Citizen services for the smartphone age

How integrating mobile-based delivery can transform eGovernment services

Capgemini

What's inside

Why mobile-based delivery matters – and why now

Scanning a QR code to activate interactive museum tours, learning new languages through gamified apps and contributing to scientific research by sharing pictures of wildlife. People of all ages now use smartphones to perform a wide range of activities, and they increasingly expect the same intuitive user experience from their public services.

To meet these growing expectations, public sector organizations need to apply human-centered design to create digital citizen services that meet users' needs. They need to work to deliver a one-stop-shop approach – services organized around important events in citizens' lives, rather than around government departments. And they need to meet citizens where they are: on their mobiles.

In the UK, 88% of adults own smartphones, and nearly 33% of financially vulnerable people rely solely on their phones for internet access. By 2030, smartphones will account for nearly 92% of connections globally, up from 76% in 2022[1]. And by the same year, 91% of the European population will be mobile internet users[2].

In this rapidly evolving digital landscape, governments need to make sure everyone can access the services they need, on the device they prefer. Yet currently, citizens in the European Union can complete just 62% of services on mobile devices, compared with 84% on laptops or desktops. And services designed for desktop or laptop use are often not tested for mobiles[3].

This suggests that some governments are reluctant to move to mobile-based delivery, which involves integrating back-end processes and making sure data is secure. It also reflects the varying levels of digital maturity among governments. But prioritizing mobile service design – in particular, through multi-purpose super-apps – allows them to transform citizen interactions and deliver better, more efficient public services. All while creating a streamlined, inclusive user experience.

In this point of view, we will explore the benefits of using mobile service design to create next-generation citizen services. We will share solutions from other countries, being mindful that each country will have its own maturity level and way of providing public services. And we will consider the steps governments need to take to create digital citizen services that people want to use.

1. The Mobile Economy 2023, GSMA https://www.gsma.com/mobileeconomy/wp-content/uploads/2023/03/270223-The-Mobile-Economy-2023.pdf
2. The Mobile Economy 2023, GSMA https://www.gsma.com/mobileeconomy/wp-content/uploads/2023/03/270223-The-Mobile-Economy-2023.pdf
3. eGoverment Benchmark Report 2023, European Commission, https://prod.ucwe.capgemini.com/wp-content/uploads/2023/08/Capgemini_Public-Sector_eGovernment-Benchmark-2023-report.pdf

The road ahead: the evolution of digital citizen services and the opportunities from mobile

In the European Union (EU), governments provide 93% of their citizen services on responsive websites designed for desktop use. But given the prevalence of smartphones, there are clearly opportunities to deliver digital public services on native mobile apps – either individually or grouped together in multi-purpose apps or super-apps.

That does not mean responsive web design has had its day. User research early in the design process will reveal which devices citizens are most likely to use to access certain services. And sometimes, it will still be a desktop or laptop. So, mobile apps represent an evolution, not a revolution, in the story of digital citizenship.

The diagram below shows the options available and how they affect the citizen experience.

Citizen experience

Partially supported by mobile

Traditional channels

Channels such as emails, phone, face-to-face and postal letters that citizens use to interact with local and central government

Fully supported by mobile

Self-service

Online services that allow users to complete tasks – for example, fill in forms or apply for benefits – on a self-service basis

Voice-powered assistants and chatbots driven by AI

Tools that allow users to have virtual interactions with government, finding information and getting answers to their queries

Digital channels for mobile use

Responsive websites

Allow users to access the website content on their mobile devices

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Native apps

Designed for use on mobile devices. Fulfill a wide range of functions and offer personalized experiences

Single-purpose apps >	Multi-purpose apps >	Super-apps >	GenAI-powered super-apps
Often department-specific, these focus on a few functionalities to accomplish a specific purpose, such as storing official documents or applying for state benefits	These serve several purposes – for example, allowing users to check their taxes and make payments while getting multi-language support	"One-stop-shop" multi-purpose apps that combine independently created mini-apps with core features to offer multiple citizen services in one place	These enhance the capabilities of a super-app by adding a layer of personalization – for example, suggesting options based on locations or on previous actions

Digital Public Infrastructure (DPI)

Much as railways and roads connect people and goods, DPI connects the essential components for building easy-to-use digital services.

Identity   **Payment**   **Data**

The pros and cons of each stage of the evolution in digital citizen services

	Responsive websites	Single-purpose or multi-purpose apps	Super-apps
What they are	Websites designed to work well on different devices	Apps designed to work on a specific device, such as an Apple or Android phone. Can serve one or several purposes	"One-stop-shop" multi-purpose apps that combine independently created mini-apps with core features to offer multiple citizen services in one place
Pros and cons for the user	**Pro**: good experience if the content is simple and designed and tested with mobile users in mind **Con**: tend to carry large amounts of information, which can make them challenging to interact with. Often not tested for mobile use	**Pro**: faster than responsive websites because they tend to focus more on functionality than content. And because they are designed for the device, they are naturally more intuitive **Con**: require the user to download the app	**Pro**: if designed well, giving users centralized access to aggregated services makes this the most intuitive and user-friendly option. And, if services are also organized around life events, citizens need only share their information once **Con**: require the user to download the app
Pros and cons for governments	**Pro**: more cost-effective than other solutions **Con**: by posing user experience challenges, they may exclude people who don't have access to desktops	**Pro**: can provide more user insights and simplify specific user journeys **Con**: expensive to develop. And due to the plethora of policy content that usually accompanies public services, it can be challenging to provide a simple and transparent user journey without a complementary web experience	**Pro**: governments must streamline their services and simplify internal processes. Starting with one service and adding more as the user base grows will save on development costs. Driving users to a single app, and marketing to the existing user base when adding new services, will also save costs in the long run. **Con**: expensive to develop and challenging to bring services and departments together. Departments need shared data governance and standards with common entry points to authenticate users

Five benefits of investing in mobile-based delivery for eGovernment services

Whether native single- or multi-purpose, sophisticated mobile apps are creating many opportunities for governments to improve the user experience. They also make it possible to deliver new or existing services that are more accessible to a broader audience, in a more efficient way. Here, we will explore five benefits of investing in mobile-based service delivery, including:

1. Revolutionizing the government-citizen relationship
2. Streamlining digital citizen services
3. Upgrading mobile customer service through the power of AI
4. Making it easy to share important documents
5. Driving public-private sector collaboration.

1. Revolutionizing the government-citizen relationship

Using mobile as a core channel has the potential to revolutionize the relationship between governments and citizens like nothing before.

First, it offers an accessible, more immediate way for governments and citizens to interact. Mobile app experiences are more direct than desktop ones and are designed to be task- rather than process-oriented. A responsive website may signpost citizens to content on how to access a service; a mobile app makes it easier for citizens to navigate services through incremental steps. It also uses features like asynchronous messaging and push notifications to make it simple to initiate, submit and check on the progress of a request. And it limits distraction by removing excess content.

This means that gathering and amending data related to an application can now happen as part of an ongoing conversation. Mistakes can be corrected quickly and the communication is more fluid than is currently possible through common desktop services.

Second, designing services for mobiles makes eGovernment services more inclusive. The pandemic was a stark reminder of the digital divide between lower- and higher-income households[4]. Not everyone can afford larger devices or an internet connection at home. The connectivity and portability of smartphones makes them the obvious choice for people who cannot afford multiple devices. So, adopting mobile-based delivery allows governments to reach more citizens.

2. Streamlining digital citizen services

Multi-purpose mobile apps – in particular, super-apps – make it possible for governments to aggregate and connect multiple services on a single platform. As a result, citizens have access to a true one-stop shop of government (and potentially private-sector) services.

This approach also brings process and efficiency benefits for governments. To optimize the mobile experience, for example, departments need to simplify how they present complex information to users. That means redesigning their services so citizens can accurately navigate complex requirements in incremental steps, completing small chunks of an activity before progressing to the next.

In the case of super-apps organized around life events, this service redesign involves departments coming together to streamline back-end processes, rather than staying in their traditional silos. In Dubai, for example, the super-app DubaiNow consolidates over 170 government and private-sector services from more than 34 departments.

To create it, Dubai invested in government-wide platforms and developed policy and regulatory frameworks to integrate government services effectively. The app acts like a digital gateway to let users renew licences, pay fines, track applications and arrange visas. Users also have a personalized dashboard that shows them the most relevant information first, helping them find the services they need most.
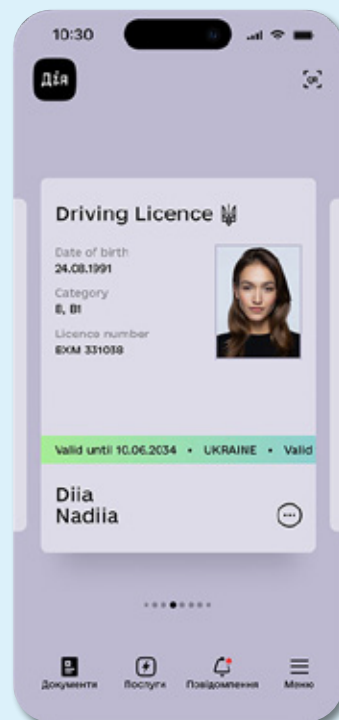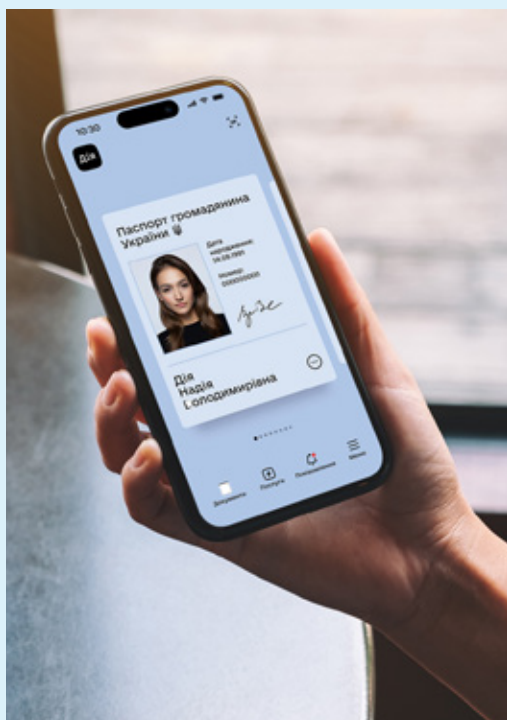
Ukraine's Ministry of Digital Transformation introduced the revolutionary Diia super-app as part of its goal to build the most convenient, people-centered state possible. This robust and scalable platform offers citizens over 100 diverse yet interconnected

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4. https://children-ne.org.uk/more-than-a-third-of-low-income-families-missing-out-on-digital-resources-our-new-report-shows/

eGovernment services to simplify their lives, from registering births and marriages to submitting tax returns and renewing passports. The super-app is part of a larger ecosystem, which includes digital portals for citizens to access essential eGovernment services, free digital literacy courses and advice for small and medium-sized businesses.

As of March 2023, 19 million citizens – over half of the country's adult population – had installed the app[5]. Thanks to this impressive take-up, Diia has become an international benchmark for governments seeking to transform the lives of their citizens by digitizing their services. And inspired by its success, countries including Colombia, Kosovo and Zambia have embraced similar super-app models.

The Diia app has digitized a number of ID documents (passports, driving licenses, etc) and allowed citizens to complete tasks, such as updating a vehicle registration certificate, all on one platform.

5. https://english.nv.ua/business/over-half-of-ukraine-s-adult-population-use-diia-for-online-government-services-70-cellphones-50327243.html

Meanwhile, the Singaporean government's LifeSG super-app organizes over 100 government services into life events like having a baby, getting married and finding a job[6]. It also allows citizens to view their benefit payments in one place. Services are effortless for users to find and understand, and governments can potentially offer services triggered by life events, rather than requested by citizens.
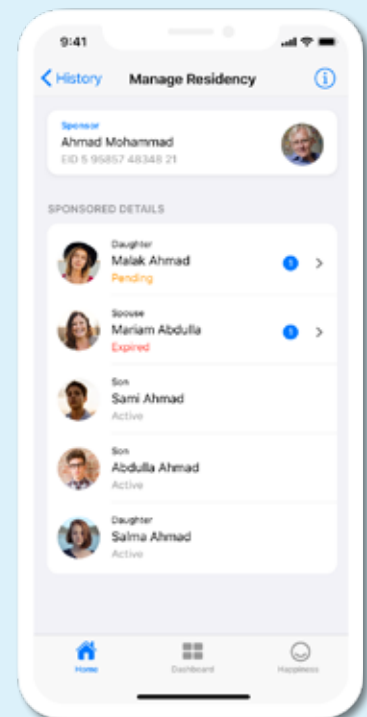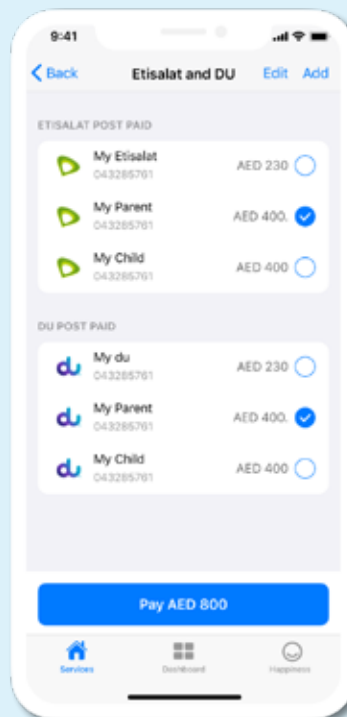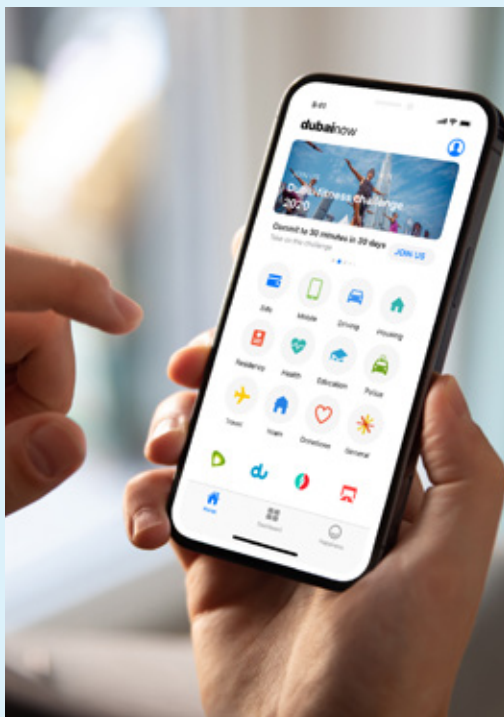
The Estonian government uses a life events approach to deliver digital citizen services, though not currently through a mobile app. Ordinarily, parents registering the birth of a baby online would need to navigate the complexity of finding and submitting separate applications for any relevant benefits. In Estonia, they automatically receive an email alerting them to the benefits they are eligible for, which they can simply accept or reject.

In other words, implementing a life events approach has allowed Estonian digital teams to consolidate several services related to a life event – the birth of a child – into a single user journey. This has improved the user experience for citizens, for whom interactions have decreased from 10 to four[7]. And by reducing the number of technical processes, it has made processing applications cheaper and faster.

You can explore this topic in more depth in our point of view, Citizen Services for Life, Personalizing eGovernment through a life events approach.

DubaiNow offers a range of services, such as renewing residence or vehicle registration, paying fines or applying for social benefits.

6. https://www.life.gov.sg/app

7. OECD Observatory of Public Sector Innovation: Having a child life-event service. https://oecd-opsi.org/innovations/child-life-event/#:~:text=One%20of%20the%20first%20of,parents%20to%20receive%20family%20benefits.

3. Upgrading mobile customer service with the power of AI

Governments are already using the power of AI to transform public sector service delivery on their responsive websites. Conversational AI tools, like chatbots and voice assistants, are giving users answers to their questions at any time. And thanks to advances in generative AI (GenAI), brand-new audio, images, text and videos are helping to create personalized, efficient and accessible interactions for citizens.

For example, in 2014, the Singaporean government introduced an AI-driven chatbot to improve how it communicates with citizens. Ask Jamie now uses large language model (LLM) engines to process, learn and understand natural language. Citizens can speak to the chatbot or type questions, and Ask Jamie can search across 80 government department websites for answers – speeding up the user experience.
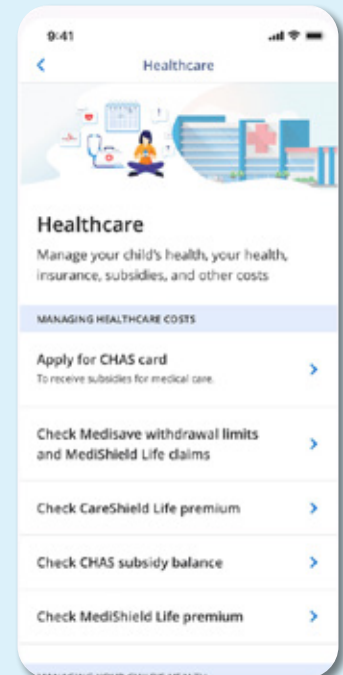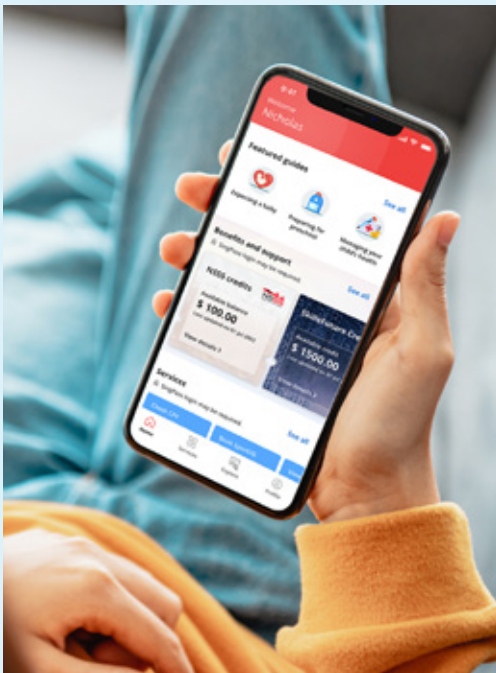
Ask Jamie is now responding to 50% of questions that would typically go to government customer centers in Singapore[8]. This shows how connecting services and automating search functions with AI can take a huge burden away from both the user and government employees. When users get a fast reply, it not only saves them time; it also frees up call center staff to focus on more complex questions and tasks.

LLMs can also reduce the time needed to train, maintain and update chatbots as there is no need to come up with all the possible ways a user could ask a question[9].

Tapping into the full power of AI through mobile service design will allow governments to take customer service to the next level. As we discussed in point 1, mobile apps already offer a more immediate way for governments and citizens to communicate. Incorporating an AI-driven chatbot into a modular mobile app, like a super-app, will make it even easier for the user to find the information they want – fast. And the potential will only grow as these technologies evolve.

Singapore's LifeSG mobile app gives citizens access to over 100 government services and personalized information, consolidated across multiple government agencies.

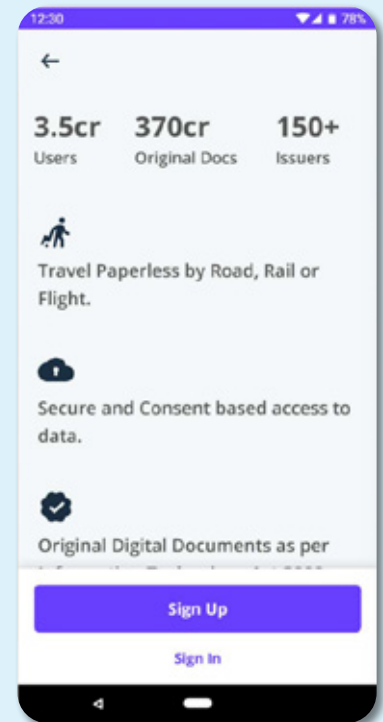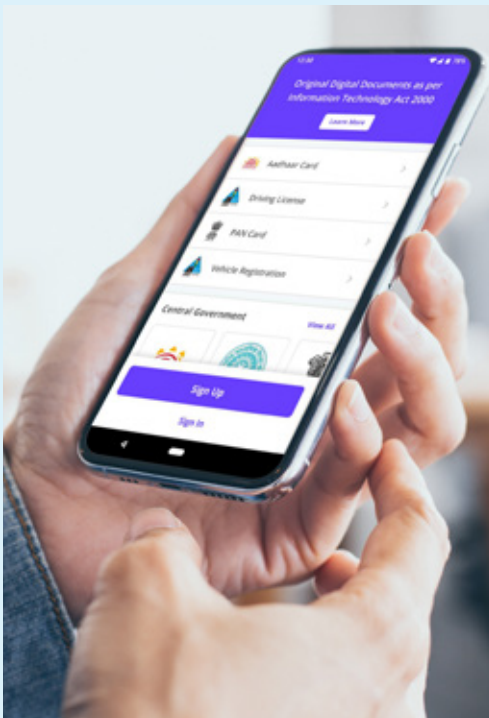8. https://go.sabiogroup.com/rs/710-JZD-844/images/uk-casestudy-digital-singapore-government-ask-jamie.pdf
9. https://www.livemint.com/money/personal-finance/all-you-need-to-know-about-digilocker-and-how-to-use-it-11612943898102.html

4. Making it easy to share important documents

For citizens worldwide, interacting with government involves sharing documents and certificates, which is often inconvenient and inefficient. A mobile-based digital wallet offers a popular solution to this problem by allowing users to upload and share important documents from their smart devices.

In 2015, India launched the DigiLocker app under the Digital India initiative. It securely stores essential documents, including licences, insurance policies, passports, voter IDs and school certificates. The app gained popularity because of its convenience and because it recognized digital documents as legally equivalent to physical ones[10].

India's DigiLocker app provides a personalized experience, with the ability to store documents and access multi-language support.

10. https://www.livemint.com/money/personal-finance/all-you-need-to-know-about-digilocker-and-how-to-use-it-11612943898102.html

Similarly, the IO app that the Italian government introduced in 2018 aimed to centralize public services. It lets users register securely, make recorded payments to public authorities and request and store official documents[11].

Italy's IO App allows users to communicate with central and local public administration, pay fees, apply for benefits and renew official documents such as ID.
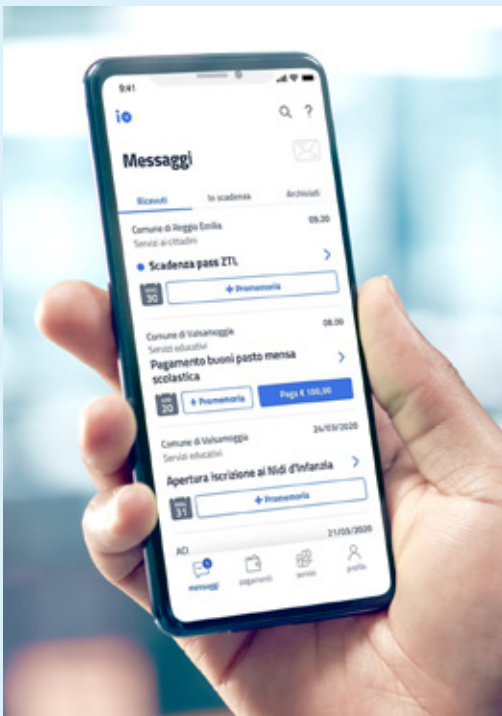
5. Driving public-private sector collaboration

Today's digital citizen expects a great user experience, whatever digital channel they are using.

Delivering this experience on mobile requires governments and private sector organizations to work together in ways that can be mutually beneficial. For example, governments can partner with tech firms to connect eGovernment services and make use of

processes and scalable IT systems. At the same time, those firms can use government funding and data to innovate and engage customers[12].

11. https://joinup.ec.europa.eu/collection/open-source-observatory-osor/news/public-services-app

12. Massimiliano Claps, IDC, Sept 2022, European Government Ecosystem Strategies: Accelerating Digital Transformation Through Ecosystem Collaboration

Here are some examples of where this kind of collaboration could (or already does) reap rewards for existing partnerships, as well as for users:

Governments using private company data or capabilities to improve digital public services.

This involves either integrating private organizations' features into government apps or allowing public services to use private sector assets. For example, letting users pay taxes, fines, fees and permits on eGovernment services using private-sector mobile wallets. Or allowing passengers to pay for public transport conveniently using their cards and contactless payment methods. (An initiative from the International Association of Public Transport Urban, or UITP, connected with financial institutions like Visa and Mastercard.)

Private sector companies using public data to create new private services.

The popular Citymapper app integrates public transport data to give users live transport options to find the best route. And an emerging business model allows the private sector to use not only public data, but also digital public services. For example, private companies could pay a commission to embed government digital IDs or payment services into their apps.

Local authorities breaking the boundaries between public and private services, so users can access everything they need in one place.

In some instances, local authorities allow private sector entities to promote or even sell their products and services through a public services app. For example, when users register their child for school on the Istanbul Senin super-app, they can also buy related items from an integrated marketplace. The appetite for this type of exchange depends on the cultural and regulatory landscape in each country.
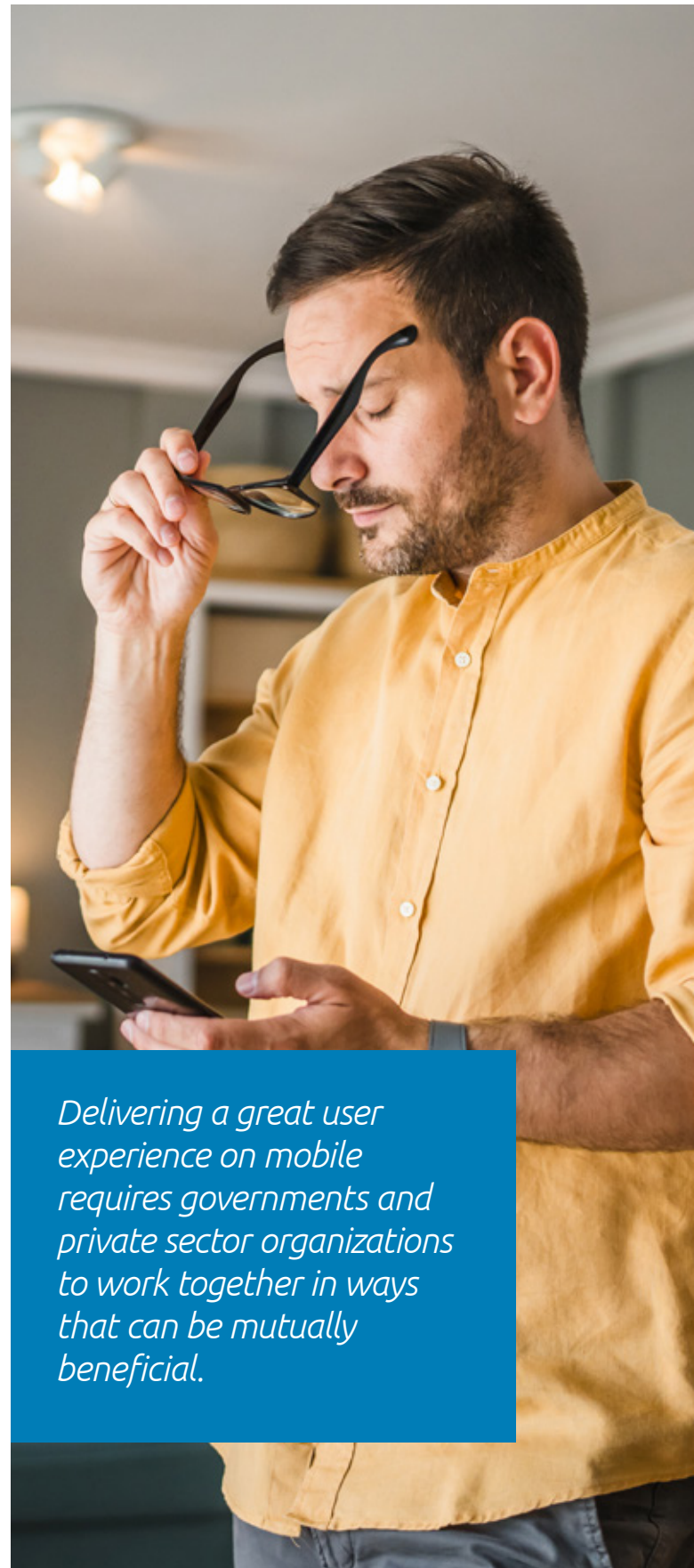
Delivering a great user experience on mobile requires governments and private sector organizations to work together in ways that can be mutually beneficial.

How to design digital citizen services that people want to use

We hope this point of view has given you a taste of the potential mobile technology offers for delivering next-generation digital citizen services. But no service will be effective unless it is designed with the audience in mind. And currently, one out of five citizens that regularly use the internet does not interact with government online at all[13].

To make navigating through these services an easier experience for citizens, governments can:

1. **Get the basics right**
   Investing in digital public infrastructure (registries for digital IDs, payments infrastructure, data exchange and consent networks[14]) is fundamental to unlocking economic value while reaching citizens where they are – on their mobile devices. For example, application programming interfaces (APIs) allow government departments to share data securely, assuming they have implemented common data standards first. This creates endless advantages for citizens, who can complete tasks easily in an app that would ordinarily involve contacting multiple departments separately.

2. **Understand service users**
   Gathering data to understand citizen perspectives and behavior can improve existing services as well as shape new ones. This human-centered design process reveals not only which services users need most, but also how they are most likely to access them (from a mobile, desktop computer or other device). The answer will vary depending on factors including the transaction type, the time it takes to use the service and the level of complexity involved. No matter how vast or small the user base, a combination of analytics and qualitative research can reveal opportunities to include new channels and rethink how services are provided.

3. **Integrate mobile into service delivery**
   Any service built on responsive websites should undergo regular usability testing for mobile. And any mobile app that brings services together should group and present those services in a way that encourages users to use it to complete tasks. From the user perspective, that means making it easy to navigate and find essential information. From an operational perspective, it means having the data needed to process applications and make decisions.

4. **Improve efficiency and the user experience with AI and GenAI**
   Governments can combine a more strategic rethink of how they deliver services with applying AI and GenAI to improve the user experience and employee efficiency. That means equipping employees to communicate with citizens more directly and simplifying back-office operations. For example, Large Language Models (LLMs) are becoming more prominent in improving communication, while Large Action Models (LAMs) can make back-office information easier to find. AI and GenAI also look set to transform how governments carry out repetitive tasks, synthesize knowledge, create content and apply predictive analytics. By combining these with features offered by mobile, like geolocation and biometric authentication, governments can give both citizens and employees a more personalized and efficient experience.

5. **Make sure everyone can access and use government services**
   To accommodate every user, governments must understand them and their diverse needs. Learning from, and empathizing with, users and their experiences will help governments create inclusive services while building citizens' confidence and trust. And making sure teams embed the latest Web Content Accessibility Guidelines (WCAG) in their services from day one will prevent challenges in the future.

6. **Build trust by strengthening security and data privacy to protect citizens**
   Governments worldwide are trusted to manage, store and process large amounts of citizen data. It is their legal responsibility to protect that data from unauthorized access or misuse. This makes maintaining data privacy and security critical for successfully delivering mobile eGovernment services. With secure data, governments can provide more efficient citizen services people can trust[15].

13. eGoverment Benchmark Report 2023, European Commission, https://prod.ucwe.capgemini.com/wp-content/uploads/2023/08/Capgemini_Public-Sector_eGovernment-Benchmark-2023-report.pdf

14. Harward Business Review, The case for investing in Digital Public Infrastructure, 22 May 2023, https://hbr.org/2023/05/the-case-for-investing-in-digital-public-infrastructure

15. https://assets.publishing.service.gov.uk/media/61f0169de90e070375c230a8/government-cyber-security-strategy.pdf

Final word

As increasing numbers of people use smartphones for everyday tasks, governments need a strategy to reach everyone. And while responsive websites are still essential, governments can achieve a huge amount through single- or multi-purpose mobile apps, especially super-apps.

Particularly inspiring are the super-apps DubaiNow and LifeSG, which have put many popular services in one place, organized around life events for easy access. To move to this model, governments will need to integrate their services, share data securely and apply human-centered design. They will also need to collaborate internally and with the private sector to deliver the "user experience 2.0" that is at the heart of next-generation citizen services.
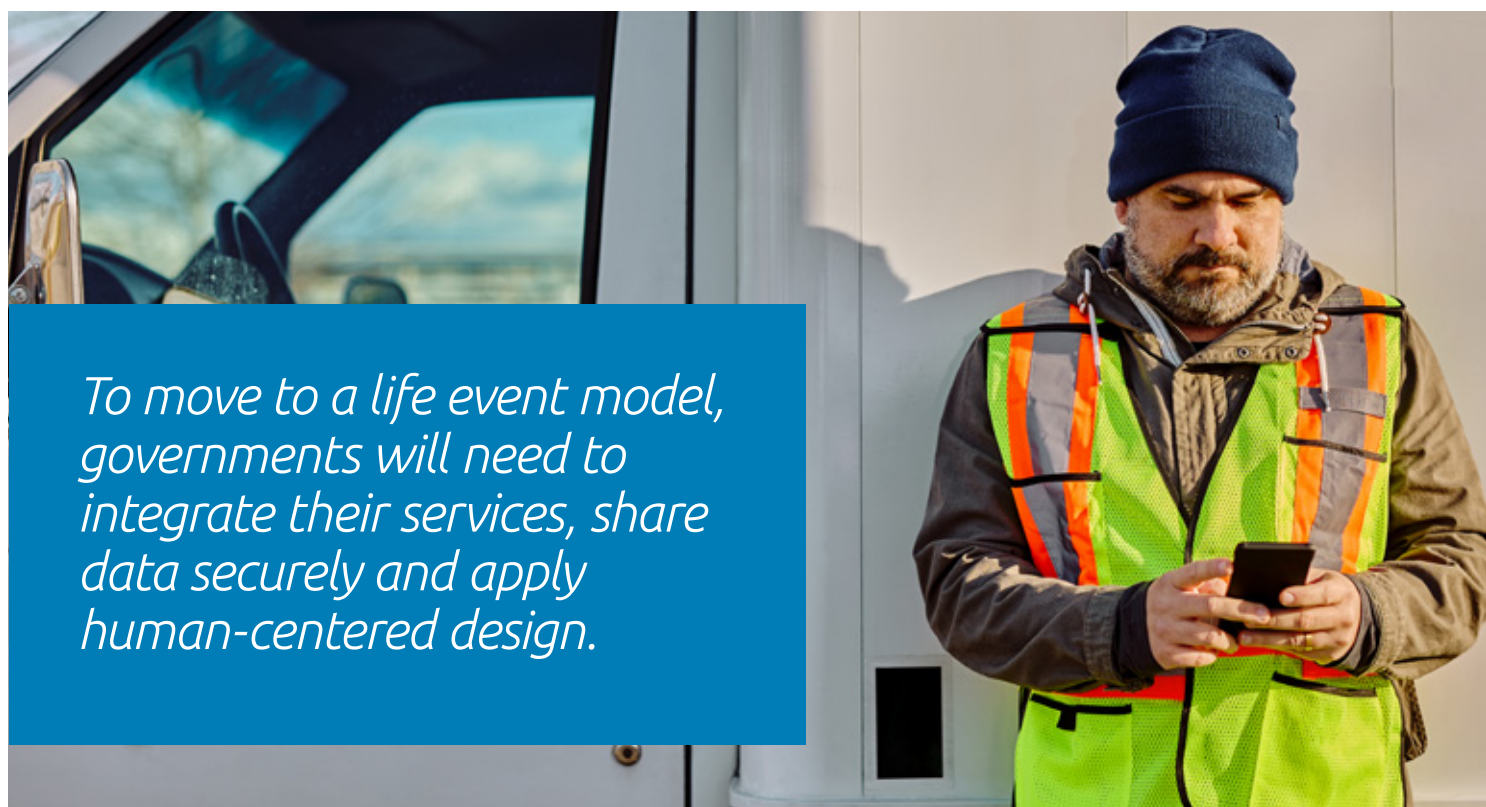
To move to a life event model, governments will need to integrate their services, share data securely and apply human-centered design.

Authors:

Alessia Capula

Elisa Vlaanderen

Nia Roberts

Jaison Thomas

JJ Jaoudie

Maeve O' Sullivan

Jess Doyle

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprizes and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertize and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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For more details, contact:

Sandeep Kumar
Executive Vice President
sandeep.kumar@capgemini.com

Dave Ord
Senior Director
dave.ord@capgemini.com

Capgemini