

Look Out 2020+
Industry Trends
Government

Realizing the promise of Government-as-a- platform

Thought
Leadership

Atos

Megatrends in Public Services: Supporting tomorrow's sustainable growth



“We are at a tipping point in the public sector. As citizens demand for digital services continues to rise, public institutions have a tremendous opportunity to radically improve the way governments serve. Public services must leverage the power of a networked economy to both become digital platforms themselves and support global growth.”

Pascal Homsy
Senior Vice President, Public Sector and Healthcare, Atos

Public services are facing revolutionary times. Everywhere, globalization is changing the pace of existing nations. While it supports innovation and growth, extracts large parts of world populations from poverty and drives the rise of new middle classes in Asia, globalization also has its drawbacks.

Tepid global economies, trade competition, demographic changes, geopolitical tensions, civil conflicts and terrorism are creating global instabilities and migration, sustaining a rise of populism - notably in struggling Western middle classes.

The result is a resurgence of demands for far-reaching public stimulus, welfare protection and homeland security that extends to most parts of the world.

Paradoxical times

This creates a contradictory situation as public services face huge expectations in conflict with a decreased means to act.

Due to the huge levels of public debt accumulated during the 2008 crisis, margins of maneuver are limited, notably in Europe. At the same time, public bodies are experiencing a weakening of their power in a

world where economic frontiers blur: international governances are rising; large parts of populations are behaving and consuming in a globalized way; and some large corporations - notably the big Tech companies - are becoming their own transnational institutions on their own.

Digital brings opportunity

All this is profoundly challenging public services, the way they drive their operations, define their missions, handle both regulatory and security issues, and interact with citizens.

To succeed in a fast-changing world, public services must not just adapt. They have to reinvent themselves for a globalized, digital age.

Today's mutations bring threats. They also bring tremendous opportunities for public services to place themselves at the heart of tomorrow's digital societies.



of citizens worldwide are Generation Y & Z



of public sector leaders are satisfied with their digitization



of the public workforce could be freed up by AI within 10 years



of people use digital government services regularly



could be generated from better public digitization
\$ = USD



of governments will adopt digital platforms by 2020



of citizens have problems with online public services



of governments will rework their data policies by 2019



efficiency will be gained from human-centered design by 2021

Four transformation challenges and opportunities for the future of Public Services

1



Substantially improve citizen experience

Citizens are changing radically. Connected everywhere and at all times, the Y and Z generations are used to **consuming simple and seamless digital services** throughout their daily lives.

Familiar with **voice-activated search and same-day e-commerce delivery**, they don't understand why they should deal with administrative procedures in person or engage with siloed administrative desks. Instead, they **expect personalized one-click services** delivered through mobile. For governments, this makes rethinking how they serve their citizens a critical priority.

To succeed, governments need to do more than simply bring their services online. They must shift towards a **more holistic experience, optimizing all touchpoints** – including digitized public agencies and contact centers – from a **360° citizen journey perspective**, tailored to individual needs and behaviors.

> The impact can be huge: not only **increasing citizen satisfaction and dramatically reducing the administrative burden** but also **building a deeper relationship with citizens and empowering public services** to drive participative initiatives.

2



Streamline service efficiency & grow agility

The 2008 crisis has left a big mark on public services. In most developed countries, **public debts have crossed the 90% threshold, with some extreme debts** reaching around 200%.

Despite interest rates remaining low (especially in Europe and Japan), public finances are still facing a firm threshold, forcing government bodies to **reassess the breadth of their operations**. In some countries, the **perimeter of public services is under scrutiny**.

All public organizations are looking for ways to **reduce costs by improving productivity**. This can encompass better **orchestration and simplification of process**, increased **collaboration** and **automation**, and better **resource sharing** to make economies of scale.

> With **multiple siloed organizations and 60% of public processes not yet digitalized**, the potential is enormous: **not just doing more with less but doing better with less** while devoting savings to reducing debt and financing high-priority missions.

3



Rethink & enlarge public missions

What roles should public services play in a digitalized world?

While globalization is **reducing the traditional power of states**, GAFAMs and the myriads of start-ups are increasingly instigating initiatives in education, health and humanitarian relief. And with the extraterritorial nature of **cyberspace challenging frontiers**, some public bodies are finding themselves in an awkward situation.

While their traditional roles – such as defense, police, justice, regulation and social support – are appearing more essential in today's challenging world, the **breadth of their perimeter** is sometimes debated.

Some choose to focus. Others choose another path: **leveraging the power of networks** to provide the foundation for creating value for NGOs, enterprises and citizens themselves. Such **'government-as-a-platform'** initiatives are already active in multiples domains, notably with open data.

> The potential is enormous: analysts estimate that **\$ trillions of value** could be created through open public platforms.

4



Enforce global trust and regulation compliance

While globalization has brought new opportunities, it has also brought new threats. Fraudsters, hackers, mafias, terrorists, rogue or hostile states mean **cyber-risks have multiplied**.

Public damages that have often been less extreme than in private institutions – which suffer losses amounting to hundreds of billions of dollars each year – may face **greater potential damages** in the future.

Cyberwar is already on the doorstep, as recent attacks in the US and Korea have demonstrated. **Attacks on strategic infrastructures or services** such as public finance, justice, transport or health could have dramatic effects, as events have already shown – to date on a very minor scale.

Beyond their own protection, public services have a key role in **enforcing the law** through their homeland security and defense missions, notably for **supporting nation-critical private operators** such as bank, utilities, transport and media.

> This makes **cyber-trust and compliance a critical imperative** for public authorities. The potential: **not just safeguarding themselves but protecting the whole of society**.

Building next-generation platforms to succeed in next-generation Public Services ecosystems



“In a data-driven world, public services have exceptional data assets with which they can create value. With the combination of ecosystem platforms, next-generation analytics and open data, they can be at the crossroads of tomorrow’s infosphere.”

John Breedijk

Global Head of Strategy & Business Development, Public Sector & Healthcare, Atos

Public institutions have always set up their organizations and processes to reflect their core mission: ensuring stability and rigorous security. They have built their information systems in the same image.

Bringing legacy systems into the digital era

What had been a strength in the previous decades can now sometimes be a constraint in the new digital era. How to streamline 360° citizen journeys with siloed systems built in isolation? How to provide agility and reduce costs with inflexible legacy infrastructures? How to support third-party initiatives with closed platforms?

To adapt, public services have executed numerous modernization initiatives over the years, successfully launching citizen portals, public services Clouds and open data.

Preparing for a paradigm shift

Preparing for the future requires a quantum leap, to fully leverage the opportunities of a ‘Government-as-a-Platform’ era.

To be ready for the future, public institutions should:

- **Be fully citizen-centric** ensuring 360° omnichannel engagement with digital citizens and public stakeholders.
- **Provide intelligent data-driven orchestration**, convening a stakeholder ecosystem (including NGOs, enterprises and citizens) to drive economic growth, employment and services.
- **Adopt real-time process automation** to provide the best public services at the lowest cost.
- **Increase agility** to adapt quickly - in just days or a week rather than months.

The road ahead

Public services should begin building their new architecture today. Modernizing legacy and fully embracing Cloud, automation, Big Data and mobile technologies, while maintaining the highest security level, is only the start of the journey.

Next-generation architecture for future-ready public services

CITIZEN CENTRICITY



OMNICHANNEL DIGITAL EXPERIENCE

360° citizen and public workforce engagement



COGNITIVE ANALYTICS PLATFORMS

Smart ecosystem orchestrator, open APIs and open data



SERVICE ACCELERATORS

Security, justice, welfare and education



HYBRID CLOUD

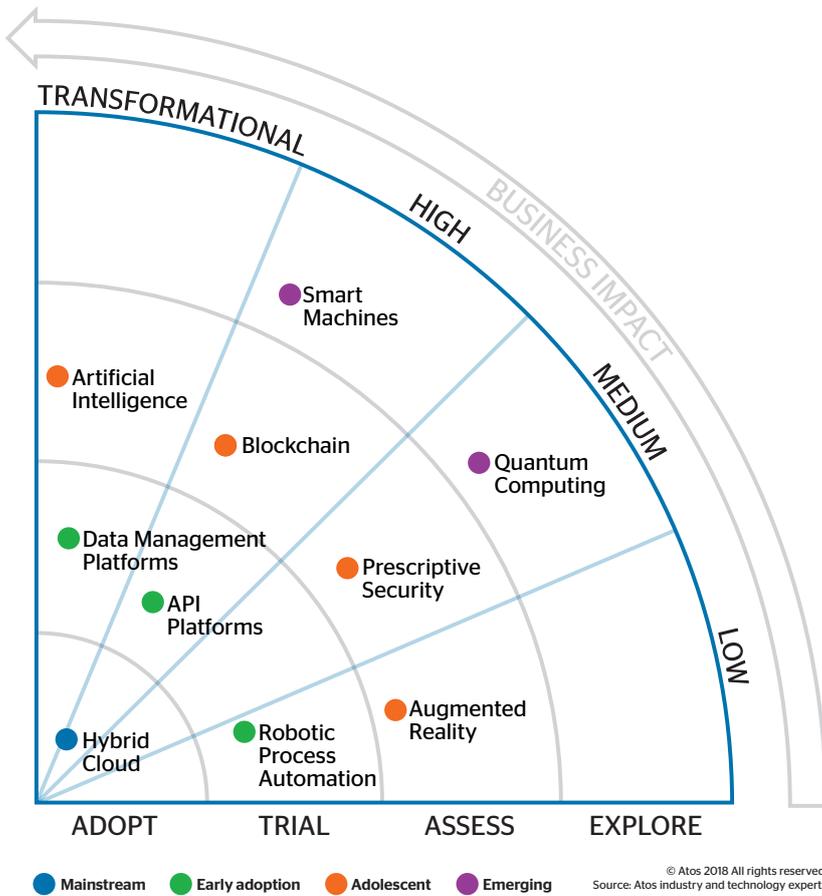
Software-defined infrastructures, microservices and DevOps

OPEN PLATFORM FOUNDATIONS

INTELLIGENT DATA-DRIVEN ORCHESTRATION

More disruptive technologies will emerge. While some may appear as dots on the horizon today, they will turn out to be transformational in the years to come.

10 disruptive technologies that will shape the future of Public Services



Government Look Out 2020+ radar: 10 key technologies set to impact Public Services over the next 5 years.



Want to know more? Examine the Look Out 2020+ Global Technology Radar to get deeper insights into these 10 strategic technologies and many more: atos.net/lookout

Hybrid Cloud is reviving Cloud initiatives by enabling seamless integration of private and public Cloud platforms. With this model, organizations can exploit the benefits of public Cloud: pay-per-use, 'infinite' bursting resources, agility and innovation. Governments must adapt their IT processes and prepare for related security implications.

Data Management Platforms enable public services players to analyze citizen behavior and manage interaction across all channels and touchpoints. They could consider making it a cornerstone for their next-generation digital platforms, ultimately enabling 'B2Me' personalized services.

API Platforms/Open Data allow offerings to be distributed and serviced across third parties. Governments players should put API platforms at the heart of their digital strategy to attract private, NGO and other public ecosystem partners.

Robotic Process Automation brings virtual workforces to manage repetitive tasks, reducing the cost of administrative and regulatory processes by at least 50% while improving quality and speed. Governments should standardize processes to facilitate automation.

Artificial Intelligence promises to second human cognitive capabilities with virtual assistants, chatbots, knowledge engineering, smart machines and autonomous vehicles. It will impact customer experience, business models and operations along the entire value chain. Public services players must prepare for the business, human and legal impacts.

Blockchain is a potential game-changer for conducting exchanges with parties without prior trust relationships. In Public Services, it could revolutionize supply chain management, payments, automated contracting and the microservice economy.

Prescriptive Security uses real-time dark web monitoring, AI and automation to detect potential threats and stop them before they strike. Applications range from cyber-protection to fraud management and compliance. Public services players should explore integrating it into their Security Operation Centers.

Augmented and Virtual Reality are blurring real and virtual worlds, allowing customers, partners and employees to engage with digital services within the context of their current environment. Governments should explore potential use cases in public services.

Smart Machines are changing the nature of citizen relationship, with smart things working on behalf of their owners for smart homes, autonomous transportation, concierge services and more. Public Services must begin exploring the business, legal and compliance implications.

Quantum Computing promises to break traditional combinatorial analysis limitations, bringing advances in R&D and Big Data analysis within ten years. This will elevate risk by potentially breaking current cryptographic standards, threatening to cause a 'crypt-apocalypse.' Governments must start preparing for quantum-safe cryptography.

A glimpse into the future of Public Services: Expert views on best practice for digital transformation



Kay Hooghoudt
Global Head Digital Transformation & Cloud
Adoption, Government and other Public
Markets, Atos



Egbert-Jan Koekkoek
Director Strategy & Business Development
Government, Atos

What could public services look like in five years?

Already today, citizens think and feel more global. They travel easily. They pick and choose international services based on their interests: they practice medical tourism in one country, work in another and go on holiday, study or retire in a third. This may accelerate in the years to come.

Based on initiatives and discussions we have had with our customers, we are convinced that **digital governments will probably be structured around four key principles by 2025:**

- **Some states will adapt to this nomadism** by offering some **“WORLD CITIZENSHIP”** options transcending geography or political borders. Estonia is a good example: today, anyone anywhere can become an e-citizen of Estonia, gain a digital identity, access services and more - without ever setting foot in the country. In return, Estonia is attracting new entrepreneurs.
- **Some governments will extend their services worldwide through the internet.** Much beyond e-government, such **‘COUNTRY-AS-A-SERVICE’** initiatives will open the door to compelling innovations for students, travelers, retirees...
- **With digital, public organizations will deliver services better, faster, cheaper** and in a more secure way. These **‘GOOD GOVERNMENT’** strategies will help deliver operational excellence and great services for citizens. However, they may also be used to increase preventative policing and control over populations. China’s digital strategy is a good example.
- **New collaborative technologies based on ‘DIGITAL COMMONS’, where information and knowledge will be owned, shared and accessed easily, will enable new democratic communities** to emerge at a local level. Early signposts are the use of blockchain in initiatives such as social services; it not only improves service and ensures security - it empowers the community.

Which driving forces will help them succeed?

The most important thing will be to have a clear vision and strategy. Digital is disrupting the world as we know it; public services must be prepared for it. Of course, no country is identical to another. Estonia or Singapore - which are inventing the e-states of the future - is very different from the US or Germany. Strategy may change, but it’s essential they benchmark, adapt and innovate. International rankings such as the **e-Government Development Index (EGDI)** strongly contribute to this growing awareness.

Then, we think getting rid of traditional siloed structures and adapting to a data-driven, platform-based approach is essential. Traditional states have historically often been built in a department-centric way. Public services now need to **adapt to a networked, interconnected society.** This will not only improve their own services and reduce costs but also enable them to attract NGOs and private partners to enrich services and innovate. This is what we call a **‘government-as-a-platform’** approach.

Within this, open data and open source initiatives should be at the heart of public initiatives. Security will also be a key asset.

“
Adopting digital is a priority for all states, whichever future they choose. Fail to act and tomorrow’s global citizens may leave states behind.”

What should public services do today?

We work with multiple states in the US, EMEA and Asia. They are long-term oriented with a different sense of urgency to the private sector. However, they know they must become digitally savvy or risk falling behind. This is what we help them do with our Digital Transformation Factory.

Based on the experience we have with governments worldwide; we believe best practice is to:

- **Begin by unifying applications and optimize** operations through a hybrid, orchestrated Cloud. This may seem obvious, but this is a step towards the future many countries still have to take to reduce costs and gain agility.
- **Set up new-generation, real-time processes and omnichannel citizen journeys** upon this foundation. Here, it’s important to leverage open data, next-generation analytics and API platforms.
- **Then invent the public services of the future by experimenting with new technologies** such as blockchain, AI and others on these platforms.
- **Secure all with bulletproof prescriptive security and transaction management.**

To succeed, defining your e-state strategy is paramount. If you don’t, you risk just automating your red tape. Another key point is about **creating a legal compliance framework** to avoid being limited by your own legislation, notably in data integration and data sharing. This is really key to fast digital transformation, as Australia is showing today.

Last but not least, being open to third parties is essential. With blockchain, for example, there are about 50 use cases in public services, from tax to healthcare. Open Labs are very useful for trying it out and **accelerating innovation with start-ups.** This is exactly what we are doing with our clients around the globe.

Creating your own Public Services transformation journey

With all these changes converging at once, you must steer your public institution forward. Faced with a rapidly changing business ecosystem, the questions you will be asking is not 'Why change?' but 'Which direction?' and 'How?'

The first step is **figuring out what e-state you want to be**. Do you want to propose some **'world citizenship'** options? Which **'country-as-a-service'** offering do you want to build? Have you a **'good government'** strategy? Are there **'digital commons'** you want to create? None of these strategies are, of course, exclusive from one another.

Having figured that out, you must next **embark on a journey of progressive and continuous transformation**, combining people, organizational and technology streams. Your journey requires a roadmap. We have drawn up a three-step approach, with steps that can be undertaken simultaneously.



Throughout these phases, an open approach to innovation – such as the **Digital Business Continuum** approach developed by Atos – will be paramount to success. In an ecosystem world where start-ups appear and spread at internet speed, openness is the best way to capture collective intelligence. As public institutions strive to transform, **open innovation labs** will provide an ideal environment for bringing new ideas and new concepts to life – and creating citizen services for tomorrow.

Where should you begin?

As the Trusted Partner for your Digital Journey, Atos can help. Meet our experts and stay one step ahead by getting hands-on experience of new disruptive technologies.



ENGAGE in a co-innovation workshop at one of our **Business Technology & Innovation Centers**.

Get off to a quick start with a personalized workshop. Ask for a meeting:
> atos.net/btic



EXPLORE how the latest technologies can boost your own practice.

Leverage our experts and labs to build POCs tailored to your own business:
> atos.net/central-government



STAY TUNED with the latest trends and best practices in digital transformation.

Keep yourself informed. Follow the latest insights from the field on:
> atos.net/blog

This is an extract from the full Atos Look Out 2020+ report, which provides an in-depth analysis of the emerging megatrends, business transformation opportunities and technologies that will drive innovation in the years ahead. Explore the full report on atos.net/lookout.



About Atos

Atos is a global leader in digital transformation with approximately 100,000 employees in 73 countries and annual revenue of around € 12 billion. European number one in Big Data, Cybersecurity, High Performance Computing and Digital Workplace, the Group provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry. With its cutting-edge technologies, digital expertise and industry knowledge, Atos supports the digital transformation of its clients across various business sectors: Defense, Financial Services, Health, Manufacturing, Media, Energy & Utilities, Public sector, Retail, Telecommunications and Transportation. The Group is the Worldwide Information Technology Partner for the Olympic & Paralympic Games and operates under the brands Atos, Atos Consulting, Atos Worldgrid, Bull, Canopy, Unify and Worldline. Atos SE (Societas Europaea) is listed on the CAC40 Paris stock index.

Find out more about us

[**atos.net/lookout**](https://atos.net/lookout)

[**atos.net/central-government**](https://atos.net/central-government)

Let's start a discussion together

