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

Leora Klapper

Why Mobile Government?

mGov is the Most Transformative Pro-Poor Technology

Mobile Network Subscriptions

11 million → 8.6 billion

1990 → 2021

Worldwide Population with Access to a Mobile Network

95%

Africa + 28%  
Asia + 27%
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

1.9 billion of the adult world population remain unbanked

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

Mobile money or vouchers to pay subsidies

Immediate cash support in urgent need
Reducing Costs & Improving Efficiency

... for Governments

- eGov: reaching potential 7% citizens
- mGov: reaching potential 74% citizens
- Increased Return on Investment
- Increased Data Quality
- Increased Process Quality
- Increased Automation Potential
- Efficient Public Service Delivery and Reduced Costs

... for Citizens, Economy & Climate

- Travel
  - Pollution
  - Costs
  - Time
  - GDP
- Forms
  - Waste
  - Resources
  - Logistics
Enhancing Quality, UX & Digital Portfolio

- **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
Potential Use Cases for mGov

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

- 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

- 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

**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

**Trust & Information Security**

**User-friendly Design**
From Strategy to Solution - Approach

Policy, Legal Aspects & Trust
- Digital Policy Framework
- Subject-specific Policies

Service Design and Implementation
- Challenge
- Idea
- Prototype
- Solution

Design Team
Architecture

Stakeholder Engagement

Whole-of-Government Coordination & Strategy
Sample Approach to Develop mGov

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.

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

1. **Strategy & Policy**
   - Establish cross-agency coordination, strategy, and policy framework
   - Increase affordability, network quality, and digital skills
   - Devote Resources to establish architectural layer shared digital services

2. **Approach**
   - Form skilled teams and corporate with local initiatives
   - Identify essential challenges and quick-wins
   - Driver user-centered design, prototyping & implementation

3. **Technology Architecture Security**
   - Consider architectural options & low-tech conditions
   - Establish an architectural layer with shared digital services (e.g., mobile ID, payment) and an information security framework

**Advanced Level**

- Enforce overarching strategy, shared services, mobile first, one stop shops & once-only
- Expand network quality & skills
- Design policies hand in hand with mGov solutions
- Establish a “Design for All” approach
- Extend user-centered design to all relevant initiatives
- Cooperate with private sector for cross-sectoral one stop shops around life situations
- Extend design skills & adoption of user-centered approach

**Very Advanced Level**

- 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
- Exploit device features but consider low-tech conditions
- Establish high-security identification & authentication
- Consolidate architectures and enforce Privacy by Design
- Further consolidate and expand and share digital services and architectures
- Ensure staying up to date regarding technology & information security