ITU REGIONAL ECONOMIC AND FINANCIAL FORUM OF TELECOMMUNICATIONS/ICTS FOR Arab Region

Manama, Bahrain, 29 November 2015

Keynotes on OTT Services

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Impact of the Globalization of Telecommunications
Need for more Investment and Specific Regulation

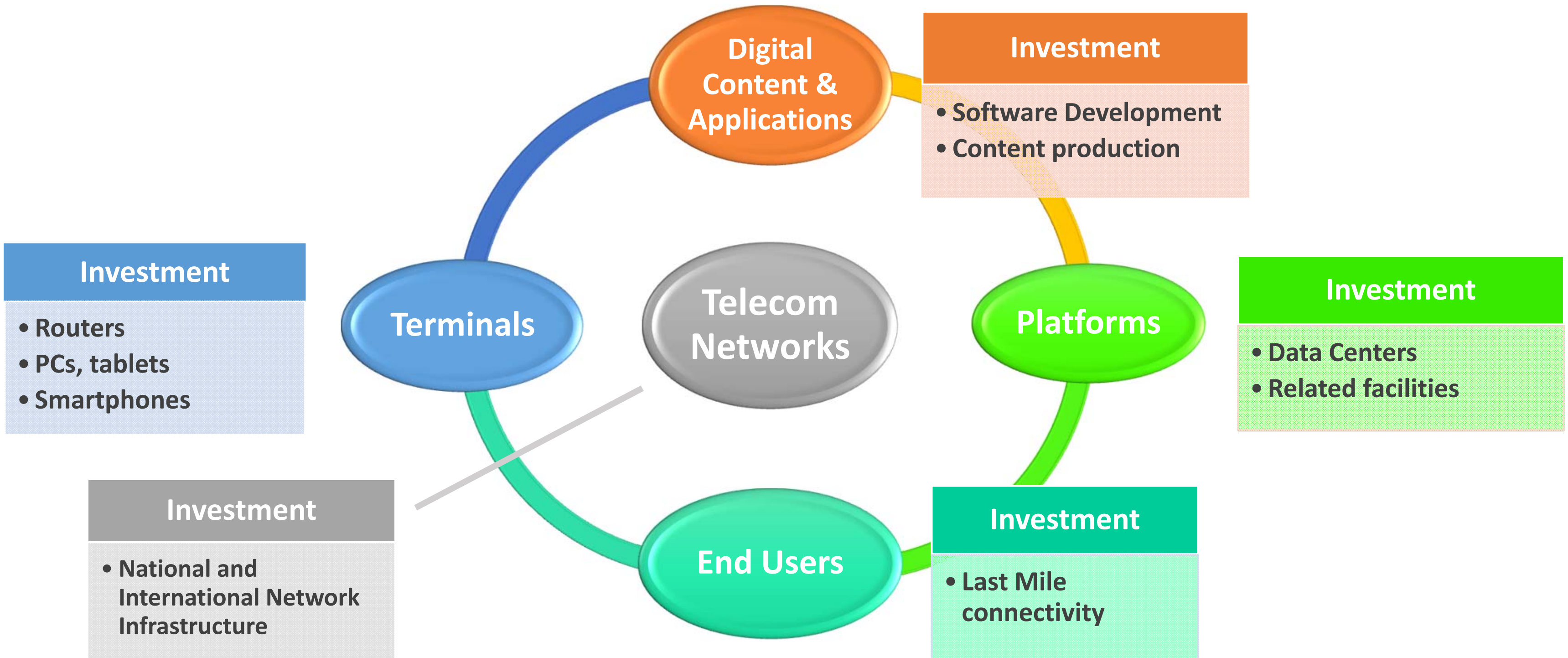
- **Network operators face considerable investment challenges**
  - *Is the solution to find alternative funding or to subsidize between market sectors*

- **Global voice service increase versus decrease on TDM voice**
  - *How is the evolution of Voice revenues*
  - *Are New services substituting classical voice and Text*
  - *What impact of new services on traffic and revenues*
  - *Is a shift from country monopoly to worldwide oligopoly*

The Digital Value Chain

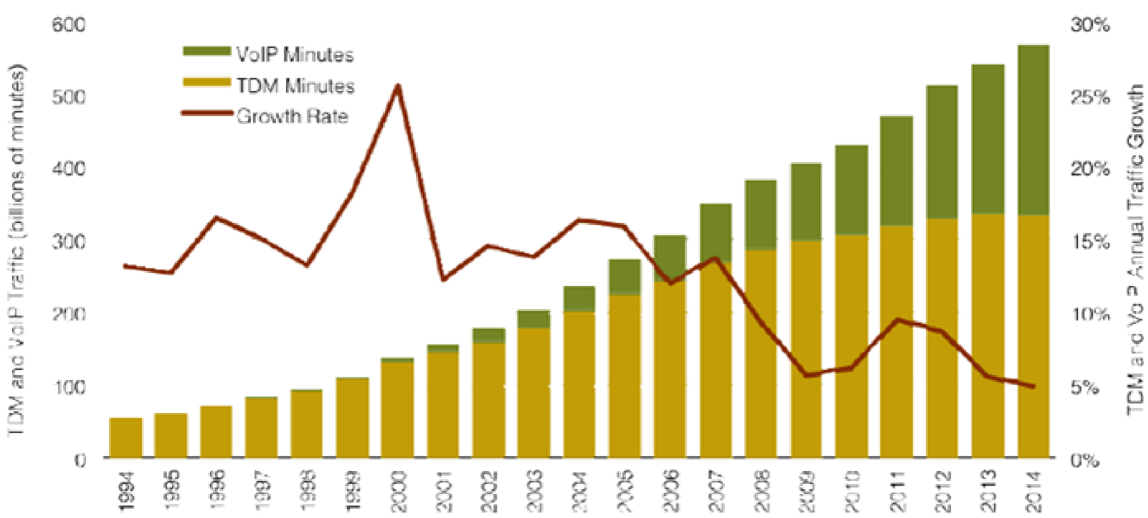
The digital value chain incorporates many players

Infrastructure operator is no longer the exclusive provider of services



International Voice Traffic : TDM vs IP

International Call Volumes and Growth Rates, 1994-2014

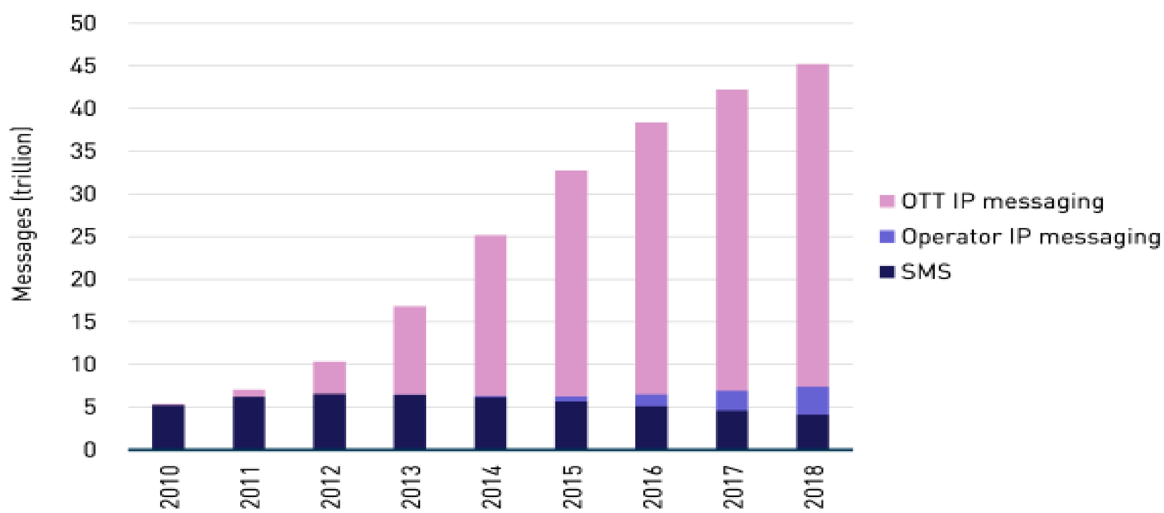


Notes: Data for 2013 are projections. VoIP traffic reflects international traffic transported as VoIP by carriers, and excludes PC-to-PC traffic.

Source: TeleGeography

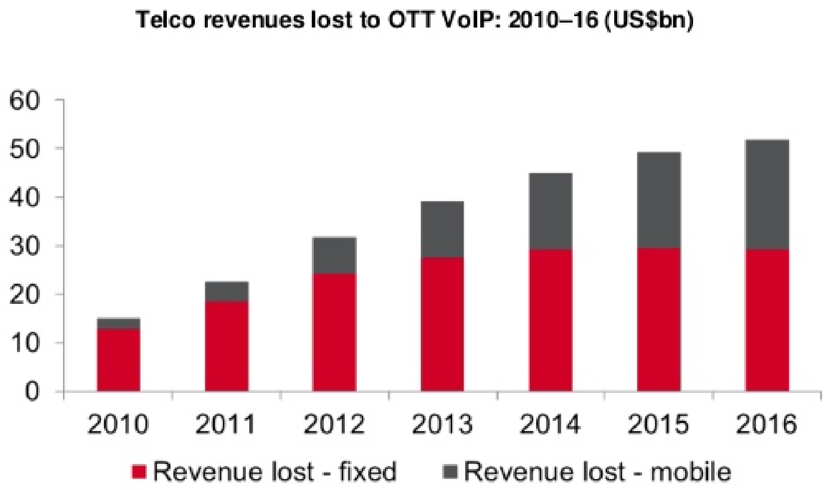
International Messaging Traffic : SMS vs OTT

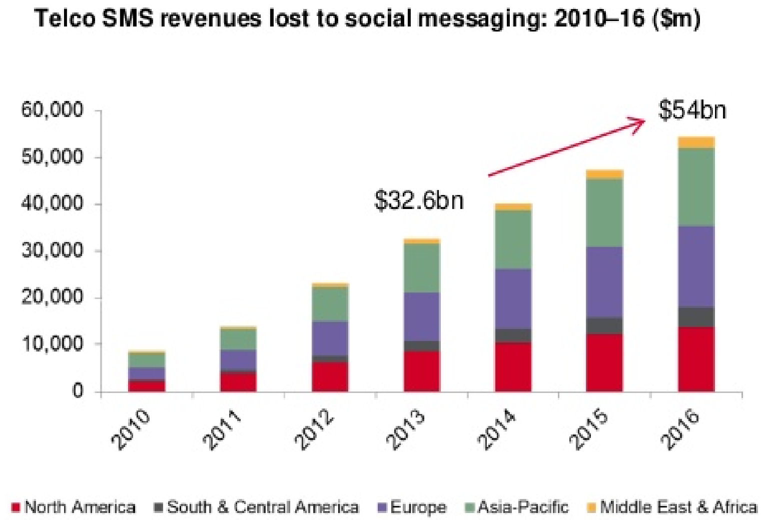
Messages sent via mobile handsets by service type, worldwide, 2010–2018



[Source: Analysys Mason, 2014]

Network Operators Revenues Lost to OTT Players

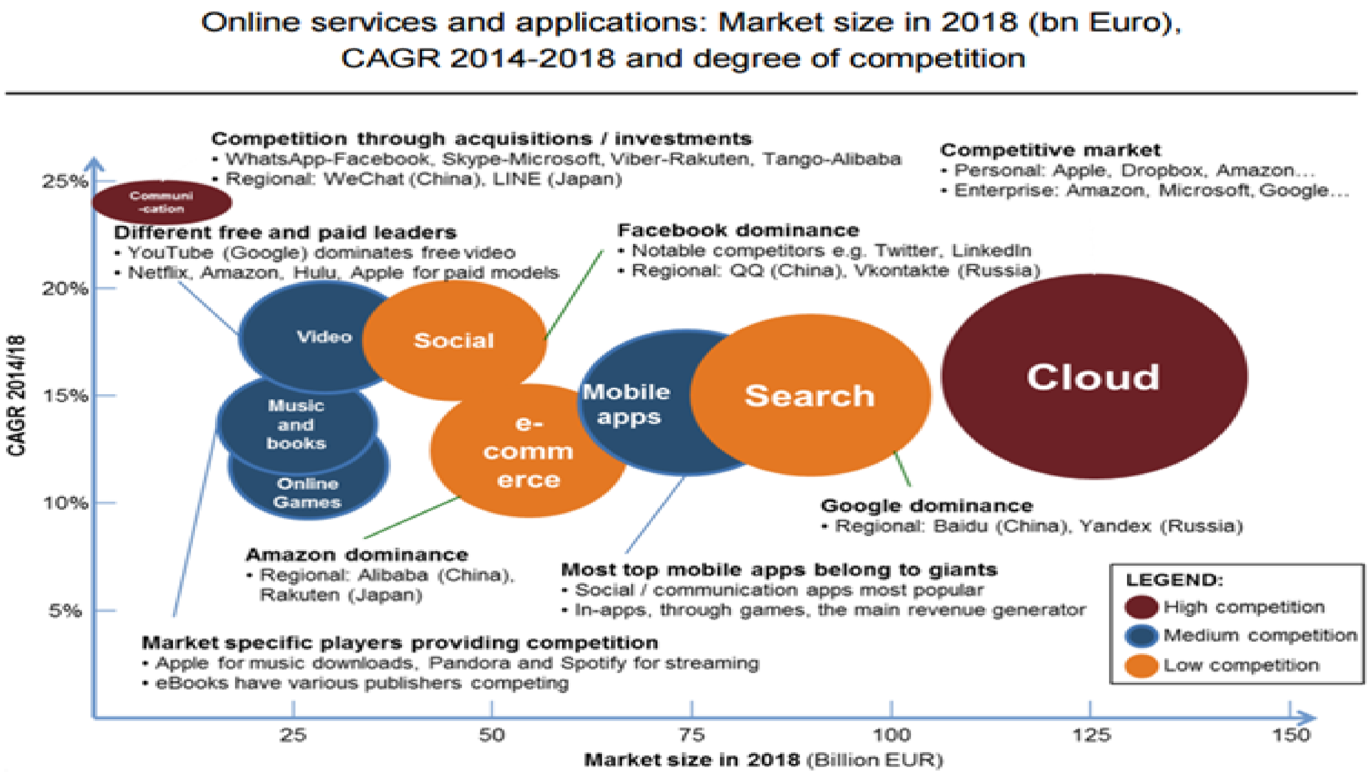




- $52bn revenues are estimated to be "lost" to OTT VoIP globally in 2016
- Over $40bn SMS revenues lost to OTT social messaging in 2014

Source: Ovum, 2015

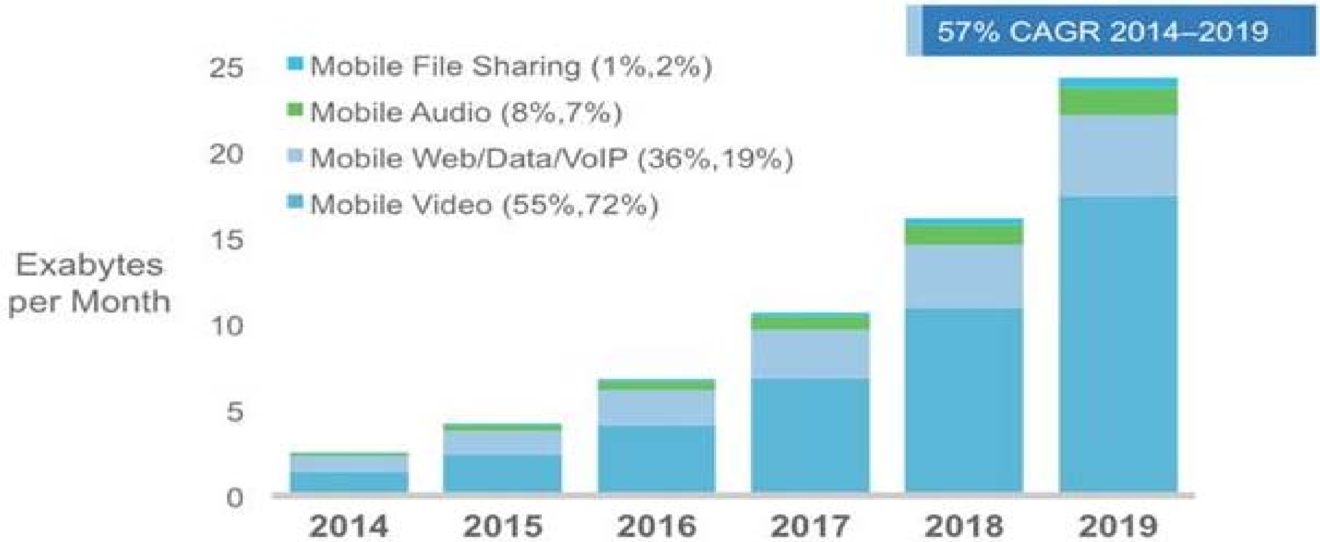
Content & Applications Market Size



Source: IDATE (2014): State of Internet services worldwide, December.

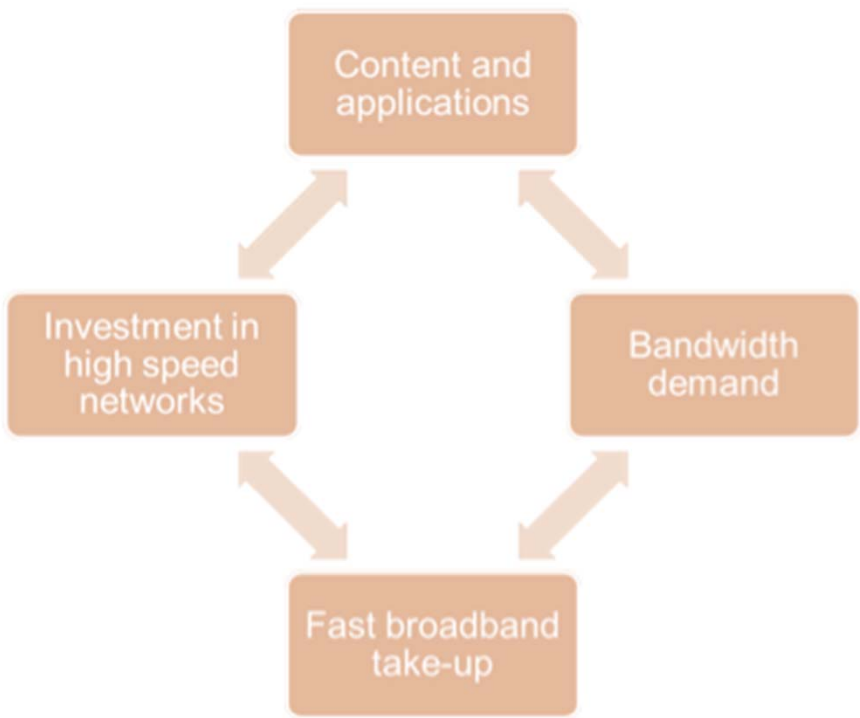
Mobile Data Traffic Growth

Mobile Video Will Generate More Than 69% of Mobile Data Traffic by 2019



Figures in parentheses refer to 2014, 2019 traffic share.
Source: Cisco VNI Mobile, 2015

Virtuous Circle of Networks and Applications



Source: WIK-Consult, Applications and networks: the chicken and the egg, 2015

Applications and content **generate user demand** – offer services that **make connectivity desirable** – thereby **boosting broadband take-up** and leads to **new network investment**

CAPs help push for an alternative revenue model **based on data rather than voice services**

Both sides of the value chain – networks and applications providers – **offer value to each other**

The Real Question is a 2-Pipe Problem

- IPTV capacity needed for streaming video for many subscribers by OTT
- **A very large pipe for Zettabytes** (log scale) **of Data (10^{21})**

Eventual technical solution may only be **fixed or Wi-Fi**, or perhaps **5G** for short range broadband networks = urban **ONLY**

MNO RAN capacity for data for the foreseeable future:

- **A comparatively narrow pipe**
- **Open to roaming surcharges**

Nearly **200 Exabytes** in **2018** (approx **12%** of **1.6 ZB**, Cisco)

Current mobile technical solutions, even with LTE Advanced, may continue to be the rule outside urban environments - so **roaming tariff issues with MNOs may persist**

The Question Needs a 3-Pipe Solution

- IPTV capacity needed for streaming video for many subscribers by OTT
- **A very large pipe for Zettabytes** (log scale) **of Data (10^{21})**

Eventual technical solution may only be **fixed or Wi-Fi**, or perhaps **5G** for short range broadband networks = urban **usually**

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Nearly **200 Exabytes** in **2018** (approx **12%** of **1.6 ZB**, Cisco)

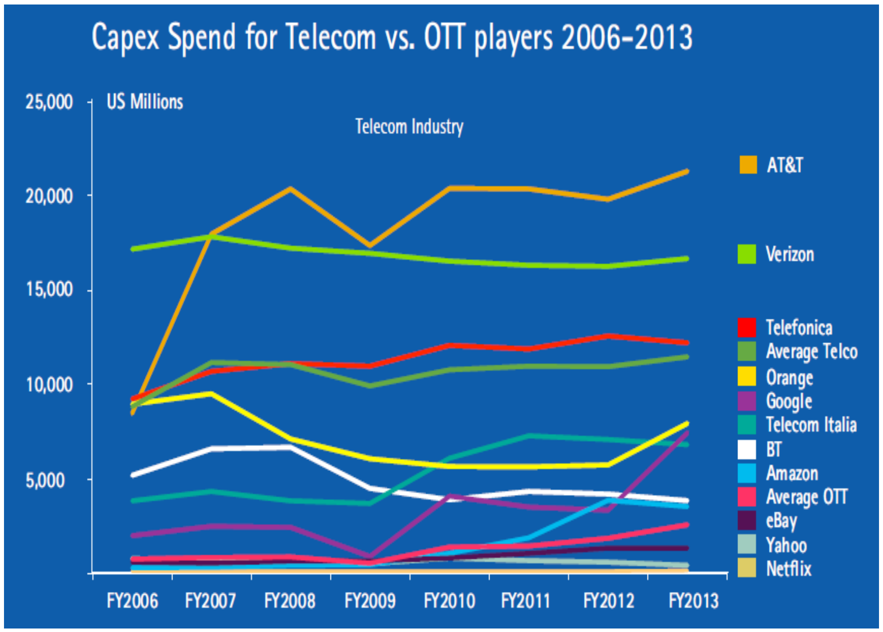
MNOs (& others) commit to **data offload option – Wi-Fi:**

- Over **fixed line** (broadband)
- Over **Wi-Fi WAN & MAN** (e.g. Relish London) & possibly **new Wi-Fi bands <700MHz**
- **IMR charges :=domestic**

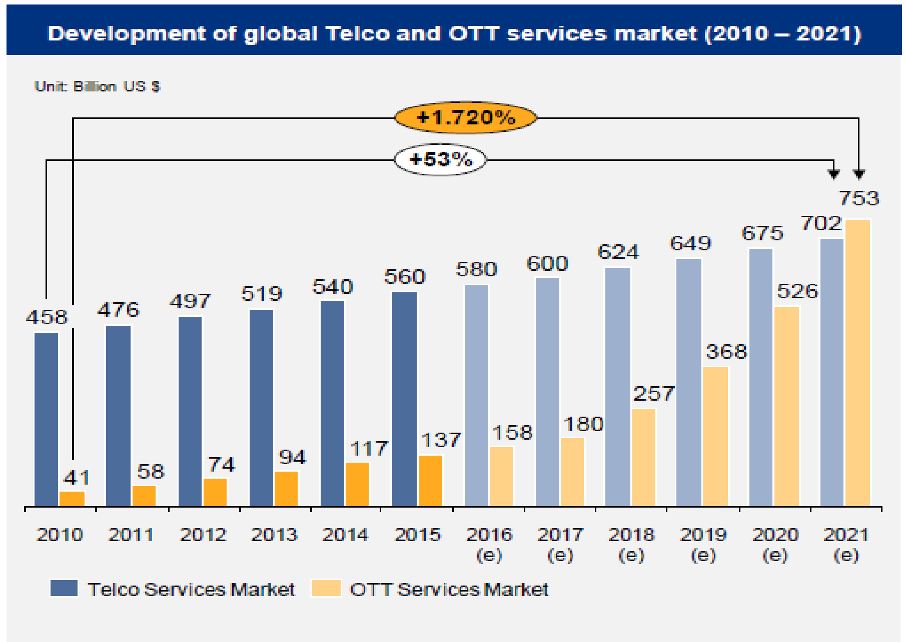
MNOs may use offloading to Wi-Fi – even wide area MANs as technical solutions, so **roaming issues might reduce quickly in some countries**

Network investments – Who Bears the Cost?

Network operators have to deal with high capital expenditure (CAPEX) while OTT Revenues are Growing every year



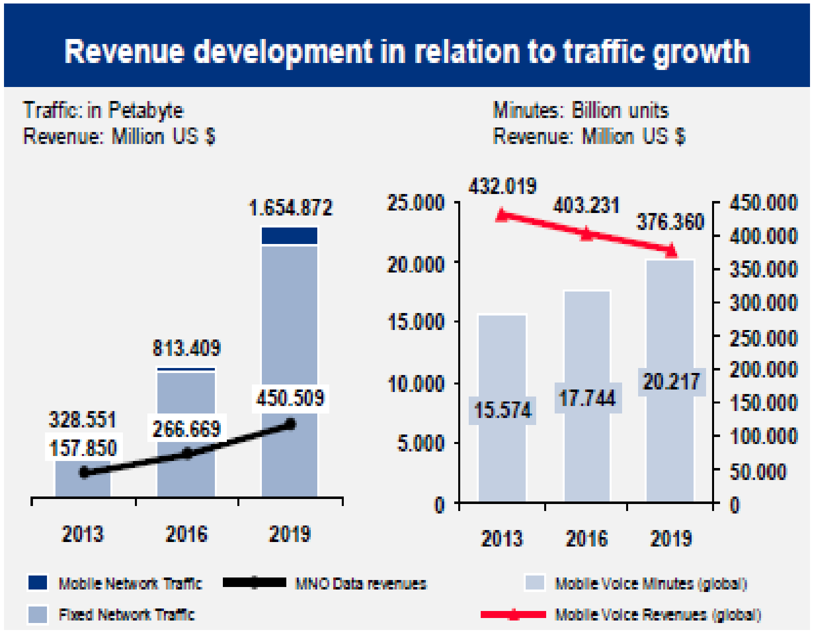
Source : Accenture- The new Digital Operator, 2014

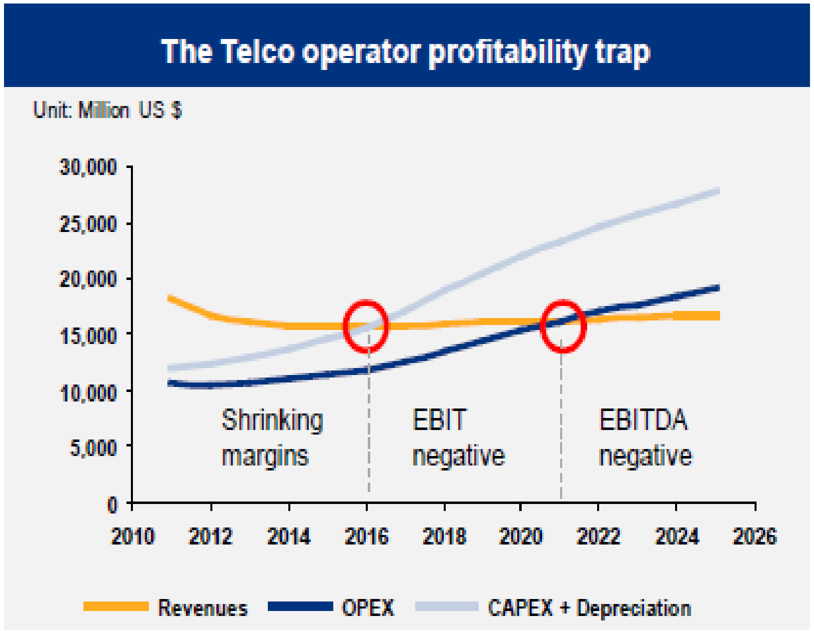


Source: IDATE - World Internet Services Markets 12/2013 and Detecon Forecast (e)

Network investments – Who Bears the Cost?

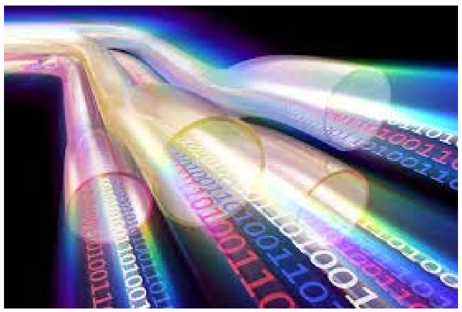
OTT players evolve into the service providers of the future at the expense of Telco operators and push them into **a severe data transport, revenue and profitability trap**





Source: *Analysis Mason (2014) - Fixed network data traffic worldwide*
Source: *Strategy Analytics (2014) - Wireless Operator Performance Benchmarking Q1 2014*

Network investments – Who Bears the Cost?



Unsustainable burdens on broadband infrastructure which require **reevaluating the economic relationships between stakeholders**

- *Should content providers contribute in the investment in telecoms infrastructure*

- *Is there a trade-off between increased usage of applications and content, and investment in telecoms infrastructure*

Conclusion

We need a global understanding of:

1. The concepts and terminology
2. Business models for all types of players
3. The evolution of significant market power
4. Directions of OTT technology progress

The ITU is working on a paper on the Regulatory Aspects of OTT that will be incorporated in the ICT Regulation Toolkit very soon…

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Thank you