

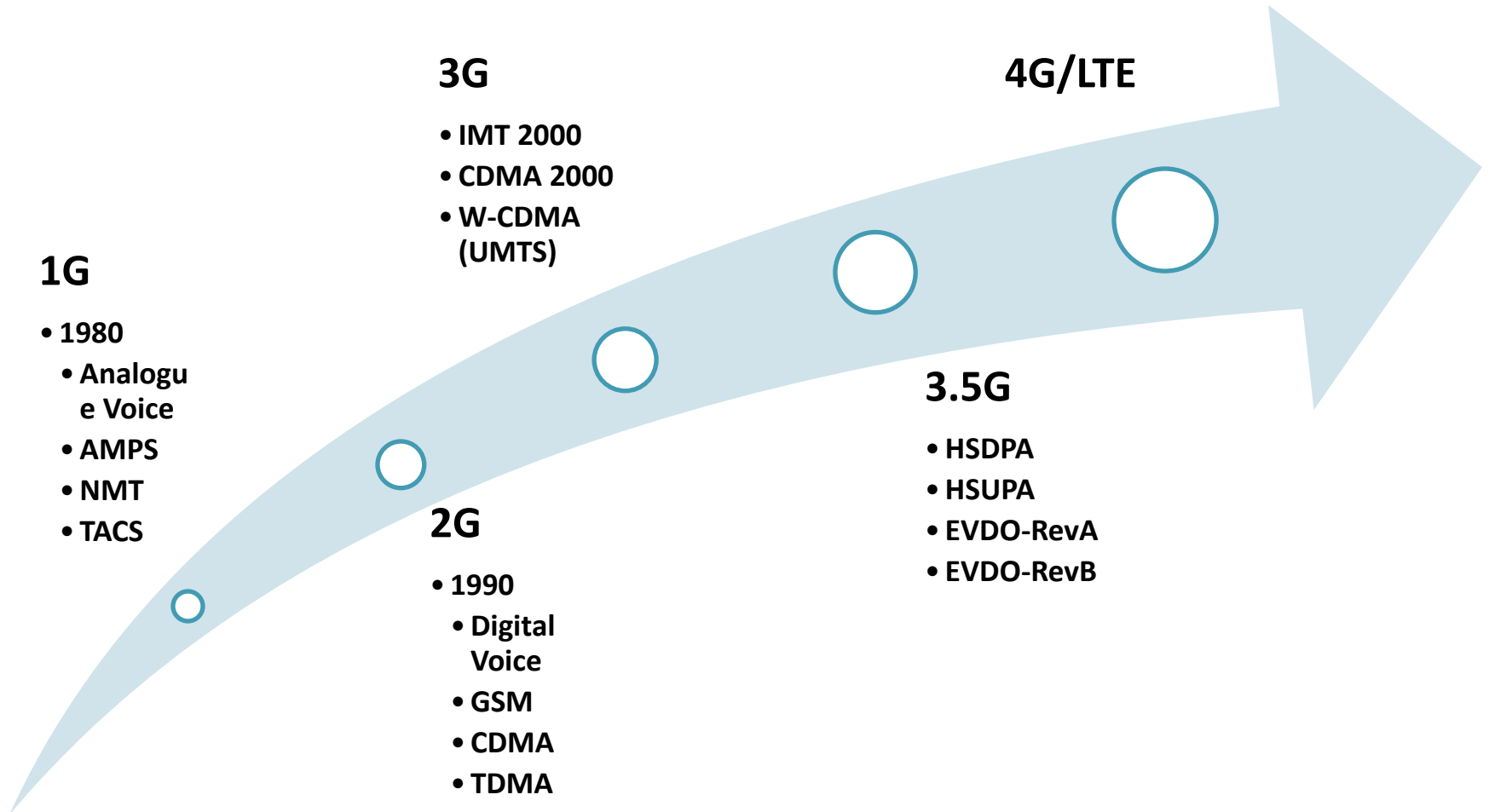
The Changing Communications Sector – How User's Expectations Have Changed and How That is Driving The Sector

Sunil Kanti Bose

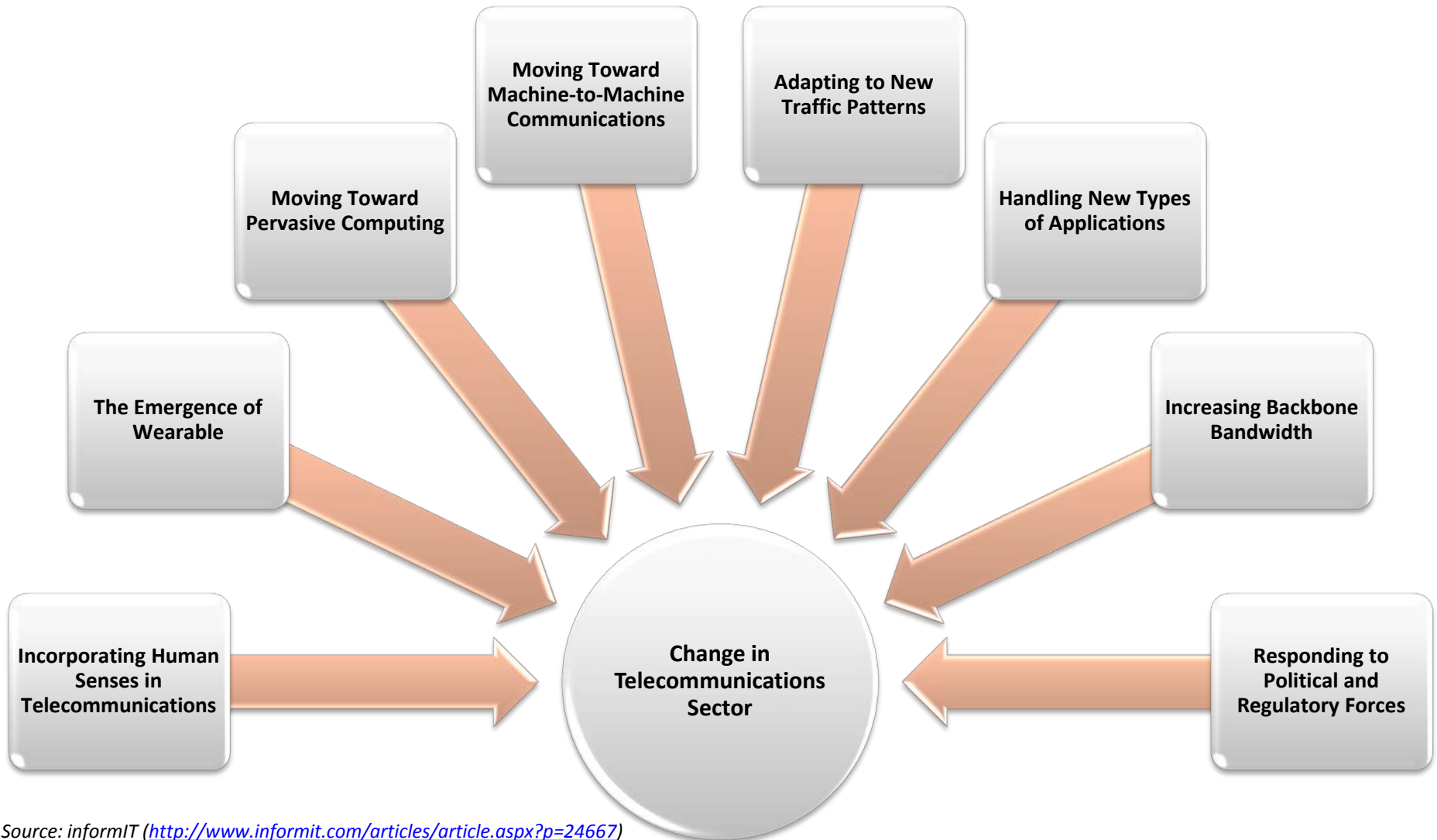
Chairman

Bangladesh Telecommunications Regulatory Commission (BTRC)

The Evolution of Telecom Technology



Big Picture of ICT Revolution



Impact of Mobile Phones in Socio-Economy

Mobile Communication has raised GDP growth in Bangladesh by 0.12% for 1% increase in mobile penetration

Source: Deloitte & Touche, 2007

Mobile Communication shall raise the GDP growth in Bangladesh by 0.15% for 1% increase in mobile penetration in 2010s

Source: World Bank

The next Revolution:

Internet through Mobile Telephony

A doubling of mobile data consumption boosts GDP by 0.5%

Source: Cisco and Deloitte



Info at fingertips



Develop & Efficiency increase of Workforce



M-GOVERNANCE



M-Banking & M-Commerce



M-Education



M-Health

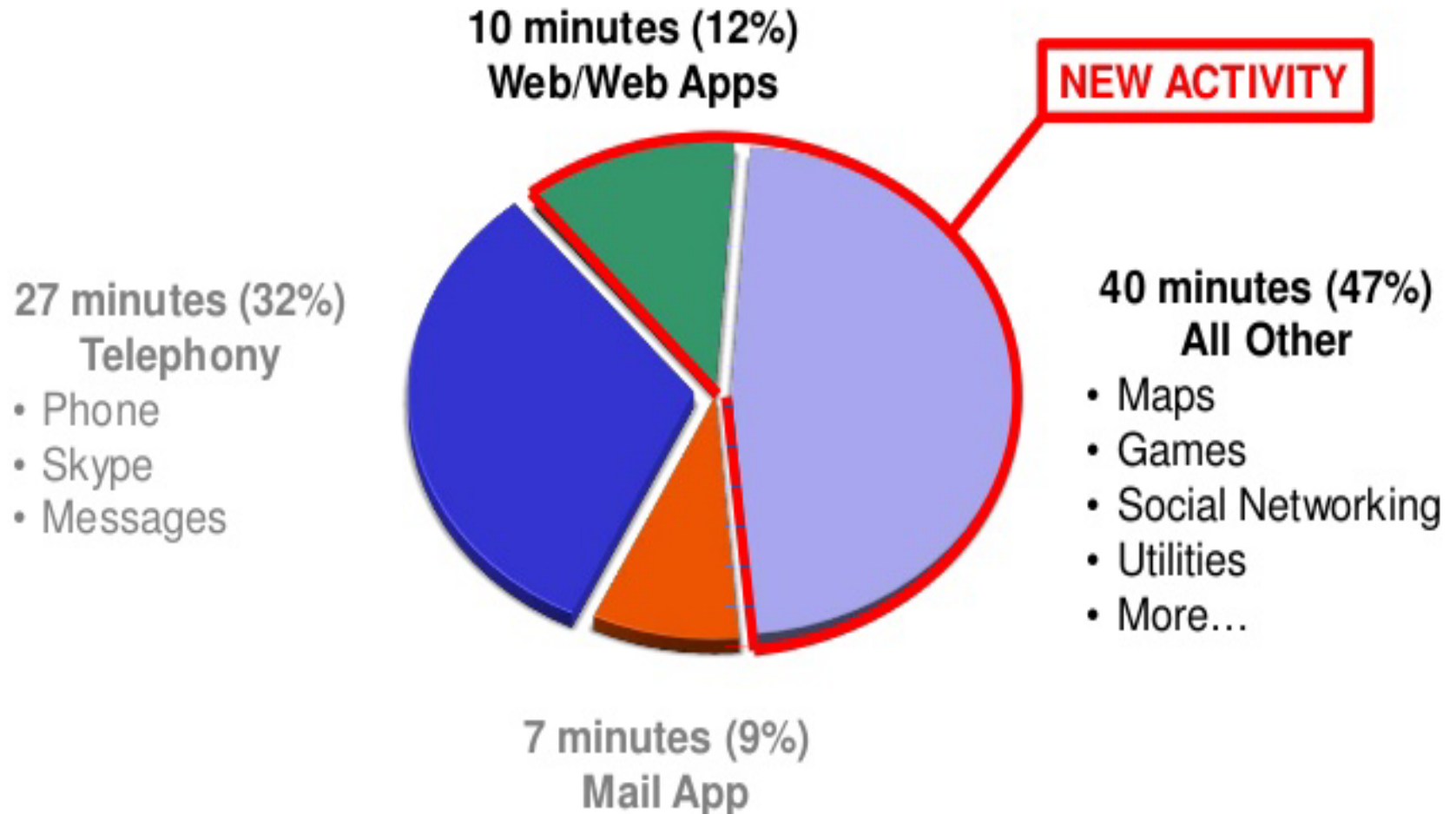


Disaster Education



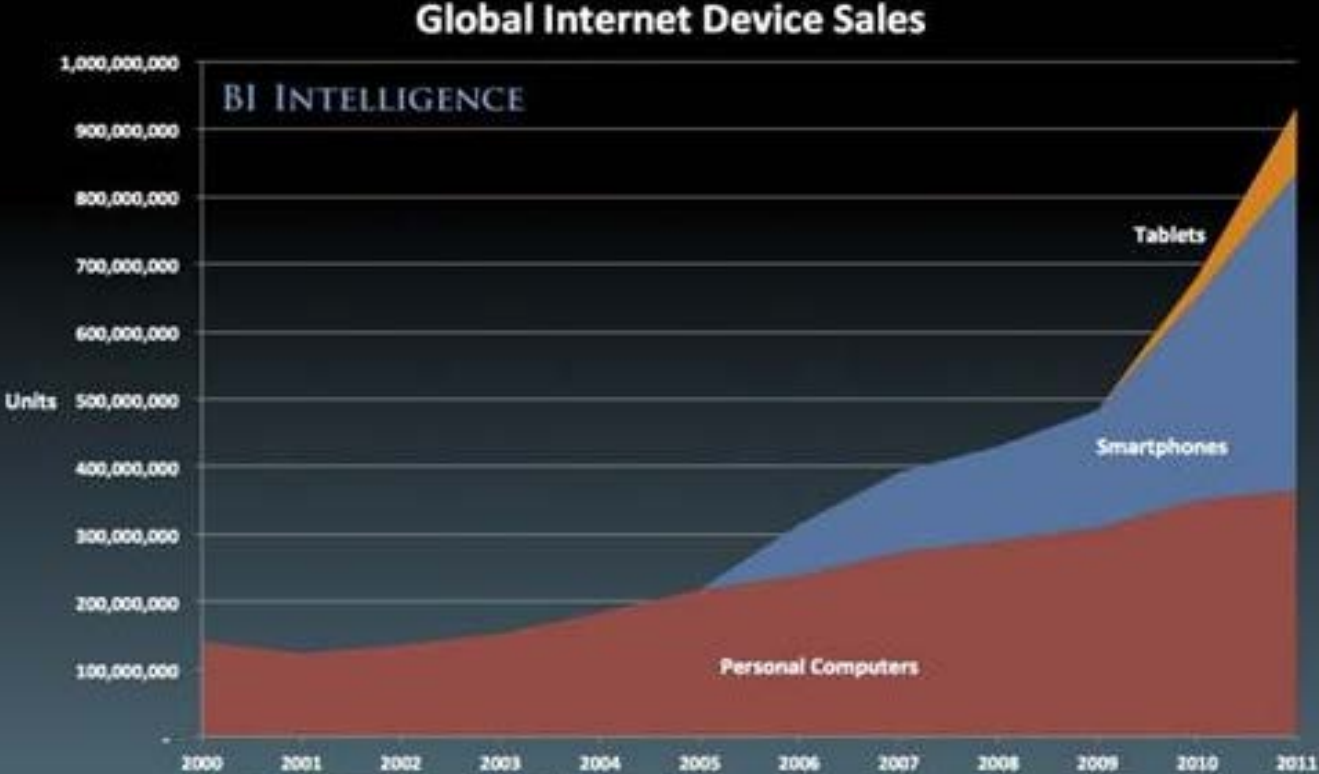
Smartphones Are Becoming Data Dominant Devices

Average Time Spent on Various Mobile Functions, 1/11

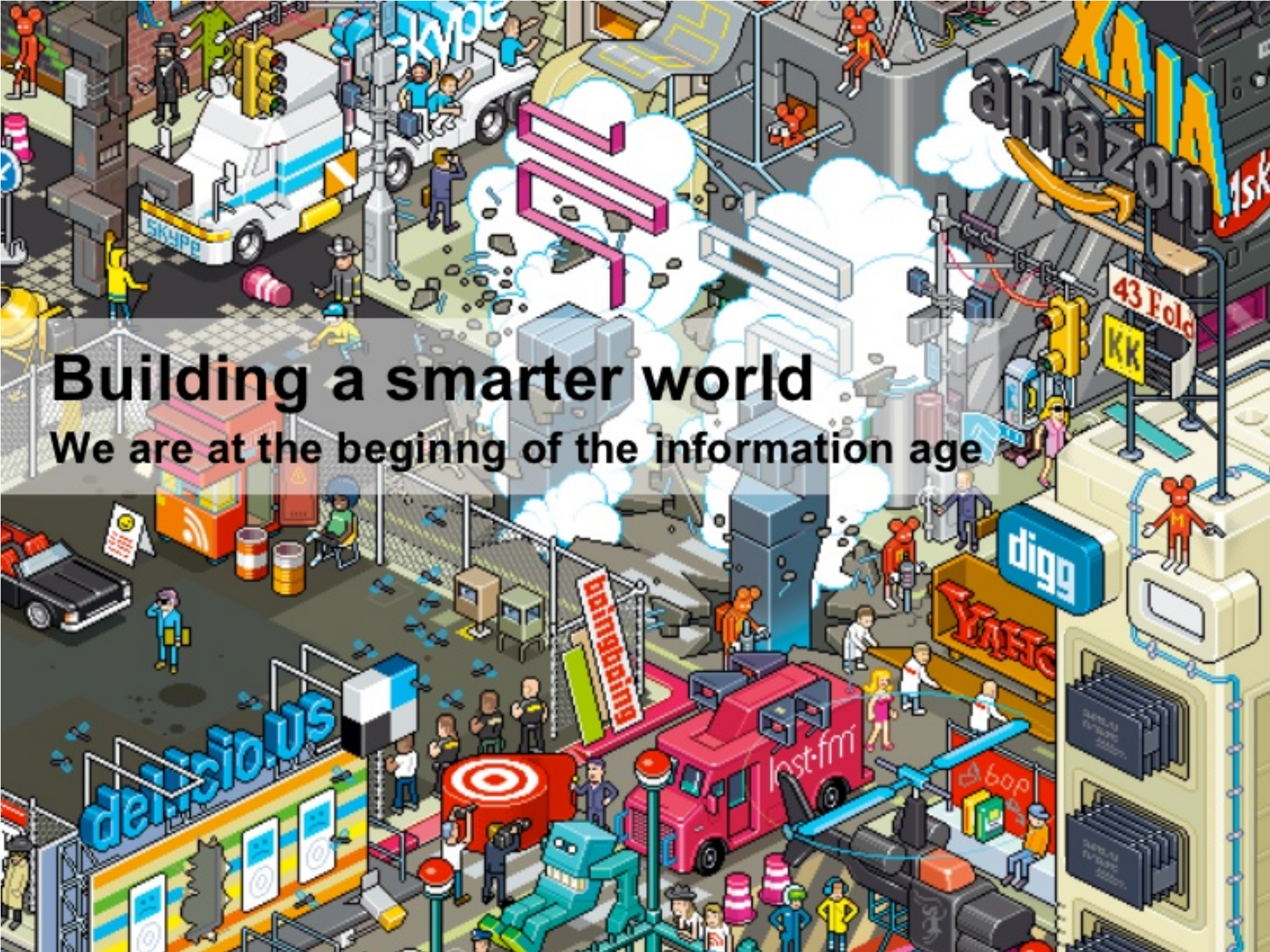


Smartphone Sales Increased Like Anything

Smartphone sales overtook PC sales



Source: Gartner, IDC, Strategy Analytics, company filings, BI Intelligence estimates



Building a smarter world

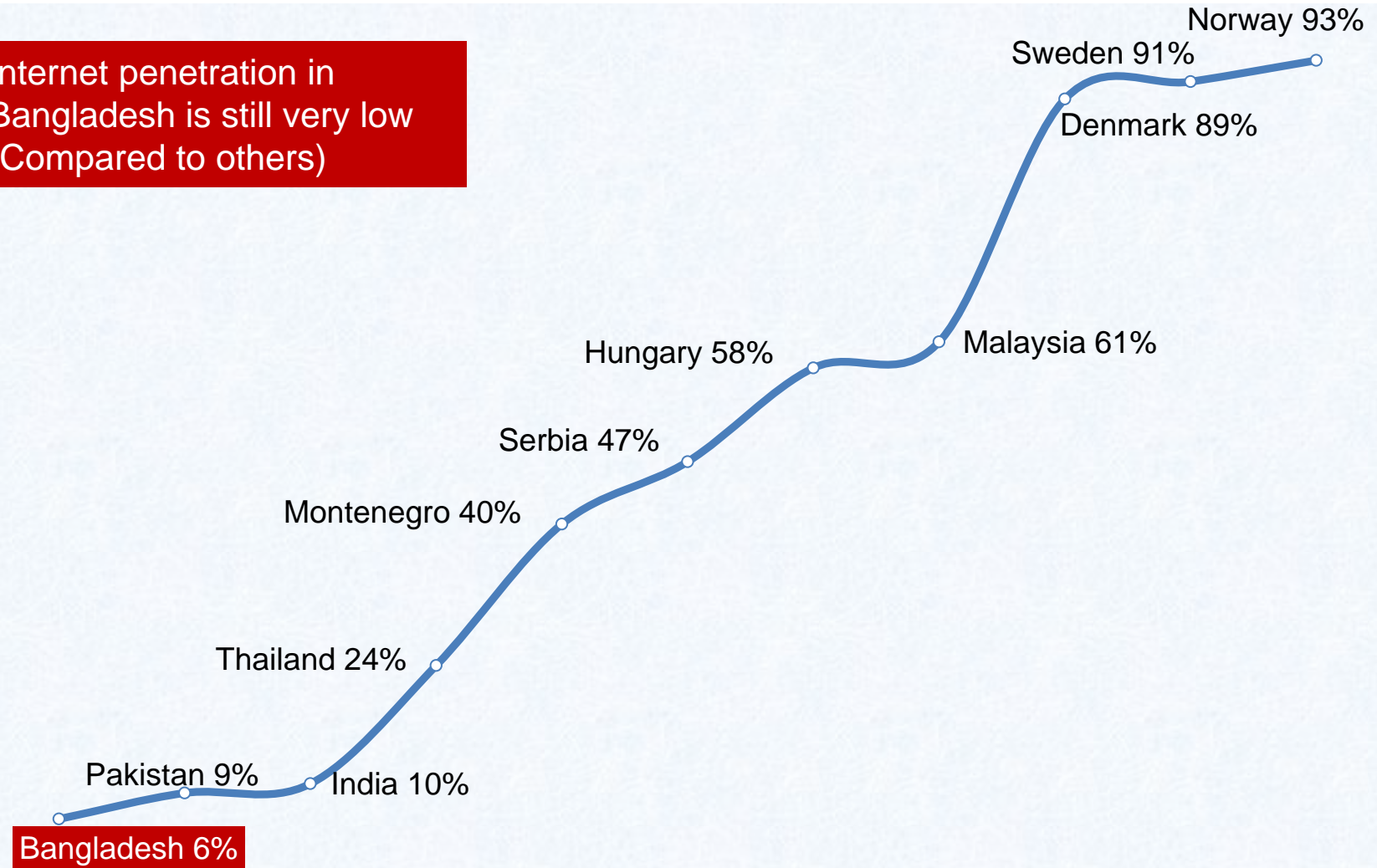
We are at the beginning of the information age

Bangladesh Internet Market Development



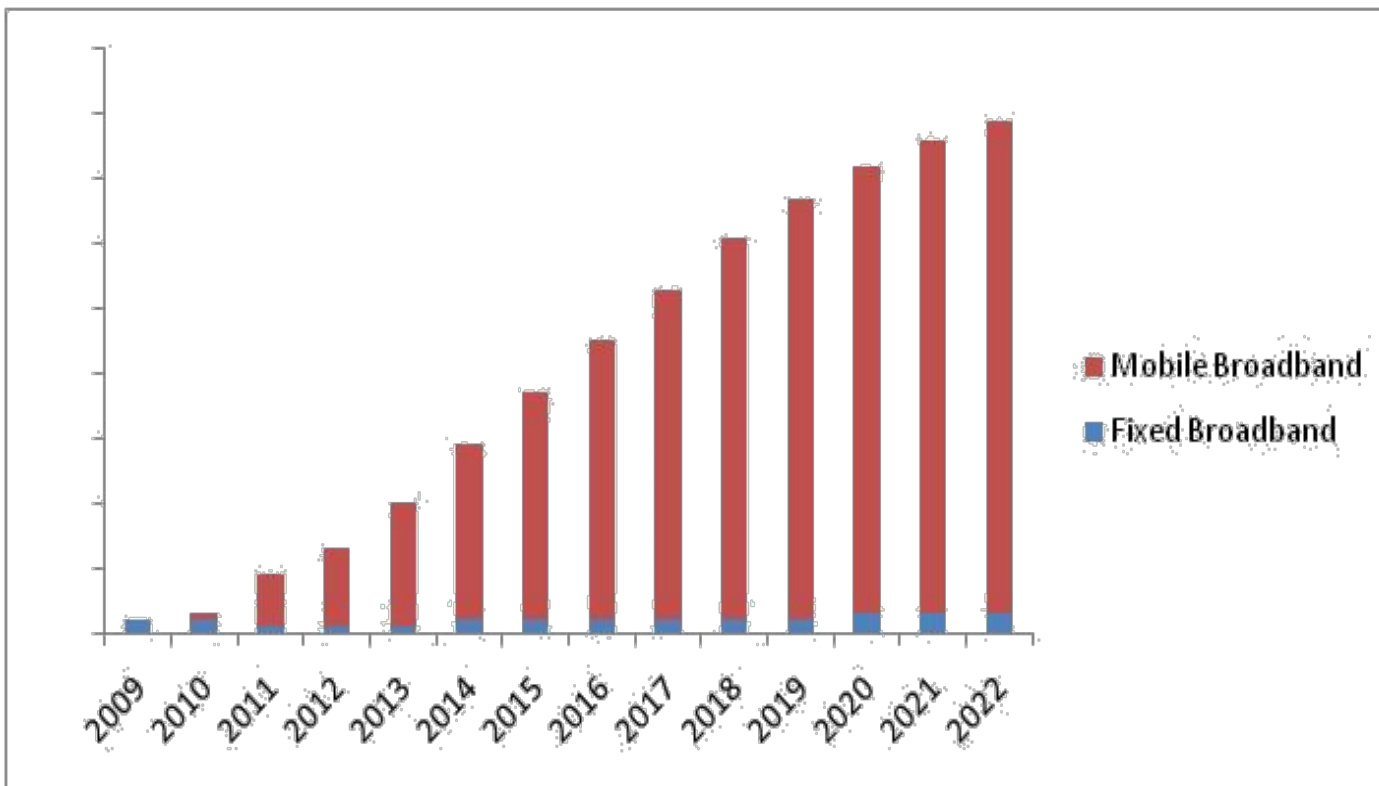
Global Picture of Fixed Internet Penetration

Internet penetration in Bangladesh is still very low (Compared to others)



Internet Penetration In Bangladesh To Reach 43% by 2022

Youthful population who are more inclined towards embracing new technology such as internet over small screen

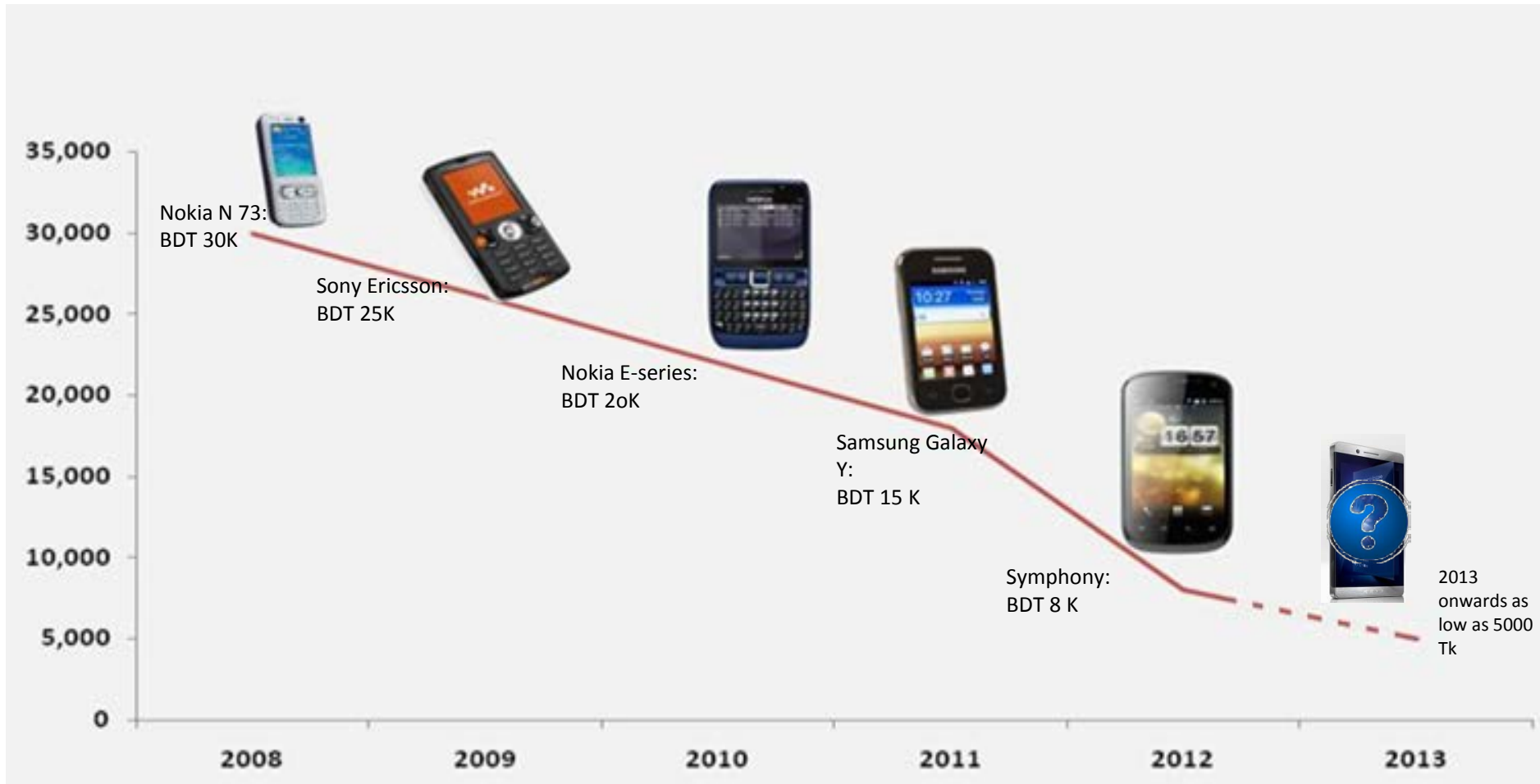


Increased awareness of the benefits of internet utilities & their relevance

Affordable internet packages and attractive contents to drive uptake and usage

Reduction of TCO of internet enabled devices

Prices of Smart Devices have fallen by more than 80% in the last 5 years in Bangladesh



Change in User Expectation & Technology Evolvemement

- Customers perception and requirements have evolved with the roll-out of 3G in Bangladesh
- Mobile Operators taking this opportunity to provide various types of Value Added Services and App based services
 - *M Health*
 - *M Education*
 - *M Commerce*
 - *M Agriculture*
 - *M Governance*
 - *M Payments*



Users Now Demand Services that has Socio-Economic Impact in Their Lives



Health

Taking medical facilities to deprived segment through **"Tele-Health"**



Agriculture

Increasing productivity through **"Krishi Jigyasha"**



Banking

Bank for unbanked rural communities through **"Mobile Banking"**



Education

Quality education even in rural through **"Education Hotline"**



Governance

Easy access to information & **Thana level connectivity** through **"Zoom"**



Cell/SMS Broadcasting
Alerts on Natural Disaster



m-Commerce
Buy/Sell from Home,
No Middle man,
Cellbazaar, Robi Haat-Bazaar

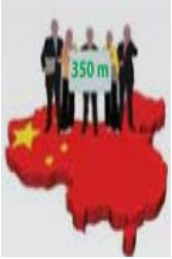


Internet & Information Service
Reduce Digital Divide through
CIC, MMS



PCO
Mobile Telecommunications for everyone & every- where

Trends in Global ICT Evolvemement



The number of internet users in China is over 350M as of May 2013, the highest in the world. The 2nd rank is USA with 191.51 M users.



Worldwide, mobile health revenue is forecasted to be \$ 23 billion by 2017.



By 2017, Mobile payment Transaction Volume is expected to be buoyant at \$ 721 Billion.



3G Mobile Device Shipment is expected to exceed 2 Billion Units by 2020.



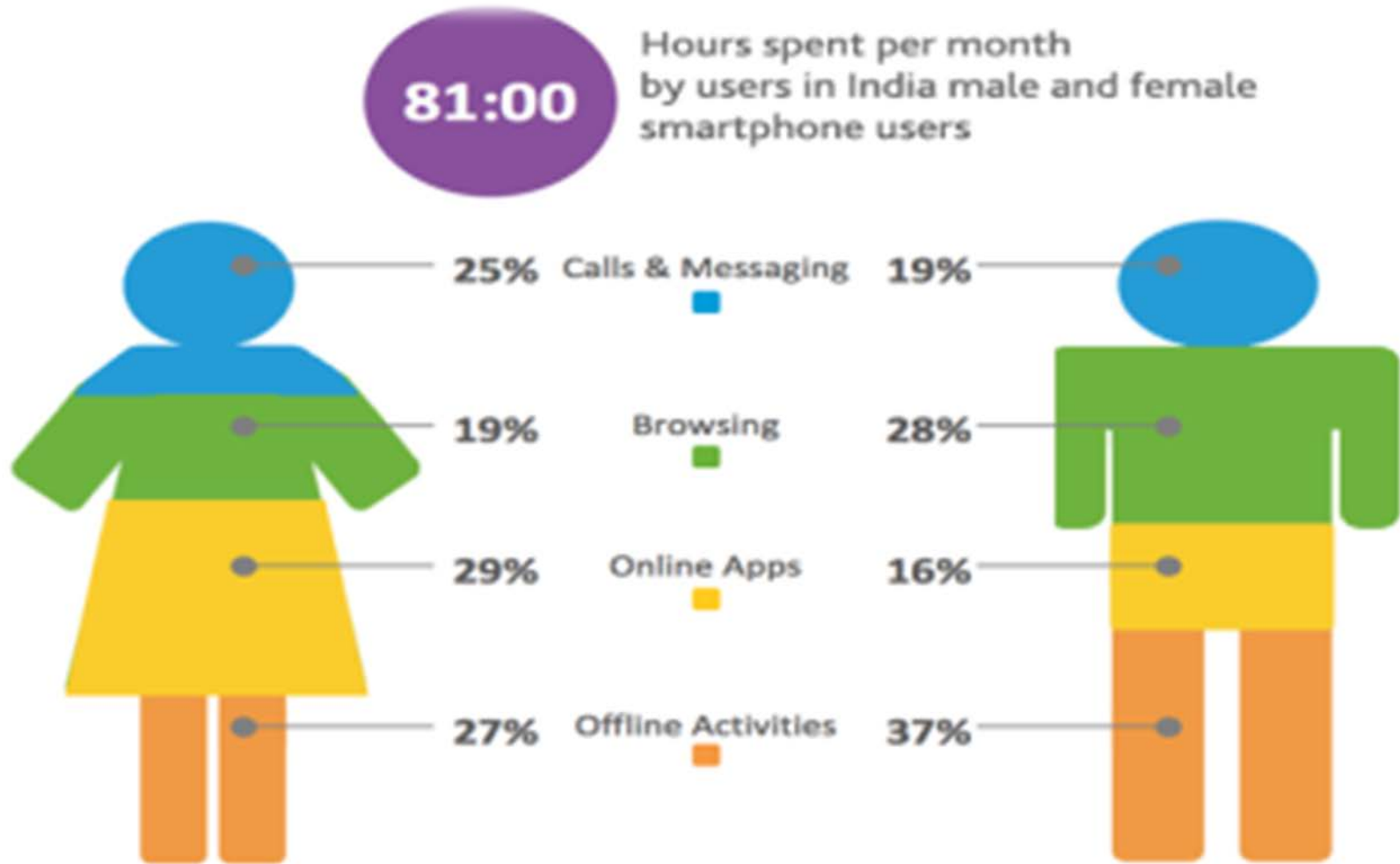
Digital Buyer penetration rate by 2017 is forecast to be 45.10%.



100% FDI in 2G and 3G operation
One of the Top Ten country in mobile penetration.

As Customers upgrade to Smart Devices: On Line Activity Will Dominate over traditional Voice & SMS

At least 75 percent of a Smartphone users time [is] spent on activities such as gaming, entertainment, apps and internet related content.



Over the top (OTT) Communication Apps usage become a norm as they are seamlessly integrated with smart devices



Globally this substitution (done by end consumers) of traditional circuit switched voice to Internet based voice is termed as Peer to Peer Voice over IP (P2P VoIP)

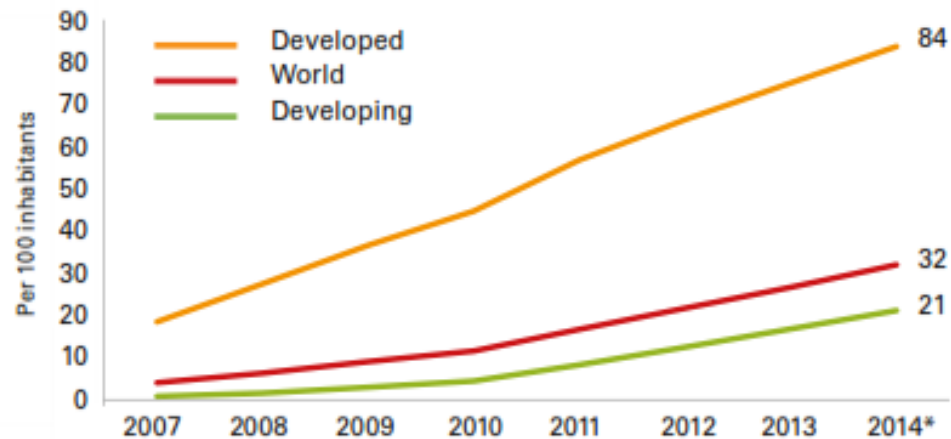
In Bangladesh, we are all working towards achieving the Digital Bangladesh Vision



Mobile Broadband Grows at Double Digit Rates

The number of mobile-broadband subscriptions reaches 2.3 billion, with 55% of them in developing countries

Active mobile-broadband subscriptions per 100 inhabitants, 2007-2014*



Note: * Estimate

Source: ITU World Telecommunication/ICT Indicators database

Globally, mobile-broadband penetration will reach 32% by end 2014 – almost double the penetration rate just three years earlier (2011) and four times as high as five years earlier (2009).

In developed countries, mobile-broadband penetration will reach 84%, a level four times as high as in developing countries (21%).