

Government services delivery: Transformation through mobile

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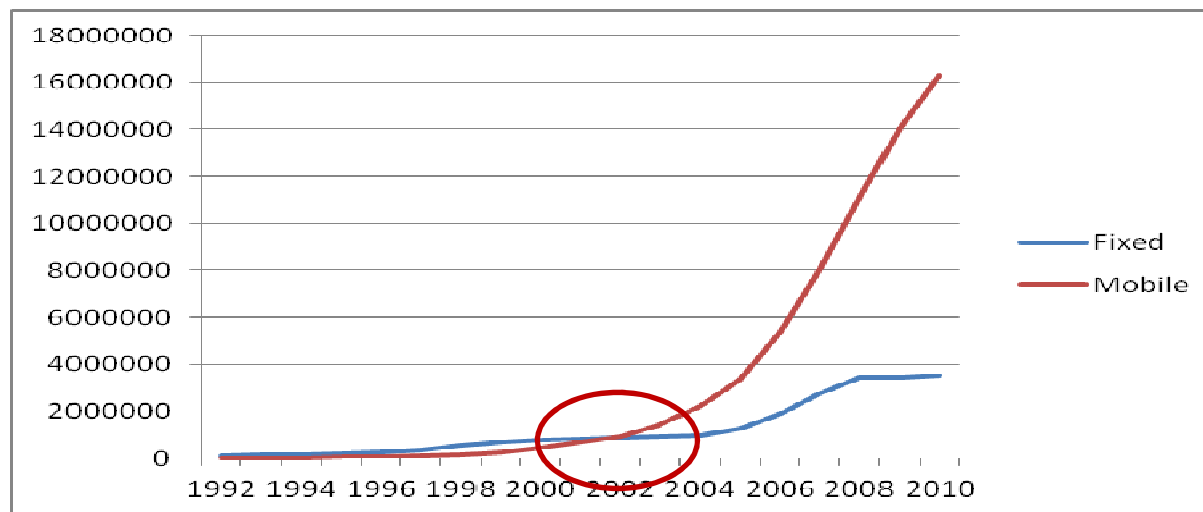


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e Sri Lanka in 2002-03

- E gov was at the heart of the design
 - Could not offer e gov only to some citizens → rural access through infrastructure reforms, tapered subsidies, telecenters & vouchers
 - Solution had to be found for small payments in a country with few/debit cards

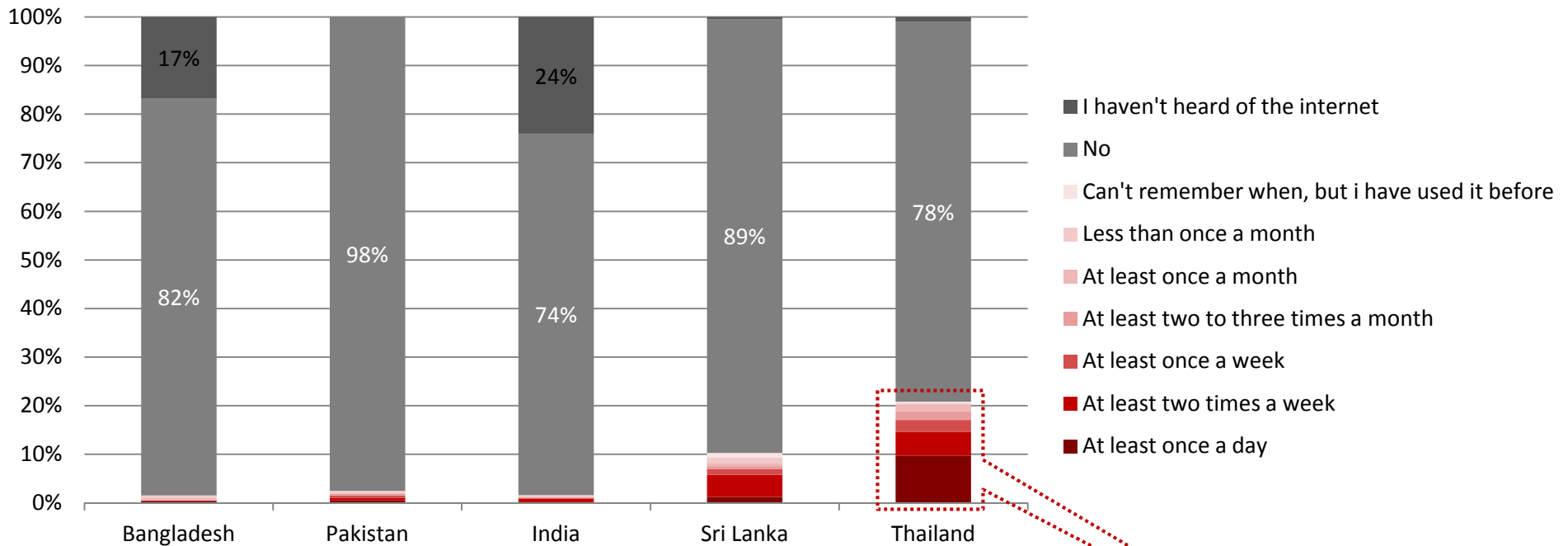


Mobile: Solutions & challenges

- Access by voice: SOLVED
 - Broadband remains to be solved
- Payments: SOLVED if not for government indecision
- How can we deliver services using the unique characteristics of mobile? → Transform?

Internet use at BOP is very low; significant lack of awareness at BOP in Bangladesh & India

Internet use (% of BOP teleusers)



	Bangladesh	Pakistan	India	Sri Lanka	Thailand
Use the Internet (% of BOP teleusers)	2%	2%	1%	9%	21%

But 89-99% of BOP had used a phone in previous 3 months

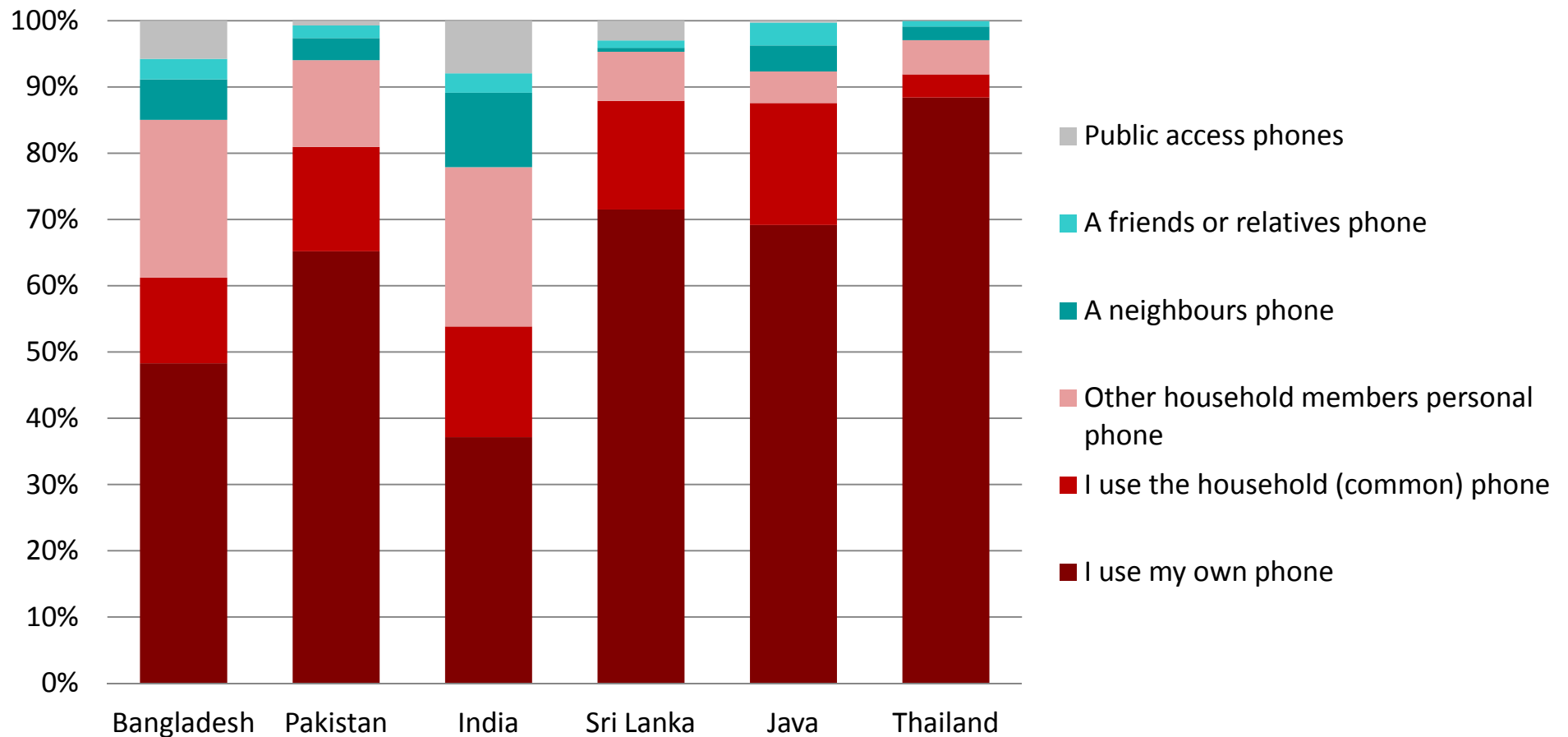
Used a phone in the last 3 months (% of BOP)

	Bangladesh	Pakistan	India	Sri Lanka	Java	Thailand
2008	95%	96%	86%	88%	-	77 %
2011	99%	96%	89%	90%	90%	91%

Findings of a large-sample (10,000) 6-country survey of Teleuse @ Bottom of the Pyramid conducted in 2011 (3,181 respondents in India)

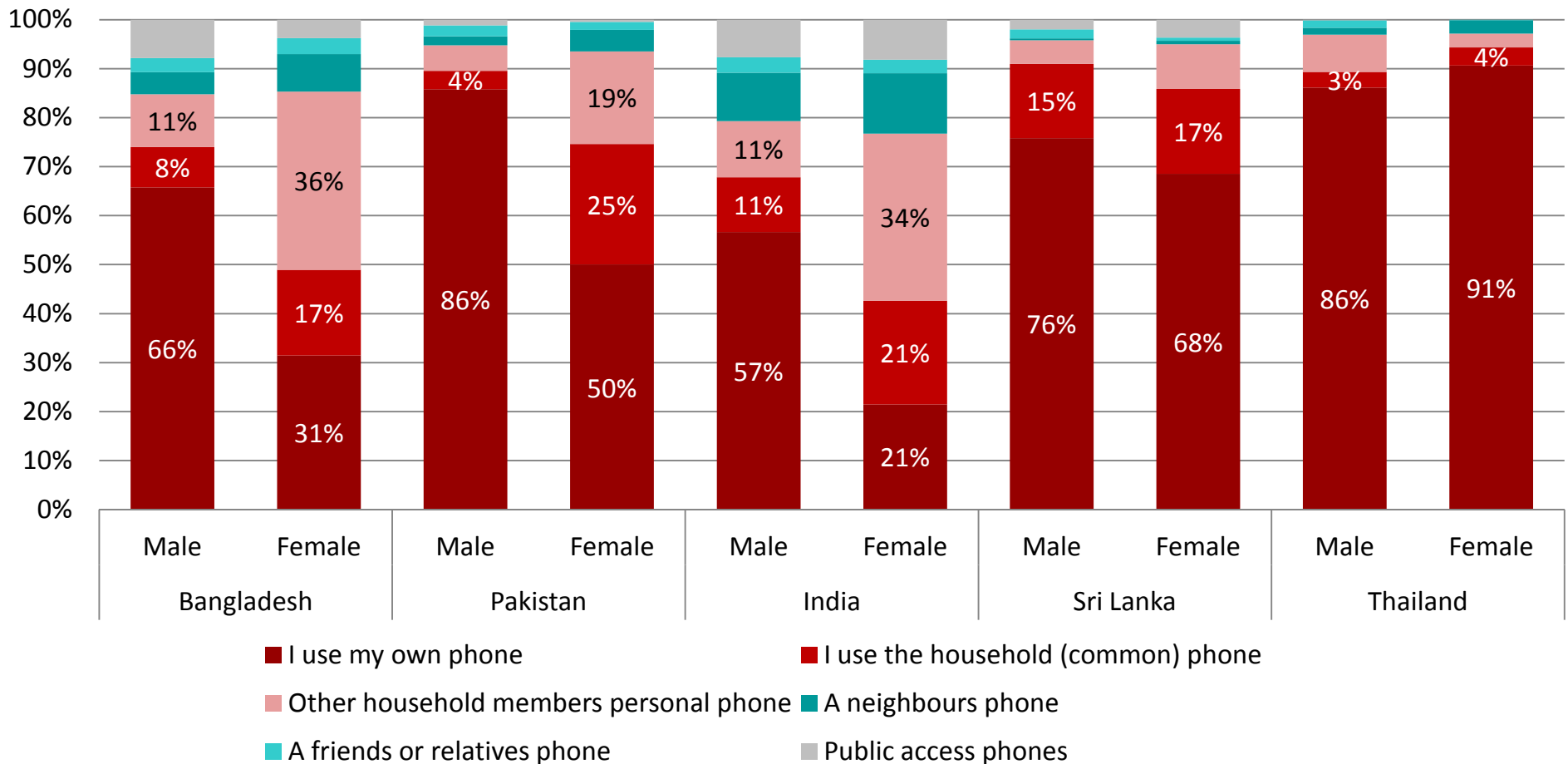
> 75 % of BOP have access to phone within household

Most frequently used phone (% of BOP teleusers)



Male vs female: Greater dependence by BOP females on household phones & others' phones within household, except in TH

Most frequently used phone (% of BOP teleusers)



**EXAMPLE OF AN INTEGRATIVE
SOLUTION THAT INCLUDES MOBILE
(SIMPLE)**

Bill Gates announcing 1st Vaccine Innovation Award to Bangladeshi doctor

- *In 2009, Dr. Hossain was assigned to two districts where immunization rates were 67 and 60 percent, respectively. In 2010, they were 85 and 79 percent. These rapid improvements were the result of Dr. Hossain's innovative approach to running an immunization program. He instituted a process of registering pregnant women with their expected date of delivery, location, and **phone number, so vaccinators knew when children were born, where they were, and an easy way to contact their mothers.** He provided annual schedules for vaccine sessions to make vaccinators more accountable to the community and **had the vaccinators put their phone numbers on the children's immunization cards, so parents with young children could get in touch with a health worker.** These may seem like small innovations, but they show how looking at old problems in new ways can make a profound difference.*

**AN EXAMPLE OF A MORE COMPLEX
INTEGRATIVE SOLUTION**

An e-bank customer service point at a village in Andhra Pradesh



As of 2009
1.6 million
Customers
6,100 Customer
Service Points
9,200 Villages
127 Districts

Close up of the equipment



Specifications of technology components

- The Point of Transaction (POT) terminal consists of 3 components: Reader (designed in India), Printer and RFID Smart Card, which communicate through NFC protocol
- POT terminal can handle transactions both in online and offline mode. The POT communicates with the back-end server through GSM/GPRS. Communication is secured through VPN.
- Standards: Bio-Metric - ISO 19794; Smart Card - ISO 14443.
- An ALW data center in Navi Mumbai serves as the back-end using banking software MIFOS and MLS for financial switch. Interface to banks has already been established.
- Fingerprint image (without compression) and the template are stored in the enrollment system.

Advantages of mobile platform over Internet kiosk

- Integrates camera, radio, data access, voice, text communication-modes that are typically used by government
- Can be integrated with a number of devices such a biometric identifiers, smart cards, small printers in a wireless mode
- Can connect with back-end servers over GPRS/3G and be integrated with existing ICT applications
- Can be operated with erratic/no power supply and without fixed-line telecom access
- Requires less training to operate than a PC
- Personalized information can be targeted to a specific user
- Costs of ownership and operation are affordable
- Improved convenience: anytime, anywhere

DECENTRALIZED INNOVATION

“App Store” and Open Data

- Government has included “app store” and innovation fund in m gov policy
 - Elements of encouraging mobile entrepreneurship
 - Barriers to entry are low for those developing m applications for smartphones & to some extent feature phones
 - But barriers do exist to the scaling up needed to become real businesses
 - Reliable streams of government data must be freed up
 - No/minimal restrictions should be placed on value-added government data
 - Need to think through intellectual property issues

LOCATION-BASED SERVICES

Using mobility of users

- Cannot be done with fixed access
- Need to think through privacy implications and develop reasonable safeguards

In sum

- Mobile as workaround
- Mobile as assumption
- Mobile as element of integrative solution
- Exploit the low barriers to entry for entrepreneurship & innovation in m apps
- Uniquely mobile: location-based services