Asia/Pacific Governments Focus on Open Data, Open Source to Deliver Innovative Citizen Services

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Executive summary

The COVID-19 pandemic has hastened digitalization across the board, in businesses as well as in the government. Governments now have to deal with a broad and complex client base of citizens who are more digitally engaged than ever. As a result, the data footprint is expanding and at the same time, demand for data is rising due to citizens' increasing desire for personalized services and experiences.

With data available in abundance, governments are looking at new approaches to harness it responsibly in order to fulfill citizens' needs through better products and services.
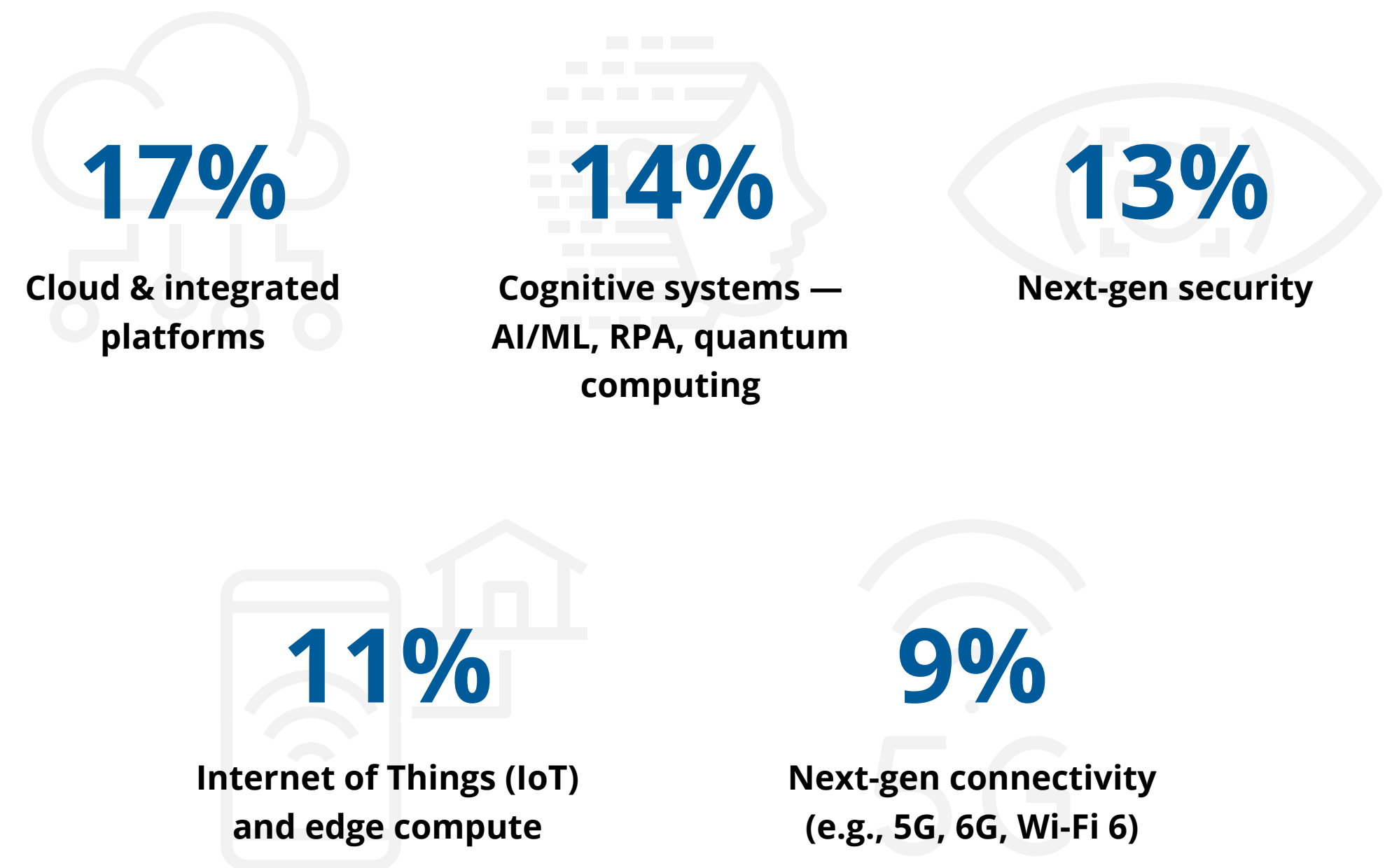
According to the IDC Public Sector Survey 2022, Asia/Pacific (AP) public sector organizations will be investing in cloud and integrated platforms, cognitive systems, and next-gen security to ensure seamless services. These technologies are set to be the top investment priorities for them over the next three years. Machines are adapting to the increasing amount of data being generated and collected by tapping on the potential of artificial intelligence (AI) and machine learning (ML), disruptive technologies that transform the way organizations operate. Incorporating AI and ML into government services enhances the data analysis process and improves service delivery for citizens.

Governments are using open source software to facilitate digital services and transparency, thus increasing citizen trust and engagement. Open source software also enables public sector organizations to manage and ensure security compliance from production to development, enabling them to handle data more efficiently and independently. As a result, data security and data sovereignty are strengthened.

At the same time, most AP countries have begun enacting national or regional legislation or regulations for data protection, security, privacy, and sharing to mitigate cyberthreats and other types of data breaches, thereby protecting citizens' sensitive information. Their trust in public sector products and services increases when their data is seen to be secure and protected.

Top 5 technologies the AP public sector will be investing in over the next three years

17%
Cloud & integrated platforms

14%
Cognitive systems — AI/ML, RPA, quantum computing

13%
Next-gen security

11%
Internet of Things (IoT) and edge compute

9%
Next-gen connectivity (e.g., 5G, 6G, Wi-Fi 6)

Key drivers for governments' technology investments

Governments can better serve citizens by adopting technology solutions based on multiple data sources to provide personalized and ubiquitous services to all.
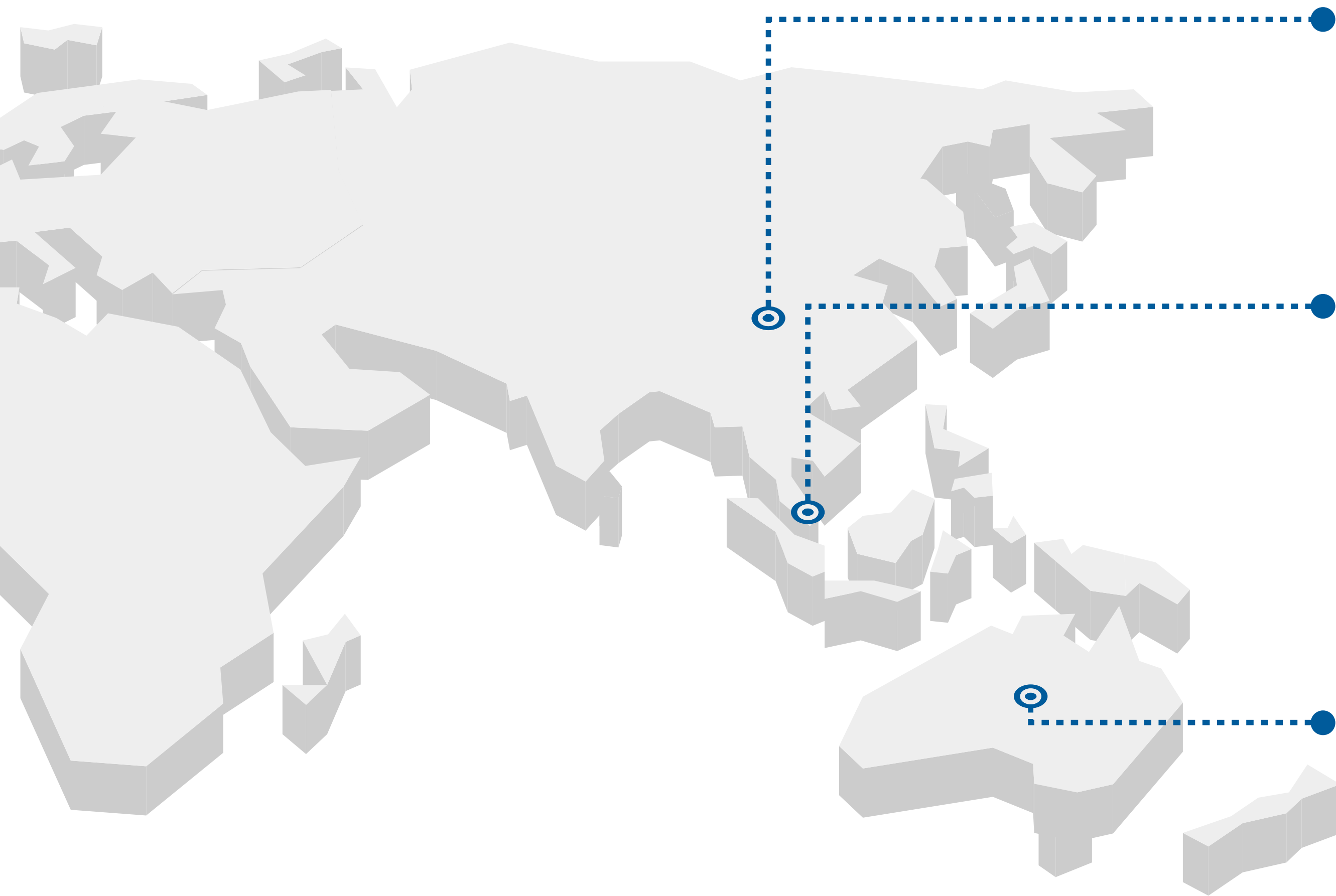
CHINA: CONSISTENT AND PERSONAL MULTICHANNEL EXPERIENCES

All channels, whether website, online chat, phone calls or in-person interactions, should provide information tailored specifically for the citizen persona.

In China, the government developed the Tianjin Nankai District Smart Elderly Care Project, an elderly care cloud platform integrating government, community service stations, elderly care institutions, daycare centers, and other social resources.

SINGAPORE: DIGITAL EQUITY

The goal of this approach is to level the digital playing field for the disadvantaged, such as the elderly, those living in rural areas, the disabled.

For example, the Singapore Open Source Physics project provides a sizable array of free educational tools for teaching. It enables experimentation and innovation initiatives intended to foster a culture of innovation and reflective practice in schools.

SINGAPORE: UBIQUITOUS ACCESS TO CITIZEN SERVICES

As society becomes increasingly mobile, governments should make anytime, anywhere data access a cornerstone of digital transformation efforts.

For example, the Singapore TraceTogether system utilized a mobile app with the purpose of facilitating community-driven contact tracing using Bluetooth connectivity.

AUSTRALIA: INCREASED SECURITY

Citizens are increasingly concerned about how their personal information is being used. As a result, governments are implementing information security management systems to protect the data they store and increasingly rely on.

For example, Australia's government is working on new cybersecurity laws with higher penalties to protect citizens' personal data.

Data utilization in AP

KOREA

MyData global initiative

Korea in 2021 held the world's first 'data sovereignty' forum, aimed to further develop data sovereignty policy and discuss strategies of protecting and exercising individuals' data rights.[2]

Initiative's outcome:

- Increased the volume, velocity, and variety of data in Korea
- Increased the computing power required to support related deployments and scalability
- Financial institutions in Korea developed their respective MyData hubs to accelerate cloud adoption in the finance sector.[1]

According to IDC, the government has decided to invest KRW11.7 billion (US$8.9 million) in data protection core technology over the next three years. This is because of the high frequency of data attacks, which are growing in tandem with exponential data collection and storage as business assets in Korea.[3]

SINGAPORE

Data-related centers of excellence

Funded by several leading banking and insurance institutions in Singapore, they drive data science, data governance, and data engineering initiatives.[4]

Singapore Data Science Consortium

A collaboration by Singapore's National Research Foundation with a few other parties.[5]

Goal:

- Assist organizations' usage of cutting-edge data science and analytics tools to tackle real-world problems
- Develop the local talent pool[5]

JAPAN

Situation overview

- Strong investment interest in data integration solutions as Japan understands that data-driven business operations have become a key pillar of corporate competitiveness

- High-value data services market in Japan

  - Worth in 2020: 177.667 billion yen (US$1.29 billion)

  - Projected sales in 2023: 196.046 billion billion yen (US$1.45 billion), growing at a 3.6% year-over-year rate.[6]

AUSTRALIA

MyGov platform

The Australian government will be centralizing digital ID/data on platform as a single system. There are now 25 million linked accounts on MyGov, and more than 1 million sign-ins.[9]

Intended outcome:

- Citizens will no longer need to provide sensitive data multiple times to multiple entities

- Delivery of seamless services, bridging government and private enterprise providers[7]

Data tsunami

Data generated in 2022:
101,349 exabytes (EB), crossing the 100,000EB threshold for the first time

Forecast for 2026:
221,178EB (CAGR: 21.2%) [8]

Sources:
[1] 2H21 Cloud Services Country Report — South Korea

[2] "The Data Sovereignty International Forum 2021 Is Held on September 8." Korea News Wire. September 2, 2021. https://www.koreanewswire.co.kr/newsRead.php?no=929755.

[3] 2H21 Country Report on IT Services — Korea

[4] IDC Market Analysis Perspectives: Big Data Management Software Platforms Market

[5] "Singapore Data Science Consortium." National Research Foundation, Prime Minister's Office, Singapore. February 20, 2021. https://www.nrf.gov.sg/programmes/technology-consortia/singapore-data-science-consortium.

[6] IDC Market Forecast, Japan Data Service Forecast, 2022–2025

[7] "About myGov." Services Australia. December 9, 2022. https://www.servicesaustralia.gov.au/about-mygov.

[8] Worldwide IDC Global DataSphere Forecast, 2022–2026: Enterprise Organizations Driving Most of the Data Growth, May 2022, Doc # US49018922

[9] "Leading experts to begin myGov revolution." Ministers for the Department of Social Services. September 16, 2022. https://ministers.dss.gov.au/media-releases/9126

Governments adopt AI, open source to improve citizen services

OPEN SOURCE SOFTWARE

According to IDC PeerScape, open source software has entered almost every layer of software and, in certain situations, has become the dominant technology. Given the tens of thousands or more of open source projects already in use, an organization is likely to find an open source software solution for almost any requirement.

41% of organizations in AP are now using open source software and its components for the vast majority of their projects

19% of AP respondents recognize the use of open source software as a strategic approach to support organizations' digital transformation efforts over the next two years[1]

Open source technologies are allowing businesses to innovate more quickly and take advantage of new capabilities across the stack

**45%** growth over the following 24 months[1]

For instance, Australia and India are two countries where open source software has received a government boost.

Australia's Digital Transformation Agency's Digital Service Standards' criterion is making source code open by:[2]

- Providing guidelines and principles to ensure security, privacy, and accessibility to the open-source community. The Australian government supports open source as a means of fostering innovation and collaboration inside the government.

India's National Policy on Information Technology 2012 objective: adopt open standards and promote open source and open technologies[3].

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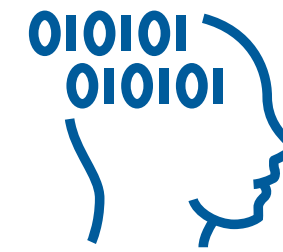
ARTIFICIAL INTELLIGENCE

As the digital era unfolds, data is an invaluable resource. Big data aids AI-enabled devices to learn and become more efficient.

Many governments in AP have employed AI to speed up operations. Besides, real-time data support is provided via cloud computing and AI-based technologies.

According to IDC Smart City Asia/Pacific Awards 2021, **30%** of cities will be using automation to integrate the physical and digital worlds, as well as to enhance remote administration of crucial infrastructure and digital services, by 2025. This automation will be enabled by IoT, AI, and digital twins.

As of 2022, IT executives are allocating **6–10%** of their application development budget to AI and ML for intelligent systems and to streamline workflows[5]. Systems get smarter thanks to AI/ML, which enables them to automate decision making and processes, and enhance content generation and throughput.

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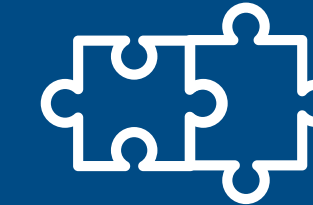
COMBINATION OF OPEN SOURCE SOFTWARE AND AI

Open source software in combination with AI is regarded as a catalyst for transforming and revolutionizing services in private and governmental sectors. It has the ability to boost transparency if it is backed by a team that renders complicated algorithms "readable" for the general public, thereby providing them with the resources necessary to determine whether or not an AI/ML solution exhibits any form of bias[4].

For example, Identiface, a feature of the Singapore open source National Digital Identity initiative, is a safe authentication mechanism which compares a face scan against the government's biometric database. It is both efficient and secure as Identiface is equipped with fraud detection technology to foil attempts at impersonation.[6]

Sources:
[1] IDC Market Perspective -Considering Role of OSS on Cloud Platforms for Digital Transformation Projects

[2] "Make source code open." Australian Government Digital Transformation Agency. https://www.dta.gov.au/help-and-advice/digital-service-standard/digital-service-standard-criteria/8-make-source-code-open.

[3] "Cabinet Approves National Policy on Information Technology 2012". Press Information Bureau. September 20, 2012. https://pib.gov.in/newsite/PrintRelease.aspx?relid=87875.

[4] Challenges and limits of an open-source approach to Artificial Intelligence (europa.eu)
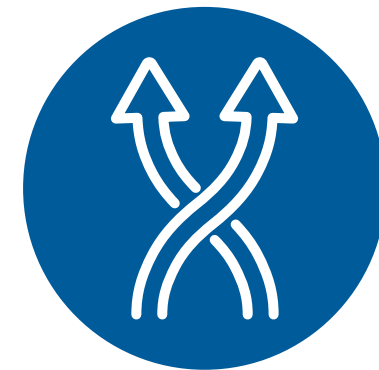
[5] IDC TechBrief AI ML Focus in M&E — Production, Distribution, and Monetization - 2022 Aug

[6] "Identiface – Authenticate users with their secure, consent-based biometrics ID." Singapore Government Developer Portal. https://www.developer.tech.gov.sg/products/categories/digital-identity/identiface/overview.html

How governments can benefit from using open source software

FLEXIBLE

Open source software can be customized by adding to or changing the code to meet unique requirements. These changes can contain security patches for urgent flaws with a short fix time. Products from comparable vendors may not have that versatility.

PROVEN TRACK RECORD

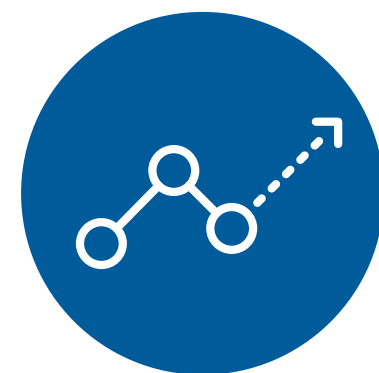Most open source products have been through rigorous testing in developer communities.

NURTURE COLLABORATION

The open source communities help foster collaboration and give individuals the freedom to contribute their most innovative ideas. By sharing code and ideas, users of open source software can create a better product as a community.
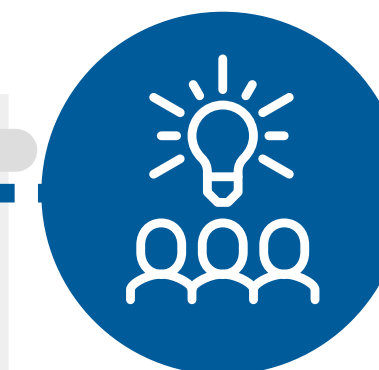
FOSTERING INNOVATION

Open source software encourages information sharing and best practices, boosting quality and offering developers the opportunity to develop their own projects.
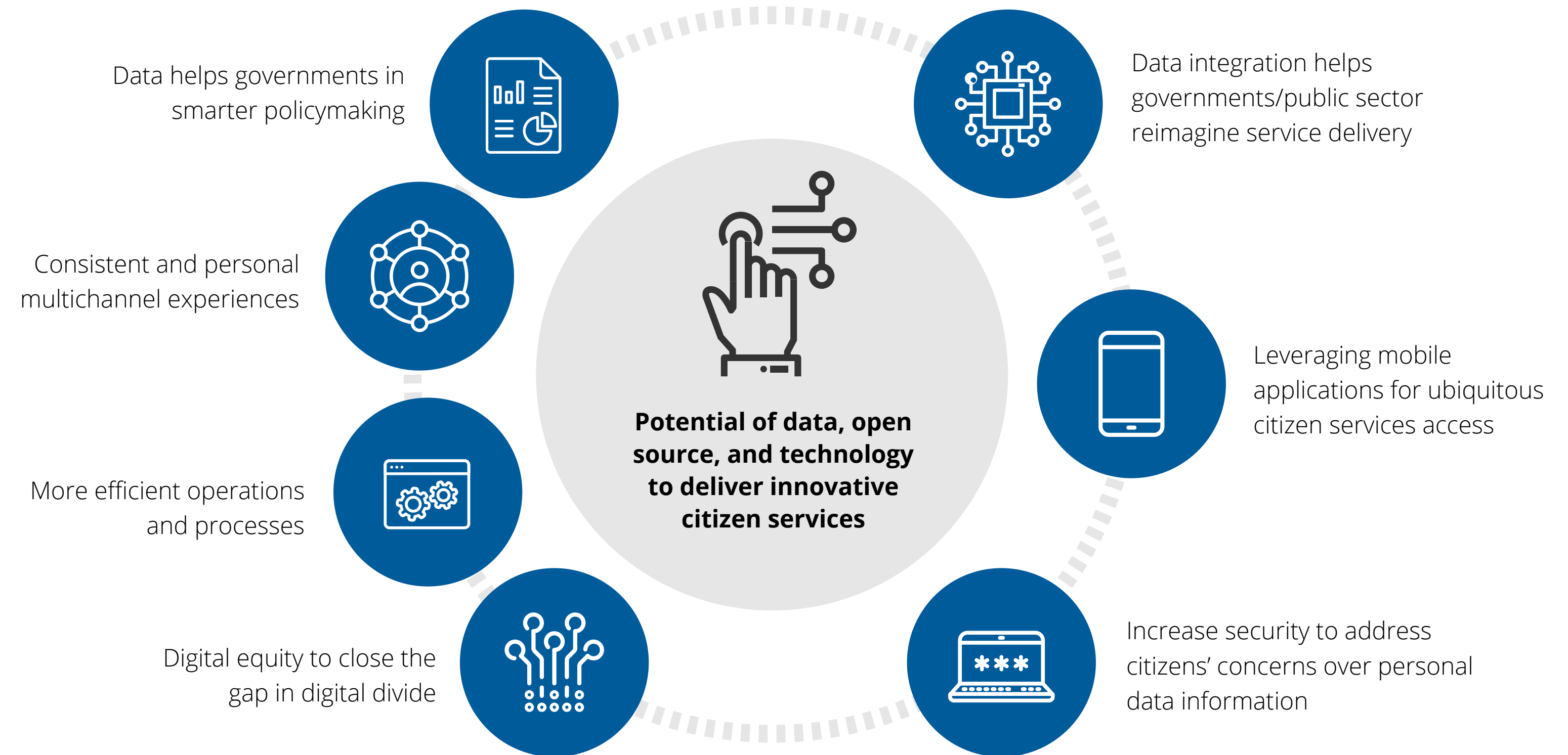
Potential of data, open source, and technology to deliver innovative citizen services

25% OF SERVICES

Governments will deliver 25% of services proactively by 2024 by fusing trustworthy data exchange and intelligent process automation, rendering bureaucracy invisible to citizens.[1] Adopting technological solutions by leveraging data in order to provide more efficient services to citizens can help governments better serve their citizens.

Data helps governments in smarter policymaking

Consistent and personal multichannel experiences

More efficient operations and processes

Digital equity to close the gap in digital divide

Potential of data, open source, and technology to deliver innovative citizen services

Data integration helps governments/public sector reimagine service delivery

Leveraging mobile applications for ubiquitous citizen services access

Increase security to address citizens' concerns over personal data information

Data helps governments in smarter policymaking

With an abundance of data, governments can formulate policies that are beneficial to the public. Smart policymaking is made possible with the use of AI, which can detect patterns of need, predict consequences, and evaluate effectiveness.

AI and ML empower a big data and analytics approach to industry ecosystems, where decisions can be made quickly and with confidence. Governments can now, therefore, swiftly and effectively offer updates, handle issues, and develop new policies.

INDIA: EGOVERNANCE, REFORMING GOVERNMENT THROUGH TECHNOLOGY

The Indian government has launched programs to empower citizens under the Digital India initiative, which is linked to its egovernance platform. It has mandated that every database unit of information should be digital rather than analog. To enable effective government procedures and to make these processes visible to the public, the workflow inside departments and agencies of government should be automated. To detect and address recurring issues, IT should be leveraged to automate, respond to, and analyze data.

e-Hospital, which is an information management system for hospitals, and e-Prison, which is an initiative that aims to computerize and integrate all of the activities that are associated with the administration of prisoners and prisons, are two examples of such programs[1].

OpenForge was launched by the Indian government as a platform for the open, collaborative production of egovernance applications. Through the usage of this platform, the government aims to encourage the utilization of open source software as well as the sharing and reusing of source code that is associated with egovernance.[3]

Aadhaar, which is the world's largest biometrics-based identity system, is a strategic policy tool that may be used to reform public sector service delivery, managing fiscal budgets, social and financial inclusion, increasing efficiency, and fostering convenient citizen-centric governance. It is very secure and reliable, which helps get rid of fake or duplicate identities. Additionally, it may be used as a primary identifier to execute a number of government welfare schemes and programs, which improves the efficiency of service delivery and helps promote transparency and good governance.[2]

Source:
[1] "e-Hospital." National Informatics Centre. https://www.nic.in/products/e-hospital/; National Prisons Information Portal. https://eprisons.nic.in/public/Home.
[2] "About UIDAI." Unique Identification Authority of India. https://uidai.gov.in/en/about-uidai/unique-identification-authority-of-india.html.
[3] openforge.gov.in

Data integration helps governments/public sector reimagine service delivery

61%
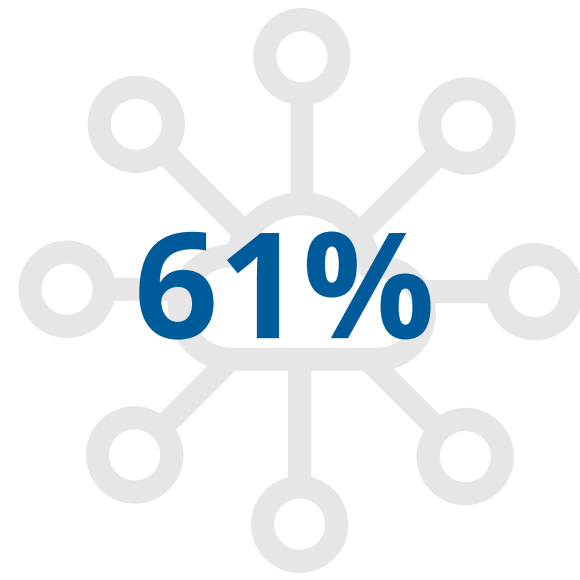
The IDC Public Sector Survey shows that **61% of public sector organizations will increase spending on cloud connectivity/interconnection services over the next three years**.[1] Government organizations can enjoy greater operational agility with cloud computing. When using a cloud service provider, they need not be concerned about limited resources. Server and hardware procurement, software updates, and general system administration are all simplified with connected cloud services. It also gives them the ability to add and alter services without adding or eliminating digital space.

41%
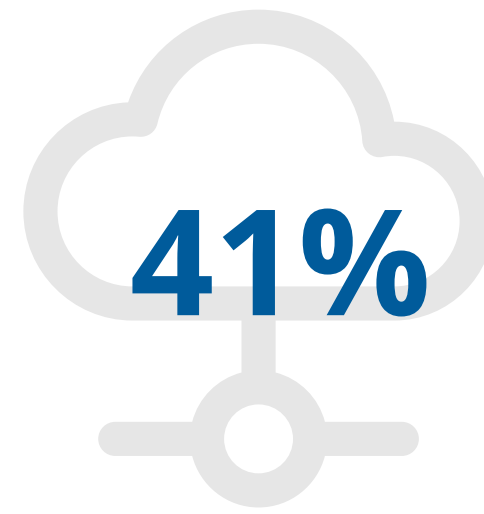
Despite expectations of lower IT budgets owing to the impending 2023 global recession, **41% of AP governments/public sector organizations intend to increase spending on cloud infrastructure (IaaS), SaaS, and PaaS services**.[3] This supports platform integration and leverages cloud computing, big data, IoT and AI, enabling governments to deliver digitalized services and ensures the efficiency of administration and convenience for citizens.

29%

of governments prefer local cloud providers to satisfy requirements for digital sovereignty and improve governance regulations.[2]

KOREA: SMART HOME LIFE CARE SERVICE BY DAEGU METROPOLITAN CITY[4]

Daegu Metropolitan City developed community care life-based services to process and analyze residents' lifestyles which includes checking on their health status and responding to emergencies. In such a situation, data sovereignty of residents' private and sensitive data would need to be guaranteed.

The care life-based service incorporated advanced ICT technology into rental public housing where many socially vulnerable groups such as the elderly live. The city not only improved the senior citizens' quality of life but also narrowed the digital gap and potentially prevented crime. This requires integrated management of various data types collected through multiple IoT sensors. Daegu Metropolitan City is also establishing an operating system for urban data (transportation, safety, and urban administration) and standardization of services through data hubs within smart city centers.

Consistent and personal multichannel experiences

Citizens, through numerous channels, are allowed to select whichever platform they find most suited or comfortable, thus improving user engagement and experience.

NANKAI, CHINA: TIANJIN NANKAI DISTRICT SMART ELDERLY CARE PROJECT

Description:

- Creates an "Internet + Elderly care" model

- The cloud platform integrates government, community service stations, elderly care institutions, daycare centers, and other social resources

- Intelligent supervision through the "one center, three platform" service system. The three services are: Smart Elderly Care Cloud Platform, Elderly Information Big Data Analysis Platform, and Supervision and Management Service Platform

Outcomes for the elderly:

- They and their relatives can obtain elderly care information and services through call hotlines, mobile phone applications, and the official website of the platform

- Receive professional pension services at home, such as home-based care services, community nursing services, and smart elderly care services

- Enhanced home safety through monitoring equipment such as smoke sensors, infrared, and smart mattresses

Source: Smart Cities Asia/Pacific Awards (SCAPA) Report Series: Digital Equity and Accessibility 2022

Leveraging mobile applications for ubiquitous citizen services access

Due to the ever-increasing prevalence of smartphones, mobile applications present the ideal infrastructure for providing citizens with instantaneous access to essential services. In addition, the provision of multichannel services improves user engagement and the quality of the user experience by offering users more entry points to the services offered. It is critical for the government to make use of mobile applications for ubiquitous citizen services access to reach the largest possible number of citizens to adopt digital service delivery.

Government organizations that support ubiquitous digital experiences claim increased engagement and customer happiness, enhanced operational efficiency, and the purposeful creation of unified, omni-channel constituent experiences.

SINGAPORE: TRACETOGETHER (COMMUNITY-DRIVEN CONTACT TRACING)[1]

· Description: A mobile application using open source code which was developed on low-code platform GitHub. It encouraged the co-creation of new technologies and ensured transparency around data usage.

· Purpose: Developed by Singapore's Government Technology Agency (GovTech) to facilitate community-driven contact tracing using Bluetooth connectivity. Data shared in TraceTogether is anonymized, encrypted, and stored only on users' devices. Locally saved data is erased from the system after 25 days.

· Even though the tool has been discontinued, Singapore's Health Minister recommends that users keep the app on their phone, in case it needs to be reactivated.[2]

99%

According to GovTech, over 99% percent of Singaporeans utilized TraceTogether to halt the spread of COVID-19 as of August 2022. After using digital contact tracing, the government could issue a quarantine order quickly. TraceTogether's identification of close contacts is highly accurate, and it is as good as manual contact tracing.

Source:
[1] "TraceTogether – Community-driven Contact Tracing." Singapore Government Developer Portal. August 19, 2022. https://www.developer.tech.gov.sg/products/categories/digital-solutions-to-address-covid-19/tracetogether/overview.
[2] "TraceTogether and SafeEntry no longer needed for most venues from Apr 26." Channel News Asia. April 22, 2022. https://www.channelnewsasia.com/singapore/covid19-tracetogether-safeentry-step-down-2641231.

More efficient operations and processes

Technology plays a vital role in establishing public health management through telemedicine and remote care. Such connected care generates clinical data across care facilities. It also enables real-time data sharing, raising the alarm in case of any irregularities requiring immediate action.

68%
World population

According to the UN, 68% of the world population is projected to live in urban areas by 2050 and this data emphasizes the need to prioritize public health management by city/state governments.[1]

13.6%
Home healthcare

10.3%
Tele-ICU

16.5%
Chronic-care management

Additionally, 13.6% of Asia/Pacific governments seek to embed ICT into home healthcare and remote monitoring while 10.3% seek to embed ICT into tele-ICU and 16.5% into chronic care management[2]. The use of ICT in healthcare is pivotal as it can enhance community wellness, streamline emergency response, and simplify the diagnosis of diseases. Therefore, governments can collaborate with tech providers to leverage data to improve the efficiency of their operations and processes, thereby providing citizens with more effective technological solutions.

SINGAPORE: VIGILANTGANTRY, CONTACTLESS SYSTEM FOR TEMPERATURE SCREENING[3]

- Fully automated and contactless temperature screenings of visitors at public venues can be performed with the help of VigilantGantry. Powered by AI and deep learning, the solution enhances current thermal scanners to speed up contactless scanning and cut down on the resources needed for temperature screening. Thermal cameras will send a customized alarm and deny entry to a visitor if high temperatures are detected.

- According to Singapore's GovTech, a trial at the National University of Singapore reduced the time taken for the temperature screening procedure from one minute for every visitor to an average of just two seconds.

- VigilantGantry's code has been made publicly available by GovTech.
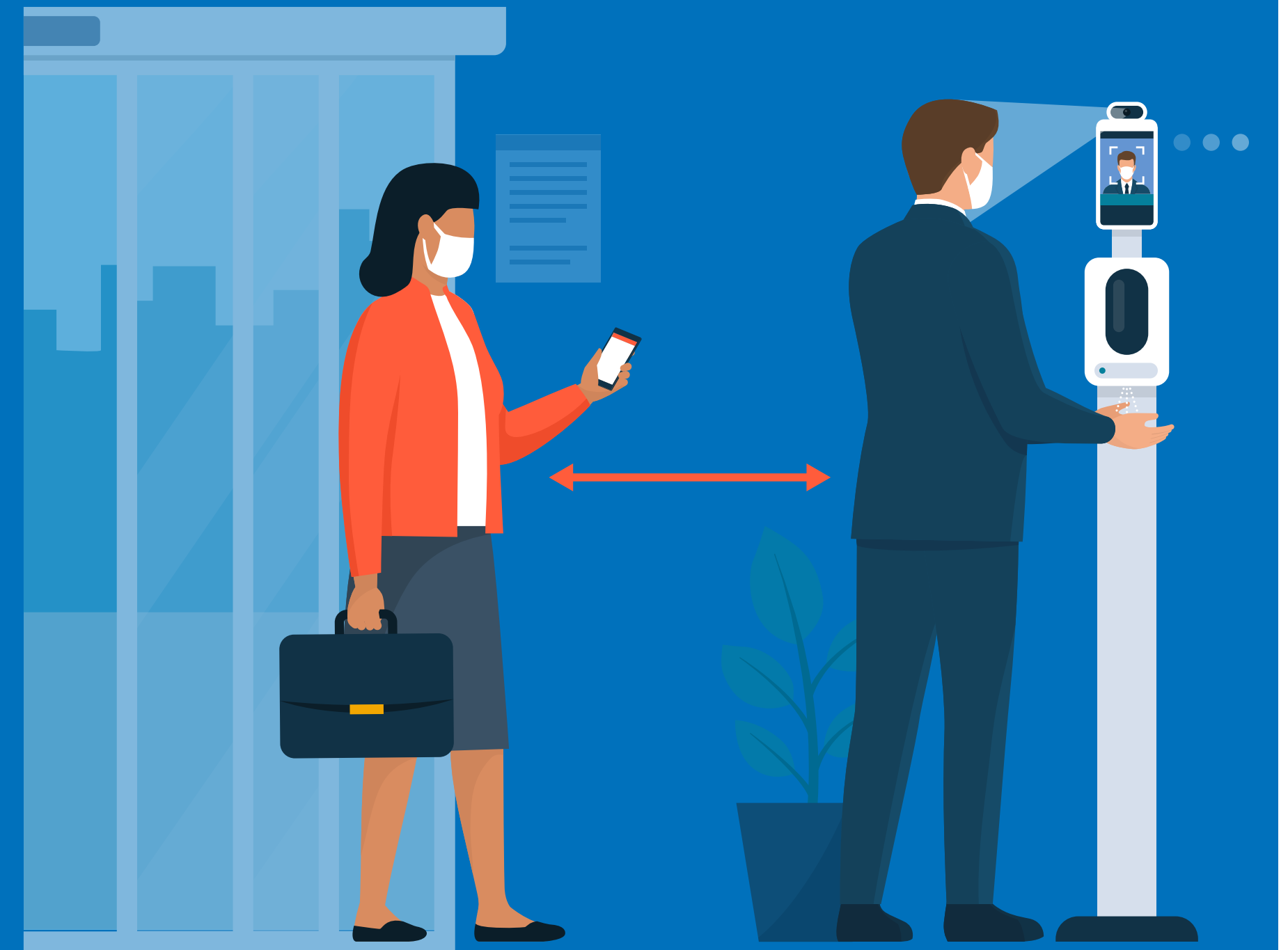
Source:
[1] "68% of the world population projected to live in urban areas by 2050, says UN." United Nations Department of Economic and Social Affairs. May 16, 2018. https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html
[2] IDC Public Sector Survey 2022
[3] "VigilantGantry - Access Control with Artificial Intelligence (AI) and Video Analytics." Singapore Government Developer Portal. August 11, 2022. https://www.developer.tech.gov.sg/products/categories/digital-solutions-to-address-covid-19/vigilantgantry/overview.html

Digital equity to reduce the digital divide

The pandemic-induced shift to digital interactions exacerbated existing gaps in digital equity and accessibility. Those who previously relied on physical access to services due to the prohibitive costs of getting online encountered barriers to their work and learning.

Digital equity and accessibility-related shortcomings include those who have limited internet access due to economic reasons.

SINGAPORE: OPEN EDUCATIONAL RESOURCES/OPEN-SOURCE PHYSICS (OSP)[1]

Supported by the National Science Foundation

Description: Development of high-quality computer-based curricular tools to engage students in physics, computation, and computer modeling. The Singapore Open Source Physics (OSP) website includes a sizable array of free educational tools for teaching. The library samples include links to ready-to-run web pages and zip files containing EJS source code. Open Educational Resource @ Singapore (OER@SG) and Open Source Physics @ Singapore (OSP@SG) are experimentation and innovation initiatives intended to foster a culture of innovation and reflective practice in schools.

Outcome: Teachers can engage in online platforms such as the OSP@SG WhatsApp chatgroups to learn, reflect, and explore together to effectively use the open source codes on projects available, thereby enhancing their technique and skill. Schools distribute effective practices produced through innovation projects by making them available for adoption and adaptation by all schools. This promotes creativity and experimentation.

2020 APS EXCELLENCE AWARD

The Open Source Physics project won the 2020 American Physical Society (APS) Excellence in Physics Education Award for its strong commitment to computational physics education. It does this through the production and dissemination of programing environments, books, software, simulation models, and other computational thinking tools, as well as research establishing the value of these standards and guidance for their use.[2]

Creating a system that addresses gaps in digital equity and accessibility is critical to ensure that everyone can reap the benefits of a system, leveling the playing field for the disadvantaged.

Sources:
[1] "Open Educational Resources / Open Source Physics @ Singapore." https://www.iwant2study.org/ospsg/#faqnoanchor.
[2] "Open Source Physics." https://www.compadre.org/osp/webdocs/about.cfm.

Increase security to address citizens' concerns over personal data

The majority of citizens believe that personal data is no longer secure, that data collecting has more negative effects than positive ones, and that it is impossible to live one's life without being tracked.

While opinions may vary, there is a general belief among citizens that their government is actively tracking and monitoring their online activities, and that the government is collecting their personal data. Governments must work together with companies to ensure that minimum security standards are adhered to.

AUSTRALIA: NEW CYBERSECURITY LAWS, HIGHER PENALTIES TO PROTECT CITIZENS' PERSONAL DATA

Following the Optus data breach incident in Australia, the government modified the Telecommunications Regulations 2021 to further protect Australians. The attack in September 2022 exposed the personal data of 10 million customers, prompting the government to act swiftly to prevent similar breaches.[1]

The Australian government proposes to increase penalties for data breaches, and work with companies to enhance security following a specific cybersecurity standard.
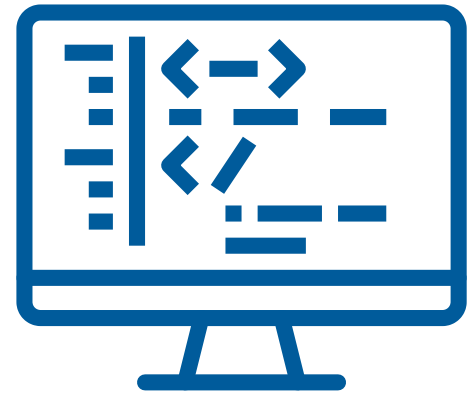
Sources:
[1] "Optus Data Breach." Australian Cyber Security Centre. September 30, 2022. https://www.cyber.gov.au/acsc/view-all-content/alerts/optus-data-breach.

Essential guidance

UTILIZATION OF OPEN SOURCE SOFTWARE TO IMPROVE SYSTEM OUTPUT

Open source software enables the creation of affordable, reliable and flexible systems without sacrificing security or responsiveness. Developers can make changes to any system in a more unrestricted manner in response to customer feedback and inputs. Therefore, the system's output will increase, which is beneficial for end users because the software may be adjusted to meet their needs.
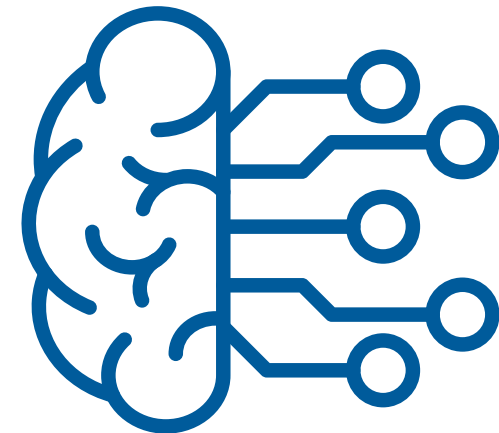
LEVERAGE TECHNOLOGICAL ADVANCEMENT; AI/ML TO PROVIDE FAST AND ACCURATE SERVICES

Decision making can be made more effective with the aid of AI/ML when dealing with large amounts of data. For instance, during the peak of COVID-19 infections, AI sped up the process of tracing persons who were infected with the virus, which in turn improved people's chances of survival. In essence, governments were able to deliver smarter services and solutions for citizens by making use of technologies such as AI and ML.
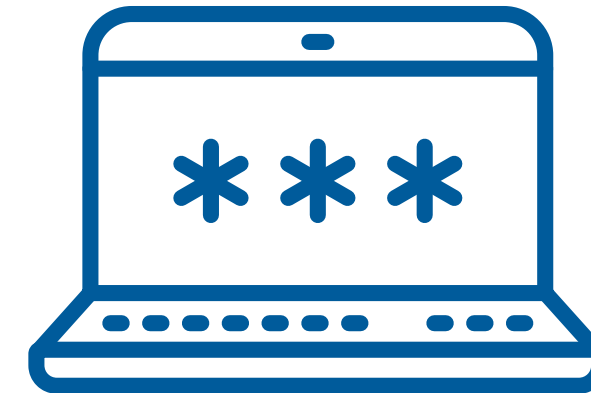
DATA SECURITY AND SOVEREIGNTY TO PROMOTE TRUST

The use of citizens' private information is a growing source of concern, as they may reside outside of their country of origin. It is essential for governments to implement information security management systems to safeguard the data they collect and rely on. Cybersecurity protects an organization's operational continuity, agency and ecosystem partner reputations, compliance adherence, and sensitive data from external threats.

CITIZEN ENGAGEMENT AND EXPERIENCE IS KEY

Users are more motivated to use systems that can provide remedies for the problems they face in their everyday lives. Systems that help users execute inconvenient or laborious tasks — for instance, going to the government office simply to pay bills — would delight users and improve their experience of the government. Next, transparency is essential in providing digital government services. Increased transparency makes users feel more secure when interacting with the system, which in turn leads to a deeper level of engagement between the government and the citizens it serves.

Open Unlocks the Potential of Open Data for Innovative Citizen Services

Open source adoption is a key factor in fostering digital innovation and building a culture that encourages responsible data sharing, skills, and innovations to meet the needs of citizens, businesses and public sector organisations in pushing the boundaries of digital government services. Red Hat helps public sector customers scale their technology function with open source software, facing the challenges of cloud adoption, legacy system modernization and improving operational efficiency without compromising on the stability and security required for digital government services. In addition, with the increasing dependency on data to help drive smarter policymaking and digital service delivery to citizens, Red Hat supports public sector customers in adopting open and interoperable technologies in building their data science platforms. Such an approach can provide the necessary transparency to address citizens' concerns over the collection, storage, and use of their personal data information.

Find out more at www.redhat.com/government

"Open data initiatives, like open source software, drive collaboration, innovation, transparency, and accountability in the public sector, while safeguarding personal privacy in digital citizen services."

- Vincent Caldeira, Field CTO, Red Hat Asia Pacific

"Ultimately open source is the only way governments can truly achieve the maximum potential of data for innovation in citizen experience with speed, resilience and control."

- Girija Balasubramanian, Director Asia Pacific Public Sector, Red Hat

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