Consumer protection and the regulator

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Pro-poor. Pro-market.

IDRC CRDI

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Canada

Professor Stephen Littlechild on consumer protection

- "Competition is indisputably the most effective - perhaps the *only* effective – means of protecting consumers against monopoly power. Regulation is essentially the means of preventing the worst excesses of monopoly; it is not a substitute for competition. It is a means of 'holding the fort until competition comes.'"

1983 Report to UK Government, Para 4.11

Consumer protection in a monopoly setting

- In a monopoly environment, the government has major responsibilities with regard to consumer protection
- When there are no exit options (alternatives), voice is all that is left (other than doing without)
  - Voice can be direct: consumer speaks/complains to supplier
  - Voice can be directed to 3rd party (consumer protection agency/telecom regulator) who has power over supplier
  - Voice can lead to anti-supplier agitation, even to demands for expropriation

Consumer protection under competition

- *Caveat emptor* (Let the buyer beware) is the starting position
  - Assumes homogenous products ➔ costless exit options
  - Assumes perfect knowledge
    - Obviously unrealistic; For all markets, but especially for markets in infrastructure services
- Government actions in absence of assumptions
  - Regulate suppliers proportionate to variance from perfect market, i.e., higher the HHI, stricter the regulation
  - Reduce information asymmetries

Low-quality equilibrium trap

- Hirschman's *Exit, voice and loyalty* analysis shows that low-quality equilibrium could result, if no significant quality differences among suppliers
  - Number leaving = number joining ➔ no net loss in market share/revenue ➔ effective market signal to supplier
- Therefore, simply reducing information asymmetries may not be enough in imperfectly competitive ICT infrastructure markets
- But we still must reduce information asymmetries and also obtain diagnostic information on where regulatory interventions are needed

APPROACHES TO BROADBAND QUALITY OF SERVICE EXPERIENCE

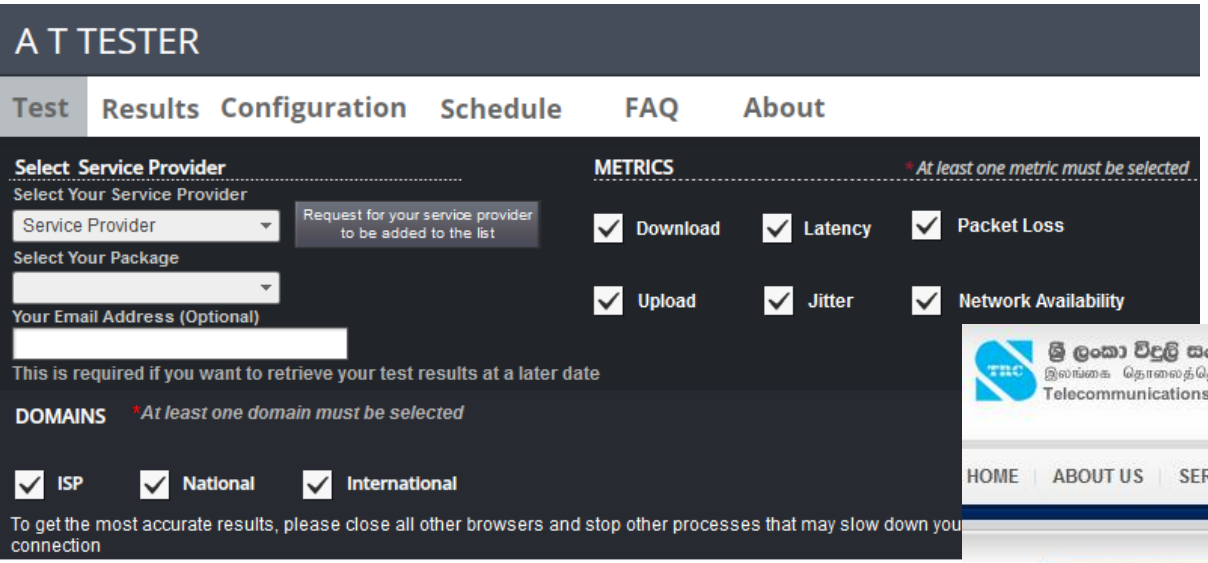
Quality testing can be done by different parties – regulator is well positioned

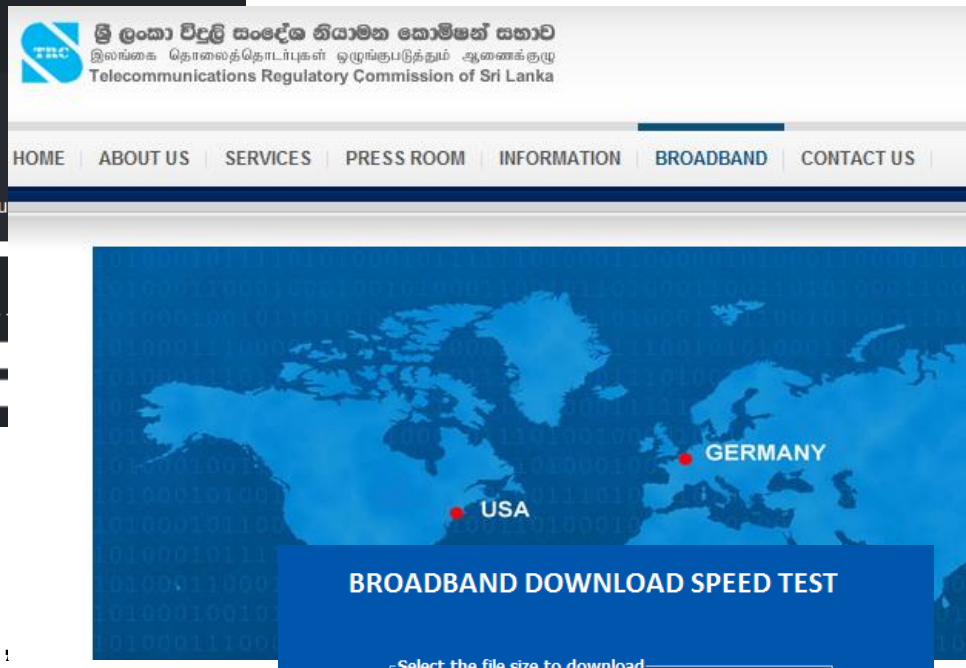
Diagnostics conducted by	Pros	Cons
Service Providers (ISPs/operators)	• Easy to implement	• Results based on equipment placed in the most optimized points of the network • Not representative of the 'actual' speeds
Users	• Represents actual user experiences	• Assumes user's PC is virus-free, with no parallel process running etc. • Dependant on user's willingness to participate • Large files impact user's data limits
National Regulatory Authorities (NRAs)	• In a position to request operator involvement when necessary	• Known test locations will prompt operators to optimize networks in selected areas

Hardware offers accuracy, but may be expensive

- Equipment directly connects to the line between the router and the PC → Accurate
- Expensive
- SamKnows is being used by the FCC (US), Ofcom (UK), IDA (Singapore), European Commission etc.

Software may be more cost effective





- Levels of accuracy can vary
- Cost effective
- E.g: TRCSL (Sri Lanka | Implemented), ICTA (Mauritius), BICMA (Bhutan | Ongoing), CAM (Maldives | Ongoing), PIRRC (Fiji | Ongoing), LIRNE*asia* - since 2008

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What to measure? Think beyond download speed

Service	Download (kbps)	Upload (kbps)	Latency (Round Trip Time, RTT) (ms)	Jitter (ms)	Packet Loss (%)
Browsing (Text)	++	-	++	-	-
Browsing (Media)	+++	-	++	+	+
Downloading	+++	-	-	-	-
Transactions	-	-	++	+	-
Streaming media	+++	-		++	++
VOIP	+	+		++	+++
Games	+			++	++

+++ Highly relevant; ++ V ant; - Irrelevant

With increased use of cloud resources, this matrix changes. E.g. upload as important as download

- **RTT** has implicatio client-server interactive systems
- **Jitter** adds to the 'noise' of the transmission
- **Packet Loss** affects streaming media

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Source: Gonsalves, T.A & Bharadwaj, A. (2009)

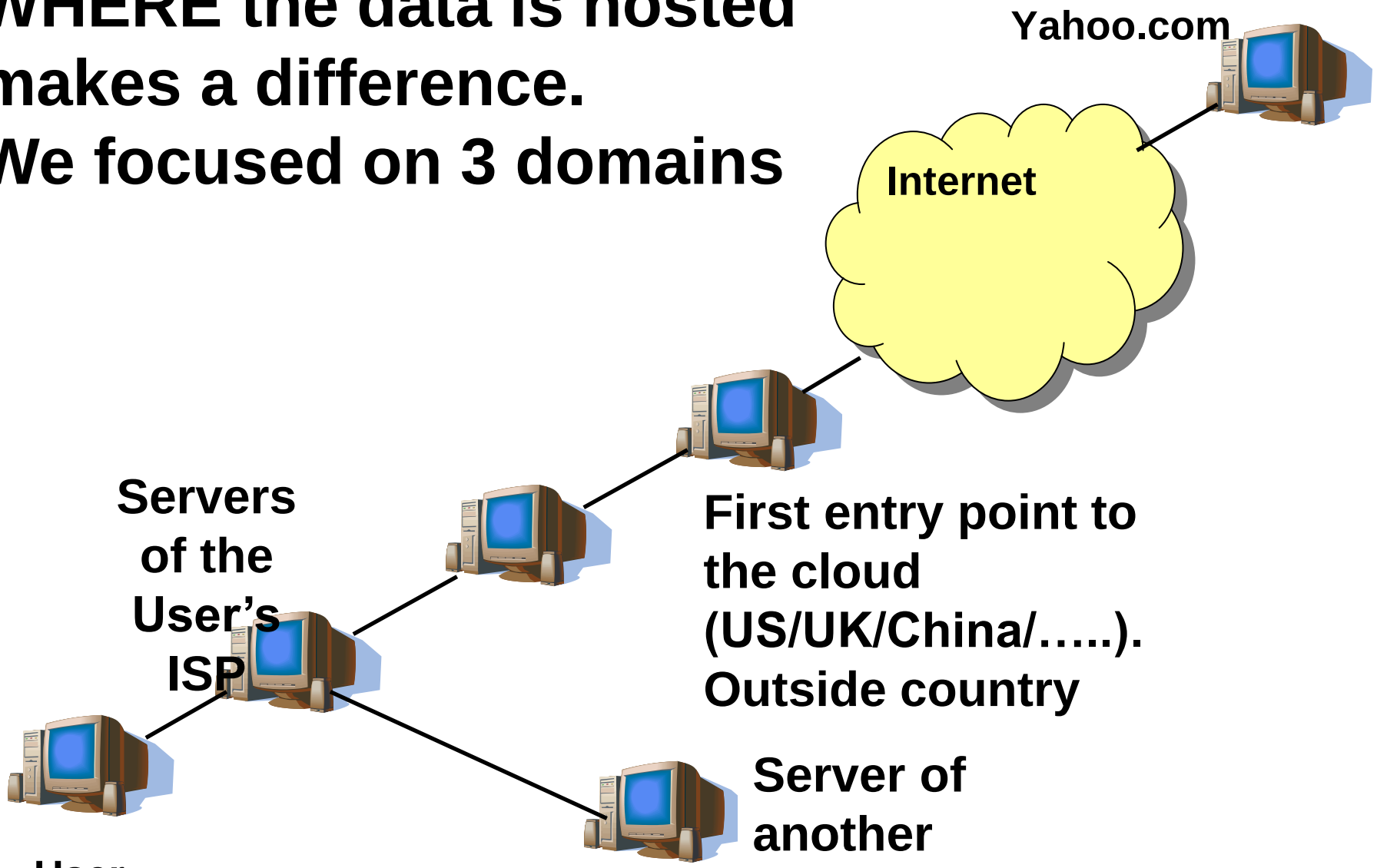
Various attributes impact measurement; Trade-offs involved in any practical solution

Attributes	Ideal case	Minimum requirement
Location	Statistically representative	Random locations
Service provider	All	Largest service provider
Broadband Plan	All	Select plans based on advertised speeds. For example: • Up to 1 Mbps • 2 Mbps – 4 Mbps • 5 Mbps – 10 Mbps • Above 10 Mbps
File size	Accurate results are obtained by using a large file that maximises use of the channel capacity. Example of file sizes: • 10 MB for connections up to 10 Mbps • 35 MB for connections above 10 Mbps	
Domains	Local, National and International	International
Test times	Multiple times of the day, multiple days of the week (including weekends) to account for off peak / peak variations	

LIRNEasia tried different approaches

- First, crowdsourcing
  - Blogger and telecenter operator meet-ups+ training;
  - Small community; High transaction cost → abandoned after 1 or 2 rounds
  - But worked in Africa: different incentives?
- Then (and now) test it ourselves
  - researchers spread across Asia (cover their cost)
  - Successful; but limited to where we can find a tester
- Given free to regulators. Got them to adopt
  - ICTA (Mauritius), BICMA (Bhutan), CAM (Maldives), Fiji and Pacific Islands

WHERE the data is hosted makes a difference.
We focused on 3 domains



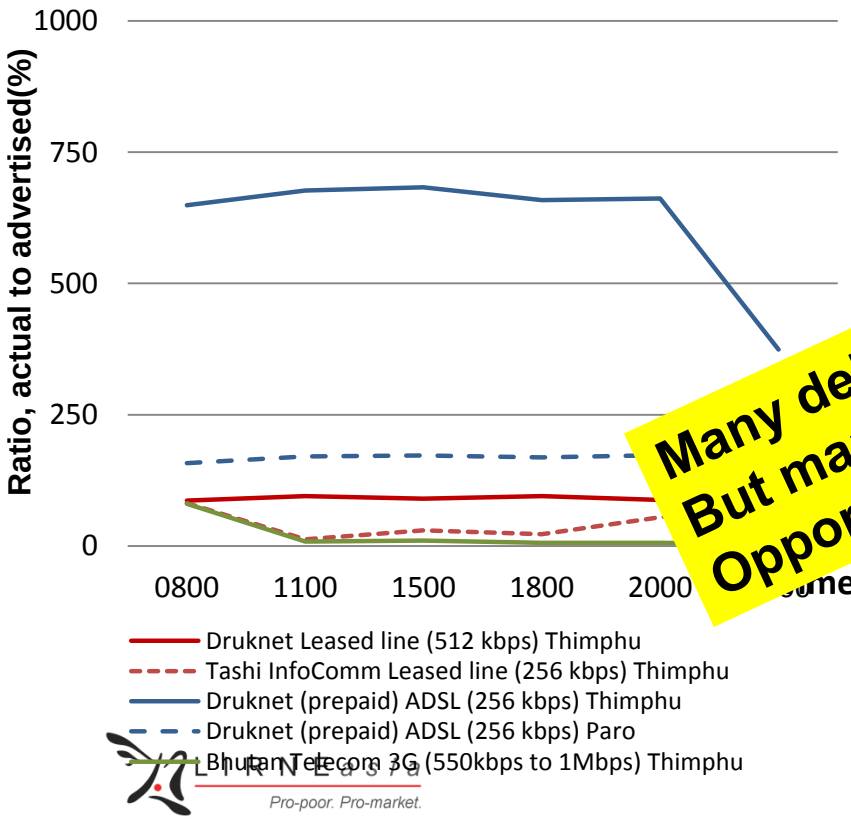
Software based, new testing methodology

- Developed methodology and software in partnership with Indian Institute of Technology (IIT), Madras
- Testing in multiple domains

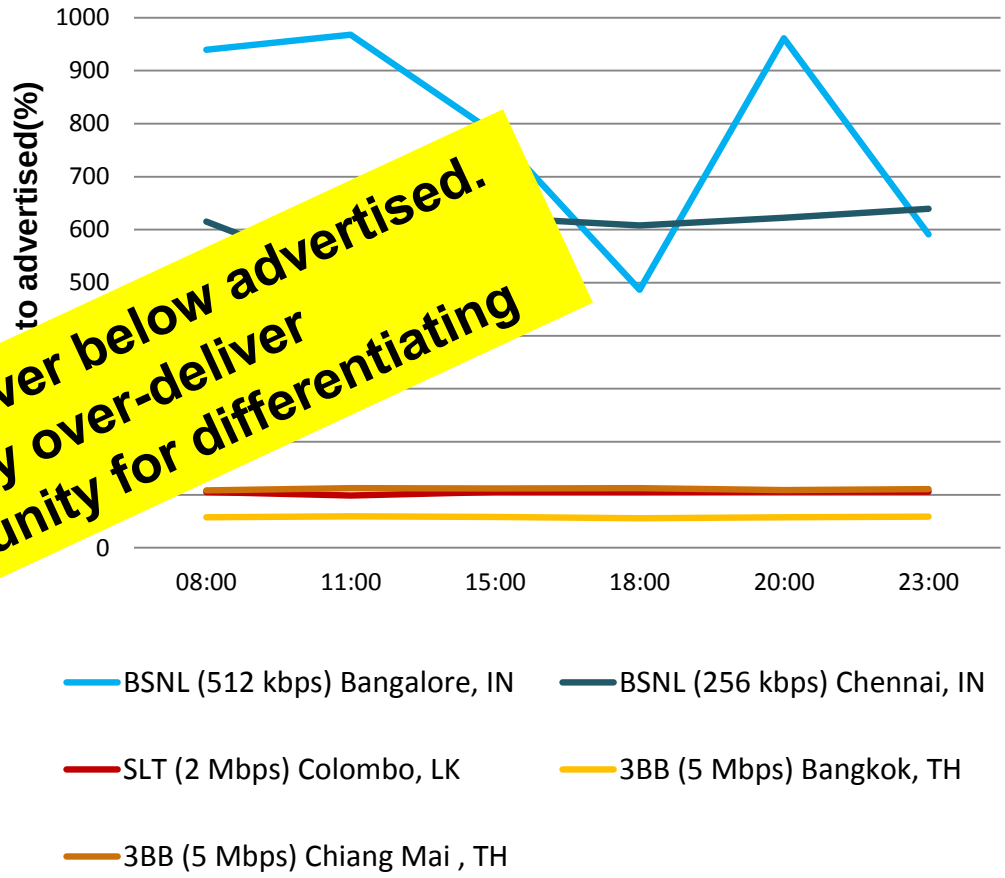
  - ISP, National and International (yahoo)
- Multiple broadband packages or links
  - 256kbps – 2Mbps
- Multiple times a day
  - 6 times a day; ranging from peak to off peak
- Multiple Locations (cities)

Actual performance differs from advertised. In surprising ways

Bhutan: Delivered (actual) as % of advertised, from international server



India, Sri Lanka, Thailand: Delivered (actual) as % of advertised, from local server



Many deliver below advertised.
But many over-deliver
Opportunity for differentiating

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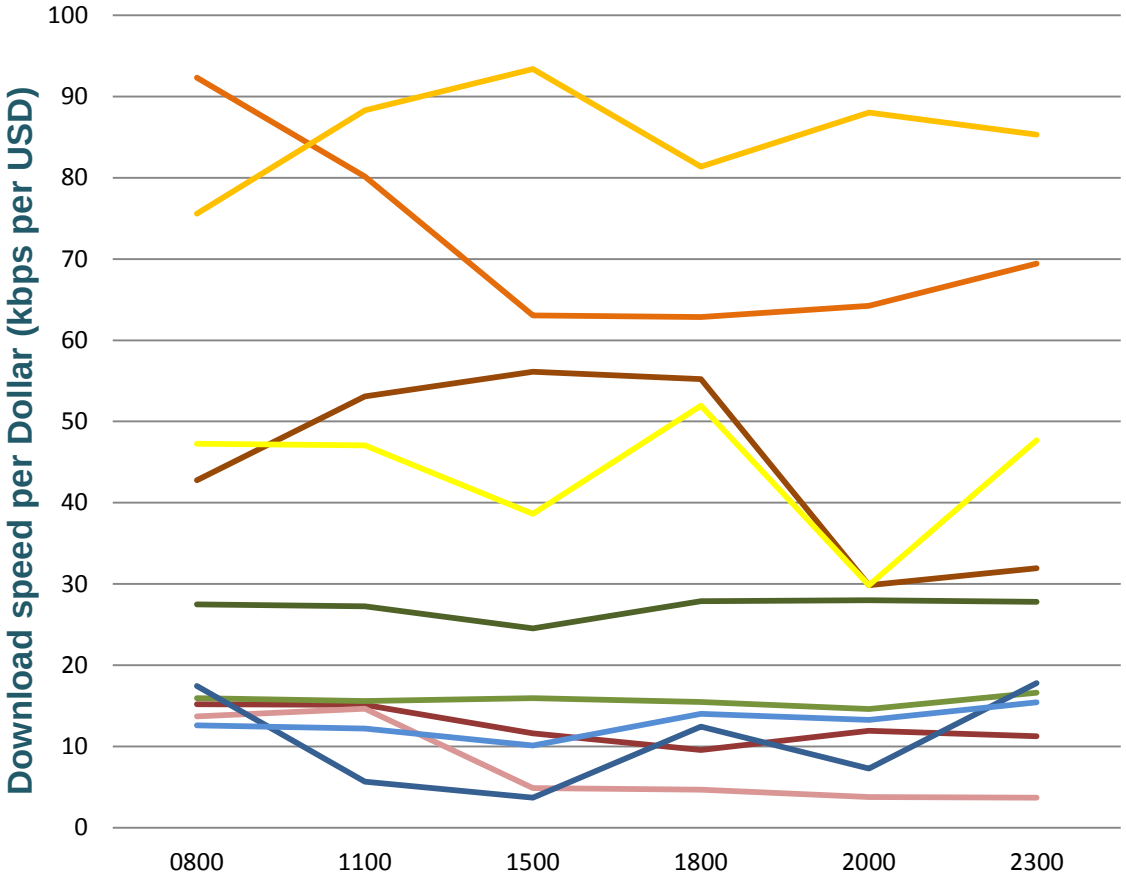
South Asian users get low value for money compared to N American counterparts



Package	per month in USD
Sirius (256 kbps) Dhaka, BD	15
SKYbd (256 kbps) Dhaka, BD	15
BSNL (256 kbps) Bangalore, IN	16
Airtel, (256 kbps) Delhi, IN	16
SLT (2 Mbps) Colombo, LK	48
Dialog (2 Mbps) Colombo, LK	44
Bell (6 Mbps) Ottawa, CA	60
Rogers (10 Mbps) Ottawa, CA	45
Verizon (3 Mbps) Buffalo, US	30
Comcast (6 Mbps) Denver, US	60

All high values for kbps/USD from N America

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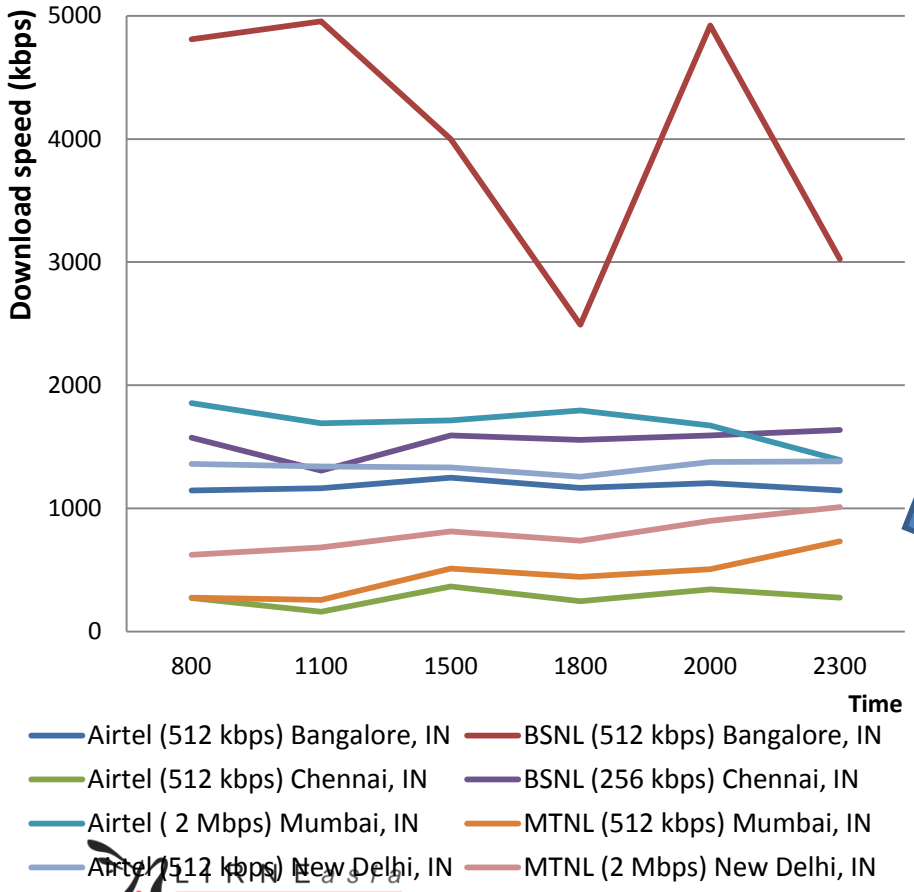
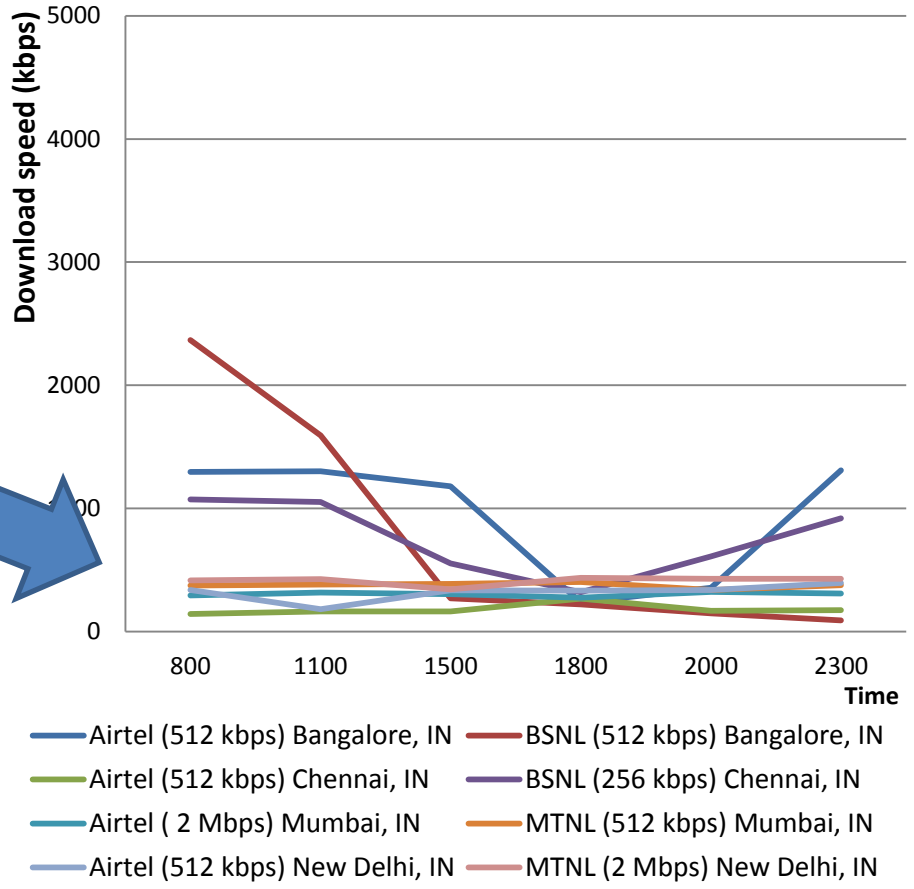
Source: LIRNE*asia*, *2009*

Indian users get lower speeds when downloading international content

India - Download from ISP server



India - Download from International server



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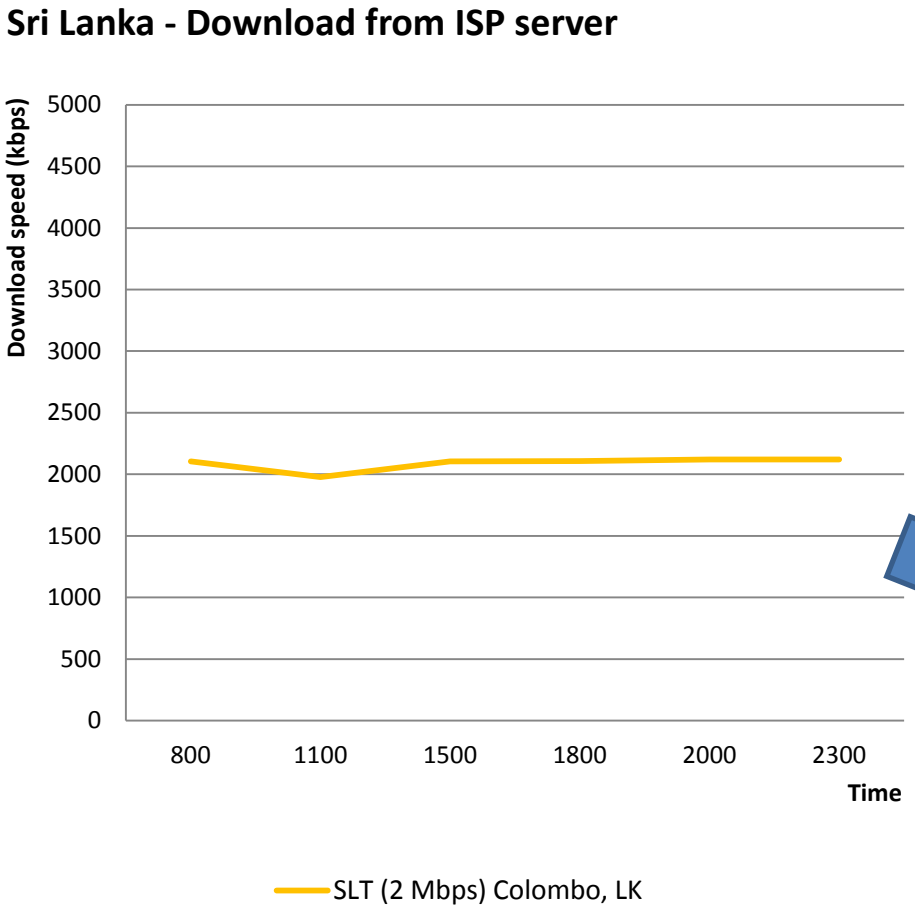
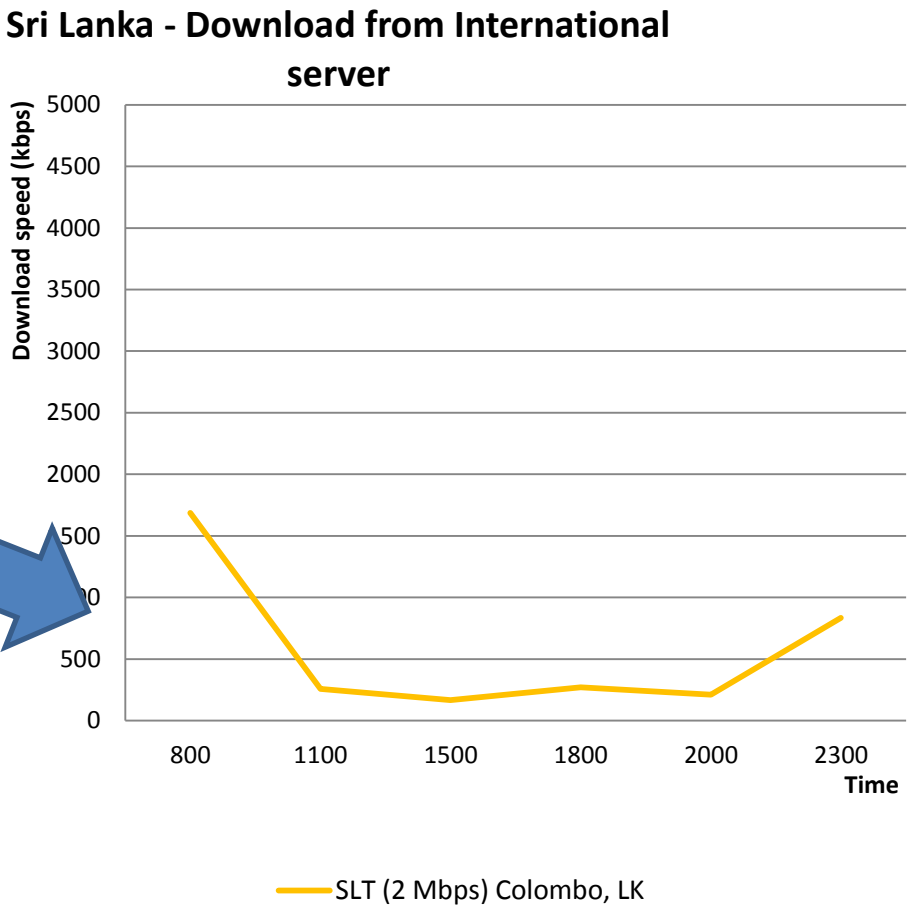
…as do Sri Lankan users





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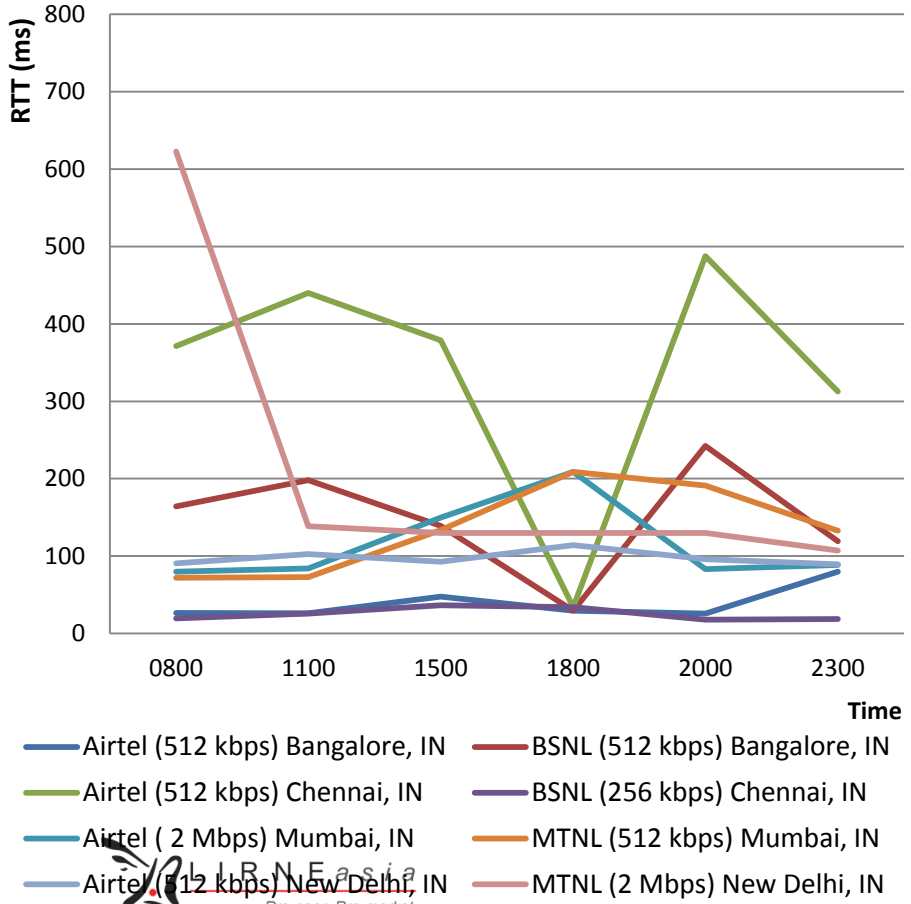
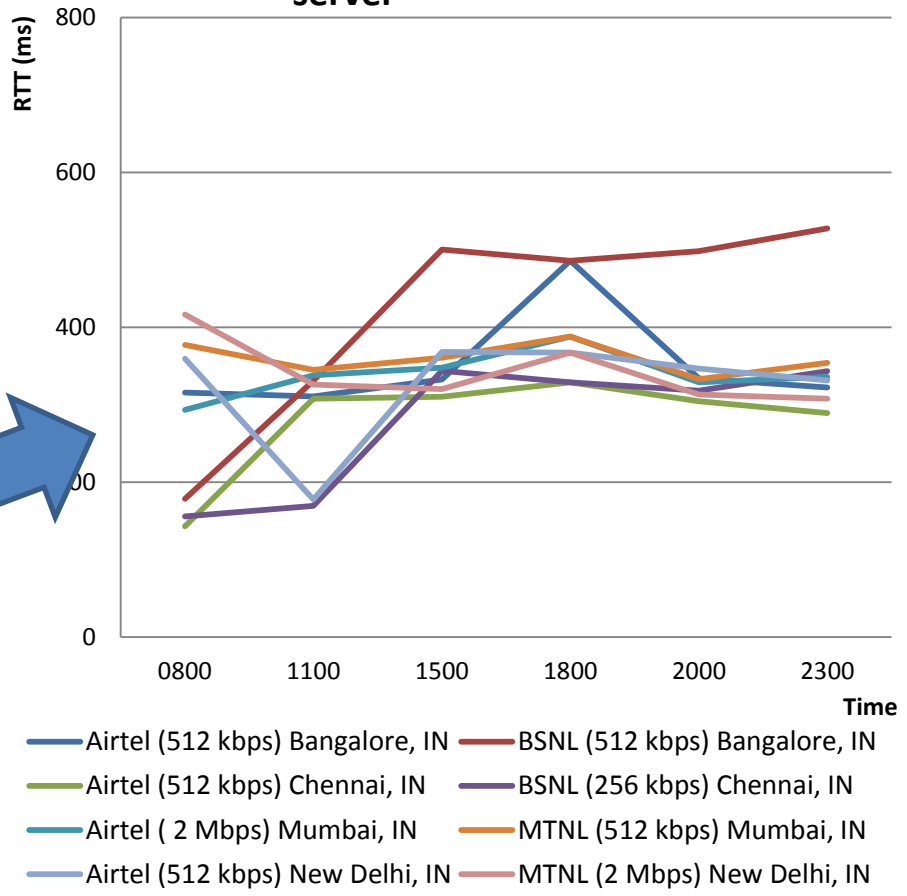
Round trip time deteriorates (increases) also when going international from India ..

India - RTT when pinged to ISP server



India - RTT when pinged to International server



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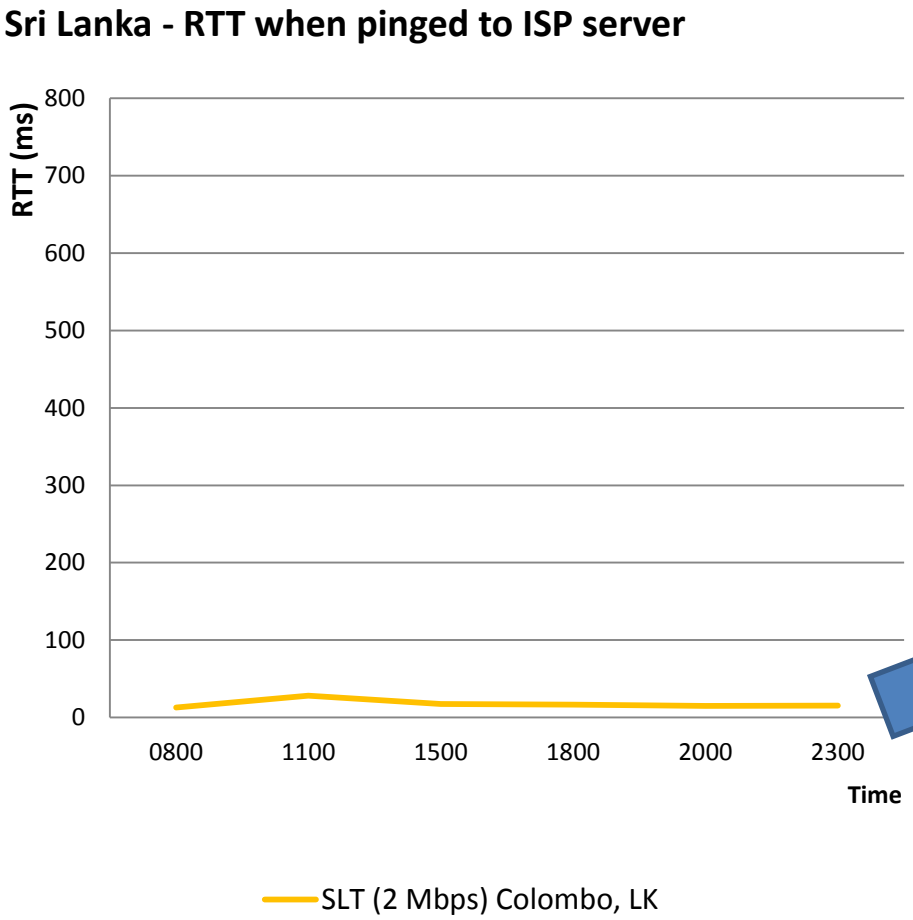
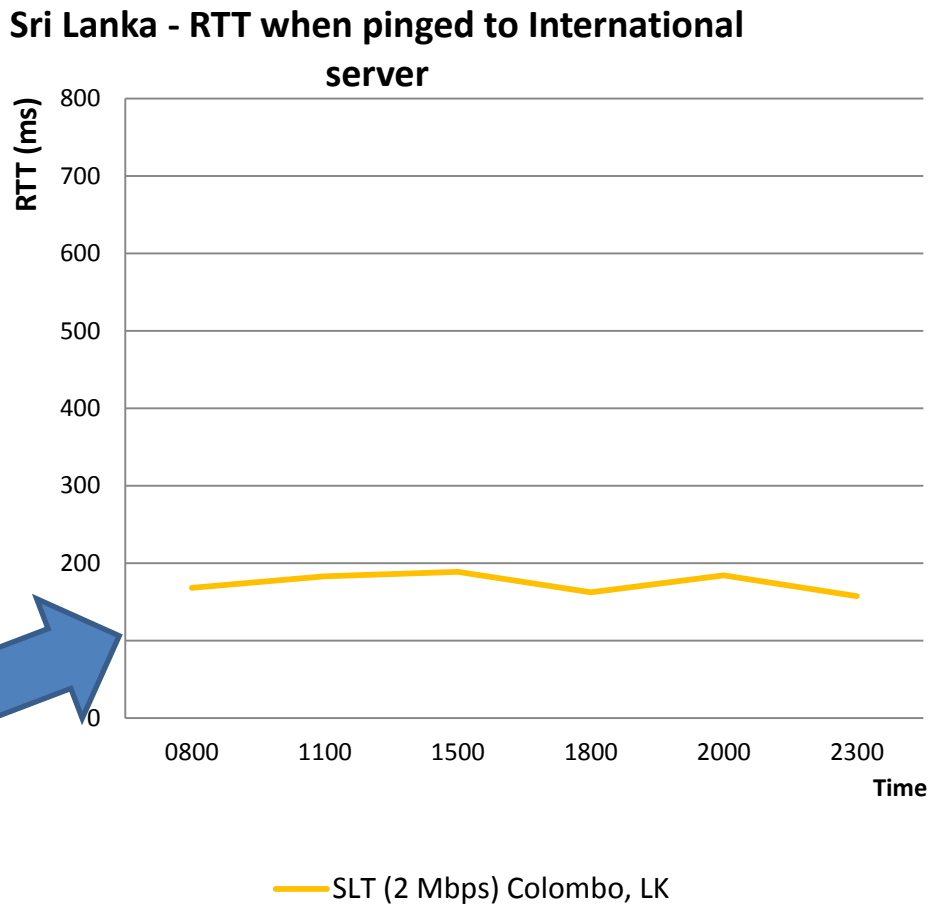
….and from Sri Lanka





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Country examples of Regulator-lead Implementations of Broadband Performance Measures

- Malta
  - Following a consultation process in January 2012 the Malta Communications Authority (MCA) issued the final decision notice on measuring broadband performance.
  - ISPs to follow a passive measurement technique, a method that uses live traffic streams to monitor the network without placing additional traffic loads.
  - The broadband characteristics include data transmission speed (upload and download), network availability of the core network and the access network, latency and packet loss, among others.
  - ISPs are required to report the performance every quarter for each broadband plan offered.
- The Pacific Islands
  - A recent initiative lead by the Pacific ICT Regulatory Resource Center (PiRRC) encouraged regulators to actively measure and the performance of their broadband networks.
  - Fiji, Samoa and Papua New Guinea are using the AT Tester (a tool developed by IIT-Madras and LIRNE*asia*) hosted by the PiRRC.
  - Vanuatu is in the process of running the diagnostics using the same tool with the guidance of the PiRRC.

Singapore and Hong Kong contrast in regulatory intervention

- Singapore
  - The Infocommunication Development Authority of Singapore (IDA) sets stringent standards to ensure consumer requirements are met although operators requested otherwise.
  - The decision to set standards was based on the fact that, at the time, the market was still developing.
  - IDA published performance indicators (network availability > 99%, Latency < 50ms and < 300ms for local and international segments respectively, among others) with a non-compliance penalty.
  - Since April 2012 there have been campaigns to recruit 900 volunteers to partake in a 12-month study conducted by SamKnows.
- Hong Kong
  - The Office of the Communications Authority (OFCA) says the market is so competitive that interventions are not needed
  - Setting performance measures is unrealistic because there are so many factors to consider
  - The level of competition ensures that service providers offer the best to consumers

LEARNINGS FROM RESEARCH ON CUSTOMER (MICRO-ENTERPRISES AT BOP) RELATIONSHIP MANAGEMENT

Demand-side CRM study

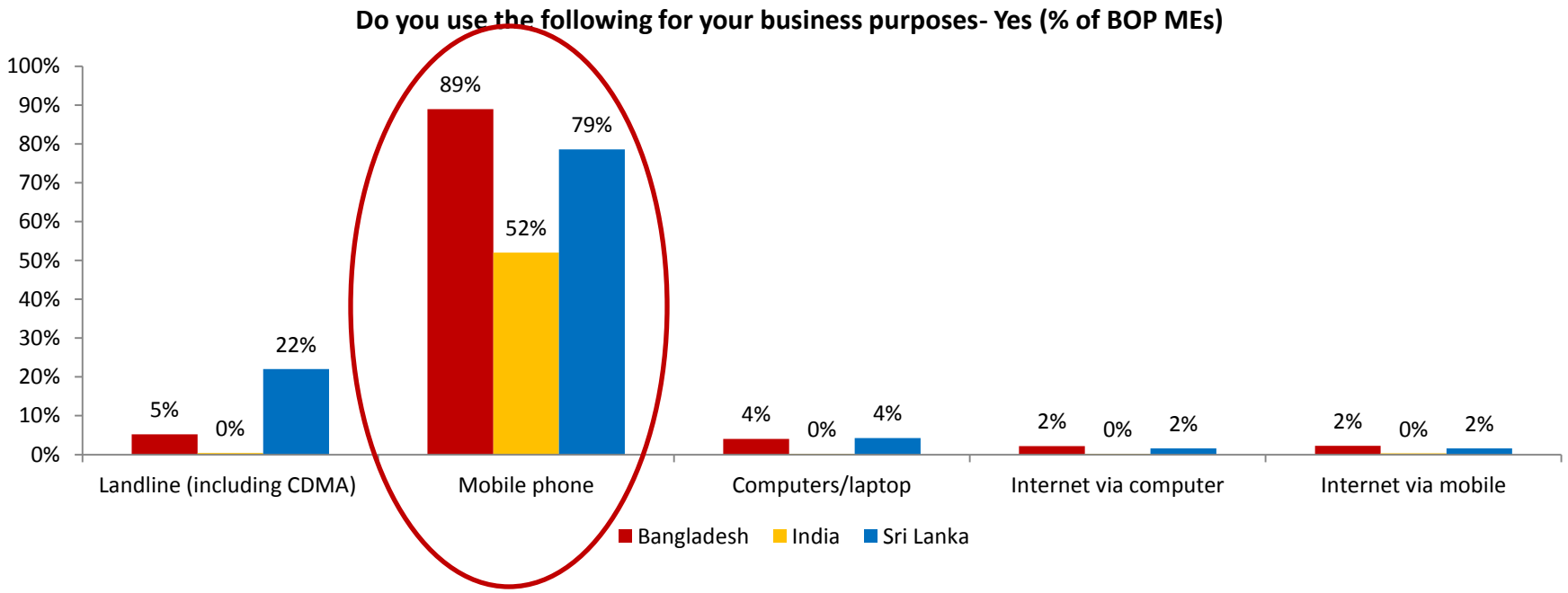
- Micro-entrepreneurs defined as those employing 0 -9 employees (may be paid part- or full-time workers including family members)
- BOP = Socio-economic classification (SEC) C, D and E.
- Representative survey of 3,180 urban, BOP micro entrepreneurs (ME)

  Dhaka – 915

  Delhi and Patna -- 1,279

  Colombo – 986
- Qualitative study with 88 participants: in-depth interviews, ethnographies and focus groups

Most used ICT for business related activities



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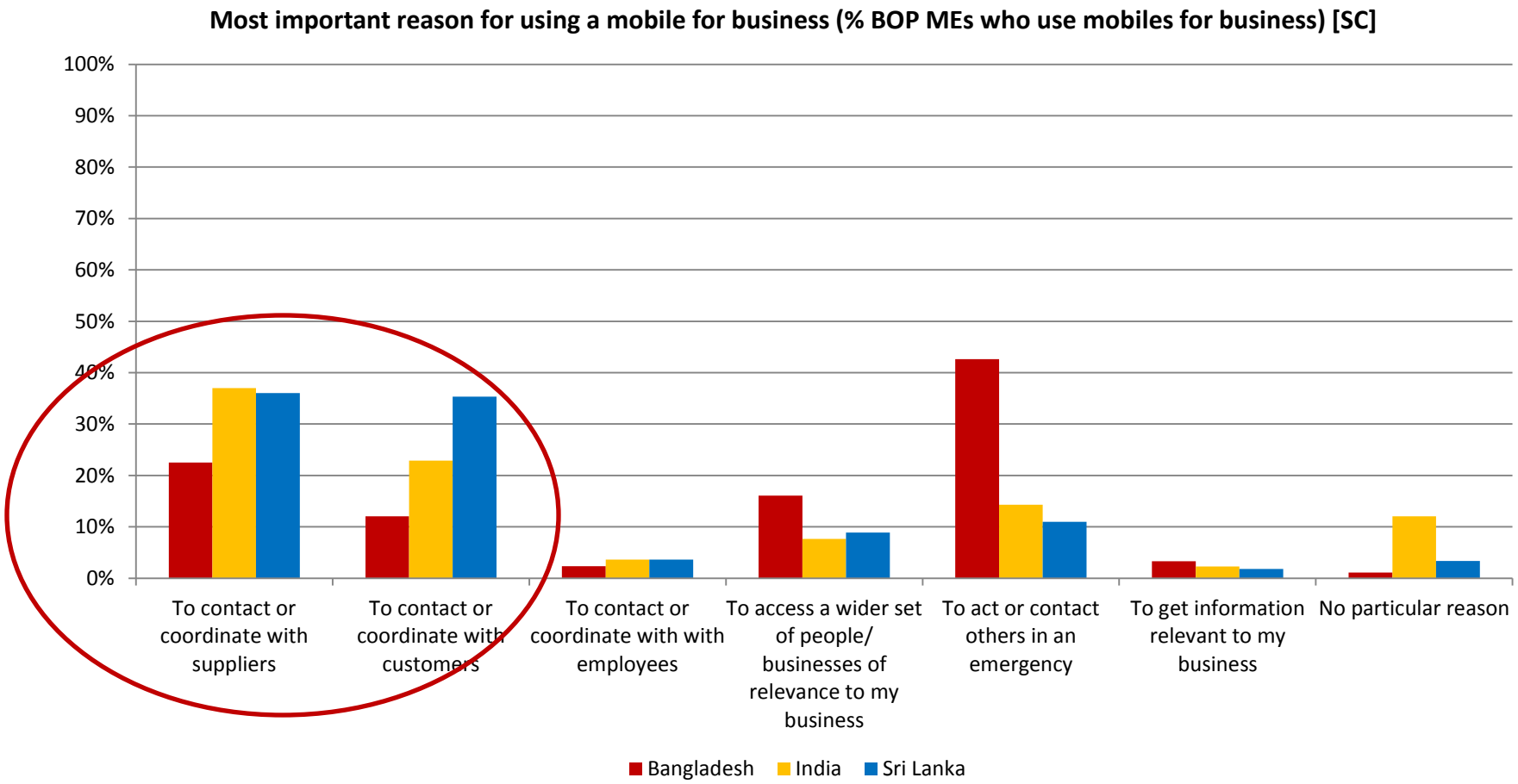
Mobiles most used for contacting suppliers & customers



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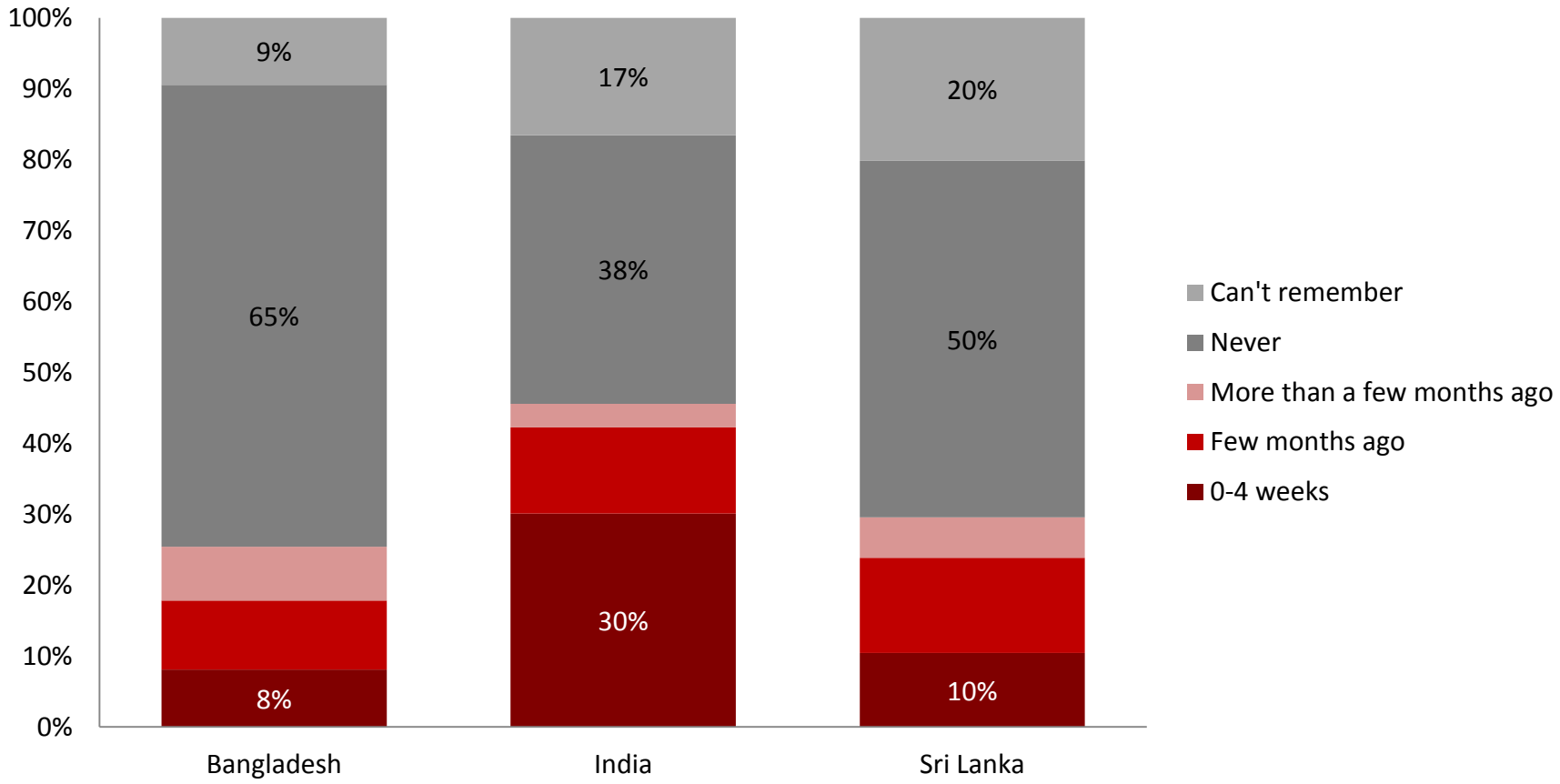
Most MEs do not interact with telecom service provider

Last time the ME interacted with the telecom service provider

(% BOP MEs who use mobiles for business) [SC]



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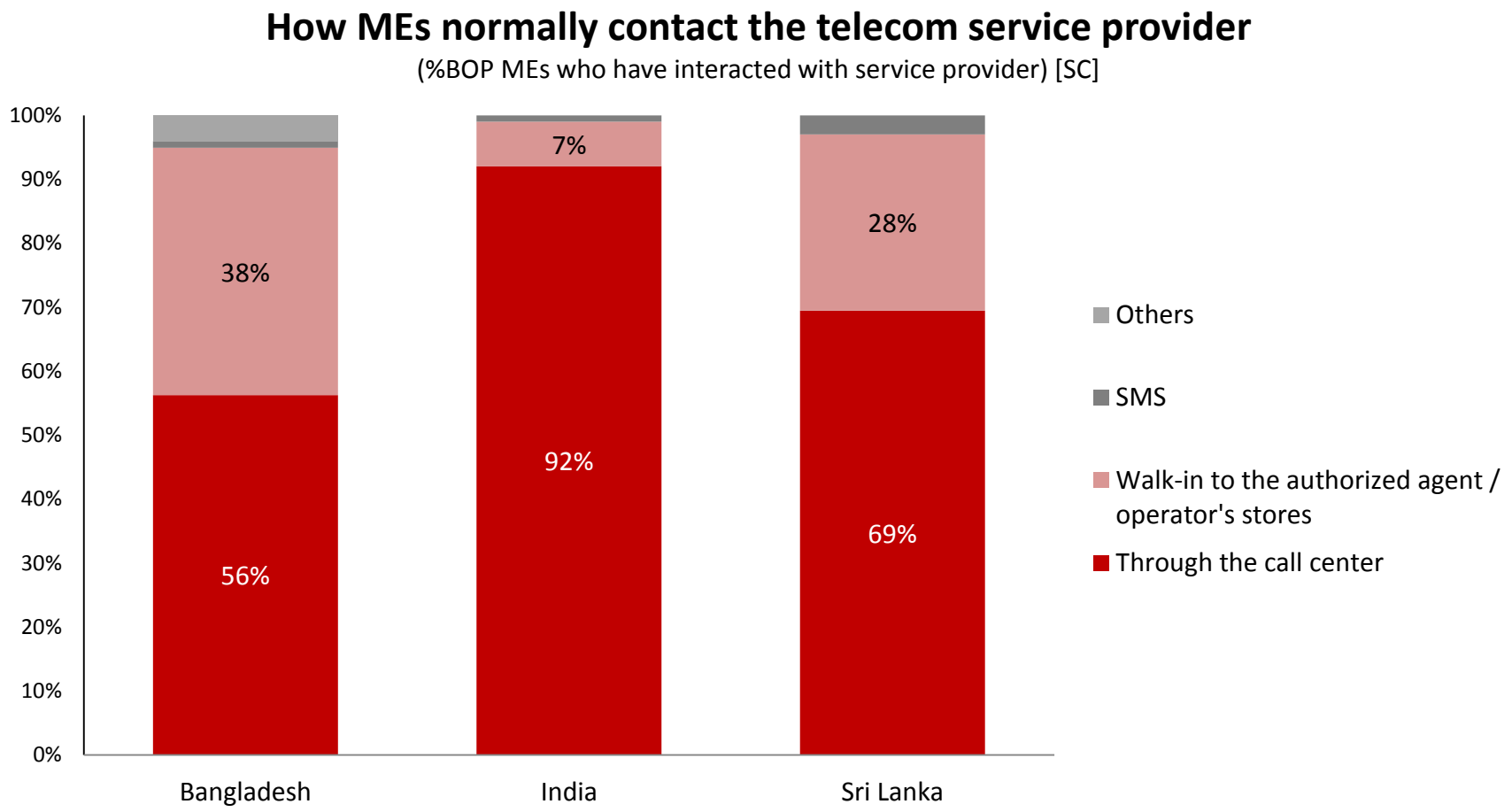
Those who do: How?



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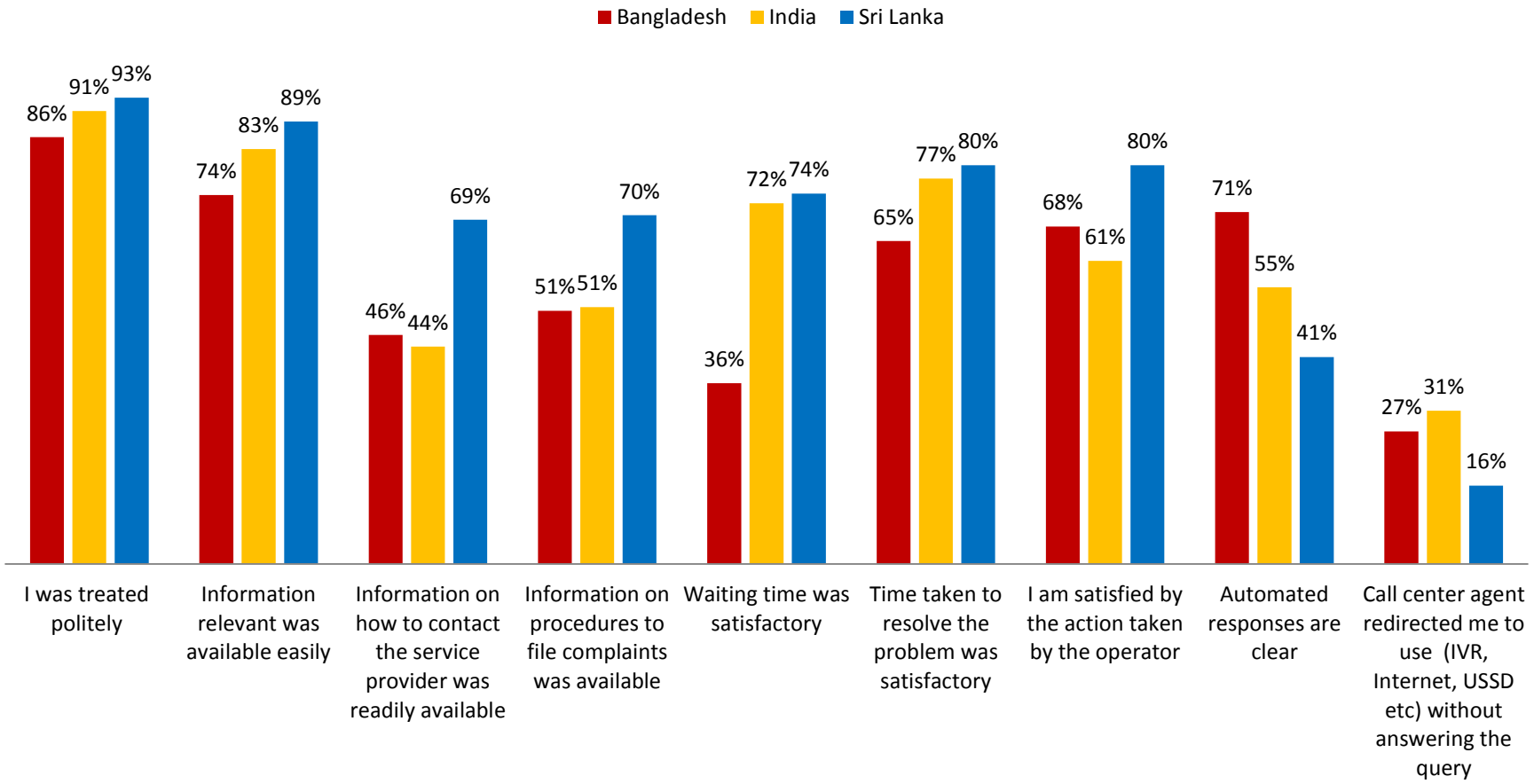
Those who do: Level of satisfaction

Experience with service provider – YES (%BOP MEs who have interacted with service provider)



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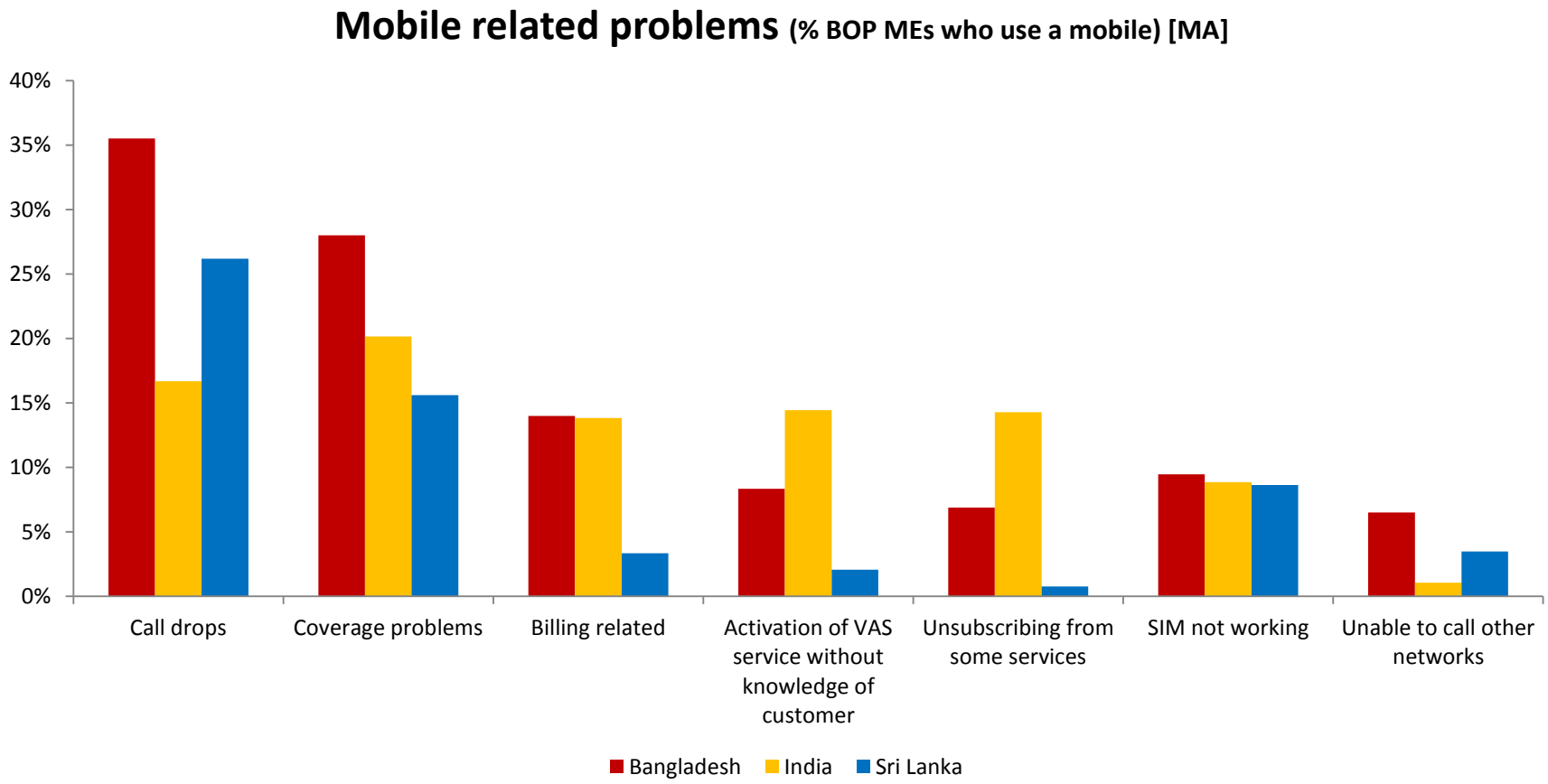
Call drops & coverage: The most significant problems



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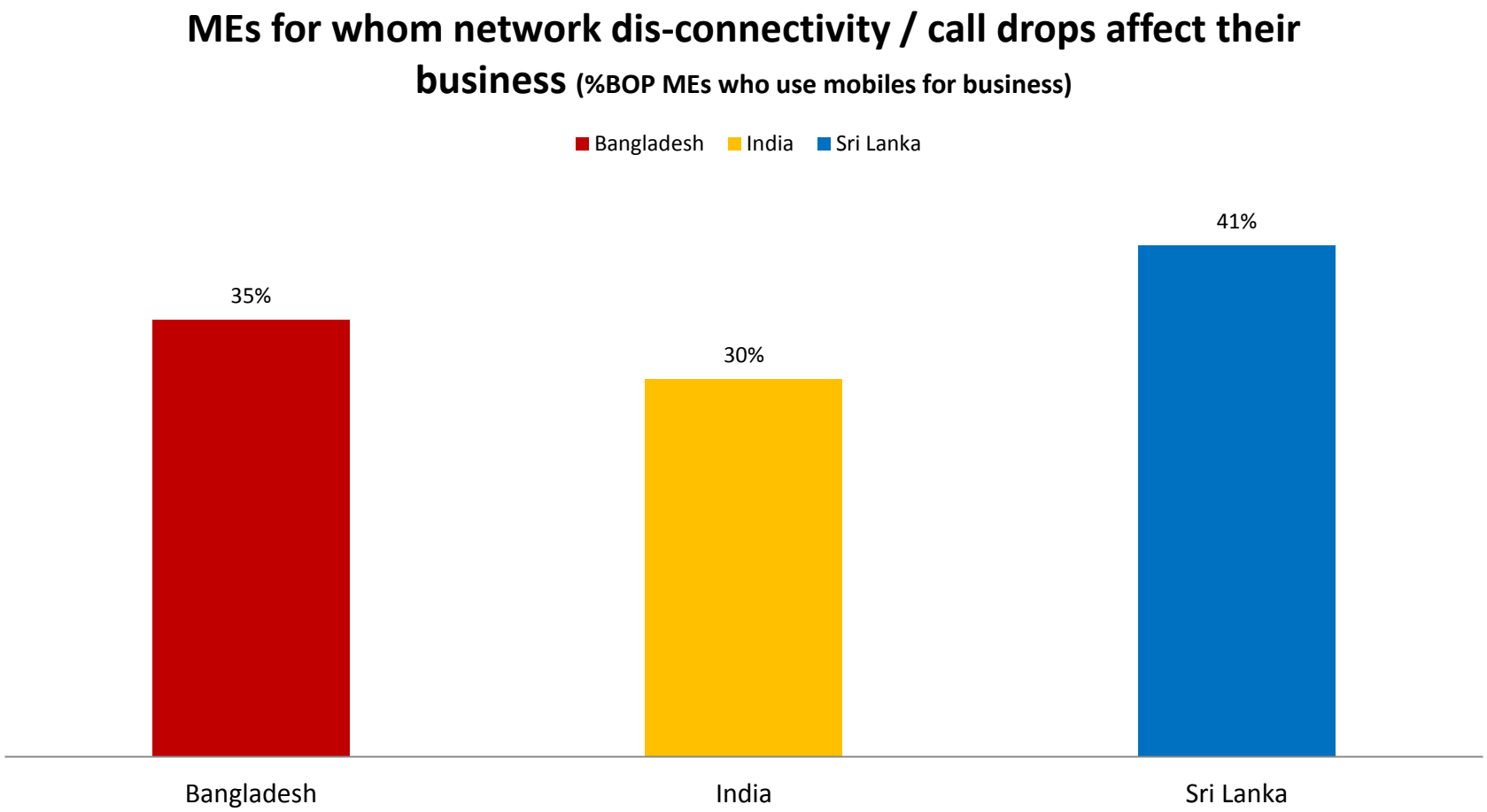
Those problems affect ME livelihoods



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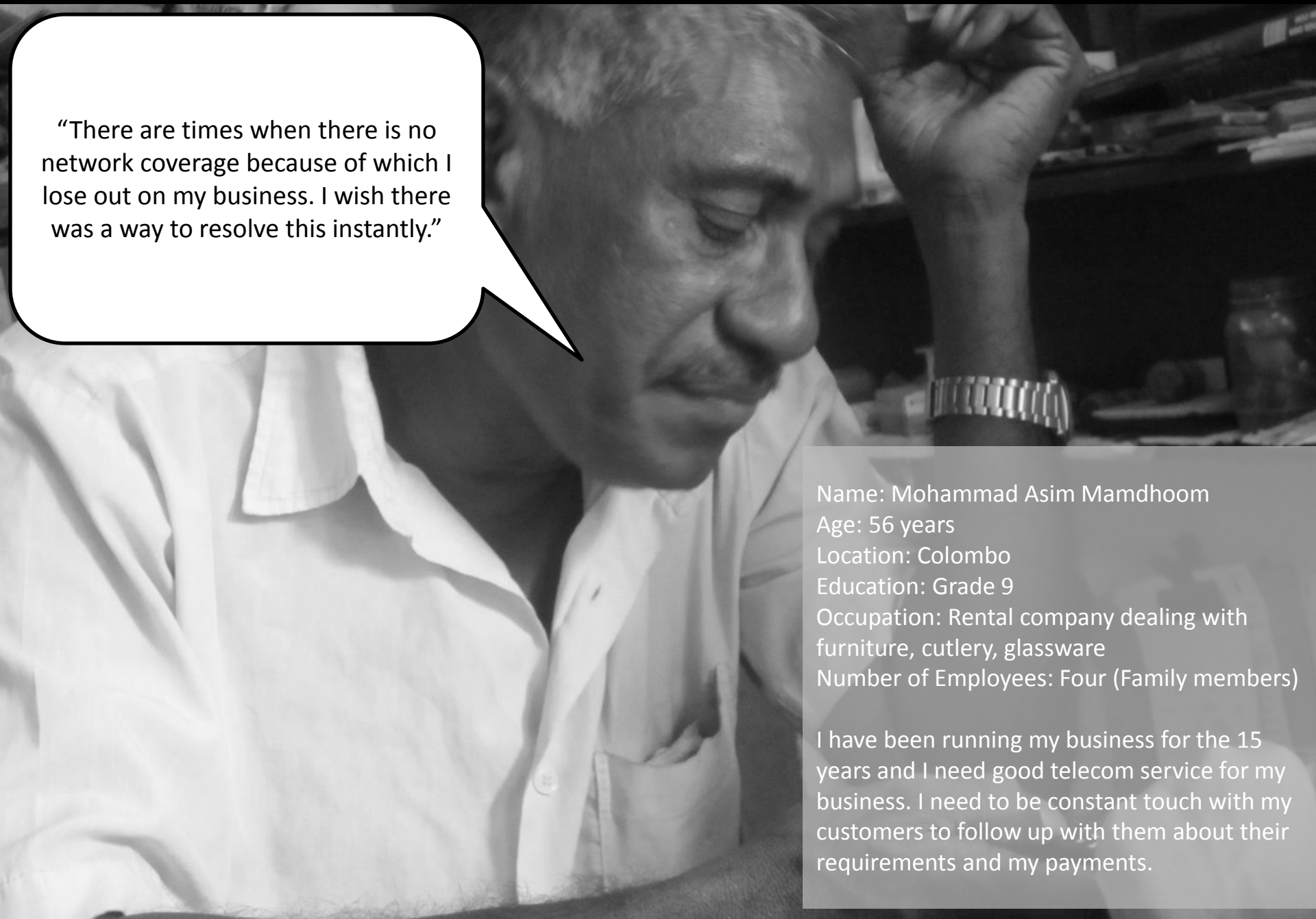
Problem- Call Drops



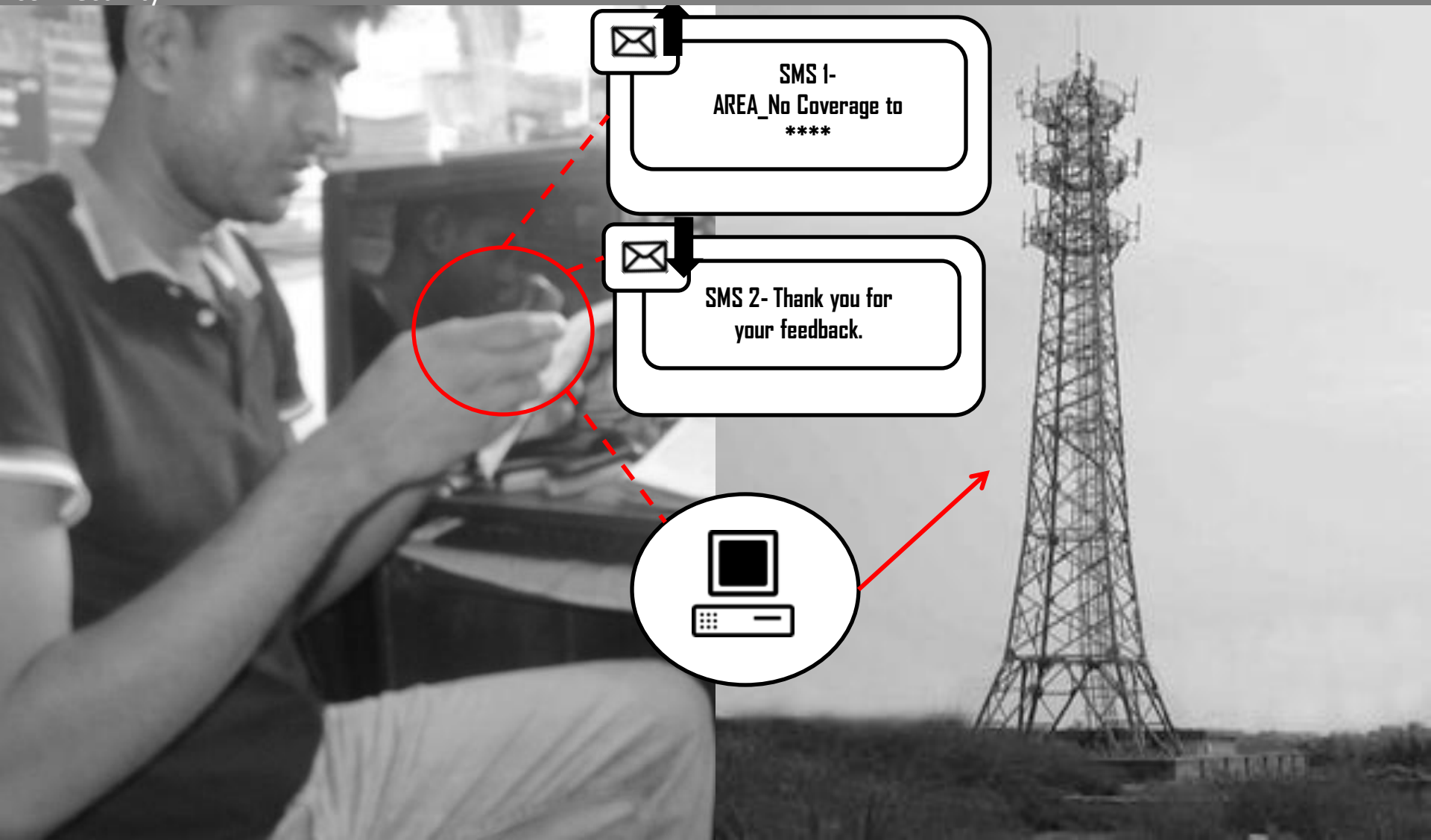
Name: Mohammad Asim Mamdhoom
Age: 56 years
Location: Colombo
Education: Grade 9
Occupation: Rental company dealing with furniture, cutlery, glassware
Number of Employees: Four (Family members)

I have been running my business for the 15 years and I need good telecom service for my business. I need to be constant touch with my customers to follow up with them about their requirements and my payments.

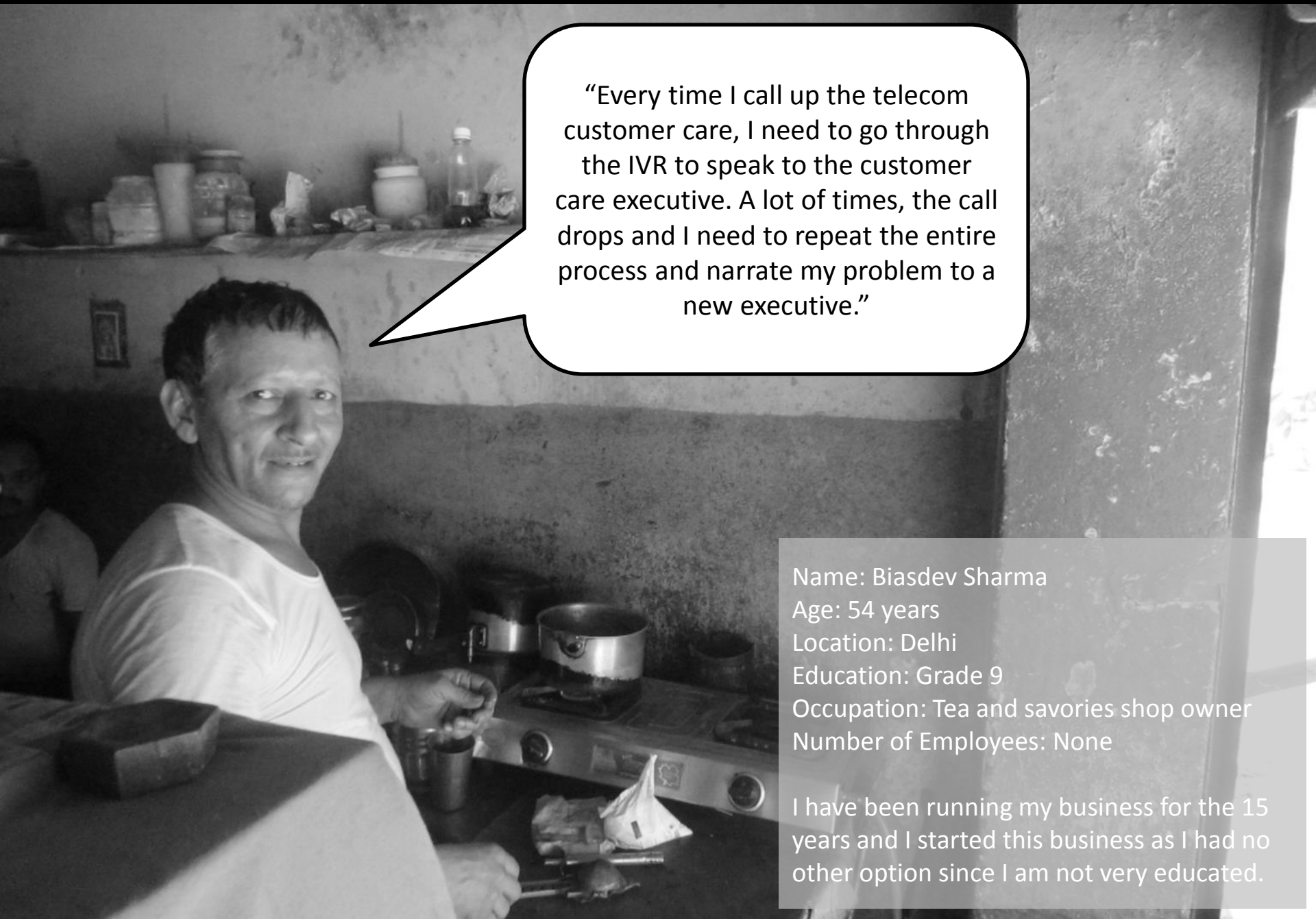
Solution to problem- Call Drops

Solution: Crowd Sourced Call Drop Map

Enable customers to log in problems pertaining to coverage through USSD/ SMS. This information will be saved in the form of a database enabling the operator to optimize phased introduction of new towers to improve network connectivity.



Call drops when calling customer care center

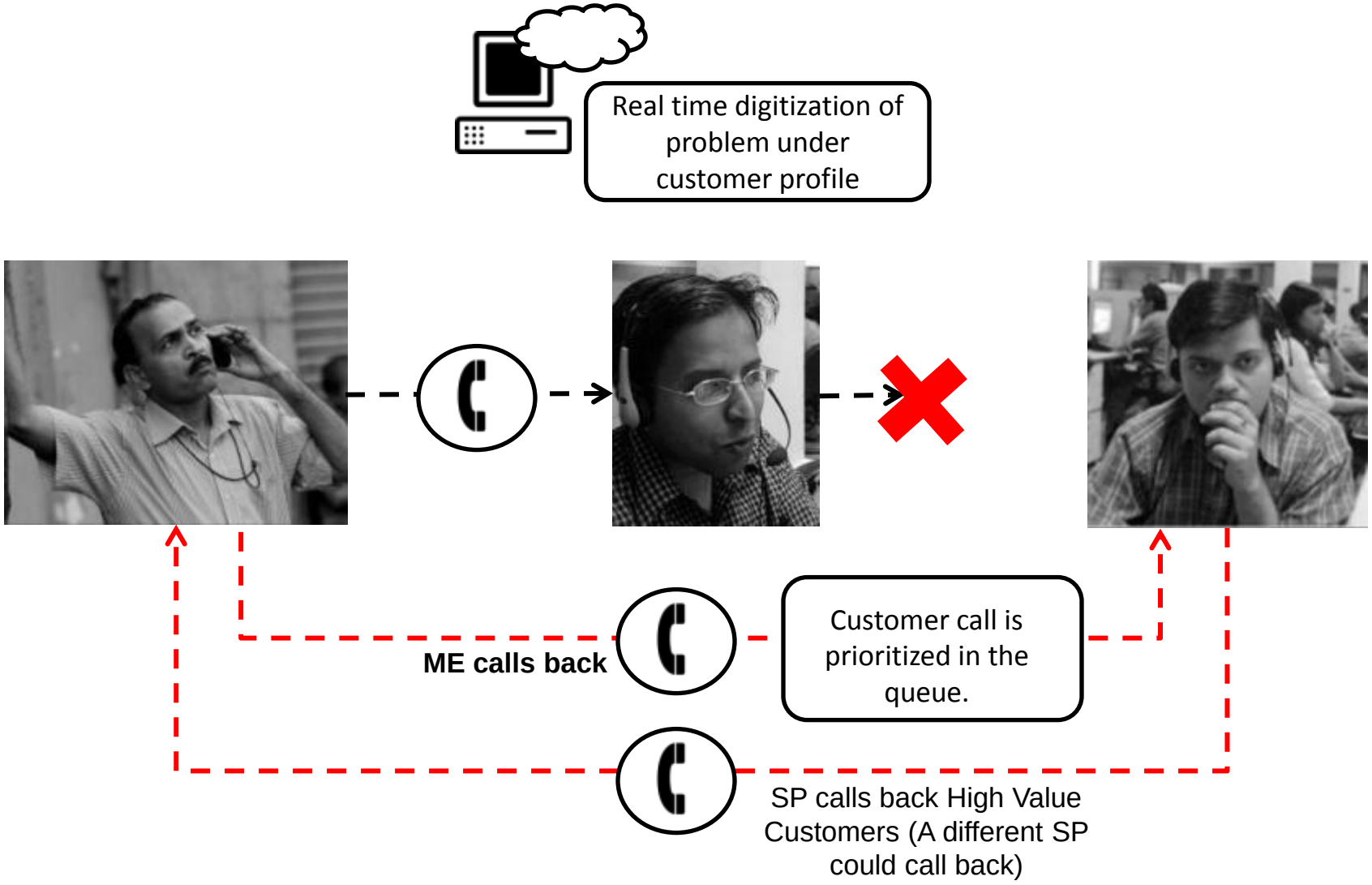


Name: Biasdev Sharma
Age: 54 years
Location: Delhi
Education: Grade 9
Occupation: Tea and savories shop owner
Number of Employees: None

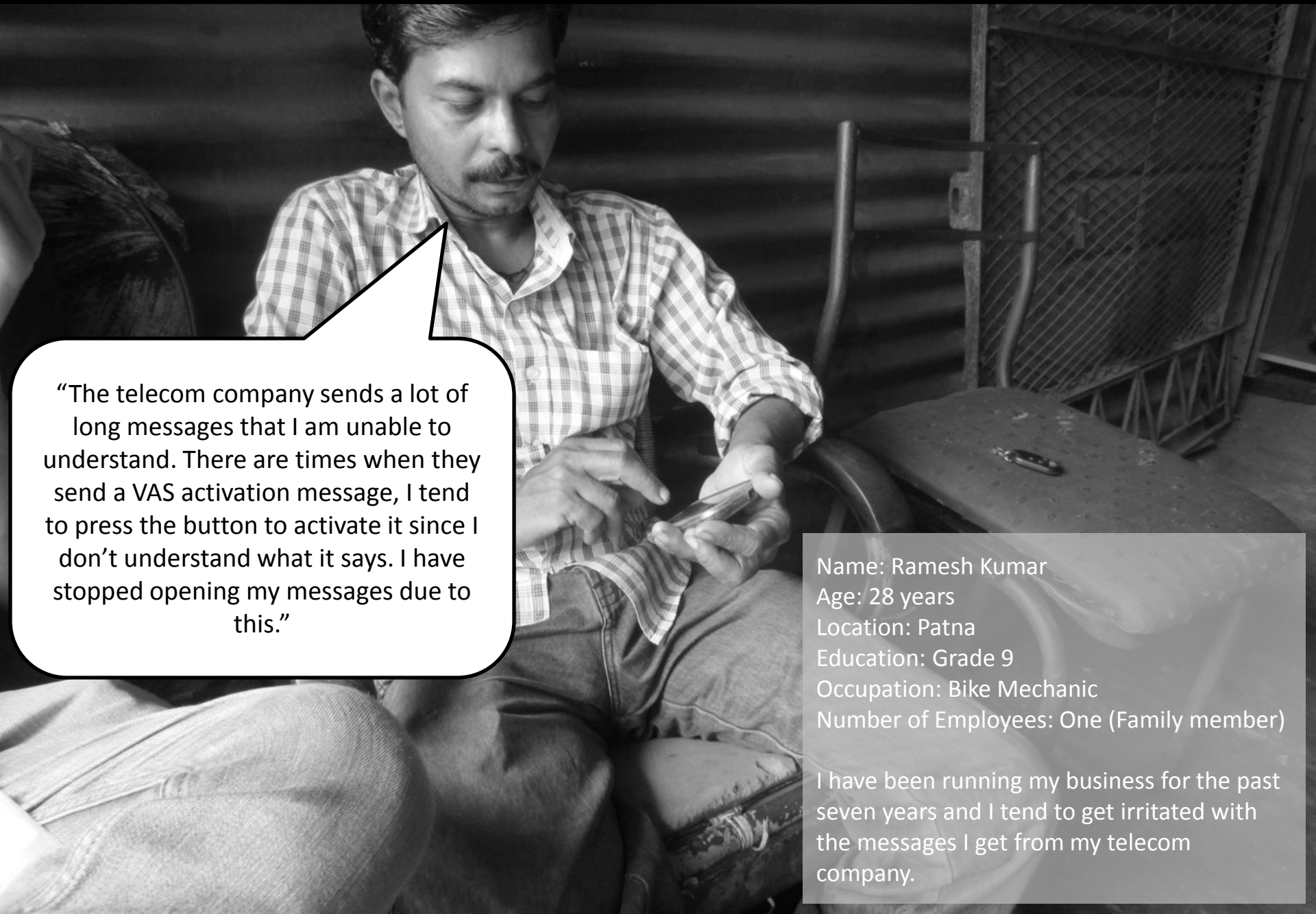
I have been running my business for the 15 years and I started this business as I had no other option since I am not very educated.

Solution to problem of call drops when calling customer care center

Solution: While addressing a customers call, the Customer Care Executive digitizes the issue in real time. In case of a call drop and the customer calls back within a stipulated span of time, the customer is prioritized in the queue. Customer will not need to repeat the problem as it is in the database.



Problem- Activation of unwanted VAS and long text messages



"The telecom company sends a lot of long messages that I am unable to understand. There are times when they send a VAS activation message, I tend to press the button to activate it since I don't understand what it says. I have stopped opening my messages due to this."

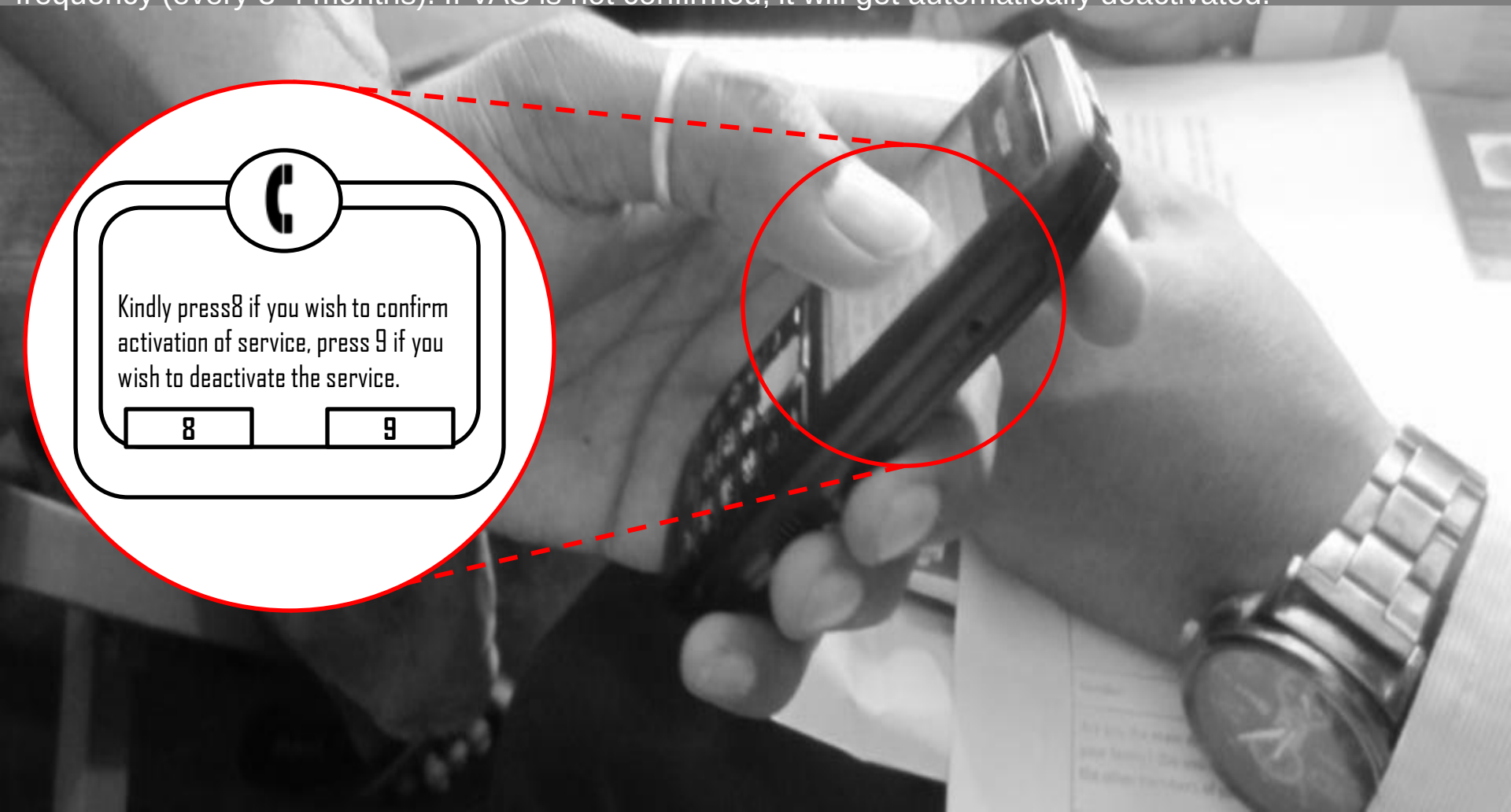
Name: Ramesh Kumar
Age: 28 years
Location: Patna
Education: Grade 9
Occupation: Bike Mechanic
Number of Employees: One (Family member)

I have been running my business for the past seven years and I tend to get irritated with the messages I get from my telecom company.

Solution to problem of activation of unwanted VAS

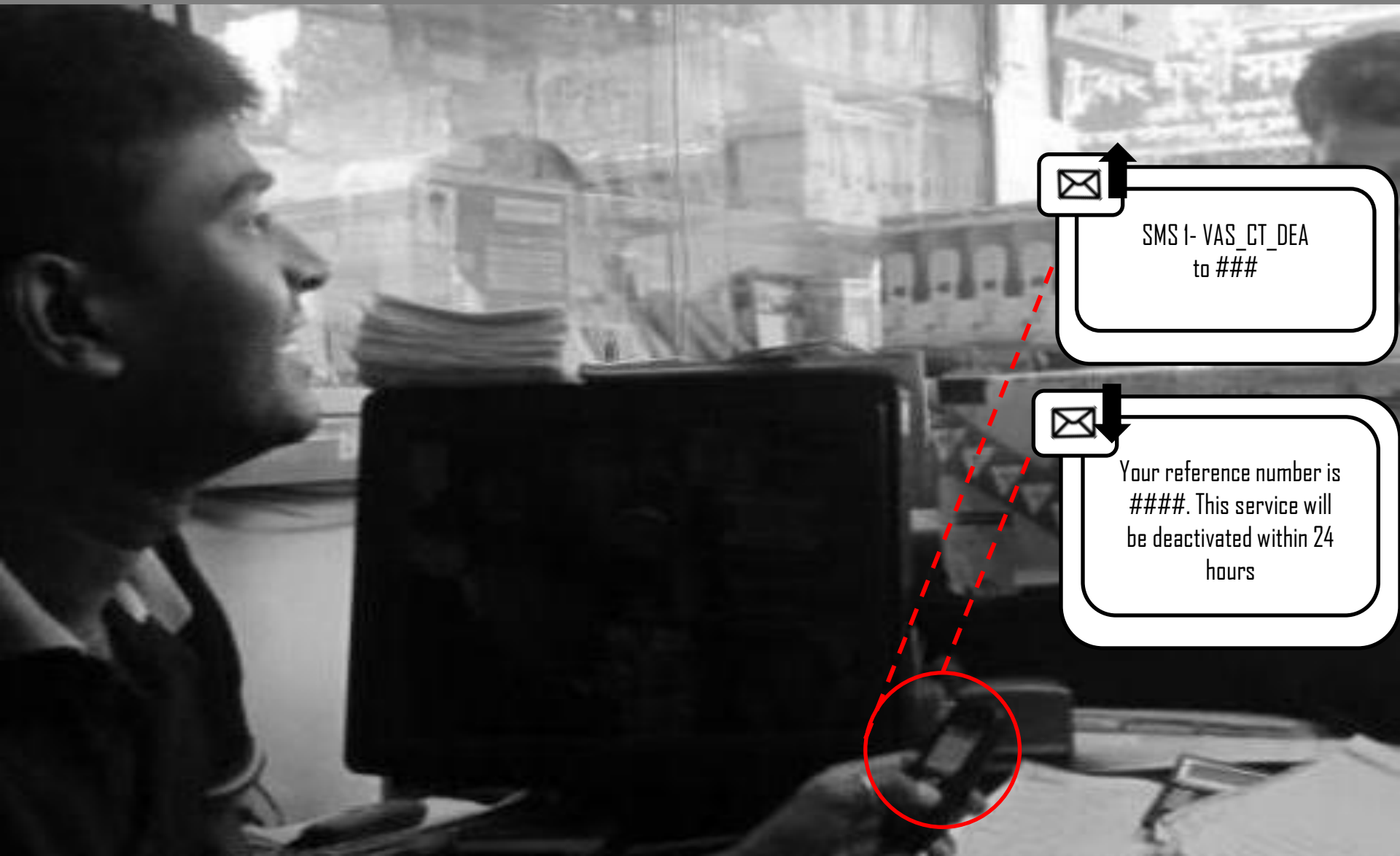
Solution 1: On activation of VAS, the ME receives a confirmation call through IVR, or SMS requesting them to confirm their activation. This way the ME can realize if the VAS was activated by mistake and press the required digit to avoid it.

Solution 2: Reconfirmation request sent through SMS or IVR about VAS activated on phone at a given frequency (every 3-4 months). If VAS is not confirmed, it will get automatically deactivated.



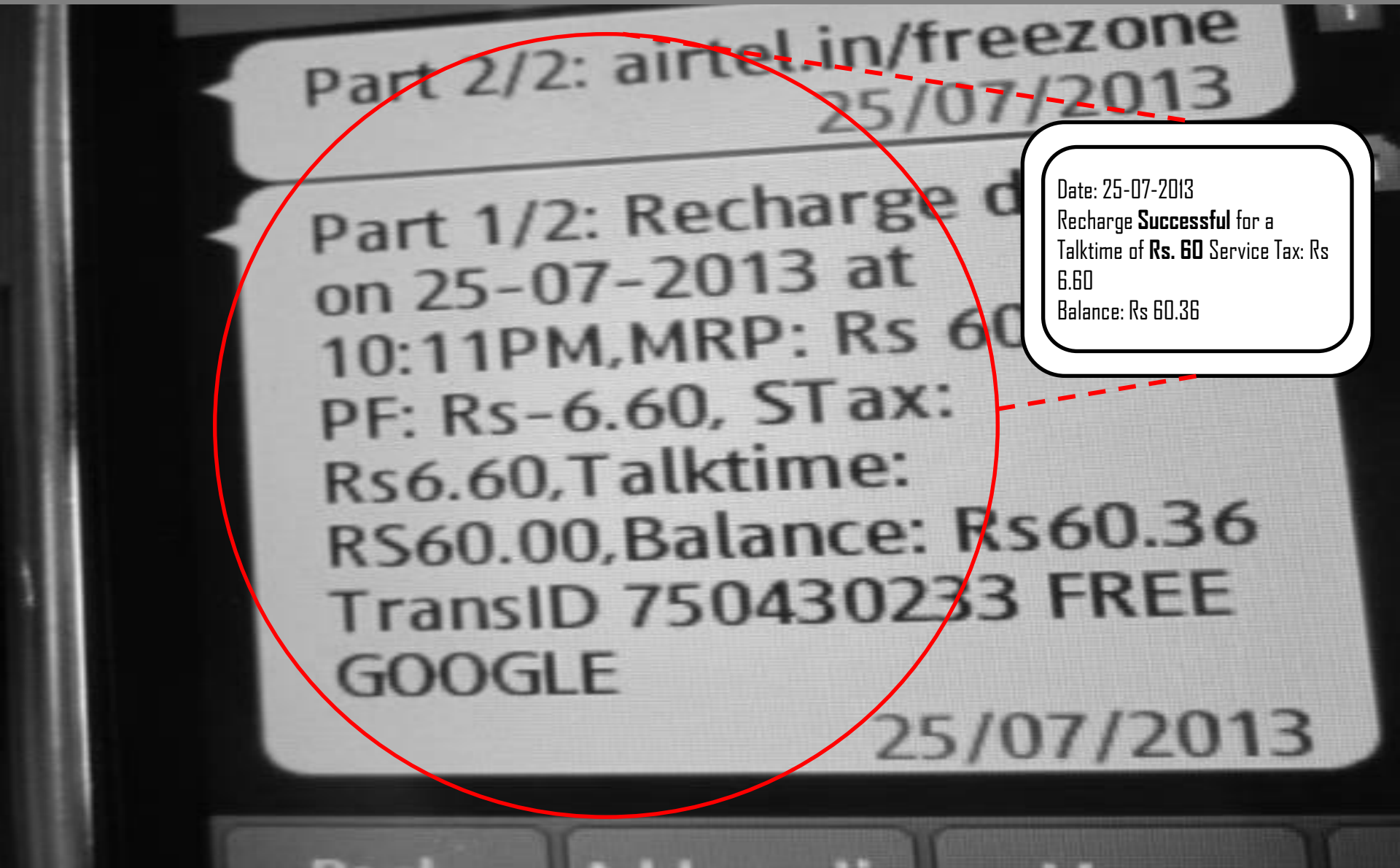
Solution to problem of activation of unwanted VAS

Solution: Create more awareness about SMS based deactivation of VAS, thus enabling MEs to initiate the process on his own. MEs who are not comfortable using SMS can take the help of friends/family/ local telecommunications vendor to initiate the process on their behalf.



Solution to problem of long text messages sent by telcos

Solution: Redesign the messages that are sent to customers. The length of the SMS can be reduced in addition to emphasizing on key information for the customer.



Problem- Lack of a phone backup if SIM gets lost

Solution to problem of lack of a phone backup if SIM gets lost

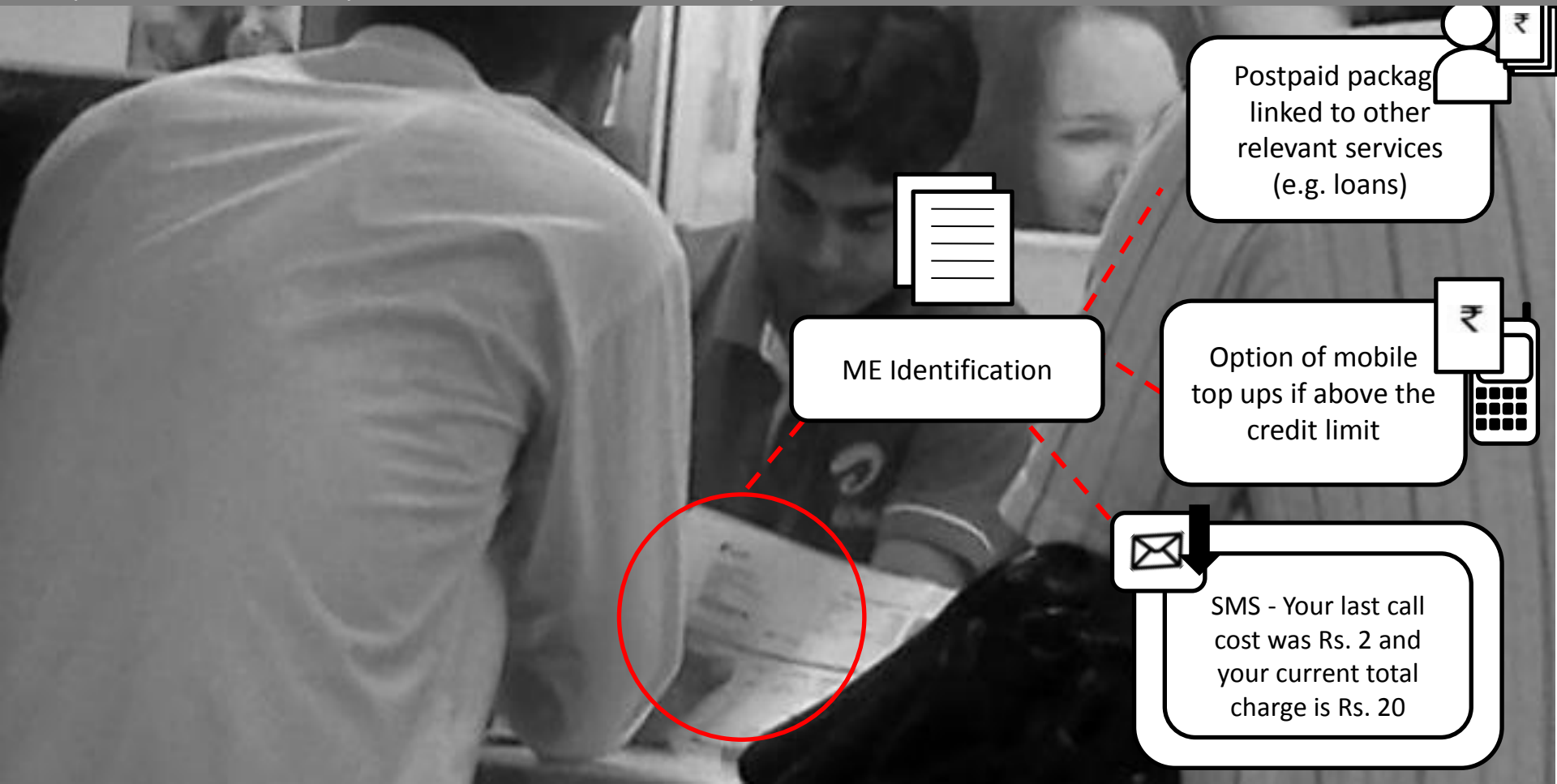
Solution: Provision of a phone backup service for customers. The customer can back up his data on the operators system. In case the ME loses the SIM, they can visit the telecom outlet t and get a new SIM along with back up of their contacts

Postpaid Lite for MEs- other services for MEs

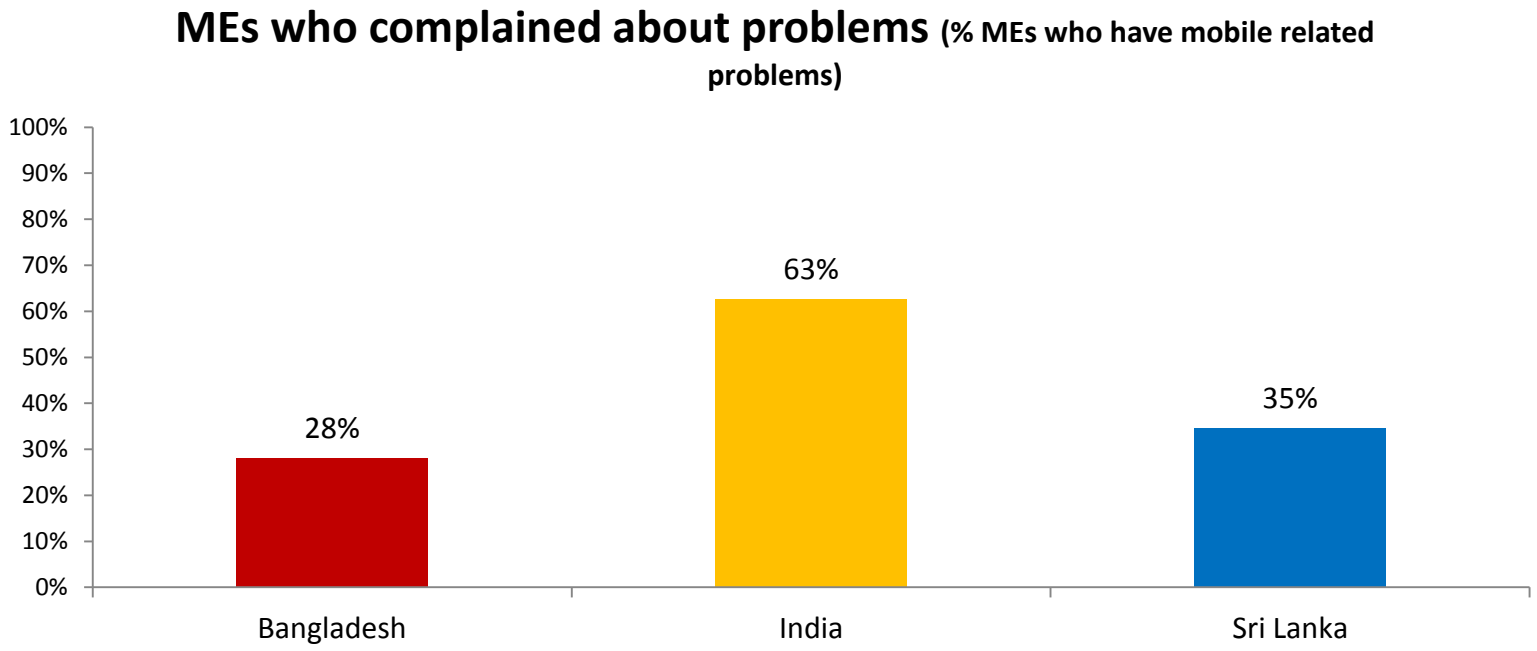
Provision of ME centric postpaid scheme with lower credit limit , no physical bills and relevant VAS applications To avoid bill shock, MEs are able to subscribe to a SMS for call charges on a pull or push basis (every day/week or after every Rs100 spent)

Information on the type of business will be recorded at the time of getting a new connection. The postpaid connection will also be linked to a broad package of services such as business loans / accounts. Super agents selected amongst the local telecom vendors to assist with relevant ME services.

Postpaid Lite can also help establish a ME's credit history



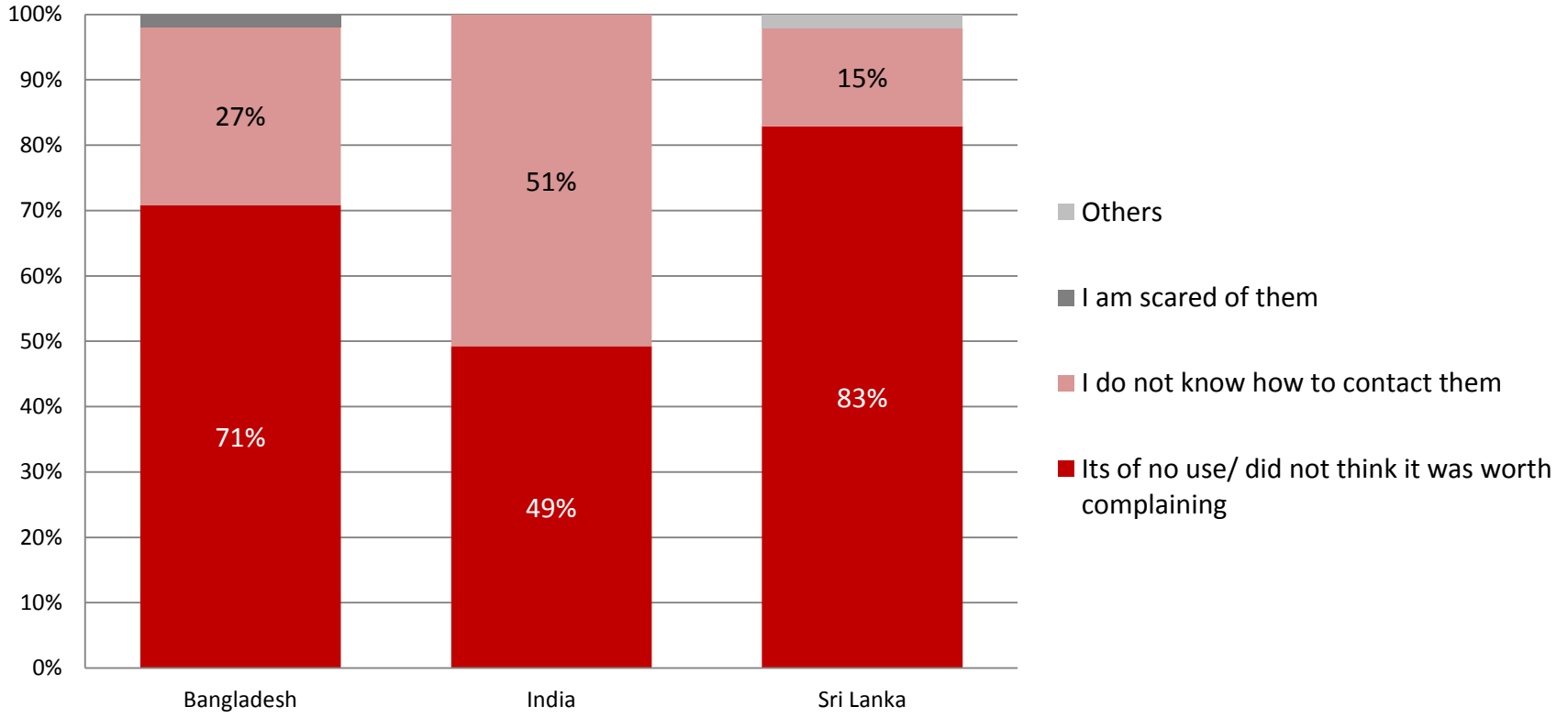
In India, 2 out of 3 MEs with problems complain to provider; in other countries 1 out of 3



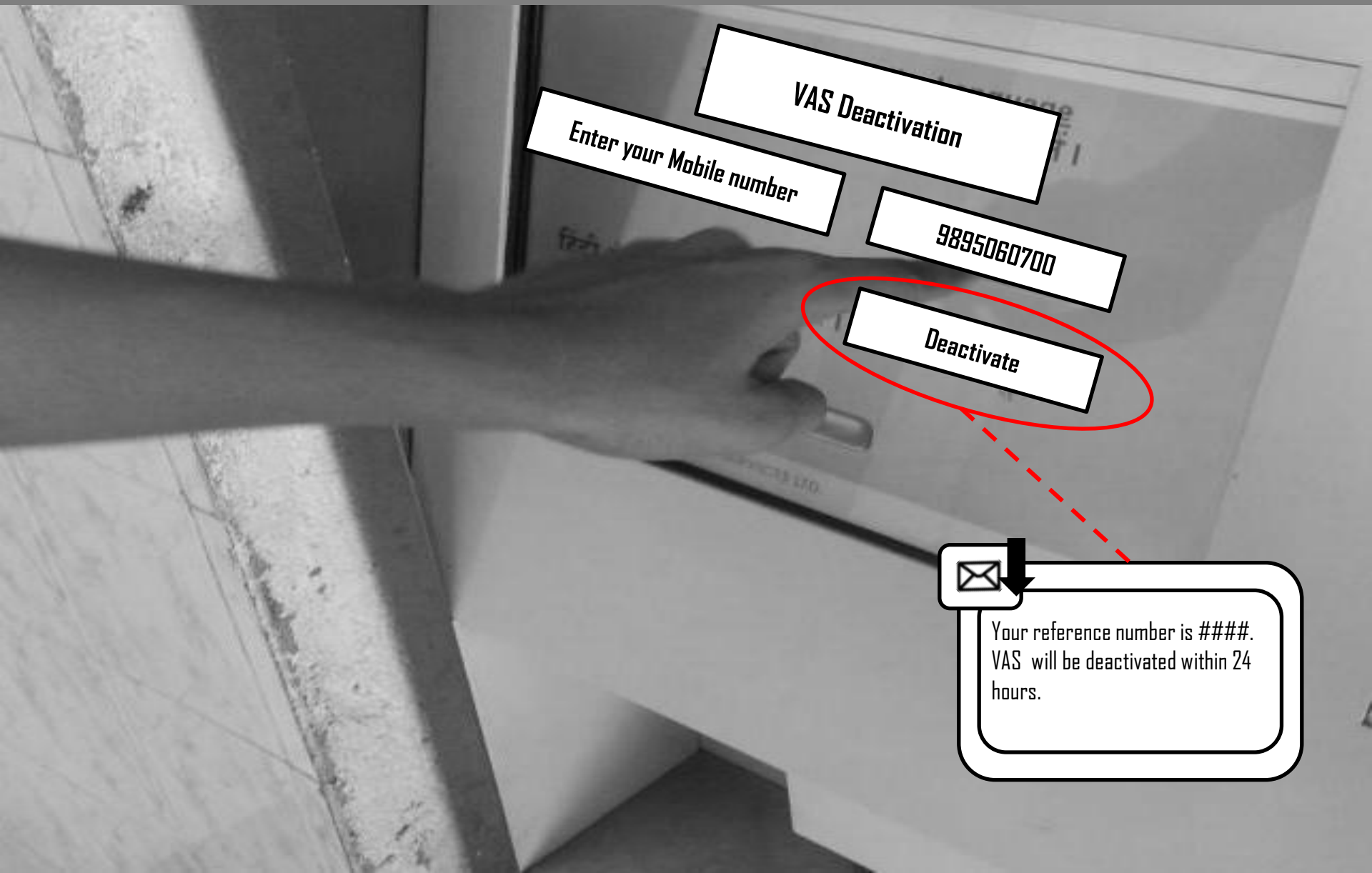
LIRNEasia
Pro-poor. Pro-market.

Why not complain?

Reasons for not complaining to the service provider (% BOP MEs who faced problems but didn't complain)



LIRNEasia
Pro-poor. Pro-market.

Automated Complaint Registration

Solution: Automate VAS complaint registration by the use of machine at the telecom operators outlet. This will enable the ME to deactivate the service without having to queue up/ call up customer care for the same