

Mobile Government How-to Note

Forum Finanz


March 13, 2023



GOVERNANCE



WORLD BANK GROUP

 Federal Ministry
Republic of Austria
Finance

Mobile Network
Subscriptions

8.6

11 million



billion

1990

2021



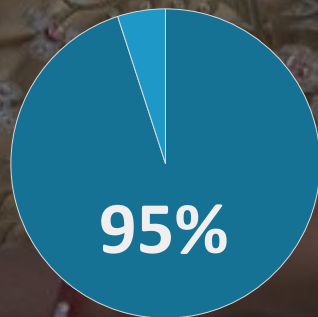
2018

2020

Africa + 28 %

Asia + 27 %

Worldwide
Population with
Access to a
Mobile Network



Why Mobile Government?

mGov is the
Most Transformative
Pro-Poor Technology

“Mobile phones help more and more people connect to the jobs, business opportunities, and services they need to escape poverty.”

Leora Klapper

Providing Access & Identification



Provide access for people in remote areas

- Only 11 % of the world's population have **fixed broadband** internet access
- 88 % in rural areas are covered by a **mobile broadband** network
- Even those without a **phone** can connect through facilitators



Provide access for people with disabilities or limited literacy

- **Speech-to-text**-communication for deaf, **text-to-speech** for blind
- **Voice control** for people with limited mobility
- **Intuitive apps** for people with limited (digital) literacy



Provide access for people without identification

- **Proxy for identification** can be constructed from mobile data
- **Empower citizens to register** themselves and their children as basis for public services
- **Secure identification** for advanced interactions, transactions and digital ID documents

Enhancing Financial Inclusion

- 1 Introduction
- 2 Opportunities & Challenges**
- 3 Potential Use Cases
- 3 Holistic User-Centered Approach
- 4 Technology, Architecture & Security
- 5 Specific Recommendations

1.9 billion of the adult world population remain unbanked



Mobile money or vouchers to pay subsidies

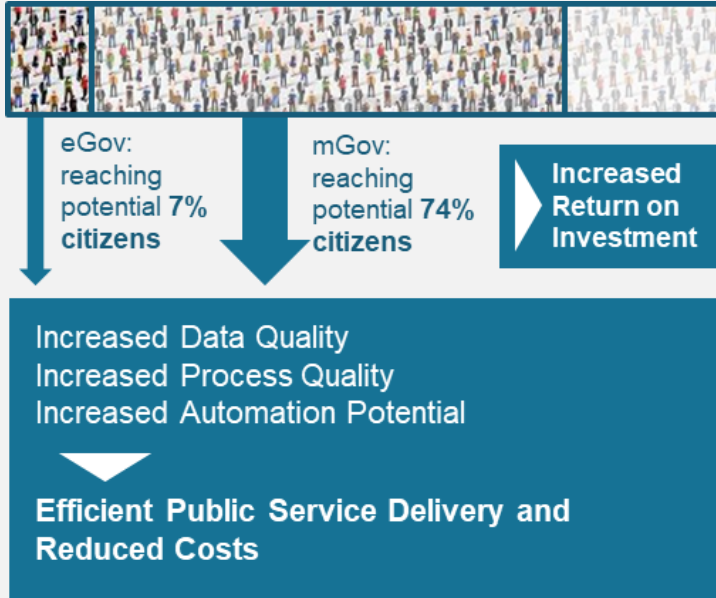
Immediate cash support in urgent need

Having an ID and a mobile phone boosts the chances of financial inclusion by nearly five times

Reducing Costs & Improving Efficiency

- 1 Introduction
- 2 **Opportunities & Challenges**
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... for Governments



... for Citizens, Economy & Climate



- ↓ Pollution
- ↓ Costs
- ↓ Time ↑ GDP



- ↓ Waste
- ↓ Resources
- ↓ Logistics

Enhancing Quality, UX & Digital Portfolio

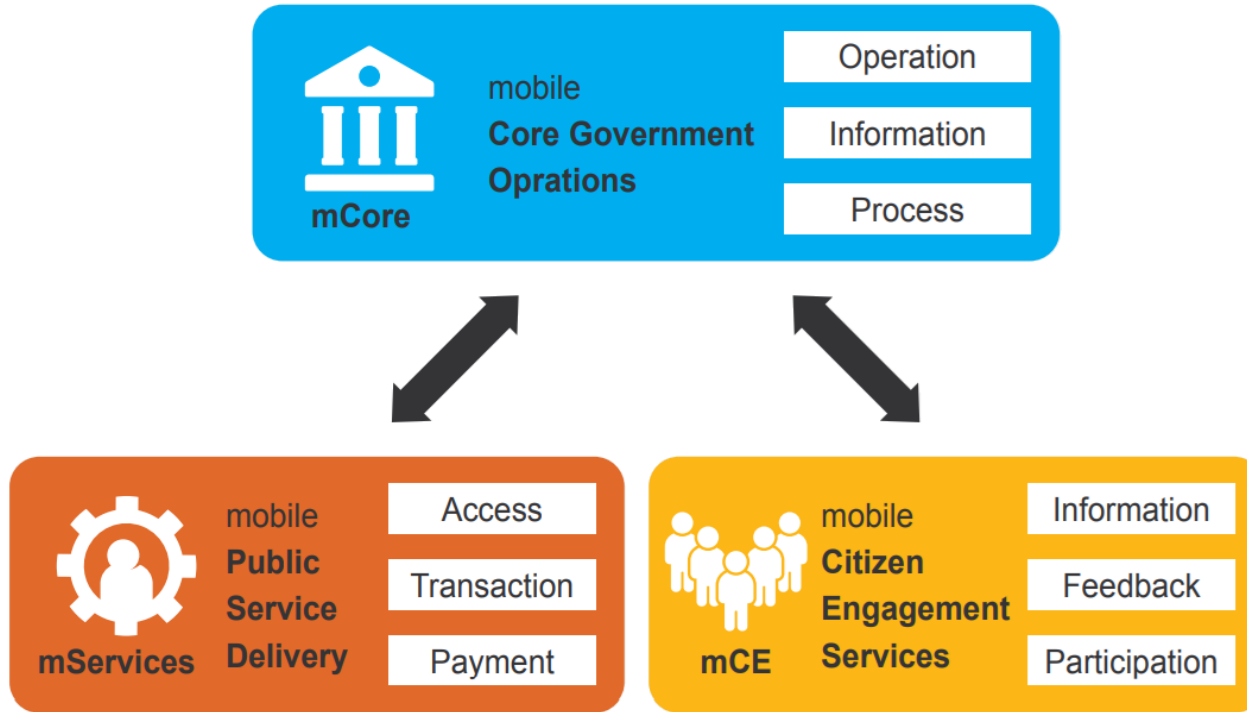
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- **Exploit mobile phone sensors** to enhance functionality of digital solutions
- **Use secure authentication** of identity as a basis to personalize and contextualize services
- **Provide intuitive services** that are convenient, flexible, and integrated
- **Easily scale** to a potential higher number of use cases
- **Use mobile data to improve public services** and processes to fit the citizen's needs



Potential Use Case Areas

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Potential Use Cases for mGov

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mobile
Core Government
Operations



mServices
Delivery



mCE
Services

- Support the daily operative work of public officials in the field
- Make back-office tasks more efficient
- Improve efficiency and accountability of government operations



Inspections



Traffic Controls (UK)



> Vérification de l'authenticité des documents émis par la République et Canton du Jura

Cette application permet de vérifier l'authenticité d'un document (numérique ou papier) contenant un QR-Code sécurisée émis par la République et Canton du Jura.

Doc. Verification
(Switzerland)




Potential Use Cases for mGov

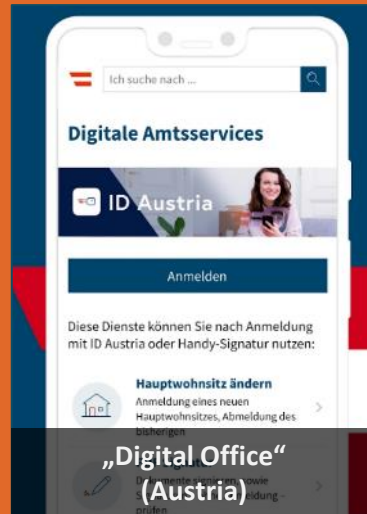
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Core Government
Operations
mCore

 mobile
Public
Service
Delivery
mServices

 mobile
Citizen
Engagement
Services
mCE

- Establish quick-wins by considering mobile-friendly access in existing initiatives
- Carry out binding transactions and payments
- Offer holistic mobile one stop shops around life situations
- Support sectors like health, education, and agriculture




Potential Use Cases for mGov

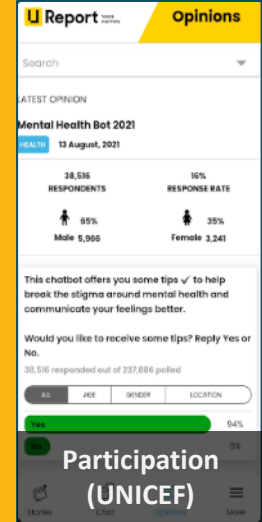
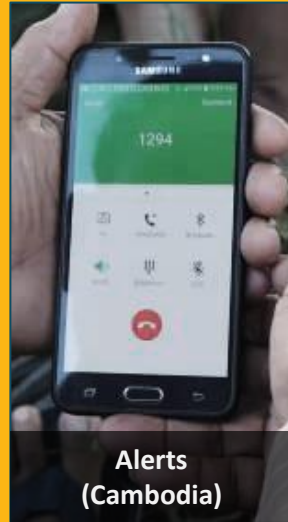
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- Broadcast information like warnings (disasters, terrorism) and reminders (tax)
- Gather citizen feedback on public services, institutions, and infrastructure
- Support participation processes and improve public policies



Challenges in Establishing mGov



Price and Affordability

- Network Subscriptions
- Mobile Devices

Trust & Information Security



User-friendly Design



Digital Foundations

- **Shared Digital Services:** Integrated Backend Systems, Secure Identification, Mobile Financial Services, ...
- **High-Quality Network Infrastructure**
- **Digital Skills**

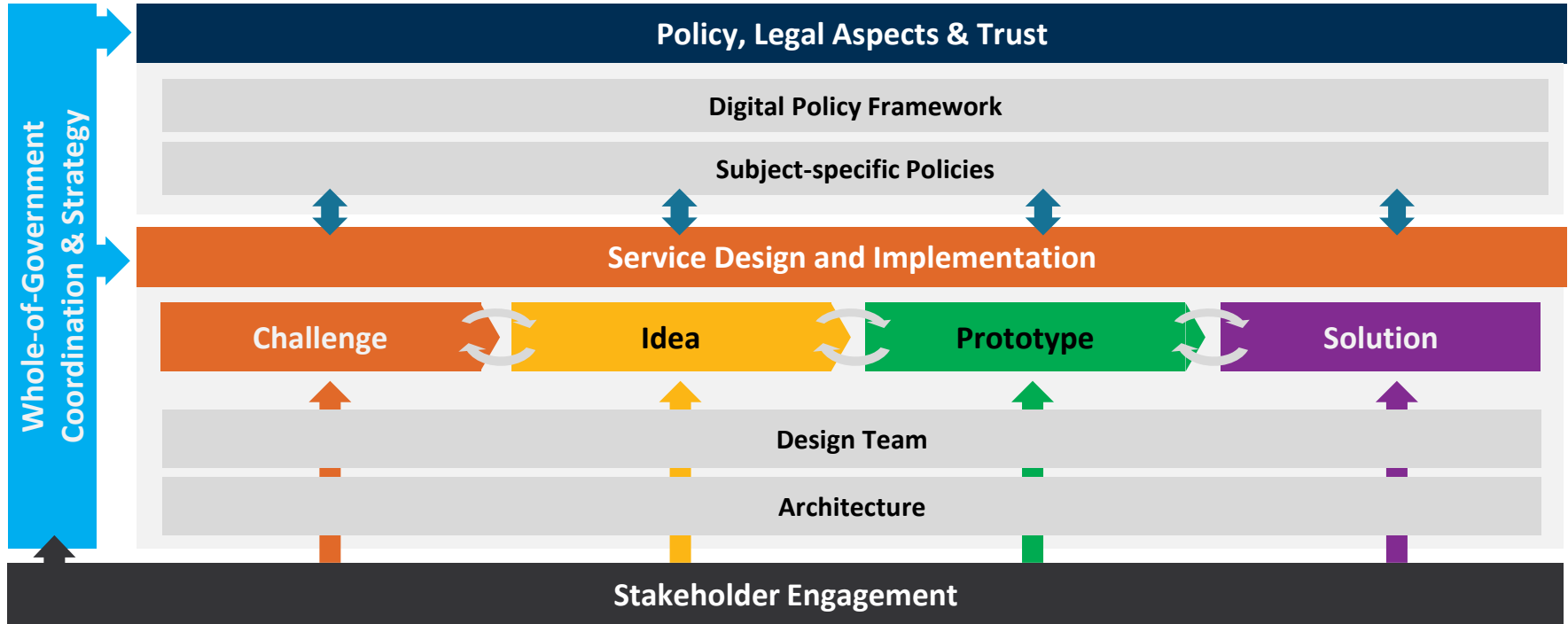


Fragmentation of Administration

- **Whole-of-Government Strategy**
- **Cohesive Approach**
- **Legal Framework**
- **Central Coordination**

From Strategy to Solution - Approach

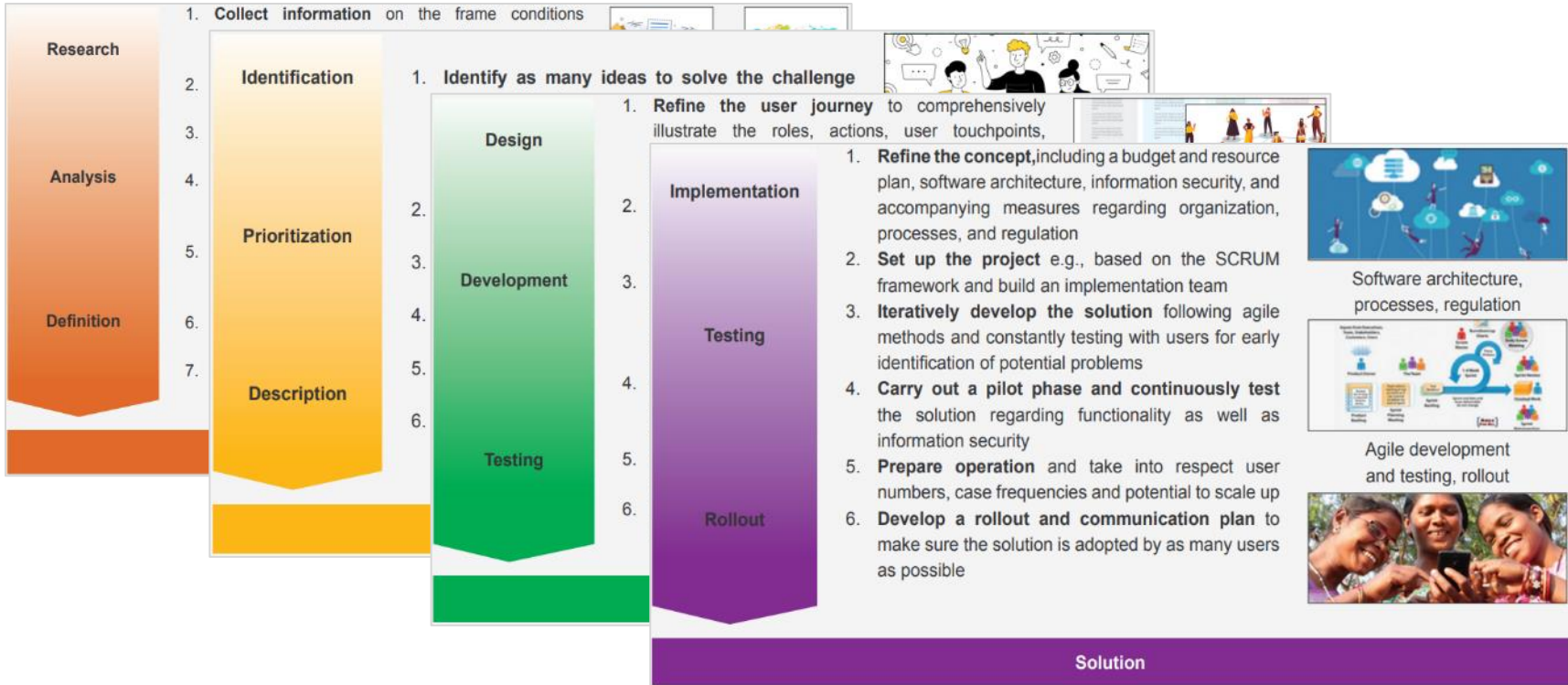
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Sample Approach to Develop mGov

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Situation A developing country with 50 million citizens wants to prepare for **situations such as disasters, pandemics**, in which it needs to **quickly support impecunious people** with financial relief to deal with exceptional circumstances



Technology and Architecture

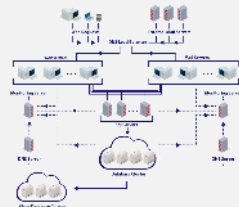
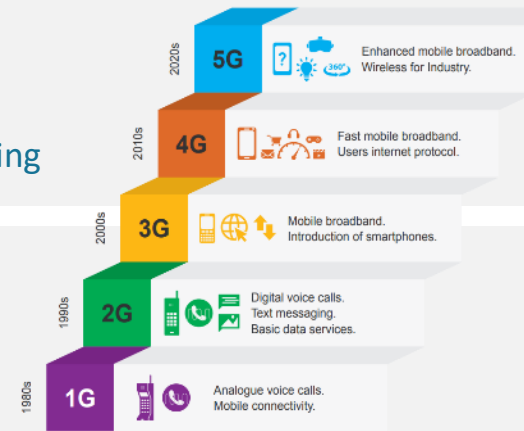
Most architectural principles and implementation guidelines for digital government also apply to mobile government, some are specific.

Multichannel Communication

- A wide range of communication channels is available
- **Backward compatibility** ensures sustainability of simple solutions
- A multichannel strategy focusing on predominant channels is most promising

Phone Features & Form Factor

- **Smartphones** provide the most extensive features for mGov solutions
- **Dumb phones** and smart feature phones need to be considered
- **Specific screen size and input types** need to be taken into account



Architectural Considerations

- A holistic cross-agency architecture and central backend service are key for efficient mGov
- Areas of specific relevance are interoperability, compatibility, scalability, integration, usability, privacy, and security.

Information Security Requirements



Identification and Authentication

- **Mobile phones** can be used for identification and authentication, be they smart or dumb phones
- **Modern smartphones** provide a set of useful security features for advanced implementations
- **The World Bank's ID4D initiative** provides a guide to implement inclusive and trusted identification systems in developing countries



Risks and Diversity in Security Features




- **Using information of mobile devices** may be perceived as privacy invasive
- **Security measures** are of key importance
- **Weaknesses in older mobile network infrastructures** tend to prevail with limited means to mitigate
- **Devices with low security** need to be taken into consideration when designing solutions

Recommendations

Overarching Recommendations

- | | | | |
|---|------------------------------------------------------------|----|----------------------------------------------------------|
| 1 | Set up cross-agency coordination and strategy | 2 | Identify essential challenges and quick wins |
| 3 | Establish an enabling legal and policy framework | 4 | Promote use cases for low-tech phones |
| 5 | Form skilled interdisciplinary teams | 6 | Drive a user-centric approach and co-creation |
| 7 | Establish architectural layers & shared digital services | 8 | Adopt inclusive & equitable approaches for accessibility |
| 9 | Increase affordability of mobile devices and subscriptions | 10 | Ensure trustful conditions & strong information security |

Specific Recommendations

	Basic Level	Advanced Level	Very Advanced Level
1. Strategy & Policy 	<ul style="list-style-type: none"> Establish cross-agency coordination, strategy, and policy framework Increase affordability, network quality, and digital skills Devote Resources to establish architectural layer shared digital services 	<ul style="list-style-type: none"> Enforce overarching strategy, shared services, mobile first, one stop shops & once-only Expand network quality & skills Design policies hand in hand with mGov solutions 	<ul style="list-style-type: none"> Roll out strategies and policies to all public entities Increase efficiency of backend processes and interoperability Integrate further services in mobile one stop shop/ eWallet
2. Approach 	<ul style="list-style-type: none"> Form skilled teams and cooperate with local initiatives Identify essential challenges and quick-wins Driver user-centered design, prototyping & implementation 	<ul style="list-style-type: none"> Establish a "Design for All" approach Extend user-centered design to all relevant initiatives 	<ul style="list-style-type: none"> Cooperate with private sector for cross-sectoral one stop shops around life situations Extend design skills & adoption of user-centered approach
3. Technology Architecture Security 	<ul style="list-style-type: none"> Consider architectural options & low-tech conditions Establish an architectural layer with shared digital services (e.g. mobile ID, payment) and an information security framework 	<ul style="list-style-type: none"> Exploit device features but consider low-tech conditions Establish high-security identification & authentication Consolidate architectures and enforce Privacy by Design 	<ul style="list-style-type: none"> Further consolidate and expand and share digital services and architectures Ensure staying up to date regarding technology & information security

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Digitalization
Innovation
Sustainability



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