



# AWS Institute Review

Public sector  
transformation insights 2021





## Introduction

**Cloud computing supports public sector transformation all over the world, from the provision of welfare benefits and online healthcare, to financial services and judicial systems. The benefits are universal: speed, scale, and security.**

However, public sector executives have varying degrees of access to the knowledge and capabilities they need if they are going to implement modernization and capitalize on these benefits. As custodians of public money, they have a high bar for neutrality and independence — and constraints on resource.

The AWS Institute provides teaching, ideas, and peer support to champion shared solutions for common problems. Our goal is to help executive and operational leaders accelerate modernization of citizen services. We are transparent about our ability to leverage an international, hyperscale cloud enterprise's expertise and its global network of world-class leaders in government transformation. These include Amazon Web Services (AWS) government transformation colleagues who have themselves led nation-scale modernization programs from Australia and Argentina, to India and the U.K. We also support independent institutions' research.

The [AWS Institute](#) publishes thought leadership and you can also learn about the [executive education program](#), such as this online class from the [Brussels School of Governance](#).

**The AWS Institute 2021 Year in Review reflects three core challenges for public sector transformation: getting started with the cloud; building responsive government services; and innovating securely.**

# Getting started with the cloud

The essential steps towards successful modernization are the same everywhere. That is the lesson from hundreds of leaders who joined the AWS Institute executive education program in 2021, and the experienced nation-scale reformers who guide and support them. From culture change and meeting skills needs, to learning from other public sector modernization programs and doing all of this securely and sustainably, we gathered expertise and supported work designed to inform policymaking the world over.

## AWS Institute transformation essentials for public sector leaders

This series of short films offers an overview of transformation from the point of view of those who have delivered successful government modernization programs. They share what worked – and some wrong turns. The first film, [Think Big](#), is an interview with the U.K. government's former chief technology officer, Liam Maxwell, now director of government transformation at AWS. He reflects on the importance of finding strong leaders with the vision to change culture. The series includes why [using what works](#) is so important, and how [open data drives social change](#), featuring the U.K. [Ethnicity Facts & Figures](#) website, a pioneering project that other nations are now using to make policies that are more inclusive and reflect diverse citizen needs. More episodes cover [skills](#) and [implementation](#), as well as how to [transform securely](#).

## Governments share solutions to accelerate their transformation

Governments can use technology that others have developed and made freely available using open source to deliver reform. Read about the ways they benefit from sharing solutions to common problems in this [AWS Institute blog](#), and find out more in the AWS Institute [Building for Reuse](#) film.





## Cloud technology: guidance for the public sector

How can state agencies successfully deploy cloud technology? This [report](#) features best practices from across Europe with a special focus on Ireland.

## Digital Development Index of states

A new index seeks to inform government policies that support digital transformation in areas including infrastructure and companies. [Centro Mexico Digital](#) launched the [Digital Development Index of the States in Mexico](#), with support from the AWS Institute. The index measures digital transformation at the state level in three pillars: infrastructure, digitization of people and society, and innovation and technological adoption in businesses. It seeks to identify policies that will support digital transformation, such as inclusive access to IT.

## Bridging the digital divide through upskilling and digital inclusion

The global skills gap affects the economic wellbeing of individuals, especially in rural and underserved communities. Education and industry are mostly tasked with solving it. But how can governments be part of the solution, and why are cloud skills so important?

During the height of the COVID-19 pandemic, when economic tensions were at their peak, AWS hosted panel discussions and a [public webinar](#) to explore this question. This 2021 [report](#) highlights the steps that governments, employers, and educators can take to bridge the digital skills gap.

## The age of data: digital literacy for public service

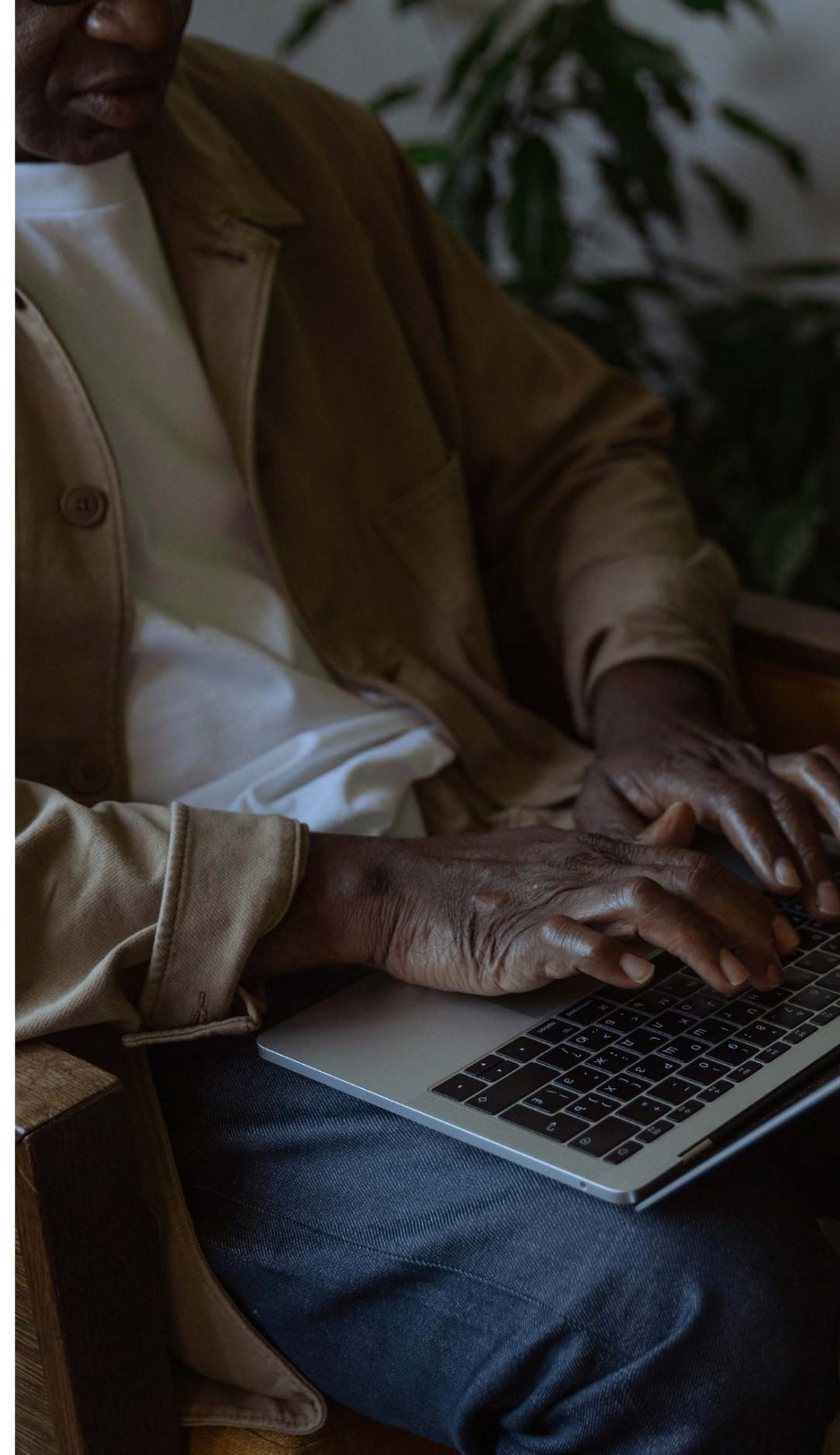
In partnership with [Íris Innovation Lab](#) in the State of Ceará, Brazil, and Social Good Brazil, the AWS Institute launched a "[Era dos Dados para o Setor Público](#)." This introductory e-book addresses data literacy as an essential competency for the public sector. It shows, based on practical tools, how to promote a culture of data analysis in government work and project management.

## Beyond the digital status quo

Governments see the risk of technological transformation but they don't fully calculate the risk of not embracing digital transformation. The [Canada Public Policy Forum](#) (PPF) first reported on this issue in 2019, with AWS Institute support in [The Risk of the Digital Status Quo](#). The PPF revisits the issues in light of the COVID-19 pandemic's impact on the speed and scale of reform in [Beyond the Digital Status Quo](#).

## How the cloud helps cities become sustainable and inclusive

Data, and the technology used to collect it and turn it into insights, are a means to an end: to better serve residents. The cloud provides data privacy and allows leaders to focus their time and resources on innovating for their residents. [This paper](#) examines how cities are using cloud technology to address public challenges with the framework of the Smart Cities Council global coalition which are **livability**, providing clean, healthy living conditions without pollution and congestion; **workability**, providing an enabling infrastructure (energy, transportation, internet connectivity) and high-quality jobs; and **sustainability**, doing so at no cost to future generations.





## The carbon reduction opportunity of moving to the cloud

Many enterprises and public sector organizations are unaware that moving workloads to the cloud can also dramatically reduce their energy use. This [report](#) from [451 Research](#) and the AWS Institute calculates the benefits in the Asia, Pacific and Japan region. The report is now available in [Japanese](#) and [Korean](#). Listen to the [podcast](#) and watch the [video](#).

## Addressing climate change and environmental conservation

The cloud is also helping scientists and policymakers understand climate change impact on the environment. These six stories, from Tasmania and Peru to the continents of Africa and Antarctica, illustrate the role of big data collection and analysis, from shark monitoring, to glacier melt. Read the Addressing Climate Change and Environmental Conservation report in [English](#), [Spanish](#), or [Portuguese](#).

## The cloud contributes to the UN Sustainable Development Goals

The cloud has the potential to significantly improve lives — by increasing productivity, unlocking new business opportunities, and lifting communities. [This paper](#) explores how the cloud contributes to the UN Sustainable Development Goals in Southeast Asia, and where do further opportunities lie and how the cloud has benefited society, as well as the elements needed to ensure greater digital inclusivity and sustainable growth.

[Get started with the cloud ›](#)

# Building responsive government services

As governments advance their digital transformation strategies, they encounter greater opportunities to advance digital solutions. They are seeking to build their resilience, learning from the experience of COVID-19, as in [Germany](#): the pandemic forced the public sector to transform services at speed, at scale, and securely. This growing knowledge is informing policymaking, for example in [Peru](#) and [Costa Rica](#). Public sector leaders, such as these from [Scotland, in the U.K.](#) and [Rhode Island, in the U.S.](#), are keen to share their experience and advice. The AWS Institute has supported conversations about how to make [financial services more inclusive in Asia](#), how to promote economic growth in [Mexico](#), and even a hackathon about reforming legacy IT to accelerate [reform in U.K. healthcare](#). We supported [Estado Digital](#) podcasts, exploring how governments in Latin America are using technology to tackle challenges ranging from deforestation to digital justice.

## The new normal: Covid-19 and the implications for public administration

[Die neue Normalität: Covid-19 und die Folgen für die Verwaltung](#) (published in German) was based on a four-part webinar series (private roundtables for local, state, and federal government and one final public discussion with all three levels), in collaboration with [Next:Public](#).

## Putting people first in government digital services

Governments moved government services online at an astonishing rate during the COVID-19 pandemic. Leaders from government departments in Scotland (U.K.) and Rhode Island (U.S.) explain how they delivered health services and welfare payments that put the user need first in this AWS Institute, IBM, and [World Affairs Council of America](#) public [webinar Putting people first in digital government services: a transatlantic conversation](#).





## Time to update: moving away from legacy IT in healthcare

Legacy IT, and what to do with it, is a common issue facing leaders who are trying to modernize services such as healthcare. Healthcare innovators, clinicians, and administrators worked together to consider solutions. Independent think-tank, [Reform](#), facilitated the session in March, 2021, to focus on the legacy IT challenges facing the English National Health Service. Attendees identified three policy challenges associated with legacy transformation: management of risk, supporting people (skills and ways of working), and ensuring value for money. Read the Reform [paper](#).

## How the cloud is solving social and public policy challenges in Latin America

Co-sponsored by the AWS Institute, Xook Media launched [Estado Digital](#) a podcast in Spanish on how cloud technology is being used to solve social and public policy challenges in Latin America. [The series](#) covered stories from the Rio Bravo to the Patagonia, such as how the cloud supported recovery from a hurricane; how [governments stepped up](#) to continue providing [higher education](#); [justice](#) and [health](#) services to their citizens remotely during the pandemic; and [how technology can help curb deforestation](#).

## Policy recommendations for digital transformation of Peru and Costa Rica

The Peruvian government has set a digital transformation agenda. This paper, created in collaboration with [AmCham](#), reviews the journey so far and suggests future steps. Read it in [Spanish](#) or in [English](#). This [paper](#) makes similar recommendations for Costa Rica.

## Austria's public services make the digital leap

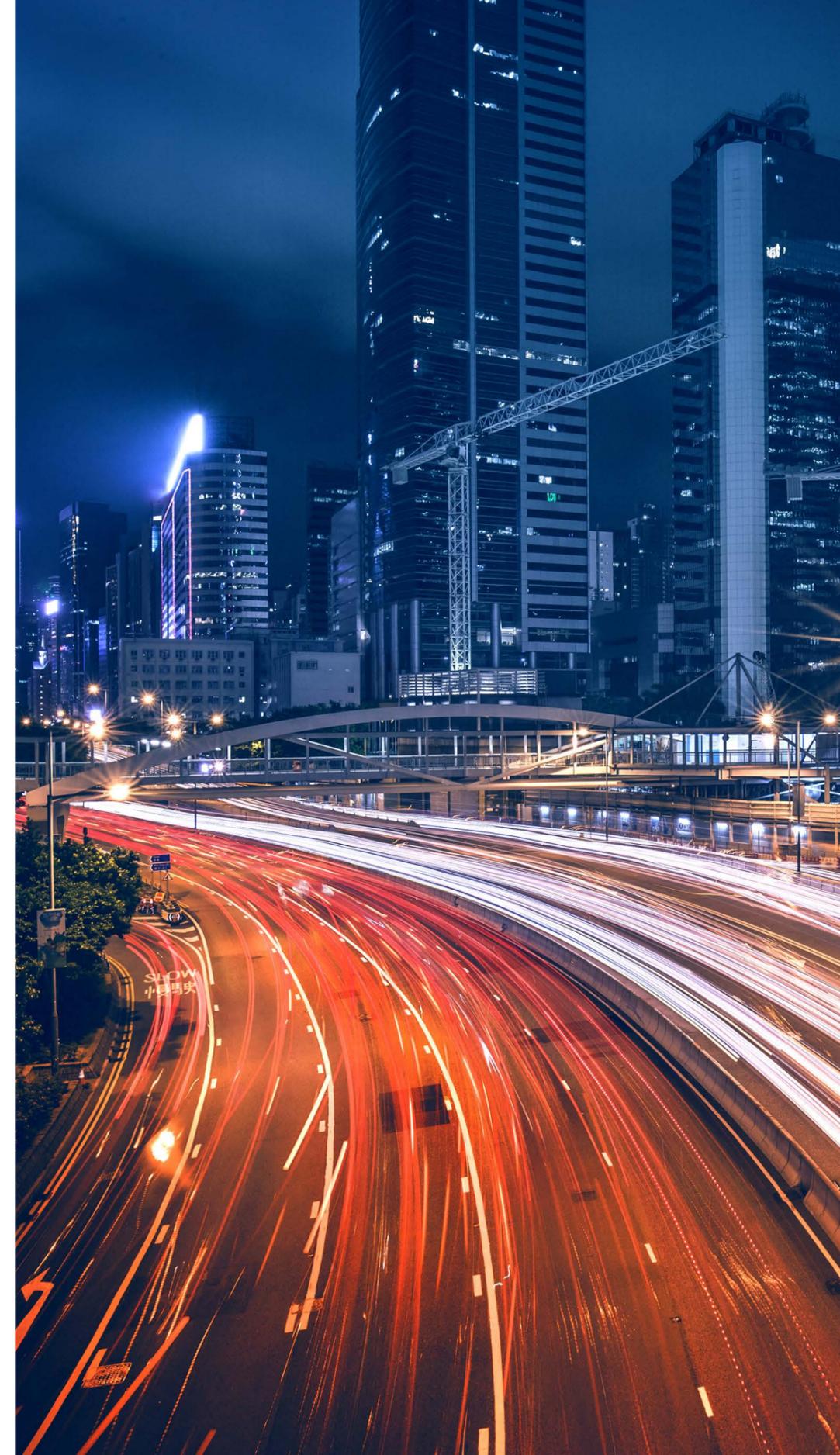
The pandemic has highlighted the need for fast and wide-ranging reforms in the digital provision of public services worldwide. In Austria, the focus is on changes to the culture of the civil service and opening up access to the skills and data needed to provide better services in a more timely manner.

[Read the article](#)

## The digital city starts here

City administrations of all sizes are increasingly able to use technology to help understand how citizens use services and amenities. This Open and Agile Smart Cities (OASC) guide, supported by the AWS Institute, offers information about getting started. [Read the paper](#)

## Building responsive public services ›



# Innovating securely

Transforming securely so that citizens' data is protected is a priority for the public sector. We explored digital identity programs, such as those in Argentina or in India; financial services that are online and seeking to become increasingly inclusive; and we also spoke to government leaders who shared how they transformed legacy approaches to security, such as outdated data classification systems. It was surprising to learn that the global security community works openly and collaboratively to strengthen cyber-security.

## Understanding the differences between privacy and security

AWS security vice president Chad Woolf talks about the differences between privacy and security and how privacy by design principles can ensure that data privacy is considered at every step of the way.

[Innovating Securely: Privacy](#)

## Secure digital identity enables modernization of public services

Issuing identification documents is just a small part of the opportunity of digital identity (ID). The benefits of digital ID systems go beyond enhancing legal compliance; they help include more people in public and private services, act as an innovation enabler, lead to higher transparency, and boost economic growth.

Digital identification has become essential in the wake of COVID-19, which has sped up digital transformation processes worldwide.

[Read the AWS Institute Digital Identity: The opportunity for government.](#)

[Digital Identity Roundtable: Key Takeaways](#)

[AWS Institute Transformation Essentials Digital Identity](#)

[AWS Institute Transformation Essentials Digital Identity for 1bn people](#)

[Governments look to digital ID to modernize services and boost growth](#)

[Designing for success: Strategic approaches to digital ID systems using the cloud](#)

## Enabling financial inclusion in APAC through the cloud

With 1.7 billion people still unbanked globally, financial inclusion remains a challenge. The cloud enables scalability and services to significant populations of underbanked individuals and small businesses and provides potential for economic development and empowerment. We explored how the [cloud helps enable financial inclusion](#). Through a [podcast](#) and a [video](#) we learned of how cloud helped overcome some of the challenges faced by excluded groups to create economic opportunities with highlighted examples on where technology solutions have worked, focusing on cloud as a foundation to support financial inclusion.

## Delivering central bank digital currencies

Increasingly, central banks want to answer practical questions and make the technology choices involved to deliver a central bank digital currency (CBDC). They need a solution that delivers on their missions and meets the performance criteria required to support a stable monetary and financial system. To help organizations understand available technology options and see how cloud services can enable optimal solution designs, AWS offers guidance and best practices surrounding CBDC objectives, architectural considerations, technology options, and performance criteria. We explored CBDC technology challenges through a [moderated panel](#) and implementation models and the role of the private sector through a [podcast](#). We also dived into how emerging economies will lead the charge for central digital currencies through a [blog](#).





## Canada's evolving regulatory framework for cloud-based financial services

Digital transformation in the global banking industry requires Canadian financial services regulators to consider how to update rules and procedures created for traditional banking and financial services to reflect the new realities of financial services—increasingly conducted online and in the cloud. [This report](#) examines the challenges that governments and business face to achieve their objectives of customer security and financial stability while also helping to create an environment that enables cloud-based innovation.

## Make security a transformation enabler

Looking at information security as an enabler for change, not a blocker, was the mind shift that contributed to digital transformation in U.K. government. The U.K. modernization of data classification concepts and processes enabled more responsive public services, and cut costs by £1.7bn in one year (2014). Liam Maxwell, the U.K. government's first chief technology officer, and cyber security expert Ben Aung describe the reform of a Cold War era approach to security policy in [this blog and film](#).

## Learn about innovating securely ›

### Transform services securely

The latest insight from the AWS Institute Transformation Essentials series looks at why security is so central to modernizing public services. New technology needs a new approach, says Alex Meek-Holmes, who was responsible for making the U.K. a safe place to be online. Watch the [film](#).

### The promises and challenges of quantum

Quantum technologies provide enormous opportunities for scientific and economic advancement but governments are challenged with setting policies for quantum development that encourage innovation while also ensuring public trust. In this [podcast](#), Canadian Global Affairs Institute vice president, David Perry, explore the topic in the Canadian context with Eric Miller, Nina Bindel, Allison Schwartz, and Randolph Mank. The [CGAI](#) has also published [The Quantum Revolution: Opportunities and Challenges for Canada](#).





## Continue the conversation

The AWS Institute is a thought leadership and [executive education](#) program to accelerate digital transformation for public sector executives.

Learn more at the [AWS Institute](#), part of [AWS in the Public Sector](#), and explore [getting started with the cloud](#); [building responsive government services](#); and [innovating securely](#).

[Find out more >](#)



**Visit the [AWS Institute](#)**