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Why AI?

Trend drivers for AI adoption in the public sector

This paper is not about Artificial Intelligence but about the opportunity to thrive in building a new kind of government that supports the prosperity of all people.

Governments should think differently about how technology can help address the challenges the world faces both economically—given a looming recession, growing global geopolitical tensions, a war in Europe that ushered an energy crisis, and costs of living that are increasing—and technologically—with new technologies like Generative AI stirring what governments and organizations might look like in the future.

Introduction

The world is living in the right moment to build the next generation of government: one that becomes digital-first by utilizing technology to solve some of humanity's most complex problems. Henry Ford's faster horses' metaphor should more than ever be in the mind of us thinking about government innovation. Unless governments think differently about solutions that take advantage of the power enabled by technology, they could be using technology to fix the symptoms, rather than the origins of their challenges.

Around the planet, people are increasingly engaging with the world online. As per a recent survey conducted by Deloitte, society's expectations for accessible and efficient engagement are deepening across all industries, including government service.[1] To meet these expectations, governments should adopt new service and interaction models which are both modern and integrated.

Recent years taught global society that discussions around technology should be tightly connected to ethical dialogues about the different levels of impact it may generate. On a technology-driven and provocative extreme, MIT Professor César Hidalgo's TED Talk from 2018[2] depicts a scenario of the end of political representatives and their replacement by personalized AI agents capable of emulating each individual's decision in a model of AI-enabled direct democracy. We are still in time to avoid these examples, and a new online government can and should be human-centered, trustworthy, transparent, unbiased, and accountable by design.

This paper covers some relevant trends that could influence governments to adopt AI; presents some forward-facing opportunities for governments to take advantage of AI technologies; and concludes with recommendations on how governments can create more effective yet more inclusive and fairer AI-enabled services.
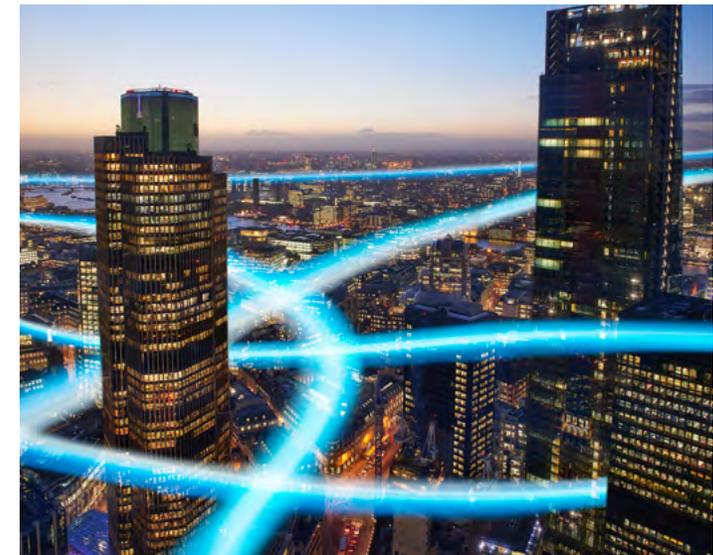
Drivers for Government AI adoption

From a technology perspective, there are three main factors enabling organizations across the globe to adopt AI: taking advantage of the unparalleled computing power available nowadays; the easily deployable hardware architectures through Cloud environments that have democratized access to this computing power; and, finally, the explosion of digital data that feeds AI models and makes its applications thrive.
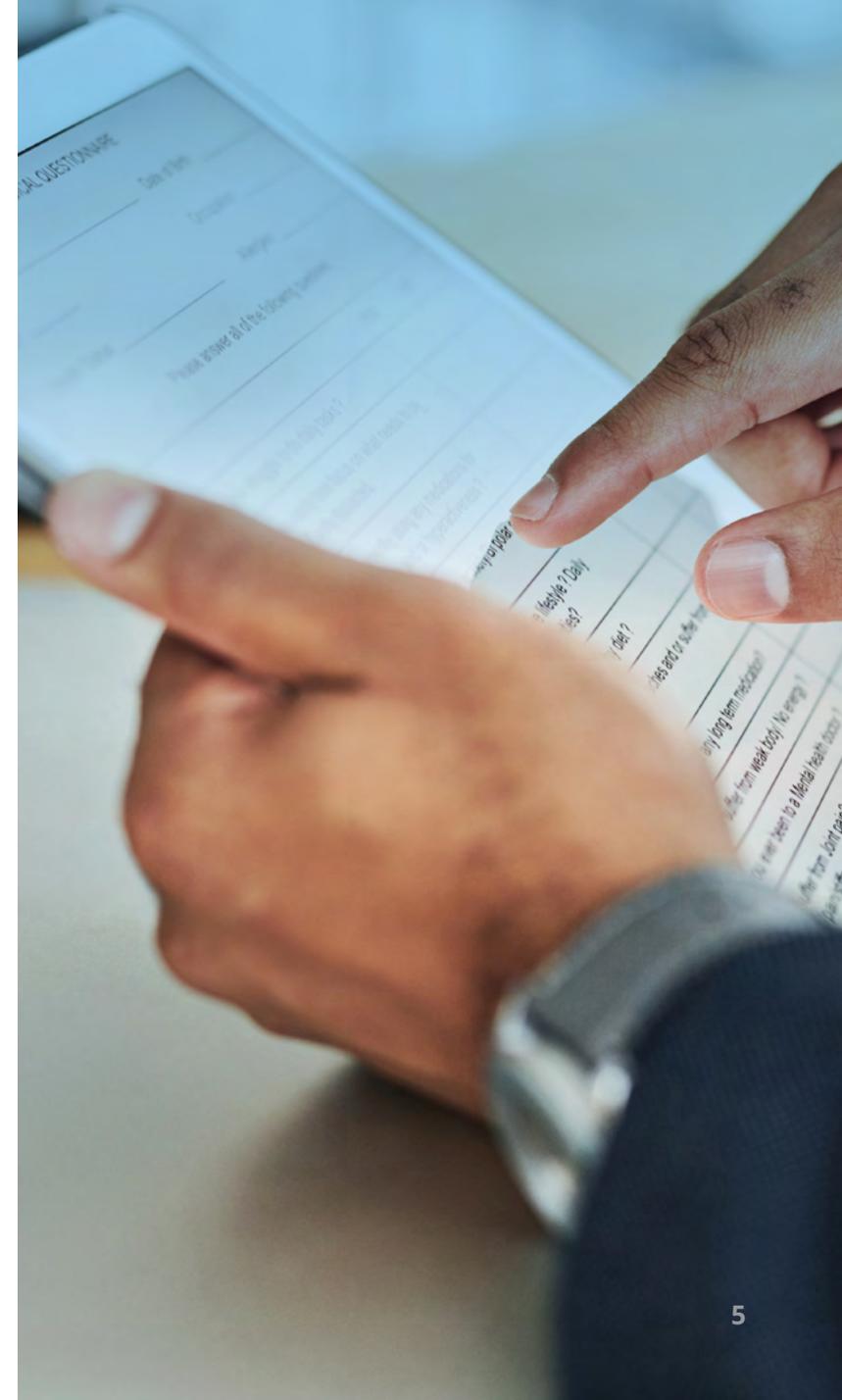
Drivers for Government AI adoption

At the same time, the growing general awareness and the emergence of commercial applications (which we have seen exemplified more recently by the explosion of Generative AI), create a growing curiosity and appetite for experimentation of new applications of AI in government.

This usage varies considerably between different sectors, from health to defense, and from social services to education, due to maturity and the nature of the services they provide.

This section explores five trends that may be prompting governments to adopt AI solutions:

- Respond to citizens' demand for digital interactions with public services,

- Create simplified and more efficient processes enabled by AI,

- Leverage AI to design services based on data,

- Increase clarity for responsible AI best practices and requirements,

- Grow the emergence of an AI ecosystem in the Public and Private sectors

Drivers for Government AI adoption

Improved digital interactions with public services

Governments are mainly adopting AI to offer services consistent with citizens' digital lifestyles. As per Deloitte's Digital Citizen Survey, citizens seek instant and digital interaction with the public sector as they experience with the private sector. They also want to feel engaged and invested in by the public sector.[3]

This quest to involve citizens at the heart of public sector activities directly results from the exponential growth of digitalization within the private sector. Indeed, citizens are increasingly accustomed to end-to-end digital self-service delivery models in the private sector, such as highly personalized and targeted services, instant loan and credit card approvals, and fully digital online applications.

To meet these expectations, governments should attempt to balance two different elements: on the one hand, recognizing that digitalization of services is a critical component to enriching engagement between the public sector and citizens; on the other hand, being mindful of the fact that not everyone interacts through digital means, which necessitates an omni-channel approach so that access and equal quality of service are available to all citizens.

The advent of Generative AI can be a game changer to how these digital interactions come to shape, ensuring higher coverage of services as well as the mass customization of services tailored to the needs of each person.

Citizens also want to feel engaged and invested in by the public sector.

Drivers for Government AI adoption

Simplified and more efficient processes

Governments face increasingly heavy demands due to people's expectation that government services are constantly connected and responsive.[2]

This search for more intuitive process management drives AI adoption, as AI-enhanced processes can help improve internal government processes.

Governments are reimagining traditional processes and siloed ways of thinking. AI-based process improvements are now cutting across internal government processes, ranging from information management, people management, and financial management to security and access management.

By delivering services more efficiently, governments can provide public servants with additional capacity to engage constituents further and address a more complex, value-added workload.

Data-based policymaking

AI has the potential to increase capabilities for data-driven policymaking. Increased use of AI and data analytics is helping policymakers across many government sectors develop more thoughtful policies with more accurate insights about impact and cost.

Data-driven policymaking can enable more effective regulation of industries, a greater understanding of social and environmental outcomes of policy, and better insights into how citizens perceive policy and where it may be falling short.

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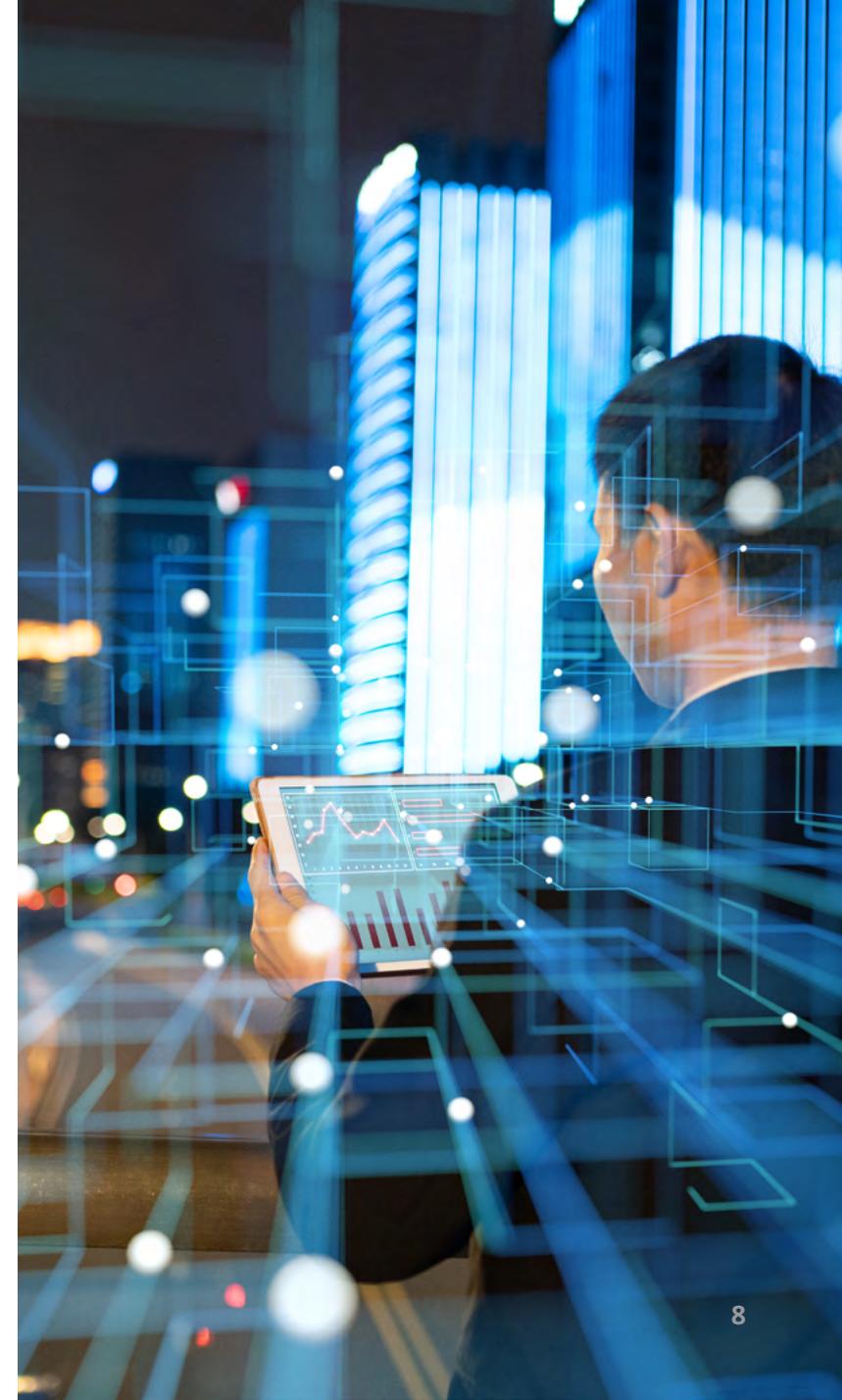# Drivers for Government AI adoption

An AI ecosystem in the Public and Private sectors

An external trend driving AI adoption in the public sector comes from the economy and, specifically, the role of the private sector in setting up an ecosystem that promotes AI-based solutions development.

The increasing number of companies addressing societal issues through AI-based technologies is soaring. Figures from Deloitte's Global State of AI in the Enterprise from 2022 show that 94% of surveyed leaders (a cohort of 2620 respondents across all sectors of society) recognize AI as vital for their businesses, and 79% of leaders have deployed AI applications.[4]

This broad adoption from the private sector positively impacts the number of available solutions and the number of people with AI capabilities that can create innovative solutions for the government.

Challenges for adopting and scaling AI solutions are similar between the public and the private sector: lack of leadership commitment, lack of capacity to show value, difficulties in choosing the right AI technology, and having the right AI skills.[3] Some public sector agencies may have increased hesitancy in deploying AI due to stricter regulatory frameworks controlling the use of AI by governments, with higher levels of accountability, namely when it comes to privacy, security, legal standards, the need for unbiased analysis, as well as the need for interoperability across sectors for data collection and compatibility with legacy systems.

Drivers for Government AI adoption

AI best practices and requirements

With the growing presence of an AI-driven mindset across the public sector, there is a rising need for clarity on responsible AI best practices and requirements.

Public distrust in using AI in the public sector persists across governments worldwide. However, governments are increasingly focusing on demonstrating their commitment to serving the best interests of citizens and society by adhering to best practices in responsible innovation.

Government agencies are deemed to keep their AI usage both explainable and accountable. The usage of AI in government agencies is being regulated as learning evolves. For instance, many governments opted for a mandatory human decision-maker. AI can inform decisions but never make them independently. Knowledge and experience sharing are critical to breaking the initial barriers of AI adoption.

Over the last three years, governments have shifted away from simply elaborating on ethical principles towards drafting AI policy proposals, regulations, and standards. The fast-paced emergence of new applications in this new field implies the creation of new regulations will need to be more collaborative in the future, with the participation of the private sector ecosystems to rapidly create regulation that is up to date and can be future-proof.

With increased clarity on what constituents expect from the government when designing and deploying AI systems, governments can continue to promote and lead the development of standards and best practices that cultivate citizens' trust and better position the use of AI toward the public good.
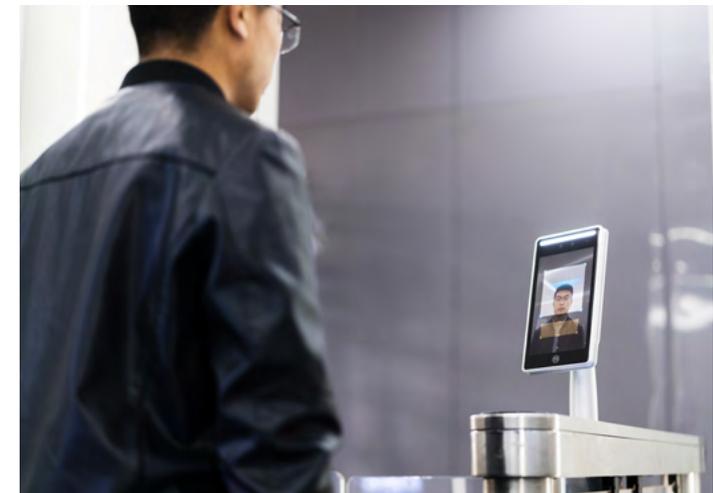
Knowledge and experience sharing are critical to breaking the initial barriers of AI adoption.

Forward-facing opportunities

Even though the usage of AI in government and public services is growing exponentially, we have yet to scratch further than the surface of its capabilities as AI still holds enormous potential to help governments deliver their mission.

This section explores three main use cases in which governments can take advantage of AI capabilities:

1

Improving decision-making, with a focus on systematically making better decisions.

2

Improving process efficiency, mostly by automating back-office activities.

3

Improving policy design, by breaking data siloes and putting forward data-driven policy-making initiatives.

1. Improving decision-making

One of the most popularized advantages of AI is automated decision-making, or the capacity to inform decisions through automated processes. The capability refers to any information technology that directly aids a human in decision-making or is designed to decide instead of a human decision-maker. One such public sector use case is using those AI systems to streamline eligibility and benefit determinations so as to deliver those benefits in a more timely manner, particularly as vulnerable populations rely on these benefits for day to day living support.

For eligibility and benefits, government agencies have sought a balance in supporting decision-making with AI rather than relying entirely on it: the automated decision-making occurs within the process that does not need human thought intervention, thereby providing eligibility resources to focus on the parts of the determination process that requires and is better supported by human decision-making.

For eligibility and benefits, government agencies have sought a balance in supporting decision-making with AI rather than relying entirely on it.

1. Improving decision-making

These use cases have gone beyond traditional automated decision-making systems, which are rule-based systems and simply applied set criteria to factual systems to generate predetermined outcomes based on user input. Leveraging advances of AI automated decision-making, systems can now be developed using machine-learning algorithms. To create an automated decision-making system through machine learning, algorithms are "trained" on datasets, enabling the system to generalize beyond the examples found in the data. As the algorithm continues to learn from the data and feedback received, its decisions no longer need to be based on set rules. For this reason, a machine learning system may also be described as an autonomous decision-making system.

In the public sector, decision-makers are looking toward AI not only to guide them through relevant facts, legislation, and policy, closing off irrelevant paths along the way, but also to provide early assessments related to legislation, case law, and policy—at relevant points in the decision-making process, or even to help identify correct questions and legal tests, and assess the required evidence that should be considered and evaluated.

While adopting and using automated decision-making in governments is a growing trend, it still raises concerns about fairness, transparency, and accountability, which will be highlighted in this article.

As the algorithm continues to learn from the data and feedback received, its decisions no longer need to be based on set rules.

Spotlight applications

The municipal government of Trelleborg is using AI to automate various social assistance decisions. The automated decision-making system can process applications for homecare, sickness benefits, unemployment benefits and taxes, which has reduced waiting time for citizens and also reduced administrative costs.
Learn more...

Canada has been developing automated decision-making systems to automate activities now conducted by immigration officials, to support the evaluation of immigrant and visitor applications.
Learn more...

In Australia, rules-based systems are used extensively in assessing eligibility for social security payments.
Learn more...

2. Improving process efficiency

Reducing backlogs and improving process efficiencies is another promising potential use of AI. Governments are struggling with backlogs, not just related to the pandemic but also due to inefficient systems amidst growing demand for government services. Work piles up faster than it can be cleared, and governments need help to match citizens' expectations.[5]

For many citizens, the point at which they are most likely to interact with the government involves case processing systems including registry for motor vehicles, applying for benefits, obtaining permits for homes or businesses, and seeking passports and visas. Long wait times and poor customer experience can erode citizen confidence in their government.

Employees are also affected by outdated processes, and improved efficiencies could help accelerate, increasing work satisfaction and retention. Hence, one of the ways to drive sustainable improvements in addressing government backlogs is to redesign processes by incorporating new technologies such as AI.

Long wait times and poor customer experience can erode citizen confidence in their government.

Here are some examples of areas where AI applications could drive process efficiency:

Chatbots and conversational agents

- Chatbots are designed to streamline the interaction with citizens and are some of the most common use cases of AI in government.

- Chatbots are available 24/7, can answer questions, provide links, and help fill out templates.

- The use of chatbots significantly reduces citizen wait times and can address the influx of queries and questions from the public.[6]

- Chatbots can also serve as an essential triage tool, answering routine questions and escalating only the more complex cases that require human input.

Case classification and triage

- AI can redefine traditional document management systems to make them faster, smarter, and more efficient.

- AI can analyze documents and group them by categories or topics. For example, documents can automatically be clustered around processes, topics and content, priority issues, and data sensitivity.

- Smarter document management systems reduce the time it takes public servants to triage applications and search for the correct information.

Image recognition

- Many backlogs are caused by processes surrounding identity verification and authentication processes.

- When used with proper oversight and privacy controls, facial recognition can be an efficient tool to help confirm or discover someone's identity.

- For example, facial recognition could streamline passport application identification processes.[7]

Spotlight applications

The US Army uses an interactive virtual assistant to check qualifications, answer questions, and refer potential recruits to human recruiters. It does the work of 55 recruiters and has a 94% accuracy rate that is improving as the machine learns.

Learn more...

An artificial intelligence chatbot with a live-chat interface was implemented by the Republic of Estonia's e-Residency organization to tackle the challenge of increasing customer support response time without hiring additional people.

Learn more...

In October 2020, Australia embarked upon developing a reusable permissions capability, a technology-enabled platform that provides consistent processing, approvals, and decision-making for departments that issue visas, permits, accreditation, licenses, and registrations.

Learn more...

3. Improving policy design

AI can enable a more effective, holistic, and rigorous approach to policymaking that responds to the needs of citizens and government priorities. As climate change remains one of the biggest global concerns of the 21st Century and a burning subject for governments across the globe, using advanced analytics to design better policies and responses to that crisis is an invaluable opportunity.

By combining environmental data with economic and socioeconomic data, governments can more effectively predict the impact of environmental policy work and better understand key priority areas for ecological programs, such as energy security. Governments should also promote solutions to address climate-change-related issues. They can leverage the significant amounts of data amassed and use it to reduce CO_2 emissions, among other purposes.

A key success factor will be developing the appropriate data-sharing framework and platforms to enable researchers, government departments, and key stakeholders to access this data to generate actionable insights and discoveries. Moreover, increasing innovation funding would accelerate the research done by the multiple AI hubs, universities, and organizations worldwide working at the intersection of AI and climate change. Governments can achieve further environmental policy objectives by ensuring adequate investments in climate innovations in the private and not-for-profit sectors.

Climate change is an international challenge, which makes fostering multilateral collaborations a priority for governments. Initiating cross-border collaboration can take many forms, including supporting knowledge-sharing on policy design, implementation, and evaluation amongst governments, industries, and key cross-jurisdicational stakeholders.

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Spotlight applications

The United Nations' Intergovernmental Panel on Climate Change (IPCC) uses prediction models to forecast climate patterns. AI can predict weather patterns and extreme weather events because it considers real-world data and factors that are otherwise very difficult to collect. This enables the prevention of large scale destruction and loss of life due to natural disasters such as cyclones, droughts, etc.
Learn more...

The Canadian government is exploring using AI to produce chemical substances that accelerate the production of clean energy, such as hydrogen. The Canadian government is also using big data and AI to prepare the country's infrastructure for electric vehicles by looking into environmental factors and drivers' social behavior to forecast needs for charging infrastructure, energy generation, and future grid extensions.
Learn more...

The UK National Grid Electricity System Operator (ESO) worked with Open Climate Fix to implement deep learning approaches to help optimize national electricity demand forecasts.
Learn more...

The European Union has developed an innovative platform that uses AI and analysis of real-time data to improve the management of forest fires, whose impact has greatly increased due to climate change.
Learn more...

Enabling conditions for AI in the Public Sector
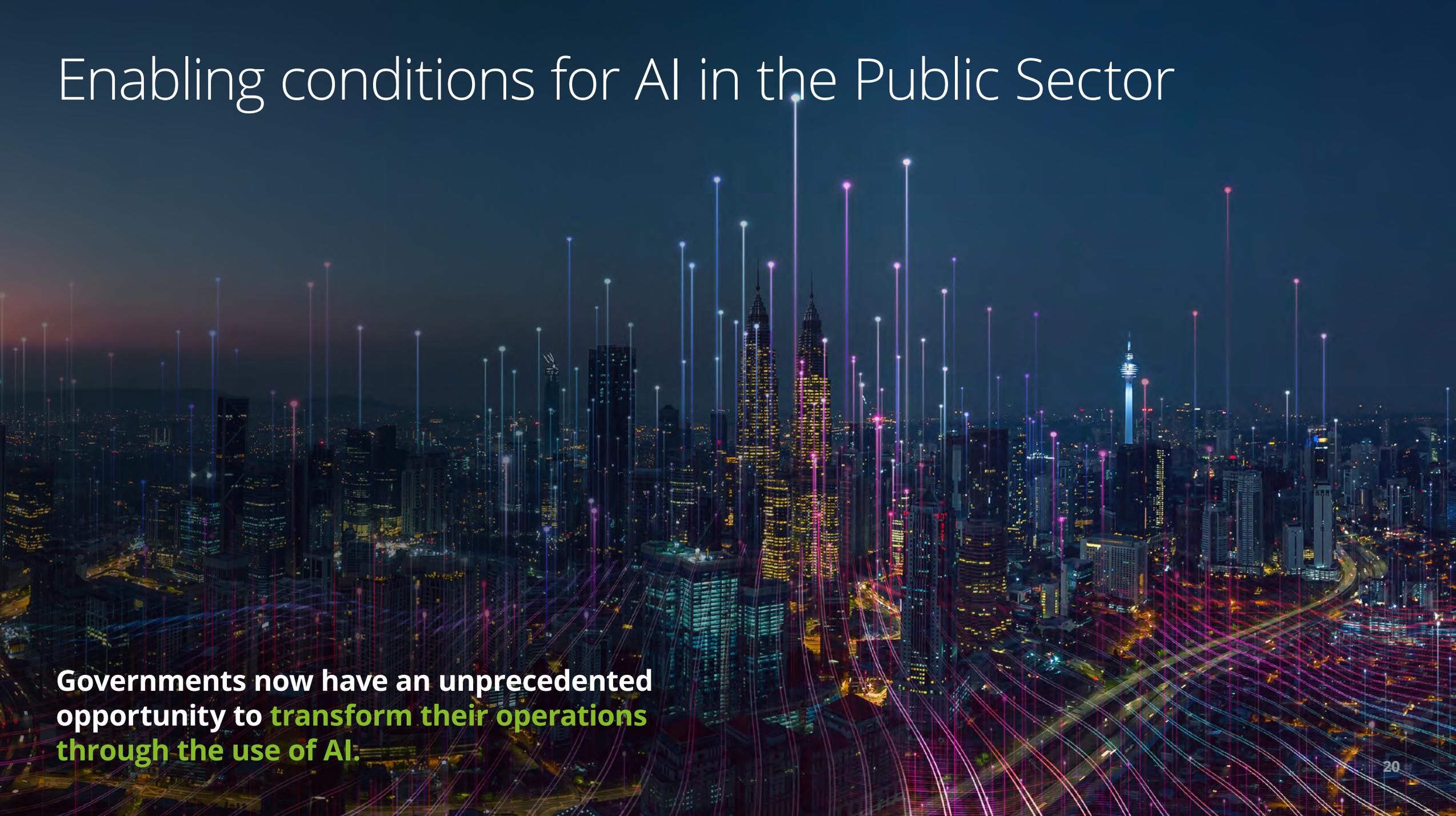
Governments now have an unprecedented opportunity to transform their operations through the use of AI.

Enabling conditions for AI in the Public Sector

History tells us we should not ask technology what it can do for governments. We must ask what we want and use technology to achieve goals.[8] Humans and technologies should find an affinity for purpose and impact, without canceling each out.

Deloitte recently launched a report[9] about how governments can help deliver streamlined life event experiences by integrating resources and anticipating people's needs as they navigate life events. Having this human-centered approach toward developing AI solutions for the public sector would be critical to reaching AI's full transformational potential.

Five critical conditions are needed to help enable an AI-powered government transformation:

1. A clear AI data strategy that nurtures citizens' trust,
2. Scaling AI literacy and upskilling programs,
3. Enhancing data-sharing capabilities across government agencies,
4. Augmenting data governance practices,
5. Creating dynamic regulatory frameworks that keep the pace of new technologies.

Enabling conditions for AI in the Public Sector

**A clear AI data strategy
that nurtures citizens' trust**
Governments should develop AI data strategies that align with government's broader policy goals and objectives, making it clear and accountable when AI should be used and for which purposes, which ethical aspects should be covered, and how government intends to make decisions based on AI technologies.

AI data strategies should cover all aspects required for organizations to use AI: goals and objectives, principles for adoption, ethical frameworks, governance and architecture, data sharing mechanisms, data quality, and privacy and security requirements.

**Enhancing data-sharing capabilities
across government agencies**
Government agencies should collaborate to break down data silos and facilitate collaboration across public and private sectors securely and transparently.

The availability and interoperability of data amongst government silos and the private sector is still critical for reaching the full potential of AI technologies within public services.

By creating data spaces that cut across government silos, it becomes easier to reach new synergies and take full advantage of the potential of AI analytics.

Scaling AI literacy and upskilling programs
Governments should ensure public servants are trained and equipped with the necessary skills to work with AI and to explore the impact of AI across all government policies.

AI literacy training and upskilling programs for existing staff should address proper know-how about these technologies and informed decision-making when assessing adoption.

At the same time, strategies to source AI capabilities will likely be critical to help Public sector competitiveness in tapping into these scarce resources in the marketplace.

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Enabling conditions for AI in the Public Sector

Augmenting data governance practices

Governments should ensure that data governance practices reflect the responsible use of AI. This includes ensuring that data is collected and used transparent, fair, and ethically while protecting citizens' privacy. It is also important to ensure that AI systems are explainable so that all citizens can better understand how decisions are being made.

Creating dynamic regulatory frameworks

Lastly, governments should play an active role in regulating technologies such as AI that are evolving fast and rapidly outpacing regulations. Governments should raise general awareness about the implication of technologies like AI, and simultaneously, work collaboratively with the academia, startups, and the private sector ecosystems to create future-proof regulation.

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Let's talk.

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Endnotes

1. Government customer experience could hold the key to citizens' trust (deloitte.com)

2. César Hidalgo: A bold idea to replace politicians | TED Talk

3. Peering through the lens of government (deloitte.com)

4. State of AI in the Enterprise 2022 | Deloitte US

5. Back-office innovations improving mission performance (deloitte.com)

6. Operator! Operator! Operator! Reimagining the government contact center experience–serving people with empathetic technology (deloitte.com)

7. Move faster, safer, and more privately with smart security (deloitte.com)

8. Bringing the Future Of Technology to Life (deloitte.com)

9. How government can deliver streamlined life event experiences (deloitte.com)

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To find out more, please visit **www.deloitte.com/us/AI.**