

# Digital Transformation in Public Organisations: IT Alignment-Related Success Factors

**Gideon Mekonnen Jonathan**

Department of Computer and Systems Sciences (DSV) - Stockholm University  
Kista, Sweden gideon@dsv.su.se

**Lazar Rusu**

Department of Computer and Systems Sciences (DSV) - Stockholm University  
Kista, Sweden lrusu@dsv.su.se

**Erik Perjons**

Department of Computer and Systems Sciences (DSV) - Stockholm University  
Kista, Sweden perjons@dsv.su.se

## Abstract

IT alignment is recognised as one of the prerequisites for digital transformation in the extant literature. To further our understanding of this relationship, a case study was conducted in a public organisation (city administration). Data was collected through interviews and internal-organisational documents in four sub-cities within the city administration. The findings suggest that an organisation's attempt to reach IT-aligned position improves the likelihood of successful digital transformation. The analysis also revealed various factors influencing IT alignment in a public organisation undertaking digital transformation. These factors are presented in eight categories—organisational structure, organisational culture, organisational agility, leadership skills, human resource management, digital metrics, external domain alignment, and stakeholder relationships. The contributions of the study for research and practice are also discussed.

**Keywords:** Digital Transformation, IT Alignment, Public Organisations, Public Value Theory, Theory of Technology Enactment

## 1. Introduction

Despite the continuous research and debate among practitioners, managing digital transformation to fruition remains a daunting task for leaders. A closer look into the academic literature also indicates that digital transformation is still a protean concept [19], [34]. More recently, however, there is a growing consensus among scholars that digital transformation is a multifaceted phenomenon. According to [14], technology itself is just one piece of the complex puzzle that needs to be solved if organisations are to achieve their overall objective in the new digital world. Thus, digital transformation refers to “*the IT-enabled change in organisations through the digitalisation of products, services, core processes, customer touch points and business models*” [13]. To this end, the work towards a successful digital transformation should incorporate an appropriate strategy formulation [3], introduction of new technologies and the necessary organisational changes including organisational structure [33], business processes [34], and organisational culture [22].

Scholars argue that digital transformation initiatives can be fruitful in enabling value creation when the various organisational changes are in par with the introduction of new technologies [10], [26] as well as the fit between the IT- and overall organisational strategies [2], [34]. This phenomenon, referred to as IT alignment, has been one of the top agenda for researchers and practitioners across industries [20, 21]. IT alignment—defined as the “*application of infor-*

*mation technology in an appropriate and timely way, in harmony with business strategies, goals and needs*” [25]—is recognised as one of the determinants of successful digital transformation [10], [19]. Given the significance of IT alignment during the digitalisation era, there are calls for further studies investigating the relationship between IT alignment and digital transformation (e.g., [16], [20], [37]). However, a closer look into prior studies reveals that public organisations were not adequately represented in these studies [29], [32]. We argue that this paucity of knowledge needs to be addressed for two reasons. First, IT alignment is found to be more challenging in highly pluralistic organisational settings, such as organisations in the public sector [36]. Second, the difference between organisations in the private and public sectors calls for nuanced empirical investigation of digital transformation [32]. Thus, our interest is to explore how organisations’ attempt to reach and maintain IT alignment contributes to successful digital transformation in the public sector. The aim of this study, therefore, is to identify IT alignment related success factors and their significance for digital transformation. Therefore, our study attempts to answer the following research question: *Which factors related to IT alignment are important to enable successful digital transformation in a public organisation?*

## 2. Literature Review

### 2.1. Digital Transformation in Public Organisations

The significant role of digital transformation in improving the delivery of public services is recognised in the literature [6], [29], [31]. However, the debate surrounding how to plan and execute successful digital transformation still continues. This confusion is also reflected in the various theories applied in prior studies. To start with, the technological determinism theory applied in prior studies [1] is criticised for not acknowledging the role of various organisational factors in the success of digital transformation. For instance, [27] argues that the provision of public services that can satisfy citizens requires a transformed public sector—not just the introduction of new technologies. This transformation involves redesigning the internal processes and making continuous organisational adjustments. This is consistent with Fountain’s theory [11] of technology enactment (TTE) recognising the significance of various organisational factors determining the way specific meanings are assigned to technologies. Thus, TTE was found appropriate for exploring how IT could be used in public organisations. For instance, TTE suggests that the success of digital transformation initiatives in the public sector depends on the social, cultural and institutional arrangements, including stakeholder relationships [27].

Since digital transformation is a process, organisations need to make continuous assessments and adjustments. Thus, leaders have to account for the benefits of their investment in new digital technologies. In this regard, the original work of Moore [30]—public value theory—has been mentioned in prior IS studies. Researchers argue that this theory has provided us with the foundation for assessing digital transformation and the success of digital government initiatives. This is a departure from the New Public Management (NPM) narratives, where public organisations are expected to be run as business-like enterprises, mostly relying on economic concepts [9]. In connection with NPM, digital transformation was seen as a means to improve administrative efficiency [31]. However, following the unfortunate lack of success of the NPM, there is a growing quest for public value creation among researchers and practitioners [6]. Thus, the public value theory is used to support the argument that public organisations stand to benefit from the complex digital transformation journey [31]. This organisation-wide transformation—digital transformation—is expected to transform public service delivery [13], [33] and create value that might not be measured in economic terms [31].

## 2.2. IT Alignment and Digital Transformation in the Public Organisations

Prior studies attempted to explore the complexity of digital transformation, dismantling the puzzling interplay between IT and various organisational arrangements [19]. The objective was to find appropriate ways that could enable the realisation of the benefits of digital transformation. A phenomenon that is often brought up in such studies is IT alignment. In fact, the relationship between IT alignment and digital transformation has been gaining the attention of researchers in recent years (e.g., [10], [19, 20]). This development is no surprise given the result of prior studies acknowledging the important role IT alignment plays in digital transformation. A review of IS studies indicate that there are three areas where IT alignment can help organisations in their digital transformation attempts [18]. These were identified as the necessary prerequisites to enable successful digital transformation [13], [34]. First, IT alignment helps organisations improve the value they derive from their new digital technologies. The rationale is that the fit between organisational objectives and the use of new technologies improves organisational performance [26]. Second, as digital transformation requires a continuous organisational adaptation, IT alignment helps enable the necessary organisational agility [37]. Third, IT alignment was found to facilitate the integration of new technologies into the existing IT infrastructures, organisational structures and business processes [18].

With multiple stakeholders and varying interests as well as arrangements with inherent administrative and political tensions, public organisations are more complex than private organisations [32], [36]. This complexity, in turn, has implications for how organisations plan their digital transformation journey and formulate their IT- and organisational strategies that can satisfy the interests of the diverse stakeholders [32], [36]. Recent case studies (e.g., [24]) also revealed that the introducing digital technologies to solve complex public administrative tasks had raised many unanswered questions. For instance, [28] and [29] pointed out the lack of studies recognising the relevance of organisational and managerial elements of digital transformation. On the other hand, the extant literature indicates that organisational and managerial approaches should be selected based on the acknowledgement of specific conditions of public organisations [24], [36].

Despite the extensive research throughout the past years, various developments in the business environment as well as the emergence of new technologies has made IT alignment a challenging enterprise. According to some accounts, IT executives spend about half of their time in their attempt to reach IT-aligned positions [20]. A review of IS studies revealed that organisational structure, organisational culture, leadership skills, as well as external domain alignment were found to be among the most important factors influencing IT alignment in organisations undertaking digital transformation [18]. Besides, within the public organisations' context, the important role of stakeholder relationships is acknowledged [4]. As the focus of public management shifts to the creation of integrated public value, the success of digital transformation is measured by whether public organisations satisfy the interest of stakeholders [31]. Researchers have also found that stakeholder relationship is vital as leaders attempt to align their IT strategies with the organisational goal in the digitalisation era. Given the dynamic technological landscape and the ongoing digital transformation in the public sector, we argue that it is time to revisit the various factors influencing IT alignment.

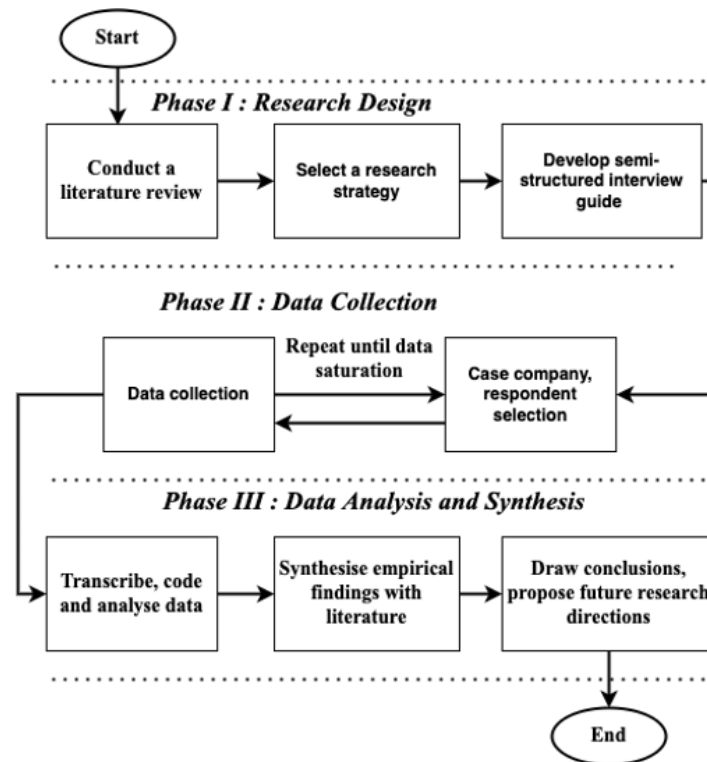
## 3. Research Methodology

### 3.1. Research Strategy and Case Setting

To explore how IT-aligned position contributes to the success of digital transformation, a case study research strategy is deemed appropriate. Case studies are best suited when researchers are interested in exploring a complex phenomenon in a natural setting [38]. Given the complex organisational structure and a long list of stakeholders with varying interests in public organi-

sations, we argue that case studies provide the opportunity to further our understanding of the relationships between IT alignment and digital transformation.

The case study was conducted at Addis Ababa City Administration which is comprised of ten sub-city administrations—organised in 28 districts and 328 neighbourhood units (also referred to as kebeles). The City Administration is recognised to be among the public administrations highly investing in digital transformation in the country. Even though each of the ten sub-city administrations is organised as separate organisations, their operations are similar, except the sub-cities are mandated to deliver public services to residents in their geographic area. The vision and strategic plan of the city guide the operations of the sub-cities. Leaders of the various functional units of the sub-cities report to the corresponding directors at the central city administration. Among the ten sub-cities we approached, four of them responded favourably to our request to take part in our study. Our research process is depicted in **Fig. 1**.



**Fig. 1.** The research process

### 3.2. Data Collection and Analysis Methods

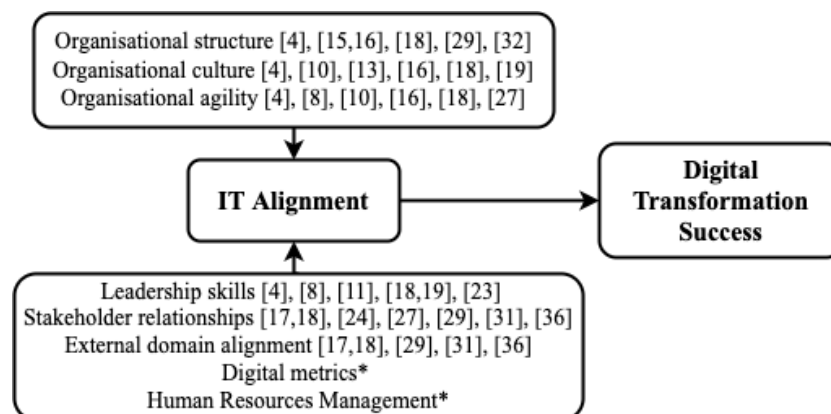
The interpretative approach we adopted is in line with the aim of our study. We focused on gathering data as provided by participants to capture the holistic view and unique situation in the natural environment [35]. [38] suggests the practice of triangulating data sources to improve the credibility of findings of case studies. Thus, the data collection was carried out through interviews and analysis of internal documents as well as publicly available information from websites. First, as the primary method of enquiry, we conducted semi-structured interviews with participants who are involved in the decision-making of the IT alignment and various digital transformation initiatives. Consistent with prior IT alignment studies (e.g., [26]), we selected participants with a deeper understanding of IT alignment and digital transformation, resulting from their experience and functional status within their respective organisations. To determine the number of interviews, we used the criteria of data saturation [12]. Accordingly, not more

than the 21 interviews were necessary for this study since no new themes were emerging, indicating the point of data saturation. For ease of reporting, we assigned code names for our interviewees (IT1, IT2, IT3,...for those in the IT department, and Adm1, Adm2, Adm3,... for participants in administration units). Interview guides were used to conduct the semi-structured interviews with respondents. Except for six of the participants who were interviewed using an online video tool (Zoom), the remaining interviews were conducted face-to-face in the vicinity of the City Administration between March and July 2021. The recorded interviews were transcribed verbatim for ease of data analysis.

We analysed our data following Braun and Clarke's thematic analysis steps [5]. According to the authors, this analysis method is widely used among qualitative researchers as it provides flexibility while enabling a rich and detailed account of data. For our study, the use of a thematic analysis method was deemed appropriate as our aim was exploratory. The procedure involves the search and identification of common threads. The themes emerged as we carefully read and familiarised ourselves with the raw data. We adopted both inductive and deductive coding in our analysis. First, we developed the initial codes and sub-themes from our transcribed data following the inductive approach. Later, we mapped and grouped these themes deductively using a priori template. As recommended by [35], the whole data analysis process was run as an iterative process.

#### 4. Results and Discussion

We structure our results in eight subsections according to the coding and analysis of the empirical data. In response to the research question, we were able to identify various factors that are important to improve IT alignment at our case organisation (see **Fig. 1**). These factors were grouped into eight categories. For instance, during the interviews, our respondents pointed out that flexibility of organisational structure and work processes were important to improve the appropriate use of IT according to the current organisational goal. These were grouped and presented as "*organisational agility*" in the paper.



**Fig. 2.** IT alignment-related factors in a public organisation undertaking digital transformation

As shown shown in **Fig. 2**, we traced back most of the factors, in the extant IS literature—organisational structure, organisational culture, organisational agility, external domain alignment, leadership skills and stakeholder relationships. Besides, our empirical data also revealed the significance of digital metrics and human resource management in improving IT alignment in a public organisation undertaking digital transformation (marked with \*). In the subsequent sections, we discuss the significance of these factors for digital transformation success.

#### 4.1. Organisational Structure

To facilitate the implementation of the digital transformation in the city administration, the organisational structure was modified on various occasions. For instance, the interviewees from the IT and administration sides (IT1, IT2, IT5, Adm1, Adm2, Adm8) were adamant that several of the IT roles and the respective responsibilities (e.g., the office of Chief Digitalisation Officer) were created or changed to facilitate the digital transformation initiatives at the city administration. Other changes introduced recently include the reporting structure where the Information Security Leads are now under the direct supervision of the CIO at the central city administration rather than the CIOs at the sub-city level. Similar changes were also made in the administrative departments to facilitate the execution of many digitalisation projects. Even though making changes to organisational structure is desirable and not uncommon [4], [16], we found the statements from our participants interesting for two reasons. First, the internal document we were provided with (formal organisational chart) did not reflect the changes pointed to us. However, we found an explanation for the contradiction in the literature. According to [32], the formal organisational structure in the public organisation is less likely to remain unchanged to maintain public legitimacy and accountability. However, people will find various ways of alternative “informal” ways of going around the rigid bureaucratic structure to get their work done. Studies on IT alignment within a public organisation (e.g., [15]) have also confirmed the presence of informal organisational structures with favourable implications for the application of IT. The analysis of the interviews also suggests that the informal arrangements have contributed to some of the success of the implementations of new systems in the city administration.

According to Adm1, there is an ongoing discussion with heads of departments to decide which forms of the organisation’s arrangements should be maintained or altered to speed up the digital transformation in the city administration. A closer look into the responses also indicates that organisational structure is closely related to the other factors that were found to be important. This finding is consistent with prior studies (e.g., [4], [15], [18], [27]) confirming the significance of appropriate organisational structure for IT alignment and digital transformation.

#### 4.2. Organisational Culture

The critical role of organisational culture in digital transformation was brought up by almost all of our participants. Specifically, the existence of sub-cultures within the city administration is a concern shared. Leaders from the IT side argue that organisational culture at the organisation has become so dire that many of the new systems launched at the city administration were not being used by administrative employees. According to IT1 and IT2, while resistance to change and attitudes towards technology are often the reasons, lack of skills and training were often cited as factors affecting the use of technology in the city administration. In relation to the top management involvement, IT leaders are hesitant on whether the city administration is ready to promote, for instance, data-driven decision-making and technology-supported changes to the existing work processes. Administrative leaders (Adm3, Adm5, and Adm10) admit that their organisation has many red tapes, rigid procedures and relatively stable organisational structure and a formal division of labour. In their opinion, this has resulted in a perpetuation of conservative organisational culture that might be a source of scepticism towards the adoption of new technologies and embracing change. Our analysis also indicates that the organisational culture of the city administration has implications for the success of the digital transformation. Thus, we argue that the city administration needs to work towards an organisational culture that promotes development of new digital skill sets, embracing open communications, risk-taking behaviour, and a positive attitude towards digital transformation. Our findings are on par with the IS literature on IT alignment and digital transformation supporting organisational cultures that promote organisational change [18, 19].

### 4.3. Organisational Agility

Similar to the debates in the extant literature (e.g., [4], [8], [10]), our participants have differing views on the relationship between organisational agility and IT alignment and how this relationship affects the success of the digital transformation. However, the dilemma is not whether there is a positive relationship between agility and IT alignment but how organisational agility could be implemented in a public organisation. According to the respondents from the IT side (IT1, IT2, IT4, IT6), organisational agility (flexibility in organisational structure and work processes) is necessary to reach IT alignment. The argument is that the flexibility of the “informal” organisational structure created an “agile-like” arrangement that was helpful to speed up some of the digital transformation works. Particularly, this has resulted in the creation of multidisciplinary teams from various departments to solve organisation-wide problems.

On the other hand, the respondents from the administration side seem to have mixed views on the effectiveness of organisational agility in general and digital transformation in particular. For instance, while the development planning head (Adm1) supports some form of flexibility in work processes, others (Adm4, Adm7, Adm8, Adm9) prefer relatively consistent structure and processes. However, when asked to reflect on the digital transformation projects, our respondents agree that cross-departmental collaborations and agile teams have resulted in relatively more timely and effective IT solutions. These responses reveal a few closely related issues that need to be addressed to help the city administration succeed in its digital transformation. The IT side (IT1, IT2, and IT6) argues that the flexibility of the IT infrastructure and organisational structure is critical. The administration side (Adm 3, Adm7, and Adm9) views the adaptability of the workforce as of paramount importance since the city administration is introducing new technologies. The statements suggest that promoting less formal and more flexible arrangements supports digital transformation. To this end, we concur with the recommendation of [4] on forming agile structures comprising interdisciplinary teams. Such teams are invaluable in improving, for instance, the IT decision-making processes [10], [18].

### 4.4. Leadership Skills

Similar to the findings of prior studies (e.g., [5], [8], [18]), our analysis of the interview data indicates that skills of leaders are associated with many of the factors recognised to influence the success of digital transformation. This is also a factor that was mentioned in relation to IT strategy formulation and IT governance. For instance, the administrative leaders (e.g., Adm1, Adm5, Adm10) admit that those in the administration leadership do not believe they possess the skill sets to contribute to IT strategic planning. According to the participants, many digitalisation initiatives could benefit from appointing leaders with the digital leadership skills necessary to formulate robust IT strategic plans. Even though the participants from IT (IT1, IT2, IT3, IT5) concur that IT leaders should take the lion’s share of the responsibility for the IT strategic planning, the support from top leaders in the administration is critical.

On the other hand, participants agree that the biggest challenge they have during this digital transformation journey is to make informed decisions on the priorities. Two of our interviewees (Adm1, Adm8), who happen to be in the committee mandated to make high-level IT decisions, admit that their selection is not based on governing the digital transformation. Instead of members with administration and IT acumen, the committee comprises highly placed bureaucrats representing most of the administration. This had implications for the IT Governance arrangement for two reasons. First, many IT teams have been waiting for decisions to be made for long time (IT8, IT9, IT10). Second, the final say on IT priorities is almost always influenced by those who do not possess the right knowledge (IT7, IT9) meant not optimal choices were made. However, the two are not mutually exclusive.

Our findings confirm what researchers have been saying about the significance of leadership skills. First, to support the formulation of a robust IT strategy supporting the digital transfor-

mation journey, there are few leadership skill sets expected from both sides. Among others, emotional intelligence, as well as conversational competency, are essential to support in forging a favourable relationship that comes in handy, enabling the formulation of IT strategy acceptable by several stakeholders [18]. Second, the decision-making process in relation to the adoption of new technologies within the public organisations is dependent on the existing rules and regulations which are stricter in bureaucratic settings [11], [23]. Thus, it behoves leaders of such organisations not only to be aware of the leeway but also to possess skills that support them to forge a working relationship with those mandated to oversee the applicable regulations.

#### **4.5. Human Resources Management**

Even though our participants recognise the significance of human resource management for the success of digital transformation, their responses (mainly from the IT leaders' side) seem to suggest a lack of sufficient investment related to human resources acquisitions as well as skills development. The general view from the administration and IT sides is that the lack of skilled personnel is unfavourably affecting the utilisation of new digital technologies at the city administration. According to IT4 and IT5, the city administration is struggling to recruit employees essential to improve the utilisation of new technologies in the work processes. For instance, it was found that there is a lack of people with expertise in robotic process automation (RPA), information security, cloud computing and network administration. The claim is supported by the IT infrastructure leads and information security lead. IT6 and IT8 also complained about the high turnover within their organisation, which is much higher than in the private sector. Even though the problem is acknowledged, many administration heads (Adm1, Adm3, Adm8, Adm10) believe a lot has been done to solve the issue. According to them, the public administration bureaucracy does not provide a leeway adjust the pay scale and other related benefits. Our analysis indicates that the organisation currently does not seem to have a consistent and formalised skills development arrangement to support digital transformation. As [8], [14], [19] put it, organisations undertaking digital transformation needs to sketch clear recruitment, remuneration as well as training and development programmes to succeed in their digitalisation attempts. Digital transformation could only succeed when an organisation ensures investment in measures that could help the administrative and IT personnel continuously acquire and develop appropriate skills [10], [14].

#### **4.6. Digital Metrics**

The internal documents we obtained indicate that the objectives of digital transformation at the city administration were to enable data-driven decision-making and create added value. Participants from the IT side argue that it is through digital performance metrics that they can assess whether these objectives are being met. Two reasons are pointed out. First, digital performance metrics would help the organisation ensure the efficiency and speed of public services delivered to citizens. This could be done either by measuring the gains by eliminating most of the repetitive tasks and automating them; or by looking into the amount of time and space saved for other tasks that require employees' actions. Second, digital metrics are also important for managing the digital transformation journey. As a continuous process, digital transformation initiatives need to be monitored, and actions might require adjustments. Leaders from both sides indicate that commonly agreed measures could help them take corrective actions. Among others, internal and external bench-marking, service level agreements, and integration of services were mentioned as essential to manage the successful digital transformation.

Unfortunately, in reality, the city administration does not seem to follow through with what is on paper. As Adm1 pointed out, while he is convinced of the favourable outcomes of digital transformation, the IT leaders did not do their homework in making a case for most of the ini-



tiatives. As a public institution with greater scrutiny, investment decision on new technologies needs to be tied to outcomes that could be “observed or measured”. The IT leaders disagree that it is the sole responsibility of their units to measure the success of digital transformation. The major issue, according to IT3, is that the organisation itself does not have a set of outcomes that can be assessed objectively. Thus, the responsibility of accounting for the improvement of services needs to be shared, recognising the role of metrics measuring the contribution of IT. [26] also recommend collaborating with the IT and the remaining departments in developing demonstrable measures. Thus, we argue that it is in the organisation’s best interest to encourage the participation of various stakeholders in developing metrics to measure the added value resulting from digital transformation. Accounting for the value gained is critical as public organisations make continuous adjustments to improve their digital transformation success [14], [31].

#### **4.7. External Domain Alignment**

Our participants recognise that digital transformation at their organisation is, by default, aimed at solving complex problems beyond the boundaries of the city administration. Thus, the IT leaders (IT1, IT2, IT7, IT9) and those in the administration (Adm3, Adm4, Adm10) argue that the success of the transformation initiatives requires inter-organisational collaboration and information-sharing with other public agencies. Accordingly, the relationship between these organisations is important because the ultimate objective of digital transformation is to support the provision of integrated services that make the lives of citizens easier. For that to happen, the responses suggest that several IT infrastructure and compatibility issues need to be solved. Among others, the compatibility of software, hardware and communication networks between the city administration and partner organisations was necessary.

On the other hand, conflicting organisational goals, divergent political attitudes, lack of trust, legal issues, and diversity of organisational culture were found to be challenging as the city administration attempted to align the new technologies with its overall organisational goal. The literature suggests that, in addition to maintaining IT alignment within their organisation, leaders need to take measures to cope with the external environment. This concept, referred to as external domain alignment (i.e., IT alignment with due consideration for the organisational objectives and IT application of related organisations and their customers), is one of the significant factors that determine the success of digital transformation in organisations [7], [18].

#### **4.8. Stakeholder Relationships**

Our participants acknowledge that digital transformation is a collaborative work involving internal and external stakeholders. According to IT4 and IT5, various digital transformation projects across the city administration have benefited from good stakeholder relationships in many ways. First, through consultation with their stakeholders (users), the city administration could improve the services delivered to citizens and businesses. The relationship with other public organisations has also brought about the possibility of delivery of integrated services to citizens. A smooth relationship with external service providers has also helped the organisation better understand and adapt to changes in the external environment. In addition to the political and legal developments, the external service providers have provided the city administration with invaluable information on the current and emerging technologies. IT1, IT2, and IT6 also highlighted the importance of top management assuming the leading role in promoting good stakeholder relationships. The analysis of our responses indicates that user engagement, and collaboration with external service providers and other agencies are important for the success of digital transformation in a public organisation. Prior studies on digital transformation (e.g., [10], [31]) and IT alignment (e.g., [17], [36]) put stakeholder relationship as one of the important factors determining the appropriate utilisation of new technologies. Thus, we argue that by encouraging the

participation of stakeholders, public organisations will be able to succeed in providing solutions that meet their stakeholders' needs.

## 5. Conclusions

The result of our study, based on the technology enactment- and public value theories, highlights the significance of formulating a robust road map for digital transformation. We argue that this road map needs to be founded on recognising the role of organisation-wide changes and making continuous digital value assessments as well as adjustments to organisational structure and internal processes. Our focus on the factors related to IT alignment (i.e., *organisational structure, organisational culture, organisational agility, leadership skills, external domain alignment, digital metrics, HR management, and stakeholder relationships*) indicates that organisations' attempt towards IT-aligned position can be beneficial for digital transformation. In addition to confirming the results of prior studies, our findings revealed the important role of digital metrics and HR management practices in reaching IT-aligned position in a public organisation, even more than in organisations in the private sector. The rigid organisational structure and decision-making arrangements do leave not much space for flexibility. However, recognising the internal and external factors affecting their work towards integrating new digital technologies is of paramount importance. Our findings identified areas that need to be monitored and acted upon to enable successful digital transformation in public organisations. For instance, we highlighted the important role of continuous monitoring of the organisational culture, and informal organisational structure to improve IT alignment. Our findings also underscore the significance of stakeholder relationships and organisational agility. However, given the challenges arising from strict organisational arrangements, we recognise the role of informal practices that could be applied to meet the demand for digital transformation initiatives.

Our study is subject to some limitations that need to be considered when the results are interpreted. First, we recognise that our decision to rely on a single study restricts our findings to the context of the selected public administration (e.g., organisational size, digital transformation stage). Based on the analysis of the extant literature, we argue that the case organisation exhibits the strategic and structural choices of those public organisations undertaking digital transformation. However, we encourage future studies at the same or similar organisation as the internal and external situations are bound to change. Second, as public organisations operate under a dynamic environment (i.e., changes in the economic, political and technological landscape), we endorse future research accounting for these changes. Third, the findings of our study reflect the snapshots of what the case organisation is doing to reach and maintain IT alignment to enable the success of its digital transformation endeavour. Future longitudinal studies might reveal how an organisation can realise the success of digital transformation through time as various changes are made to improve IT alignment.

## Acknowledgements

This study is partially funded by the Swedish Research School of Management and Information Technology (MIT).

## References

1. Aurigi, A.: Competing Urban Visions and the Shaping of the Digital City. *Knowledge, Technology & Policy*, 18(1), 12-26 (2005)
2. Benbya, H., Leidner, D. E., Preston, D.: MIS Quarterly Research Curation on Information Systems Alignment. *MIS Quarterly (Research Curations)*, 1-19 (2019)
3. Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., Venkatraman, N. V.: Digital Business Strategy: Toward a Next Generation of Insights. *MIS Quarterly*, 471-482 (2013)

4. Bitzer, M., Hinsen, S., Jöhnk, J., Urbach, N.: Everything is IT, but IT is not Everything—What Incumbents Do to Manage Their Digital Transformation Towards Continuous Change. In: Proceedings of the 42nd International Conference on Information Systems (ICIS), pp. 12-15. AIS, Austin (2021)
5. Braun, V., Clarke, V.: Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3, 77–101 (2006)
6. Cordella, A., Bonina, C. M.: A Public Value Perspective for ICT Enabled Public Sector Reforms: A Theoretical Reflection. *Government information quarterly*, 29(4), 512-520 (2012)
7. Dawes, S. S., Gharawi, M., Burke, B.: Knowledge and Information Sharing in Transnational Knowledge Networks: A Contextual Perspective. In: Proceedings of the 44th Hawaii International Conference on System Sciences (HICSS), pp. 1-10. IEEE, Hawaii (2011)
8. Deiser, R.: *Digital Transformation Challenges in Large and Complex Organisations*. Claremont, CA (2018)
9. Di Mauro, A., Cominola, A., Castelletti, A., Di Nardo, A.: Urban Water Consumption at Multiple Spatial and Temporal Scales. A Review of Existing Data sets. *Water*, 13(1), 36 (2020)
10. Fischer, M., Imgrund, F., Janiesch, C., Winkelmann, A.: Strategy Archetypes for Digital Transformation: Defining Meta Objectives Using Business Process Management. *Information & Management*, 57(5), 103262 (2020)
11. Fountain, J. E.: The Virtual State: Transforming American Government?. *National Civic Review*, 90(3), 241-252 (2001)
12. Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., Grimshaw, J. M.: What is an Adequate Sample Size? Operationalising Data Saturation for Theory-Based Interview Studies. *Psychology and Health*. *Psychology and health*, 25(10), 1229-1245 (2010)
13. Heilig, L., Lalla-Ruiz, E., Voß, S.: Digital transformation in maritime ports: analysis and a game theoretic framework. *Netnomics: Economic research and electronic networking*, 18(2), 227-254 (2017)
14. Jedynak, M., Czakon, W., Kuźniarska, A., Mania, K.: Digital transformation of organisations: what do we know and where to go next?. *Journal of Organisational Change Management*, 34(3), 629-652.
15. Jonathan, G. M., Rusu, L., Perjons, E.: Organisational Structure's Influence on IT Alignment: The Case of a Public Organisation. In: Proceedings of the 16th European, Mediterranean, and Middle Eastern Conference on Information Systems (EMCIS), (pp. 471-485). Springer, Cham (2020)
16. Jonathan, G. M., Rusu, L., Perjons, E.: Business-IT alignment in the era of digital transformation: Quo vadis?. In: Proceedings of Hawaii International Conference on System Sciences (HICSS), pp. 5563-5572. AIS, Hawaii (2020)
17. Jonathan, G. M., Rusu, L., Perjons, E., Kuika Watat, J.: The Relationship Between Organisational Agility and IT Alignment in Public Organisations. In: Proceedings of the 32nd Australasian Conferences on Information Systems (ACIS), p. 28. AIS, Sydney (2021)
18. Jonathan, G. M., Rusu, L., Van Grembergen, W.: Business-IT Alignment and Digital Transformation: Setting A Research Agenda. In: Proceedings of the 29th International Conference on Information Systems Development (ISD). AIS, Valencia (2021)
19. Jöhnk, J., Oesterle, S., Olig, P., Rövekamp, P.: Managing the Complexity of Digital Transformation: How Multiple Concurrent Initiatives Foster Hybrid Ambidexterity. *Electronic Markets*, 3 (2022)

20. Kahre, C., Hoffmann, D., Ahlemann, F.: Beyond Business-IT Alignment-Digital Business Strategies as a Paradigmatic Shift: A Review and Research Agenda. In: Proceedings of the 50th Hawaii International Conference on System Sciences (HICSS), pp. 4706-4715. AIS, Hawaii (2017)
21. Kappelman, L., Maurer, C., McLean, E. R., Kim, K., Johnson, V. L., Snyder, M., Torres, R.: The 2020 SIM IT issues and trends study. *MIS Quarterly Executive*, 20(1), 8 (2021)
22. Karimi, J., Walter, Z.: The role of dynamic capabilities in responding to digital disruption: A factor-based study of the newspaper industry. *Journal of Management Information Systems*, 32(1), 39-81 (2015)
23. Kraemer, K. L., King, J. L.: Information technology and administrative reform: will e-government be different?. *International Journal of Electronic Government Research*, 2(1), 1-20 (2006)
24. Lindgren, I., Toll, D., Melin, U.: Automation as a Driver of Digital Transformation in Local Government: Exploring Stakeholder Views on an Automation Initiative in a Swedish Municipality. In: DG.O'21: DG.O2021: The 22nd Annual International Conference on Digital Government Research, pp. 463-472. ACM, Omaha (2021)
25. Luftman, J.: Assessing Business-IT Alignment Maturity. *Communications of the Association for Information Systems*, 4(1), 1-51 (2000)
26. Luftman, J., Lyytinen, K., Zvi, T. B.: Enhancing the measurement of information technology (IT) business alignment and its influence on company performance. *Journal of Information Technology*, 32(1), 26-46 (2017)
27. Luna-Reyes, L. F., Gil-Garcia, J. R.: Digital government transformation and internet portals: The co-evolution of technology, organisations, and institutions. *Government Information Quarterly*, 31(4), 545-555 (2014)
28. Meijer, A., Bekkers, V.: A metatheory of e-government: Creating some order in a fragmented research field. *Government Information Quarterly*, 32(3), 237-245 (2015)
29. Mergel, I.: Open innovation in the public sector: drivers and barriers for the adoption of Challenge. *Gov. Public Management Review*, 20(5), 726-745 (2018)
30. Moore, M. H.: *Creating public value: Strategic management in government*. Harvard university press (1995)
31. Panagiotopoulos, P., Klievink, B., Cordella, A.: Public value creation in digital government. *Government Information Quarterly*, 36(4), 101421 (2019)
32. Plesner, U., Justesen, L., Glerup, C.: The transformation of work in digitised public sector. *Journal of Organisational Change Management*, 31(5), 1176-1190 (2018)
33. Selander, L., Jarvenpaa, S. L.: Digital action repertoires and transforming a social movement organisation. *MIS Quarterly*, 40(2), 331-352 (2016)
34. Vial, G.: Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118-144 (2019)
35. Walsham, G.: Doing interpretive research. *European journal of information systems*, 15(3), 320-330 (2006)
36. Winkler, T.: IT Governance Mechanisms and Administration/IT Alignment in the Public Sector: A Conceptual Model and Case Validation. In: *Wirtschaftsinformatik Proceedings*, pp. 831-845. AIS, Leipzig (2013)
37. Yeow, A., Soh, C., Hansen, R.: Aligning with new digital strategy: A dynamic capabilities approach. *The Journal of Strategic Information Systems*, 27(1), 43-58 (2018)
38. Yin, R. K.: *Case study research and applications*. Sage (2017)