



# Digital Transformation in Government







**We've seen two years' worth of digital transformation in two months. From remote teamwork and learning, to sales and customer service, to critical cloud infrastructure and security—we are working alongside customers every day to help them adapt and stay open for business in a world of remote everything."**

Satya Nadella,  
CEO,  
Microsoft, on the impact of the COVID-19 pandemic

## Introduction

Digital transformation can put governments in a strong position to take quick, decisive action when necessary. Recent disruptive global events 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 attentive, helpful citizen services. They are recognizing that a strong digital ecosystem is the foundation for that future. In this time of crisis, governments are accelerating their digital transformation to support employees working from home and to serve citizens seamlessly.

Even in ordinary times, governments are presented with many opportunities to provide responsive service to citizens. In a time of global upheaval, new circumstances make the move to digital transformation more urgent.

Some of those scenarios include:

- Increased need and ability to govern remotely
- Delivering citizen benefits remotely and at scale
- Coordinating crisis and first response
- Managing virtual courts and hearings
- Coordinating cross-agency collaboration
- Developing remote learning
- Monitoring virus outbreaks
- Providing virtual visits
- Accelerating research and development
- Outreach and support for citizens
- Responding to employment and skilling needs
- Fraud prevention

Digital transformation can help 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 that go into a digital transformation and provides guidance for governments considering a move to the cloud.

# Contents



# 1 Leading through crisis

In a perfect world, leadership during a crisis would look similar to everyday leadership, as governments and agencies put prepared plans in motion and respond quickly with practiced actions that reassure their citizens. However, in government, historically slow adoption of technology hinders crisis response and reveals shortcomings in systems that are largely underfunded.

In a time of crisis, citizens look for leadership first from their government. For the most part, people trust their government to have their best interests at heart and to take action to protect them and their livelihood. Governments must continue to deliver critical citizen services securely while they simultaneously respond to the crisis at hand. Continuity of operations is a key part of maintaining calm and confidence across a population. Having robust and responsive technology in place to handle unusual circumstances can position governments to respond quickly and efficiently.

## Modernize before a crisis

Modernizing services with cloud-based digital technology during non-crisis times can make government and agencies better prepared to step up 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.

Some services to consider modernizing with cloud technology include:

### Remote governance

Cloud-based products and services facilitate secure collaboration and remote working for all, with built-in accessibility features.

### Public health

Using data to help public health authorities make informed and effective decisions.

### First response

Connecting first responders via technology, which can allow chat, call, video, and photo sharing.

### Delivering citizen services remotely

Updated apps, bots, and data collection infrastructure make it easier to provide personal services, track those services, and respond when something goes wrong.

## Technology in action 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](#) is using Microsoft Teams for COVID-19-related taskforce meetings and to gather and distribute updates on their response between crisis management and disaster prevention offices.
- ✓ [International healthcare organizations](#) overwhelmed with patient inquiries have created and deployed 1,230 COVID-19 self-assessment bots, reaching 18 million individuals.
- ✓ In [Wenzhou, China](#), healthcare professionals at the Second Affiliated Hospital of WMU—the largest hospital in the area—are using Microsoft Teams video meetings and calling across mobile devices to communicate with clinicians who are working inside of quarantined sections of the hospitals.
- ✓ [London Metropolitan Police](#) in the United Kingdom are ensuring continuity of operations through coordination, communications, and collaboration with Microsoft Teams.





## 2 Governing remotely

Perhaps for the first time for many governments, economic and social disruption has brought the need for remote governance to the forefront. Before the global upheaval, court hearings, licensing and registrations, and other governmental agency work was conducted in person. In many cases, social services were delivered in person, and government administration itself was an in-person activity.

Now governments must consider how to perform necessary functions remotely:

- ✓ Enable easier access to secure government services on demand, when and where they are needed.
- ✓ Personalize government services to meet the needs of all citizens, with accessibility and security built in.
- ✓ Service citizens at scale via highly secure and compliant intelligent tools.
- ✓ Deliver government programs with faster response time and quicker issue resolution from the field through cloud data analytics and AI.

### Secure and reliable tools can help

Maintaining the primary functions of government requires secure and reliable tools to break down barriers, 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 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 and can help with decision making. The right kind of data storage makes it available to all the agencies that need access, facilitating quicker response 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 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. Teams is FedRAMP compliant and helps healthcare organizations to enable HIPAA compliance, 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.

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.





## 3 Building citizen trust

Governments and their agencies hold a specific responsibility to build and maintain trust with the citizens 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 citizens at the front of decision-making.

The way governments conduct business on behalf of their citizens, 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 one another, being transparent, and most importantly, backing up our words with our actions.

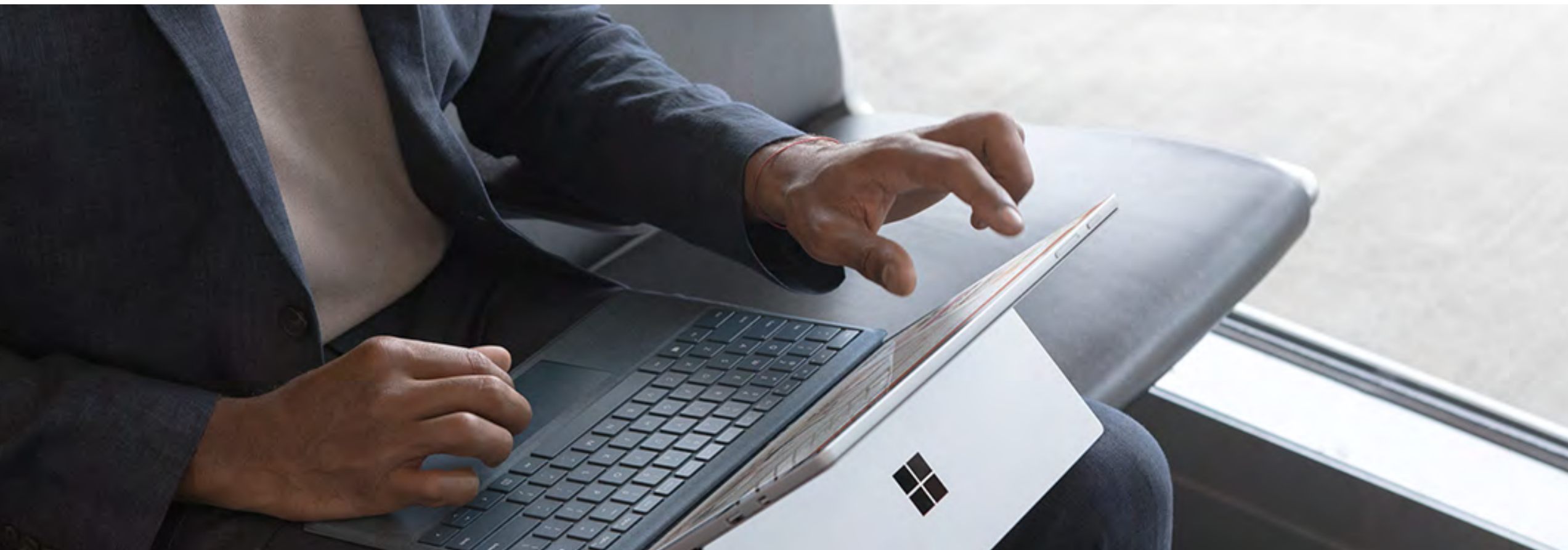
Visit the [Microsoft Trust Center](#) for the latest information, news, and best practices.



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

Brad Smith,  
President and Chief Legal Officer,  
Microsoft





## 4 A cloud fit for government

Governments are increasingly moving workloads to the cloud to reduce IT costs as budgets are cut due to revenue shortfalls. The cloud can improve agility and help government achieve scalability when immediate expansion of services is required, such as delivering an increased number of unemployment benefits during a crisis.

Citizens are looking to their government agencies to provide the same level of service and innovation that they see in their day-to-day business and private lives. The place to do that is in the cloud.

Microsoft offers various configurations of cloud services to meet the needs of most 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 compliance 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)



# Customer stories

[Canada Mortgage and Housing Corporation \(CMHC\)](#) streamlined processes across the organization from finance to procurement and mortgage-backed securities by adopting Azure as its common cloud platform. This improved its security posture and advanced analytics capabilities, all of which enhance service to Canadians and their housing needs.



In Thailand, the government’s [Ministry of Public Health](#) is using digital transformation to contribute to the social good and extend government services. Using Microsoft technologies such as machine learning and computer visualization, the ministry is more efficiently identifying public health risks and disease hotspots to reduce the risk of epidemics. Advances like these are only possible in the cloud, but getting there doesn’t have to be difficult.

## 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 citizens, achieve economies of scale, and modernize their operations. Learn more about [cloud computing](#).





## 5 Intelligent security where it matters most

The number of cyberattacks on government agencies is increasing. According to Verizon's 2019 Data Breach Investigations Report,<sup>1</sup> the public sector has the highest number of incidents compared to other sectors. Government agencies have, arguably, the most to lose from an attack. A data breach can erode confidence in government 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.

In a time of global emergency, fraudsters are likely to try to take advantage of emergency aid funding, compromising governments' ability to help those who need it most.

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.

<sup>1</sup> [Verizon's 2019 Data Breach Investigations Report](#)

## Customer story

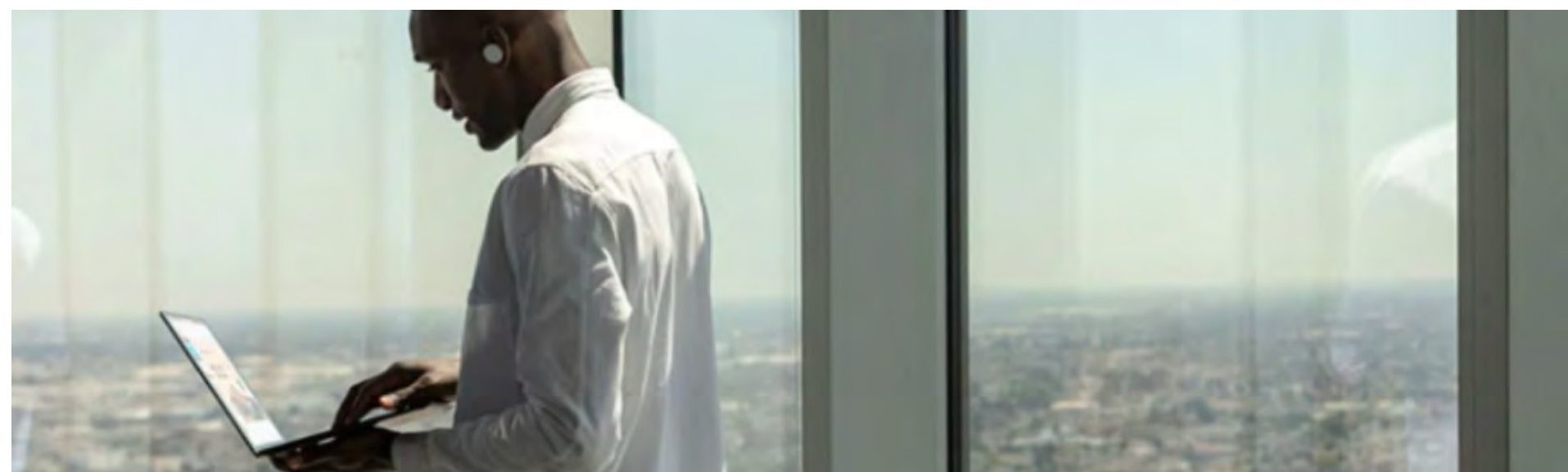
The [city of Oulu](#) is one of the most technologically advanced population centers in Finland. To maintain this reputation and give employees the ability to securely work and collaborate from anywhere, the city adopted Microsoft 365.

Though Oulu's infrastructure was primarily on-premises, the education services department had migrated to Microsoft Office 365 in 2010. The city was therefore familiar with the core security and collaboration benefits a cloud-based Microsoft solution had to offer.

Microsoft 365—the leader in cloud-based productivity and security—had an immediate effect on Oulu. Many employees discovered the productivity and collaboration benefits for the first time. Others began to experience the freedom to work anywhere, anytime.

To ensure users and data remain protected, the city implemented a layered security approach. Microsoft solutions enable city employees to access all their apps and documents remotely through Azure Multi-Factor Authentication. To bolster this security stance and further reduce the risk of a data breach, Oulu is also using Microsoft solutions and services for enhanced email, app, and data security. As a result, the number of phishing attacks on the city has dropped by 30 percent.

**Microsoft can help transform your security, too. To learn more, visit [Microsoft Security](#) and [explore our solutions](#). You can also [read more about Zero Trust](#) and how a Zero Trust model can help governments [protect data](#).**







## 6 Reducing the burden of compliance

New and revised laws, regulations, policies, and procedures are introduced every year. At the same time, as government agencies undergo digital transformation, the volume of data they generate grows exponentially, requiring more oversight and compliance. When governments are caught in a period of global disruption or crisis, compliance becomes a particular 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 helps reduce the burden. Microsoft helps governments navigate this ever-changing landscape so they can focus on meeting their missions.

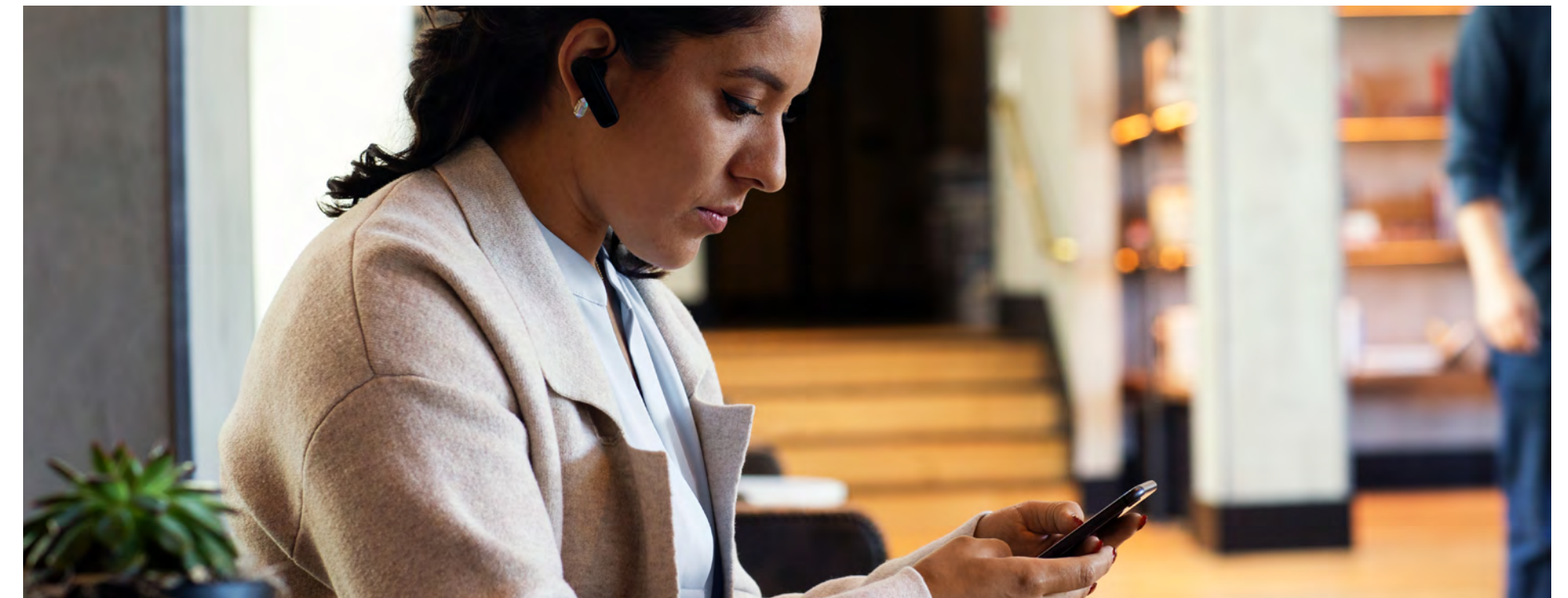
Through our integrated technology, intelligence, and partnerships, Microsoft helps governments achieve compliance and further deliver on organizational goals. Microsoft offers a suite of products created to help organizations meet compliance obligations, and we are transparent in how we help them remain compliant.

## Customer story

With employees accessing and sharing data both at home and on site, the Swedish municipality [Söderhamn Kommun](#) needed a solution that would support a flexible work style while complying with the European Union's General Data Protection Regulation (GDPR). The municipality moved to Microsoft 365 as a first step in its cloud journey.

As Söderhamn rolls out Microsoft 365 across the organization, the team plans to take more control over its data and devices so they can scan attachments and URLs in emails, as well as implement phishing protection. In addition, they are now able to classify and encrypt their documents—a key requirement under GDPR.

With this digital transformation, Söderhamn can circumvent the need to extract data from secure locations, enabling it to use data more safely and efficiently. In addition, Söderhamn is implementing functions for secure messaging across key areas of the organization and creating secure storage areas to provide better protection for data used in collaboration between teams and individuals.



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.





## 7 Technology for all

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.<sup>2</sup> 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, 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](#).

<sup>2</sup> [The GATE Initiative Infographic](#), World Health Organization, undated.

## Customer 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](#).





## 8 Upskilling for today— and tomorrow

Digital transformation is driving change throughout government—down to the skills that employees need to be productive. According to the World Economic Forum’s 2018 Future of Jobs Report, there will be “an average shift of 42 percent in required workforce skills over the 2018-2022 period.”<sup>3</sup>

However, upskilling isn’t a challenge for the future. It’s an issue governments grapple with today. “Macro trends such as digital transformation and the decreasing shelf life of skills are leaving organizations to play catch-up as they try to hire and develop the right skills,” according to LinkedIn Learning’s 2019 Workplace Learning Report.<sup>4</sup>

For government organizations, upskilling presents a dual challenge: in addition to upskilling their own employees, governments are also concerned with ensuring citizens have the proper technology skills to remain competitive in the job market. These are complementary issues. As leaders, governments must set the example, using digital technologies to serve citizens. To do so, governments need citizens 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 nontechnical government employees become more familiar with technology trends and concepts.

<sup>3</sup> World Economic Forum, [“5 things to know about the future of jobs.”](#)

<sup>4</sup> [LinkedIn Learning 2019 Workplace Learning Report](#)



## Customer stories

Governments around the world are using Microsoft skills development solutions to upskill their employees as well as their citizens. 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 2018, the municipality of [Dubai](#) rolled out LinkedIn Learning to its employees. The platform was well received. Ninety-four percent of employees activated their licenses, and the average user watched more than 10 hours of courses in the first 14 months.

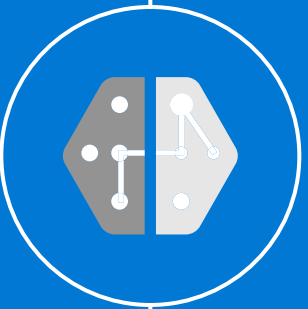
Find out what [LinkedIn Learning](#) resources are available for your organization.



## Explore



Visit [Microsoft Learn](#) and see for yourself how Microsoft helps governments upskill employees and citizens.



Go to [AI Business School for Government](#) and learn how to make a transformational impact with AI.





## 9 Removing your carbon footprint

Over the past 50 years, the average temperature on the planet has risen by 1 degree Celsius. Scientific research clearly points to carbon dioxide emissions as the primary driver. If we don't reduce carbon emissions, scientists estimate that by the end of the century average temperatures will rise another one to four degrees, with catastrophic consequences.

For more than two centuries, economic development has generated an ever-increasing amount of carbon emissions. Creating more economic opportunity and prosperity will likely require even more energy use. Going forward, we need to use more energy while reducing carbon emissions. Governments and large enterprises are ready to lead the way, and we are here to help.

At Microsoft, we have an ambitious goal to reduce—and ultimately remove—our carbon footprint. 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.

Progress requires not just bold goals like these, but a detailed plan. We have an aggressive program to cut our carbon emissions by more than half by 2030, both for our direct emissions and for our entire supply and value chain. The program is funded in part by expanding our internal carbon fee, in place since 2012, to start accounting not only for our direct emissions but also those from our supply and value chains.



**We also have an 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.**

Government agencies like [JTC](#) are realizing the value of achieving sustainability through energy-smart facilities. Since 1968, JTC has played a critical role in developing Singapore's industrial landscape. Inspired by Microsoft's Redmond campus, JTC decided to become more sustainable by using data sensors and predictive analytics to reduce energy use in its buildings and increase productivity. The agency is using integrated solutions

to gain improved building management insights that can, for example, result in adjustments to air conditioning systems for more efficient air flow and reduced cooling costs. Like JTC, you may find that small changes can have a big impact on your costs and carbon footprint.

## Try it

- ✓ Use the [Microsoft Sustainability Calculator](#) to gain insights into the carbon emissions of your IT infrastructure and make more sustainable decisions.

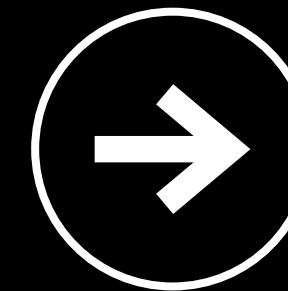
**Governments around the world are making sustainability a priority, and so is Microsoft. Learn more about how we plan to [reduce our carbon footprint](#) to become [carbon negative by 2030](#) and our [approach to product sustainability](#).**



# Conclusion

A worldwide crisis is prompting many governments to assess the state of their digital proficiency. This is accelerating a move toward more holistic digital transformation throughout the industry. 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.

## More resources



Download [Government Digital Transformation: 4 Strategies for Success](#) >

Download the [Digital Transformation Playbook](#) >

Download the Forrester report [Why and How to Improve Government CX](#) >