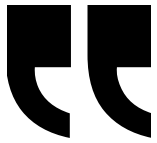**Microsoft**

Digital Transformation in Government

" We are seeing a change in how we work, when we work, and where our work gets done. More and more people are also asking that very fundamental question: why we work...Organizations need a new digital fabric for collaboration that brings together both digital and physical spaces."

Satya Nadella, CEO, Microsoft

This e-book is for government leaders and decision-makers at all levels of government, from municipal to regional to national. If you are an elected official, head of a government ministry or agency, labor secretary, HR or IT leader, urban planner, or other public servant, this e-book will show you how digital transformation and moving to the cloud can help your organization deliver more robust, responsive services to the people in your communities.

Contents

Introduction

Digital transformation can put governments in a strong position to take quick, decisive action when necessary. Disruptive global events over the past few years have shown that digital technology and data are indispensable tools for governments as they adapt to sudden and unexpected changes across their agencies.

Many government leaders are taking stock and imagining a future with the most helpful services for their people. They are recognizing that a strong digital ecosystem is the foundation for that future, one that will help them:

- **Drive economic growth and development:** Stimulate economic growth and empower their workforce with skilling capabilities and initiatives.

- **Enable personalized, digital experiences:** Provide inclusive, accessible platforms and enhanced digital services to individuals and businesses.

- **Deliver trusted and secure services:** Build trusted government services by adopting the highest standards of security and compliance.

- **Build resilience and sustainability:** Create a better future by harnessing the power of new and emerging technologies.

Even in ordinary times, governments are presented with many opportunities to provide responsive service. In a time of global upheaval, new circumstances make the move to digital transformation more urgent. In this time of rapid change, governments are accelerating their digital transformation to support employees wherever they work and to serve citizens seamlessly.

Some of those scenarios include:

- Developing sustainable water management.

- Delivering proactive traffic management.

- Providing enhanced civic experiences.

- Modernizing taxpayer services.

- Driving recovery through grants.

- Detecting fraud and anomalies.

- Protecting child welfare.

- Providing economic assistance.

- Preventing and responding to disease outbreaks.

- Accelerating response times.

- Expediting evidence discovery.

- Streamlining trials and court procedures.

- Modernizing parole and release.

- Safeguarding data and ensuring compliance.

Digital transformation helps governments seize these opportunities. Governments that successfully navigate their digital transformation journeys understand that the process takes more than just new technology. These organizations focus on their vision and strategy, culture, unique potential, and capabilities as foundational success factors—and then look to technology with a specific role in mind.

This e-book explores the components of digital transformation and provides guidance for governments moving to the cloud.

Modernize before a crisis

As the past few years have shown, resilience has never been more important, and technology plays a crucial role in building our capacity for resilience. Modernizing services with cloud-based digital technology during non-crisis times can make government and agencies better prepared to respond during a crisis. The agility of cloud services allows governments to scale and adapt services based on growth, connecting any device from anywhere, and without adding additional hardware.

Here are some services to consider modernizing with cloud technology.

- **Public utilities**
  Enable intelligent transportation systems that are connected, accessible, efficient, and sustainable.

- **Emergency response**
  Enhance communications and collaboration between agencies and first responders using cloud-based platforms for chat, calls, video, and photo sharing.

- **Tax collection**
  Facilitate compliance and improve revenue collection by using the cloud to streamline processes, reduce data silos, and increase employee efficiency.

In a time of crisis, people look for leadership first from their government. Public officials, departments, and agencies must continue to deliver critical services securely while they simultaneously respond to the crisis at hand. Continuity of operations is a key part of maintaining calmness and confidence across a population. With robust and responsive technology to handle unusual circumstances, as well as the right public-private partnerships in place, governments can respond quickly and efficiently.

- **Public health policy**
Care for the most vulnerable and ensure healthy populations by using data to track outcomes and measure intervention effectiveness.

Cloud-based products and services facilitate collaboration and support hybrid working models, empowering employees to deliver secure services wherever they are located.

Technology inaction during a crisis

As recent global events unfolded, we identified some organizations demonstrating strong leadership using technology during the crisis.

The City of Kumamoto, Japan uses Microsoft Teams for COVID-19-related taskforce meetings and to gather and distribute updates on their response between crisis management and disaster prevention offices.

Invitalia, Italy's national agency responsible for inward investment and economic development, uses Microsoft Azure to simplify management of its IT infrastructure and cope with periods of high demand while protecting customers' sensitive commercial and funding data.

Using Microsoft Power Virtual Agents, the City of Ottawa deployed an internal chatbot named OBot to help employees work more effectively during the pandemic. The success of the solution has inspired the city to team up with Ottawa Public Health to create a public-facing chatbot, connecting citizens with critical information and services to stay safe and healthy.

The Dominican Republic's Judiciary uses Microsoft Teams to conduct virtual hearings and legal processes across more than 600 offices nationwide, ensuring the continuation of legal proceedings during the pandemic. The agency has also transformed its citizen services with solutions built on Azure and Power Platform.

Until recently, governmental agency work like court hearings, licensing, and registrations, as well as most social services, was conducted in person. As remote and hybrid work has become more common, governments everywhere are finding new ways to support employees, whether they are working in the office, remotely, or somewhere in between.

Learn how Microsoft approaches managing a distributed workforce with our guide to hybrid work and get insights on how to manage the "hybrid work paradox."

Secure and reliable tools can help

Maintaining the primary functions of government requires secure and reliable tools to work across teams, share information, and work optimally where policies and needs intersect. This is how governments can create and manage initiatives more effectively.

Governments need to ensure continuity of operations for their parliaments, cabinets, and councils so decisions can be made collaboratively and securely, while enabling citizens to watch and participate remotely. A holistic technology solution for remote governance requires the consideration of three key areas.

1 Communication and collaboration

How will employees connect securely? Is videoconferencing feasible? What about working in productivity software like Word, PowerPoint, or Excel? Can employees share, comment, and coauthor effectively?

2 **Data collection, storage, and analysis**

Trustworthy, consistent data collection can help governments address situations as soon as they need attention, as well as support smart decision-making. The right kind of storage supports effective access and identity management and provides end-to-end visibility across your entire data management infrastructure, making data available to all agencies that need access and facilitating quicker responses when necessary.

3 **Reliable, secure devices**

Security and compliance in government requires special consideration when deploying devices to employees. Microsoft Surface devices include robust compliance certifications and warranties, and Microsoft Surface Enterprise Management Mode (SEMM) allows IT administrators to secure and manage firmware settings. SEMM also uses a certificate to protect the configuration from unauthorized tampering or removal. When issuing devices, governments also need robust endpoint security and management such as Microsoft Enterprise Mobility + Security to help protect data and infrastructure.

Training is critical for success

To ensure continuity of government operations, leaders must train employees for remote and hybrid working while also providing them with the tools they need to get their jobs done.

We designed Microsoft Teams so that government and first responders could use it securely and in compliance with important regulations. Microsoft Teams is FedRAMP compliant and helps healthcare organizations comply with HIPAA, as well as GDPR, EU Model Clauses, IRAP, and other government regulations. Teams allows employees to exchange sensitive information across internal and external stakeholders and across agencies.

Teams also offers a centralized learning hub called Viva Learning that helps employees seamlessly integrate learning and building skills into their day. In Viva Learning, teams can discover, share, recommend, and learn from content libraries provided by both your organization and partners.

Sharing real-time information on a platform where collaborators can connect—including remote employees or people outside of the organization or agency—is critical when coordinating essential work, patient care, or public service delivery to citizens.

Governments and their agencies hold a specific responsibility to build and maintain trust with the communities they serve. This trust is developed over time as leaders show up for their people in ordinary and not-so- ordinary times, keeping the safety and interests of their people at the front of decision-making.

The way governments conduct business, and who governments choose to engage with, can impact this relationship.

Pillars of trust

There are four pillars of trust that can help guide government agencies as they work through digital transformation.

1 **Security: keeping people and data safe in a dangerous world.**

Enabling modern security also requires new ways of thinking and operating. Microsoft uses an approach called Zero Trust to protect data and identities.

2 **Privacy: a fundamental human right.**

Just as with security, privacy needs to be built into technology from the ground up. Microsoft builds privacy into its services as part of the Microsoft Security Development Lifecycle.

3 **Compliance: an opportunity, not a burden.**

Meeting and exceeding compliance standards is an investment in trust. Microsoft works closely with governing and industry bodies to help shape and update standards.

4 **Transparency: partnering to build trust.**

In a world where data has massive value, trust is built over years and destroyed in a moment. Transparency helps trust grow, and Microsoft empowers customers to easily understand and manage things like data access.

Microsoft has been a trusted technology provider for more than four decades, and we take our responsibilities as a technology leader and innovator seriously. We also understand the value of partnership, learning from each other, being transparent, and most importantly, backing up our words with our actions.

Visit the Microsoft Trust Center for the latest information, news, and best practices.

"

If we can't protect people, then we don't deserve their trust."

Brad Smith, President and Chief Legal Officer, Microsoft

Microsoft offers various configurations of cloud services to meet the needs of almost every government organization, including hybrid environments, enabling you to modernize your legacy infrastructure in a flexible way that works best for your organization.

We have a comprehensive set of compliance offerings, with 90 certifications, to help government organizations comply with national, regional, and industry-specific requirements. Regulations and standards include:

- International Organization for Standardization (ISO) 27001, 27018, as well as 22701, which emphasizes cloud-specific threats and risks

- Federal Risk and Authorization Management Program (FedRAMP)

- HITRUST Common Security Framework (CSF)

- European Union Model Clauses

- General Data Protection Regulation (GDPR)

Cloud adoption is no longer simply a technology decision, but a strategic decision that touches every aspect of an organization. This includes legal, risk management, procurement, and compliance.

Governments are increasingly moving workloads to the cloud to reduce IT costs and meet smaller budgets due to revenue shortfalls, as well as improve the security, resiliency, and sustainability of their infrastructure. The cloud improves agility and helps governments achieve scalability when immediate expansion of services is required, such as delivering an increased number of unemployment benefits during a crisis.

That's why Microsoft has developed the [Cloud Services Due Diligence Checklist](). This checklist helps leaders navigate the decision-making process and provides structured guidance for choosing a cloud service provider.

👤 Customer stories

As part of its ongoing digital transformation, the [City of Madrid]() uses Azure cloud solutions for remote working, internal communications, and phone-based services. This supports the 27,000 civil servants who work for the administration office in carrying out essential work remotely and paving the way for further modernization of city services.

[Municipality Vingåker](), a rural village in southeast Sweden, is a pioneer in the concept of "smart villages." Using Microsoft 365 and Teams to enable flexible working and improved connectivity and collaboration, the municipality has digitally transformed its approach to caring for the elderly by tackling difficult issues of loneliness and isolation and improving the quality of life for all residents.

☰ First steps

Pick a simple, yet visible workload to move to the cloud first. This will help you identify skills gaps and understand the business processes that need to evolve, the partners you need to work with, and the challenges you need to overcome.

A successful move to the cloud requires collaboration across IT, HR, finance, security and compliance, and lines of business— as well as external suppliers and delivery experts. Bring stakeholders in early and make the move together.

Set expectations that this is a process, not a destination. Moving to the cloud is a continual journey of evolution. There will always be new technology that will benefit your citizens or organization that you should consider.

The sooner government organizations begin moving workloads to the cloud, the sooner they can better serve their people, achieve economies of scale, and modernize their operations. Learn more about [cloud computing]().

institutions and public trust—and hamper first responders in delivering critical, life-saving services.

Shifting to remote government work can potentially increase vulnerability to data breaches and attacks if systems and processes are not secure from the ground up.

Today, more and more organizations are shifting toward a new security model that enables a mobile workforce, and protects devices, apps, and data wherever they're located. An end-to-end Zero Trust approach aims to build security into the entire digital estate, across your identities (usernames and passwords), devices, network, infrastructure, applications, and data. With Microsoft solutions, governments can take immediate steps toward a Zero Trust security model.

Microsoft's integrated approach to security delivers a frictionless experience for end-users, ensuring everyone can get their job done securely regardless of where they work and which tools they use. AI and automated capabilities free security teams from repetitive tasks and empower them to focus on more strategic initiatives.

The number of cyberattacks on government agencies is increasing. According to the 2021 Microsoft Digital Defense Report, government is the most targeted sector in nation-state cyberattacks. A data breach can erode confidence in government

👤 Customer story

When a ransomware attack shut down computer systems at the [Government of Nunavut](#) (GN), Canada's largest and northernmost territory, the IT team turned to Microsoft's elite Detection and Response Team (DART) to rebuild its network and fortify its infrastructure against future attacks.

Using Microsoft solutions like Microsoft Sentinel, Defender for Cloud Apps, Microsoft Information Protection, Microsoft Defender for Endpoint, and Azure Active Directory, GN was fully back up and operational across all 2 million square kilometers of Nunavut territory— 25 communities, with 800 servers and 5,500 devices—within just 6 weeks.

In addition to helping GN update its security posture, the recovery program was also a welcome opportunity to fast-track several projects that had been on the back burner, including decommissioning old Exchange servers and deploying Microsoft 365. Armed with Microsoft security solutions, GN's IT team now has end-to-end visibility and the data it needs to make the best decisions at the right time, as well as tools to protect IT systems in remote, sometimes extreme conditions.

Microsoft can help transform your security, too. To learn more, visit Microsoft Security and [explore our solutions](#). You can also read how the [Finnish Tax Administration](#) uses the cloud to improve security and enhance citizen trust.

GN was fully back up and operational across all

2 million
square kilometers
of Nunavut territory

25
communities

800
servers

5500
devices

6
weeks

challenge as it can slow down the ability to serve the public quickly and effectively.

Meeting compliance obligations in a dynamic regulatory environment is a complex undertaking. It can't be accomplished alone. Moving to the Microsoft cloud reduces the burden. Microsoft helps governments navigate this ever-changing landscape so they can focus on meeting their missions.

Through our integrated technology, intelligence, and partnerships, Microsoft helps governments achieve compliance and further deliver on organizational goals. Microsoft offers a suite of products created to help organizations meet compliance obligations and transparency in compliance best practices.

👤 Customer story

In the highly competitive energy market, German energy company Stadtwerke Krefeld AG (SWK) needed a way to deliver increased customer value while meeting high regulatory security standards for confidential data. Working with long-standing Microsoft Partner Network member Bechtle AG, SWK modernized its customer portal on Microsoft Azure and turned to Microsoft 365 E5 to optimize its security software and communication and collaboration systems.

New and revised laws, regulations, policies, and procedures are introduced every year. As governments adopt new technologies as part of their digital transformation, they must ensure continued compliance, even as the volume of data they generate grows exponentially. When governments are caught in a period of global disruption or crisis, compliance becomes a particular

With the flexibility and scalability of Azure, SWK's customers can now view, purchase, and manage their products anytime, from anywhere. And with Microsoft 365 E5, confidential and GDPR-relevant data is now classified and marked as such through automatic labeling, resulting in less potential for error and a significant reduction in time and effort for this task.

In addition to enhanced security and customer satisfaction, SWK has also improved collaboration with Microsoft Teams, which has enabled mobile and flexible work throughout the pandemic, ensuring that operations run smoothly and efficiently.

Download our white paper to learn how to manage compliance in the cloud, visit our Trust Center, peruse a full list of compliance resources to help you meet worldwide and region-specific standards, or explore compliance solutions that help you intelligently assess your compliance risks, govern and protect sensitive data, and effectively respond to regulatory requirements.

It's important to remember that digital transformation is not simply about technology. It requires organizations to re-envision existing business models and embrace a new way of bringing together people, data, and processes to create value for everyone. A global shift to remote working opens the door for more accessibility as employees enable closed captioning for video calls and are able to

connect more easily and frequently. Not all remote working software is created equal, and it's important to ensure accessibility for all.

There are a billion people in the world who have disabilities, many of whom need assistive technology. But only one in 10 have access to the products they need.[1] Disability—whether temporary, situational, or permanent—can affect anyone at any time. Accessibility is imperative.

The challenge—and goal—is to foster a transformation that lives up to its promise of being accessible and inclusive for all. When you have accessible tools and technology that everyone can access in an organization, and in interactions with constituents and partners, you can amplify innovation and productivity.

We provide Accessibility Conformance Reports that demonstrate how our products and services meet international accessibility standards, including: ETSI EN 301 549, US Section 508, and WCAG (ISO/IEC 40500).

Accessibility has far-reaching benefits to both your organization and to the citizens you serve. To learn more about the impact of accessibility on your organization,

[1] The GATE Initiative Infographic, World Health Organization, undated.

download the e-book, 3 Ways an Accessibility Strategy Can Help Boost Business Performance, or read How Accessibility Can Empower Your Company and Culture. If you're interested in how accessibility can impact your citizens, read the e-book The Accessibility Advantage: Driving an Inclusive Customer Experience.

Finally, explore public policy recommendations for improving access to education, employment, and government services.

👥 Partner story

Like Microsoft, Moovit is passionate about creating products that help people with disabilities unlock their full potential. Launched seven years ago in Israel, Moovit has become the world's most popular transit-planning and navigation app. The company is also a leader in inclusive technology, with innovative work that makes it easier for people with a variety of disabilities to use buses, trains, subways, ride-hailing services, and other modes of public transit.

Moovit has developed a variety of products, such as screen readers and global data on wheelchair-friendly routes. Moovit's live audio navigation helps people with an intellectual disability who want extra guidance with alerts for when a bus is coming, when to transfer, and when to get off.

Moovit has partnered with Microsoft to provide its multi-modal transit data to developers who use Azure Maps, and a set of mobility-as-a-service solutions to cities, governments, and organizations. Developers who use Azure Maps will have access to Moovit's trip planner and rich data to help build innovative, accessible tools. Thus, the partnership between Microsoft and Moovit will foster the creation of more inclusive, smart cities and more accessible transit apps. Moovit is just one example of how organizations are democratizing technology. There are plenty more opportunities to improve accessibility and inclusivity.

✏️ Take action

- Visit DisabilityIN to fully assess your organization's readiness for accessibility.

- Explore the rich features and tools in Microsoft technology that improve accessibility.

- Read Microsoft Tools to Help Promote Accessibility in the Workplace.

- Learn about accessibility standards that policymakers can use to improve access to government services.

According to LinkedIn Learning's 2021 Workplace Learning Report, 59 percent of learning and development leaders identified upskilling and reskilling programs as their top priority in 2021.[3]

For government organizations, upskilling presents a dual challenge: in addition to upskilling their own employees, governments are also concerned with ensuring people have the proper technical skills to remain competitive in the job market. These are complementary issues. As leaders, governments must set the example, using digital technologies. To do so, governments need people who have the skills to drive technological advancements in government and other industries.

Microsoft helps government organizations address these exact challenges. Our skills offerings focus on both technical and non-technical learners within government and are primarily targeted at upskilling employees who need to acquire additional skills to do their current job or a new one. Microsoft also offers a variety of resources to help business decision-makers and other non-technical government employees become more familiar with technology trends and concepts.

Digital transformation is driving change throughout government—down to the skills that employees need to be productive. According to the World Economic Forum's 2020 Future of Jobs Report, 50 percent of all employees will need reskilling by 2025.[2]

Clearly, reskilling and upskilling aren't challenges for the distant future. The skills gap is an issue governments are grappling with now and in the near term.

[2] "The Future of Jobs Report 2020," World Economic Forum, 2020.
[3] "2021 Workplace Learning Report," LinkedIn Learning, 2021.

59%

of learning and development leaders identified upskilling and reskilling programs as their top priority in 2021.

👤 Customer stories

Governments around the world are using Microsoft skills development solutions to upskill their employees as well as the people they serve. In Colombia, half a million students, teachers, and employees now have unlimited access to online learning courses that will help them build vital technical and soft skills through a new agreement between SENA (Colombian National Learning Service) and LinkedIn Learning. Together, SENA, Microsoft, and

LinkedIn are helping prepare Colombian workers to thrive in the digital economy and create new pathways to opportunity for the nation's workforce.

In 2017, Somerset County Council in southwest England adopted Microsoft Surface devices as part of its program to enable a more modern and productive workforce. Employees have benefited from the ability to develop new skills and work more productively from anywhere while enjoying a range of tools and features that suit their individual work styles.

Find out what LinkedIn Learning resources are available for your organization.

🔍 Explore

- Visit Microsoft Learn and see for yourself how Microsoft helps governments upskill employees and communities.

- Go to AI Business School for Government and learn how to make a transformational impact with AI.

At Microsoft, we believe in walking the talk. That's why we've outlined a series of ambitious goals to reduce our carbon footprint, water usage, and packaging waste by 2030, as well as protect vulnerable ecosystems. Those goals include:

- **Carbon negative:** By 2030, Microsoft will be carbon negative, and by 2050, Microsoft will have removed from the environment all the carbon the company has emitted, either directly or by electrical consumption, since it was founded in 1975.

- **Water positive:** We've also committed to becoming water positive by 2030. This means reducing the water needs of our direct operations, replenishing supplies in water-stressed regions where we work, and improving water access to 1.5 million people.

- **Zero waste:** We will reduce as much waste as we create across our direct operations, products, and packaging with the goal of reaching zero waste by 2030.

- **Ecosystem protection:** We are taking a data-driven and science-driven approach to protecting ecosystems most at risk, and we aim to protect more land than we use by 2025.

Over the next several decades, our global society faces urgent environmental challenges such as climate change, pollution, resource depletion, and loss of critical ecosystems. Governments everywhere, at all levels, have an urgent responsibility to adopt sustainable, future-ready solutions that will help decrease carbon emissions, minimize waste, and protect precious resources and natural habitats.

By taking responsibility for our own sustainability, we hope to demonstrate to governments and organizations around the world the power of technology in creating sustainable solutions. Today's cloud-based technologies can help governments respond more quickly to changes, reduce their environmental impact, and support process innovation while meeting the needs of the planet.

We also have the initiative to use Microsoft technology to help our suppliers and customers around the world reduce their own carbon footprints, and a $1 billion (US dollars) climate innovation fund to accelerate the global development of technologies that reduce, capture, and remove carbon.

The Met Office, the UK's national weather service, plays an important role in supporting businesses, agencies, and governments in shaping the short-term and long-term decisions that make the world a safer and more resilient place. Weather and climate science rely on vast quantities of data and complex simulations. This is why The Met Office selected Microsoft as its partner for a

new supercomputer that will deliver the innovation and compute resources it needs to meet these technological demands.

This supercomputer will run on 100 percent renewable energy, which is expected to generate savings of 7,415 tons of carbon in the first year alone. Together, Microsoft and The Met Office are working together to create social impact at scale and are using data science and AI to solve real-world environmental challenges.

✅ Try it

Explore the Microsoft Cloud for Sustainability and learn how cloud-based solutions can accelerate your sustainability journey.

Use the Microsoft Sustainability Calculator to gain insights into the carbon emissions of your IT infrastructure and make more sustainable decisions.

Governments around the world are making sustainability a priority, and so is Microsoft. Read our detailed plan for becoming carbon negative, water positive, and zero waste by 2030.

Microsoft

How Microsoft can help

A worldwide health crisis and shift toward flexible ways of working has prompted many governments to assess the state of their digital proficiency. This is accelerating a move toward more holistic digital transformation in governments around the world. Microsoft understands the unique needs of your organizations as you undergo digital transformation. Through our deep commitments to trust, innovation, security, and compliance, we've helped governments around the world enable remote access, empower cross-agency collaboration, and deliver trusted and secure services.

Learn more ⊙→

More resources

Learn how to unlock the value of your digital transformation

Download Government Digital Transformation: 4 Strategies for Success

Download the Forrester report A Three-Step Approach To Jump-Starting CX Transformation in Government

Download Enabling Remote Government: Lessons Learned When Building a Foundation for Future Innovation

Download Empowering Cross-Agency Collaboration: How Digital Transformation Builds a More Agile, Efficient Government

Download Building Trust with Secure Services: Six Technology Updates for Government