



Future of Digital Trust – Digitalization of public services

Digital transformation has become a reality in every area of our lives. People are demanding more digital solutions not only in their private lives, but also when interacting with public sector organizations. Despite its many advantages, the digital transformation of Germany's public sector has been slow. The obstacles to

adoption range from concerns about data protection and user reluctance to specialist skill shortages. To leverage on the advantages of digitalization in public services, the first key step will be to build digital trust: Public administrations should therefore engage in building up digital trust in order to overcome the current barriers

of digitalising public services and to build up a modern, efficient and citizen-oriented administration. ➤

Targeted, flexible and digital public services are in demand

Citizens demand flexibility, speed and tailored solutions in their daily lives. However, Germany's public sector has been slow to adapt their services to meet these needs. Case in point: the average visit to a public service provider in Germany takes about 2.5 hours.¹ In addition, in larger cities, an appointment with a public office needs to be booked at least three months in advance and administrative offices often have limited opening hours. The personal circumstances, socio-economic backgrounds, the nationality and the specific services they require shape citizens' needs in various ways.² The application process can vary quite significantly for housing allowance (as a part of social services), dog licenses or residence permits for family reunification. Public sector organizations need a targeted approach to adapt each digital public service to the specific needs of individual service users.

Challenges facing the public sector

Public sector organizations are increasingly confronted with internal obstacles. On average, most public sector employees are older than their counterparts in the private sector, with employees aged 60 and above accounting for only 7 percent of the private sector workforce but 11 percent of the public sector workforce.³ Furthermore, shortage of personnel is omnipresent, mainly because not enough young individuals apply to the open positions tendered by public authorities.⁴ Economically disadvantaged and small-scale municipalities are particularly affected by this shortage.⁵ Due to the wave of retirements, a further staff shortage is to be expected in the next few years. At the same time, workloads in the public sector increase due to greater regulatory volume and complexity. Another issue is the availability of modern systems in public sector organizations, where advanced technology

infrastructure and digital data systems are lacking. That means, the majority of internal processes remains analogue: fax machines, letters, telephones and e-mails coexist with a few digital offers, making access to public services a lot slower and more expensive than those in the private sector. According to a calculation of the National Regulatory Control council⁶, 3.9 EUR billion could be saved yearly only by digitalizing the most important public services. In

addition, citizens gain 84 million hours per year, which they would not have to spend in citizens' offices.⁷ Another reason expenditure is so high in Germany's public sector organizations is a lack of cooperation. Hierarchical and fragmented governance structures are less efficient and less likely to foster coordinated, holistic problem solving. Consequentially, internal processes are resource-intensive and oftentimes not streamlined.



¹ Bitkom e.V., *Corona-Pandemie beschleunigt Digitalisierung der Verwaltung*, 15.10.2020, accessed: 12.04.2021.

² Nationales E-Government Kompetenzzentrum e.V., *Top 100 Verwaltungsleistungen*, 2016, accessed: 12.04.2021.

³ Destatis, *Öffentlicher Dienst: Beschäftigte im Durchschnitt 44,5 Jahre alt*, 2017, accessed: 12.04.2021.

⁴ Behörden Spiegel und prognos, *Trendreport Digitaler Staat*, 2019, accessed: 12.04.2021.

⁵ Ebd.

⁶ Nationaler Normenkontrollrat.

⁷ Kommunal, *Wegen Personalmangels: Digitale Verwaltung auf dem Abstellgleis*, 28.05.2019, accessed: 12.04.2021.

These challenges require citizen-centric and targeted digital solutions

To overcome the challenges facing the public sector in Germany and provide the user-centric, flexible and more efficient solutions citizens demand, public sector organizations need new approaches and targeted digital technologies.

The German federal government’s Digital Strategy⁸ highlights concrete solutions for five core digital transformation challenges: digitalize all public services, invest in technology infrastructure and equipment, fund innovation and digital transformation, and adopt initiatives to improve digital literacy as well as the quality of life across society.

Fig. 1 – Core areas in the German Digital Strategy



The digitalization of public services is a key pillar within the Digital Strategy. In order to achieve a comprehensive digitalization across all public services, decision-makers should implement a holistic and citizen-centric approach including the following key principles:

- Public sector organizations have to develop a form of communication that serves the citizens and businesses and not the other way round. In their interactions with the public, they must acknowledge the specific realities of service users and provide targeted solutions to address their diverse needs.

- Smart, innovative public services should further be “digital by default”, meaning that service users should have digital access all existing and future public services.
- Public sector organizations should adopt the “Once-only principle”, which only requires citizens and businesses to provide their data once to access all public services. An automated system then makes this data available for processing and exchange in other public service offices.
- All digital public services must be easily accessible for all citizens, which is best achieved by keeping the threshold for participation low and promoting active civic engagement.

⁸Die Bundesregierung, *Die Digitalstrategie der Bundesregierung, September 2020*, accessed: 12.04.2021.

AI-enhanced applications increase efficiency

A particular field of the digital transformation of public services is the use of artificial intelligence (AI). AI can provide access to new data, information and knowledge, optimize workflows and even support administrations in their decision-making process. One of the key strengths of AI is to provide easily accessible and flexible procedures for citizens, which substantially reduces barriers for citizens and administrative burdens for administrations. They can process cases faster and ease the workload for personnel, freeing up time to focus on more urgent and more complex tasks.

Various AI-enabled applications can support the contact between administrations and citizens at different stages in the administrative process and some of them are already in use. AI applications can contribute to the automation of various processes such as the proceeding of requests and applications and the direct interaction with citizens via chatbots. Various municipalities are already reaping the benefits of service robots that supplement or even replace person-to-person communications and provide assistance with applications. Artificial intelligence is already playing an integral role in direct citizen communications, in process optimization, in workflow support and in real-time decision-making. A prominent example of AI-supported decision-making is the tax assessment process, where tax authorities have automated processes from assessment notices to routine returns.

Use Case: An AI solution for citizen communications

Open communication and regular dialogue are critical for building trust between citizens and public sector organizations. However, public service providers often struggle with maintaining communication, when it comes to specific questions, suggestions or complaints put forward by individual citizens. This is due to the increasing number of requests paired with a declining workforce in public sector administrations. Deloitte recently supported a German city in investigating how AI can be used address this issue increasing the efficiency in communicating with citizens.

In most cities, residents can submit comments, questions and complaints to various designated departments and/or officials within the local authority either via telephone, post, email and in some cases via mobile apps. With so many different contact options, there is a huge influx of citizen engagements each year. These requests are processed manually in many administrations, leading to inefficiencies and delayed response times.

In this context, Deloitte has developed a proof of concept for automating the processing of citizen communication to increase both efficiency and quality. The project had three main outcomes:

- **As-is assessment:** Based on interviews, workshops and the analysis of citizen communication, a thorough review of current workflows, we review the way citizen requests are processed. The review included both a description of the process as well as an evaluation of challenges and best practices. The as-is assessment served as the foundation for the other project deliverables.
- **Development and analysis of options:** Based on the as-is assessment four options on how to modify the current process of answering civil letters have been developed. The options were discussed with stakeholders in a design workshop. Subsequently a multi-criteria analysis was carried out to assess the options and determine the preferred approach.
- **Determining the preferred option:** The preferred option is the combination of a centralized dashboard streamlining the processing of civil letters across the agency as well as an AI driven routing system to assign civil letters swiftly to the responsible case worker. The dashboard has been visualised with a click dummy while the proof of concept of the AI solution was visualised with demo material.

In addition to the above-mentioned outputs, a marketing concept has been developed to increase buy-in from all concerned stakeholders. All project outputs serve as foundation for a potential follow-up project to implement the recommended solutions.



Successful digital transformation requires clear principles

Despite the obvious advantages of digitalization in general and AI in particular, the public sector has so far been unable to unlock the full potential of digital transformation.⁹ The digital transformation and the implementation of AI in the administrative processes face considerable obstacles that should be addressed consequently:

Lack of usability

Many advanced digital projects, such as the e-ID and other services outlined in the Online Access Act (Onlinezugangsgesetz), have low utilization rates, because either the relevant data is supplied on different, incompatible media or citizens are unaware of them. Instead, digital services must follow the needs of citizens. Citizens want an unbureaucratic, simple, understandable public service which is flexible and without any additional technological efforts.

Data protection principles

Data protection in Germany is a highly complex, highly regulated area that often leads to the delay or even postponement of digital initiatives. Data protection issues are commonly used as an excuse to derail digitalization. Instead of overregulating data protection, public sector organizations should make their services digital “by design” and “by default” to guarantee transparency.

Clear chain of responsibility

To reduce the fragmentation and complexity as described above, German public sector organizations must ensure all their digital public service solutions are coordinated. This is especially relevant for lower levels such as municipalities and cities to avoid extra costs, delays and redundancies.

Investment is key

To digitalize public services and make them available for all citizens, investments and a considerable amount of resources are necessary. The provision of digital public services should always follow the maxim of reducing complexity and streamlining processes. Coordination, particularly at the municipal level, and standardization across all systems are key prerequisites to becoming a state-of-the-art digital public services provider.

Looking ahead

There is no doubt that the future of public services is digital. More and more citizens expect digital access to public services as well as intuitive and user-centric solutions. Administrations can currently not comply with these requirements: a shortage of personnel, increasingly complex tasks and regulations as well as demographic shifts are just some of the challenges facing the public sector. And yet, the COVID-19 crisis

has shown quite convincingly that digitalization of public services is not only a nice-to-have for citizens, but also a must-have for a modern and efficient public sector.

But how do we get there?

To achieve digital transformation, above all we need innovation, trust in digital services and targeted citizen communications. Our use case implementing AI for automated processing of citizen requests is a compelling example of all three: A targeted AI solution that includes various ways of communication can replace the current analogous system and thereby optimizes the process by freeing up resources and providing a more time-efficient system. Citizens will clearly benefit from this type of AI-enabled solution – after all, usability and targeted communications are the key to successful digital public services. The process of digital transformation of Germany’s public sector has by far not reached its end. The pace, the solutions and the outcome, however, depend on innovative solutions, the amount of investment and active engagement. The obstacles of digitalizing public services in Germany are not insurmountable – they instead need to be addressed in a targeted manner.

⁹Bundesdruckerei, *Vertrauensraum in der Digitalisierung*, 2017, accessed: 12.04.2021.

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