

STATE OF THE NET:
OPPORTUNITIES AND
CHALLENGES FOR
TELCOS



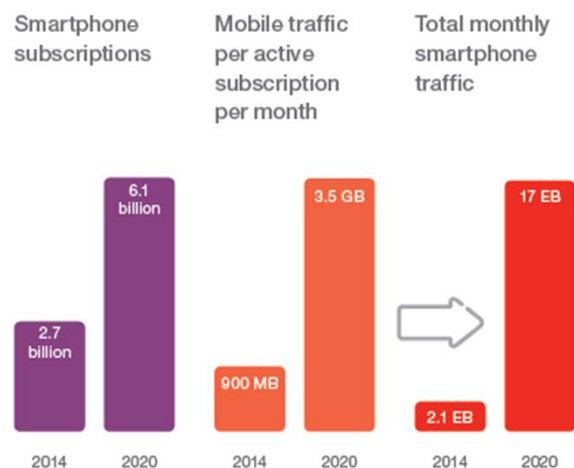
Mobile Penetration and Changing landscape

- Ç Total telecom subs ñ 957.6 Mn
- Ç Overall Teledensity ñ 76.7%
- Ç Rural Teledensity ñ 45%
- Ç Broadband internet subs ñ 75.7 Mn
- Ç Only 8% Telecom subs are broadband internet users

Source: TRAI report as of Sep-14

India:
More than 80% internet users are wireless subscribers

Worldwide Forecast:
90% Mobile subscriptions will be Mobile broadband by 2020

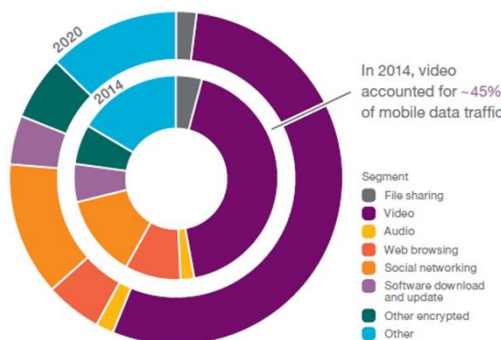


Ericsson Mobility report Q3 2014



6.1 Bn Smartphone subs by 2020

55% of Mobile traffic from video in 2020



Source Ericsson Mobility report Q3 2014

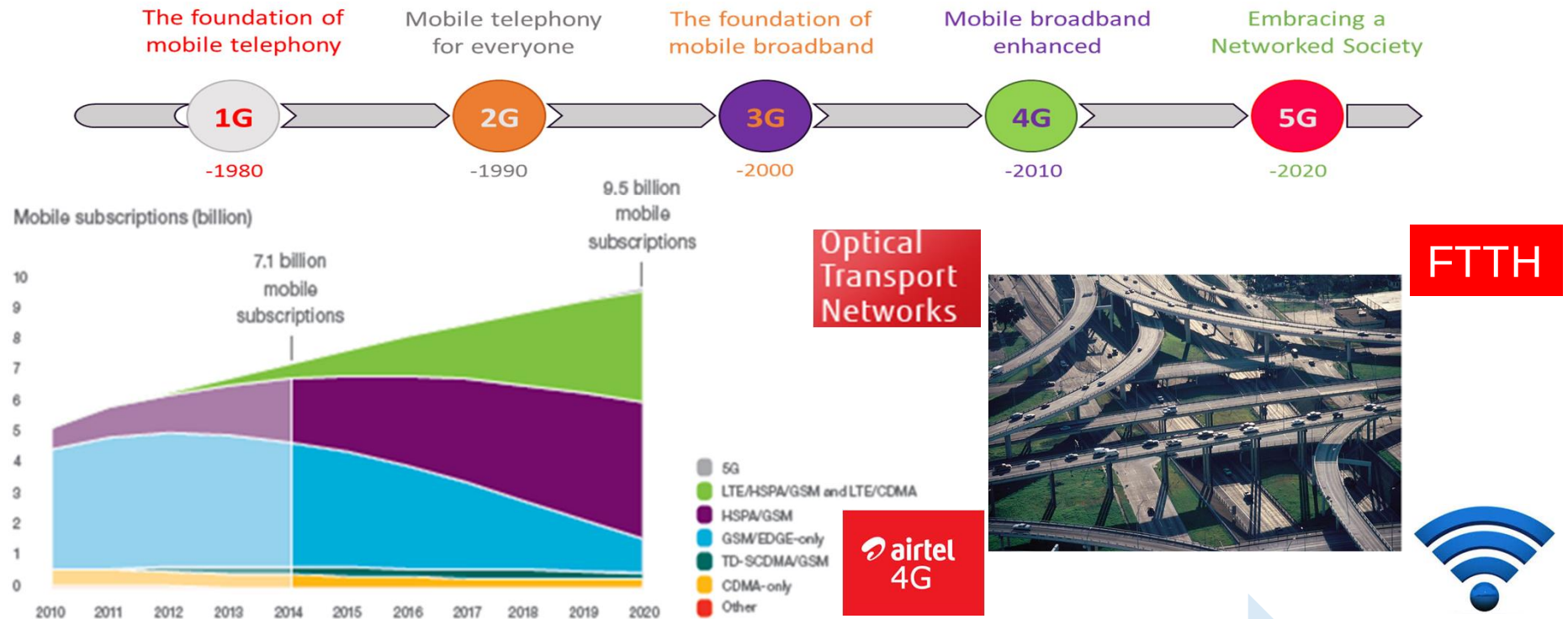
WhatsApp messaging volume equalizes SMS volumes



Technology as Key enabler for exponential data growth

Wireless Access Generations

Voice centric to data centric



Source Ericsson Mobility report Q3 2014

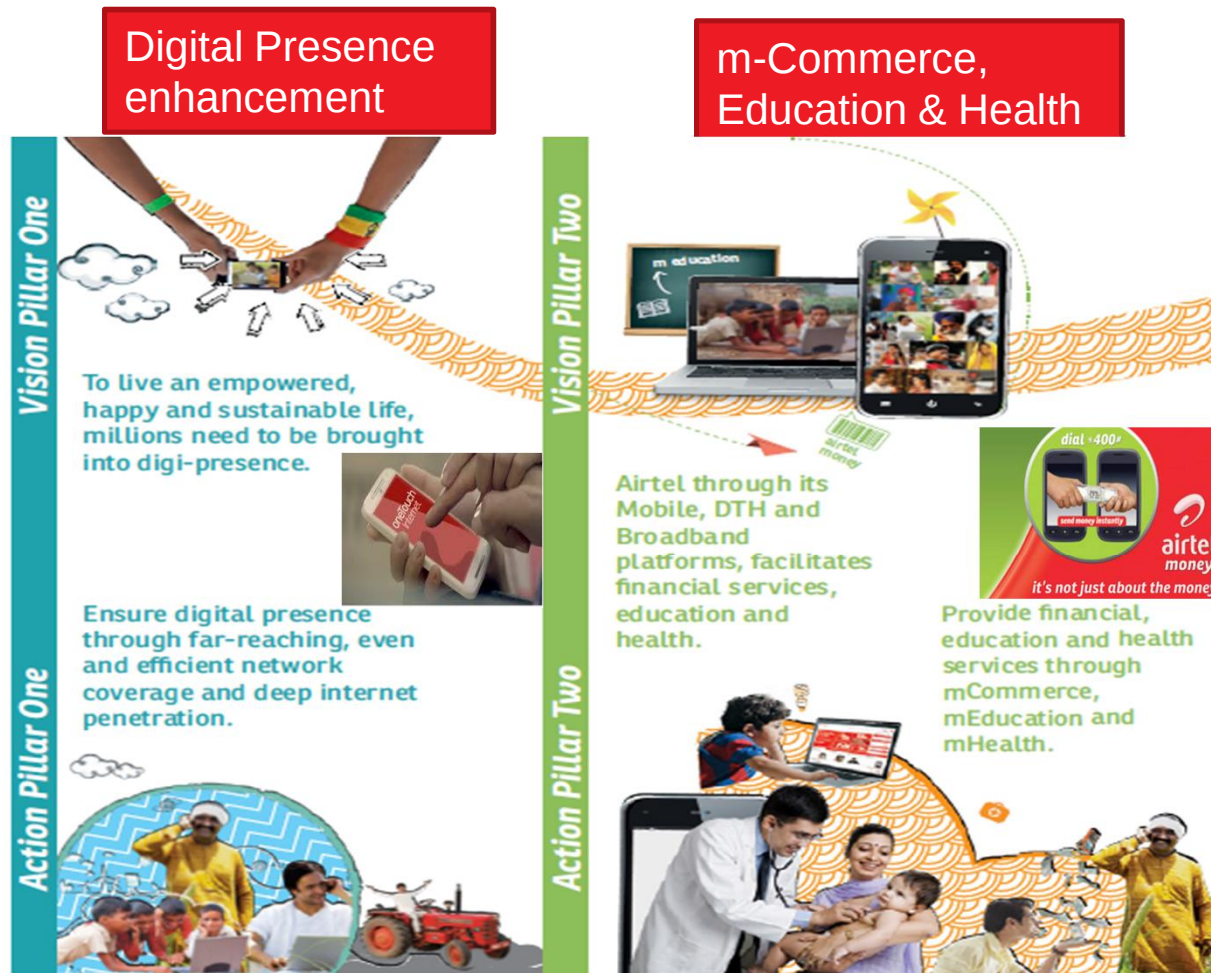


Enhanced technology

Enhanced Usage

Enhanced experience

Telecom networks – Enriching the lives of millions



Smarter Planet

An internet of things

ET Telecom Award:

Airtel initiative with IFFCO -- benefited 2.6mn farmers

Use of Telecom for Social good



Customers connected everywhere using 2G/3G/4G/Wifi Technologies

DIGITAL INDIA

A programme to transform India into a digitally empowered society and knowledge economy

Broadband for all Rural and Urban

Universal Access to mobile connectivity to all villages by increasing network penetration

Technology for Education ñ e-Education

Technology for Health - e-Healthcare

Technology for Farmers - Real time pricing

Technology for Justice - e-Courts, e-Police

Public Wifi hotspots

School books to be e-Books

SMS based weather information, disaster alerts



Broadband Highways

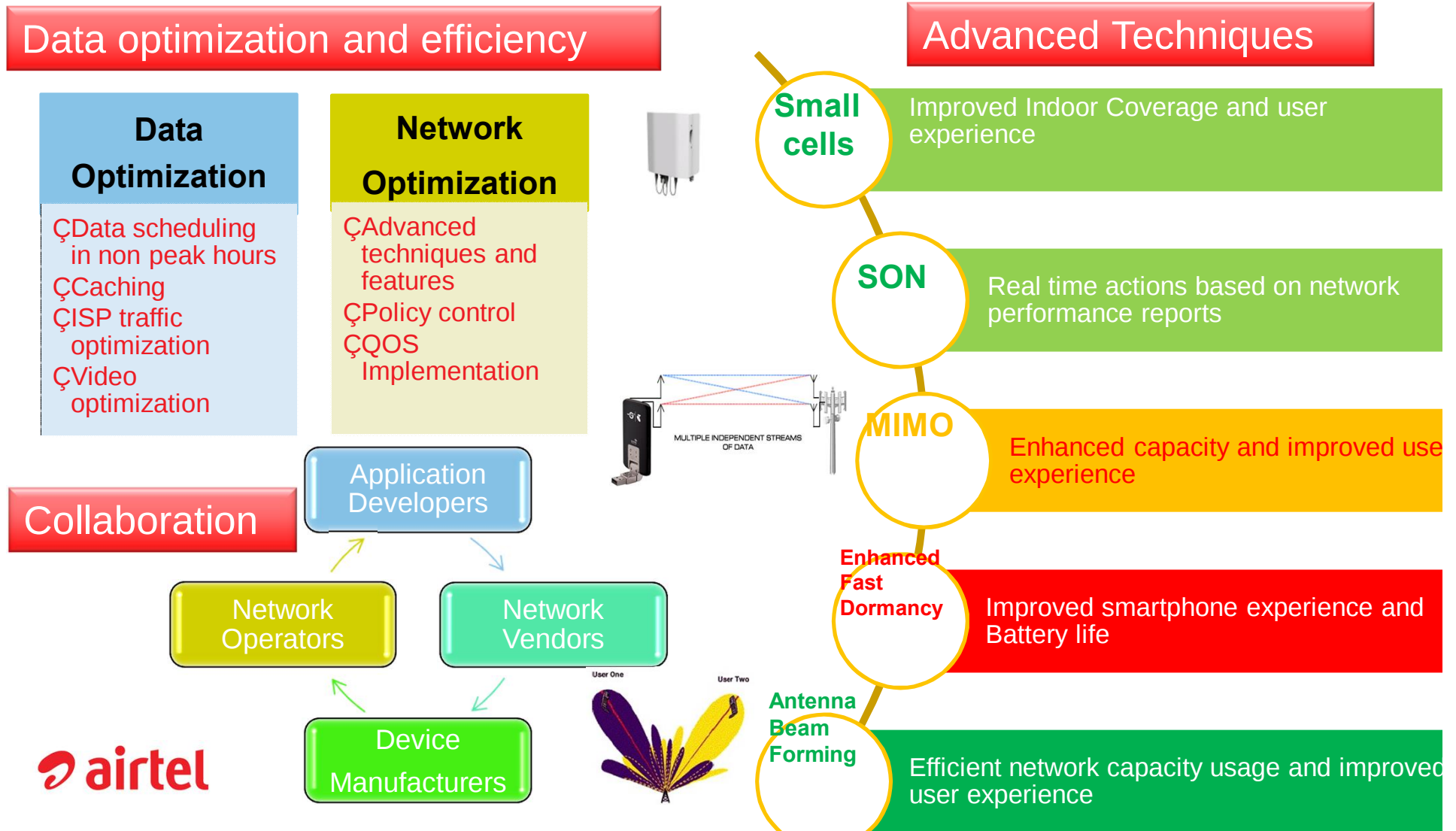


Department of Electronics
and Information Technology,
Government of India



Big opportunity for Telcos to meet this huge expectation

Smart network usage and collaboration



Challenges Telcos are facing

Spectrum

- Ç Scarcity of Spectrum
- Ç High cost

Infrastructure

- Ç Fiber availability / rollout
- Ç Difficulty in site acquisitions

Device Eco-system

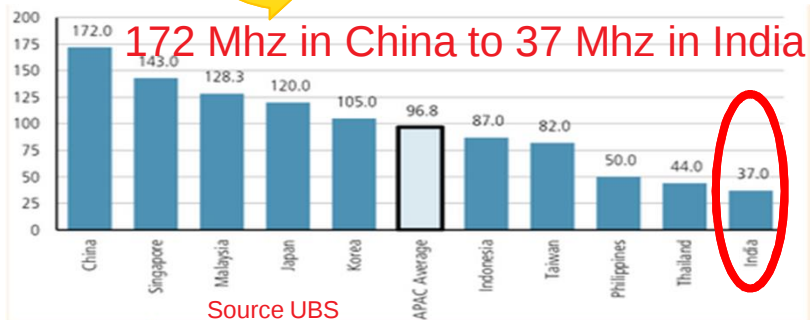
- Ç High end devices affordability
- Ç Limited 4G handsets

Radiation

- Ç Lack of understanding with general public

OTT Regulation

- Ç Dumb data pipe
- Ç No regulation on OTT players
- Ç Huge revenue impact



TRAI's reserve price for 900 Mhz spectrum is 27 times higher than Spain & 24 times with Singapore

Radiation Limit:

India

900 Mhz = 0.45 W/m²

ICNIRP

900 Mhz = 4.5 W/m²

India is 10 times more stringent than international recommendation

THANK YOU

