ensure content validity. To check the reliability of the results, the intra-coder reliability was measured. The intra-coder reliability checks whether the coder would code the same interview consistently when coding the second time. The researcher did the first round of coding before making the coding scheme. When the coding scheme was applied in the second round of coding, the researcher checked whether the coding was in line with the first round of coding.

Level of trust in local government
The survey questions used to operationalise this variable will only consist of closed-ended questions. In doing so, the reliability of the interpretation of the responses can be assured as they do not need interpretation from the researcher. The four items of the question ensure content validity as the index score for trust is composed of the sum of the level of trust in the Local Council, the Major, the bench of Major and the Aldermen, and the municipal officials.

The Cronbach's alpha of the scale was composed to examine the internal consistency of the four items. Cronbach's alpha "is an indication of how well the different items complement each other in their measurement of different aspects of the same variable or quality" (Litwin, 2003, p. 22). An alpha above 0.70 indicates a reliable internal consistency of the scale (McMillan & Schumacher (2001). The Cronbach's alpha for the four items measuring trust in local government is 0.867. Deleting one of the items of the scale will result in a deduction of the Cronbach's alpha for all the items. We can therefore conclude a high internal reliability of the construct.

A high Cronbach's alpha, resulting from high average inter-item correlations, might also be the result of the respondents' inability to fully understand the differences between the actors that are part of the local government. Such inability is common among Dutch citizens (Schaap, 2019). The inability to distinguish the formal differences between the actors and institutions and, therefore, the inability to distinguish their levels of trust between these actors and institutions leads to a high correlation between the items. To protect the index score's validity, respondents who do not know to what extent they trust one of the four actors are removed from the data set. In doing so, respondents that might not be able to distinguish their level of trust between the actors and institutions are excluded.

Level of satisfaction with service delivery
The survey question used to operationalise this variable consists of one closed-ended question where the respondent needs to indicate their satisfaction with service delivery on a scale of 1-10. Such a scaling system is frequently used and asks for little interpretation from the respondent. As the question is closed-ended, no interpretation from the research is required. The respondent needs to make their own interpretation of what is meant and included with service delivery, as no questions are asked about different dimensions of service quality. A differentiation of dimensions is made with available service quality metrics such as SERVQUAL (Parasuraman, 1988). Choosing to measure service quality without using its different dimensions could have possible dangers to the content validity of the construct.

3.6: Ethical Considerations

This thesis is written for the Master of Public Administration at the Faculty of Behavioural, Management, and Social Science (BMS) of the University of Twente. Studies that involve human subjects in an indirect or direct manner and/or use potentially sensitive data need to be approved by the Ethical Committee of the faculty. This study makes use of human subjects in a direct manner by conducting interviews. For this reason, the researcher entered a request at the Ethical Committee. No ethical complications were foreseen by the committee and the request was approved. The application is filed under number 221310 at the Ethical Committee of the BMS Faculty of the University of Twente. To ensure the ethicality of the research, the respondents are provided with information about the research and their rights according to the BMS Faculty guidelines (BMS, n.d.). All respondents signed an informed consent form reflecting their agreement to the conditions.

Chapter 4: Results qualitative study

This chapter discusses the qualitative part of this research. Six in-depth interviews were conducted and analysed to validate the operationalisation of the independent variable 'the level of digital transformation of service delivery'. In section 4.1, an introduction and overview of the interviews can be found. In section 4.2 the results of the interviews are discussed. Section 4.3 provides the results of the categorisation of the municipalities into one of the five categories of digital transformation of service provision based on the interviews. Th

4.1: Overview interviews

Table 4: Overview interviews digital transformation reports public space process

Respondent	Municipality	Digital maturity score (0-100)	Use of digital technologies in report public space process	Implemented systems	Aim for further use of digital technologies
Respondent 1	Weert	66%	- External mail contact - Generic ERP system - Webform on website - Social media	Zaaksysteem	No.
Respondent 2	Stichtse Vecht	71%	- External mail contact - Generic EPR system - Specific ERP system - External web application - GPS located reporting	Fixi, zaaksysteem.	No.
Respondent 3	Oss	77%	- External mail contact - Internal mail contact - Generic ERP system - In-house web application - GPS located reporting - Webform on website	Zaaksysteem, self-developed web application	Yes, roll-out phase.
Respondent 4	Doetinchem	84%	- External mail contact - Specific ERP system - External web application - Webform on website	MeldDesk	Yes, decision-phase.

Respondent 5	Meierijstad	84%	- External mail contact - Specific ERP system - External web application - Webform on website - Social media	Melddesk	Yes, orientation phase.
Respondent 6	Heerenveen	92%	- External mail contact - Generic ERP system - External web application - Webform on website - Social media	Zaaksysteem	Yes, tendering phase.

Table 4 provides an overview of the context for the conducted interviews. Six in-depth interviews were carried out to gain a better understanding of the level of digital transformation of Dutch municipalities. These interviews are used as after-measurements for the independent variable of this research. The results of the interviews provide insight into the suitability of the digital maturity score as an indicator or proxy variable for the level of digital transformation of service delivery. In addition, the interviews provide more information on the drivers of digital transformation, the attitudes of civil servants towards digital technology use and the upcoming plans for further use of digital technologies.

Five of the respondents are active within the municipality organisation. One respondent (municipality 4 – 84%) is active at a municipality enterprise founded by the municipality. The respondents' roles within the organisations differ in either a focus on the digitalisation side (advisor information management) or on the process of making and handling a report in the public space side (coordinator reporting point). However, all the respondents of the interviews are knowledgeable about the process of making and handling a report in the public space and the use of digital technologies within this process in their municipality. As seen in table 7, the municipalities range in their use of digital technologies. Moreover, the municipalities differ in their aim for further use of digital technologies and the stage of implementation of such technologies. The renewed system of organisation 3 is perceived as their current use of digital technologies as the respondent was able to demonstrate the new fully functioning system.

All municipalities make use of some form of an Enterprise Resource Planning (ERP) system that is offered by a third-party. Municipalities that make use of generic ERP systems, make use of an ERP system that is designed to support processes throughout the organisation. Zaaksysteem is an example of a frequently used generic ERP system. Melddesk and Fixi are examples of ERP systems that are specifically designed to support the processes regarding making and handling reports in the public space. The municipality of Oss is the only municipality that makes use of a system that is specifically designed for the municipality.

The goal of the interviews is to categorise the municipalities into one of five levels of digital transformation. The operationalisation of the variable of digital maturity that is used in the quantitative data analysis does not fit the paradigm of digital transformation fully. Therefore, these qualitative interviews function as a validation for the use of digital maturity as a proxy-variable. Furthermore, these interviews contribute to an explorative goal. The analysis of the interviews aims to provide more in-depth information on the effect of the use of digital technologies on the processes within the municipality, on the organisation of the municipality itself, and on the relationships of the municipality with external stakeholders. Findings on these topics might lead to recommendations for an improvement of the operationalisation of the level of digital transformation of service provision of government organisations.

4.2: Analysis interviews

4.2.1: Digital technology use

Table 5: Code-document table digital technology use

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
External email contact	3	4	2	1	1	2
Internal email contact	0	0	2	0	0	0
Generic ERP system	4	5	4	0	0	3
Specific ERP system	0	2	0	2	5	0
Social media	5	0	0	0	5	5
External web application	0	5	0	3	3	1
In-house web application	0	0	3	0	0	0
GPS located reporting	0	1	8	0	0	0
Webform	2	0	2	1	2	2

All the respondents indicate that the organisation uses email to receive reports about the public space. Three of the organisations use social media as a reporting channel. Their citizens can contact them via Twitter, Facebook, and/or WhatsApp. Two of the organisations make use of the external web application Buiten Beter application to receive reports. Organisation 3 (77%) indicated that they do not want to use this application due to privacy concerns. All the respondents make use of an automated web form on their website as a reporting channel. Only organisation one uses GPS-based reporting, where the citizen needs to indicate the location of the report on a map. Where all the municipalities indicate using an email system to receive reports, only organisation 3 indicates using an email system for handling reports about the public space. All organisations use some form of an ERP (Enterprise Resource Planning) system for the management of resolving the reports. 3 municipalities do this within the general

ERP system of the organisation, indicated as 'het zaaksysteem'. Organisations 2 (71%), 4 (84%) and 5 (84%) do this within an ERP system specifically designed for handling reports in the public space (Melddesk application, Fixi application). Fixi and Melddesk are both digital report software and come with a web application for both making and handling reports about public space. They make use of the software as a service (SaaS) model. Four organisations are in the process of further implementing digital technologies within the process of making and handling a report about public space. However, the stages they are in differ from the decision phase to the roll-out phase. All these organisations aim for some form of reporting using GPS location. Two respondents indicated that they want to implement Fixi within their organisation, and municipality 2 (71%) has implemented Fixi.

Municipalities have different motives for using digital technology within the report public space process. Efficiency and process optimisation are the most mentioned motives (3 respondents). Due to the implementation of digital technology, reports can be handled in less time and with fewer manual steps. In addition, the use of digital technology aids streamlining the process. A remarkable motive for (further) the use of digital technologies within the report public space process is the use of similar digital technologies in other municipalities (2 respondents). Respondent 6 (92%) indicated this to be due to experiences of civil servants as a citizen in another municipality:

> "And my colleague from the ICT department, so you can say that they are the advisor ICT, they live in the neighbouring municipality [X]. So, he lives there. So, he already had experience with it from the citizen side. And so, he already knew something about it, and that is how the ball started rolling."

Respondent 3 (77%) explained that the continuous cooperation with another municipality functioned as a motive:

> "Because we came into contact with the process as it worked at Woerden, we were like: well, this contributes so much to the service delivery, we just have to do that."

The motives of customer satisfaction and service delivery quality fit the role of the municipality of a service provider (2 respondents). Respondent 6 (92%) indicated:

> "So it is also much more customer-friendly for citizens and that is also one of the main reasons why we decided to purchase Fixi."

Lastly, two respondents specified that better management of information or data is an advantage of using digital technology.

4.2.2: Process adaptation

Table 6: Code-document table process adaptation

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Automation	2	3	6	2	2	1
Steps added	4	0	1	2	3	0
Steps removed	0	1	1	2	0	0
No adaptation	0	0	0	0	1	0
Absence of process evaluation	0	0	1	1	0	1
Presence of process evaluation	0	1	0	0	2	0

All respondents specified some process adaptation due to the introduction of digital technologies. The process adaptation can be categorised into three categories: automation of specific steps, adding steps, and removing steps. In all cases, the adaptation involved some form of automation. Steps that were previously done manually were now done automatically. The following quote of respondent 6 (92%) illustrates this adaptation well:

> "Yes, the advantage is of course: if they do it via the website that a lot of data is already automatically registered in the case system. Yeah, which we no longer have to do manually."

Four respondents indicated that introducing digital technologies had led to extra steps in handling a report public space. Two respondents mentioned the necessity to improve the quality or completeness of received reports. Respondent 1 (66%) stated that the digital technologies had consequences for the number of steps that were needed to complete for the employees working on the streets:

> "The process is designed in the case system and that means that the department has to do more, more steps in the system, in the application itself."

In the process of three organisations a step was completely removed from the process due to the implementation of digital technologies:

> "And before he just got several notes printed stating at these places you need to repair lamp posts." (Respondent 4 – 84%).

While all organisations experienced some form of process adaptation due to the implementation of digital technologies, only two respondents could confirm that a process evaluation prior to the implementation had taken place within the organisation.

Respondent 5 (84%) explained that they are currently doing a process evaluation before deciding on which software to implement into their process:

"No, no, not yet. We are focused on that, so to speak, to map it out. Because we think it is possible. It's not like we think: well, it can't or it's impossible. It is more of: which reports are we going to handle where and what exactly is a report?" What is the definition of a report for us? Hey, is a notification sidewalk tile: is that similar kind of notification as a request for a new garbage can for a citizen?"

4.2.3: Internal government transformation

Table 7: Code-document table organisational structure

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Formal power	0	0	0	0	0	0
Roles and tasks divided differently	0	0	0	1	0	1
Roles and tasks removed	0	2	3	4	0	1
Roles and tasks added	0	2	1	1	2	1
Work arrangements	0	0	0	0	0	2
Number of employees	0	1	0	0	0	2
Absence of change	0	0	1	1	1	0

Introducing new digital technologies led to changes within the organisational structure in five of the six organisations. These five organisations experienced that certain positions within the organisation would get extra tasks. So said respondent 6 (92%) the following about the employees of the customer contact centre at their organisation:

"I would rather say that maybe someone should join the customer contact centre because they will of course be given more tasks."

This statement also shows that implementing digital technology can lead to extra work load. Two respondents indicated that extra man hours were needed. Four organisations experienced that certain tasks or roles were removed. For example, respondent 3 (77%) indicated that employees of the customer contact centre would have less work due to the implementation of digital technologies:

"We're going to talk about the ladies from the customer contact centre first. They will get less work. On the one hand, because there are no more double reports, because a lot is automated. And because you no longer have to type for the reports, because it is just a click and the customer does it."

Respondent 6 also emphasised the need for formal work arrangements due to the implementation of digital technologies. None of the respondents mentioned a change in the hierarchy of the organisation due to digital technology.

Table 8: Code-document table organisational culture

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Collaboration frequency	0	0	1	0	0	0
Collaboration efficiency	0	0	0	1	0	0
Collaboration intensity	0	0	0	0	1	1
Communication mode	0	1	1	0	0	0
Communication frequency	0	0	1	0	0	0
Communication quality	0	0	0	0	1	0
Values: responsibility	0	0	0	1	0	0
Absence of change	0	1	0	0	0	0

In five organisations, introducing new digital technologies led to changes within the organisational culture. Three of these organisations mentioned a change in manners due to the implementation of digital technologies, either in the practices regarding communication or in collaboration within the organisation. In the following quote of respondent 3 (77%) shows the relation between changes in communication and collaboration within their organisation well:

> "Well, collaborating certainly, because what used to be done by phone and e-mail, now happens behind the scenes. You see each other less, and you speak less with each other.

When it comes to collaboration, changes are experienced in the frequency, intensity, and efficiency of the collaboration. Notably, respondent 3 (77%) indicated that less frequent direct collaboration between civil servants is needed, while respondent 6 (92%) indicated that more frequent direct contact between civil servants is needed. Respondent 6 (92%) explained that collaboration within the organisation needed a higher frequency and intensity. Thus, more civil servants from different departments need to collaborate with each other. When it comes to communication, changes are experienced in the mode, frequency, and quality of the communication. Communication is perceived to be more often not in person (either online or indirect communication), less frequent, and of less quality. Lastly, respondent 4 (84%) indicated there to be a change in the way responsibility within the organisation was valued:

> "You actually place more responsibility with the people who carry out the work outside. So, we think that's a positive thing because those people often know best what's going on in such a neighbourhood."

4.2.4: External relationships

Table 9: Code-document table relationship citizen positive and no change

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Easier access to contact	0	2	1	0	2	0
Updates	0	0	1	0	0	1
Quality of contact	0	1	0	0	1	1
No change	0	0	0	2	0	0

All respondents indicated that they have experienced or expect to experience a change in their relationship with their citizens due to the implementation of digital technologies. Digital technology can initiate negative and positive changes in the relationship between the municipality and the citizen. All the respondents see that the use of digital technologies makes it easier to get in contact with citizens. The barrier to making a report is lower when using digital technologies. Respondent 3 stated:

> "Yes, that will of course be a little less in terms of contact, but a bit faster and more accessible via the internet. 24/7, hey, you can make a report."

Two respondents mentioned that it is easier to send reporters updates about the solution when a report is being resolved due to digital technologies. One respondent indicated that using a web form is beneficial for the quality of the report and, therefore, for the contact and the relationship with the citizen.

Table 10: Code-document table relationship citizen negative

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Easier access to contact	2	0	0	1	0	0
Expectation management	0	0	1	1	0	0
Less direct contact	2	2	1	0	0	0
Quality of contact	2	0	0	1	0	0
Trust	0	1	0	0	0	0

However, two of the respondents experienced that as a downside to the easier access to contact that the quality of contact and reports becomes lower. This concerns the reports coming from social media channels:

> "A report that comes in via social media is very different from the reports that we receive by telephone and those that are registered via the website." (Respondent 1 – 66%).

The use of digital technologies for making reports means that there is less direct contact between the citizen and the civil servant (3 respondents). Respondent 1 (66%) explained that from their point of view, less direct contact has negative consequences for both citizens and civil servants. They state that citizens experience a bigger distance between the municipality and them:

> *"But I do notice that if you have contact by phone, many citizens find it more pleasant, because they can then communicate directly with an employee of the department. And if they register it via the website, for example, then they just have to wait and they are dependent on a digital system, if they get an answer? Yes or no? Yes, and then I think, as a citizen, that the distance is bigger, that they also experience it that way."*

In addition, they indicate that civil servants experience a similar growing distance:

> *"Yes, I think the specialist department feels less involved, anyway with that citizen, because it's all remote, it's all digital."* (Respondent 1 – 66%).

Furthermore, the expectation management of citizens is different when making a report using digital technology. Two respondents indicated this to have a negative influence on the relationship with their citizens. Respondent 3 (77%) made a comparison between the service delivery of the municipality and the service delivery of private delivery companies, such as Post NL:

> *"Citizens expect much more from us now. The citizen is spoiled by Google, by the orders they can place and they see examples very clearly. Citizens actually demand the same kind of service delivery as they receive from Post NL. You choose something at Bol.com, you order it, you can then decide for yourself what will be at your doorstep and when."*

Respondent 4 (84%) also explains that it is harder to set the right expectations for citizens for the resolution of the report when they make the report digitally:

> *"There is something in the confirmation email, you know. But people often find that super fuzzy. Because, yes, we try to explain that we don't immediately pick up on every   report, but they actually find that super confusing."*

Respondent 2 (71%) explained that the use of digital technology can negatively affect the trust citizens have in their report being resolved.

Table 11: Code-document table relationship public actors

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Other municipalities	2	1	3	0	1	1
Semi-government organisations	1	0	0	0	0	0
The State	1	1	0	0	1	0
Water authorities	1	0	0	0	1	0
Province	0	2	0	0	1	0
No change	0	0	0	2	1	0

Three respondents active within the municipality organisation indicated that implementing digital technologies changed the relationship with other public actors. The respondent active at the municipality company indicated that digital technologies made no changes in their relationships with public actors. The implementation of digital technologies within the report public space process particularly effectuates changes in the relationship with other municipalities. The change is mainly caused by the cooperation or knowledge exchange with another municipality in preparation for implementing new technologies. Other mentioned actors are the State (Rijkswaterstaat), the province, and water authorities.

Table 12: Code-document table relationship private actors

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Contractor	0	4	0	1	2	0
Waste disposal company	2	0	0	0	0	1
No change	0	0	1	0	0	0

Three respondents experienced a shift in the relationship with a private actor due to the implementation of digital technology. These changing relationships concern the relationship with the waste disposal company (2 respondents) or the contactor (3 respondents).

4.2.5: Contextualisation

Table 13: Code-document table contextualisation

Code	R1 (66%)	R2 (71%)	R3 (77%)	R4 (84%)	R5 (84%)	R6 (92%)
Application context of report public space	0	1	1	2	2	2
Application context of the municipality	0	0	4	0	0	0
Absence of contribution to policy goals	0	0	0	1	0	0
Initiator for policy development	1	0	3	0	0	0
Insight achievability policy goal(s)	3	0	0	0	3	0
Mean for achieving policy goal(s)	0	2	0	0	0	0

Only municipality 3 (77%) makes use of digital systems that are particularly designed for the application context of reports public space and for the application context of that municipality. Municipality 3 (77%) designed a reporting tool specifically for reports public space based on the most frequently reported categories in that municipality:

> "We first investigated which reports do we receive the most and where do they fit?   Which topics? And those twelve tiles are matters in the field of waste, pests, nuisance, greenery, roads, water, well, twelve tiles."

Four municipalities use digital systems that are specific for the context of reports public space but not specific for the context of their municipalities, such as Fixi or Melddesk.

Municipality 1 (66%) only uses generic digital systems that are not adapted for the context of reports public space or the municipality. This respondent also states dissatisfaction with the choice to work with these generic digital systems:

> "Yes, and I now miss in this department within the MOR process, because they have opted for the case system, which is much more complicated and much more customer-unfriendly than a digital system that is really specifically designed for a MOR process."

Four respondents mentioned that the implementation of digital technology contributes to specific policy goals of the municipality. Three respondents explain that digital technology aids in the information management concerning policy goals. The data can either be used as an initiator for policy as explained by respondent 3 (77%):

> "Or suppose there is a neighborhood where a lot of reports about flooding come in, well, then it's about time you started thinking about your sewerage system that lies underneath. [...] If there are a lot of reports, you get an insight into which neighborhoods are experiencing flooding. Are you going to do something? Suppose this street is going to be renovated, then you will take this into account in your design. You may have to

disconnect rainwater. Perhaps you should construct wadis. So in your management also, hey, your long-term management you can use this kind of information."

However, the data can also be used as indicator for the achievability of policy as explained by respondent 5 (84%):

"But you see, well, let's put it this way: we want to have inventoried and maintained all trees throughout [village X] this year. But you don't have the capacity for example. Or you see, in recent years we have only been able to do 5000 in one way or another and you can see that. Yes, for example, you now have 15,000 trees. I can say yes, this is not realistic with the ambitions we have. So I think that your data can certainly be supportive of certain policies that are made. And I think that the better the supporting data, the better the policy."

Respondent 2 (71%) indicated that the use of digital technology contributes to the policy goal of improving service delivery itself.

4.3: Validation operationalisation digital transformation

Table 14: Digital transformation categorisation based on the adapted Government Evolution Model (Janowski, 2015)

	Prere quisite 1	Prere quisite 2	Prere quisite 3	Prere quisite 4	Prere quisite 5	Digital transformation level
Municipality 1 (66%)	14 >= 1	6 > 0	0 = 0 AND 3 > 0	7 > 0 AND 5 > 0 AND 2 > 0	0 = 0 AND 0 = 0	Digitalisation
Municipality 2 (71%)	15 >= 1	4 > 0	5 > 0 AND 2 > 1	5 > 0 AND 4 > 0 AND 4 > 0	1 > 0 AND 0 = 0	Engagement
Municipality 3 (77%)	19 >= 1	8 > 0	4 > 1 AND 4 > 0	4 > 0 AND 3 > 0 AND 0 < 1	1 > 0 AND 4 > 0	Transformation
Municipality 4 (84%)	5 >= 1	6 > 0	6 > 1 AND 2 > 0	7 > 2 AND 0 < 2 AND 1 > 0	2 > 0 AND 0 = 0	Transformation
Municipality 5 (84%)	16 >= 1	5 > 1	2 > 1 AND 2 > 0	2 > 0 AND 4 > 1 AND 2 > 0	2 > 0 AND 0 = 0	Engagement
Municipality 6 (92%)	13 >= 1	1 > 0	5 > 0 AND 1 > 0	2 > 0 AND 1 > 0 AND 1 > 0	2 > 0 AND 0 = 0	Engagement

Table 14 contains the results of the categorisation of the researched municipalities into one of the levels of digital transformation. Three municipalities are in the engagement stage. Two municipalities are in the transformation stage. One municipality is in the digitalisation phase.

Table 15: Comparison digital maturity score and digital transformation level categorisation

	Digital maturity score (0-100)	Digital transformation level (1-5)
Municipality 1	66%	2
Municipality 2	71%	4
Municipality 3	77%	3
Municipality 4	84%	3
Municipality 5	84%	4
Municipality 6	92%	4

As can be seen in table 15, the digital maturity scores of the six municipalities are no reliable indicator for the digital transformation level based on the conducted interviews. The reliability of the number of digitised services as an indicator for the digital transformation stage of a municipality should therefore be questioned.

4.4: Recommendations operationalisation digital transformation

The conclusion of section 4.3, stating that using a digital maturity score for the operationalisation of the digital transformation level is questioning, calls for an improved operationalisation based on quantitative data. Based on the analysed interviews, the following recommendations for such an operationalisation can be made.

All municipalities fulfil the prerequisites for phase 1: digitisation and phase 2: digitalisation. The implementation of digital technology into the service delivery process was already a part of focus when the attention of government organisations was on the e-government or e-governance process instead of the digital transformation process. Therefore, it can be assumed that digital technology is used and adapts the service delivery process in some form for all municipalities. So, these characteristics do not have to be part of the operationalisation.

The scores for prerequisites 3, 4, and 5 divide the municipalities into the different stages of digital transformation. To check whether the municipality has achieved the criteria for phase 3: transformation, the operationalisation should include elements operationalising the effects of digital technology's implementation on organisational culture and structure. The interviews did not find enough evidence to make assumptions about which factor is more crucial for achieving stage 3: transformation. When checking the criteria for phase 4: engagement, the operationalisation should only check for changes in relationships with public and private actors. All organisations experience a change in their relationship with citizens due to the

implementation of digital technology. The interviews did not find enough evidence to make assumptions about the order of achievements of changes in the relationship with public and private actors. To check whether phase 5 has been achieved, the characteristic of using digital technology specific to the application context of the municipality seems to be the determining factor.

So, the proposed operationalisation should include elements checking for:

- A (positive) impact of digital technology on the organisational culture and organisational structure of the municipality;
- A (positive) impact of digital technology on the relationship of the municipality with public actors and private actors;
- Whether the use of digital technology is specific to the application context of the municipality.

Based on the Government Evolution Model (Janowski, 2015), achieving a phase implies that the characteristics of previous phases have also been achieved. However, the interviews found two municipalities where this is different. They fulfilled the prerequisite for a stage, while the prerequisite for a previous stage still needed to be fulfilled. Further validation of this hierarchical operationalisation should be conducted to see whether a hierarchal order of the digital transformation stages is valid.

Chapter 5: Results quantitative study

Chapter 5 provides the results of the conducted quantitative analysis. First, some descriptive statistics and a histogram of the variables will be displayed. Mediation analysis is performed to check for the potential mediator role of the variable 'satisfaction with service delivery'.

5.1: Level of digital transformation of service provision

The level of digital maturity is used as a proxy variable to analyse the levels of digital transformation of service provision of Dutch municipalities. The data is complete and available for 332 of the 380 municipalities in the Netherlands in 2018 (CBS, 2022a).
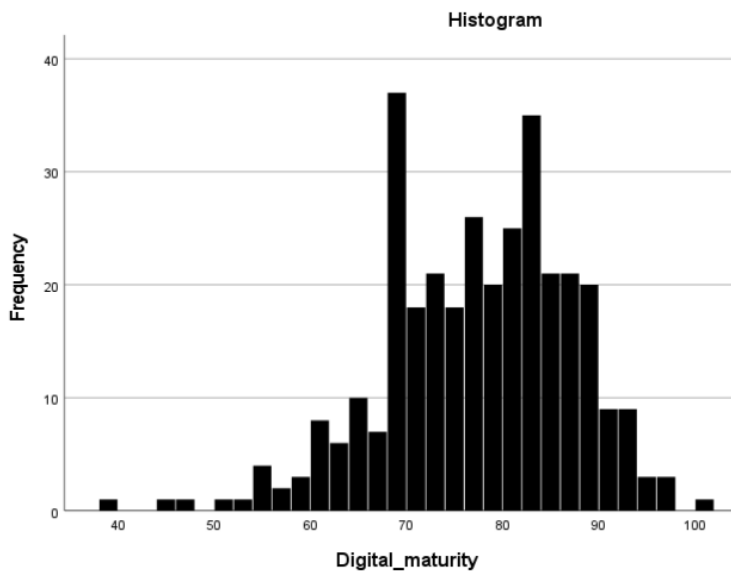
Figure 6: Histogram proxy-variable digital maturity

The average digital maturity score is 76.91% with a standard deviation of 9.806. A histogram showing the distribution of the digital maturity scores can be found in figure 6.

5.2: Level of institutional trust in local government

The index score for the level of institutional trust (4-16) is the sum of the trust scores (1-4) for the Local Council (de Gemeenteraad), the bench of Major and the Aldermen (College van Burgemeester en Wethouders), the Major (de burgemeester), and the municipal officials (gemeenteambtenaren). The variable level of institutional trust in local government is composed for each municipality by calculating the average index score of all the respondents from the municipality.

The data is available for 315 of the 345 municipalities in the Netherlands in 2022 (CBS, 2022b).
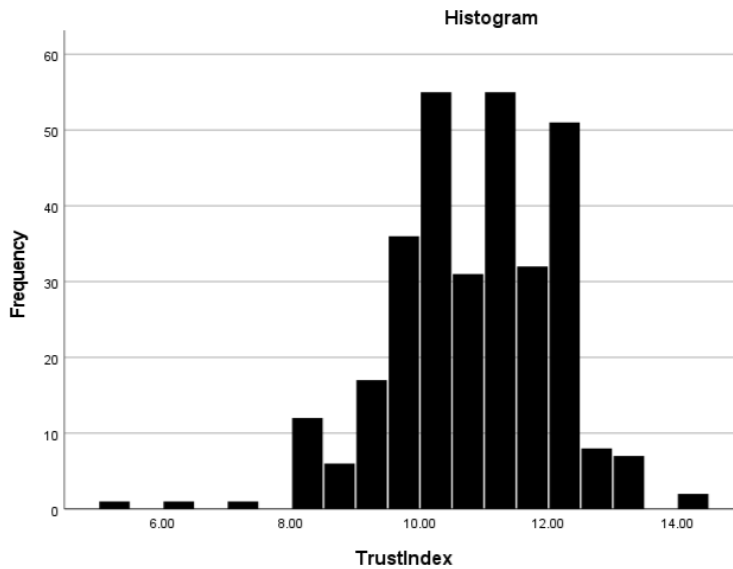
Figure 7: Histogram index-score institutional trust in local government

The average trust index score is 10.74 with a standard deviation of 1.258. A histogram showing the distribution of the trust index scores of Dutch municipalities is shown in figure 7.

5.3: Satisfaction with service delivery

The score for satisfaction with service delivery of a municipality is the average score given by their citizens for the quality of their service delivery. The data is complete and available for 314 of the 380 municipalities in the Netherlands in 2018 (CBS, 2022a).

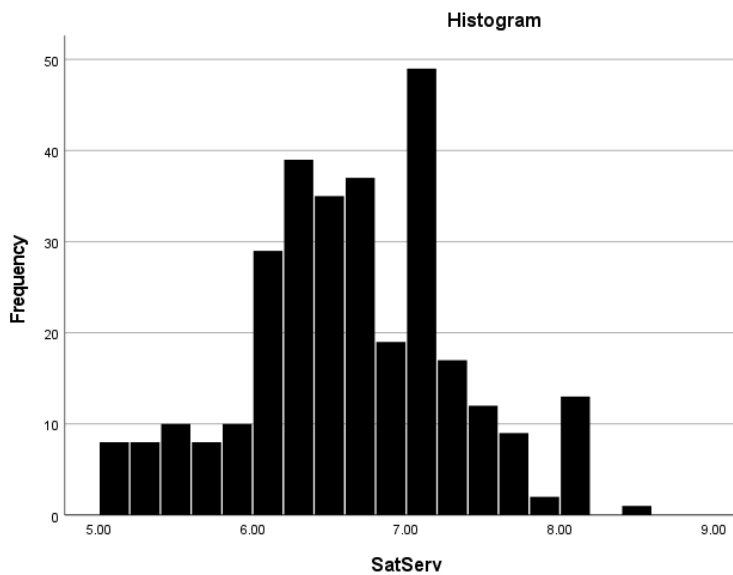Figure 8: Histogram satisfaction with service delivery

The average satisfaction with service delivery score is 6.61 with a standard deviation of 0.678. A histogram showing the distribution of the satisfaction with service delivery score for Dutch municipalities can be found in figure 8.

5.4: Mediation analysis

The digital maturity scores (0-100) for the mediation analysis have been categorised into five levels. This categorisation has been done to protect the anonymity of the data of the other variables. Scores up to 61 per cent fall into category 1. Category 2 contains scores ranging from 62% to 71%. Category 3 contains scores ranging from 72% to 81%. Category 4 contains scores ranging from 82% to 91% per cent. Category 5 contains scores ranging from 92% to 100%. These categories are based on the mean (76.91) and the standard deviation (9.806). Level three contains the scores ranging from the mean +- ½ x standard deviation. The other levels follow from there.

The variables were tested for outliers before the mediation analysis was performed to prevent outliers from affecting the results. 13 municipalities with either an outlier for the level of satisfaction with service delivery or the index score for the level of institutional trust in local government were removed from the dataset.
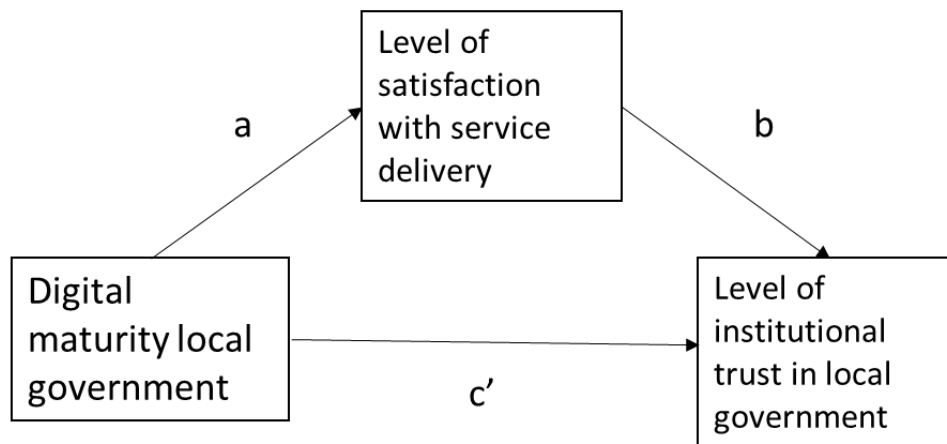
Figure 9: hypothesised mediation model

The hypothesised mediation model displayed in figure 9 was tested using the PROCESS macro model number 4 (Hayes, 2013). The model test for the significance of the total, direct and indirect effect of the digital maturity of local government on the level of institutional trust in local government. For a path to be significant for a confidence interval of 95%, a p-value equal to or smaller than .05 needs to be found. Path a was found to be insignificant (p = .2315). Path b was found to be significant (p = .000) with an unstandardised coefficient of .5438. The direct effect (c') was found to be insignificant (p = .5064). Lastly, the total effect was also found to be insignificant (p = .8037).
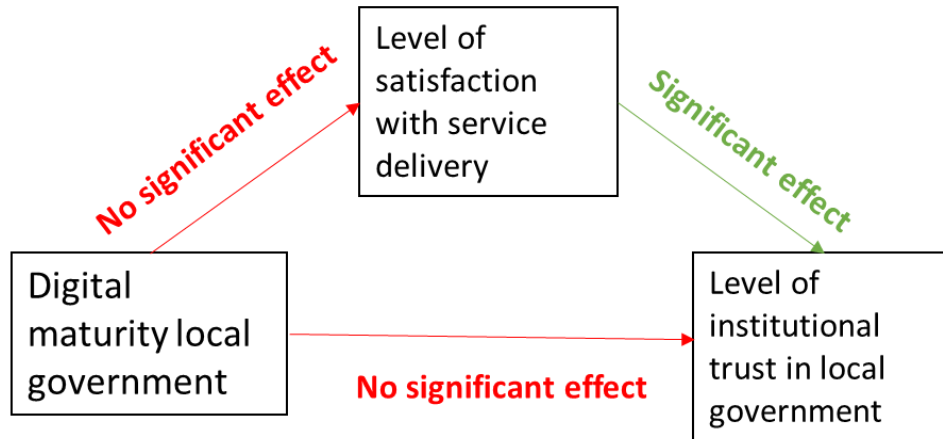
Figure 10: results mediation analysis

As there is not enough evidence for a direct effect between local government's digital maturity level and institutional trust in local government, hypothesis 1 needs to be rejected. The insignificance of the effect of the digital maturity level of local government on the satisfaction with service delivery of local government leads to the rejection of hypothesis 2a. The effect of the level of satisfaction with service delivery on the level of institutional trust in local government is significant and positive. Hence, hypothesis 3 has been accepted.

Chapter 6: Conclusion

The conclusion chapter of this thesis summarises the findings and answers the composed research questions. First, the conclusions for sub-research questions 1 and 3 will be discussed. Lastly, the main research question will be answered.

6.1: Answering sub-research question 1

The following section discusses the findings to answer sub-research question 1: *What are the levels of digital transformation of service provision within Dutch municipalities?*

The digital maturity scores of Dutch municipalities range broadly. The digital maturity scores show deviations with the classifications into a level of digital transformation based on the Digital Government Evolution Model of Janowski (2015) for the research municipalities. All researched municipalities fulfil the requirements for the digitisation and digitalisation stages for their process of making and handling a report public space, which means that the organisation makes use of digital technology in the process and that the digital technology leads to an adaptation of the service delivery process. One municipality is currently in the stage of internal government adaptation. Where the organisational culture of the municipality organisation is transformed due to the implementation of digital technology, a transformation of the organisational structure still needs to be achieved. Two municipalities are in the engagement stage. One municipality still needs to achieve the engagement of other public actors in their digital transformation process. The other municipality has yet to find engagement with private actors in relation to their digital transformation. Not one municipality can be categorised into the last level of the digital government evolution model. While one municipality fulfils the implementation criteria of digital technology being specific for both the application context of the municipality and the application context of the report public space process, this municipality still needs to meet the engagement criteria.

The levels of digital transformation for municipalities with an average population size and average urbanisation differ from level 2: digitalisation and level 4: engagement.

6.2: Answering sub-research question 2

The following section discusses the findings to answer sub-research question 2: *What are the levels of institutional trust of citizens in their local government in Dutch municipalities?*

The average index score for the institutional trust level of municipalities is 10.7 on a scale of 4-16. Overall, the measurements of the variability of the data are relatively small. The standard deviation shows that most municipalities have an institutional trust index score relatively close to the average. An average score of 10.7 shows that citizens, on average, trust the actors that form the local government institution to some extent. On average, citizens are between not trusting their local government much (2) and quite a lot (3).

When answering sub-research question 2, it must be concluded that most municipalities have an index score that shows a moderate institutional trust level of their citizens in their local government. the levels of institutional trust of citizens in their local government still differ per municipality. However, except for some outliers, the deviations are relatively small.

[51]

6.3: Answering sub-research question 3

The following section discusses the findings to answer sub-research question 3: *Is the level of digital transformation of service provision within Dutch municipalities causally related to the level of institutional trust of citizens in local government?*

The mediation analysis shows no significant effect between the level of digital transformation and the level of institutional trust of citizens in local government. Therefore, it needs to be concluded that there is not enough evidence to accept hypothesis 1.

This thesis found there to be no significant evidence that the level of digital transformation of service provision is causally related to the level of institutional trust of citizens in their local government.

6.4: Answering the main research question

The described findings and the answers to the three sub-research questions enable us to provide an answer to the main research question: *What is the relationship between the level of digital transformation of service provision and the level of institutional trust of citizens in their local government in Dutch municipalities?*

The conceptual framework proposed in chapter 2 shows a theoretical explanation based on academic literature for the relationship between the digital transformation of service delivery and the level of institutional trust in local government. However, the data analysed for this thesis shows no significant relationship between these two variables. Nevertheless, a significant relationship was found between the level of satisfaction with the service delivery and the level of institutional trust in local government. Besides, the quantitative data analysis failed to find a relationship between the level of digital transformation of service delivery and the satisfaction level with service delivery.

These findings lead to the following conclusions. The average perceived quality of the service delivery correlates with the level of institutional trust in local government. The academic literature on these topics provides enough evidence to support the claim that this correlation is a causal relationship. Citizens are more likely to trust their local government if they are satisfied with the way their local government delivers services to them. Because no relationship between digital transformation of service delivery and satisfaction with service delivery was found, no conclusions can be drawn that the digital transformation of service delivery has a positive or negative effect on the perceived quality of the service delivery. In conclusion, no direct relationship has been found between the level of digital transformation of service provision and the level of institutional trust of citizens in their local government. Neither has an indirect relationship between these two concepts via the concept of service delivery quality been found.

Chapter 7: Discussion

The last chapter provides an interpretation of the results. It is discussed to what extent the results are in line with the expectations. In addition, possible clarifications for the found results are considered. Furthermore, the theoretical and practical implications of the drawn conclusions will be discussed. Moreover, this chapter contains a discussion of the limitations of this research. Lastly, suggestions for further research into the topics of institutional trust and digital transformation will be provided.

7.1: Interpretation

The thesis did not find a relevant relationship between the level of digital transformation of service delivery and the level of institutional trust in local government. Neither a direct nor an indirect relationship through satisfaction with service delivery can be found. This finding contrasts with what was expected based on the study of Mahmood (2016). He found that government transformation through the implementation of digital technologies positively influences institutional trust in government through the mechanism of satisfaction with service delivery.

The lack of a relationship between the level of digital transformation of service delivery and the level of satisfaction with service delivery could be explained through the concepts between digital transformation and satisfaction in the causal chain in the theoretical framework. First, according to the expectancy-disconfirmation theory (Oliver, 1996), citizens compare the performance of the service delivery to their expectations of the service delivery. Satisfaction is achieved when the local government meets or exceeds these expectations. However, respondent 1 indicated the changing expectations of citizens due to digital transformation of service delivery in the private sector:

> *"Citizens expect much more from us now. The citizen is spoiled by Google, by the orders they can place and they see examples very clearly. Citizens actually demand the same kind of service delivery as they receive from Post NL. You choose something at Bol.com, you order it, you can then decide for yourself what will be at your doorstep and when."*

These higher expectations of the level of service delivery of local government due to experiences with digital service provision in the private sector might rule out the positive influence of the improved service delivery of local government due to the implementation of digital technologies on the level of satisfaction with service delivery of local government. Another possible clarification for the insignificance of the relationship between the level of digital transformation of service delivery and satisfaction with service delivery is that digital transformation of service delivery of local government fails to improve service delivery's (perceived) performance. A logical explanation for citizens not being more satisfied with the service delivery is if the implementation of digital technology does not lead to better (perceived) service delivery for citizens. This perception of better service delivery might not be affected if the negative experiences with the digital transformation of service delivery rule out the positive experiences. The perceived negative experiences mentioned in the interviews were indirectness

and lower quality of contact. Other possible negative experiences might be due to privacy and safety issues and concerns.

The thesis found a correlation between service delivery satisfaction and the level of institutional trust in local government. This finding is in line with the researcher's expectations and the work of Blokstra (2019). As explained in the theoretical framework, satisfaction with service delivery is expected to positively influence the perceived benevolence and ability of local government, which positively influence the level of institutional trust in local government.

7.2: Limitations

Limitations of the research should be considered when putting the conclusions into perspective. First, the theoretical implications are discussed. Secondly, the methodological implications are debated.

To begin with, scientific knowledge on digital transformation of local government is scarce. Not only is the focus shift towards digital transformation compared to e-government or e-governance relatively new, but the focus on local government instead of national government is also not yet looked upon frequently. The novelty of the combination of these concepts is highly beneficial for the scientific contribution of this thesis. However, it has limitations for the number of scientific articles on which the theoretical framework could be built.

In addition, it is essential to point out some methodological limitations. No quantitative data that fits the conceptualisation of digital transformation of service provision was available for this research. The decision was made to use municipalities' available digital maturity score as a proxy variable for the digital transformation level. The decision was made under the assumption that municipalities that have digitised more services also work more on the quality of implementation of digital technology and, therefore, on the digital transformation of the service delivery. However, this assumption has limitations, as the quantity of digitisation does not have to be a correct indicator for the approach to the digital transformation of municipalities. The unsuitability of the digital maturity score as an indicator of digital transformation might be a reason for the inability to find a significant effect between digital transformation levels and service delivery satisfaction levels.

The qualitative validition measurements for the level of digital transformation of service delivery also come with limitations. The researcher was unable to test the interview questions before conducting the interviews. As a result, some inaccuracies in the questioning were found during the interviews. Nevertheless, the same initial set of questions was used to ensure reliability between the interviews. Most municipalities were actively working on the digital transformation of their report public space processes. For this reason, respondents tended to talk about their aims rather than the current state of their digital transformation. In addition, some respondents had little knowledge about the course of events before or during a state of less use of digital technology as they were not yet active at the organisation then. The level of digital transformation is measured using an ordinal scale model. The achievement of level 1 is a necessary condition for the achievement of level 2. These necessary conditions were met in only four of the six analysed cases. Thus, the reliability of this construct is limited.

Summarising, the scientific novelty of the combination of the concepts of digital transformation and institutional trust in the context of local government has theoretical limitations. The methodological limitations are primarily concerned with measuring the independent variable digital transformation of service provision.

7.3: Implications

7.3.1: Theoretical implications

This thesis can contribute to the body of knowledge on digital transformation. This research builds on the work of Janowski (2015) by applying the Digital Evolution Government Model to municipality organisations to categorise them into a stage of digital transformation. The Digital Evolution Government Model was initially designed to explain the evolution of digital technology in government. The way the digital transformation of service delivery was measured in this thesis contributes to the scientific knowledge on measuring digital transformation of (local) government organisations. This thesis also provides recommendations for the elements of a future operationalisation for a quantitative measurement of the level of digital transformation of a (local) government organisation.

In addition, this research adds to the scientific knowledge of the relationship between the level of digital transformation, satisfaction with service provision, and institutional trust in local government. A study on the relationship between these concepts at the local government level was not yet conducted. The results found a relationship between the level of satisfaction with service provision and the level of institutional trust. This finding suits the identity of the local government as a service provider. The results did not find a relationship between the level of digital transformation and the level of satisfaction with service delivery or the level of institutional trust.

7.3.2: Practical implications

When local governments want to work on their level of digital transformation of service provision, it is important to be aware that digital transformation goes beyond implementing digital technologies into their processes. The focus should also be on the impact of these digital technologies on the government organisation, relevant stakeholders and the application context. The outcomes of this research suggest that digital transformation of service delivery is not per se a tool in the toolbox and definitely not a panacea for local governments to (re)build trust. Municipalities should, therefore, not expect a direct (positive) effect on their citizens' satisfaction or trust levels when working on their digital transformation of service delivery. As a relationship was found between satisfaction with service delivery and institutional trust, focusing on improving the service delivery can contribute to higher trust levels of citizens. However, this research cannot confirm the positive contribution of digital transformation of local government to their service delivery.

7.4 Further research

Based on the findings and limitations of this research, recommendations can be made for further research into the fields of digital transformation and institutional trust. First of all, limitations were found with the operationalisation of the digital transformation levels of

(municipality) organisations. Because of the perceived unsuitability of digital maturity as a proxy variable and the small sample size of the qualitative after-measurements, no generalisations can be made about Dutch municipalities' digital transformation levels. Future studies could apply the used framework to a different or more significant sample size to come to more generalised findings. In addition, future research can make use of and validate the recommendations for an improved operationalisation for the level of digital transformation of service delivery.

Due to the limited scope of this research, the decision has been made to use the municipalities as the objects of observation rather than to analyse individual citizens. For future studies, it is relevant to investigate the individual differences of citizens when analysing the relationship between digital transformation of service provision and institutional trust. It is both academically and practically relevant to know if and which characteristics of citizens determine whether the level of digital transformation plays a role in the level of institutional trust in local government.

Lastly, it might be relevant for future studies to research the possible explanations of a non-existing relationship between the level of digital transformation of service provision and the level of institutional trust in local government. This thesis discusses the possibilities of the inability of digital transformation to lead to a higher perceived service delivery performance and the influence of digital transformation of the private sector on citizens' expectations. These explanations could be investigated. Additionally, other explanations could be explored.

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Appendix

Appendix A: Structure Interviews

1. **Voorstellen**
2. **Introductie interview**

Dit onderzoek wordt geleid door Tessa van Leeuwen. Het doel van dit onderzoek is informatie te vergaren over het niveau van digitale transformatie van het Melding Openbare Ruimte (MOR) proces bij de gemeente waar de geïnterviewde werkzaam is. Het interview zal gebruikt worden voor het onderzoek voor de afstudeerscriptie van de onderzoekleider.

Uw antwoorden zullen worden opgeslagen door een audio-opname/video- opname. Er zal ook een transcript worden uitgewerkt van het interview. Deze zal met uw gedeeld worden voor goedkeuring. Er zijn geen fysieke, juridische of economische risico's verbonden aan uw deelname aan deze studie. U hoeft geen vragen te beantwoorden die u niet wilt beantwoorden. Uw deelname is vrijwillig en u kunt uw deelname op elk gewenst moment stoppen.

In een publicatie zullen anonieme gegevens of pseudoniemen worden gebruikt. De audio-opnamen, formulieren en andere documenten die in het kader van deze studie worden gemaakt of verzameld, worden opgeslagen op een beveiligde locatie bij de Universiteit Twente en op de beveiligde (versleutelde) gegevensdragers van de onderzoekers. De onderzoeksgegevens worden bewaard voor een periode van 10 jaar. Uiterlijk na het verstrijken van deze termijn zullen de gegevens worden verwijderd of worden geanonimiseerd zodat ze niet meer te herleiden zijn tot een persoon. De onderzoeksgegevens worden indien nodig (bijvoorbeeld voor een controle op wetenschappelijke integriteit) en alleen in anonieme vorm ter beschikking gesteld aan personen buiten de onderzoeksgroep.

Dit onderzoek is beoordeeld en goedgekeurd door de ethische commissie van de faculteit BMS (domain Humanities & Social Sciences).

3. **Toestemming vragen**
4. **Opname starten**
5. **Toestemming herhalen**

Introductie ambtenaar

1. Wilt u zichzelf voorstellen en uw functie binnen de gemeente omschrijven?
2. Hoe zou u uw rol binnen het proces van een melding openbare ruimte omschrijven?

Omschrijving proces van een melding openbare ruimte

3. Hoe kan een burger een melding openbare ruimte maken bij de gemeente?
4. Hoe ziet het proces van het afhandelen van een melding openbare ruimte binnen uw gemeente eruit?

Gebruik digitale technologieën

5. Welke voorbeelden van digitale technologieën worden er gebruikt bij het maken van een melding openbare ruimte?
    a. Welke digitale technologieën worden frequent gebruikt?

6. Welke voorbeelden van digitale technologieën worden er gebruikt voor het afhandelen van een melding openbare ruimte?
    a. Welke digitale technologieën worden frequent gebruikt?

Adaptatie dienstverlening door digitale technologieën

7. In hoeverre heeft u ervaren dat het proces van een melding openbare ruimte geëvalueerd werd omdat er digitale technologieën werden geïmplementeerd?
    a. Zo ja, welke punten kwamen er uit deze evaluatie?

8. In hoeverre zijn er aanpassingen in het proces rondom een melding in de openbare ruimte gemaakt door de implementatie van digitale technologieën?
    a. Zo ja, welke concrete voorbeelden?

Interne transformatie

9. In hoeverre hebben aanpassingen in het proces door de implementatie van digitale technologieën geleid tot veranderingen in de organisatorische structuur?
    a. Zo ja, welke concrete voorbeelden ervaart u?

10. In hoeverre hebben aanpassingen in het proces door de implementatie van digitale technologieën geleid tot veranderingen in de organisatorische cultuur?
    a. Zo ja, welke concrete voorbeelden ervaart u?

Externe relaties

11. In hoeverre ervaart u dat de relatie met de burger veranderd is door de implementatie van de digitale technologie?
    a. Zo ja, op welke wijze? Noem een concreet voorbeeld.

12. In hoeverre ervaart u dat de relatie met andere overheidsinstellingen is veranderd door de implementatie van de digitale technologie?
    a. Zo ja, op welke wijze? Noem een concreet voorbeeld.

13. In hoeverre ervaart u dat de relatie met overige (semi)-private organisaties veranderd door de implementatie van de digitale technologie?
    a. Zo ja, op welke wijze? Noem een concreet voorbeeld.

Contextualiseren

14. Op welke manier denkt u dat de implementatie van de digitale technologieën bijdraagt aan specifieke beleidsdoelen?
    a. Zo ja, welke beleidsdoelen?

15. Welke elementen zijn in uw optiek specifiek voor de implementatie van de digitale technologieën in uw gemeente in het processen waar u zich bezighoudt?
    a. Zo ja, met welke specifieke omstandigheden is er rekening gehouden?

Afronding interview

Dit waren de vragen die ik u graag wilde stellen. Zou u nog aanpassingen willen maken in één van uw antwoorden? Zijn er zelf nog dingen die u graag kwijt wilt? Dan wil ik u graag hartelijk bedanken voor de medewerking aan het onderzoek. Ik zal u het transcript toesturen zodat u eventueel rectificaties kan maken. Daarnaast zal ik de resultaten van onderzoek met u delen indien deze gepubliceerd zijn. Heeft u nog verdere vragen?

Appendix B: Indicators phases digital transformation for process of report about the public space

Phase 1: *Digitisation*

- *Use of digital technologies in the process*
    o Access to online documents or information via digital networks for citizens
    o Access to online documents or information via digital networks for civil servants
    o Service accessible via digital networks
    o Internal digital communication between civil servants
    o Digital communication between citizen and municipality

Phase 2: *Digitalisation – Technology impacting process*

- *Process evaluation and adaptation of the service delivery due to digital technology*
    o Change in number of steps in the service delivery process
    o Automation of certain steps
    o Outsourcing or insourcing of certain steps

Phase 3: *Transformation – Technology impacting government organisation*

- *Change in organisational structure*
    o Change in number of departments
    o Change in hierarchical structure

- *Change in organisational culture*
    - Change in modes of information sharing
    - Change in frequency of information sharing
    - Change in quality of information sharing
    - Change in frequency of collaboration within public space department
    - Change in frequency collaboration between other departments
    - Change in frequency physical or digital internal communication

Phase 4: *Engagement − Technology impacting relationships with external stakeholders*

- *Affect relationship with citizens*
    - Changing in process of feedback of citizens
    - Change in contact with citizens

- *Affect relationship with other governmental organisations*
    - Change in contact with regional government
    - Change in contact with other (partnering) municipalities

- *Affect relationships with other non-governmental stakeholders*
    - Change in contact with businesses
    - Change in contact with civil society organisations

Phase 5: *Contextualisation − Technology impacting sectors and communities*

- *Implementation is specific for the application context*
    - The implementation is specific for the municipality
    - The implementation is specific for the living environment sector

- *Implementation contributes to a specific policy-relevant problem*
    - The implementation contributes to participation problem, sustainability problem etc.

Appendix C: Coding scheme interviews

10000 Digital technology use

    10100 Web application

        10110 External application

        10120 In-house application

    10200 ERP system

        10210 Generic ERP system

        10220 Specific ERP system report public space

    10300 Email system

        10310 Internal email contact

        10320 External email contact

    10400 Social media

    10500 Website

        10510 Webform

        10520 GPS located reporting

11000 Process adaptation

    11100 Automation

    11200 Steps added

    11300 Steps removed

    11400 No adaptation

    11500 Presence of process evaluation

    11600 Absence of process evaluation

12000 Government organisation adaptation

    12100 Change in organisational structure

        12110 Formal power

        12120 Roles and tasks

12121 Divided differently

12122 Removed

12123 Added

12130 Work arrangements

12140 Number of employees

12150 Absence of change

12200 Change in organisational culture

12210 Collaboration

12211 Frequency

12212 Efficiency

12213 Intensity

12220 Communication

12221 Mode

12222 Frequency

12223 Quality

12230 Values

12231 Responsibility

12240 Absence of change

13000 External relationships affected

13100 Relationship with citizens

13110 Positive

13111 Easier access to contact

13112 Updates

13113 Quality of contact

13120 Negative

13121 Easier access to contact

13122 Expectation management

13123 Less direct contact

13124 Quality of contact

13125 Trust

13130 No change

13200 Relationship with public organisations

13210 Other municipalities

13220 Semi-government organisations

13230 The State

13240 Water authorities

13250 Province

13260 No change

13300 Relationship with private organisations

13310 Contractor

13320 Waste disposal company

13330 No change

14000 Contextualisation

14100 System specific for application context

14110 Application context of report public space

14120 Application context of the municipality

14200 Contribution to policy problem

14210 Presence of contribution to policy goals

14211 Initiator for policy development

14212 Insight achievability policy goals(s)

14213 Mean for achieving policy goal(s)

14220 Absence of contribution to policy problem

15000 Aim for further use of digital technologies

15100 Specific ERP system report public space

15200 Reporting using GPS location

16000 Motive digital transformation

16100 Customer satisfaction

16200 Service delivery quality

16300 Information management

16400 Efficiency

16500 Process optimisation

16600 Another municipality

Table C.1: Codebook

ID	Category: subcategory	Code	Definition	Indicators	Example (quote – orginal'	Example (quote – translation)
101 10	Digital technology use: web application	External applicati on	Responde nt indicated use of an applicatio n using web technolog y offered by external organisati on as a service for citizen and municipal ity.	Nation-wide or region-wide use of application that is externally developed, municipality not self in charge of development .	En bijvoorbeeld de Buiten Beter app die is landelijk. Daar hebben wij, zijn wij geen lid van en hebben wij geen aansluiting op, maar die komen wel bij ons binnen.	And, for example, the Buiten Beter app, which is nationwide. We have, we are not a member of that and we have no connection to it, but the reports do come to us.
101 20	Digital technology use: web application	In-house applicati on	Responde nt indicated use of an applicatio n using	Web-based system, own development .	Wat we gemaakt hebben is een web-based systeem.	What we have created is a web-based system.

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			web technology taken care of by the municipality itself.			
102 10	Digital technology use: ERP system	Generic ERP system	Respondent indicated use of an enterprise resource planning system that is used for a broad application context within the organisation.	Zaaksysteem.	We gebruiken hiervoor het zaaksysteem waarin al onze klantzaken worden bijgehouden.	For this we use the case system in which all our customer cases are kept.
102 20	Digital technology use: ERP system	Specific ERP system	Respondent indicated use of an enterprise resource planning system that is specifically implemented for handling reporting the public space.	Fixi, Melddesk.	Dat gaat allemaal via een app: de Melddesk app.	This is all done via an app: the Melddesk app.

103 10	Digital technology use: email system	Internal email contact	Respondent indicated use of email contact between civil servants within the municipality.	Email system (Google Workspace, Amazone Webservice), @municipalityname.	En dan wordt het doorgestuurd. Dat is allemaal een mailsysteem naar degene die het probleem (of de melding) moet gaan oplossen.	And then it is forwarded. That is all a mail system to the person who must solve the problem (or the report).
103 20	Digital technology use: email system	External email contact	Respondent indicated use of email contact between a civil servant and a person or organisation outside of the municipality.	Email server (Google, Hotmail etc.). Contact citizen, partners etc.	Dan kunnen wij via ons digitale systeem wel heel snel de melding door te sluizen via een emailadres.	Then we can very quickly pass on the report via our digital system via an email address.
104 00	Digital technology use	Social media	Respondent indicated use of websites and applications that enable users to create and share content or to participate in social	Facebook, Twitter, WhatsApp, Instagram etc.	Via de social-media kanalen, dus dat is via Facebook en WhatsApp.	Via the social media channels, so that is via Facebook and WhatsApp.

			networking.			
105 10	Digital technology use: website	Webform	Respondent indicated use of an interactive web page that mimics a paper document or form.	Answer questions in form.	Er wordt gebruik gemaakt van een web formulier inderdaad.	Yes indeed, a web form is used.
105 20	Digital technology use: website	GPS located reporting	Respondent indicated that information about the location of the report is gathered using GPS location of the report.	Reporting on a map or using GPS location	En dan opent zich een kaart, kan je klikken op de kaart. Dat is dus geografisch gebaseerd.	And then a map opens, you can click on the map. So, that is geographically based.
111 00	Process adaptation	Automat ion	The respondent indicated that a task that was previously done by civil servants is now	Steps are no longer manual.	Ja, het voordeel is natuurlijk wel als ze het via de website doen dat heel veel gegevens al automatisch in het zaaksysteem geregistreerd staan. Ja, die wij niet meer handmatig hoeven te doen.	Yes, the advantage is of course if they do it via the website that a lot of data is already automatically registered in the case system. Yes, we no longer have to

			done by software.			do them manually.
112 00	Process adaptation	Steps added	The respondent indicated that extra steps were needed in the process due to the implementation of a digital technology.	Extra steps in process.	En als d'r gegevens van de melder bekend zijn, moeten we ook vaak om meer detail gegevens gaan vragen. Dus we moeten gaan bellen of mailen.	And if the reporter's details are known, we often have to ask for more detailed information. So we have to call or send an email.
113 00	Process adaptation	Steps removed	The respondent indicated that less steps were needed in the process due to the implementation of a digital technology.	Less steps in process.	En eerder krijgt ie gewoon allerlei briefjes uitgeprint van: hier moet je allemaal lantarenpalen gaan repareren.	And earlier he just got all kinds of notes printed out from: at all these places you have to repair lampposts.
114 00	Process adaptation	No adaptation	The respondent indicated that the process did not change due to the	Same process.	In principe niet. Is alleen de manier hoe het binnenkomt. Bij webformulier hebben we meer completer overzicht van wat er eigenlijk al aan de hand is. Maar in principe het	Basically not. Is just the way they come in. With a web form we have a more complete overview of what is actually going on. But

			implementation of a digital technology.		tussenstation blijft hetzelfde.	basically, the intermediate station remains the same.
11500	Process adaptation	Presence of process evaluation	The respondent indicated a presence of a process evaluation before the implementation of digital technology.	Evaluation outcomes, points of improvement.	Het is meer van: welke meldingen gaan we waar afhandelen en wat is dan precies een melding? Wat is voor ons de definitie van een melding? Hé, is een melding stoeptegel: is dat is dat al hetzelfde als een melding voor een aanvraag voor nieuwe vuilnisbak voor een burger?	It is more of: which reports are we going to handle where and what exactly is a report? What is the definition of a report for us? Hey, is a notification sidewalk tile: is that the same as a notification for a request for a new garbage can for a citizen?
11600	Process adaptation	Absence of process evaluation	The respondent indicated an absence of a process evaluation before the implementation of digital technology.	No evaluation outcomes, no points of improvement.	Dus daarom, ja, hebben we daar eigenlijk ook verder niet heel veel aan geëvalueerd.	So that's why, yes, we didn't really evaluate that much further.
12110	Government organisation	Formal power	Respondent indicated change in	Other persons have a managemen	-	-

	adaptation: organisational structure		hierarchy due to the implementation of a digital technology.	t role, new management roles.		
1212 1	Government organisation adaptation: organisational structure: roles and tasks	Divided differently	Respondent indicated change in division of roles or job descriptions between civil servants due to the implementation of digital technologies.	Task A that belonged to person A is now performed by person B.	Ja, dat is een goeie. Het proces wordt wel anders. Want kijk de KCC-medewerkers handelen nu in principe nu alle meldingen openbare ruimte straks af. Dus niet meer de medewerkers DIV of zo. Dus dat wordt echt gestroomlijnd naar Fixi en naar de KCC medewerker.	Yes, that's a good one. The process will be different. Because look, the KCC employees now basically deal with all reports for public space. So, no more DIV employees or something like that. So that is really streamlined to Fixi and to the KCC employee.
1212 2	Government organisation adaptation: organisational structure: roles and tasks	Removed	Respondent indicated that a role or task was removed due to the implementation of digital technology.	Task A is no longer necessary, which changes the job description of person A.	En dat deed iemand anders een mailtje naar de klant dat het was afgehandeld. Of d'r was iemand die het werk verdeelde: Jantje, Pietje. Nou, dat is straks niet meer.	And so someone else sent an email to the customer that it was handled. Or there was someone who divided the work: John, Pete. Well, soon that won't be no longer be the case.

121 23	Government organisation adaptation: organisational structure: roles and tasks	Added	Respondent indicated that a role or task was added due to the implementation of digital technology.	Task C is new, which changes the job description of person C.	Ik zou eerder zeggen dat er misschien iemand juist bij moet komen bij de KCC omdat zij natuurlijk d'r meer taken bij krijgen.	I would rather say that maybe someone should join the KCC because they will of course be given more tasks.
121 30	Government organisation adaptation: organisational structure	Work arrangements	Respondent indicated a change in work arrangements between colleagues, departments etc. because of the implementation of digital technology.	New work arrangements, new agreements, new rules.	Er moeten echt werkafspraken gemaakt worden om dat werkproces in goeie banen te kunnen leiden.	Work agreements really have to be made in order to steer that work process in the right direction.
121 40	Government organisation adaptation: organisational structure	Number of employees	Respondent indicated a change in number of employees needed in the organisations in a	Extra colleagues, civil servants, more FTE, higher workload.	-	-

			whole of in certain departments due to the implementation of digital technology.	.		
121 50	Government organisation adaptation: organisational structure	Absence of change	Respondent indicated there to be no change in organisational structure due to the implementation of digital technologies.	No change in number of departments, hierarchical change, job descriptions, number of employees.	Maar dezelfde mensen blijven het uitvoeren, dezelfde mensen blijven leiding geven, dezelfde mensen blijven controleren.	But the same people keep doing it, the same people keep leading, the same people keep checking.
122 11	Government organisation adaptation: organisational culture: collaboration	Frequency	Respondent indicated a negative change in the frequency of collaborating within the organisation due to the implementation of digital	Negative change in frequency of collaboration.	Nou samenwerken, zeker, want wat er voor hen via telefoon en mail ging, dat gebeurt nu achter de schermen. Je ziet elkaar minder, je spreekt elkaar minder.	Well, collaborating, certainly, because what used to be via phone and e-mail for them now happens behind the scenes. You see each other less; you speak less with each other.

					technolog ies.		
122 12	Governmen t organisatio n adaptation: organisatio nal culture: collaborati on	Efficienc y	Responde nt indicated a change in the efficiency of collaborat ing within the organisati on due to the implemen tation of digital technolog ies.	Collaboratio n is quicker, easier etc.	Samenwerken ja, dat is wel veranderd. Ik denk dat het wel efficiënter is geworden.	Collaboration yes, that has changed. I think it has become more efficient.
122 13	Governmen t organisatio n adaptation: organisatio nal culture: collaborati on	Intensity	Responde nt indicated a change in the intensity of collaborat ing within the organisati on due to the implemen tation of digital technolog ies.	Change in colleagues with whom collaboration is necessary.	Ja, dat zeker, want d'r is inderdaad veel meer samenwerking nodig. Hé, juist omdat je met heel veel verschillende stromen dus te maken hebt en dus ook dat heel veel afdelingen raakt en nu heel veel teams en medewerkers raakt.	Yes, certainly, because much more cooperation is indeed needed. Hey, precisely because you are dealing with many different flows and therefore that affects many departments and now affects many teams and employees.
122 21	Governmen t organisatio n adaptation:	Mode	Responde nt indicated a change in the	Change in mode of communicati on, analogue to digital	Waar je vroeger snel de telefoon pakte of even naar elkaar toestapte om even met elkaar te	Where you used to quickly pick up the phone or go to each other to discuss

	organisational culture: communication		internal communication mode due to the implementation of digital technologies.	communication.	bespreken. Ja, dan vind ik dat wel ontzettend een nadeel.	things with each other. Yes, I think that is a huge disadvantage.
122 22	Government organisation adaptation: organisational culture: communication	Frequency	Respondent indicated a change in internal communication frequency due to the implementation of digital technologies.	Speak colleagues less.	Nou samenwerken, zeker, want wat er voor hen via telefoon en mail ging, dat gebeurt nu achter de schermen. Je ziet elkaar minder, je spreekt elkaar minder.	Well, collaborating, certainly, because what used to be via phone and e-mail for them now happens behind the scenes. You see each other less; you speak less with each other.
122 23	Government organisation adaptation: organisational culture: communication	Quality	Respondent indicated a change in internal communication quality due to the implementation of digital technologies.	Quality, context.	Dus wat je dan krijgt, is ook communicatie of dat via een app is of via een webformulier: vaak ontbreekt het toch altijd wel iets van informatie of een stuk context.	So what you get then is also communication, whether that is via an app or via a web form: often it is always missing some information or a piece of context.
122 30	Government organisation adaption: organisatio	Responsibility	Respondent indicated a change in the way	Degree of responsibility.	Je legt eigenlijk meer verantwoordelijkheid bij de mensen die het werk buiten uitvoeren neer. Dus	You actually place more responsibility on the people who carry out

nal culture: values		the value of responsibility is valued within the organisation due to the implementation of digital technologies.		dat vinden wij iets positiefs want die mensen die werken de hele dag, weten vaak het best wat er aan de hand is in zo'n wijk.	the work outside. So we think that's a positive thing because those people who work all day often know best what's going on in such a neighborhood.
122 40	Government organisation adaptation: organisational culture	Absence of change	Respondent indicated no change in the organisational culture due to the implementation of digital technologies.	No change in organisational values, manners, ways of collaboration or communication.	-	-
131 11	External relationships affected: relationship with citizens: positive	Easier access to contact	Respondent indicated that the relationship with citizens is affected because of the easier access to contact and	Frequency of reports, people who report repeatedly.	Ja, dat wordt natuurlijk iets minder qua contact, maar wel wat sneller en toegankelijker via het internet. 24/7, he, kan jij een melding doen.	Yes, that will of course be a little less in terms of contact, but a bit faster and more accessible via the internet. 24/7, hey, you can make a report.

			reporting because of the implementation of digital technologies.			
131 12	External relationships affected: relationship with citizens: positive	Updates	Respondent indicated that the relationship with citizens is affected through the difference in updating the citizen about the report public space due to the implementation of digital technologies.	Feedback, updates, notification.	En de burger, die wordt ook steeds op de hoogte gehouden omdat die buitendiensten medewerkers dus ook in die Fixi app steeds werken.	And the citizen, who is also kept informed because those field service employees always work in the Fixi app.
131 13	External relationships affected: relationship with citizens: positive	Quality of contact	Respondent indicated that the relationship with the citizens is positively affected	Higher quality, more complete reports.	-	-

			because of the higher quality of contact and reporting due to the implementation of digital technologies.			
1131 21	External relationships affected: relationship with citizens: negative	Easier access to contact	Respondent indicated that the relationship with citizens is negatively affected because of the easier access to contact and reporting because of the implementation of digital technologies.	Frequency of reports, people who report repeatedly.	Ja, dat wordt natuurlijk iets minder qua contact, maar wel wat sneller en toegankelijker via het internet. 24/7, he, kan jij een melding doen.	Yes, that will of course be a little less in terms of contact, but a bit faster and more accessible via the internet. 24/7, hey, you can make a report.
1131 22	External relationships affected: relationship with	Expectation management	Respondent indicated that the relationship with citizens is	Expectation, assumption.	De burger verwacht al veel meer van ons. De burger is verwend door Google, door bestellingen die ze doen en die zien dus heel duidelijk	Citizens expect much more from us now. The citizen is spoiled by Google, by the orders they can

	citizens: negative		negatively affected by the expectation management of the citizens due to the implementation of digital technologies.		voorbeelden. De burger verlangt eigenlijk een zelfde soort dienstverlening als dat ze krijgen bij Post NL. Je zoekt bij Bol.com iets uit, je bestelt het, je kan volgen zelf bepalen wat er wanneer bij jou voor de deur staat.	place and they see examples very clearly. Citizens actually demand the same kind of service delivery as they receive from Post NL. You choose something at Bol.com, you order it, you can then decide for yourself what will be at your doorstep and when.
131 23	External relationshi ps affected: relationshi p with citizens: negative	Less direct contact	Responde nt indicated that the relationsh ip with citizens is negatively affected because of more indirect contact due to the implemen tation of digital technolog ies.	Digital contact, no physical contact, indirect contact	Ja, ik denk dat de vakafdeling zich minder betrokken voelt, sowieso bij die burger, want het is allemaal op afstand, het is allemaal digitaal.	Yes, I think the specialist department feels less involved, anyway with that citizen, because it's all remote, it's all digital.
131 24	External relationshi ps affected: relationshi p	Quality of contact	Responde nt indicated that the relationsh	Less complete reports, less explainable.	En de mensen maken zich niet bekend met naam, adres in heel veel gevallen en dat	And people do not make themselves known by name, address in

p with citizens: negative		ip with the citizens is affected because of the differing quality of contact and reporting due to the implementation of digital technologies.		maakt het heel erg moeilijk om zo'n melding te kunnen registreren en om die serieus te nemen.	many cases and that makes it very difficult to register such a report and to take it seriously.
131 30	External relationships affected: relationship with citizen	No change	Respondent indicated that the relationship with citizens is not affected through the implementation of digital technologies.	Similar relationship, no change.	Ja, d'r wordt nog steeds best wel veel gebeld. Dus ja, ik denk dat, ja, nee, ik denk dat dat niet heel veel veranderd is.	Yes, there is still quite often being called. So yeah, I think, yeah, no, I don't think that has changed very much.
132 10	External relationships affected: relationship with public organisations	Other municipalities	Respondent indicated that the relationship with other municipalities is affected	Communication with other municipalities, collaboration with other municipalities.	Ja, we hebben vorige week was dat volgens mij hebben we nog inderdaad over Fixi gepraat met onze buurgemeente de Friese Meren.	Yes, last week I think we did indeed talk about Fixi with our neighbouring municipality de Friese Meren.

			by the implementation of digital technologies.			
132 20	External relationships affected: relationship with public organisations	Semi-public organisations	Respondent indicated that the relationship with semi-public organisations is affected by the implementation of digital technologies.	Relationship with independent administrative bodies, housing organisations etc.	Vaak gebruik ik dan ook weer de website van de andere gemeente. Nou ja, en ook naar het rijk en naar het waterschap, dus de semioverheid dan ga ik wel sneller de digitalisering opzoeken. Omdat ik weet van, dat is ook voor een andere gemeente of voor het rijk de snelste ingang. Ja, en daar staat ook precies in wat voor gegevens dat ze nodig hebben.	I often use the website of the other municipality. Well, and also of the national government and the water board, so the semi-government then I will look for digitisation more quickly. Because I know, that is also the fastest way for another municipality or for the State. Yes, and it also states exactly what kind of data they need.
132 30	External relationships affected: relationship with public organisations	The State	Respondent indicated that the relationship with the State is affected by the implementation of	Communication with other municipalities, collaboration with the State.	Vaak gebruik ik dan ook weer de website van de andere gemeente. Nou ja, en ook naar het rijk en naar het waterschap, dus de semioverheid dan ga ik wel sneller de digitalisering opzoeken. Omdat ik weet van, dat is ook voor een andere	I often use the website of the other municipality. Well, and also of the national government and the water board, so the semi-government then I will look

			digital technologies.		gemeente of voor het rijk de snelste ingang. Ja, en daar staat ook precies in wat voor gegevens dat ze nodig hebben.	for digitisation more quickly. Because I know, that is also the fastest way for another municipality or for the State. Yes, and it also states exactly what kind of data they need.
132 40	External relationships affected: relationship with public organisations	Water authorities	Respondent indicated that the relationship with the water authorities is affected by the implementation of digital technologies.	Communication with water authorities, collaboration with water authorities.	Vaak gebruik ik dan ook weer de website van de andere gemeente. Nou ja, en ook naar het rijk en naar het waterschap, dus de semioverheid dan ga ik wel sneller de digitalisering opzoeken. Omdat ik weet van, dat is ook voor een andere gemeente of voor het rijk de snelste ingang. Ja, en daar staat ook precies in wat voor gegevens dat ze nodig hebben.	I often use the website of the other municipality. Well, and also of the national government and the water board, so the semi-government then I will look for digitisation more quickly. Because I know, that is also the fastest way for another municipality or for the State. Yes, and it also states exactly what kind of data they need.
132 50	External relationships affected: relationshi	Province	Respondent indicated that the relationsh	Communication with province, collaboration	Nou ja, bijvoorbeeld de provincie Noord-Brabant waar we bijvoorbeeld heel veel mee	Well, for example, the province of North Brabant, with which we

	p with public organisations		ip with the province is affected by the implementation of digital technologies.	with province.	samenwerken. Rijkswaterstaat voor de wegen natuurlijk. In dit geval het waterschap, De Dommel en waterschap Aa en Maas bijvoorbeeld, aangezien we ook in hun gebieden liggen. Dus ja, verschillend.	collaborate a lot. Rijkswaterstaat for the roads, of course. In this case, the water board, De Dommel and the Aa en Maas water board, for example, since we are also located in their areas. So yes, different.
13260	External relationships affected: relationship with public organisations	No change	Respondent indicated that the relationship with public organisations is not affected through the implementation of digital technologies.	Similar relationship, no change.	Nee, die is eigenlijk niet zo veranderd. Die mensen kennen elkaar gewoon goed. En dat nou, die bellen gewoon, die gaan niet mailen. En dat, die relatie is gewoon eigenlijk nog zoals die altijd al was. Ja.	No, it hasn't really changed that much. Those people just know each other well. And that's it, they just call, they don't email. And that, that relationship is actually still the way it always was. Yes.
13310	External relationships affected: relationship with private organisations:	Contractor	Respondent indicated that the relationship with the contractor is affected by the	Communication and/or collaboration with contractor.	En nu gaan die meldingen, die zeg maar worden doorgezet, die zitten zeg maar aangesloten op ons meldingssysteem. Bijvoorbeeld bij verlichting stuurt een melding door aan een aannemer, die in	And now those reports, which are passed on, say, are connected to our reporting system. For example, in the case of lighting, a notification is forwarded to a

		implementation of digital technologies.		het systeem is meegenomen. En eerder krijgt ie gewoon allerlei briefjes uitgeprint van hier moet je allemaal lantarenpalen gaan repareren. Juist dat is er veranderd in die zin.	contractor, who is included in the system. And before he just got all kinds of notes printed out from: at these places you have to repair all lampposts. That is precisely what has changed in that sense.
13320	External relationships affected: relationship with private organisations:	Waste disposal company	Respondent indicated that the relationship with the waste disposal company is affected by the implementation of digital technologies.	Communication and/or collaboration with waste disposal company.	Ik weet wel al dat bijvoorbeeld Omrin dat is, de afval instantie van Friesland. Die werkt ook met Fixi. Dus dan wordt het ook wat makkelijker om bijvoorbeeld een melding die in Fixi staat, omdat als het om om afval ophalen gaat, om die dan makkelijk door te sturen naar de Omrin toe.	I already know that Omrin, for example, the waste authority of Friesland. They also work with Fixi. So, then it also becomes a bit easier to, for example, send a message that is in Fixi, because when it comes to collecting waste, it can easily be forwarded to the Omrin.
13330	External relationship affected: relationship with private organisations	No change	Respondent indicated that the relationship with private organisations is not	Similar relationship, no change.	Speaker 2: Dus u ervaart dat niet als significant?[P]00:49:59[L]Speaker 1: Nee.	Speaker 2: So you don't find that significant? 00:49:59 Speaker 1: No.

			affected through the implementation of digital technologies.			
141 10	Contextualisation: system specific for application context	Application context of report public space	The implementation of digital technology is specific for the application context of making a report in the public space.	Specific application, software etc. for handling or making a report in the public space.	En we, we zijn juist ook bezig met een aanbesteding voor Fixi.	And we, we are also working on a tender for Fixi.
141 20	Contextualisation: system specific for application context	Application context of the municipality	The implementation of digital technology is specific for the application context of the municipality.	Implementation depends on demographics, spatial planning etc. of municipality	Maar dan zie je diezelfde tegels en wij hebben het gewoon aangepast op wat er bij ons gebruikelijk is. Want al die jaren weet je dus wat er gemeld is en aantallen.	But then you see the same tiles and we have simply adapted it to what is customary with us. Because all those years you know what has been reported and the numbers.
142 11	Contextualisation: presence of contribution to policy goals	Initiator policy development	Respondent indicated that use of digital technologies functione	Information gathering through digital technologies, allocation of budget.	Als er veel meldingen binnenkomen over wateroverlast of storingen of gemaal storingen of dan kan je er direct op voorbereiden. Je kan grootschalig	If many reports come in about flooding or malfunctions or pumping station malfunctions, you can

		d as the initiator for policy developm ent to reach (a) certain policy goal(s).		onderhoud aan de weg, alles naar voren trekken in bepaalde wijk. Het hele systeem zal omgaan.	immediately prepare for it. You can carry out large-scale maintenance on the road, pull everything forward in a certain neighbourhood. The whole system will change.
142 12	Contextuali sation: presence of contributio n to policy goals	Insight achievab ility policy goal(s)	Responde nt indicated that the use of digital technolog ies provides insight into the achievabil ity of (a) certain policy goal(s).	Information gathering through digital technologies , achievability.	Ik denk dat data jou meer inzicht geeft in wat haalbaar is. Dus als je gaat kijken naar als er beleid wordt gemaakt van, ja, dit zijn de ambities, hé, want vaak maak je op basis van je ambities je beleid. Alleen ik denk dat je de data kan gebruiken om te kijken of je ambitie, laat ik zo zeggen, reëel is.	I think data gives you more insight into what is feasible. So, if you look at whether policy is made of, yes, these are the ambitions, hey, because you often make your policy based on your ambitions. Only, I think you can use the data to see if your ambition is, let's say, realistic.
142 13	Contextuali sation: presence of contributio n to policy goals	Mean for achievin g policy goal(s)	Responde nt indicated that the use of digital technolog ies on itself contribute	Contribution service delivery.	-	-

			s to achieving policy goal(s).		
142 20	Contextuali sation	Absence of contributi on to policy goals	Responde nt indicated there to be no contributi on of the digital technolog ies to specific policy goals or problems.	No information gathering through digital technologies for policy, no contribution to problems like sustainabilit y or participation.	Ik denk dat die beleidsdoelen hier niet zo scherp zijn. Ik denk dat die echt bij de gemeente liggen. Wij hebben echt uitvoeringsdoelen.	I think those policy goals are not so clear-cut here. I think they really belong to the municipality. We only really have implementation goals.
151 00	Aim for further use of digital technology	Specific ERP system report public space	Responde nt indicated there to be an aim for the implemen tation of a specific ERP system for reports in the public space.	Development , decision or tendering phase of the implementati on of a specific ERP system for reports in the public space within the organisation.	En we, we zijn juist ook bezig met een aanbesteding voor Fixi.	And we, we are also working on a tender for Fixi.
152 00	Aim for further use of digital technology	Reportin g using GPS location	Responde nt indicated there to be an aim for the implemen tation of GPS-	Development , decision or tendering phase of the implementati on of reporting using GPS location in	Maar ja, we willen sowieso toe naar een systeem dat meldt op kaart, dus dat je echt een pinnetje kan zetten en zeggen: hier is het aan de hand.	But yes, we want to go to a system that reports on a map anyway, so that you can really put a pin and say: here is it going on.

			based reporting.	the organisation.		
161 00	Motive digital transformation	Customer satisfaction	Respondent indicated the satisfaction of the customer with the municipality as a motive for digital transformation.	Customer satisfaction rates.	Dus ook voor de burger is dat veel klantvriendelijker en dat is ook één van de hoofdreden waarom wij besloten hebben om Fixi aan te schaffen.	So this is also much more customer-friendly for the citizen and that is also one of the main reasons why we decided to purchase Fixi.
162 00	Motive digital transformation	Service delivery quality	Respondent indicated service delivery quality as a motive for digital transformation.	Service-oriented.	Dus dat is gewoon verbetering van werkprocessen geweest, een bijdrage aan verbeteren dienstverlening.	So that has simply been improvement of work processes, a contribution to improving services.
163 00	Motive digital transformation	Information management	Respondent indicated service delivery quality as a motive for digital transformation.	Data is valuable.	Maar wat je wint is overzicht. Omdat dit nu geprogrammeerd is, je kan maandelijks of jaarlijks tellen hoeveel meldingen er binnenkomen, op welk onderwerp.	But what you gain is overview. Because this is now programmed, you can count how many reports come in on a monthly or annual basis, on which topic.
164 00	Motive digital	Efficiency	Respondent indicated efficiency	Easier, quicker, less time.	En omdat de aantallen meldingen ook enorm oplopen hebben wij gewoon	And because the numbers of reports are also increasing

					niet meer de personele capaciteit om dat allemaal te behandelen zoals we deden.	enormously, we simply no longer have the personnel capacity to handle all of that as we did.
transformation		as a motive for digital transformation.				
16500	Motive digital transformation	Process optimisation	Respondent indicated process optimisation as a motive for digital transformation.	Streamlined, optimised.	Dus veel beter stroomlijning, dus meer duidelijkheid, ook in 1 punt, waar alle meldingen openbare ruimte terecht komen aan de voorkant.	So much better streamlining, so more clarity, also in 1 point, where all public space reports end up at the front.
16600	Motive digital transformation	Another municipality	Respondent indicated that another municipality functioned as an example and therefore as a motive for digital transformation.	(Neighbouring) municipality with similar system earlier implemented.	Omdat wij dus kennis maakten met het proces zoals het bij Woerden werkte, hadden wij zoiets van: nou, dit is dermate bijdragend aan de dienstverlening, dat moeten we gewoon gaan doen.	Because we became acquainted with the process as it worked at Woerden, we were like: well, this contributes so much to the service, we just have to do that.