Government Services Forum

5th Edition

A DIALOGUE ON THE FUTURE OF GOVERNMENT SERVICES

OUTCOMES REPORT
FEBRUARY 2023
The World Government Summit is a global platform dedicated to shaping the future of governments worldwide. Each year, the Summit sets the agenda for the next generation of governments with a focus on how they can harness innovation and technology to solve universal challenges facing humanity.

The Summit is a knowledge exchange center at the intersection of government, futurism, technology, and innovation. It functions as a thought leadership platform and networking hub for policymakers, experts and pioneers in human development.

The Summit is a gateway to the future as it functions as the stage for analysis of future trends, concerns, and opportunities facing humanity. It is also an arena to showcase innovations, best practice, and smart solutions to inspire creativity to tackle these future challenges.
In today’s world, people are communicating, organizing, and demanding change faster than ever before. From the way people work to the services they use and the places in which they live, digital technologies are engendering new patterns of citizen behaviour and expectations. This poses new challenges for all organizations – including government. At the same time, factors such as demographic shifts, the climate emergency, and rising inequality of access are creating a complex and uncertain environment in which governments have to operate. To further complicate matters, this is also all happening at a time when many governments are facing significant fiscal, economic and social challenges – leading many to operate with a tighter purse and coming under increased scrutiny than ever before.

Despite the complex challenges, we are on an unstoppable path toward digital adoption. Across the world, citizens have become increasingly reliant on technology in everyday life and are expected to make even more use of it going forward. More significantly, we may also be on the cusp of a new technology paradigm – the metaverse – an immersive three-dimensional virtual realm which promises to fundamentally transform the services and experiences that governments deliver to citizens.

Further, with the possibility of creating predictive, hyper-personalized and proactive services, and the potential that emerging technologies such as AI, AR, VR and the metaverse present, governments undoubtedly have an opportunity to reimagine the services they deliver today. However, as governments continue to invest and explore new ways of delivering government experiences, it’s imperative that key fundamentals are kept in sight – equity, trust, inclusivity, empathy, and human centricity.

In February 2019, we began a dialogue on the future of government services at the World Government Summit, held in Dubai. This saw 16 leaders from 9 different countries come together at the inaugural Government Services Forum held under the patronage of the Emirates Government Service Excellence Program. We then continued our engagement at the Goldman School of Public Policy, University of California at Berkeley and thereafter, at GITEX Dubai in 2020 and Expo Dubai in 2022.

At this year’s Forum – the largest yet, 5 panel discussions were facilitated by EY – the knowledge partner of the Government Services Forum. Convening a total of 39 speakers from across 14 countries, including 6 representatives from the United Arab Emirates, the panels focused on connecting, sharing experiences and debating a number of important topics – identity, payments, citizen engagement, AI and the metaverse – in a bid to explore how to deliver improved government services for the citizens of today and tomorrow.

In addition to the 5 panel discussions that took place this year, this edition of the Forum also saw a number of distinguished guests deliver keynotes including H.E. Dr. Amr Talaat – Minister of Communications and Information Technology, Egypt; Mr. Rafiuddin Shikoh, CEO of DinarStandard; and Mr. Uri Levine – an entrepreneur and the co-founder of Waze. We also launched the Global Government Services Handbook, an initiative of our Emirates Government Services Excellence Program (EGSEP).

In conclusion to this year’s Forum, all panelists converged around the need to continue this dialogue through the broader GX platform so that we can collaborate effectively and continue to work together to reimagine the way governments design and deliver services to their citizens.

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I look forward to hosting the next edition of the Forum and many more, as we continue to work towards enhancing the lives of our citizens.

MOHAMED BIN TALIAH
Chief of Government Services, Government of UAE
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Due to ever-evolving citizen needs and expectations, and technological advances being made, we have seen citizens across the world become increasingly reliant on technology. In fact, technology has literally transformed the way many people work, play, learn, shop and socialize. Perhaps most significantly, digital technologies have upturned what citizens expect from government. And, whilst the pandemic accelerated innovation more than we could have ever imagined and put governments under pressure to accelerate the digitalization of public services, in many cases, services being delivered are still perceived by some to lag behind those delivered by the private sector. At the same time, we must not forget that whilst technological advances are being made at unprecedented speed – exciting to many, technological advances are perhaps taking place quicker than some citizens are able to adapt to – leaving some feeling overwhelmed, anxious and at risk of becoming more disconnected than they already are today.

As technology therefore, without question, has the potential to transform government services to deliver better outcomes for citizens and communities, and many conversations continue to be centered around the power of technology, there is a fundamental need for governments to also continue working on progressing the more ‘foundational’ elements that are critical to the success of any transformation effort. This includes continuing to work on factors such as equity, accessibility, inclusivity, empathy, trust and human-centricity.

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INTRODUCTION

In conclusion, whilst governments must look to gauge and understand future trends and signals including what technology has to offer, they must also address some of the core challenges they are facing, if they are to truly deliver improved services that are considered to be of value.

As part of this year’s report therefore, we explore a number of key topics including:

- **Identity**: How can the identity challenge be resolved to enable more citizens to gain access to key government services in a trusted manner?

- **Payments**: How are payment mechanisms evolving to deliver an improved experience when a government service is availed?

- **Citizen Engagement & Service Centres**: How are governments engaging citizens to uncover innovative solutions to long-standing and complex challenges, and what does the future hold for physical service centres as governments look to rationalize resources and digitize services?

- **AI**: AI holds the potential to improve government services but how do we overcome fundamental challenges related to AI such as data privacy, data sharing, biases, ethics and the explainability of AI models?

- **Metaverse**: Is the metaverse set to be truly game-changing and does it have the ability to truly transform how government services will be delivered going forward or is it technology’s latest fad?
We live in an era of digital disruption and a time in which new and emerging technologies truly have the potential to take us into an entirely new digital age. The primary objective of the Government Services Forum is to explore the rapidly changing landscape in terms of technological advances being made and changing customer needs and expectations - to understand the potential implications that this may have on the future of government services and the citizens and communities which governments serve.

From ChatGPT taking the world by storm and the potential that the metaverse offers – the opportunities to deliver differentiated and improved government services seems endless. At the same time however, governments must rise to the complex challenges they are facing and continue to work on progressing some of the foundational issues like accessibility, inclusivity and trust, that impact many governments all over the world.

To date, the Government Services Forum has hosted 50+ thought leaders across various domains, has engaged 11 knowledge partners; and collaborated with 50+ organizations worldwide that operate across both the private and public sector, to share experiences and thoughts – ultimately to help governments worldwide to build a roadmap of potential initiatives that can help guide their transformation efforts and support the delivery of improved government services. At the heart of delivering any transformation successfully however is a willingness to experiment and to look at the next generation of technology, whilst at the same time thinking innovatively and putting fear aside.

In its 5th edition, this year’s Forum represents the largest yet – offering individuals a platform for engagement and providing governments worldwide the opportunity to explore what is possible, and to share ideas that have the potential to become reality and transform how services are delivered in both the United Arab Emirates and globally.

**KEYNOTES**

H.E. Mohamed Bin Taliah
Chief of Government Services, Government of UAE

“We live in an era of digital disruption and a time in which new and emerging technologies truly have the potential to take us into an entirely new digital age. The primary objective of the Government Services Forum is to explore the rapidly changing landscape in terms of technological advances being made and changing customer needs and expectations - to understand the potential implications that this may have on the future of government services and the citizens and communities which governments serve.

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Digital transformation is all about change management, not technology. We have to be able to change the culture, beliefs and norms of the ecosystem in which we operate. Only then will we be successful and drive the delivery of new and improved government services.

To deliver improved services and platforms, we, in Egypt, have explored 7 pillars:

1. Collaborative government – Government entities share data, and the government is seen as a one-stop-shop by citizens.
2. Whole of government, whole of society – All public services are integrated and one common vision exists to which all government entities are aligned to.
3. Advent of new technology – New technologies that are emerging and that have the potential to improve the experience and services delivered to citizens are explored.
4. Citizen-centric service design – The end-to-end life journey of citizens is looked at as well as key milestones within the life journey to determine the services that the government should deliver.
5. Citizen impact – A measure of success, beyond operational KPIs, that looks to measure the impact that a service has delivered.
7. Stakeholder management – Ability to change people’s mindset and culture to adopt new ways of working and thinking to drive the delivery of improved government services.
Launch of the Global Government Services Handbook 2023


The survey sample consisted of 2900 respondents from 29 leading and emerging countries across the globe. 56% of the respondents were ‘satisfied’ or ‘very satisfied’ with their government services (amongst 15 aggregated government services.) Top of the list of government service satisfaction was ‘applying for identity documents and vital records.’ The top frustration across all government service areas (grouped by 9 frustration types) was that the ‘process takes a long time to complete.’ On the flip side, the top area respondents want governments to address and exceed expectations in was to ‘complete the process in 15 minutes or less.

Ten best practice countries are also profiled based on the report’s expert interviews and other research-based analyses to understand government service excellence practices of select high-performance government service countries. The countries profiled (in no particular order) are: Singapore, Denmark, Estonia, New Zealand, South Korea, the United Arab Emirates, Brazil, Canada, South Africa and the United Kingdom.
The report also presents a view on the future of government services (next 5-10 years). The future of government services is projected to be fast, convenient, user-friendly, secure, anticipatory, and inclusive. Within 10 years, we expect to see the following in government services: Increased cybersecurity, secure platforms, logins, private data protection, and digital payments; sophisticated data analytics to improve customer experience; new service delivery methods, e.g., digital assistants 2.0, metaverse, AR; a step toward strengthening citizen trust through government services; inclusive government services that include all customer segments and digital appetites.

Addressing the gap in the lack of a structured roadmap for government officials on driving government service excellence, the report introduces an original Government Service Excellence Maturity framework. It consists of four stages of a government’s service maturity – starting with prioritizing government service reformation, then building internal and external structural transformation, then satisfying customers, and finally, delighting customers. Each stage highlights major and minor opportunity areas that are prioritized across customer-facing and internal areas to elevate customer satisfaction through government services.

The full report can be downloaded from GX.ae and the World Government Summit website.
A number of key lessons can be learnt from entrepreneurs and start-ups that can be applied to build improved digital government services. Just as with start-ups however, the journey that governments will likely go through to deliver exceptional digital government services can be long, have many ups and downs, and include some failures and experimentation along the way.

Perhaps the most important lesson is to always place the user at the heart of any design process so that the challenge can be understood from the actual user’s perspective. If this is done, the chances of building and delivering services that are considered to be of real value, are likely to be much higher. At the same time, it’s also important to focus on simplicity and to deliver for the 80% - remembering that a service doesn’t have to be perfect from the get-go and that further improvements can always be made iteratively once they have been delivered to customers – based on user feedback obtained.

Of equal importance for governments to deliver improved services, is that civil servants have the right mindset and attitude, feel empowered, and operate in an environment in which experimentation and risk taking are encouraged, and failure is understood to form part and parcel of the innovation process. Whilst many governments have a real fear of failure, it’s essential that people are not afraid to fail and change, and above all, that they learn to fail fast. This will enable individuals to get more attempts to try and reach success. Ultimately however, the opportunity must be seen to be greater than the threat something presents.

“If you’re afraid to fail, then in reality, you already failed because you’re not going to try. Albert Einstein used to say – if you haven’t failed, it’s because you haven’t tried anything before. If you try new things, you will fail.”
On the journey of delivering new and improved services it’s also important to recall that success should be associated with people deriving real value from services that are created and delivered, and not just individuals using them. To deliver on this, it’s then also particularly important for governments to place focus on building services for the next generation and to not be impacted by government terms which in some cases may only be short e.g., 4 years.

All in all, it’s also important to recognize that there are different kinds of users and that the vast majority of these need to be addressed. In general, users can be categorized into three main categories when we look at their ability/willingness to adopt new technology and new services. This includes:

1/ Innovators -~2% of the population and includes people that use something because it’s new

2/ Early adopters -~15% of the population and includes people that use something new primarily if they believe the can derive value from the new service

3/ Early majority -~30% of the population and includes people that are afraid and resistant to change, and whom need to be hand-held to show them how to use a new service / new technology for them to use it.

As the latter category represents a significant portion of the overall population, governments should actively engage with these citizens. Lastly, to ensure success, governments must also understand their current limitations and work with the wider ecosystem to expand creativity and bring in external perspectives.
A DISCUSSION ON IDENTITY, PAYMENTS, CITIZEN ENGAGEMENT, AI AND THE METAVERSE
CHAPTER 1

Identity: Reinforcing Human Centricity and Trust

Speakers

- H.E. Sheikh Saud bin Sultan Al Qasimi
  Director of the Sharjah Digital Office
- Mohammed Al Khamis
  Director Development Department, Digital Government Sector, Telecommunication & Digital Government Regulatory Authority (TDRA)
- Barbara-Chiara Ubaldi
  Deputy Head of Division and Head of Digital Government and Data Unit, Public Governance Directorate, OECD
- Aaron Snow
  Fellow and Interim Executive Director, Beeck Center for Social Impact + Innovation, Georgetown University, USA
- Phil Malem
  Chief Executive Officer, Serco Middle East
- Amit Ranjan
  Tech Entrepreneur, CoFounder SlideShare, ex Product Architect, Digi Locker

Moderator

- Mohammad Sear
  Partner – EY MENA Digital Government Leader
The United Nations (UN) and World Bank ID4D initiative aims to provide everyone on the planet with a legal identity by 2030. Yet, today, its estimated that ~850 million people around the world do not have any form of official identification – particularly those living in lower-income countries and members of marginalized and vulnerable groups. Documentary requirements, distance to registration points and cost are often cited as the key reasons that contribute to such individuals not having a formal ID. Not having an ID however can significantly impact an individual’s ability to access key services and their fundamental rights – such as the right to vote. To highlight the impact, today, it’s estimated that globally, around 1 in 3 of those without an ID report having difficulty using financial services, receiving financial support from the government, applying for a job, and voting in elections; while around 25% have problems receiving medical care.

In contrast, the world’s remaining population has some form and in many cases a variety of IDs – e.g., passport, national ID, driving license – for physical identification purposes, and use different usernames/passwords to access different online portals – for digital identification purposes. However, if governments are to truly modernize public services and deliver life-event triggered or proactive services (e.g., automatic enrollment in retirement benefits) in a world in which people increasingly work, live and play in both the physical and increasingly the digital realm, many governments will need to introduce a new and more sophisticated mechanism to identify citizens. Despite acknowledging this however, many governments are still struggling to roll-out identity schemes that have high adoption rates. So, what’s holding governments back and how can key challenges be overcome?

One common challenge is that a fragmented set of systems is often in place to identify and authenticate people, to provide them access to a particular service. To tackle this challenge, governments should, from the get-go, have a clear vision as to how they are going to manage identity from an end-to-end perspective, to provide citizens with access to a wide range of services. Subsequently, they should decide whether to manage their identity scheme centrally, through a decentralized model or whether to adopt a hybrid approach. The model that is adopted can in many cases be informed by a number of factors including the way in which their respective government operates.
The future of identity should not require physical documentation to be submitted but just enough information to present yourself to the right technology.

Building an all-encompassing identity system for a government should not be approached as a project but instead as an ever-evolving product. However, governments are great at managing projects but not products which have a lifecycle and evolve over time. We need to get much better at managing products.

In a centralized model, the government is solely accountable for collecting and storing personal attributes, issuing digital credentials, and authenticating users. This would require governments to have specific organizational capabilities to both implement and operate the scheme, and could lead to concerns related to cyber-attacks. In contrast, in a decentralized model, multiple accredited providers could be responsible for collecting, storing and managing attributes and credentials, and authenticating users. This approach could be beneficial in geographies where a high number of providers that have substantial capability in identity proofing exist. Alternatively, and given the sensitivity associated with identity, governments could operate on a hybrid basis – whereby they define and retain control over the framework and standards that govern the digital identity scheme that they develop but they gain support from the private sector.

Essential and lying at the heart of any identity scheme however, is a regulatory framework and standards which should be developed to support a broad range of high-value use cases, across both the public and private sector, and that supports interoperability – i.e., the ability of the identity scheme to exchange data with other systems, databases, devices and applications. In some jurisdictions such as the EU, interoperability across jurisdictions is already required by law. For example, the EU’s eIDAS Regulation requires that all organizations delivering public digital services within an EU member state must recognise electronic identification from other EU member states. Evidently, this helps mitigate the risk of fragmentation, whereby service providers build their own authentication tools that are primarily compatible with for their own need – leading national identity schemes to lose momentum and further complicating the identity challenge.

Having a regulatory framework and standards in place will also help engender a high-level of trust. This is of particular importance given growing public concerns over data privacy and security. In many cases, governments adopt a ‘privacy-by-design’ approach which establishes fundamental protections of privacy and data security – e.g., high standards for data storage, mandating user consent for all personal data use. At the same time however and of equal importance, some governments will need to start thinking more innovatively to resolve the identity crisis and deliver improved services to citizens. For example, in Estonia, the government has made electronic authentication and signatures legally equivalent to face-to-face identification and handwritten signatures.

To be successful and increase adoption, governments must also develop an identity scheme that enhances the experience of a user or the customer journey that a public or private sector organization wants to offer. Both public and private sector organizations must also be incentivized to use its digital identity scheme. Above all however, identity schemes must be inclusive and cater to everyone, as developing identity schemes that lock people out can disproportionately impact society’s most vulnerable groups.
Mechanisms governments and private sector organizations are introducing around identity.

To tackle the issue of needing multiple usernames and passwords to log into online portals to access services, the UAE introduced UAE Pass – the UAE’s secure, national digital identity scheme that is available to both citizens and residents.

Today, UAE Pass enables an individual to:

- Login and sign up to multiple websites and apps with one account, giving someone access to more than ~6,000 services provided by ~130 government, semi-government and private entities through their websites and apps
- Sign and verify documents digitally
- Request and share official documents

Digital Identity Scheme – Digital Wallet, EU

Being developed by the European Commission and set to be made available to all EU citizens, residents, and businesses, the digital scheme will allow an individual or business to identify themselves or to confirm certain personal attributes to enable them to access public or private digital services across the EU. Furthermore, the scheme will give users full control over the aspects of their identity, data and certificates they may wish to share with third parties and enable them to track any sharing activities.

Practically speaking, the scheme would enable a user to request a birth certificate, report a change of address, open a bank account, file a tax return, store a medical prescription that can be used anywhere in Europe, rent a car using a digital driving license, prove age, apply for a bank loan – and the list goes on.
One Login for Government Programme, UK

One Login for Government is a multi-year, cross-government programme that was established by the Government Digital Service in the UK in January 2021 to (i) provide a single, ubiquitous and simple way for people to log in and provide their identity when accessing online services and (ii) prevent users from having to repeatedly enter the same information to access different services.

Ultimately, the programme’s core objectives include:

• Enable and accelerate digital transformation in government
• Improve user experience and inclusion when accessing government services and,
• Remove barriers to service integration and deliver a smooth transition to the desired target state

Outlined below is a view of the high-potential opportunities that could collectively improve accessibility and inclusivity which other governments may also wish to explore:

• Digital vouching – Involves a person asking someone else to confirm their claimed identity
• Security questions – Involves asking an individual questions, based on their records, that only they should know the answer to, and setting the challenge at different levels of confidence, depending on the service they wish to access. For example: a check on non-sensitive information could be required to access a service where there is a low risk of fraud, but additional checks may need to be conducted for someone to be able to receive a financial benefit.
• Joining up government data – Involves exploring how the number and type of high-value security questions can be widened to support different types of users, through the use of wider government data sources. The latter may require new legislation that will support this data-sharing possible.
Amazon One

Amazon's 'Amazon One' operates under the tagline 'One scan does it all.' Developed to simplify everyday interactions, Amazon One represents a free and contactless services that allows people to use their palm to make a payment, enter a venue or identity themselves. Design in accordance with Amazon's long-standing privacy policies and controls, and protected by on-device and cloud-based security measures, Amazon One is said to offer a safe, easy and convenient way in which individuals can authenticate themselves.

How does it work?

1. An Amazon One device takes an image of your palm – In seconds, a process of proprietary imaging and computer vision algorithms capture and encrypt your palm image.
2. Amazon One creates a unique palm signature – Amazon One uses the information embedded in your palm to create a unique palm signature that it can read each and every time someone uses it.

Mechanisms governments and private sector organizations are introducing around identity.
The digital era we live in continues to evolve at soaring speed. Yet, today, an astounding ~850 million people globally still do not have any form of formal identification – preventing the most disadvantaged and vulnerable groups of society from accessing and benefiting from even the most basic services that a government has to offer.

The identity challenge is without doubt complex to resolve. Multiple factors including infrastructure – access to internet, digital literacy, data privacy and security, and trust – to only name a few – must be carefully considered and addressed.

Going forward however, it is imperative that governments adopt a human-centred approach to gain a thorough understanding of the attribute(s) that a citizen needs to prove and/or provide to access a particular service. This will be vital to increase adoption, offer citizens a more seamless experience, and above all improve accessibility and in-turn citizen wellbeing. At the same, the new frontier that governments must explore is the cross-border one – making sure that identity schemes are truly interoperable across jurisdictions.
As a government, our client includes all our citizens. This makes identity all about accessibility. Eventually, it's not about creating a single system but doing what is needed to address all groups of citizens.

Using mechanisms such as facial recognition to identify people to enable them avail services can take on an entirely new meaning in the public sector. In some parts of the world, storing as much data as is necessary is essential to not breaking the trust barrier.
CHAPTER 2

Payments: A Key Building Block for Proactive Government Services

Speakers

H.E. Saif Humaid Al Dhaheri
Assistant Governor For Strategy, Financial Infrastructure And Digital Transformation, Central Bank UAE

Abdallah Abu-Sheikh
Co-Founder and CEO, Astra Tech

Jayesh Patel
CEO, Wio Bank

Sandro Gianella
Head of Public Policy, EMEA, Stripe

Praveena Rai
Chief Operating Officer, NPCI

Kyung Yang Park
Founder, President & Chief Visionary Officer (CVO), Harex InfoTech Inc., Korea

Moderator

Krishnakant Duggirala
Partner – EY MENA Government & Public Sector Leader
When it comes to payments – which is critical to any economy – the pitfall for any government is to stay static. It’s critical to keep abreast of changing customer needs and upcoming challenges and to keep the radar open to tech. changes happening.

Payment systems form an integral part of government operations and a central part of the journey citizens experience when availing a government service. Governments must essentially ensure they are able to collect service fees, taxes, and other payments in an efficient and secure manner. As technology advances it is essential that governments adopt new ways in which they process payments. Governments are now turning to digital payments, mobile payments, and other innovative solutions to make payments easier, reliable and more secure.

Digital payments bring efficiency to the payment process – a need for all governments today removing the need to use paper-based systems making payment collections quick and secure. Digital payments also help to reduce fraud and increase transparency, and allow for payments to be tracked in real-time, making it easier to identify any discrepancies or fraudulent activity.

In addition to digital payments, mobile payments are becoming increasingly popular in governments allowing governments to accept payments from citizens and businesses from their mobile devices. This is particularly useful as it has been identified that a large number of households are still largely unbanked. The use of digital wallets and mobile payments also allow governments to accept payments from citizens who may not have access to traditional banking services. Further, for such individuals, digital payments also offer the added benefit of ease of use. Further innovation to the payment systems should enable payments for a broad set of potential consumers and users, with sufficient security to mitigate payments risks.

For the last 100 years, bankers and accountants have tried to fit customers into financial products. Flipping this around and placing greater emphasis on the customer at the outset is what will enable innovative solutions to emerge such as Pay Now, Buy Later.
Social platforms provide digital literacy to citizens and this needs to be leveraged to educate individuals on new payment possibilities.

Current payment systems were developed ~70 years ago. We need to move towards hyper-personalised services where the data flow is user-centric.

Finally, governments are also exploring the use of blockchain technology to process payments. Blockchain technology offers a secure, transparent, and efficient way to process payments. Blockchain-based payments are immutable and can be tracked in real-time, making it easier to detect any fraudulent activity.

Besides the obvious benefit of increased efficiency with the evolving mode of payments, Digital payments also improve customer experience and increased mobility and accessibility by offering more convenient and faster payment options. However, whilst governments have come a long way in recent years, there is yet a large opportunity to further digitize payments to bring the share of the unbanked population into the financial system. Closing this gap will require a reform in policies coupled with programs that build digital and financial literacy. A multi-pronged approach will need to be adopted to ensure all individuals in societies including women, those with disabilities and other marginalized groups, can access and use their accounts or make digital payments with confidence.

The future of payments in governments is bright. Digital payments, mobile payments, and blockchain-based payments are transforming the way governments process payments. These technologies offer governments a secure, efficient, and transparent way to collect payments from citizens and businesses. As technology continues to evolve, governments will continue to adopt new payment solutions to make the payment process easier and more secure.
Chapter 2
CASE STUDY

Digital Payments, India

The Reserve Bank of India (RBI) has had a key role in determining the mobile payments landscape in a country that has a population of 1.4 Billion. With the increase of the use of mobile phones in the country, the adoption of digital payments was seen across all strata of society for payments related from day-to-day provisions to payments for government services. Multiple app based payment solutions including digital wallets that have allowed digital payments have emerged in the economy making it accessible to all. A series of changes were implemented by the government in the country, including policy changes:

- Incentive schemes to promote opening of bank accounts by all citizens
- Easy to use connected mobile interface for digital transactions
- Adoption of digital solutions at all levels of service providers
- Launch of the United Payments Interface (UPI) in and interoperable direct bank transfer platform that supports multiple bank accounts in a single mobile application in 2016. UPI merges several banking features, seamless fund routing and merchant payments into one hood.

The aim of the government was to simplify and provide a single interface across all NPCI (National Payments Corporation of India) systems, thereby creating interoperability and a superior customer experience.
Chapter 2

VOICE OF THE MODERATOR

Krishnakant Duggirala
Partner – EY MENA Government & Public Sector Leader

“The challenges posed by the pandemic has driven adoption of digital technologies to unprecedented levels, an outcome of which was the acceleration of digital payments. The convenience from this enhanced digital experience has come to stay with the citizens expecting more from the private sector and the governments in respect of their digital experience.

While the private sector has embraced these developments and is making considerable investments and driving service and technological innovations, the government digital services and payments landscape still remains fragmented and leaves a lot to be desired.

Citizen expect government services to be “simplified, seamless and secure” while catering to the full spectrum of government payments and receipts thereby enabling a wholesome user centric experience."
Chapter 2

KEY TAKEAWAYS

Standardization of APIs and interoperability are of paramount importance to enable payment information to be connected and transferred seamlessly, to connect key players across the ecosystem and ultimately to enable a payment to travel end-to-end seamlessly.

1. Safe, simple and secure payment systems are central to a government being able to offer quality services to its citizens.

2. Continued collaboration is needed between key players including private and government sector entities and citizens to identify and develop innovative and new payment solutions that meet the needs of both the citizens of today and tomorrow.

3. Governments need to evolve the payment solutions they offer today to enable individuals from all factions of society to access and avail services, whilst continuing to ensure that payment solutions are safe, secure and efficient. This includes finding innovative ways to allow unbanked individuals to pay for services.

4. Standardization of APIs and interoperability is of paramount importance to ensure that:
   1. payment information can be connected and transferred seamlessly across the end-to-end journey
   2. there is reach – i.e., that citizens from different factions of society and geographic locations can make payments to another party
   3. a hyper-personalized experience can be delivered to citizens.

5. A user-centric approach should be taken to identify financial products and payment solutions. This will drive the delivery of new and more innovative products and solutions that citizens consider to be of true value – in-turn increasing the adoption rate.

6. Central Banks globally will continue to govern financial products and payment mechanisms. However, going forward, they should provide the infrastructure and guidelines that allow innovative solutions to be creative. Additionally, they must develop and agree to common/standard regulations between jurisdictions to facilitate cross-border interoperability.
CHAPTER 3
Citizen Engagement: Designing the Future of Government Services and Service Centres

Speakers

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Secretary, Capacity Building Commission, Government of India

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Moderator

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* Represented by: Abdul Aliyev - Head of International Relations Department - State Agency for Public Service and Social Innovations under the President of Azerbaijan
As governments look to redesign and introduce new services, what becomes key is inclusion-by-design rather than digital-by-design.

The loudest voice doesn’t always tackle the biggest problem. As an outcome, having a voice needs to be institutionalized, and platforms must be opened to hear the unheard.

Citizens today expect governments to deliver levels of quality, speed and convenience that are on par with those delivered by private sector organizations. They are also increasingly demanding for immediate and seamless access to services through a variety of different channels – e.g., chat, text, mobile, web. Most significantly however, citizens expect new digital solutions to improve the way they conduct many aspects of their lives, and they expect governments to keep up.

To deliver improved services in today’s digital era, governments are increasingly placing greater emphasis on:

- Capturing and analyzing data (qualitative and quantitative) to enable them to understand people’s needs and circumstances
- Involving citizens as partners in the design and implementation phase when updating existing or delivering new services
- Building an ecosystem of partners to provide wide-ranging and diverse perspectives
- Developing a deep understanding of people’s relationship with technology
- Developing new skills such as user experience research and design

Taking a human-centric approach has long been a differentiating method that many organizations globally have adopted to solve complex problems and develop new services. This is not new. However, in today’s world – with the technological advances that are being made, understanding the customer is more important than ever before. Otherwise, governments risk disconnecting as many citizens as they connect, and risk further widening the digital divide that already exists.

To support the development of human-centric services that are built around real user needs and life events, many government agencies worldwide have adopted Design Thinking and set-up customer experience labs. At the centre of all these popular approaches lies ‘empathy’ – our ability to see the world through a customer’s eyes and to understand what they see, feel and experience – to help gain a deeper appreciation and understanding of people’s motivations, thoughts, needs and preferences. Other approaches including government organized hackathons and open innovation challenges, have also proven popular and gained significant traction over the last few years.

Additionally, increasingly, more and more citizens also expect to partake and have a voice in how governments services are designed and delivered, and what governments spend their budget on. Top-down models of governance will likely no longer be seen as legitimate in many parts of the world. Many now expect decision-making to be shared, open and participatory. As an outcome, digital participation tools such as social media, mobile apps and online digital platforms including open innovation platforms, are increasingly being used to enable inputs to be collected from citizens on a large scale – providing insights to
Success lies not in service being delivered but in users actually using a service and deriving value from that service.

Governments cannot choose their customers. Therefore, it’s imperative that there is a fairness in the delivery of public services. Inevitably then, a two-tier system will therefore exist where for the vast majority of citizens will avail services digitally and be low-touch, whilst a small minority of citizens will be very high-touch and avail services through face-to-face interaction.

governments to enable them to enrich policy and decision-making. Importantly, going forward, governments should also ensure that people are not just consulted but that they also feel empowered to shape the decisions that affect them and that they are able to co-create solutions to some of the most complex social and economic challenges we face.

Notably, as governments start to think about the metaverse – an immersive world which is set to become the main technology interface in coming years – the importance of human-centricity and engaging citizens will certainly take on an entirely new meaning. Successful experiences in the metaverse will more than ever hinge on a true and deep understanding of emerging customer behaviours and expectations. As an outcome, it’s predicted that governments will going forward place more focus on human-centered design, behavioural insights and analytics than perhaps ever before.

Despite technological advances being made however, which show great promise, there continues to be a large minority of citizens that lack the skills or means to access digital services. According to an EY study, globally, almost one-third of citizens (32%) think the benefits of technology will not be equally spread across different groups in society and 34% think that technology gives more power to those who are already rich and powerful. Many also fear that increasing reliance on technology and the digitization of services, alongside many governments rationalizing resources in a bid to reduce their cost base, will lead the most vulnerable groups in society to become more isolated as physical support centres for examples start to close. Supporting people to become more comfortable and competent with technology is therefore critical. In support of this, 61% of survey respondents said that they would be likely to use government training schemes to improve their digital skills, if available – although levels of interest vary across countries. Regardless of such schemes however, governments will need to ensure that those who are not digitally connected continue to have alternative ways of accessing services. In the near future therefore, it’s likely that physical service centres, which have long allowed governments to engage with citizens in a face-to-face manner, will continue to exist – although they will likely evolve from what we know them today.

As governments look to deliver improved services, they must also place focus on sourcing people with new capabilities and upskilling their existing workforce. To support this, several governments are running large training programmes that are focused on equipping people with knowledge of emerging technologies for example. However, of equal or perhaps even greater importance is the need for people to adopt a new mindset to enable them to operate, and design and deliver the services of tomorrow. In short, an effective digital state, perhaps begins with an empowered and motivated digital workforce, and the transformation of services requires that humans are put at the centre – that is citizens and civil servants.
Senior Digital Education Programme: Seoul, South Korea

To support inclusion and help adults aged 65 and above to become more tech-savvy in an increasingly digital world, the city of Seoul has developed a digital education programme that looks to teach and provide resources to senior citizens to help them use digital devices such as smartphones and self-service kiosks.

From needing to scan a QR code on a smartphone, to providing proof of vaccination to be able to enter any sort of public facility, to having to use self-serve kiosks to order food at many restaurants and supermarkets, digital education for senior citizens has become a necessity as the country continues to accelerate the digitization of services. Due to the success of the programme, it has been confirmed that the government will further invest in such schemes.

Capacity Building, India

To educate government sector employees on the potential benefits that emerging technologies and digital solutions can deliver, the Indian government is currently running awareness sessions with ~1 million civil servants, at every level of government, across India. It is believed that equipping government sector employees with this knowledge and keeping them up to date is just as critical as building the digital literacy skills of citizens. In addition to delivering training, the importance of changing people’s mindset to reduce resistance that some may show towards introducing and/or adopting new technology solutions was also stressed. Further, it was mentioned that whilst work is needed at an individual level, work is also needed at an organizational level to change current ways of working.
Established at the beginning of 2019, Accelerate Estonia represents an innovation unit within the Estonian government that is tasked with solving the country’s most complex challenges and identifying new ideas that can help the government better serve its citizens and create economic value.

More specifically, it provides the launchpad for moonshot ideas that have the potential to create true systemic change and runs one-of-a-kind experiments. Above all however, it acts as a filter that helps validate where government can help with radical innovation and where not.

So, how does it work?:

1. Individuals and ministries that are open to rapid innovation are identified.
2. The complex problem(s) that needs to be solved and which doesn’t yet have a solution is defined with respective stakeholders.
3. Innovators that offer possible out-of-the-box solutions are called for.
4. Innovators that deserve proper investment are identified and evaluated.
5. Innovators are offered access to government, an R&D grant that enables a meaningful pilot to be conducted and the Accelerate Estonia brand to highlight the necessity and urgency of the experiment.
6. Innovators and their public sector counterpart(s) to prove that they can push the edge of government where it has never reached before.
7. For those that make it, follow-up investments may be available from public and/or private sector sources.
Taking a human-centered approach has long been a differentiating method that organizations globally have used to fundamentally understand and empathize with their customers, and solve complex problems – all in a bid to deliver improved and more innovative solutions and services.

However, in light of technological advances being made and as people increasingly work, live and play in both the physical and digital world, putting users at the centre of both design and implementation efforts, and co-creating solutions with a diverse set of stakeholders, in an agile manner, will become more critical than ever before – if government are to deliver services of real value and to prevent the digital divide from widening even further.

At the same time, it’s critical that focus is also be placed on introducing new capabilities and upskilling those individuals that serve citizens to ensure they have the right mindset and skillset to deliver the services of today and tomorrow.
Chapter 3

KEY TAKEAWAYS

Success should be defined by the value that a service delivers and not solely the uptake rate of a service.

How citizens wish to engage with the government should be decided by citizens themselves.

1. Ensure that services deliver real value to end-users / customers.
2. Leave no-one behind. Accessibility and inclusivity are key. It is the role of government to serve all its citizens. As a first step, barriers to accessibility and inclusivity must therefore be clearly understood and resolved effectively.
3. Develop a thorough understanding and appreciation for the potential that technological advances and data have the ability to deliver but, place the citizen at the heart of all design and implementation initiatives.
4. Governments must take the next step and view citizens as partners and not solely customers.
5. Work in an agile manner to improve the services of today and the services of tomorrow – ensuring that experimentation, working iteratively and feedback loops are embedded in the service design and implementation process.
6. Governments must build partnerships with a diverse group of stakeholders to deliver the services of tomorrow – including citizens, academia, private sector entities, etc.
7. Even in a digital society, governments will continue to deliver services through digital means and through physical service centres.
CHAPTER 4

AI: Enabling Next-Generation Government Services

Speakers

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Dr Nele Leosk
Ambassador-at-Large for Digital Affairs, Ministry of Foreign Affairs, Estonia

Dr. Carlos Santiso
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Kyoung Jun Lee
Professor of AI & Business, Kyung Hee University & Director, HAREX Infotech User Centric AI Institute, Korea

George Atalla
Global Leader, Government and Public Sector, EY

Marta Tomovska
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Moderator

Dr. Eva-Marie Muller Stuler
Partner – EY MENA AI, Data and Analytics Consulting Leader
Governments have been collecting and storing data about cities and citizens for hundreds of years. The issue is not with the volume of data. However, more focus needs to be placed on the reliability and quality of data, and on minimizing silos that may exist between government entities.

AI has the potential to revolutionize the way governments around the world operate and the services they deliver. And, more importantly, if applied right, AI can deliver better outcomes for society at large and help tackle some of the most complex global challenges the world currently faces. However, whilst some governments have been faster to adopt AI than others, the majority have yet to embrace it - despite most if not all government entities claiming that digital is a top priority on their agenda. As per a recent EY survey commissioned by Microsoft, only 4% of agencies surveyed reported that they have managed to scale the use of AI to achieve real transformation in services. Nevertheless, from making the border-control process more efficient and seamless, to helping deliver better customer experiences through mechanisms such as automated tollbooths, to tackling environmental issues – AI is already being applied by different governments across the world and new use cases are continuously being identified.

Overall, AI represents a set of technologies and capabilities that can help governments by supplementing certain human competencies or, in some cases, replacing them. Largely however, AI can help in three main areas including:

- Sensing - AI can augment or replace human sensory capabilities, speeding up simple tasks such as visual detection. For example, AI software can automatically analyze street and traffic cameras in real time – enabling governments to make the best use of public transport, reduce pollution and manage the flow of traffic.
- Thinking and Personalization - AI and related technologies, such as machine learning, deep learning and natural language processing can analyze and process large volumes of data much faster than humans, and in some cases, more effectively. Some governments are already using these technologies to help teachers fill the gaps in teaching and learning – for example, by carrying out admin. tasks and tailoring learning to different pupils’ needs. In another example from the healthcare industry, AI has the potential to improve patient outcomes by analyzing individual patient information and proposing more personalized treatment plans.
- Acting - AI and related technologies such as intelligent automation (think virtual assistants or chatbots) can take simple decision-making tasks off humans – freeing up time for front-line workers to focus on activities that improve services and citizen experience.

By 2025, we expect 90% of all internet content to be created by AI. This provides many opportunities but this could also lead to a number of issues such as misinformation. The ‘dark side’ of AI needs to be addressed.
Given that so many people are apprehensive about sharing their personal data, perhaps insights that are obtained from data sets can be shared instead of the data itself.

Frameworks that govern data differ across borders. So, how do we feel safe to exchange data to support interoperability? We will need to solve this in the near future.

One of the risks we have is that some parts of the population that are ‘data poor’ and this is a problem even in developed countries.

Despite the potential that AI offers however – for governments to truly derive value, they need to have a single view of citizens’ data and be able to share it in a relevant way across multiple government entities and departments – whilst at the same time protecting the data and privacy of citizens. As reflected in the Edelman Trust Barometer (2023) however, in many parts of the world, trust in government continues to be a challenge – leading many citizens across the world to be reluctant to provide and share their personal data.

To overcome this, governments need to have legislation and standards in place, and urgently build a trusted framework that allows the adoption of AI at scale, mitigates the risk of misuse and still encourages innovation to take place. Importantly, having such a framework will also give public sector teams working on AI related initiatives increased confidence that AI initiatives being completed will have a positive impact on people’s lives and society more broadly – as some today continue to be concerned around the harm that AI can potentially cause.

Of equal importance, and as communicated by panel members, whilst governments commonly collect and hold a high volume of data, data that is available must be of quality and reliable. Otherwise, there is a risk that algorithms could be biased, and outcomes generated from AI could be unexplainable and potentially cause harm. Additionally, consideration must also continue to be given to the fact that ~850 million people around the world do not have any form of official identification and that some governments are therefore not collating data from certain factions of society – leading data sets to be incomplete and ultimately outcomes that are derived to be distorted or inaccurate. What is essential going forward therefore is that a robust governance and ethical framework exists.

In addition to the above, another common challenge that several governments are facing, impacting their ability to deploy AI, is a lack of skills and resources that can implement the technology – with many lacking key data and digital skills. To tackle this issue, many governments are running training interventions and even exploring mobility programmes between the private and public sector. At the same time, governments are also having to grapple with the fact that some people are opposed to AI becoming more mainstream in fear that it will take away jobs – even though the introduction and use of AI does in fact allow people to work on more value adding tasks. As a first step, governments must therefore educate their workforce on AI and the value that can be derived.
CASE STUDIES

AI use cases shared by panel members:

**Border Control, UAE**

As an outcome of AI, the border control and immigration process at Dubai Airports provides customers with a seamless travel experience – giving visitors a positive impression of the city they’re about to enter and visit.

**Court Documents, Estonia**

Using AI, the government can detect personal data in court documents which is then redacted automatically before any court decision is made public.

**Government Procurement, Brazil**

Using AI, fraud and corruption can be identified within government procurement processes and to spot anomalies in public / government contracting processes.

**Food Security & Climate Change, Serbia**

In Serbia, AI is being used to tackle society-wide challenges including the burning of fields after the harvest – helping the country to tackle food security and climate change.

**Highway Toll Gates, South Korea**

Using AI, individuals can drive through highway toll gates in Korea without having to take any action, as AI cameras automatically recognize car plate numbers and the cost incurred to travel through a toll gate(s) is automatically deducted from the customer.

**Road Transportation, USA**

Referencing information from several sources including sensors, cameras, applications such as Google Maps etc. AI can inform the police and road transportation department on where challenges lie and drive more informed decision making.
Governments across the world are increasingly realizing that AI has the potential to deliver better outcomes for citizens and society. However, whilst many governments use some form of AI, there continues to be huge untapped potential to expand its use to fundamentally re-imagine and transform how governments deliver services and the actual services they deliver.

For governments specifically, however, the road ahead is not simple. Not only must governments overcome key challenges such as data quality and trust – but it is also the government’s responsibility to role-model AI’s use, identify and manage the risks that AI poses, regulate how companies apply it, and educate both citizens and civil servants to be ready and educated on its usage and potential benefits.

Ultimately however, governments must look to deploy trusted, ethical and human-centred AI that delivers better citizen outcomes.
Chapter 4
KEY TAKEAWAYS

What is key is that data is available, reliable, accessible and of quality.

In light of ChatGPT, it’s likely that all government services will in the future become conversational but language processing has to be improved.

AI is a game changer in public administration that is disrupting government services.

1. Both citizens, starting with school children, and civil servants need to educate themselves on AI and other emerging technologies to enable people and governments to capitalize on the potential benefits that AI and other technologies have to offer.

2. The quality and reliability of data continues to be an area of concern that needs to be addressed. To support this, data pulse checks should be conducted to verify factors such as the volume of data and reliability of data, and focused initiatives/programmes need to be set-up.

3. Look to open AI codes and increase data sharing between government and even between public and private sector organizations.

4. Data interoperability across borders should exist. However, supporting legislation and a common governance framework must exist and be agreed by respective parties to enable different governments to feel safe to exchange data.

5. Re-think existing and build new partnership models to drive innovation and find solutions.

6. Ensure that legislation, standards and principles are in place that govern data ownerships, data collection, data storage, and data usage and sharing to build and maintain trust.
CHAPTER 5

Metaverse: Mapping the Next Frontier of Government Services

Speakers

H.E. Eng. Mohammad Ibrahim Al Zarooni
Deputy Director General for Information and Digital Government Sector, TDRA, UAE

Ian Khan
Metaverse Futurist & Future Readiness Pioneer

Vishal Gondal
Founder & CEO, GOQii

Dr. Jonathan Reichental
Founder, Professor, and Author

Robert Wolcott
Co-Founder & Chair, The World Innovation Network (TWIN Global)

Ryan Androsoff
Founder and CEO, Think Digital

Moderator

Prem Kamath
Partner – EY MENA Digital Experience, Platforms and Engineering Lead
The metaverse no doubt offers exciting opportunities. However, many communities around the world today still lack access to the internet and services, and some governments are still paper based. The basics therefore still need to be worked on to ensure accessibility and inclusivity.

Even if the metaverse emerges, it will be alongside other digital channels to ensure that the needs and expectations of all citizens are met.

Every so often, a new technology paradigm emerges which promises to fundamentally re-engineer industries, economies, societies and daily life. Roughly 10 years ago since the last such shift – social, mobile, cloud – we may now be on the cusp of a new one – the metaverse. Touted as the successor to the internet, the metaverse is defined by some as a shared, immersive, three-dimensional virtual realm where people interact with objects, the environment and each other through digital representations of themselves or avatars.

With the pandemic accelerating the convergence of physical and digital, coupled with the evolution of complementary and emerging technologies, the metaverse is predicted to manifest on a wide spectrum and set to offer endless possibilities across all industries including the government sector. Demand for more proactive, personalized, transparent, seamless and inclusive services is ultimately pressuring governments globally to re-imagine their services and the digital solutions they leverage to deliver an improved experience.

The fusion of our physical, digital, and virtual worlds – into the metaverse, is projected by some to represent a ~$800 billion market opportunity by 2024 and will enable many to explore and capitalize on new revenue streams. Importantly however, it is likely that the metaverse will result in new cross-sector collaborations and partnerships, and business models to be established. This particularly holds true given that many governments are operating with a tighter purse than ever before and may not have the necessary skillsets required to support a shift to the metaverse. This also holds true if the metaverse is ever to be truly interoperable – a world wherein different virtual worlds and platforms interact with each other, and where data and content can be shared across platforms.

The endless opportunities and scenarios that the metaverse is projected to deliver ranges from increased collaboration across borders, a new generation one-stop-shop of digitized government services for every possible audience and government service, to a digital embassy, to immersive democratic interactions, to richer experiences in education, tourism, and cultural events. In addition to this, it’s projected that collective intelligence could also increase as an outcome of immersive virtual meetings and workshops being conducted in the metaverse, which could in-turn allow governments to explore and build consensus around solutions that could look to solve some of humanity’s most pressing challenges. At the same time, with the evolving capabilities of VR technology, citizens can potentially immerse themselves in realistic simulations such as a political debate, enabling a citizen to get a much more intimate sense of a candidate’s policies and platforms. In many ways, the metaverse has the potential to make politics, as an example, more transparent, efficient, and engaging than ever before.
From immersive workouts in reality-defying environments to obtaining advice from top coaches – the gamification of exercise, through VR headsets, is already popular with many. Why can’t gamification be applied in the metaverse to other real-world scenarios to deliver better citizen outcomes?

The immersive era however will require a radical shift in the way in which companies approach customer engagement, and whilst putting human interests at the core has been an increasingly differentiating characteristic for enterprises today – in the metaverse – this will take on an entirely new meaning as individual personas will manifest and want to teleport across the virtual immersive landscape. Successful experiences in the metaverse will therefore increasingly hinge on a true and deep understanding of current and emerging customer behaviours, needs and expectations. Additionally, given the unintended consequences that technological advances have already had, as the metaverse becomes the next main technology interface, it is likely that increased emphasis will be placed on techno-ethics and the impact that the metaverse could have on people’s health and wellbeing.

Evidently, frameworks, standards and new legislation will also need to be introduced to govern the metaverse, to tackle concerns related to data privacy and security – something which citizens are increasingly apprehensive about and that can further diminish trust. However, establishing new laws and regulations may prove complex and is likely to require extensive collaboration and consultation. This also comes at a time when regulators are already grappling with trying to manage the challenges that current digital technologies present. In the near-term, it’s predicted that our portal into the metaverse will be through virtual and augmented reality devices. This will allow people to interact in the metaverse. At the same time however, this will also allow companies to increasingly track personal data such as facial expressions, blood pressure, eye gaze and more.

The metaverse without doubt promises to deliver many benefits. At the same time however, we must also continue to bear in mind that ~2.6 billion people today remain unconnected – leading many to question whether the metaverse may therefore further widen the digital divide and negatively impact those that are less advantaged disproportionately. To prevent this, governments worldwide will need to place great emphasis on initiatives that look to increase accessibility as well as digital literacy among their population. Without this, we risk disconnecting as many people as we connect.

In conclusion, with any new technology wave comes competing visions of dystopia and utopia. The metaverse is no different. And, whilst we cannot yet fully imagine the entire gamut of benefits or risks that will emerge, it is clear that we are about to launch into a fascinating new dimension of the human experience and that private and government entities alike will need to fundamentally re-think and re-imagine how they deliver services today if they are to meet the needs and expectations of customers tomorrow.
Estimated to be completed by 2026 and supported by a ~$200M fund, South Korea is launching a virtual replica of the capital’s city with an overall goal of improving its public services. It’s also believed that resulting projects will create upwards of 1.5 million jobs and boost the vibrant startup ecosystem in major South Korean cities, including Seoul.

In its initial stage, it’s said that citizens will be invited to use avatars to get their tax questions answered, gain access to youth counselling, and attend virtual consultations with city officials. In essence, the city’s goal is to tackle existing challenges that relate to availability and time latency as users will in the future have access to services 24/7. In future stages, the virtual world is projected to expand to real-estate and foreign investor services.

Although the metaverse initiative is a predominantly driven by big-tech and the private sector, South Korea is among one of the first governments to make such a significant investment in the metaverse and could very well provide a blueprint for others to follow in coming years.
Launched in July 2022, Dubai’s Metaverse Strategy aims to turn Dubai into one of the world’s top 10 metaverse economies as well as a global hub for the metaverse community. The strategy aims to build on Dubai’s achievement of attracting more than 1,000 companies in the fields of blockchain and metaverse, and overall, it aims to promote Dubai’s ambition to support more than 40,000 virtual jobs by 2030 and increase the number of blockchain companies x5.

More specifically, Dubai’s Metaverse strategy seeks to:

- foster innovation, enhance the metaverses’ economic contribution through R&D collaborations, and promote advanced ecosystems utilising accelerators and incubators that attract companies and projects to Dubai
- foster talent and invest in future capabilities by providing the necessary support in metaverse education to developers, content creators and users of digital platforms in the metaverse community
- develop Web3 technology and its applications to create new governmental work models and develop vital sectors including tourism, education, retail, remote work, healthcare and the legal sector
- develop global standards to build safe and secure platforms for users, and develop a metaverse infrastructure and regulations to accelerate the adoption of key technologies that will support the metaverse.
The metaverse has the potential to transform the way in which we approach real-world concepts, participate, and avail/experience services. However, the following needs to be addressed as we move into this new, immersive era and begin adopting it.

1. Readiness of citizens given existing challenges related to accessibility and inclusivity
2. The actual value add citizens will derive from availing/experiencing a service in the metaverse
3. The standards and regulations that will govern the metaverse to support the wellbeing of citizens.

Going forward, as organizations look to operate in this new dimension, it will be critical for governments and the private sector to consider where they fit and to re-assesses their capabilities – all whilst ensuring that the core focus of what they intend to deliver still places the customer/citizen at the centre.”
Chapter 5

KEY TAKEAWAYS

The metaverse – It will perhaps represent a new society.

If governments can in the metaverse turn what citizens feel they ‘should do’ into ‘want to do’ then governments will truly have a chance at driving better citizen outcomes.

1. A new technology paradigm is undoubtedly emerging – the metaverse. It promises to transform every aspect of the human experience and impact all sectors including government. However, whilst presenting exciting opportunities, the metaverse is in its infancy and several critical challenges need to be addressed.

2. The metaverse will likely represent one channel, alongside others, through which services can be accessed and availed/experienced to ensure accessibility and inclusivity.

3. New cross-sector and in the longer-term even cross-border collaborations and partnerships, as well as business models will likely emerge to enable governments to deliver services in the metaverse.

4. The immersive era will require companies including governments to fundamentally re-imagine how they engage customers and deliver services, and will require a thorough understanding of current and emerging customer behaviours, needs and expectations – more so than ever before.

5. New frameworks, standards and legislation will need to be introduced to tackle any unintended consequences and govern the metaverse – to protect citizens, and their data and privacy.

6. In contrast to Web 2.0 where data is largely controlled by a few large corporations, Web 3.0 will most likely place more control at the hands of the user – a shift that has already started to take place.

7. ~2.6 billion people globally have no access to the internet today. As an outcome, governments will need to conduct wide-reaching and engaging initiatives to increase accessibility and digital literacy to prevent the metaverse from further widening the digital divide.
INDIVIDUAL CONTRIBUTIONS TO THE WORLD OF GOVERNMENT SERVICES
DigiLocker – Digitizing Citizen Data & Documents to Build a National, Federated Ecosystem

Amit Ranjan
Tech Entrepreneur, CoFounder SlideShare, exProduct Architect, DigiLocker

DigiLocker was launched by the Government of India in 2015 – it is a key initiative under #DigitalIndia, the Indian Government’s flagship program aimed at transforming the country into a digitally empowered society and knowledge economy. The project’s goal is to build a national federated, interoperable data and document network for India’s 1.3 BN citizens. The platform works by digitizing citizen data records and enabling a public-private paperless ecosystem for issuance and usage of this data in a consented, secure and privacy compliant way. Indian citizens are issued various documents & certificates over their lifetime by various government agencies (e.g. Passport, PAN Card, Driving License, Voter Card, school & college certificates). DigiLocker digitizes these citizen records directly from the source, issues them digitally to citizens via their digital identity (Aadhaar number), and enables a digital transaction ecosystem to minimize paper usage. This results in increased transparency, faster turnarounds, reduced bureaucracy, and significant cost savings for both private and public sector organizations.

150 MN Indians are already DigiLocker users today, using 5.6 BN documents issued by almost 2300 issuing entities. Citizens are using DigiLocker in several ways that make their lives simpler and paperless – this could include ID/background checks at airports and railway stations, showing digital driving licences when stopped by a traffic policeman on the road, or students applying for university courses and scholarships using their digital marksheets. Banks, NBFCs and Fintechs use DigiLocker extensively in their digital KYC processes. Coupled with India’s digital identity system (Aadhaar), DigiLocker is becoming an indispensable digital tool for citizens, organizations, businesses, and institutions alike.

A spin-off benefit of DigiLocker is its role in the creation of a whole new swathe of digital infrastructure technologies and platforms that are built on top of its APIs. The National Academic Depository (NAD) in the education sector, the National API Gateway (API Setu) as a gateway for accessing government APIs, the National SSO (MeriPehchaan) as a single signon service, have all been spawned from DigiLocker. This is helping accelerate the overall mission of India’s digital transformation.
Building a national platform like DigiLocker wasn’t without its own set of challenges. The system had to be scalable, based on open standards and without technology or vendor lock-in. And all this had to be backed by appropriate amendments to the Indian Information technology (IT) Act, and its subordinate rules and regulations, so it can withstand legal and constitutional scrutiny. Creating an interoperable ecosystem for issuance and consumption of data and documents required a robust public-private partnership. Digitizing citizen data and documents across government and private issuers across the length and breadth of India was a gigantic task, and no single entity could do justice to it. This necessarily meant that multiple stakeholders - central, state, and local governments, financial sector regulators, business and industrial organizations, academic institutions all had to be interwoven into the paperless ecosystem in an economically sustainable model.

As a government incubated platform, DigiLocker has emerged from its initial phase, but a lot more needs to be done to drive its impact and usage nationwide. It’s current set of users largely reside in the cities and towns and are from the mid to higher economic sections of the society. Driving its adoption in the rural hinterland and villages, extending it to vernacular speaking audiences, and those in the lower economic strata must be prioritized. The government also plans to expand its use case – from being just a citizen data & document repository, to extending to its entities (organizations).

It is important to understand that DigiLocker was not built as an isolated, standalone platform – rather, it is an intrinsic part of #IndiaStack – the generic name given to a set of open APIs and digital public goods (DPGs) to unlock the economic primitives of identity, data, and payments at population scale. Besides DigiLocker, #IndiaStack encompasses other government platforms like Aadhaar, eKYC, UPI, eSign, Account Aggregator – all working in tandem to usher India into the presenceless, paperless, and cashless age. The vision for #IndiaStack is not limited to one country; it can be applied to any nation, be it a developed one or an emerging one. It just so happens, that this stack of digital public goods was conceptualized and first implemented in India, where its rapid adoption by billions of individuals and businesses has helped promote financial and social inclusion and positioned the country for the Internet Age.
Governments Should Adopt a Citizen-First Approach in Payments

Sandro Gianella
Head of EMEA Public Policy at Stripe

In the past few years, it has been heartening to witness governments around the world take advantage of technological innovation and adopt citizen-first thinking. We have seen examples in countries including the United Arab Emirates (with UAE Pass), Singapore (with PayNow) and the United Kingdom (with GOV.UK Pay). These governments acted quickly to provide faster, more efficient and more secure payment services to their citizens and residents.

Governments are increasingly coming up with solutions that are seamless, user-friendly and allow citizens and residents to pay for various services online such as utilities, renewing their visas or passports, transferring money to each other and even making donations. Partnerships between government and the private sector have accelerated this improvement of the citizen experience, introducing moments of delight in day-to-day transactions that were not traditionally known to be easy, quick or even happening online at all.

We’re seeing that governments across the globe are getting better at making sure paying online becomes easier for citizens and residents. Some countries even come up with payment systems that bring a large portion of their population online. Just look at Brazil, where Pix, an instant-payments system launched by the Central Bank in 2020, is now used by more than two-thirds of Brazilian adults.

When Stripe started in 2011, it was to help digital-first businesses accept payments online. Today we’re supporting businesses across all sectors and of all sizes to expand their Internet presence and reach more customers in more places. We’re building economic infrastructure for the Internet economy and continue to be amazed by the ways in which entrepreneurs are using our technology to build and scale their operations. It’s only natural that more and more governments are rethinking not just their online presence but how it can help close the gap between citizens and government services.

Indeed, with the rising demand for digital payment solutions and the efficiencies introduced by the private sector, citizens and residents expect government services to match the frictionless experiences they have gotten accustomed to. Policymakers should aspire to support the transformation of the payments landscape for government services by taking advantage of innovative technologies to improve the experience for all their stakeholders. Citizens, residents, business visitors, and tourists: for each of these groups, payments technology can make interactions with government agencies significantly easier.
We are living in a world that has come to be characterized as a product of endless technological developments and innovations that make our lives easy. At the same time, we are living in a world where citizens have effectively become the main drivers of positive change. Although one cannot dismiss the importance of technology, it is imperative that we acknowledge the potential of citizen engagement in helping us identify and address certain challenges. Citizens come from various walks of life, which is why their active participation are bound to help governments access a large pool of innovative ideas.

The provision of public services is the area that clearly demonstrates such potential. Realizing its importance, in 2012, the Government of Azerbaijan, under the guidance of H.E. Ilham Aliyev, created a “one-stop-shop” mode of public service delivery that would come to be known as “ASAN Service.” Today, the “ASAN Service” centers in Azerbaijan provide over 360 services of both public and private organizations within a single space, based on the principles of good governance like accountability, responsiveness, transparency, and effectiveness. What is important to realize is that “ASAN Service” has been largely successful due to it being tailored to citizens’ needs. These are the same needs that have made “ASAN Service” reach out to all citizens, especially the ones that do not have ready access to public services. One important social innovation in this regard is the Mobile “ASAN Service” model of public service delivery, which is a fleet of specially-equipped buses and a train that bring public services to such citizens’ doorsteps, regardless of their geographic location.

The Azerbaijani “ASAN Service” experience shows that citizen engagement, if utilized correctly, can become an important source of innovations. Although the “ASAN Service” centers rely on modern technology to streamline some of the daily processes, their main strength lies in face-to-face interaction with citizens. The one-stop-shop centers like “ASAN Service” are what encourage citizens to engage and help governments in improve their modes of delivering public services. By analyzing the feedback that are submitted to us by citizens through official social media pages, corporate websites, a call center, or even volunteers, we later use them to improve on our delivery methods. This, inter alia, demonstrates how active citizen participation, through the one-stop-shop models like “ASAN Service,” can help governments create a room for innovations and further enhance their public service delivery methods.
The fourth industrial revolution is an excellent chance for Serbia and other countries to win, offsetting for our inability to capitalize on the third. It represents a perfect opportunity to transform our labor-intensive economy into a knowledge- and innovation-driven one, with technology serving as the driving force behind that transformation.” – said Prime Minister of Serbia, Ana Brnabić, in her inaugural speech in 2017.

And it turned out that this was the ideal strategy. Every second job added in 2022 was in the ICT industry, which is currently the largest net exporter. In Serbia’s case, the government support was critical in improving the ecosystem for innovation. National support for life-changing technologies has proven to be not only a matter of national responsibility, but also a wise investment with high economic returns.

Building and supporting a solid AI ecosystem was one of the reasons.

That achievement was undoubtedly aided by the early adoption of a National AI Strategy, the inclusion of AI programs in educational curricula, and the establishment of a government-backed AI Institute. However, there were some additional wise moves...

The development of AI products is based on computationally demanding processes of training multilayer neural networks using large datasets. The computational infrastructure required for these activities is often very expensive and not easily accessible. To encourage the development and implementation of AI by the public agencies, academia, start-ups, and SMEs, the government decided to establish a National AI Platform based on the NVIDIA AI supercomputer.

The Platform was established in 2021 and made freely available to these organizations. The home of the Platform is the recently constructed Government Data Centre in the city of Kragujevac – one of the biggest and the most sophisticated data centres in Southeast Europe. Today, we can proudly say that the Platform serves as a “kitchen” for a number of cutting-edge AI projects.
In order to improve the delivery of public services, the government is experimenting with automated decision-making systems, including algorithms. Machine learning is already being used by Serbian National Power to forecast electricity demand and costs. We are testing machine learning in Serbian courts to help judges make decisions in routine instances like traffic violations.

Serbia is also taking strong steps to transform public healthcare and education, through innovative use of mixed reality technology powered by AI. Through remote collaboration using HoloLens headsets, doctors in some of the biggest public hospitals in Serbia have the same insight into patient’s condition without the need of physical presence, enabling joint real time inputs and medical interventions with experts from anywhere, as well as remote education for medical students.

In addition, the government is investing in “AI literacy” in the public sector. Some of the most creative uses of disruptive technologies were included in the online interactive training “Fourth Industrial Revolution: New Technologies” that was made available to the entire public sector by the National Academy for Public Administration. Through highlighting the novel ways how AI, AR/VR, metaverse, blockchain, IoT, Robots/Drones, 3D printing and platform economy models can affect the public sector and the society at large, civil servants in Serbia are now in a better position to rapidly create, modify, and enforce “future tech” policies and regulations.

Globally, these efforts have not gone unnoticed. Serbia is among the GovTech leaders, according to the World Bank’s GovTech Maturity Index - one of the most comprehensive tools for measuring the potential and capacity of digital governments. Serbia ranks 11th out of 198 evaluated economies, joining digital leaders such as Korea, Estonia, France and the United Arab Emirates.

This position, however, cannot be maintained or improved unless we establish a sustainable system of innovation in the public sector, with even more advanced AI applications. AI has progressed more quickly than many anticipated and we are aware that every app is going to be an AI app. Notwithstanding the risks, in addition to the numerous exciting examples in the fields of healthcare, finance, and the life sciences, generative AI initiatives like OpenAI – ChatGPT, DALL-E, VALL-E, and the applications atop are expected to have a transformative impact on the society.

That is the motivation behind the new GovTech program that the Serbian government is about to launch. Promoting collaboration and introducing a novel method of financing AI and disruptive tech, it will be innovative companies and startups that will help the government advance to the next level.

We are excited to embark on this journey and happy to be joined by international partners who share our vision for the future.
The Metaverse is Coming: Is Government Ready?

Ryan Androsoff
Founder & CEO, Think Digital

In the past few years one of the most hyped terms in the tech world has been the "Metaverse". First coined in Neal Stephenson's 1992 science fiction novel "Snow Crash", it evokes the idea of a persistent, connected online experience that we can explore with all our senses. With the advent of immersive, consumer-grade Virtual Reality (VR) and Augmented Reality (AR) technologies, the Metaverse is quickly transitioning from science fiction to reality.

VR refers to the use of digital headsets that allow users to experience computer-generated images in a fully immersive 360-degree environment. AR, on the other hand, overlays computerized images over the real-world using smartphones or specialized smart-glasses. While these technologies that empower the Metaverse aren’t exactly new, they have recently reached an inflection point of cost, performance, and availability that opens up interesting new possibilities.

Some of the biggest tech companies are investing in developing the Metaverse, including Meta (previously known as Facebook), whose Quest 2 VR headset has become what many would consider to be the first VR mass consumer product with over 15 million units sold in just two years. Apple and other companies are also ramping up their investments in VR and AR, with next-generation products expected to launch soon.

What does this mean for government and service delivery? One of the principles of good service delivery is to meet your customers (or citizens) where they are. That might increasingly mean the Metaverse in one form or another. However, we should be clear that the Metaverse is likely not going to be the appropriate venue for every service delivery need. It is also important to acknowledge that there are some legitimate concerns from an equity and competition standpoint with regards to who will get access to, and control of, Metaverse platforms. The history of major social media platforms over the past two decades and recent controversies over issues such as centralization and censorship of such platforms may prove to be instructive as we think about the future of the Metaverse.
That said, Metaverse technologies are showing some compelling use cases for situations where we want to prototype or explore real-world services using what is often called “digital twins”. As we explore what the future of remote working looks like with workplaces that are shifting post-pandemic to a hybrid model, it allows possibilities for more immersive virtual collaboration across geography. It can also allow for exploring and manipulating data and scientific information in compelling new ways that improve decision-making compared to the traditional 2-dimensional data visualizations that we are used to.

The Metaverse is still very much in its infancy and governments should be careful to sort through the hype to discover where there might be real value for them. This will require building knowledge and encouraging experimentation in this fast-moving domain. We recommend that those in the public sector start thinking about the Metaverse as being a part of their future technology roadmap in the same way that they have been exploring how technologies such as Artificial Intelligence and Blockchain can be leveraged to improve services. The Metaverse may yet prove to be a powerful new way to connect, collaborate, and communicate with stakeholders and citizens. Getting hands-on experience now with this emerging technology will ensure that governments are prepared to take advantage of it in the future while being mindful of how to navigate the potential pitfalls.
EPILOGUE

Governments across the world today are increasingly expected to deliver levels of quality, speed and convenience that are at par with those delivered by private sector organizations. And, in light of the many challenges they face, governments continue to seek innovative ways to solve these complex issues, and place greater focus on delivering improved experiences to the citizens and communities they serve – more so than perhaps ever before. This was clearly showcased at this year’s Forum through the use cases that were discussed.

However, as expressed by panel members – comprising of a total of 39 speakers from across 14 countries and a mix of both private and public sector entities, whilst progress is undoubtedly being made, many governments across the world still need to address and overcome some fundamental challenges to be able to truly transform the services they deliver and to be able to venture into new and unknown territories such as the metaverse.

From the 5 panel discussions that were held at this year’s Government Services Forum at the World Government Summit, the following key takeaways emerged that governments may wish to explore in more detail:

- Leave no-one behind and take a human-centered approach to redesign and implement services. Accessibility and inclusivity are key. It is the role of government to serve all its citizens. As a first step, barriers to accessibility and inclusivity must therefore, be understood clearly and resolved effectively.

- The quality and reliability of data continues to be an area of concern that needs to be addressed. To support this, data pulse checks should be conducted to verify factors such as the volume of data and reliability of such data, and focused initiatives and programmes need to be set up.

- In contrast to Web 2.0 where data is largely controlled by a few large corporations, Web 3.0 will most likely place more control in the hands of the user – a shift that has already started to take place. Consequently, increased focus needs to be placed on data sharing (between governments, as well as between government and private sector organizations) and data privacy, and governments need to be transparent with how people’s data is being used, to enhance trust and adoption.
Cross-border operability needs to be enabled but thought through carefully. Interoperable standards, governance frameworks and legislation lie at the centre of this being able to work effectively, and these must be agreed by all respective parties to ensure safeguards are in place and trust can be built.

For payments, standardization of APIs and interoperability is of paramount importance to ensure that:
(i) information can be connected and transferred seamlessly across the end-to-end journey
(ii) there is reach i.e., citizens from different sections of society and geographic locations are able to make payments to another party
(iii) a hyper-personalized experience can be delivered to citizens.

Central banks globally will continue to govern financial products and payment mechanisms. However, going forward, they should also continue to provide the infrastructure and guidelines that allow innovative solutions to be created. Additionally, they must develop and agree to common/standard regulations between jurisdictions to facilitate cross-border interoperability.

New frameworks, standards and legislation will need to be introduced to tackle any unintended consequences and effectively govern new technologies including the metaverse – to protect citizens, and their data and privacy. However, these must not stifle innovation efforts.

Governments must work in an agile manner to improve the services of today and the services of tomorrow – ensuring that experimentation, working iteratively and feedback loops are embedded in the service design and implementation process.

An estimated 2.6 billion people globally have no access to the internet today. Hence, governments will need to conduct wide-reaching initiatives to increase accessibility and digital literacy to prevent the metaverse from further widening the digital divide.

Lastly, even in a digital society, governments will continue to deliver services through digital means and via physical service centers. Multiple service delivery channels will continue to exist to cater to all citizens.

All in all, the key takeaways as outlined above, have the ability to address some of key concerns that continue to plague governments, and can ultimately improve factors such as accessibility, inclusivity, trust and digital literacy. Lastly, while change can be hard, standing still is not an option. And, only those governments that are able to balance the challenges they are facing and the opportunities that present themselves, will likely reach a new level of maturity and achieve better outcomes for the citizens and the communities they serve.
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For more information on the Forum, please contact info@gx.ae. Read more about this edition at gxforum.ae.

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The Emirates Government Services Excellence Program was launched in 2011, in line with the vision of the UAE to be one of the best countries in the world. His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai launched the program to raise the efficiency of government services to a seven-star level, by focusing on customer centricity and enhancing government efficiency.
Read more about government services and contribute your ideas at https://gx.ae/