

The Implementation of a Digital Strategy in the Austrian Public Sector

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ABSTRACT

The European Commission's eGovernment report states that "eGovernment in Europe is characterized by a "virtuous circle": public administrations develop better and better digital services because user demand is high; and more and more users access government services online because these services are available and easy to use" [1]. In this report, Austria ranks among the top five in the delivery of public services, high on indicators such as transparency and the key enablers that facilitate digital interactions between governments and users, help to standardize process flows and thus help both citizens and businesses in their dealings with the government. Yet in the most current Digital European Society Index Austria ranks only 10th and is described as being slow in improving the use of digital services, connectivity and integration of digital technology. In this study, we aim to investigate the strategies implemented for the digitalization of services and processes in Austrian public administrations in order to explain such incongruous scores.

CCS CONCEPTS

• **Social and professional topics** → Computing / technology policy; Government technology policy.

KEYWORDS

public administrations, digital strategy

1 INTRODUCTION

The widespread adoption of new information and communication technologies (ICT) has led organizations to develop strategies in order to take advantage of them for manufacturing, service delivery, customer relationships and human resource development. These strategies usually include the explicit transformation of important business processes in order to create impact on product development, internal work processes, organizational structures and the

values and concepts of the organization. Blackler and Brown [2] have argued that when implementing technology, a strategy must contain four phases: an initial review of possible opportunities, exploration and prior justification, design of the system, and implementation. Matt, Hess and Benlian [3] identify four dimensions that digital transformation strategies have in common, independent of industry or firm: the use of technologies, the changes accruing to value creation, the changes in organizational structure, and the financial considerations driving digital transformation. According to Lember [4], this requires public administrations to develop new practices and gain new competences to serve the public more efficiently and more effectively. Digital transformation though requires "a comprehensive organizational approach rather than one that merely makes forms available online or the transition from analog to digital public service delivery" [5]. The majority of digital transformation initiatives though fail to produce the anticipated results regardless of changes in policy and governance [6, 7].

In this study we therefore investigate the strategies implemented for the digital transformation of public administrations and reasons why these efforts still fail. In order to investigate this issue, we picked a particularly interesting case to study – the digital transformation of the Austrian public administration at the municipal, regional and national levels. The reason for selecting Austria for this study is that although the 2020 eGovernment benchmark report ranks Austria high in the delivery of public services [1], it is low in the Digital Economy and Society Index (10th) and is described as only slowly improving in the use of digital services, connectivity, and integration of digital technology [8]. We therefore aim to answer the following research questions: What are the targets of the digital strategies and how are these monitored in Austria? What are the phases or elements that characterize digital strategies in the Austrian public administration? What are the preparatory steps taken for the implementation of a digital strategy? To answer these questions, 41 digital transformation experts from the Austrian public sector were interviewed between 2018 and 2019. Some of the experts identified the phases of a strategy, such as ensuring the availability of certain tools, developing solutions, enabling the technology, and others see the development of a digital strategy itself as part of an overall strategy and achieving the digital transformation of public administrations in Austria. Preparatory steps play an important role, just as much as the need for digital leadership. The results gained show the lessons learned in Austria that could be useful for public administrations in other countries in the process of developing and implementing a digital strategy for their digital transformation.

2 BACKGROUND

Since the 1990s, information and communications technology (ICT) has played a central role in reshaping and transforming public administrations. The use of ICT as a tool for change in the structures and processes of governmental organizations enables the exchange of information between citizens, businesses and government in order to achieve results such as improved efficiency, convenience as well as better accessibility of public services [9]. The effective integration of services and processes represents the transformation of structures, processes and management culture as well as new forms of cooperation between public authorities, organizations and society [10]. In order to achieve these aims, organizations have to develop and implement strategies that focus on the transformation of those processes that will have an impact on product development, internal work processes, organizational structures and the organizational values.

In a business context, Blackler and Brown [2] have argued that when implementing technology, a strategy must contain four phases: an initial review of possible opportunities, exploration and prior justification, design of the system, and implementation. Berman [11] distinguishes between three digital transformation strategies in the private sector that focus on as: redefining the customer value proposition using information and analysis, redesigning the customer value proposition, and increasing, expanding or redefining the value of the customer experience; redesigning the business and operating model by building on the existing infrastructure and adding new digital functions; and combining these two approaches by simultaneously transforming the customer value proposition and organizing the delivery processes. Bharadwaj, El Sawy [12] instead, argue that given that as digital technologies and digital platforms are enabling cross-boundary industry disruptions, new forms of business strategies are necessary that address “(1) the scope of digital business strategy, (2) the scale of digital business strategy, (3) the speed of digital business strategy, and (4) the sources of business value creation and capture in digital business strategy” (p.1). More recently, [13] note that “IT strategies usually focus on the management of the IT infrastructure within a firm, with rather limited impact on driving innovations in business development” (p. 339), but that digital transformation strategies require a different perspective and different goals. They identify four dimensions that all digital transformation strategies have in common, independent of sector: the use of technologies, the changes accruing to value creation, the changes in organizational structure, and the consideration of the financial aspects driving transformation. These dimensions represent the “Digital Transformation Framework (DTF)” model, where the use of technologies is understood both as an organisation’s attitude towards new technologies as well as its ability to exploit these technologies. The use of new technologies, Matt et al. argue, implies changes in value creation such as the opportunities to expand the products and services offered, but also the development of relevant competences. Structural changes in the organizational set-up will be necessary, but financial aspects play a central role, these are both a “driver” and a “bounding force” (p. 341). They argue that a successful digital transformation relies on aligning the four dimensions, but also aligning the strategy with

other functional and operational strategies. It is this alignment that is particularly difficult and requires additional coordination efforts.

Digital is clearly seen as a transformative driver whether dealing with products, services, or processes, and many are experimenting with digital technologies, trying to make use of their potential and evaluate their impact for value creation and competitive advantage [7]. Graham and Dutton [14] argue that the development of technologies and the social implications associated with it are shaped by policy and regulations – governments “encourage technological innovation through investment in computing and telecommunications” (p.14). In addition, they add, if the next two decades are as transformative as the previous two, “it is likely that that many of us will be living in a very different technologically, informationally, and algorithmically mediated world” [14]. In public administrations, digital transformation can be understood as the transformation of internal and external processes and structures supported by ICT “in order to provide services that meet the goals of the public sector such as efficiency, transparency, accountability and closeness to the citizen” [15]. Public administrations are therefore under pressure from political leaders and citizens to digitally transform and adapt their organizational strategies [6].

The majority of digital transformation initiatives fail to produce the anticipated results regardless of changes in policy and governance, sometimes as a result from controversies [16]. There may be several reasons for this. Digital transformation strategies used for the public sector are often based on experiences and expertise from the private sector [17] although the aims and responsibilities of the public and private sector differ and may even be at odds [18]. Weerakkody, Sivarajah [19] note that the aim of digital strategies in the private sector focus on reducing costs and increasing profits whilst the public sector addresses reducing waste, improving citizens’ service outcomes and experience. Strategies for digital government are often imprecise and may refer to formal policy documents implemented by local or national governments [20]. Some digital strategies may also be too specific, addressing individual cases or specific digital aspects of digital government or focus on the use of social media [21] rather than adopt a holistic approach or address the whole organisation. Another reason may be that digital transformation processes are rarely clean, linear progressions [22] and that the public sector may follow a different logic and longer paces [23].

The strategic document that has shaped the efforts in the last years is the eGovernment Action Plan 2016-2020, it focuses on engaging, connecting, digitising and enabling digital public services [24]. Other policy documents and agreements such as the European Interoperability Framework [EIF, 25] (European Union, 2017), the Tallinn Declaration [26] and the Berlin Declaration [27] also play an important role in the digital transformation of the public administrations (European Commission, 2020a). The digital challenges and opportunities public administrations face differ according to the country’s political and public administration context. European benchmarks for digitalisation and e-government monitor the implementation of technology and digital measures in the member states, e.g., the Digital Economy and Society Index (DESI, European Commission, 2021a), or the eGovernment Benchmark (European Commission, 2020c). In the European context, countries that achieve high rankings in the digital government context are,

for example, Denmark, The Netherlands, Finland, Estonia, the UK, Luxembourg, Belgium and Austria [28].

In the 2020 eGovernment benchmark report [1], Austria ranks high in the delivery of public services, the digitalisation of front- and back offices and indicators such as transparency and key enablers. The Austrian Digital Roadmap [29] urges the implementation of digital strategies in all sectors. The public administration plays a central role in these national digitalisation efforts: „The public sector also sees itself as an innovation driver for Austria. Citizens and businesses have the right to convenient, simple and barrier-free electronic communication with the public administration.” (p. 5). Digital services are increasingly used by citizens and businesses to find information, complete official procedures electronically with the mobile phone signature or pay fees online. Mobile and digital services are understood as official channels to be used electronically by citizens and businesses 24/7 and public administrations process the electronic files (ELAK) as part of a digital workflow [30]. There are also digital strategies at the regional level, for example the “Digitalisierungsstrategie NÖ” in Lower Austria [31] that focuses on three goals in particular on securing jobs, strengthening the rural regions and improving the quality of life. Municipalities and cities also have their own digital agenda and strategy, e.g., the Digitale Agenda Vienna [32].

Austria’s digital strategy has been criticized for its lack of quantified targets and monitoring [1]. In this study we aim to investigate the implementation of digital strategies in Austria to answer the following research questions: What are the phases or elements that characterize digital strategies in the Austrian public administration? What are the preparatory steps taken for the implementation of a digital strategy? What are the targets of the digital strategies and how are these monitored in Austria?

3 RESEARCH DESIGN

A qualitative approach was chosen as this allows the analysis of real-life phenomena and to understand the context and significance of the viewpoints of those involved [33]. Expert interviews were used to collect the data and, as the aim is not to simply report the frequency of codes, but to find significant meaning in the data. A narrative interpretative approach was chosen for the analysis. A narrative analysis allows the integration of different viewpoints and to identify similarities and differences in the experiences and actions [34, 35].

3.1 Case selection

This case was chosen as the Austrian digital strategy urges the implementation of digital strategies in all sectors, in particular in the public administration. To achieve the aims set out in the digital strategy, the political responsibility for Austria’s e-government strategy has been moved from the Federal Chancellery to the Federal Ministry for Digital and Economic Affairs, which has set up the online platform Österreich.gv.at to provide information and select digital services for citizens, the Mobile App Digital Public Office [30], the online platform Unternehmensserviceportal for businesses [36], and a digital post box for users [37]. Further objectives include a greater use of ICT tools, the implementation of e-payment systems, digital delivery and digital signatures, but also fostering

citizen participation and involvement in the overall digital transformation of the country. The development of the vision Digital Austria in 2050 includes several strategic action plans on select priority topics [38].

The legal basis for the digital strategy is the implementation of the Austrian E-Government Act [39]. It includes three central principles: free choice of communication channel with public administrations, secure and data-protection-compliant implementation of electronic communication, and barrier-free access to public administration.

3.2 Method

The data was collected using expert interviews [40]. 41 experts from the Austrian public sector were interviewed 2018-2019. The sampling strategy followed a purposive sampling approach [41]. First, a small sample of international experts in the public sector digital transformation field was identified. The selection of the first sample of experts was based on the criteria derived from the study’s aims and the knowledge about the study’s population. In a second step, a snowball approach was applied to the individuals identified through these activities [42]. 33 interview participants stem from the Austrian government sector, six from organisations from the private sector and two from the non-profit sector that either work with or advise public administrations on digital transformation projects and strategies. The number of interviewees lies above the suggested 20–30 interviews and the sample can therefore be deemed as large enough in order to answer the research questions set [43].

The questions for the interview guideline were developed using theoretical concepts of digital transformation and e-government (the interview guideline is described in detail in Mergel, Edelmann [5]). In the interview guide, these questions specifically address digital strategies in Austria:

Why do you think public administrations embark on digital transformation processes?

What does a strategy for digital transformation look like in your opinion?

What are the main elements of a strategy?

What are the implementation phases for digital transformation?

What does the public sector need to do to prepare public administrations for the transformation processes?

The interviews were conducted by phone or Skype and recorded for data analysis purposes. Prior to recording, the interviewees were asked for permission, and the interviewees’ names and affiliations were anonymized to protect the identities of the interviewees.

4 ANALYSIS

The memos and the transcripts were analyzed using thematic analysis to identify the “what” of the narrative (the content of stories) and involves searching and identifying common threads by breaking down the text into smaller units of content and then analyzing them in order to achieve a rich, detailed and complex account of the data [40]. The initial coding list in Table 1 was derived from the literature on digital strategies.

The data analysis phase consisted of a first-cycle and second-cycle [34]. Using the initial list, the data was first categorized into larger data chunks and then, in a second step, analyzed in-depth

Table 1: Initial coding list

Phases that characterize digital strategies
<ul style="list-style-type: none">• The use of technologies• Changes accruing to value creation• Changes in organizational structure• Financial aspects driving transformation
Targets set out in digital strategies
<ul style="list-style-type: none">• Transformation of the back-office business processes• Complete transaction and service delivery online• Shift citizens and businesses to digital channels for economies of scale• Sharing infrastructure, processes and standards and working together to develop solutions across government departments• Exchange of information between authorities and citizens, companies and partners
Monitoring change
<ul style="list-style-type: none">• Adopt appropriate time horizons for change, set priorities and measure progress• Develop the necessary leadership, incentives, attitudes, skills, guidelines, and culture within government to initiate and sustain change

by adding and refining the categories. The themes identified in the literature review guided the first step of the analysis of the experts' views, experiences and activities [40]. In the second stage of analysis, the data was re-analyzed and grouped into a smaller number of categories. During this cycle, the analysis helps to explain how the phenomena investigated develop patterns, relationships, and processes, and the differences and similarities between them [34].

5 RESULTS

This section contains the results gained from the analysis of the data of the 41 experts interviewed. They are supported by quotes from the interviews as this illustrates the experts' different perspectives, helps to enhance the transparency of the research process and enables other researchers to follow the reasoning [44].

5.1 Digital Strategies

We asked the experts what they believe a digital strategy should look like. Many noted that above all, that a digital strategy must be comprehensive, holistic and be implemented across departmental, organizational, federal and sectoral boundaries:

In general, with the strategic approach, I think it is important to look at the whole picture. (AT16)

For me, it would definitely be a comprehensive strategy. I don't think much of strategies where each economic sector, each ministry does something for itself in a quiet chamber, I think it requires a broad approach. You can see that in many areas. Especially in areas where many levels are involved. The municipal level or the EU level or even the national level, I think we need to take advantage of synergy effects and really look at what we already have. Where is

there potential, what can be used, what is going well? [...] It's no use if I have a strategy for digital transformation for Vienna, but in the best case I have it for the whole of Austria and in the optimum I have it for the EU public sector (AT13).

A strategy has to serve the whole of society, so the public administration's own role as well as that of the stakeholders becomes important. Not only must the public administration develop a new awareness about what digital transformation is (9), but stakeholder participation is central for the development of a strategy (13). The need for a new awareness or mindset was highlighted by several interviewees:

Well, some people might want a strategy for the whole of society that someone or some small group comes up with. I think this must be approached in a different way. In this area, it is a matter of grasping the challenges that exist for society, which are formed with the digital transformation. And that is a dimension that is always of enormous importance for our coexistence in a state. (AT12)

Whilst some highlighted the importance of having a digital strategy (3), it is important not to see this as an IT project (5), but as an opportunity to assess the IT that is currently being used (1) as well as the digital competences currently available in the organization (1). Further central elements of a digital strategy are the need to link it to an organizational strategy, thus, to consider its impact on financial resources (7) as well as increasing efficiency (5). New areas may also need to be addressed (4), in particular citizens orientation, and emphasizes the need for public administrations to be more participatory and take on the role of the listener:

For me, a classic strategy process is always: listen, understand, act. [...] I have to have a dialogue with many people to find out where

Table 2: Results from the data analysis

Phases that characterize digital strategies	Experts
<i>Analysis of the business model</i>	11
<i>Set aims</i>	4
<i>Changes in organizational structure</i>	3
<i>Generation of ideas and collection</i>	2
<i>Stakeholder involvement</i>	2
<i>Financial aspects driving transformation</i>	1
<i>The use of technologies</i>	1
<i>Changes accruing to value creation</i>	1
Preparatory steps	
<i>Leadership</i>	25
Address known barriers	15
Digital Leadership	10
Agile Management	9
Allow mistakes	9
Communication	9
Change Management	7
<i>Organization</i>	
Competences	26
Mindset	18
Organizational culture	6
Organizational development	6
Financial aspects	4
New methods	3
<i>Stakeholders</i>	3
Participation	14
<i>Infrastructure</i>	8
Targets	
Digitalization	24
Values	11
Customer focus	10
Transformation of the back-office business processes	10
Complete transaction and service delivery online	7
Reduce costs	7
Infrastructure	5
Exchange of information between authorities and citizens, companies and partners	4
Set aims	4
Window of opportunity	4
Competences	3
Sharing infrastructure, processes and standards and working together to develop solutions across government departments	3
Mindset	3
Security	3
Shift citizens and businesses to digital channels for economies of scale	2
Digital resources	2
Increase quality	2
Monitoring	
Adopt appropriate time horizons for change	4
Set priorities	3
Measure progress	2
Develop leadership, attitudes, skills, guidelines, and culture within government to initiate and sustain change	0

I stand and then analyze that so that I then take the right steps. (AT10)

The main goals of the strategy are citizen orientation, strengthening the business location, trust and security, for example, the topic of data protection and data security, which is very important. New compared to previous strategies is probably the topic of transparency, openness, participation, the topic of innovation and Viennese specifics are, of course, also the topics of inclusion, gender equality and one must not forget the topic of flexibility and learning of the people involved. (AT11)

5.2 The implementation phases of digital strategies

In their digital transformation framework, Matt et al [3] note that across all sectors, digital strategies are characterized by the following phases: the use of technologies, changes accruing to value creation, changes in organizational structure, and the financial aspects driving transformation. In the interviews, the phases from the digital transformation framework were rarely mentioned. Only the phase regarding the changes in organizational structure was mentioned more than once (3):

That would also be a step to say, if I now act with a strong digital focus in the future, I have to adapt my organizational structure, I have to create new departments and areas, new responsibilities, new roles. (AT1)

The phase most experts pointed out was the analysis of the business model (11), and then, albeit to a lesser extent, the need to set out the aims (4), generate new ideas (2) and ensure stakeholder involvement (2). The business model and what can be achieved is central to the digital transformation in public administrations:

Very few administrations know what services they currently offer. [...] And only when I have worked that out can I think about what I can digitize or where are the individual levels of difficulty in digitization? What is easy to digitize because it is used by many or because it is not very complex, or what is difficult to digitize because it is very complex or because many, many different administrative bodies have to be digitized? (AT15)

5.3 Preparatory Steps

The two most important preparatory steps for the implementation of a digital strategy are leadership and the development of competences (25):

if I act with a strong digital focus in the future, I have to adapt my organizational structure, I have to create new departments and areas, new responsibilities, new roles. How can I further develop the current employees in order to meet these requirements? What know-how might I need to bring in? What might I have to deliberately throw overboard, because it weighs on me, because I keep thinking in silos that have existed up to now, but which have to go. (AT1)

If you take the digital transformation and really live it in the workplace, in the environment, then I think we need a different kind of leadership behavior (AT14).

Leaders need to adopt a new mindset (18) and be able to address known barriers to change (15). Using principles of digital leadership (10), agile management (9) and change management (7) can be useful:

In the agile process that goes hand in hand with these changes, it is essential to bring in a certain error culture. That is clearly a leadership task. (AT36)

Several other preparatory steps are related to the organizational culture of public administrations: the development of a new organizational culture (6), one that allows mistakes and errors (9), the ensures the use of new methods (4), participation (17) and strengthens the communication between the stakeholders (9). Further preparatory steps should consider the infrastructure required (8), the financial impact (4), the re-organization of the IT department (3). Preparatory steps may also focus on ensuring political support for the implementation of a digital strategy (5), showing the success or quick-wins that can be achieved (1) and ensuring transparency from the beginning (1). The political support must have awareness and knowledge about digital transformation processes:

It won't work without political will, which means that we simply have to ensure that there is a political climate that recognizes the value of digitalization for the administration and for society as a whole. Politicians who live it themselves, in their private lives, and who may have already had it in their professions before. (AT4)

5.4 Targets

The analysis of the business model is important in order to set the targets and aims to be achieved. The most important target is that the digital strategy should achieve or support digitalization and a modern way of working that reflects changes in society (24):

In general, we will have to move with the times, and if everything else is modernized, then the administration will not be able to stay behind. (AT18)

because we want to work more efficiently, more modernly and better as a city administration, and digital transformation is above all a rethinking and reworking of processes and we also try to make the work easier for the city administration. (AT23)

There is a clear need to use the window of opportunity currently offered (4) and to use it to new aims such as digitalization of back-office processes (10), develop customer-centered approaches (10), to reduce costs (7), and provide online transaction and service delivery (7). Further aims mentioned are to support the exchange of information (4), develop competences (3), increase the quality of the services offered (2), develop a new mindset (3), ensure secure services (3), share the infrastructure, processes, standards and solutions (3), to use digital resources (2) and to shift or encourage the use of digital channels (2).

5.5 Monitoring

Monitoring the implementation of a strategy is important in order to know whether the set targets are being achieved. The implementation of the strategy must therefore be monitored by setting

the priorities (3), defining the time horizons (3), and measuring the progress of the implementation (2). This can be supported by implementing agile projects and pilots, and learning from the outcomes:

we have taken such implementation steps, such transformation steps, to go into piloting relatively quickly, into trial operation again with the staff, so that they can also imagine and be involved in how these first steps will be, collect feedback and accompany it here again quite decisively and thus also a continuous improvement process, these feedbacks, which must also be ensured here in a cycle. So this phase after the actual transformation is also very, very essential in order to a) stabilize the process and b) make it more effective and efficient. (AT37)

6 DISCUSSION

In this study we aimed to investigate the digital strategies implemented for the digital transformation of public administrations in Austria and the reasons why the digital transformation of public administrations may still fail. In order to answer the research questions, 41 digital transformation experts from the Austrian public sector were interviewed about what they believe a digital strategy should look like, including the preparatory steps and the implementation phases, the targets to be achieved and how these targets are monitored.

Because of its government and political structure, there are many different digital strategies in Austria – at the federal, regional, municipal and organizational level. Many experts though noted that a digital strategy should be broad and serve the different levels of government and public administrations, rather than develop several strategies for different needs, government levels and even organizations in the public sector. A digital strategy should be able to cut across the public administrations, and efforts should be put into developing a strategy that is useful to all public administrations, regardless of type of organization, focus of the services offered or level of organization. This follows the argument put forward by Bharadwaj, El Sawy [12], who argue that digital technologies and digital platforms must be cross-boundary. Central aspects of a digital strategy are the need for a type of leadership, a new mindset or awareness of the impact of digitalization in society and the participation of the stakeholders, including citizens, in its development. Engagement and user-centricity is important, and can be supported by tools that allow continuous interaction with participants helps to appreciate their needs, but also their values, norms and practices [45]. This acknowledges that a strategy needs to have a customer or user focus, a central element repeatedly found in European policy documents such as the Tallinn or Berlin Declaration or the European Interoperability Framework. This emphasizes the importance of ensuring stakeholder involvement to help generate of new ideas. Identifying their needs can be achieved by knowing who the stakeholders are, and then involving them in the development of the strategy as can be seen, for example, in the development of the Digital Agenda of Vienna [46].

Several experts highlighted how important it is to have a digital strategy, one that is linked to an organizational strategy as well as an IT strategy, although a digital strategy should not be seen as either being or driving an IT project. This reflects the issue raised by Matt et al [3], who emphasize the need to align a digital

strategy with other functional and operational strategies. What are the phases or elements that characterize digital strategies in the Austrian public administration? In their Digital Transformation Framework (DTF), Matt et al [3] identify four dimensions that all digital transformation strategies have in common. Although to a limited extent the Austrian experts pointed out these phases, the phase related to changes in organizational structure was seen as the most important one. But the experts identified other elements as more being more important. In this study, the financial aspect and the financial impact of a digital strategy were mentioned only by a few experts, but most experts pointed out was the analysis of the business model to identify the changes necessary and set the aims to be achieved. Whilst Matt et al [3] argue that the financial aspects play a central role in developing a digital strategy, both as a driver and a limiting aspect, the focus on developing a business model is more in line with the phases described by Blackler and Brown [2] who argue that when implementing technology, a strategy must contain the phase of an initial review of possible opportunities. Weerakkody, Sivarajah [19], has described this issue before, noting that whilst the aim of digital strategies in the private sector focus on reducing costs and increasing profits, public sector organizations address other issues such as stakeholder participation and public administration values such as efficiency.

The lack of broad management knowledge about the potential and requirements of new technologies is seen as one of the main reasons for failed ICT investments in public and private companies. A new organizational direction cannot be achieved through technology alone, but requires changes in attitudes, skills in the organization and to encourage cultural change. Preparatory steps are therefore central to strategy implementation. The results gained here reflect this: the two most important preparatory steps for the implementation of a digital strategy are a new type of (digital) leadership and the development of competences. Management and leadership practices vary significantly and have an impact on the success of companies using new technologies, on productivity and workers. As e-government and e-business applications continue to spread, managers need to deepen their understanding of the potential of ICT and administration. Leaders tend to isolate and delegate ICT leadership to technologists and ICT managers and are unaware of the critical role they have to play in integrating ICT. Instead, leaders need to draw on agile management, be able to support change management and be able to address known barriers to change. As noted by the experts, digital leadership requires an understanding of how technology interacts with other factors, such as organizational policies and strategies, organizational structures, and organizational practices. Changing the culture of an organization is difficult and needs to allow for testing and piloting, the use of new methods, but also for mistakes. As public organizations are under pressure from political leaders to digitally transform the provision of their services [6], one of the preparatory steps that experts recommend is to engage the support of politicians who are also knowledgeable about digital transformation.

The literature shows that the results that digital transformation in public administration can be achieved by including the transformation of back-office administrative processes, new and attractive customer-centric practices, complete transaction and service delivery online, and shifting citizens and businesses to digital channels.

However, the majority of digital transformation initiatives still fail to reach the targets and produce the anticipated results [6, 7]. One of the main criticisms made by the European Commission [47] is that the Austrian digital strategy urges the implementation of digital strategies in all sectors, but lacks quantified targets and monitoring. A digital strategy therefore needs to include the targets or aims that are to be achieved, such as ensuring that organizations make the necessary adjustments to their business and IT strategies, change their organizational structure as well as their processes. What are the targets of the digital strategies and how are these monitored in Austria? The aims of the Austrian federal government include the greater use of ICT tools, the implementation of e-payment systems, digital delivery and digital signatures, fostering citizen participation and their involvement in the overall digitalization of the country. The “Digital Austria in 2050” strategy is to update and harmonize different outdated strategies, fostering the digital transformation and improving user-centric, modern e-government services. In this study, the answers given by the experts reflect these aims: the most frequently-mentioned target of a digital strategy is digitalization per se. Leadership plays a central role in digital strategies, it helps to not only lead employees and the organization, but also to support collaboration, organizational change, and developing an organizational culture that helps to achieve the targets. Further targets are upholding the values of public administrations, digitalization of back-office processes, a focus on the customer or user, reducing costs and to achieve online transaction and service delivery.

Why are digital strategies implemented for the digital transformation of public administrations not achieving their goals? Digital transformation processes are rarely clean linear progressions [22] and different agencies may follow different and longer paces [23]. Monitoring includes setting up appropriate time horizons for change, setting priorities and measure progress as well as developing the necessary leadership, incentives, attitudes, skills, guidelines, and culture within government to initiate and to sustain change. All the experts pointed out several targets, but only a few of them highlight the importance of monitoring, assessing and evaluating the implementation of the strategy by setting the priorities (3) and time horizons (3), as well as measuring the progress of the implementation (2). In addition, some of the targets set, such as digitization, upholding public administration values or developing a customer focus can be hard to measure, assess or quantify numerically for the indexes preferred by the European Commission.

7 CONCLUSION

Digital transformation can lead public administration from a closed, hierarchical and inward-looking organization to an open, decentralized, service-oriented and networked organization. In order to help public administrations’ digital transformation, digital agendas can set the target and steps necessary to achieve them. In Austria, and in other countries too, a new direction cannot be achieved through technology alone, but requires digital leadership, changes in attitudes, skills in the organization, often seen as preparatory steps. By setting targets and goals, monitoring can be improved, although the aims which cannot be quantified numerically would certainly require a qualitative rather than a quantitative assessment.

This study shows the benefits of a qualitative assessment of the Austrian public administration’s digital transformation. There are several lessons that can be learned from this analysis that can be of benefit to Austrian and other countries aiming to digitally transform. A digital strategy needs to be holistic and comprehensive and be broadly applicable. It requires a new type of (digital) leadership, one that is agile and able to engage the users. The digital strategy should not be a stand-alone implementation but be linked to other important strategies and changes in organizational structure. When preparing the digital strategy, it is useful to develop it on the basis of a business model, the aims that need to be achieved and the political support by politicians who are knowledgeable in this area. As the implementation of such a strategy will lead to change, it is important to ensure the development of an organizational culture that allows experimentation, piloting and making errors. To learn from the implementation, it is necessary to monitor it. In a next step, this evaluation could be extended by assessing to what extent the experts think that the set goals and targets have been achieved, how to identify changes in organizational culture, especially in the context of the impact of the Co-VID-19 pandemic on the efforts to digitally transform public administrations. Whilst a qualitative assessment of the topic is important, the political context of Austria (a federal republic) plays an important role on digital strategy development but has not considered extensively here.

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