Trust-enabled M-Government Services

Mobile Technologies for Responsive Government and a Connected Society

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M-Government

- Published a report with OECD on "**Mobile Government for responsive governments and connected society**"

- The report documents the use mobile technologies to enhance government's performance, improve public service delivery, and engage citizens and civil society organizations in policy and decision making both in developed and developing countries,

- The report is available at: http://www.itu.int/ITU-D/cyb/app/m-gov.html .

Introduction

- Wireless and mobile technology explosion increasingly is affecting how public institutions function and deliver services

- the adoption of mobile government (m-Government) to support and enhance government performance and a more connected society is now inevitable

- M-Government emerges as the next generation in the process of information and communication technology (ICT) use in the public sector.

- It allows the developing countries to bypass building the heavy infrastructure, including the costs and time

Value-added e-government services: What and for whom?

- In the process of rendering internal government functions and processes efficient and effective, users were often forgotten.
- **A call for Paradigm Shift: From Government centricity to citizen centricity**. *OECD: Rethinking e-Government Services, 2009*
- Focus on external outcomes rather than internal goals.
- Citizens want:
  - Services that have direct impact on their daily life
  - Personalization for individual needs/culture/behavior/context
  - Easy access to Services anywhere, anytime
  - Ensure their privacy
  - One-entry for Public services
  - Empowerment Services

Policy Formulation and Priority Setting

Policy formulation should take into consideration the following key features of the next generation public services:

Citizen centric: Most of the work of various governments is still not geared to look at policy-making from the citizen perspective. Change in the perspective of governments will require real change in thinking as well as structure of governance.

Restructured government: Governments should move towards more cooperative models of service and policy design and delivery (i.e. engaging appropriate players, stakeholders and public agencies).

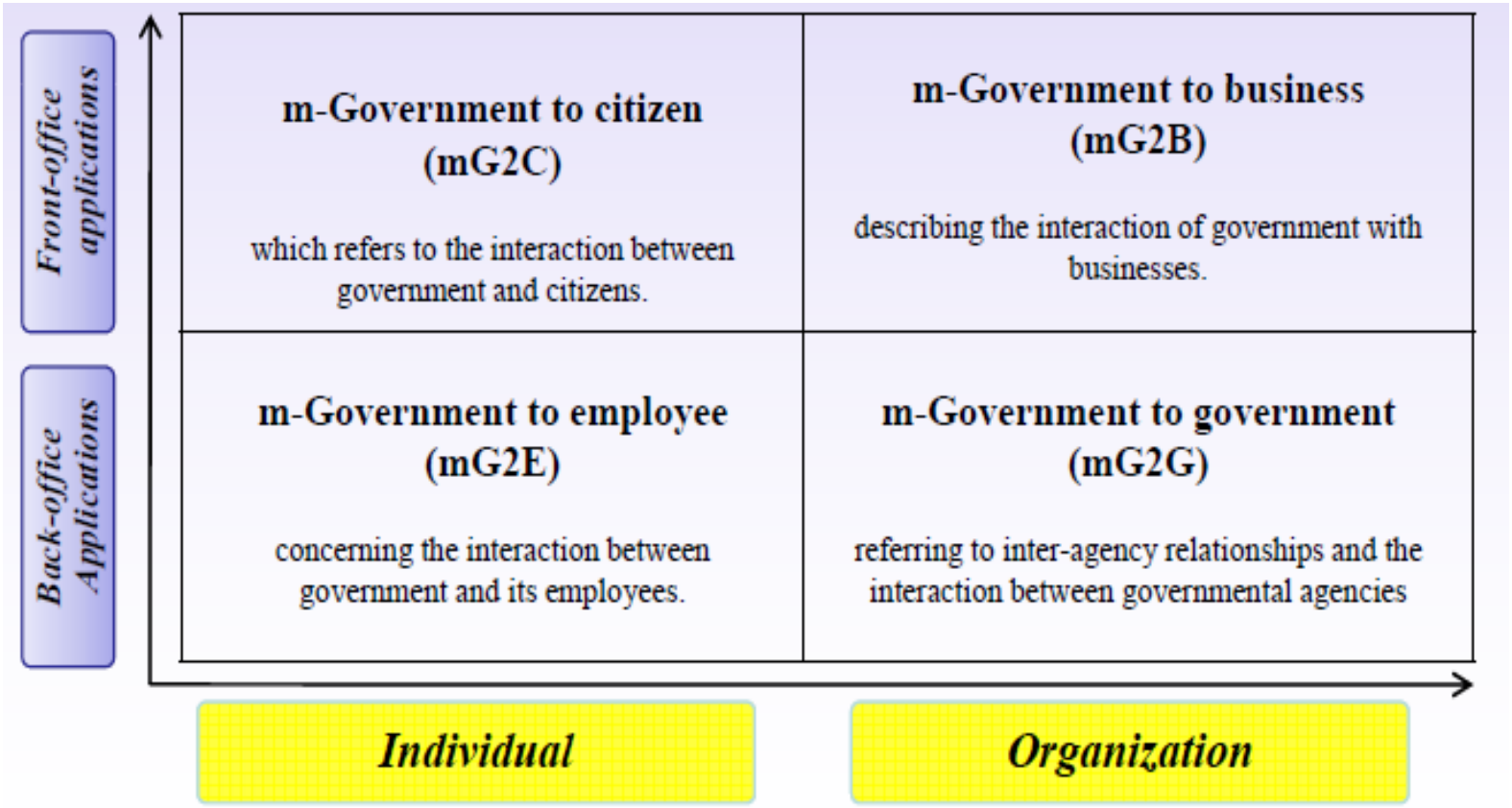
Measurable and transparent: Citizens are increasingly becoming more aware of the work of government and, in some of the developed countries, also have started participating in policy-making. Transparency and the ability to measure the outcomes and impact of government programs will be the key features of next generation public services.

Will m-Government appear to be just another access channel to public administration?

The transition from e-Government to m-Government is not only a matter of a shift in ICT technologies that are applied, but of a more **fundamental change**

- ❑ A different relationship between the mobile state and the mobile citizen and the public official.
- ❑ wider acceptance of these technologies by the public sector
- ❑ Penetration of mobile devices
- ❑ Ease of use for citizens
- ❑ Easier interoperability
- ❑ The fact it can bring government closer to citizens
- ❑ The fact that m-Government services are cheaper than computer-based services

M- GOVERNMENT APPLICATIONS



Source: Uhm Oui-Suk, *Introduction of m-Government & IT Convergence Technology,* KAIST Institute for IT Convergence, 2010

M-G2C: Push services

❖**INFORMATION SERVICES**: weather, tourism, recreation, health, public safety, contact information, services, regulations, etc.)
❖**Notifications**: exam results, security notifications, events and programs, news, road closures, holiday schedules, public hearing/meeting schedules, service or fee changes, etc.)
❖**EDUCATION**: learning using mobile

Examples of related m-applications

Information Services

- Flight information- UAE
- Tourist information- Estonia
- Occasional congratulation, weather- Saudi Arabia
- Traffic information- Dubai

Emergency Alerts

An SMS broadcasting system used in Mexico City, Mexico sends alert messages to citizens in the district regarding meteorological and high rain risks, low temperatures, potential disasters, and emergency locations, contact numbers

Education

- Combination of mobile phone and TV to deliver content in primary schools, in science, mathematics and life skills - Tanzania

M-G2C Interactive services

- Citizens can engage in dialogue with governments and send inquiries, problems, comments, or service requests to the agency.
- The interaction becomes more personalized, detailed and targeted to specific citizen interests and service needs, and specific agency divisions and service areas.
- The communication becomes one-to one, rather than one-to-many. The focus is on citizen convenience and increased participation, with citizens choosing to receive notifications about specific items, such as neighborhood crime reports, exam results or the availability of a special library book.

Examples

- Ireland's Multimedia SMS (MMS) enables citizens to send photos of criminal suspects to the law enforcement agencies and fight against terrorism (Criminals have been caught using both of these services);
- India's SMS services to empower citizens to help enforce anti-pollution laws by reporting smoke-belching public buses and other vehicles, and to get citizens involved in the fight against crime and illegal drugs

M-G2C Interactive services

❖**SECURITY**: Report a crime; Law enforcement
❖**COMMUNICATION**: Claims; Suggestions

Related m- applications

Security

- SMS criminal hunt- Germany
- SMS use to get citizens involved in the figh t against crime and illegal drugs- India
- Reporting incidents to the police force- Malta
- Crime reporting- South Africa

Communication

- Illegal waste deposits can be reported- Philippines
- SMS service to enable citizens to send their concerns or information they want immediate action on to the government - Ghana

M-G2C Transactional services

- Citizens can complete their transactions with government electronically and at their convenience.
- This includes self-service options for paying taxes, making payments, lodging tax returns, applying for services and grants, as well as other similar G2C interactions
- Citizens have access to these services 24/7.

Examples

- Citizen bus/train ticket system in Amsterdam, the Netherlands, enables citizens to request, through an IVR or Internet, a specific route at a specific time and receive a ticket via SMS sent to the user's mobile phone, with the SMS (M-Ticket) then shown to the conductor

- An SMS enquiry to claim tax credits and request a number of tax forms and information leaflets via SMS- Ireland

- Istanbul's SMS tax service enables citizens to query and pay their taxes via SMS, along with a reminder module for their tax payment deadlines and tax amounts upon registration;

- mPARK mobile parking fee payment services in Edinburgh, Scotland, Cologne, Germany, Oklahoma City, United States and Tartu, Estonia, and SMS toll payment service in London, UK provide transportation-related payments;

M-G2C Governance and Citizen Engagement

One Mobile tool SMS or "texting," has become a Powerful and prevalent communication channel for government and citizens, and a fundamental foundation of effective M-Government strategies, positively impacting the democratic process.

- ***Citizen Engagement*** *(to strengthen citizen-centered approach to government and to involve citizens in policy development and decision making)*
- ***Elections and Voting***

Related m-applications

Citizen Engagement

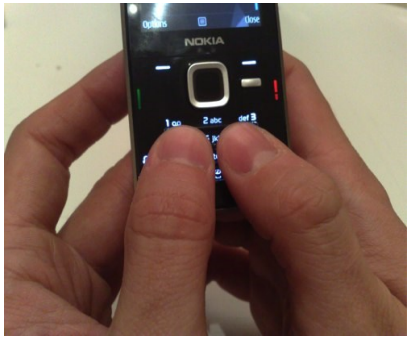
- Active citizen text-messaging in China and the Philippines to members of their legislatures

M-Voting

- Using SMS to find the polling station during the presidential election- Venezuela, 2006
- Casting of ballots via mobile phone by over 70 percent of 300,000 voters in Korea in the October 2007 poll for the presidential candidate for the United New Democratic Party
- M-Voting Estonia

M-Democracy examples

Website provides live transmission of parliamentary sessions, available at Blackberry (Austria)



M-Voting in Morocco

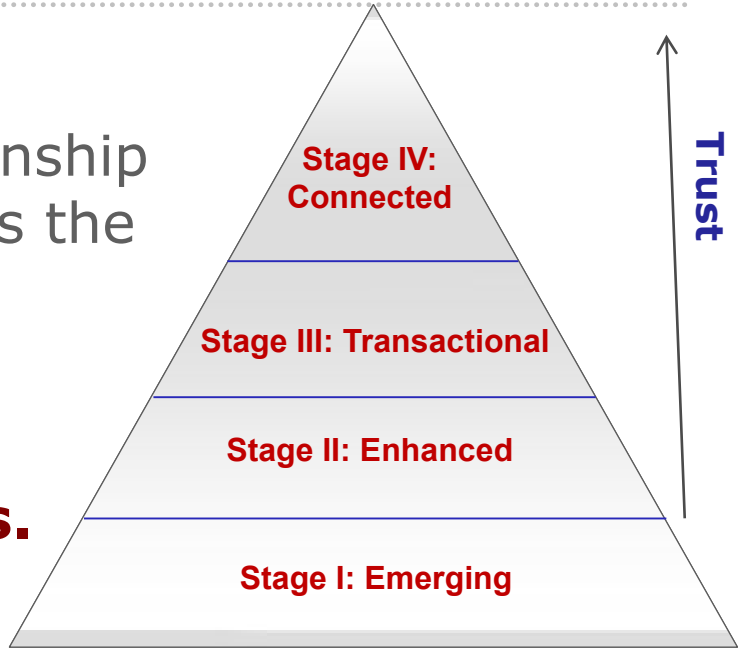
New electronic methods to encourage voter registration

- Set up a special internet site (www.elections.gov.ma), where citizens could find answers to common questions about the registration and voting process

- Voters registration (2007) by sending the national ID card number and date of birth by SMS to a toll- free phone number

Why Trust?

- Trust is the foundation of the relationship among communicating parties and is the backbone of electronic transactions.
- **As the certainty level increases so does the value of the services.**



Stages of e-government
Source: UNDESA

- Trust can build a more efficient, accountable and transparent government, rebuilding citizen trust in government, by improving service delivery, reducing cost, corruption and empowering citizens to participate in advancing good governance.

> *People are naturally very good at making judgements about trust from visual cues, voice, background information etc. But it's not easy to adapt these to make trust judgements when interacting with people over technology or about devices themselves.*
>
> *Cyber Security Expert*

Many value-added citizen-centric e-government services were not possible

Because they need:

Personal Presence

Proof of identity for security reasons

Proof of eligibility to receive the service

Need to sign documents to make them legally binding

High security

Prevent Unauthorised access

Protect Privacy and Confidentiality

Protect Data Integrity, etc.

e-Identity Management

- Authentication
- Accountability
- Identification

Secured Platform

- Access Management
- Data Integrity and Availability
- Communication Security

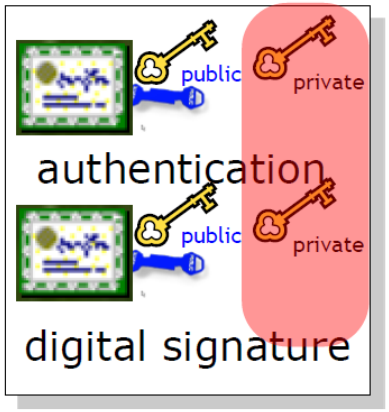
Why bother with Identity Management?

Sir James Crosby, a former bank CEO and the Deputy Chairman of the Financial Services Authority in the United Kingdom has this to say:

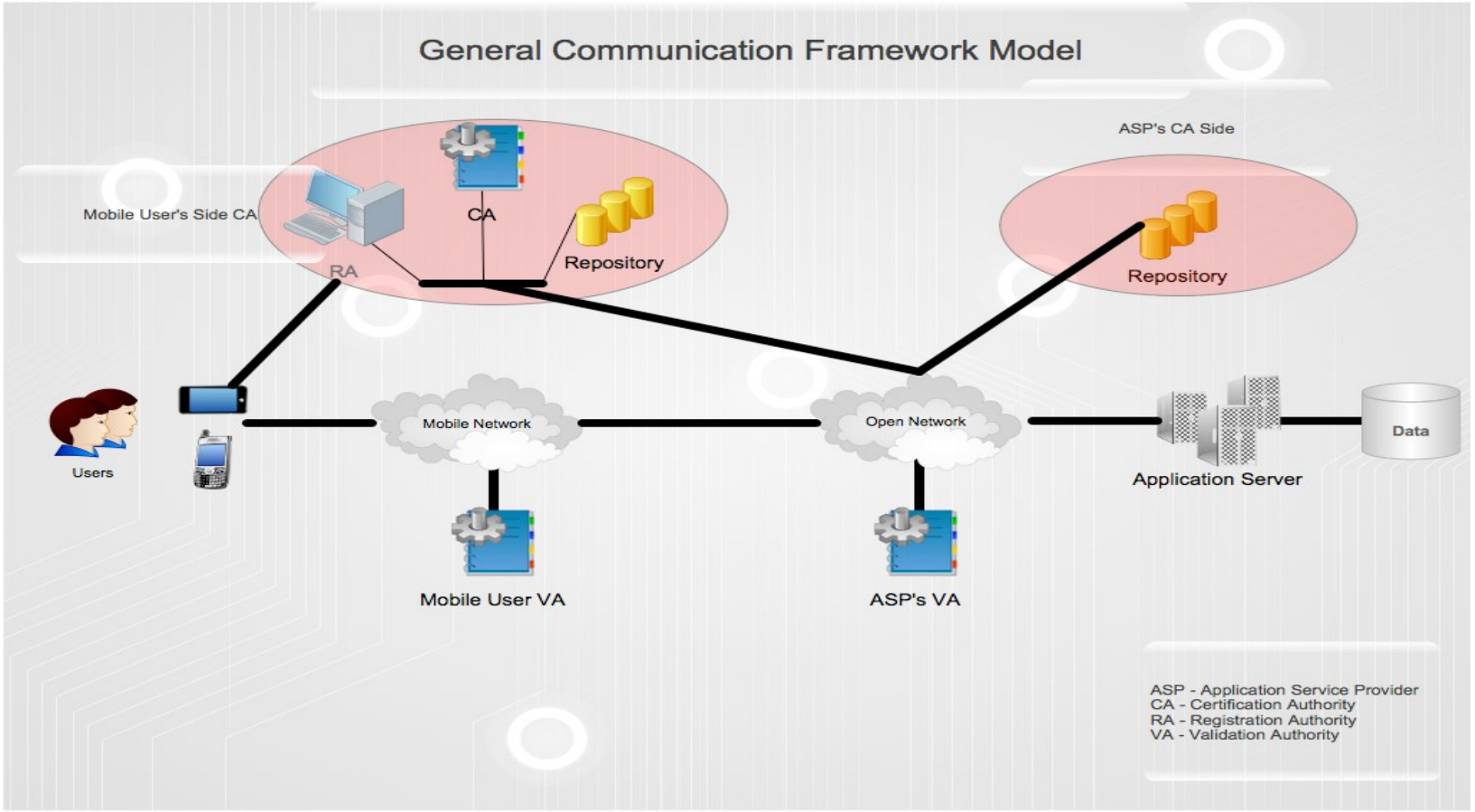
"… those countries with the most effective ID assurance systems and infrastructure will enjoy economic and social advantage, and those without will miss an opportunity. There is a clear virtuous circle. The ease and confidence with which individuals can assert their identity improves economic efficiency and social cohesion…"

e-ID Management:
e-ID cards and digital signatures

Use of a dual authentication system in which a digital signature, created through a complex random logarithm using a private key on the card, is checked up against a public key on a database.



2. e-ID Management: eID on Mobile



ITU-T Recommendation X.1122 serves as a guideline for implementing security in mobile systems with the use of public key infrastructures (PKI). PKI technology has proven useful when implementing security functions such as digital signatures and data integrity measures.

E-government Trust-enabled Services

Secure and controlled access to government and other online information and services *(Login Authentication)*	Secured access to online services: tax, civil registry, Personal Health Records, MyPension, e-payments to government services, Banks, etc. Ex: e-ID Belgium, e-ID Portugal, e-ID Austria
Authorized access to entitled services *(Transaction Authorization to provide Proof of Identity and legally binding transactions)*	❑ Government Payments: social payments, pensions, salaries, insurance, citizen benefits/grants, etc. Ex: Namibia Basic Income Grant; Biometric Smart Cards: Financial Inclusion for India's Poor ❑ Services that need Proof of Identity for security: Proof of Membership, Proof of age for vending machines, Access to buildings, children access to internet, filling a police complaint, access to gov's intranet resources, etc. Ex: e-ID Belgium, e-ID Estonia ❑ Services for eligible citizens: Health, Access to subsidized products/services, Education, Unemployment benefits, etc. Ex: e-ID Belgium ❑ Elections Ex: Estonia e-ID use in elections
Signing Documents *(provides legal binding signatures)*	Signing web forms, documents, emails, etc. Ex: e-ID Belgium, e-ID Estonia, Mobile Signature Turkcell

Estonia e-ID

- Estonia has implemented the electronic ID card as the primary document for identifying its citizens.
- The card facilitates secure authentication and legally binding digital signature, in connection with nationwide online services.
- Used to viewing and changing data in the Estonian Citizenship and Migration Board systems, running queries to the national registers, using the E-Tax Board, gaining access to several banks, **government elections**, etc.

Governmental Services

Estonian Tax and Customs Board	e-Tax Board	KAART	MOBIIL-ID
Estonian National Electoral Committee	Internet Voting	KAART	
Estonian Road Administration	Paberivaba ARK	KAART	
Centre of Registers and Information Systems	Commercial Register	KAART	
Centre of Registers and Information Systems	Company Registration Portal	KAART	MOBIIL-ID
Centre of Registers and Information Systems	Ship Register	KAART	
Ministry of Finance	Riigihangete register	KAART	
Ministry of Finance	E-Riigikassa	KAART	
Patendiamet	Kaubamärgi taotlemise portaal	KAART	
Keskkonnaministeerium	Kalanduse infosüsteem	KAART	
Põllumajanduse Registrite ja Informatsiooni Amet	e-PRIA	KAART	

Company Services

AS Sertifitseerimiskeskus	e-teenindus	KAART	MOBIIL-ID
Elion	e-teenindus	KAART	MOBIIL-ID
EMT	self-service	KAART	MOBIIL-ID
Tele2	self-service	KAART	
Eesti Energia	Kodukliendi iseteenindusbüroo	KAART	MOBIIL-ID
Eesti Gaas	e-teenus	KAART	
Tallinna Vesi	iseteenindus	KAART	

http://id.ee

Belgium e-ID

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Portail **belgium.be**
Informations et services officiels

Actualités ○ Calendrier ○ Services en ligne ○ Adresses et sites ○ Jobs ○ Publications ○ Vidéos

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Chercher Plan du site

Services en ligne

affiner par **niveau de pouvoir**

Fédéral (5)

Il y a **6 résultat(s)** trouvé(s) sur base des critères de recherche

filtres actifs

belgium.be	No label found for: tiles_selected_facets.site_portal	
↳ **applications eID**	e-ID	annuler filtre(s)
↳ **thème**	Emploi	annuler filtre(s)

rss

1-6 Du 6 résultats

Communication de chômage temporaire
Cette application permet aux employeurs de satisfaire à leur obligation de communication vis-à-vis de l'ONEM dans des situations de chômage temporaire.
URL https://www.socialsecurity.be/site_fr/Applics/ctw/index.htm
▸ lire plus

Déclaration des risques sociaux
Grâce à cette application vous pouvez déclarer les risques sociaux de façon électronique.
URL https://www.socialsecurity.be/site_fr/Applics/drs/index.htm
▸ lire plus

Interruption de carrière et crédit-temps
Les travailleurs en interruption de carrière ou crédit-temps peuvent consulter leur dossier via cette application.
URL https://www.socialsecurity.be/site_fr/citizen/Applics/elo/index.htm
▸ lire plus

Mon Selor
Postuler en ligne.
URL https://www.selor.be/login/login.aspx?ReturnUrl=%2fcandidat%2fCVOnline%2fCvOnLineCockpit.aspx
▸ lire plus

MyPension
MyPension permet aux travailleurs et aux pensionnés du régime salarié de consulter leur dossier de pension et de suivre pas à pas son évolution.
URL http://www.onprvp.fgov.be/FR/about/Pages/Mypension.aspx
▸ lire plus

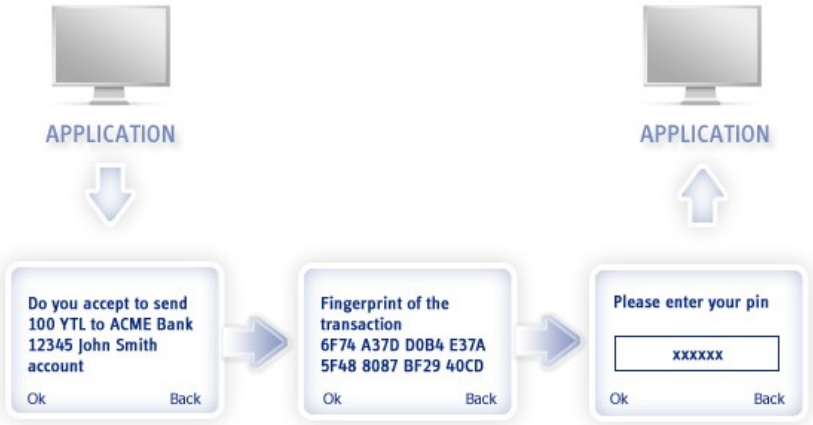
Vacances annuelles
Depuis le mois d'avril 2006, l'ouvrier, l'apprenti-ouvrier ou l'artiste sous contrat peut consulter ses propres données de vacances sur le portail de la sécurité sociale.
URL https://socialsecurity.be/site_fr/citizen/Applics/cova2/index.htm
▸ lire plus

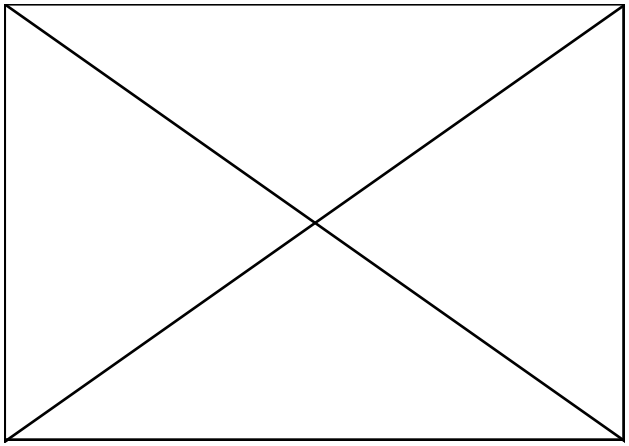
http://eid.belgium.be

Namibian Basic Income Pilot: First Universal Cash Pilot

- The Basic Income Grant pilot project provides a universal cash transfer of N$100 per month to 930 individuals under the age of 60 in the settlement of Otjivero-Omitara, 100km to the east of Windhoek
- Delivery of the Basic Income Grant is made through the use of smart card-based savings accounts issued by the state post office, NamPost.
- Recipients can access their funds through the local NamPost in Otjivero by having their fingerprint verified and have the freedom to access their transfer through any of NamPost's 122 branches throughout Namibia

Mobile Signature, ex: Turkcell





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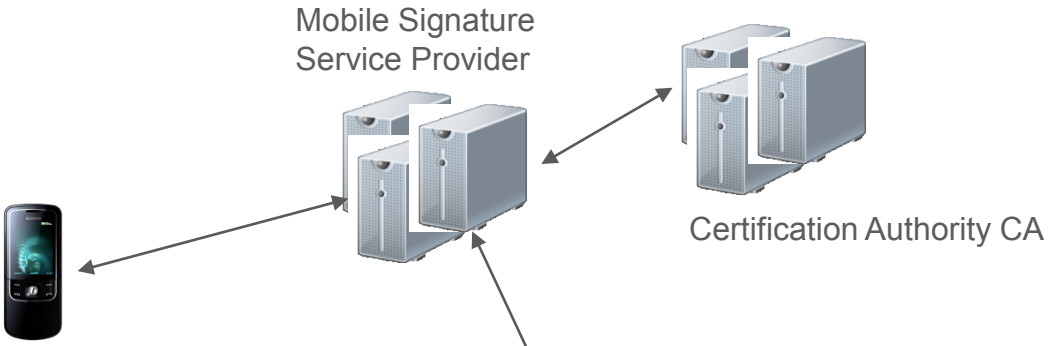
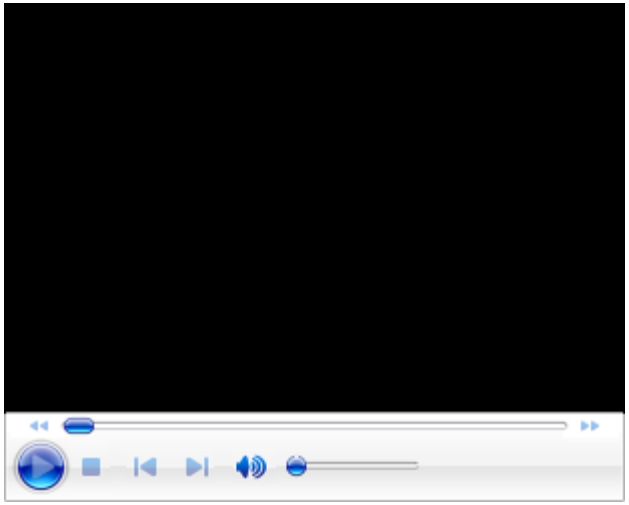




http://www.youtube.com/watch?v=vW5wwJVSWcQ

Application Service Provider ASP
- Banks
- Government
- eHealth services
- Postal services
- etc.

G2C case study

The Philippines National Police: M- Policing/ TEXT 2920 Service

- In 2002 the Philippines National Police introducing a text messaging system

- To report criminal offences by criminals as well as police officers to relevant authorities to take action
- To allow more transparency in the government offices

- The SMS service can also be used by citizens to seek emergency assistance

- Since the introduction of the service in 2003, it received around 29,000 complaints of which 33% were for assistance, 25% for usage of illegal drug or gambling and 13% against corrupt police officers

M-G2C examples

- Citizens can use the "iBurgh" application to photograph problems around the city, add a description and send the information to the council's complaints department- US
- GoRequest iPhone application allows a person to log an issue with their local government- USA

PORTALS

- Proxima Mobile Portal: The objective is to create a wide range of useful everyday services open to the general public and free of charge, thereby ensuring that the social, cultural and economic benefits of mobile Internet become accessible to all.

http://www.proximamobile.eu/

M-G2G

- **CRISIS**: Improving communications between governments: better emergency management
- **SERVICES**: Coordination of government's activities for Inspections, Controls, Supervisions
- **SECURITY**: Law enforcement; Security of citizens

Related m-applications

Emergency Management

- Public safety and emergency management personnel have been making transformational progress in their notification, response and disaster management capabilities through coordinating among agencies through state-of-the-art mapping and planning technology and traffic information systems

Coordinating Government Services

- Florida Keys Mosquito Control helps to maximize the use of the 61 vehicles engaged in insecticide control to prevent the spread of West Nile Virus. A wireless fleet management solution is used to monitor the locations, heading, speed and insecticide applications of all their vehicles in real time.

Security

- Access for law-enforcement Officers to databases with information about national drivers and vehicles – Australia
- Tablet PCs for Mobile Traffic Units to conduct queries regarding offending drivers' license and vehicle information - Turkey

M-G2E

Mobile technologies have substantial impact on improving G2E services, especially for field crews and staff who work in secondary or remote locations, enabling real time access to enter, retrieve and share data.

More efficient inspections: access to date online information on companies needed to inspect, insert inspection results in real time, thereby solving potential violations immediately- Texas

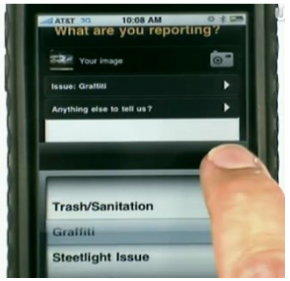
Services for public officials, such as: to schedule meetings, scan for any changes or updates, will allow government officials at local, provincial and national levels to access certain information from anywhere.

Examples:

- Hong Kong's Mobile Field Environment Inspection System enables inspectors to use touch-screen PDAs to enter inspection information at the scene, as well as review the results of past inspections. Mobile phones allow inspectors to send their reports through their device without going to the office.
- Mobile devices which have GPRS and Bluetooth connectivity use to fill in information regarding the incident by street wardens- London

M-G2B

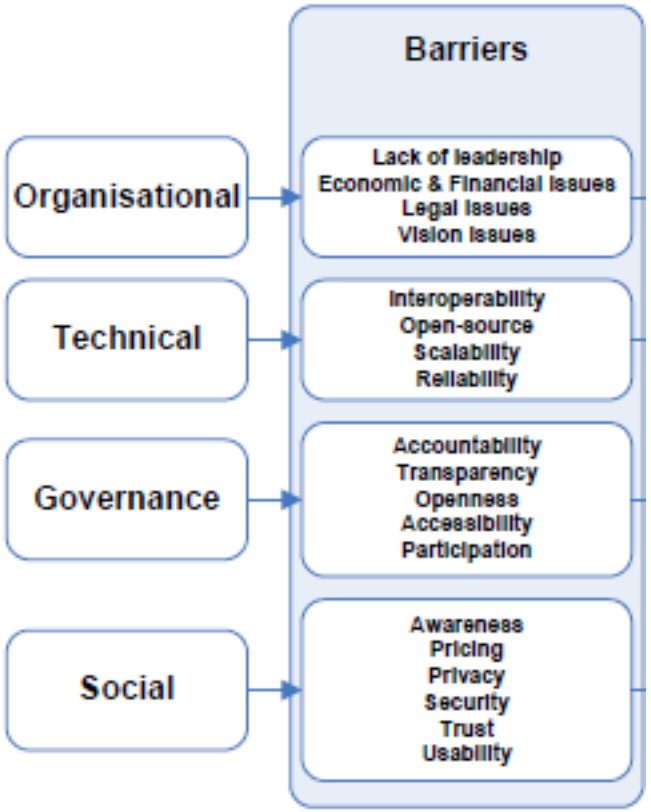
Government to Business (G2B) services include providing information regarding policies, regulations, forms, and applications related to procurement, licensing, permitting and payment of taxes, as well as support of small and medium enterprises and business development.



Examples

- India’s unique mobile weather forecast service helps farmers and fishermen decide when to plant, water and harvest their crops and fish, boosting the profits of many fishermen in south India;
- Farmer's Friend, an agricultural information service based on text messages, is used in Uganda and other countries. The system accepts queries such as "rice aphids”, "tomato blight" or "how to plant bananas" and retrieves advice from a database.
- Oman mobile’s new bi-lingual iBulk SMS service utilizes an innovative web-based engine and gives businesses the ability to send short messages to their targeted clientele effortlessly with the click of a button;
- TradeNet in Ghana utilizes web pages and text messages to allow rural farmers to advertise their merchandise to an international market and find the fairest price for their crops;
- Bangladesh’s SMS classified-ads service, providing a market place to buy and sell goods and services.

Key Barriers and Challenges



El.Kiki, Tarek, *Emerging Mobile Government Services: Strategies for Success*, (20th Bled eConference , 2007).

Key Barriers and Challenges

- Government should not be just one more way in which the "haves" benefit at the expense of the "have nots".
- The existence of m-Government and its applications does not on its own guarantee results and governments should proactively consult with the public and take their opinion into account over implementation.
- Users expect a free flow of information about governments' decisions and actions, i.e. transparency. Transparency is part of, and cannot be separated from, accountability; risks will arise when one of them is applied and the other is neglected.
- Functional bureaucratic orientation should be replaced by a client orientation
- If a delivery process is not effective, first it needs to be re-organized, which might cost even more than later putting it on the mobile delivery channel.
- Uniform interface for services and multi-jurisdictional service delivery; and technology portability from older systems to m-Government interfaces.

CONCLUSION

- Applications that can identify the locations of crime incidents in the surrounding area, as well as tell the user where the nearest Metro train station is and when the next train will arrive respond finally to what citizens want, as opposed to what government would expect them to need.

- M-Government is strongest when it comes to utilizing social and civic media applications to broadcast information, letting citizens know what to do, or where to go for help.

- Government officials examining the fast-moving m-government environment should begin the planning process by asking “why” before asking “how”. Some m-government applications may work in one setting and yet not in another.

CONCLUSION

- M-Government has become a new means of communications with citizens with applications in which citizens are encouraged to report on garbage pickup shortcomings, street potholes, flooding, tree removal, graffiti, and other services citizens would have had to call or write about.

- Citizen's will seek new forms of online accountability, transparency, and improved delivery of public administration services. Government agencies must be responsive. Governments should begin and continue to experiment with new m-government applications.

- Government's role need not be limited to regulating new mobile services but have an essential role in helping drive demand for new, for example, mobile financial services through their own programs, with a special emphasis on **Government-to-Persons Payments (G2P).** Governments can become the largest payer in the country, driving the scaling up of m-services to outreach the critical mass.

Thank You!