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# UNDERSTANDING THE MOTIVATIONS BEHIND ARTIFICIAL INTELLIGENCE (AI) ADOPTION IN LOCAL GOVERNMENTS: A QUALITATIVE STUDY OF POLITICIANS AND MANAGERS

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## ABSTRACT

*Recent developments in artificial intelligence (AI) have the potential to transform administrative and political practices at the local level. However, the literature still offers limited empirical evidence on how local managers and politicians perceive this change, which motivations drive their adoption of AI technologies, and how they form future expectations. This study examines AI adoption in a municipality in Türkiye's Eastern Anatolia Region through the Technology Acceptance Model (TAM) as an analytic lens. We selected 12 municipal managers and council members through purposive sampling, conducted semi-structured interviews, and analyzed the data in MAXQDA with a hybrid thematic analysis (deductive-inductive). The analysis indicates that participants define AI through digital assistant/anthropomorphic assistant metaphors and also as an algorithmic tool. Moreover, awareness of hallucination, lack of consciousness, and limitations in creativity make trust conditional. Motivations that drive AI use include strengthening administrative capacity, speeding up service delivery, working with big data, and improving operational efficiency and reducing cognitive load. Actual use concentrates on information-intensive workflows, especially text-document production, legal/analytic research, and reporting. Meanwhile, they frame AI use with calibrated caution because of trust-control-accuracy concerns and risks such as manipulation, cognitive atrophy, and professional substitution. This study analyses the motivations of local managers and politicians to use AI through qualitative data, and it argues that researchers need to analyze technology acceptance beyond perceived individual benefits by also considering institutional responsibility, risk perception, and the governance context.*

**KEYWORDS:** Artificial intelligence, Local administrators-politicians, Technology acceptance model, AI adoption, Local government.

## 1. INTRODUCTION

AI is rapidly infiltrating our public organizations, yet, scholars have sparse empirical research regarding how local political/administrative actors understand its promises and risks in practice. Although government's capacity and strategies are largely studied, the logics for adopting AI at the local level is understudied. It is also overlooked because local governments make the frontline of public service provision-decisions about AI there affect accountability, public value, and trust. Despite its promises, AI in local politics does so under conditions of ambiguity and scant expertise, which makes its adoption ripe for study.

Over many years, digital transformation remained an elite act largely dependent on the central government. Put simply, in most views, local government neither had the means nor the will to conduct large-scale technological change (Dunleavy et al., 2006). But the rise of AI has led to this position being challenged. AI is now a usable technology, it is accessible and commonplace. In the 21st century, advances in computational power and availability of data have further speeded up the adoption of AI. In general terms, Simmons and Chappell (1988, p. 14) define AI as systems that perform tasks that humans recognize as requiring intelligence. Today, AI plays a central role in a digital world and in human life (Farrokhnia et al., 2024). Its use spreads across different parts of society. People use AI for personal aims, and they also use it in their professional activities because it provides several opportunities (Ibrahim et al., 2025). Compared with earlier periods, AI now moves faster and reaches more areas. It has started to change working life in a deep way. In this process, some jobs disappear, new roles emerge requiring new skills, and existing occupations transform (Agarwal, 2018).

Local governments and local politics have become important areas for AI use. They integrate AI tools into their systems to improve efficiency and productivity in local public services (Meng & Cheng, 2020; Yiğitcanlar et al., 2024). Many places around the world use AI in several local areas, such as better decision-making, city asset management, finding and solving faults in city infrastructure, and offering fast and easy services through chatbots (Faisal et al., 2019; Rodriguez Müller et al., 2025; Yiğitcanlar et al., 2019; Yiğitcanlar et al., 2023). However, local governments gain real value from these technologies only when users accept them and keep using them over time (Singh, 2024), making technology acceptance a central issue in understanding AI adoption in local governance.

Scholars have developed a growing body of research on the factors that shape how local governments and local leaders adopt and use AI. Many studies assess AI adoption and use by focusing on potential benefits and possible risks (Wang et al., 2022; Banazılı, 2025). For example, they link AI adoption to institutional technological capacity (Erkut, 2020; Schaefer et al., 2021) and to an innovative culture (Kuziemski & Misuraca, 2020). Bureaucratic slowness was also presented as a barrier to AI adoption (Alshahrani et al., 2022). Studies also count environmental factors, such as national AI roadmaps, as important drivers of AI adoption. Madan and Ashok (2023) review this work in detail in a systematic literature review. They argue that technology, organizational capacity, environmental factors, and absorptive capacity shape AI adoption, and public managers play an important role in this process. Moreover, the study highlights the role of public managers as active decision-makers who focus on public value in this process.

In recent years, researchers often use the Technology Acceptance Model (TAM) in studies that examine individual acceptance of AI use (Hokroh et al., 2026; Ibrahim et al., 2025; Kelly et al., 2023; Sohn & Kwon, 2020; Song et al., 2025; Ulaş, 2025; Zou & Huang, 2023). Two beliefs that TAM posits as being central are perceived usefulness (a person believes the technology will help performance) and perceived ease of use (that using the technology will be easy). TAM argues that these two beliefs shape a person's attitude toward the technology and then guide intention to use it (Davis, 1989). For this reason, TAM (Davis, 1989) ranks among the most common frameworks for explaining how people adopt and use new technologies. This study also uses TAM because it can offer useful insights for this analysis (Kelly et al., 2023).

In the AI-driven change process in local governments, we need to understand the factors that shape local managers' adoption practices. This understanding matters because it helps explain how local governments integrate these technologies into administrative and political processes. In public institutions, people often link the success of technological innovation to the knowledge level, perceptions, and motivation of the individuals who take part in the process. For this reason, researchers have carried out more studies in recent years. For example, Distor et al. (2021) examine how local government officials in the Philippines perceive AI use for e-government initiatives; Yiğitcanlar et al. (2023) examine city managers' perceptions, expectations, and barriers related to urban AI

systems. Rodriguez Müller et al. (2025) examine the willingness of 497 public managers to adopt AI in decision-making. Based on institutional theory, they focus on how three institutional pressures (coercive, normative, and mimetic) shape managers' intention to use AI and how personal benefit perceptions interact with these pressures. Horowitz and Kahn (2021) examine attitudes toward AI adoption and the demographic, experience-based, and ethical factors that shape these attitudes, using a representative sample of 690 local officials in the United States.

Even though AI use has grown in local governments, knowledge remains limited on the motivations behind adoption and on how local actors interpret AI. The current literature mainly focuses on macro factors such as institutional capacity, technological infrastructure, and regulatory frameworks. However, local AI use often depends on how decision-makers think, what they expect, and what strategic choices they make. The literature has not fully addressed this issue. A clear gap remains on how elected politicians and bureaucratic actors use AI, how they bring it into governance processes, and how they define its role in local policy-making. A broad framework can support a more detailed analysis of the strong and weak sides of AI in local practice and clarify the main opportunities and risks for local governance.

This study aims to fill this gap as followings. First, it offers an empirical contribution by analyzing how local political and administrative elites in Türkiye perceive AI and what motivates them to use it, based on qualitative interviews. Secondly, starting from the assumption that AI creates public value in local services only when users accept it and keep using it over time, this study proposes an analytic framework that combines the core TAM components (perceived usefulness, perceived ease of use, intention to use, and actual use) with thematic analysis. In this way, the study brings forward the 'local actor's sense-making', which the literature often neglects. The study examines how local actors define AI, identify its benefits, and assess associated risks. It also explores how micro-level perceptions and organizational dynamics influence AI adoption.

A municipality in Türkiye's Eastern Anatolia Region that utilizes AI tools was selected for this study. Semi-structured interviews were conducted with 12 municipal managers and elected council members. The interview data were analyzed using qualitative content analysis with the assistance of MAXQDA. This paper examines how local actors conceptualize AI, explores key themes related to motivations for use, methods of implementation, and

future expectations. The study also investigates the opportunities and risks anticipated by local decision-makers. Overall, it contributes to the literature by providing evidence on the current state and future trajectory of local AI use.

The rest of the paper is structured as follows. Section 2 of the paper presents both the existing literature on AI and its impacts on public administration and local governance, and the TAM as the theoretical framework explaining why local political and administrative actors use this technology. Section 3 describes the research design, the data collection process, and the analytical procedures. Section 4 reports the interview findings and the results of the thematic analysis. The last section draws conclusions from this study theoretically and practically and suggests directions for future research.

## 2. CONCEPTUAL AND THEORETICAL FRAMEWORK

AI has no precise definition (Wang, 2019, p. 29). At least, it is interdisciplinary field of research, whose ambition is to reconstruct, as well as reproduce, mental processes of human beings, such as learning, thinking or decision-making processes in a machine (Winston, 1992). More broadly, it is about designing systems capable of efficient action in order to achieve particular goals (Russell & Norvig, 2010). In other words, it supposes a dual structure, in the sense that people have to consider AI as both an engineering output, as well as a scientific activity.

Modern conceptions of AI rest on concepts established in the early intellectual history of the field. Alan Turing's seminal, "Imitation Game" (1950) restated machine intelligence functionally and behaviorally, that is, in terms of observable performance rather than internal mechanism. His "child machine" notion made learning and experience a central part of how intelligence develops in intelligent systems. That made learning one of the main parts of his "child machine" definition, which formed later scientific bases to contemporary machine learning. The Dartmouth Workshop produced the organization of AI; however, early attempts had only limited learning. The central idea of learning then became prominent in Samuel's (1959) definition, which changed AI from command-based systems to data and experience-based systems. McCarthy (2007) based the science and engineering of AI on computational methods to display intelligent behavior without necessarily copying human intelligence mechanically.

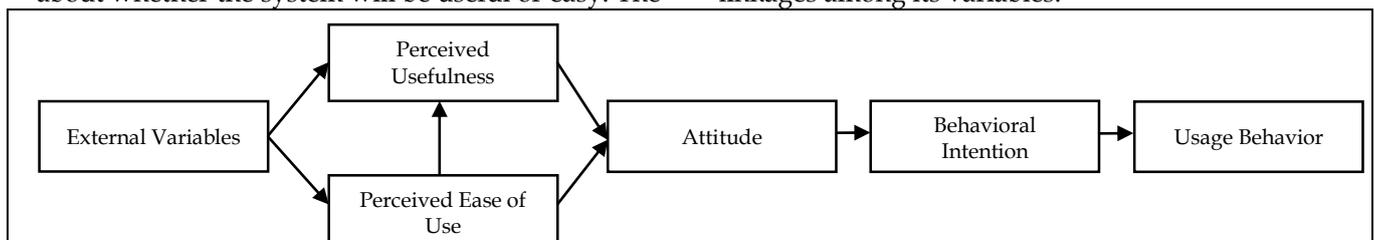
AI goes beyond imitation of human behavior as it

provides a general approach to solving problems in AI where knowledge representation, learning, reasoning, and decision-making are seen as one piece of a systems perspective (Winston, 1992; Russell & Norvig, 2010). From a systems perspective AI is now part of the decision process, work that addresses AI through practical AI, algorithmic AI, and social impact. Today, definitions consider the capacity, as well as, context of AI, the systems created to achieve a use case and associated outputs. As such AI is defined as a system that takes data from an external source, uses that information flexibly in pursuit of narrow goals, and that, with use, becomes better at the task of achieving those goals. Scholars describe AI as a path from limited narrow AI applications to potentially human-like AI capacity (Kaplan & Haenlein, 2018).

Ajzen and Fishbein (1975) treat belief as a person's subjective estimate of how likely it is that an object has certain features. In other words, before a user tries a system, the user makes a mental estimate about whether the system will be useful or easy. The

user then updates this estimate with each new experience.

Based on this psychological base, Fred Davis (1989) built the TAM, which many people see as a key model in the information systems literature. Davis argues that two judgments shape the fate of a technology: Perceived Usefulness and Perceived Ease of Use. He defines perceived usefulness as "the degree to which a person believes that using a particular system will improve job performance" and he defines ease of use as the degree to which the system does not require effort. According to one of Davis's main claims, users will not adopt a system if it is difficult to use, unless it provides obvious advantages to users, since perceived usefulness is a more powerful predictor than ease of use. For this reason, intention is more important than system properties for technology acceptance. As Davis et al. (1989) point out, actual use is best predicted by behavioral intention to use a technology. Figure displays the conceptual structure of the TAM and the linkages among its variables.



**Graphic 1: Technology Acceptance Model (TAM)**

In this model an analytic frame is provided. The model explains how external variables affect usefulness, affect perceived ease of use, affect attitude, affect intention, affect usage, and the correspondence of the intention to use of the system with its actual use. Intention has not just the aspects of personal intention: in the TAM2 model Venkatesh and Davis (2000) included social pressure and demonstrated that especially in work context, where usage was compulsory, the influence of the expectations other people created directly affected intention.

Venkatesh et al. (2003) integrated these "fragmented" approaches into one umbrella: Unified Theory of Acceptance and Use of Technology (UTAUT). Venkatesh et al. (2003) integrated multiple variables such as performance expectancy, effort expectancy, and social influence into one strong model. TAM3 followed this, and gave managers "a more pragmatic and action-oriented perspective" based on training, social support and improving the technology (Venkatesh & Bala, 2008). Critics say that the technology acceptance models only explain part

of the usage behavior, not all of it, and that the models should also focus on the human and social change processes (Legris et al. 2003).

In this study, AI means generative AI and data-based decision-support tools. Municipalities use these tools for text production, document/file retrieval, transcription, summarizing, translation, information scanning, and decision support. It uses TAM as an analytic lens to understand AI use in local governments. Interviews show that local managers and elected actors judge AI not only by perceived usefulness and perceived ease of use, but also by contextual criteria such as accuracy, trust, controllability, and low error tolerance in formal procedures. For this reason, the study combines TAM's core components with thematic analysis and adds trust-risk-control dimensions as complementary mechanisms that shape adoption in local governance.

### 3. RESEARCH DESIGN

This paper addresses the following research question: "How do municipal managers and

politicians interpret AI, which motivations drive their use, and what expectations and worries do they hold about the future of this technology?" It addresses the main research question by dividing it into three sub-questions: (i) How do local managers and elected actors conceptualise AI? (ii) Which motivations lead these actors to adopt AI, and which areas of use do they prefer in the municipal organisation? (iii) Which opportunities and risks do participants foresee for the future of AI?"

Qualitative research aims to explain under which conditions social phenomena emerge and how they gain meaning. This approach takes a human-centred view, so it studies how individuals interpret their environment and what meanings they give to the situations they experience (Aydın, 2023). Punch (2020) states that this approach covers studies that do not use numerical data, and it works as a broad 'umbrella' that includes different methods. Qualitative studies examine a phenomenon in its own context and treat it as a whole. For this reason, the researcher plays the main role as the key tool for data collection, and the study presents findings through rich descriptions that reflect participants' lived experience. Therefore, this study adopts a qualitative approach.

This study focuses on drivers for AI adoption through an exploration of actors' experiences and perceptions in this field. A qualitative case study design was used, with the empirical domain a single municipality. Through purposive sampling, participants able to address the organization-related practices and decisions related to AI-adoption were interviewed. As methodology a set of semi-structured in-depth interviews were conducted and the material was analyzed in a hybrid thematic approach where deductive and inductive logic were combined. We first developed an initial coding frame from the study's research questions and relevant concepts, and then expanded and refined the codes as participants introduced new meanings and concerns. Qualitative interviewing enables researchers to access participants' interpretations through an interactive and flexible exchange (Patton, 2014).

In qualitative research, the researcher makes the choice of group of participants through the procedure of sampling for purpose. The purpose of choosing the study group is so that the study will be conducted in individuals that best serve the research's aims and that yield plentiful qualitative data. Purposeful sampling indicates that the researcher is choosing participants based on the goal of the research problem (Creswell, 2013). We held

semi-structured interviews with 12 participants from the municipality, including both elected and appointed local actors. To map familiarity with AI, we asked participants to evaluate their knowledge and experience with AI during the interviews. We found that differences in familiarity with AI applications gave the study a useful range of views. We chose participants from managers in different municipal units and from local representatives from different political parties. This choice aimed to generate rich data by bringing together varied institutional roles and political perspectives.

The researchers collected the data with a semi-structured interview form that includes ten questions. All interviews took place face to face and lasted about 30-40 minutes on average. We received ethics committee approval for the study. The researchers informed participants about the research and as part of the ethics process, participants signed a consent form before the interview. During the interviews, the researcher asked extra questions when needed. These questions clarified points and guided the conversation, and they helped participants express their experiences. After the interviews, the research team brought the data together. The team created texts by transcribing recordings and by using written notes. The team then checked and edited the texts and prepared an analysable dataset. We used content and thematic analysis to analyse the interview data. These methods allow a systematic review of text-based qualitative data (Flick, 2009). The analysis had two stages. In the first stage, the team read the texts carefully, identified meaning units, and coded the data. In the second stage, the team compared the codes and grouped them based on conceptual similarity. This step produced themes and sub-themes. The team used MAXQDA to support qualitative data analysis. To strengthen validity and reliability, the team followed a systematic and transparent analysis process. Researchers coded the material on their own, compared code sets, and evaluated agreement. We discussed differences and developed a common coding framework.

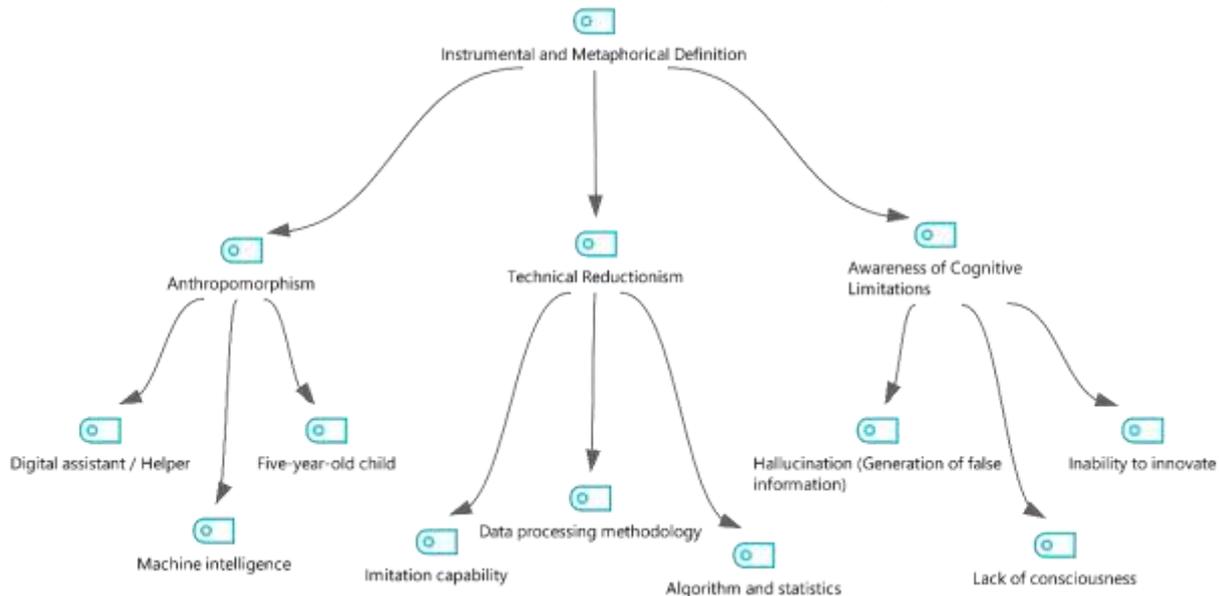
#### 4. RESULTS

In this section, we present the interview findings derived from a hybrid thematic analysis (deductive coding informed by TAM and inductive coding emerging from the data) conducted in MAXQDA, which maps how local administrators and elected officials conceptualise AI, what motivates their use, how they apply it in municipal work, and what future expectations and concerns they express.

#### 4.1. Instrumental and Metaphorical Definitions of AI

The perceptions and definition of AI by municipal

administrators have been categorised into three main categories. As shown in Figure 1, these categories are anthropomorphism, technical reductionism and awareness of cognitive limitations.



**Figure 1: Hierarchical Code-Subcode Sections Model Showing Instrumental and Metaphorical Definitions**

Anthropomorphism (attributing human-like qualities) emerged as a common attribution mechanism in participants' definitions. For example, P1 describes AI as "a five-year-old child who is highly intelligent, loaded with data, but lacks a truly innovative analytical ability." It reflects the faith that AI needs direction, even if it's powerful. The concept of machine intelligence emphasizes AI's capacity to perform multiple tasks simultaneously and implies that the technology is viewed as software capable of processing data within seconds and generating new data. P5 describes this technology as the biggest competitor in the workplace of the future. The fact that AI is seen as a competitor to humans in the workplace may indicate that it is accepted as an entity with human status.

Additionally, in participant' expressions, AI is conceptualized as decision-making, learning, possessing intelligent vision, and even as a selfless colleague who takes on the workload that humans describe as "menial work." P12's description of AI as a structure that "can mimic human thinking, analysis and decision-making processes" clearly shows that human-specific abilities are attributed to the technology. P8 further personalizes this relationship, stating that AI can respond to it with comments such as "very nice, I hadn't thought of that," transforming the connection into a kind of master-apprentice or assistant-manager dialogue. This situation indicates that AI has moved beyond being a detached technology and has been placed in a semi-subject

position that models human intelligence, albeit without empathy existing to make human life easier. This human-like assistant role assigned to AI reinforces the user's sense of control over technology (as in P8's statement, "I am directing it"), while also allowing the complexity of technology to be simplified and domesticated through the assistant metaphor.

Some participants defined AI as a technical tool. In this framing, they emphasized its algorithmic and statistical nature, focusing on functional capabilities rather than human-like attributes. P7 expresses this view, stating, "Honestly, I don't see AI as AI at this point. We see it as an algorithm." Likewise, imitation capability, P11 describes AI as "a technology that can mimic human intelligence, process large data sets quickly and meaningfully, and assist in decision-making processes and as a tool" that makes service delivery effective for municipal administrators.

P12 emphasizes the technology's ability to replicate, defining AI as "a technology that can mimic human thinking, analysis and decision-making processes; a technology that produces results by learning from data" and highlights the importance of this mimicking ability in public services. "These definitions show that people see AI as a functional tool based on data processing and imitation, not as an autonomous entity.

Participants' expressions of AI's cognitive limitations are presented under the category "Awareness of Cognitive Limitations" focusing on

the technology's shortcomings in relation to the human mind. Within this category, three fundamental cognitive deficiencies of AI stand out. Firstly, AI's tendency to generate unrealistic information (hallucination) is explained with a concrete example experienced by participant P2. P2 describes this situation as "confusing, giving people new -incorrect- information" stating that upon inquiry about a municipal law, the AI invented non-existent articles and, even though it admitted its mistake, entered into a trust-eroding cycle. Secondly, the AI's lack of self-awareness and willpower is highlighted in P7's statements, which emphasise that

the system is merely an "algorithm." P7 argues that true intelligence requires the ability to think and exercise sound logic; stating that AI's lack of consciousness makes it easily manipulable by malicious individuals. Finally, the AI's inadequacy in terms of creativity and innovation is explained by P1 using the metaphor of a "5-year-old child" for the system. The participant argues that although the system's intelligence level appears superior to what it is merely a "methodology" that can only process existing data and lacks a truly innovative analytical ability.

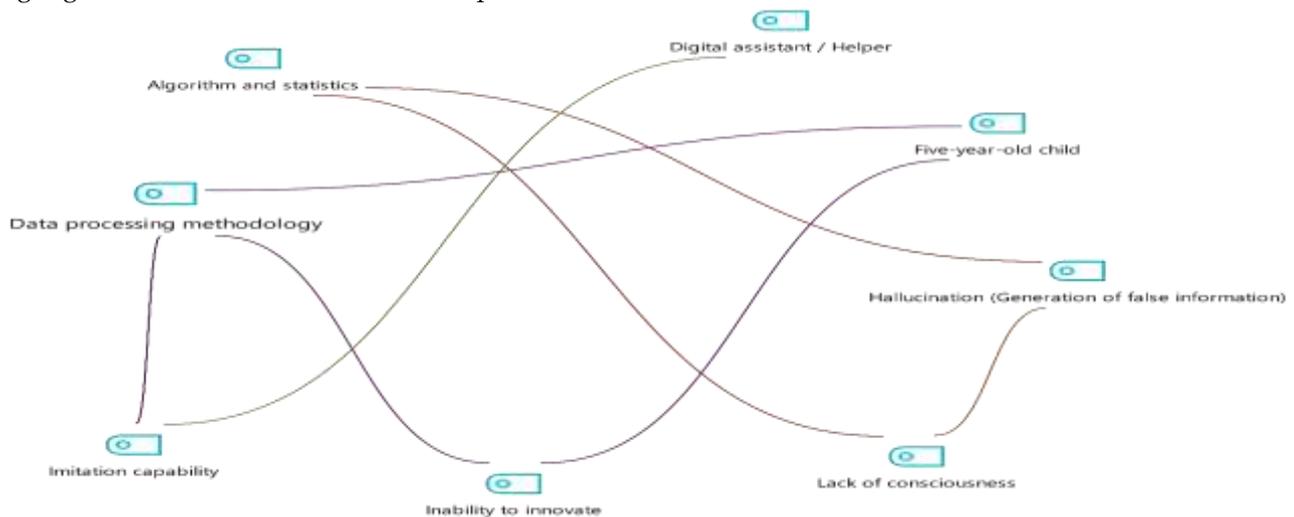


Figure 2: A Code Co-Creation Model for the Instrumental and Metaphorical Definition of AI.

Figure 2 reveals that participants' expressions of AI exhibit fluidity across multiple conceptual frameworks. The most striking finding in the model is the broad loop represented by purple lines, connecting the largest code symbols. This loop demonstrates the strong co-occurrence between anthropomorphism and awareness of cognitive limitations, revealing that participants define AI using human-like metaphors such as "a five-year-old child" or "digital assistant" while simultaneously emphasising the technology's shortcomings. The green and red lines show that participants made fluid transitions between anthropomorphic definitions and technical reductionism, and between technical definitions and specific limitations such as inability to innovate or lack of consciousness. The size differences of the code symbols indicate that anthropomorphism and cognitive limitations are prominent themes, while technical definitions such as "algorithm and statistics" remain more peripheral. The intersection of multiple-coloured lines at the centre indicates the presence of bridge codes and reveals conceptual pivot points that allow participants to shift between different conceptual

frameworks within the same conversation. These findings show that participants do not hold fixed, singular perspectives on AI, but rather develop sophisticated, multi-layered mental models characterized by thematic fluidity and conceptual plurality-particularly the strong co-occurrence of anthropomorphism and cognitive limitations, revealing that humanizing AI does not lead to uncritical acceptance, but rather coexists with the perception of it being human-like but fundamentally limited.

#### 4.2. Motivations for AI Use

As seen in the hierarchical code-subcode sections model in Figure 3, key motivations for using AI is to strengthen administrative capacity. Several factors come together under this category. First the organizational need to use AI. Alongside these needs, the availability of public support and the requirement for rapid process advancement are among the factors accelerating the adoption of AI. Therefore, municipal administrator/politicians are turning to AI solutions to meet the need to provide effective services. The necessity of working with big

data is an important reality faced by modern organizations. However, limitations in accessing information make the effective use of this data difficult. AI plays an important role in this context by creating experience-based frameworks and supporting data-driven decision-making processes. This enables municipal actors to transform their accumulated data into strategic decisions.

The second motivation category focuses on improving operational processes and reducing cognitive load on employees. Content and information management is one of the areas where AI makes a significant contribution. Delegating routine tasks to AI allows employees to focus on

more strategic and creative work. For instance, in the case of urban planning and service delivery, AI helps the organisations to solve more complex problems.

Automating of routine tasks also eases out the routine workload and saves a considerable amount of time spent for research and preparation of the presentation. These things add up and local actors will be able to reduce the overall workload, and direct the capacity of employees towards the strategically more valuable work. All these operational gains will be important for further realization of the smart city vision many municipalities are pursuing.

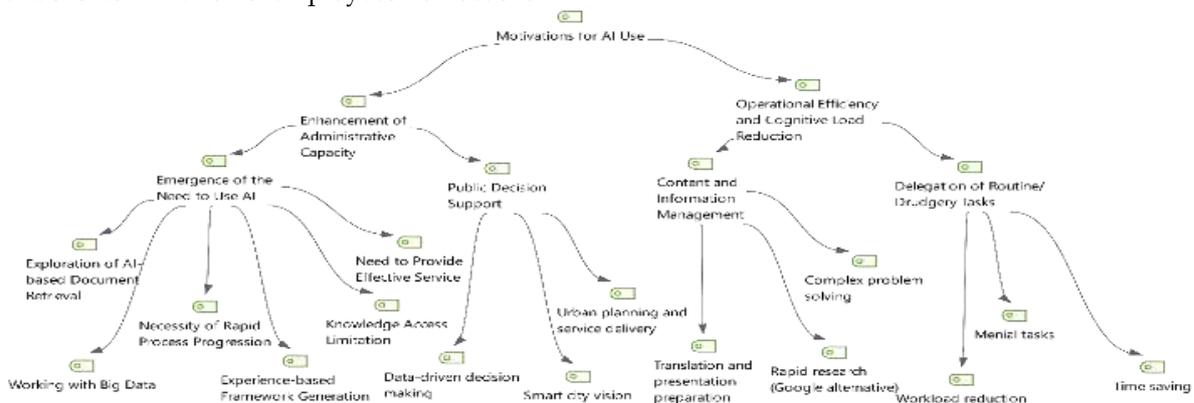


Figure 3: Hierarchical Code-Subcode Section Model Showing AI Usage Motivations

### 4.3. Enhancement of Administrative Capacity

The emergence of the need to use AI, has been shaped by various factors coming together in municipal administration. This need is grouped under six main subcategories: creating an experience-based framework, exploring AI-based document access, the need to provide effective services, information access limitations, working with big data, and the requirement for rapid process advancement. In the context of experience-based framework generation, participants develop practical solutions by testing AI in real-world scenarios. One participant explained this as follows: “We are carrying out urban transformation, and there is no absolute right here, only the optimal right. I ask AI how my scenario should be in urban transformation. It finds the negatives of previous applications and draws me a framework by saying, “Look, they did this, they experienced that problem” (P1). This statement shows that AI has become a tool that offers practical solutions by learning from past experiences.

Secondly we can state that increasing local manager/politicians expectations have created a need for fast and effective service delivery. As one participant stated, “Due to increasing citizen

expectations, there is a need for fast decision-making and effective service delivery” (P11). This situation demonstrates the role that AI plays in citizen-focused service delivery. On the other hand, local managers/politicians face the problem of not being able to make efficient use of their accumulated knowledge. One participant explained this problem as follows “Let’s say we are preparing a project. Our unit is the Climate Change and Zero Waste Directorate. It is not possible for us to have all the information produced in this field worldwide. We use AI to find examples and save time when conducting research or preparing for a project” (P3). In the age of information municipal administrators/politicians need to manage data intensity and derive meaningful results. Participants expressed this situation as follow, “There is a lot of data in municipal administrations, and decision-making processes must be fast” (P12) and “There is a need for technology that can analyse this much data to accelerate the processes of analysis, reporting, regulatory compliance, and strategic planning” (P11). In sum, the findings show that the need to use AI in municipal administration emerges where three pressures meet: rising citizen expectations, difficulties in managing and accessing information, and the need to make fast decisions. At the same

time, participants are saying AI is still not reliable enough and formal procedures allow no space for errors. In the view of the participants, the local government should use AI responsibly and cautiously as a supporting tool. Motivations for municipalities to adopt AI are public services decision support and hence comprise a top-most category. Public services decision support has three sub-themes: the smart city vision, data-based decision making, and urban planning and service delivery.

In the smart city vision theme, municipal actors view AI as a driving force of urban renewal and modernization. As a participant puts it: "AI to me is the digital assistant which analyses data, has human-like decisions, keeps learning and solves very big problems at the flick of a switch or in seconds. For me AI is a modern force which increases urban quality of life, enhances data-driven decisions and pursues the public good and in line with our smart city vision" (P4). The participants' understanding is beyond a technical tool. They envision AI to be a force of modernisation for improved quality of urban living.

It is evident for municipal administration - a Data Driven Decision - that many municipal actors rely on AI to make more informed and effective decisions through the analysis of large data sets. A participant defined this need as "when I think of AI, I'm think of technology which can act like human intelligence, crunch large data sets and do it fast, and also inform decision making" (P11). For municipal actors, AI plays an enabling role in this and thus strengthens decision making and ensures efficient service delivery.

AI role in Urban Planning and Service Delivery one participant defined this role as follows "I define AI as a technology that can simulate human thinking, analysis and decision making processes and gets results from learning from data. Properly used it is a very powerful tool in the planning of public services" (P12), here it is obvious that the role of AI in a strategic planning and delivery of public services.

#### **4.4. Operational Efficiency and Cognitive Load Reduction**

Theme "Operational efficiency and cognitive load reduction" is defined as municipal administrators/politicians AI use outside of decision areas that are strategic or conceptual in nature, but also in more practical tasks that make daily work easier, and alleviate the mindwork that municipal employees need to do on a daily basis. Under this theme, the first sub-dimension, content and information management, is defined as

municipalities utilising AI as a "workflow booster" for access to information, content generation and content editing, using AI as a strategic support tool to solve complex and multi-faceted problems. One participant defined the use in the following way: "I refer to AI as a digital assistant that analyses data, makes decisions similar to people, constantly learns, and solves complex and challenging problems in a matter of seconds. This technology serves our urban quality of life advancement according to our smart city vision, supports decision-making based on data, and is for the benefit of people. In this sense, AI enables more efficient data and decision making, reduces cognitive load, and streamlines operational tasks. (P4).

AI brings good convenience in presentation preparation and content production, two essential daily operation tasks in municipal administration. One participant said: "I'm a bit prejudiced. I don't like it very much. I don't like how much it is part of my life. Popular culture - I am a little distant from popular products - but then again, I use AI to prepare the presentation and I translate. Personally I think that AI is a technological device that provides convenience" (P10). The paradoxical statement reflects the point that although the participants say that they keep away from the technology they, at the same time, use it and state that AI has become an everyday tool that makes information management effortless when doing daily operations in municipalities. Meanwhile, despite all its conveniences, the participants also worried that human input could become less significant in future service processes.

Delegating routine and drudgery task to AI can be seen as one specific implementation of motivation for operational efficiency/reduction of cognitive load in municipal administration. AI is claimed to reduce workload due to AI acting as a "helper/assistant" on (among others) everyday mundane work or repetitive, low added-value jobs. In addition to that, the participants report that employees switch focus to more strategic tasks. This category contains three sub-dimensions: workload reduction, delegation of simple/tedious tasks and time saving.

In the workload reduction sub-dimension regard AI as a helper taking their "load." P9's comment "I define AI as a useful assistant; for me, it's a useful tool for taking my workload represents the role of AI as a helper reducing daily pressure and facilitating attention to higher-order activities." This result implies that a main driver for usage is that it enables workload management, instead of producing better ideas. Time is the most precise and measurable

outcome of task-transfer. One participant emphasized this benefit as follows “I would describe AI as a production tool that provides tremendous time savings for people who have bright ideas, think quickly, and are very good at asking questions” (P3). This statement shows that the time savings provided by AI are not limited to simply speeding up simple tasks. The technology creates a multiplier effect for users.

The code-co-formation model presented in Figure 4 illustrates the relationships between concepts related to motivations for AI usage. The concept of “need to provide effective services” is positioned at the centre of the model and is connected to almost all other concepts. This indicates that participants view the goal of AI usage as providing better services to citizens. The concept of “the necessity for rapid process advancement” shows strong connections to both working with big data and information access limitations, indicating that process speed is directly related to data management and information access. The code of “working with big data” serves as a bridge between data driven decision making,

problem solving with complexity and process advancement. The most tightly connected set of relationships of concepts occurs between working with big data, rapid process advancement and excellent service delivery. These concepts can be found together over and over again within participant statements and are a direct manifestation of the dilemma municipal administration faces: to process data quickly so that services to citizens are not adversely affected. The connections between the smart city vision and data-driven decision-making, on the one hand, and time savings and information access limitations, on the other, show that participants perceive AI as an integrated tool that both improves daily operations and enables the achievement of long-term strategic goals. The central position of the “need for effective service delivery” shows that all other motivations ultimately serve this goal. The model emphasises the necessity of an integrated approach that considers the interactions between these motivations, rather than focusing on a single motivation, when developing AI strategies in municipal administrations.

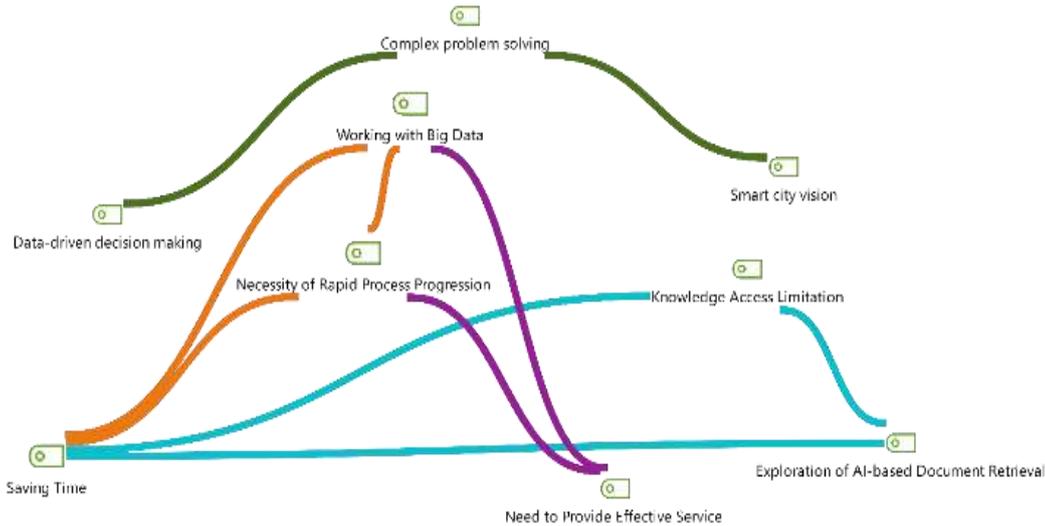


Figure 4: Motivations for AI Use Theme Code Co-Creation Model

4.5. The Use of AI

The codes in this section draw directly on the TAM. In this frame, authors integrate the core components of TAM into the thematic analysis and reflects them in the coding scheme. In this way, the analysis assesses participants’ perceptions (e.g., perceived usefulness and perceived ease of use) and behavioural tendencies (e.g., intention to use and actual use) not only at the individual level, but also together with institutional practice and adoption

processes in municipal organizations.

The use of AI is the main theme, divided into six different subcategories: perceived ease of use, perceived usefulness, intention to use, actual system use, areas of use in municipal administrations, and AI adoption in municipal actors. The model systematically categorises both the individual perception and behavioural dimensions of AI use and the institutional application and adoption processes, providing a comprehensive framework for how the technology is adopted and used by municipal administrators and politicians.



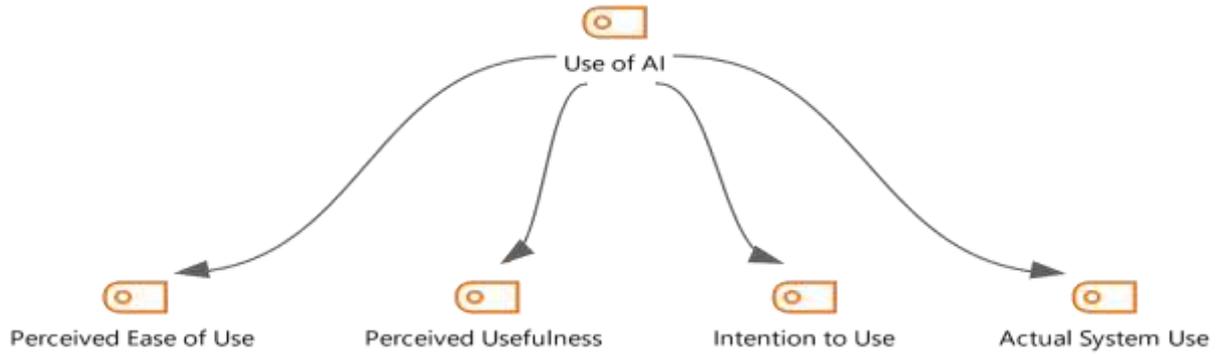


Figure 5: Hierarchical Code-Subcode Section Model Showing Categories Related to the Theme of Use of AI

Perceived Ease of Use as a key element of AI Adoption by municipal administrators/politicians. It is made up of 2 dimensions: facilities and challenges. It appears on the left: facilities that make use easier like saving time, acceleration of work, quick access to data, and correction of errors and as a “second eye.” It appears on the right: challenges that make the use

harder and require care like issues concerning data correctness, necessity of checking manually, security of data, complication of integrations, adaptation of staff, and legal gaps. This is why the category does not remain isolated. It takes shape together with the need for verification and control.

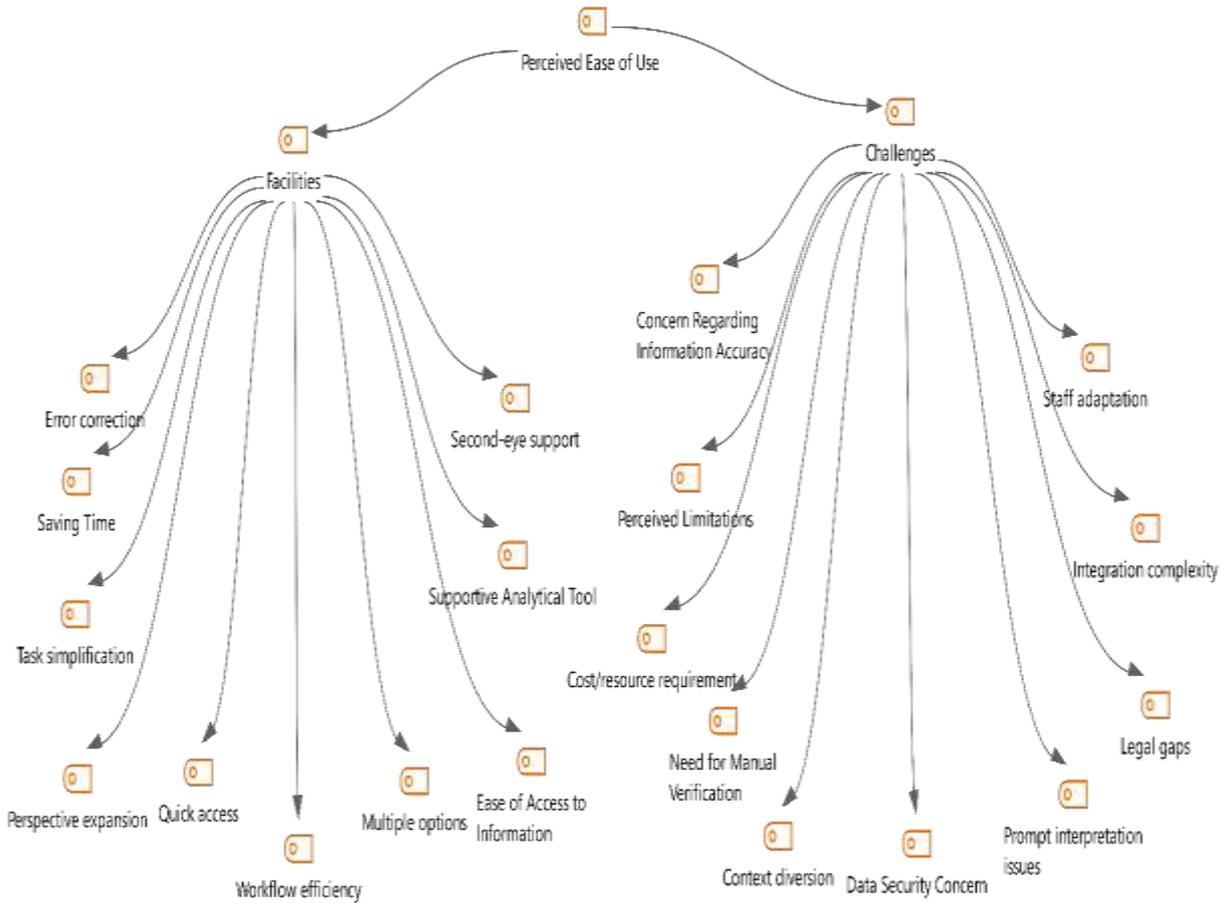


Figure 6: Hierarchical Code-Sub-Code Section Model Showing Categories Related to the Theme of Use of AI.

Facilities comprise 10 concepts. For instance, task simplification refers to AI making complex and multi-stage tasks more manageable and reducing the workload of municipal administration officials. One participant expressed this ease as follows “The greatest convenience is being able to access

information quickly and prepare draft texts (P12)”. Saving time, another code, is one of the conveniences emphasised by participants and constitutes one of the concrete benefits of AI. One participant summarised this as follows “The biggest convenience is time saving. It’s a wonderful thing; it makes me

smile every time. It can prepare a speech text targeting a specific audience from a complex data set in seconds or prepare a report to be presented in this format. It produces it in seconds, down to the last comma. You can review it if you wish, of course. It can be considered technical assistance, but a human touch is essential after the output is received." (P3). Second eye support, AI does not function as a verification and control mechanism for municipal's officials. One participant described this feature as follows "When it comes to the difficulties you encounter during use, because this 'child' is coded, it only gives you existing information. It knows everything, but because it is coded, it cannot come up with new ideas. I use this system more like a second eye (P1)", emphasising the use of AI as a consultation tool. Ease of access to information AI provides significant conveniences in information search and access processes. As one participant stated, "The greatest convenience is being able to access information quickly and prepare draft texts" (P12). This feature enables staff to access the information they need quickly and effectively. On multiple options, AI's capacity to offer alternative solutions and approaches enriches decision-making processes. One participant explained this feature as follows "I haven't encountered much difficulty, on the contrary, it's something that makes life easier. We can manage time very well, find answers to our questions quickly, and it offers many options" (P6).

Challenges are a more clearly defined category in terms of facilities of use. One reason for this is that participants who experienced AI talked more about problems. Perceived limitations indicate that AI's current capacity is insufficient in certain areas. P1 described this situation as follows "When it comes to the difficulties you encounter during use, because it is 'childishly' coded, it only gives you existing information. It knows everything, but because it is coded, it cannot come up with new ideas" (P1). P9 emphasised the limitations of the technology, stating, "In terms of difficulties, we can mention doubts about the accuracy of the information and difficulties in correctly interpreting prompts. The limitations of AI are also a challenge" (P9). P5 states, "The most challenging part for me when using the applications was that sometimes the AI gave me very superficial answers to the commands I gave or the questions I asked. They were things I could easily find by searching on Google. I suppose I needed to ask more detailed questions to get the answer I wanted. That was a hard part." This indicates that AI gives mostly superficial answers and one needs to ask detailed questions to get accurate results. For instance, legal

gaps concerns arise from the inadequacy of the regulatory framework regarding AI usage. P11 explained this situation as follow "The challenges that stand out are legal loopholes and question marks regarding data privacy, security, and non-compliance with the Personal Data Protection Law" (P11). This statement highlights how serious a problem the legal uncertainty surrounding the protection of personal data is.

Guidance/steering by AI creates the impression that AI is directing participants through its suggestions. P3 states, "I don't like how AI tries to guide you with various questions when data is loaded. Let's continue from here, for example. If you get caught up in those questions, you abandon your original train of thought and become a digital slave, rendering you incapable of thinking. I want it not to guide me, but simply to organise the data I upload in the format I want and provide it to me." (P3). Cost/resource requirements is stated that the financial resources required for the establishment and sustainability of AI pose a significant challenge for local authorities. P7 states, "We need to get involved in these kinds of things. On the other hand, at the call centre, when a citizen calls, they should say 'welcome', but they want a fee for this, 7.5 TL per minute. We could tell the colleagues at the call centre there that 'we don't need you', but because there is a cost, we are not getting involved in this at all now. It's not cheap, it's expensive." (P7).

Data security concern is another difficulty expressed by the participants. P10 said, "When I say difficulty, I don't trust that it keeps data secure. I don't have a membership; I don't install it on my phone. I don't upload photos, images, faces, neither of myself nor my children. I don't use facial recognition programmes; I don't unlock things with facial recognition. I don't trust it when it accesses my personal data (P10). P11 stated, "The challenges that stand out are data privacy, security, and the legal loopholes and question marks regarding non-compliance with the LPPD" (P11). Context diversion refers to AI sometimes misinterpreting the context or producing irrelevant results, which creates problems for users. P8 expresses this difficulty by stating, "As a challenge, it can distract you from the context and purpose, pulling you into a different area."

Prompt interpretation issues, on the other hand, refer to AI's inability to understand prompts. P9 states, "We can say that the difficulties include doubts about the accuracy of information and difficulties in correctly interpreting prompts. The limitations of AI are also a challenge" (P9). This statement highlights the limitations of AI in correctly

understanding commands.

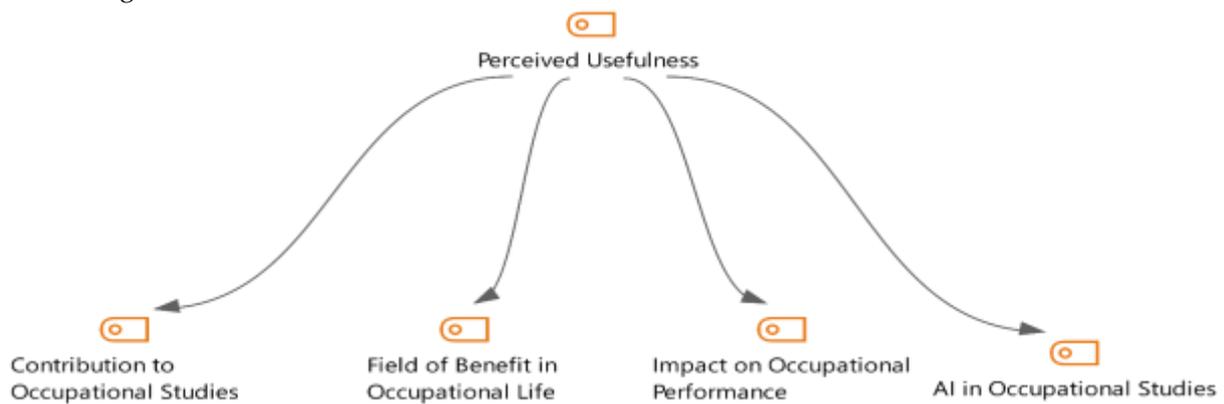


Figure 7: Hierarchical Code-Subcode Sections Model showing concepts related to the Perceived Usefulness subcategory.

Perceived Usefulness is consisting of 4 subcategories. Contribution to Occupational Studies category highlights how AI supports municipal administrations in their daily work processes and professional development. This category is structured under five main subheadings: offering a different perspective, benefits of data organisation, operational convenience, data analysis and reporting, and the use of AI for consultation purposes. Offering a different perspective AI contributes to users gaining different perspectives and broadening their horizons. P12 expressed this feature as follow “It also offers the opportunity to quickly see different perspectives.” This statement shows that AI enables users to make more comprehensive assessments by offering alternative approaches in decision-making processes. data organisation utility refers to AI providing significant conveniences in organising complex and dense data. P3 states, “It is important for organising complex, dense data in a short time. However, personal or corporate information should not be fed into this mechanism. I use these tools more for public reports or speech texts” (P3). Operational Convenience refers to AI providing operational conveniences by simplifying and speeding up daily work processes. P2 states, “If the data is coming in properly, it’s great, simple, it can make everything easier for you, it can organise the tasks you need to do morning and evening and map out a path for you. But the reliability of the information it provides is important.” Data Analysis and Reporting refer to AI’s strong contributions, especially in analysing and reporting large datasets. P11 said the following on this subject: ‘It has provided significant improvements, particularly in terms of time management and systematic data analysis. As the Legal Affairs Directorate, we have over 4,000 files,

and it contributes as if there were an intelligence on the other side in terms of classifying these files, quickly finding what is sought, and analysing and reporting according to file characteristics” (P11). Consultative AI Usage refers to using AI as a consultation and verification tool in professional work. P1 explained this use as follows: “I use this system more like a second pair of eyes.” For example, I am also an expert witness, I write reports for courts. I write the report, then I ask it, “What do you think?” Sometimes it tells me, “This law says this”, but I open it up and check because sometimes it can bring up old or outdated regulations, these kinds of errors happen a lot. But I benefit from it a lot” (P1).

The category contribution to professional work shows us that AI works as a multi-sided tool that improves the professional capacity of municipal officials. AI contributes in many ways, from offering different perspectives to organising data, from operational conveniences to complex analysis. It also supports professional decision-making when officials use it for consultation.

The field of benefit in occupational life highlights the tangible benefits that AI gives to municipal officials in daily work processes and professional duties. Local managers and elected politicians concentrate their AI use in specific functional areas. The findings show that this use clusters around eight core concepts: optimizing project design, continuous learning, large-scale document scanning and retrieval, translation, strategic planning, project development, interpreting legislation, and writing texts. This pattern shows that, in municipal organizations, AI mainly acts as a decision-support tool in information-heavy and text-focused workflows. For instance, strategic planning has been used in the context of AI supporting participants’ long-term planning processes. P11 stated, “I benefit

from strategic planning processes" (P11). This brief statement indicates that AI is used as a tool in strategic thinking and planning processes. Project Development refers to AI's contributions to project design and development processes. P11 stated that they benefited from AI for this purpose. Interpretation of legislation refers to AI providing support in understanding and interpreting complex legal texts. Again, P11 benefited from this purpose. Optimization of project design refers to the use of AI in improving and optimising project design processes. P3 states "We use it to learn new approaches, follow up on work done, learn not to repeat mistakes, or to be able to carry out a new project in the most appropriate way without losing data or missing any details. It is a good process in terms of summarising, computers do not miss any details," said P3. This statement highlights how AI ensures meticulousness and detail-oriented in project optimisation. Writing texts refers to the use of AI in preparing various official and professional texts. P11 gave the following examples of this area of use "Creating official correspondence drafts, writing petitions to courts, finding and analysing court decisions, preparing reports and presentations" (P11). This statement shows that AI has a wide range of uses in text production.

The category of impact on professional performance shows that AI improves the job performance of municipal managers and politicians and strengthens their work capacity. This category includes six concepts: stimulating creative motivation, improving decision support in project planning, an inspiring comparison effect, reducing workload through automation, enabling higher work capacity, and saving time. For example, in the context of stimulating of creative motivation AI is perceived to positively influence staff's creative thinking and motivation levels. P3 stated, "Seeing other examples, seeing good work done elsewhere spurs people on and prevents us from repeating ourselves. It provides a dynamic process in terms of instantly seeing work around the world and reducing the margin of error in projects. It is very useful for the organisation, yes" (P3). This statement shows that AI inspires staff by showing them other examples and encourages them to produce higher quality work. Inspirational benchmarking effect is that AI contributes to the development of elected/selected officials by showing different applications and best practices. P3 said, "Well, seeing other examples and good work done elsewhere spurs people on and prevents us from repeating ourselves. It provides a dynamic process in terms of instantly seeing work around the world and

reducing the margin of error in projects. But as a human being, I don't like it mentally exhausting me, although it keeps the process dynamic. Institutionally, yes, it's very useful." This statement shows that AI improves performance through benchmarking and showcasing examples.

Saving time is one of the concrete indicators of the impact on professional performance. P12 summarised this impact as follows "It facilitates time management, allowing me to focus on more files and topics. Because it speeds up routine tasks, I can devote more time to strategic and evaluation-requiring issues." P2 exemplified the practical results of time savings by stating "It has a positive effect on the time I use. For example, I currently have a programme. We must write down every word in parliamentary meetings, as required by law. I upload the audio recording, and it transcribes everything down to the last comma." (P2), illustrating the practical results of time savings. Improved decision support in project planning claims that AI enables more informed decisions in project planning processes. P3 said, "Well, seeing other examples, seeing good work done elsewhere spurs us on and prevents us from repeating mistakes. It provides a dynamic process in terms of seeing work around the world instantly and reducing the margin of error in projects. But, as a person, I don't like it straining my mental activities, although it keeps the process dynamic. Institutionally, yes, it is very useful" (P3) and P11's statement that "It has a positive effect on performance. The process of writing a petition and preparing its attachments, which can sometimes take a day when done manually, can be synthesised under our supervision using the best examples offered by AI and edited in an hour. The ability to quickly find and retrieve information from other departments' databases significantly increases performance" (P11). These statements are examples of this.

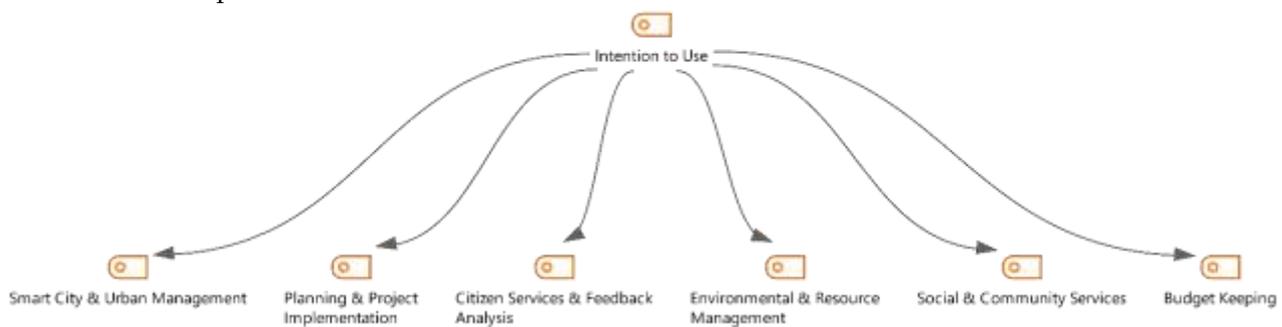
Impact on occupational performance category reveals that AI has increased the work performance of municipal administration officials/politicians in a multidimensional way. AI, which has a wide range of effects from capacity increase without reducing workload to creative motivation and time savings, significantly increases both the individual performance of staff and organisational efficiency. Participant statements reveal that these effects are not only quantitative but also qualitative.

The subcategory of AI in occupational studies theme is last one and show the specific areas and ways in which the technology is applied in municipal administration. P12 comprehensively describes the role of AI in professional work as follows "AI

contributes to more efficient service delivery by saving time in areas such as analysis, reporting and the evaluation of citizen requests" (P12). This statement shows that AI is used as a versatile tool in municipal administration and improves service quality by providing time efficiency. One of these is text writing. AI is used in text production across a wide range, from official correspondence to reports. This area of use plays a role, particularly in accelerating routine documentation processes. Another is the assessment of citizen demands AI has become a tool used in the analysis and evaluation of citizen requests. As stated by the participant, the time savings achieved in this process enable faster and more effective responses to citizens. The third is

analysis, reporting and planning. P11 detailed this area of application as follows "Due to increasing citizen expectations, there is a need for rapid decision-making and effective service delivery. There was a need for technology capable of analysing such a large amount of data to accelerate the processes of analysis, reporting, regulatory compliance, and strategic planning" (P11). This statement highlights that AI plays a role particularly in data-intensive processes and supports strategic planning processes.

The Intention of Use of AI reflects municipal administration officials' predictions and expectations regarding the areas in which AI will be used in the future.



**Figure 8: Hierarchical Code-Subcode Section Model Showing Concepts Related to the Usage Intentions Category.**

Some participants indicated that AI will be used more intensively in planning and project processes in the future. P5 expressed this prediction as follows "In the future, many processes in municipal administration will need to be completed much more quickly. For example, the process of issuing a building permit will be completed within a few days in the future. Or the preparatory stages for asphalt and pavement works in a neighbourhood will be completed within a few days with AI support. In such cases, managers will need to keep pace with the speed of AI in terms of planning the services they offer to the public. Furthermore, personnel expenses, which are one of the largest expenditure items for municipal administration, will gradually decrease as AI usage advances, providing economic benefits, which is important for administrators" (P5). This statement demonstrates how important AI's potential to speed up routine processes and reduce personnel costs will be in the future. P5 also mentions its possible use in technical applications "Assuming I benefit from AI; technical units will be the first to start benefiting. Areas such as the mapping unit of the planning department or the project unit in engineering works will start purchasing AI-based programme licences" (P5).

P4 explained the use of AI in the context of digital

transformation as follows "This aspect is vital for keeping pace with the digital age, developing proactive solutions to urban problems, and using public resources more efficiently" (P4). This statement presents a vision of AI being integrated with strategic priorities and used in the future. Again, P4 states, "In the future, AI will evolve from being a support tool to becoming the digital backbone of municipal administration' decision-making and implementation mechanisms. Thanks to fully integrated smart city systems, we will transition to a proactive management approach that identifies and solves urban problems before they arise and autonomously manages resources. AI will become an indispensable standard of modern municipal administration in the name of sustainability, energy efficiency, and the strengthening of participatory democracy" (P4).

Participants also anticipate that AI will be used in smart city applications and urban management processes. P1 states, "Municipal administration must adapt to this system in terms of planning, management, and control, as well as to ensure that these are carried out effectively. Consider that the system analyses all forms, if compliance is not achieved, administrators would face a lengthy process of contacting the manager or the mayor, but

with digitalisation, citizens will receive responses very easily... For example, when a citizen asks, "What stage is my project at?", the system will be able to pull the answer directly from the digital signature and respond, "The architect has approved it, correct the electrical project" (P1). This statement shows how smart city systems will transform citizen services. P2, on the other hand, approaches the smart city vision from a broader perspective "Smart home systems and smart city systems are in the development phase. For example, large shopping centre car parks have helium balloons that show where there are empty spaces; it's a simple system. But think about AI, autonomous systems, electric vehicles" (P2). This statement emphasises the different dimensions of smart city technologies and the role of AI in these systems.

P12 focused on traffic management and data analytics "I think smart city applications will be more widely used in traffic and infrastructure planning, disaster management, and the analysis of citizen feedback... Decision support systems will become an important part of this." P3 emphasised AI's potential for transparency and fairness, stating, "A system like smart city applications, where no one can get ahead of anyone else, would be wonderful" (P3).

Furthermore, P11 mentioned AI's potential for widespread use in urban areas "In terms of contributions, I believe it will provide countless benefits in areas such as zero waste, traffic and transport management, social assistance, urban security and urban planning, and will strengthen democratic governance" (P11), drawing attention to AI's potential for use in almost all areas of urban management.

Some participants anticipate that AI will play a role in social services. P11 emphasised that social assistance could be enhanced with AI, stating, "In terms of contributions, I believe it will provide countless benefits in areas such as zero waste, traffic

and transport management, social assistance, urban security, and urban planning, and will strengthen democratic governance" (P11).

In addition, as stated in P5, AI is expected to be a tool for the efficient use of financial resources. This will facilitate data-driven decision-making, particularly in budget planning and resource allocation. "Furthermore, personnel expenses, which are one of the largest expenditure items for municipal administration, will gradually decrease as the use of AI advances, providing economic benefits, which is important for administrators" (P5).

It has also been stated that AI will play an active role in the future in terms of Environmental and Resource Management. P10 said, "There definitely needs to be digital control in environmental and waste management, but they don't know how to take advantage of it" (P10). P4 stated that AI will be an indispensable standard of modern municipal administration in terms of sustainability, energy efficiency, and strengthening participatory democracy, indicating that AI will play an active role in environmental and resource management in the future (P4).

Some participants shared various plans regarding the use of AI in citizen services and feedback management. P7's statement, "If administrations do not keep up with developments, they will be left behind. Citizens' expectations are no longer what they used to be, when a problem is reported, a quick response is required. Things need to be made easier," (P7) echoes P12's view "I think smart city applications will be used more widely in traffic and infrastructure planning, disaster management, and the analysis of citizen feedback. They will become an important part of decision support systems" (P12) reveal the participants' expectations in this regard.

The Actual System Use category reveals the areas in which municipal administration officials currently utilise AI.

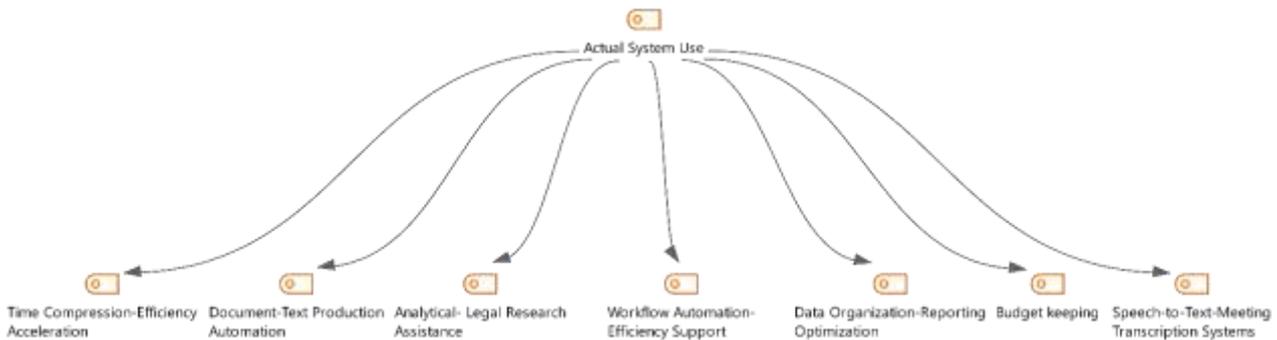


Figure 9: Hierarchical Code-Subcode Sections Model Showing Concepts Related to the Actual System Use Category.

AI is widely used in official document and text production processes as Document-Text Production

Automation. P2 stated, "We have a project where we are developing a document query system using AI

for several companies.” P5 emphasised the role of AI in professional documentation, stating, “In the organisation I work for, there are few staff members who can professionally use many applications such as Microsoft Office. When my managers need to make presentations or prepare reports, I prepare clear and explanatory information for them using data I generate with AI.” P3 emphasised the speed of text production, stating, “It can prepare a speech text aimed at a specific audience from a complex pile of data in seconds” (P3). The use of AI in the Time Compression-Efficiency Acceleration function provides significant time savings in work processes. P2 demonstrated efficiency in large data sets by stating, “Look at this software, we actively use it for law, tax, social security, everything... It brought 16,000 Court of Auditors investigation documents. It collects and brings the documents” (P2), demonstrating efficiency with large data sets. P7 stated, “Its contributions to our professional work make our jobs easier, save us time, and eliminate dependence on individuals and companies” (P7). Similarly, P4 emphasised time efficiency by stating, “It accelerates workflows, providing positive momentum in terms of time management and efficiency” (P4), and P5 stated, “If I were to evaluate it myself, thanks to the results I get from AI professionally, I am both improving myself and getting my work done much faster” (P5).

The use of AI in Analytical-Legal Research Assistance is employed in legal research and legislation tracking. P1 stated, “I use AI more for interpretation techniques and to get a head start in research (P1), “explaining current AI usage. P1 added, “It has improved performance in the field of law. I don’t know English, but I can easily find and analyses European Court of Human Rights decisions. AI is best for analysis. It has serious benefits in the field of law.” (P1), emphasizing the critical role of AI,

especially in accessing foreign sources. P2, on the other hand, expressed the potential of AI in legal document management, stating, “I want it to bring up any petition or application from 10 years ago.” (P2) These statements show that artificial intelligence is an important support tool in legal work.

Data Organization-Reporting Optimization the use of AI in optimization is in the context of organizing and reporting complex data sets. P3 said, “It’s a wonderful thing, it makes me smile every time. It can prepare a speech text for a specific audience in seconds from a complex data pile or prepare a report to be presented in this format” (P3), emphasizing the speed of data processing.

The use of AI in Workflow Automation-Productivity Support is used in the automation of routine work processes and in increasing overall productivity. P5 exemplified automation in calculation processes by stating, “To give an example in this regard, when calculating the personnel income ratio in municipalities as stipulated by law, I specify the relevant legal provisions on AI, enter the necessary values, and request the system to calculate the current ratio” (P5). P7 emphasised the role of AI in reducing external dependency, stating, “We are trying to reduce our external dependency. Management expects things to happen quickly. We are also monitoring AI integrations in software” (P7).

The data indicated that AI increases efficiency with routine and time consuming tasks. AI, was employed in every sector from taking meeting minutes to budget projections, legal research and data analysis and allowed the staff time to work on other tasks such as strategic or creative work. A common theme of participant comments was that artificial intelligence outputs needed to be subject to human judgement, especially in the official procedures and legal work.



Figure 10: Code Cloud for the AI Adoption Theme.

The code cloud demonstrates the multi-dimensional nature of the use of AI in local

authorities, which means a very diverse nature. The most common were the concepts “Smart City” and

“Time Compression”, which indicates an instrumental approach in the municipality in terms of a strategic vision as well as a specific practical effect. The prevalence of concepts such as document automation, time saving, urban management indicate that the municipality mostly uses AI to improve the efficiency of work and improve service quality. In addition, this visual also demonstrates that participants in the discussions perceive AI not only as a tool, but also as part of the vision of the smart city.

#### 4.6. Future Imagination and Perception of AI

The focus of future imagination and perception is that non-technical and operational concerns do not end at the technical/operational level, but that

existential concerns about AI take place. There are three headings: trust/manipulation, cognitive decline and professional existential threat. Trust/manipulation concerns are that system will be too open to manipulation, and that AI will have guidance and control over people. Cognitive decline concerns people are worried that AI is digitally slavery, intellectual undermining, and limits to imagination. Professional existential threat heading shows the visible risks, that thought “died”, human redundancy, and rivalries in work life. This structure shows that local actors see AI as a technology that changes service processes and not only a technical risk but also a risk that can put pressure on trust, cognition and professional identity.

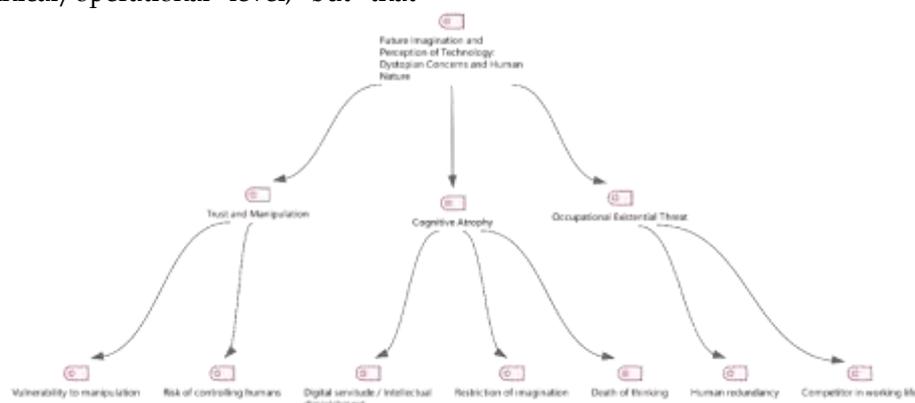


Figure 11: Hierarchical Code-Subcode Sections Model Showing Categories and Concepts Related to the Theme of Future Imagination and Perception of AI.

Trust and manipulation category: it made the trust issues related to AI visible to the participants and expressed their apprehension about the possibility of manipulation by AI in future. The category is made up of two core concepts: risks of being controlled and vulnerability to manipulation. The risk of being controlled is the concern of AI becoming powerful enough over time to control human behaviour, e.g. “It helps me, I guide it. If we start using it from zero without knowing anything, it controls us (P8).” The balancing power between human and AI is demonstrated through the statement. This finding suggests that participants evaluate AI use not only through benefits, but also through the question of who holds control. It also shows that acceptance of the technology takes shape in line with this sense of control. The participant indicates that an unconscious approach to AI could lead to a loss of control. Vulnerability to Manipulation refers to AI’s potential for information manipulation and social perception management. P7 states, “For it to be AI, it needs to think independently. Right now, it just takes data from sensors, here and there, and interprets it. It needs to

imitate. Perhaps if you follow it, they are making robots... Still, it will ultimately be software, it will be loaded and will not go beyond that. It will not think for itself. I don’t foresee human-like intelligence now, maybe in the future, but I won’t make big claims, I honestly don’t foresee such a thing now’ (P7).

The vulnerability to manipulation theme states that participants are reluctant towards AI. The turn “It controls us” suggests existential worry that technology is out of human control. The theme “manipulable” indicates that technology is receptive to change by outside influence, and that this situation poses great risks for the reliability of information. Participants compare AI to “a 5-year-old child.” They see a great processing power, but do not see actual autonomous thought. This makes a contradiction clear: technology is treated like a great tool, but AI remains receptive to manipulation.

The Cognitive Atrophy category raises issues regarding how use of AI will damage human cognitive ability. This category centres around three main themes, being digital slavery/intellectual weakening, the restriction of imagination, and the death of thinking. These issues are highly prominent

within the participants' focus on the risks, and reflect concerns not only about a tool that does less labour-intensive work but, instead, long-term risk that could reduce individual judgement, productive thought, and creativity.

Digital servitude/intellectual diminishment refers to the fears that "excessive AI use will make people stupid" and it refers to "concerns that because we are dependent on AI, we become intellectually diminished" (P3, see quote above). The latter claim, "I see it as a grinder that directly drags people who do not have bright ideas, cannot think well, and cannot ask good questions into digital slavery, and it dulls them' also refers to how AI can turn the user from active thinking agent to passive user of information. The use of metaphors ("digital slavery" and "grinder") reinforces the claim that the AI can grind away at critical thinking practices and damage freedom of thought and/or intellectual autonomy.

Restriction of Imagination refers to concerns that AI could curtail imagination and creativity in general. P8 commented "Finally, it comes to the form it wants and keeps pushing you around. It dulls the imagination." The above quote reflects that in the end, AI pushes users toward repetitive thinking patterns and reduces or prevents human from coming up with original ideas/imaginative thinking. The result solidifies the belief that despite its practical utility, AI places a "cognitive cost" on intellectual diversity and creativity.

The other death is the death of thinking, or AI becomes the extinction of thinking. P2 summarizes this as "AI is needed in the years to come but this is when human nature and thinking die" (P2). This is the dichotomy between the rise of AI and the extinction of humanity. To emphasize on "the point of thinking dies" implies that AI is essential but paradoxically, threatens human nature.

Occupational existential threat relates to participants' thoughts concerning the future occupational threats AI would present for labour and professions in general. Occupational existential threat is defined by two core concepts: Human redundancy & competitor in working life.

About human redundancy, participants report concern that AI will make human work unnecessary in the future. "AI is a very advantageous tool today if it is used properly, but it is obviously detrimental if it is not used properly. It is a means of life that makes life easier which is why we use it so much but it is a frightening thing also because it does not need people at all, it is both a facilitator and a frightening object, (P6). This quote shows the tension between what AI can do and how unnerving it is for staff. By

placing the emphasis on "not needing human beings at all", staff reveal concern that their work may be made redundant in the long term.

Then, AI is currently viewed not just as a tool, but as a competitor in working life as well. This is depicted by one of the participants as follows: "And in other words, I can say that it will be the biggest competitor in people's working lives in the future" (P5), reflecting that AI would potentially be used as competitors for humans in the workforce of the future.

It is apparent that AI adoption can be a double-edged sword. Whereas the technology helps the participants, at the same time, participants are afraid that it may "threaten their own professional existence." As the participant conceptualized AI as a "competitor" AI is no longer a servant tool, but can eventually replace the human factor in the job market.

## 5. CONCLUSION

Besides sharing the perceptions and experiences of the interviewed municipal managers/politicians, this analysis delivers insights into local governments' capacity to adopt, constraints, and preferences with regard to their testing of AI in municipal operations and urban services. We argue that our results are in line with the overall framework Rodriguez Muller et al. (2025) and Yiğitcanlar et al. (2023) present and also differ from it, especially in the case of local actors' perception and institutional practice. The study pinpoints those differences below.

AI is understood by local managers and politicians from several interpretive frames, they experience it as an anthropomorphic assistant, a technical tool and a system with cognitive limits. Their multi-dimensional interpretation of the meaning of AI leads to conditional trust in AI. The actors accept the high computational ability of AI, but also the tendency to mistakes and non-sentience of the technology in so they urge a continual need of review by human agents.

Our findings shows that local decision-makers understand AI through risk-sensitive pragmatism and not techno-optimism. We show that the circumstances under which local governments adopt AI are contexts where rapidly evolving public demand, a rich information environment, and pressure to act quickly in rapidly made decisions collide. Local actors understand AI as a tool for administrative capacity-building, for use of big data, and for speeding up decision-making. AI in this framing is not just an instrument of efficiency, but is also an institutional-performance fixing instrument.

AI applications in local governments are concentrated in information-intensive work activities. Municipal managers and politicians use AI as a decision support tool for work activities related to official writing and reporting, legislative/regulatory search, data analytics, project development, and citizen demand evaluations. Participants indicate that users need to check the output of AI, especially in formal tasks. Moreover, they describe a hybrid mode of use: the benefits of AI are acknowledged (i.e., it has reduced time costs, it offers quick access to information, and simplifies processes); however, AI usage is governed because of accuracy-related concerns, data security, and legal uncertainty. In turn, these patterns signal that it is not sufficient to explain adoption, trust, control, and verification mechanisms are important in local governments.

Findings demonstrate that participants forecast AI to alter the way we deliver smart city applications, data-based governance, and speedy services delivery in the future. At the same time, participants raise high risk of manipulation, cognitive dependency, as well as reconfiguration of professions. Thus, they evaluate the AI use in terms not only as practical convenience, but also in the longer run risk of cognitive atrophy. Participants take seriously the chance of reduced thinking capabilities, narrowed imagination, and narrowed intellectual autonomy. In other words, AI is viewed by participants as a process which creates opportunity and uncertainty. Local actors thus are not unconditionally adopting AI, rather there is a search for benefits balanced with risk awareness, which is a “calibrated” logic of use. They consider AI-practices by accuracy and

reliability/trustworthiness, and institutional responsibility/transparency as relevant; and the adoption takes the form of sociotechnical negotiation instead of pure technical adaptation.

The study as a whole shows that AI contributes to a cognitive shift in governance which results in changes of how decision-making and professional judgment are made and how institutional learning occurs. This finding means that introducing a new type of technology into local government goes beyond pure issues related to administrative capacity building towards a cultural and cognitive transformation. Therefore, the study shows that perceptions of AI among local managers and elected actors cannot be reduced to “technology acceptance” frame.

Because this study relies on qualitative interviews with a limited number of managers and elected actors in a single municipality, the findings have limited generalisability across different institutional and geographic contexts. The participant group may also signal selection bias, since it likely includes people who show interest in AI and have already tried it. In addition, the study focuses mainly on information-intensive administrative processes, so it does not cover the full range of local services. Qualitative coding and interpretation can also reflect the researchers’ perspective, and the study cannot fully remove this risk. For these reasons, the study does not aim to offer broad general conclusions, instead, it aims to provide in-depth insight into actors’ experiences and sense-making in a specific local setting.

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**ETHICAL DECLARATION:** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee with regard to the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. Ethics committee Decision No: 2026/(3-7). The study was approved by Inonu University Social and Human Sciences Ethics

Committee. Interviewees signed an interview consent form to take part in the study and publication of their views.

## REFERENCES

- Agarwal, P. K. (2018), Public administration challenges in the world of ai and bots. *Public Administration Review*, 78, 917-921.
- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin*, 82(2), 261-277.
- Alshahrani, A., Dennehy, D., & Mantymaki, M. (2022). An attention-based view of AI assimilation in public sector organisations: The case of Saudi Arabia. *Government Information Quarterly*, 39(4) 101617.
- Aydın, N. (2023). Nitel araştırma yöntemleri. *Özgür Yayınları*.
- Banazılı, A. M. (2025). Yapay zekânın kamu yönetiminde kullanımı üzerine nitel bir inceleme: faydalar, riskler ve türk kamu yönetimi bağlamında çıkarımlar. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 34(Uygarlığın Dönüşümü: Yapay Zekâ), 538-563.
- Creswell, J. W. (2013). Nitel araştırma yöntemleri: Beş yaklaşıma göre nitel araştırma ve araştırma deseni. (Trans. M. Bütün), Ankara, Siyasal Kitabevi.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982-1003.
- Distor, C. B., Khaltar, O., & Moon, M. J. (2021). Adoption of artificial intelligence (AI) in local governments: An exploratory study on the attitudes and perceptions of officials in a municipal government in the Philippines. *Journal of Public Affairs and Development*, 8, 33-65.
- Dunleavy, P. (2006). *Digital era governance: IT corporations, the state, and e-government*. Oxford University Press.
- Erkut, B. (2020). From digital government to digital governance: Are we there yet? *Sustainability*, 12(3), 860.
- Faisal, A., Kamruzzaman, M., Yigitcanlar, T., & Currie, G. (2019). Understanding autonomous vehicles. *Journal of Transport and Land Use*, 12(1), 45-72.
- Farrokhnia, M., Banihashem, S. K., Noroozi, O., & Wals, A. (2024). A SWOT analysis of ChatGPT: Implications for educational practice and research. *Innovations in Education and Teaching International*, 61(3), 460-474.
- Flick, U. (2009). *An introduction to qualitative research*. SAGE.
- Hokroh, M., Abubshait, K., Alodhaib, S., Al-Ajami, H., & Wang, Z. (2026). Generative artificial intelligence (GenAI) adoption in Saudi Arabia using technology acceptance model (TAM): The role of gender and generations differences. *The International Journal of Business Management and Technology*, 10(1), 69-76.
- Horowitz, M. C., & Kahn, L. (2021). What influences attitudes about artificial intelligence adoption: Evidence from U.S. local officials. *PLoS ONE*, 16(10), e0257732.
- Ibrahim F, Münscher J-C, Daseking M & Telle N-T. (2025). The technology acceptance model and adopter type analysis in the context of artificial intelligence. *Frontiers in Artificial Intelligence*. 7: 1496518.
- Kaplan, A., & Haenlein, M. (2018). Siri, Siri, in my hand: Who's the fairest in the land? On the interpretations, illustrations, and implications of artificial intelligence. *Business Horizons*, 62(1), 15-25.
- Kelly, S., Kaye, S. A., & Oviedo-Trespalacios, O. (2023). What factors contribute to the acceptance of artificial intelligence? A systematic review. *Telematics and Informatics*, 77, 101925.
- Kuziemski, M., & Misuraca, G. (2020). AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings. *Telecommunications Policy*, 44(6), 101976.
- Legris, P., Ingham, J., & Collette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management*, 40(3), 191-204.
- Madan, R., & Ashok, M. (2023). AI adoption and diffusion in public administration: A systematic literature review and future research agenda. *Government Information Quarterly*, 40, 101774.
- McCarthy, J. (2007). What is artificial intelligence? Stanford University. <http://www-formal.stanford.edu/jmc/whatisai.pdf>.
- Meng, T. & Cheng, D. (2020). Research on local government governance structure reform and function change based on artificial intelligence technology. *International Journal of Wireless and Mobile Computing*, 18(3), 303-310.

- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Sage Publications.
- Punch, K. F. (2020). *Sosyal arařtırmalara giriř: Nicel ve nitel yaklařımlar* (Trans. D. Bayrak, H. B. Arslan ve Z. Akyüz). Siyasal Kitabevi.
- Rodriguez Müller, A. P., Tangi, L., & Lerusse, A. (2025). Understanding the adoption of artificial intelligence in local government decision-making: The influence of institutional pressures and managerial perceptions. *Public Administration (Early View)*, <https://doi.org/10.1111/padm.70033>
- Russell, S. J., & Norvig, P. (2010). *Artificial intelligence: A modern approach* (3rd ed.). Pearson Education.
- Samuel, A. L. (1959). Machine learning. *The Technology Review*, 62(1), 42-45.
- Schaefer, C., Lemmer, K., Samy Kret, K., Ylinen, M., Mikalef, P., & Niehaves, B. (2021). Truth or dare?-how can we influence the adoption of artificial intelligence in municipalities?. In *Proceedings of the Annual Hawaii International Conference on System Sciences (HICSS)*, 2347-2356.
- Simmons, A. B., & Chappell, S. G. (1988). Artificial intelligence-definition and practice. *IEEE Journal of Oceanic Engineering*, 13(2), 14-42.
- Singh, P. D. (2024). Generative AI through the lens of technology acceptance model. Available at SSRN: <http://dx.doi.org/10.2139/ssrn.4953174>
- Sohn, K., and Kwon, O. (2020). Technology acceptance theories and factors influencing artificial intelligence-based intelligent products. *Telematics Inform.* 47:101324.
- Song Y, Qiu X., & Liu J. (2025). The impact of artificial intelligence adoption on organizational decision-making: An empirical study based on the technology acceptance model in business management. *Systems*. 13(8):683.
- Turing, A. M. (1950). Computing machinery and intelligence. *Mind*, 59(236), 433-464.
- Ulař, M. (2025). Akademisyenlerin yapay zekâ teknolojilerini kullanma motivasyonları üzerine nitel bir arařtırma. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 34(Uygarlığın Dönüřümü: Yapay Zekâ), 142-159.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273-315.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.
- Wang, P. (2019). On defining artificial intelligence. *Journal of Artificial General Intelligence*, 10(2), 1-37.
- Wang, Y., Zhang, N., & Zhao, X. (2022). Understanding the determinants in the different government ai adoption stages: Evidence of local government chatbots in China. *Social Science Computer Review*, 40(2), 534-554.
- Winston, P. H. (1992). *Artificial intelligence* (3rd ed.). Addison-Wesley.
- Yigitcanlar, T., Agdas, D. & Degirmenci, K. (2023). Artificial intelligence in local governments: perceptions of city managers on prospects, constraints and choices. *AI & Society*, 38, 1135-1150.
- Yigitcanlar, T., David, A., Li, W., Fookes, C., Bibri, S. E., & Ye, X. (2024). Unlocking artificial intelligence adoption in local governments: Best practice lessons from real-world implementations. *Smart Cities*, 7(4), 1576-1625.
- Yigitcanlar, T., Wilson, M., & Kamruzzaman, M. (2019). Disruptive impacts of automated driving systems on the built environment and land use: An urban planner's perspective. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(2), 24.
- Zou, M., & Huang, L. (2023). To use or not to use? Understanding doctoral students' acceptance of ChatGPT in writing through technology acceptance model. *Frontiers in Psychology*. 14:1259531.