



Digitalization in the Public Sector

Trend report



Digitalization in the Public Sector

As digital transformation affects all aspects of daily life, citizens expect their governments to provide better services and policies that deliver on the promises of the digital age.

Today, digital services are modernizing the public sector, with [75% of global public service leaders agreeing that technology architecture is becoming critical to overall organizational success.](#)

Alongside developing social and business-critical applications that streamline processes and improve services, the apps are essential support mechanisms in challenging times.

Following recent global events, such as the COVID-19 pandemic, the countries that employed digital governance methods could ensure their citizens received the necessary support and information.

For example, [in France, the introduction of the 'AlloCovid' service used artificial intelligence to investigate potential coronavirus symptoms and direct citizens toward emergency services or doctors.](#)

Although highly beneficial, the digital transformation of the public sector is a complex process.

One that will require revamping how public sector organizations function and are structured, as well as requiring governance mechanisms that deliver efficient data handling and build trust.

To achieve its goals, a digitally mature government requires clear leadership, with a mandate and strategic vision for system-wide transformation and government-wide coherence within and between public sector organizations.

At the same time, they must ensure collaborative relations with citizens and businesses to help deliver increased economic productivity and societal well-being.



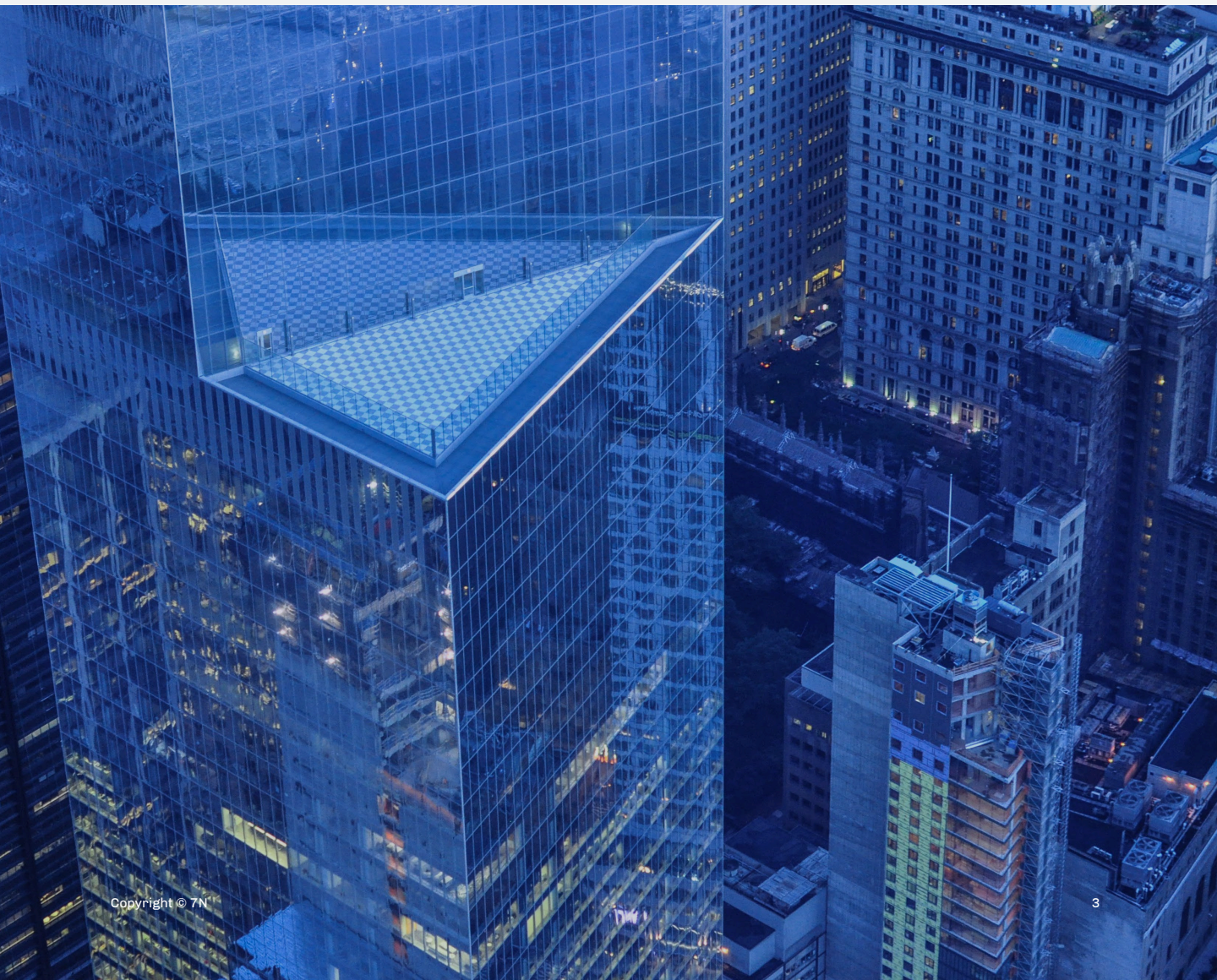
The Digital Government

The digital revolution is bolstering economic growth and productivity, improving living standards and resulting in giant leaps across various sectors.

However, to create a society of shared prosperity, governments must update their policies and institutions to offer more transparent and effective services and seize the possibilities created through digitalization.

Which for governments can result in many positive outcomes, such as [92% of U.S. citizens believing enhanced digital services would positively impact their view of government.](#)

In short, they must embrace the opportunity and become a digital government.



From e-Government to Digital Government

As ICT services became more available, the ability of governments to provide public services electronically grew.

The application of e-government enables higher levels of effectiveness in governmental services, enhancing service delivery through the digitalization of procedures, documents, and services.

The transformation from e-government to digital government arose as governments prioritized using digital tools and data as a public service provision. For example, it led to adopting open, data-driven, and risk management approaches involving stakeholders from beginning to end.

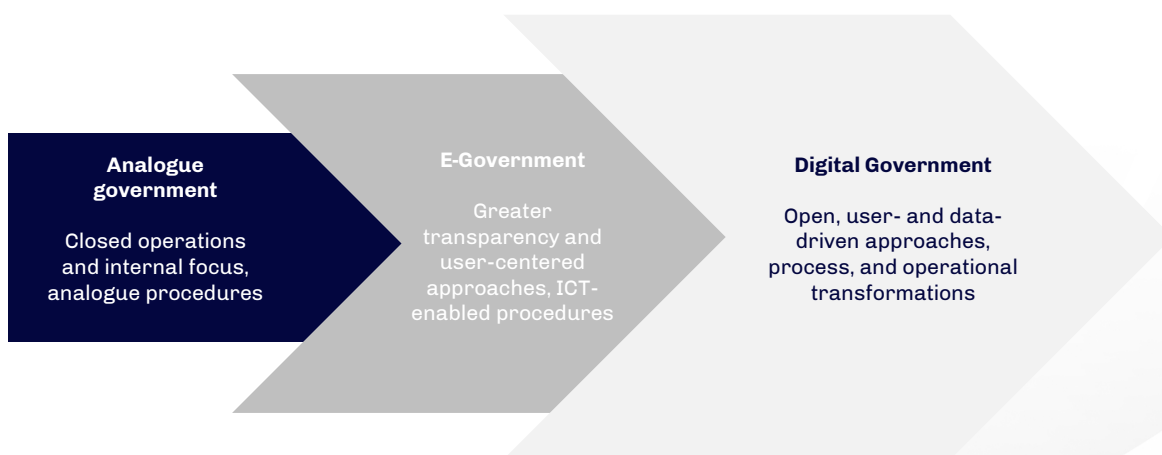
Digital governments regard the use of digital technologies as an integral component of governments' modernization strategies. As such, they deliver value by improving the management and organization of services critical to the citizenry.

To create a broad digital universe, governments seek to build a digital ecosystem with numerous participants, who support the production of and access to data, services, and content through digital interactions.

However, to deliver a digitally mature service, the right governance frameworks are necessary to provide a system-wide transformation that meets users' needs and builds public trust.

Consequently, governments must think beyond just developing suitable capacities to optimize the value of digital technologies and data in the public sector. But instead, they require a holistic transformation of institutional governance, job profiles, human resources management, working methods, culture, and mindsets.

Digital transformation of the public sector



Source: Based on (OECD, 2014) "OECD Recommendation of the Council on Digital Government Strategies

The Mature Digital Government

It is possible to assess the maturity of digital governments by examining how organizations use data to redesign and deliver services and transform operations through new technologies.

Currently, governments are adopting new methods and developing innovative solutions to improve their service delivery and citizen-centric model. For example, data and sophisticated analytics support decision-making processes and improve communication with citizens.

Today, the Digital Government Policy Framework (DGPF) is a policy instrument that supports governments to effectively design and implement strategic approaches

to achieve higher levels of digital maturity in their public sectors. Additionally, it allows them to benchmark the progress of digital government reforms across OECD countries.

Governments that achieve digital maturity are well-positioned to achieve significant benefits. The opportunity to find solutions for policy challenges, explore new business models and develop innovative and agile public services solutions that have commercial appeal and contribute to economic growth.

Under the DGPF, a mature digital government is:

The Digital Government Policy Framework (DGPF)

Proactiveness: Through increased awareness and insight, civil servants can anticipate the needs of the citizenry both individually and collectively and take steps to respond correctly.

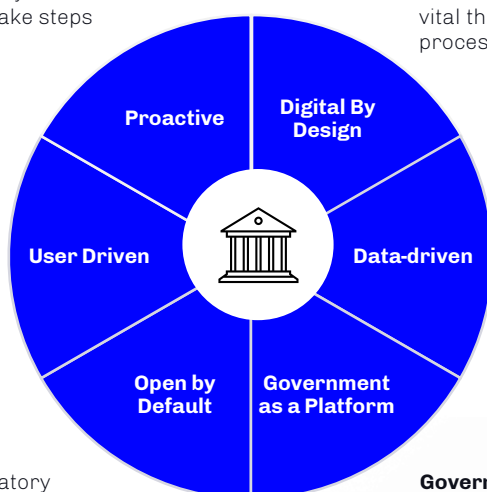
User-driven: Users have a central role in shaping and informing public policy, service design, and delivery processes.

Open by default: Within the regulatory and legislative limits, digital tools such as algorithms and government data are available for public engagement.

Digital by design: Not solely considered a technical topic, digitalization is a mandatory transformative aspect of the government, vital throughout public policy and service processes.

Data-driven: The safe use and management of data generate significant value for the public through policy, service design, and delivery cycles.

Government as a Platform: Civil servants can focus on delivering for their users' needs because they exist in an ecosystem that enables the sharing and integration of tools and resources.



Delivering Better Digital Government

As governments seek to integrate digital technologies and data across sectors, success relies on many factors.

Effective design and implementation of digital government policies require clear and decisive leadership coupled with the involvement and shared accountability of all relevant stakeholders, whether public, private, or civil society.

Moreover, public sector employees must possess the appropriate skills to realize the vision and meet the citizenry's needs.

However, identifying how to start or move forward can be troublesome for governments in an increasingly complex and intertwined landscape.

Nevertheless, the OECD E-Leaders Handbook on the Governance of Digital Government suggests that when devising digital governance frameworks, it is crucial to consider these three critical facets:

1

Contextual Factors

These focus on country-specific characteristics. Whether political, administrative, socio-economic, technological, or geographical context, every country has specificities that demand a unique approach to governance. Yet it is possible to identify elements that have shared relevance.

2

Institutional Models

There are different forms of institutional set-ups, approaches, arrangements and mechanisms for working within the public sector and the digital government ecosystem. It offers an insight into how the parameters influence and direct digital government strategies and their implementation.

3

Policy Levers

These address the different policy instruments; governments can utilize levers to ensure a coherent digital transformation of the public sector, including the strategy, project management tools, financial management mechanisms and regulations.

Trends in the public sector

To build a public sector fit for the future, governments worldwide must reinvent themselves and capture the benefits digital transformation can deliver to society.

Here we will discuss the trends shaping the sector's future.

Dig deeper

Unified Citizen Experiences

Automation

Governmental Data Management

Increased use of AI and Machine-Learning

The Proliferation of 5G Networks in Smart Societies

Compliance: Growing Emphasis on Data Security

Government Services in the Cloud

Filling the Digital Skills Gap

Unified Citizen Experiences

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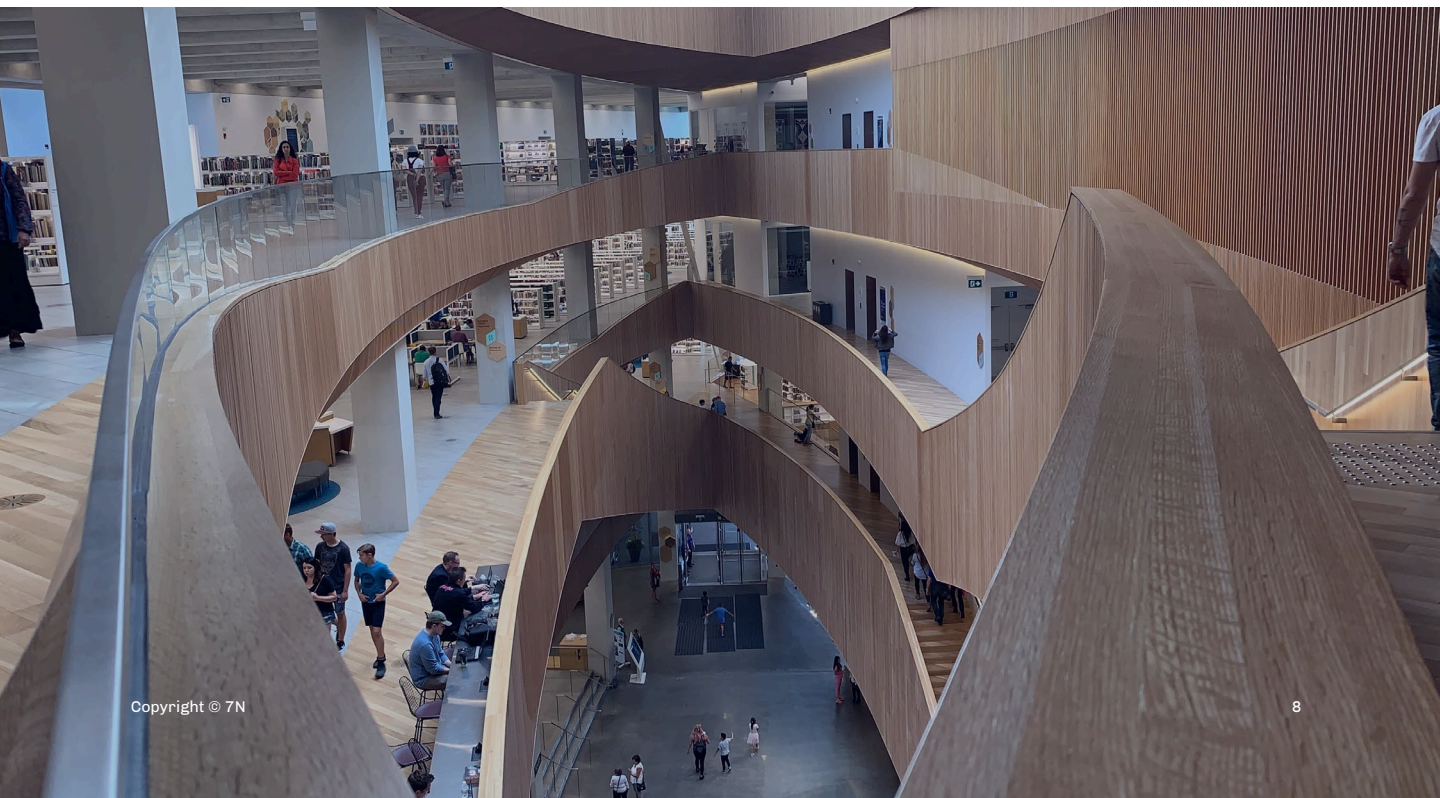
Through technological advancements, it is now possible to apply this concept more effectively across government agencies to offer more unified, convenient and seamless experiences and accelerate the delivery of digital government services.

Unifying all government services provides users with direct access to digital government services through one single entry point at any time and place.

For governments, access to a wealth of web analytics data can help to identify users' social and behavioral traits. Thus, they can offer personalized recommendations or services at specific times and potentially predict and prevent adverse health outcomes.

In addition, the increased awareness of citizens based on their audience segment can ensure that they can offer them the right services.

Intelligent systems like these can better anticipate citizens' needs and create a more unified experience without the heavy development and training to implement. As a result, governments can ensure their citizens receive the help they require.



Automation

The expansion of intelligent automation within the public sector will help meet citizen expectations whilst boosting productivity and supporting cost reductions.

Often, public sector employees rely upon manual means of exchanging information, thus increasing costs and room for error. For instance, [in the Australian Public service, 40% of employees' time is spent collecting or processing data.](#)

For the public sector, automation enables its workforce to be more efficient and improve service delivery.

For example, recent technological advances such as Robotic Process Automation (RPA) are beginning to enable repetitive, administrative tasks by software robots reducing human error and minimizing inaccuracy in vital services.

At the same time, as citizens' expectations rise, the growth of automated processes can enable governments to deploy significant numbers of people-facing employees who can deliver high-value, dedicated service to citizens.

For example, workers can now personally support citizens to navigate intricate processes, resolve complex issues, and take time to connect with citizens seeking emotional engagement, thus ultimately strengthening public trust in government.

As automation grows within the public sector, it will help [deliver savings of £17 billion off the public sector wage bill by 2030.](#)

Leaders of successful automation projects recognize that automation requires changing existing systems and processes, while at the same time retraining and redeploying employees for new tasks

How can governments adopt new technologies while sustaining outstanding customer experience, without generating issues?

Areas of attention	Description
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End-to-end customer journey	They see automation from the customer's side, examining how it impacts their experience. This allows automation to be properly integrated into a customer-centric design approach called automation experience design (AXD), which combines human-centered design and automation.
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Simplicity, reliability, and consistency	When resources are scarce, it's important to focus on what matters most to customers. These three drivers don't require large investments and have a high return on investment: simplicity, reliability, and consistency..
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Change management from the outset	Automation can be hard for employees and customers to adjust to, which is why it's important to invest deeply from the start in change management. It's easy for automation to cause disruption across all parts of an organization, which will require careful and thoughtful support throughout the process.
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Source: McKinsey (2020)

Governmental Data Management

Capturing the opportunities data signifies for many governments remains a struggle.

Firstly, data is typically located across a landscape of specific registers related to the nature of the dataset, increasing the difficulty of discerning which information is in which register, or even which records exist across organizational silos.

Moreover, data may not be available digitally or stored in formats that are hard to access or demand a high cost and administrative burden to realize.

Consequently, it inhibits progress in the growth of digital government services. In addition, citizens receive little transparency on how sensitive information is stored or used.

Therefore, governments should seek to develop an interoperable and connected data landscape to unlock their data potential. Here, data collected by a government department or service provider is available, with security and privacy safeguards implemented to prevent data misuse.

In doing so, governments can improve their citizens' experiences and enable data-driven decision-making along with improved usability and value-creating opportunities.

By building an interoperable and connected government data landscape, governments can lay the foundations for a more efficient public sector and digital society.

International examples of successful integrated data-management implementations

For many countries, they have made increasing data interoperability and connection across the public sector a priority:

For Estonia, the 'only-once' principle is central to their data interoperability designs. In 2000, The Public Information Act, approved seeks to ensure data collection occurs only once and prohibits the establishment of mirror databases that hold the same data.

In the Netherlands, they integrated 12 base registers into the "Stelsel van Basisregistratie" system in 2003, where citizens' information, such as personal addresses, business names, and income, can be found.

For citizens, the ability to draw data from various databases enables them to pre-populate tax declaration forms, thus simplifying documentation processes.

Increased use of AI and Machine-Learning

As the presence of AI (Artificial Intelligence) and ML (Machine Learning) grows, it will enable the public sector to adapt to complex societal issues.

Embracing AI and ML in daily government operations can provide the agility necessary to streamline processes and enable end-to-end automation of document-centric processes.

Both AI and ML will help bridge the physical and digital worlds. For example, leveraging intelligent document processing models will help classify and convert different document formats to work through backlogs at previously impossible speeds and volumes.

Moreover, ML will enable governments to make more informed data-driven decisions. The machines, through patterns and inferences, will be able to learn without explicit instructions from humans.

Through this, ML can help governments in numerous ways, such as better adjusting the supply of public transportation based on historical weather forecasts and predicting the probabilities of different types of hazards, such as floods and forest fires.

A significant issue impacting the public sector is the backlog and delays of critical services.

For example, since 2009, the average wait for a Medicare appeal decision in the United States has risen from three months to two years.

The Proliferation of 5G Networks in Smart Societies

The advent of 5G promises to catapult digital services delivery to new levels and transform citizens' lives.

[5G can deliver data 10 to 20 times faster than the current 4G technology](#). Thus, quicker data-transfer speeds, low latency, and greater network reliability will produce a hyper-user-experience digital era.

The combination of 5G with other innovative technologies will unlock unprecedented opportunities to fulfill the promise of smart cities.

As urban areas grow, with [the global city population expected to increase to 58% over the next 50 years](#), 5G will help governments to modernize core infrastructure elements and establish better foundations to meet citizens' demands and connect them to services.

For example, 5G's ability to support massive device density allows the connection of "things" with a higher degree of repeatability and reliability. And so, 5G will help join millions of devices and measure vital indicators of city life such as air quality, pedestrian traffic, and water levels.

Moreover, 5G can help to elevate the citizen experience by enabling the real-time dissemination of information regarding traffic flow and issuing advisories to drivers. Moreover, providing real-time public transport systems updates can help citizens plan better and save crucial time.

For our future cities and lives, 5G will transform government service delivery across the living, service, and regulatory environments.



Compliance: Growing Emphasis on Data Security

As societies take steps to enhance data management, questions regarding data ownership, privacy concerns, and appropriate measures against security breaches will need to be answered by government agencies.

Today, citizens place significant amounts of their information in the hands of public organizations online.

Well-publicized global data breaches have not helped position governments as effective custodians of sensitive personal data.

Ultimately, as data sharing between different government agencies and the web of risk expands, the public sector must consider both traditional and technological mechanisms to meet these compliance requirements.

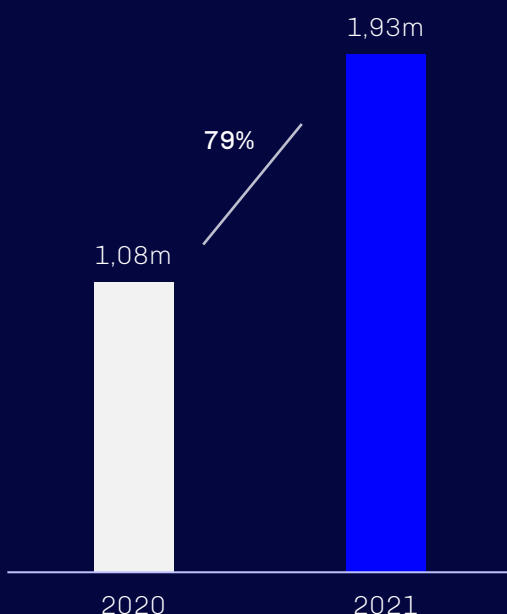
Complying with data standards, regulations, and other governance rules, such as GDPR, helps protect the confidentiality and integrity of an organization's data, databases, and additional relevant information.

Furthermore, organizations must have robust procedures, policies, and training to protect personal information.

Training and improving user awareness are cost-effective and reliable solutions to support data compliance. It is vital that all staff complete regular training in their compliance obligations, alongside regular reviews and process auditing.

Organizations can adhere to data compliance requirements and ensure transparency and good governance whilst, most importantly, improving public trust.

Between 2020 and 2021, the total cost of data breaches in public sectors rose nearly 79%, with an average data breach costing \$1.93 million.



Government Services in the Cloud

Cloud-enabled technology plays a crucial role in the public sector's efforts to deliver reliable public-facing services, with [70% of public service executives seeing cloud migration as integral to transforming their core models and systems in the next three years.](#)

The benefits of the cloud for public service agencies are undisputed: from cost savings to minimizing on-premise systems and legacy technology reliance and scalability.

The global pandemic and the need to deliver digital services highlighted the value of cloud-based architectures for fast and flexible scaling. Cloud-based digital services flex with demand, thus helping government agencies navigate increased demand for public services.

For example, in the UK, the impact of COVID-19 led the government to utilize financial applications and cloud computing solutions to support the distribution of fiscal support, such as the furlough scheme, to its citizens.

As a result, the UK government was able to provide access to vital information and resources to its citizens, simultaneously increasing the value of these agencies and the services they provide.

Public cloud services and infrastructure spending worldwide will grow from \$229 billion in 2019 to nearly \$500 billion in 2023, at a CAGR of 22.3%.

At the same time, the public sector is increasing its use of cloud services, which can help the public sector to meet ESG aspirations.

Automating processes and standardizing data delivers increased transparency across an organization as leaders seek to understand diverse social and environmental risks better. Moreover, migrating from on-premise data centers to an energy-efficient cloud can help public sector organizations reach emissions reduction targets

Filling the Digital Skills Gap

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Investments into new systems, processes, and technologies are worthless if a shortage of skilled workers prevents the digital transformation strategy from becoming established.

Hence, the public sector must look to attract new talent, reskill existing employees, and retain excellent digital talent to build the digital services of the future.

The lack of up-to-date digital skills for government and public service employees is a significant internal barrier to user-centric services, with estimates that by 2023, [more than 8.6 million people across the EU-28 public sector will lack the necessary digital and technology skills](#).

Today, organizations struggle to meet the requirements of a digital society. Therefore, the public sector must invest in digital skills training and foster an individual and

collective mindset geared toward digitalization to deliver value.

Whether that is increasing the technical capabilities of staff, such as expanding knowledge of AI and advanced data analytics, alongside hiring employees with softer skills, such as creative thinking and empathy, public sector organizations must look to build their workforces of the future.

However, the challenge remains that even if government organizations can train or attract the talent needed to succeed, they could easily find those employees enticed by higher salaries or improved opportunities in commercial industries.

Therefore, the public sector must make itself an attractive destination for digital talent and identify how it can appeal to these individuals.



The 7N Way: The flexible IT consultancy

A global network of extraordinary IT people – delivering on clients' objectives and beyond

Sector expertise drives the digital transformation

In recent years, macro events have increased the pace of innovation, development cycles, and competition, while creating an ever-changing risk landscape. Armed with knowledge of these trends and their implications on the business, our agents and consultants can help mitigate risk and identify opportunities in our clients' business cycle.

Over decades, 7N has been part of several waves of digitalization. Today, our consultants work across industries and geographical borders to deliver the projects that define the new digital realities.

We offer clients a highly specialized portfolio of IT services and solutions delivered by the top 3% of IT professionals. Our expertise spans across many industries providing digital transformation across all phases of the IT project life cycle.

By engaging early with 7N, our clients already benefit from our expertise when defining project scope and strategic needs, and they always gain flexibility to adapt and accommodate changing demands while retaining control and maintaining ownership of IT development in-house.

How we deliver high-performance IT

Delivering with high efficiency shouldn't lead to higher workload. We build efficient teams, where expertise and experience accelerate more than headcount and capacity. In doing so, we help form small, highly efficient teams, staffed to maximize client impact.

A tailored recruitment process refined over 30 years

We have a sophisticated our best-of-breed approach to identifying and quality-assuring top 3% IT professionals. Our model is designed to identify personal capacities, professional skills, and drive to deliver to our clients. For all clients, we have dedicated recruitment teams with extensive local knowledge and global reach for candidate sourcing. We tailor our recruitment process to each client's technical and cultural needs.



Connect with our advisors

Schedule a meeting and hear more about how we can help you assess your possibilities and overcome your challenges.

GET IN TOUCH



7N Group is an elite IT consultancy agency with more than 20 years of market experience in serving all aspects of critical IT projects both within the public and private sector.

We have dedicated ourselves to finding the right match between our consultants and the companies we serve – we believe that is how the best results are created. At 7N, we have built a professional community of extraordinary people. A community dedicated to achieving professional and personal development. A place where the best gets to play with the best.

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