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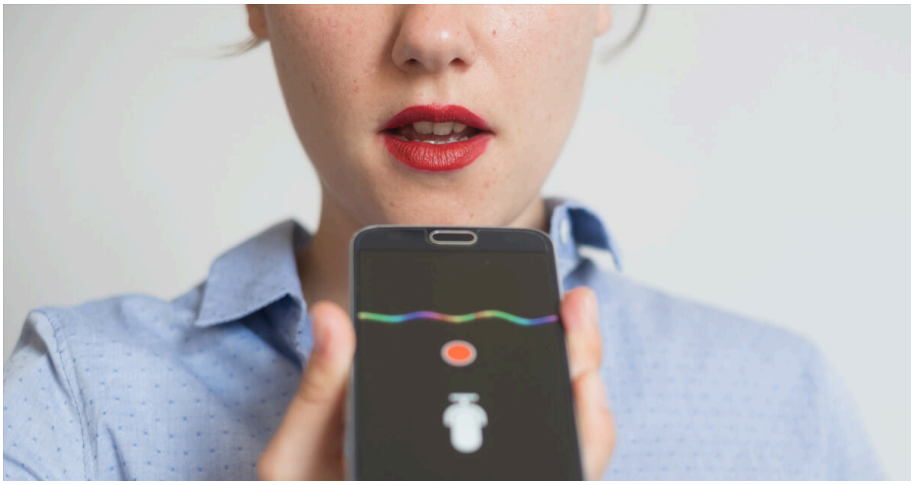
Forward Thinking

From Labyrinth to Lifeline: How Mobile Apps Are Revolutionizing Government Services



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Imagine if interacting with your government was like ordering takeout—convenient, efficient, and accessible at your fingertips. This is the reality for citizens in several countries thanks to a new wave of mobile applications that simplify access to multiple services (SAMS). These apps are fundamentally changing the way people access essential government services like license renewals, tax filing, and pension management. Speech technologies are playing a central role in these changes.

Non-SAMS apps may present significant hurdles:

1. **Service discovery.** Finding the right app or website often requires a frustrating web search, wasting valuable time and energy.
2. **Digital identity.** Juggling usernames and passwords for each app creates log-in headaches.
3. **Form fatigue.** Repetitive forms across different apps lead to tedium and increase the risk for errors.
4. **Multiple log-ins.** Excessive log-ins when users switch between apps is tiresome.
5. **Inconsistent user interfaces.** Each app has a different user interface, which confuses users.

Table 1 lists some government service apps that solve one or more of these hurdles.

WEB EVENTS

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Country	Name of application
USA	usa.gov website
India	UMANG (unified mobile application for new-age governance)
Estonia	Bürokratt
Singapore	MyInfo
France	FranceConnect

Table 1: Government service apps illustrating one or more SAMS features.

Here is how they do it:

Service discovery. Instead of requiring users to search the entire web, the U.S. government created usa.gov, which acts as a central hub for citizens to access information and services. Users can either browse through one of 18 general categories to locate specific services or use a search feature to find them. Similar websites are available for other countries, including Canada and the United Kingdom.

Several other countries have created mobile apps that serve as a single platform to access various government services across central and state government bodies. For example, UMANG (unified mobile application for new-age governance) is a mobile app that serves as a single platform to access various services across government bodies in India. UMANG provides a one-stop hub to (a) search for and access government services, (b) apply for government benefits, and (c) make payments for government services.

Estonia's Bürokratt will avoid user searching entirely. For each user query, Bürokratt will consult a Classifier module that contains service descriptions, selects appropriate services, and then routes requests to the selected services. Bürokratt is scheduled to become operational in 2025.

These methods overcome hurdle 1, saving the user time and effort.

Digital identity. Several governments support identity and access management (IAM) systems that provide secure access to digital services. IAM systems for different countries have diverse goals and work differently, but all maintain user identity information and assist the user in identifying themselves. Most government IAM systems use a nationally assigned ID number, such as Social Security number (U.S.), national insurance number (U.K.), numéro d'identification national(France), or aadhaar (India).

An IAM captures three types of information about users:

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education background, and employment information.
2. Biometric information, including fingerprints, voice prints, retinal scans, and facial characteristics.
3. Possession-based information about what the user has, including passport, driver's license, credit card, and SIMM card numbers.

The IAM uses this information to verify the user's true identity. Some IAMs avoid the use of passwords because users frequently forget them, and passwords are easily compromised by sophisticated fraudsters. Instead of passwords, IAMs use biometrics and possession-based devices. Each of the countries listed in Table 1 (except the U.S.) use an IAM for user verification. IAMs help overcome hurdle 2. No more juggling passwords.

Form fatigue. Myinfo helps Singapore citizens and residents manage and consent to the use of their IAM data to prefill digital forms from participating government agencies and businesses. It eliminates the practice of providing the same information repeatedly for different transactions. Using IAM data overcomes hurdle 3, making it easier for users to apply for new services.

Multiple log-ins. FranceConnect, a digital ID system run by the French government, allows users to access more than 1,400 official online services using a single centralized account. With FranceConnect, you can log in to various websites—including impots.gouv.fr (France's tax website), ameli.fr (health system), and portals for passports, ID cards, and drivers licenses—without creating multiple accounts or managing numerous usernames and passwords. This overcomes hurdle 4, because the user only needs to remember a single password.

Inconsistent user interfaces. What can be easier than using one's native language? Estonia's Bürokratt users will be able to use Estonian, English, or Russian via a chatbot-style user interface. Users either (a) type prompts via a keypad and view responses on a screen, or (b) speak prompts into a microphone and listen to responses on a speaker. There are no command words to memorize and no computerized languages to learn. Speaking a phrase in the user's own language overcomes hurdle 5 and provides users with a consistent user interface to all services.

Beyond Government Services

Several countries are streamlining user access to government services by helping users find appropriate services, confirming the user's identity with the government using established credentials (without using passwords), minimizing form-filling tasks, eliminating the need for multiple log-ins when switching between services, and maintaining a consistent user interface across apps.

SAMS apps techniques can be applied to other app families, including the following:

- **Smart homes.** Imagine adjusting lighting, temperature, entertainment systems, and home security systems and accessing all your smart home apps with your voice or a tap on your phone.
- **Medical monitoring.** Wearable devices and in-home systems can track vital signs like blood pressure, temperature, and heart rate. Data from all your devices and systems can be integrated and monitored by you and your healthcare provider.
- **Connected cars.** Modern vehicles are packed with technology. You can monitor speed, fuel, and battery levels and receive navigation guidance, all on your dashboard display. Connected cars also offer entertainment options and keep you connected on the go.

The Road to a SAMS future

The success stories of SAMS highlight the immense potential of technology to empower users and improve government service delivery. Using the user's own language to access any service is an easy and consistent user interface to all government services. By overcoming existing hurdles to access services, governments worldwide can pave the way for a more citizen-centric future. x

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