Arab regional Forum on "Future Networks: Regulatory and Policy Aspects in Converged Networks”

(Rabat, Morocco, 19-20 May 2015)

“Setting the Scene”

Overview of Global Eco-System Actors, Drivers & Issues





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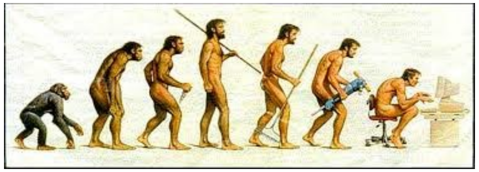
Our World's
Continuous CHANGE & EVOLUTION

It is not the strongest of the species that survives, nor the most intelligent, but the one** **most responsive to change !

Charles Darwin, 1809

And so is
The Digital World !



A BIT OF HISTORY

1

Late 90s | Early 2000s | Mid/Late 2000s | Early/Mid 2010s

- **2G Networks** were « grown » all around the word allowing developping countries to catch-up for voice telephony (and sms)
- **Data Communications** was limited to "professional" and high end and Investments in Fixed Infrastructure was not priorised…Internet in the starting phase.
- **3G Technology was full ready** and licensing initiated in Europ (supported by lobbying of Vendors and Cash need of Governments

A BIT OF HISTORY

2

Late 90s | **Early 2000s** | Mid/Late 2000s | Early/Mid 2010s

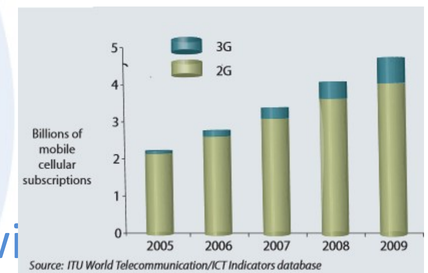
- **Fixed Internet starts to grow**
- **3G Standard was finalized by 3GPP** (IMT-2000)
- In Europe almost all major Operators paid B€s to get 3G lice ut were **Reluctant to Invest** in large 3G infrastructure dep nt (only Trials)
- 3G was then more considered as a solution to cope with a growing **voice demand** (e.g. capacity)

3G Business Case was not viable without a **«Killing Application »**

A BIT OF HISTORY

Late 90s | Early2000s | **Mid/Late 2000s** | Early/Mid 2010s

- **“Killing Apps”** came with **Smartphones and 3G dongle for Internet in Mid-2000s** and **the development of on-line services** (search, social, music, streaming video….)



- Fast deployment of **3G Networks** to cope wi **Communications demand. Trials then Commercial LTE Networks deployed** (beginning from 2009)
- And **Investments in Fixed infrastructure** were boosted by Internet usage in many Regions of the World.

Operators were Dominating the Communication Industry

A BIT OF HISTORY

4

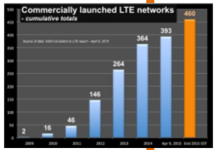
Late 90s

Early 2000s

Mid/Late 2000s

Early/Mid 2010s

- **Data Traffic** was almost **"doubling"** every year**,** thanks to **OTT services** and quite **attractive data tariffs(*)**, maintained low due to competition and efficient Regulation



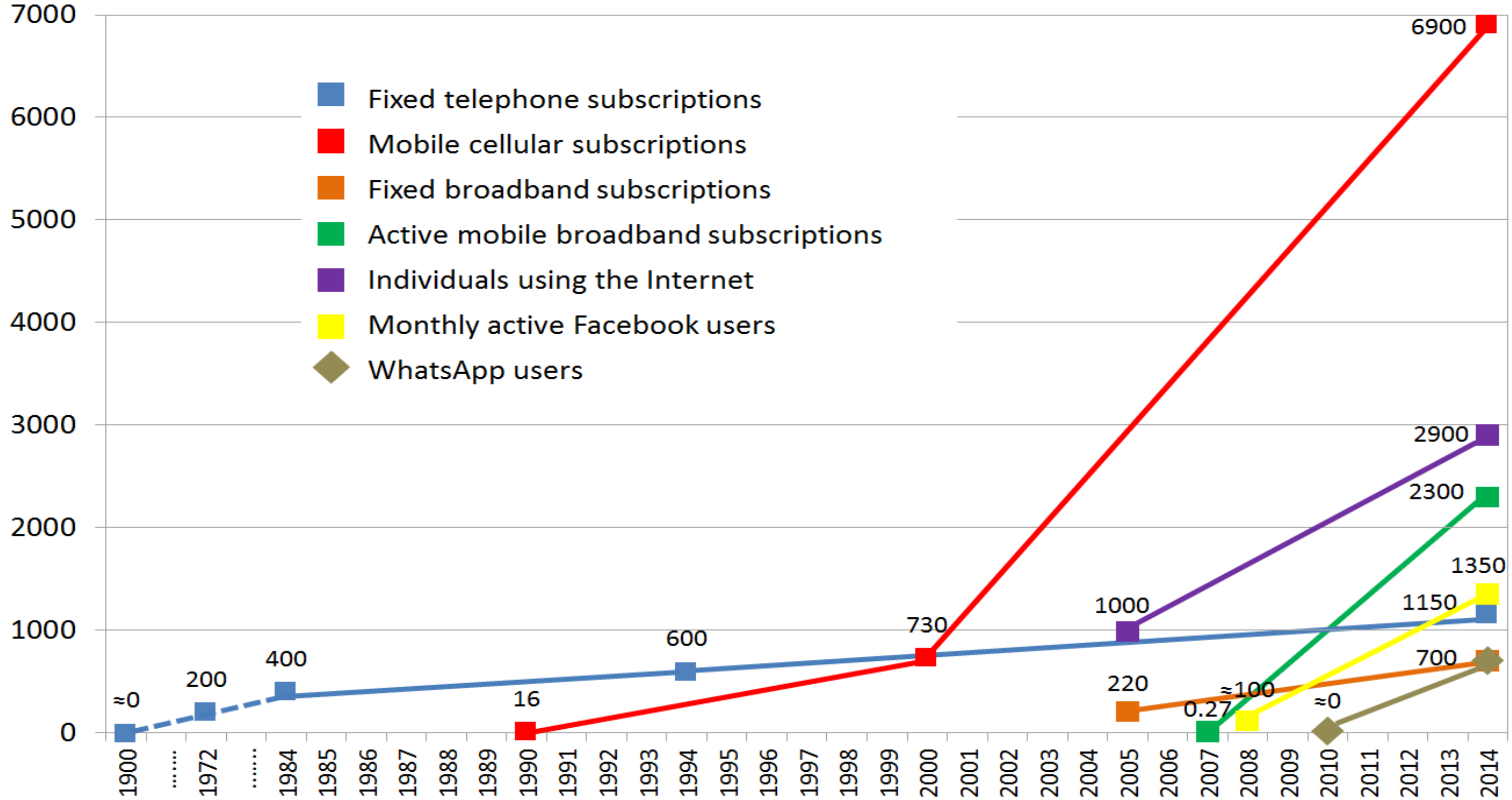
- **Increased deployment of 3G and LTE** Networks worldwide
- **Investment in Fix : ADSL, FTTx** in developped/ing in some regiosn
- **But ….**

Operators are "Rationalizing" their Investments, as the **business Model** involving **on-line services** has become **« unbalanced ».**

(*) : Except in Roaming !

Evolution over the last Decade… 1

Boost in Mobile/Broadband Subscriptions & Internet Use (mid 2000s – 2014)

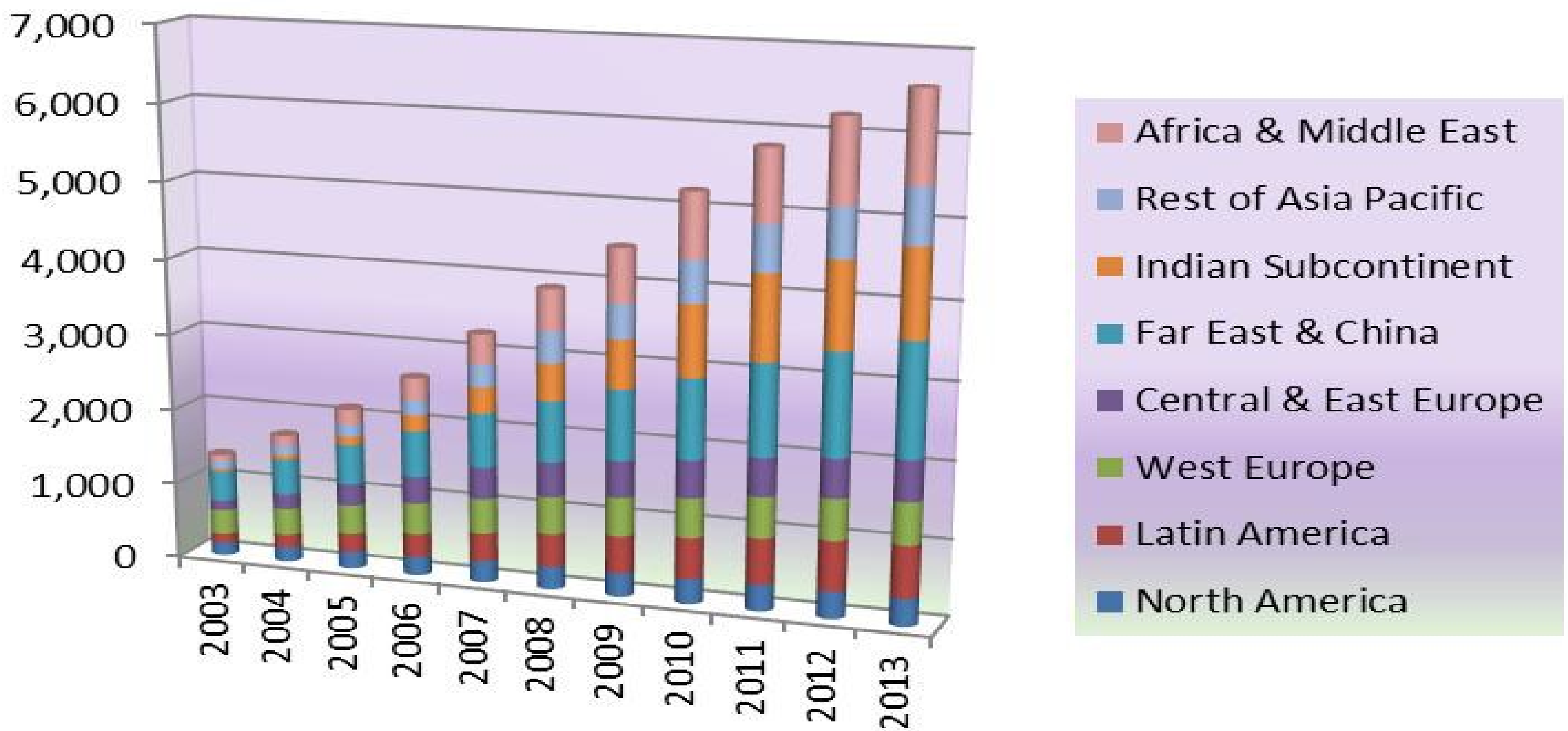


Source : WIK-Consult based on ITU statistics

Evolution over the last Decade…

1b

Global Mobile Subscriber Base per Region

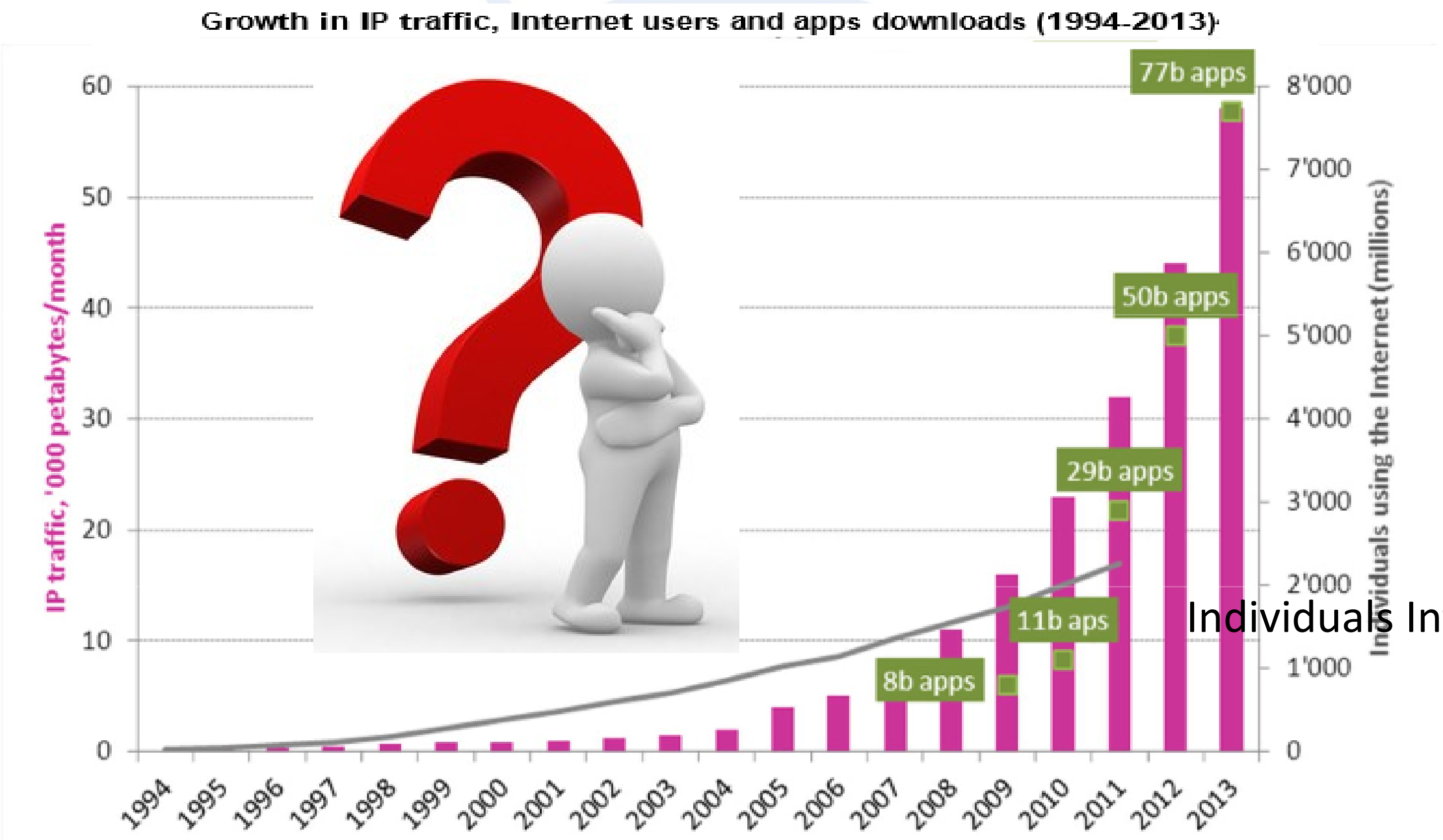


Source : Juniper Research

Evolution over the last Decade…

2

Boost in IP Traffic & Apps Downloads

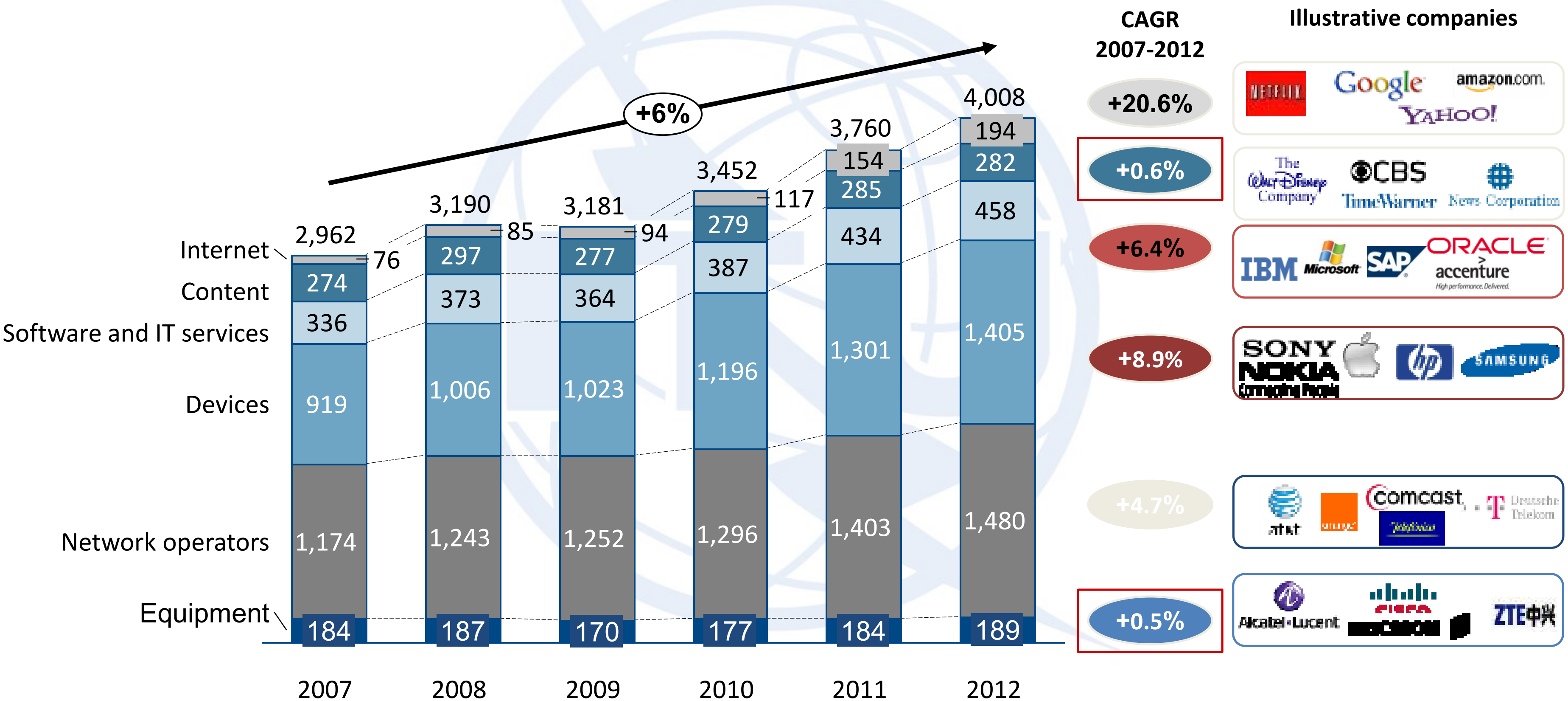


Source: Trends in Telecommunication reforms by ITU

Evolution over the last Decade…

Revenus Growing for Global and OTT Actors ….

3



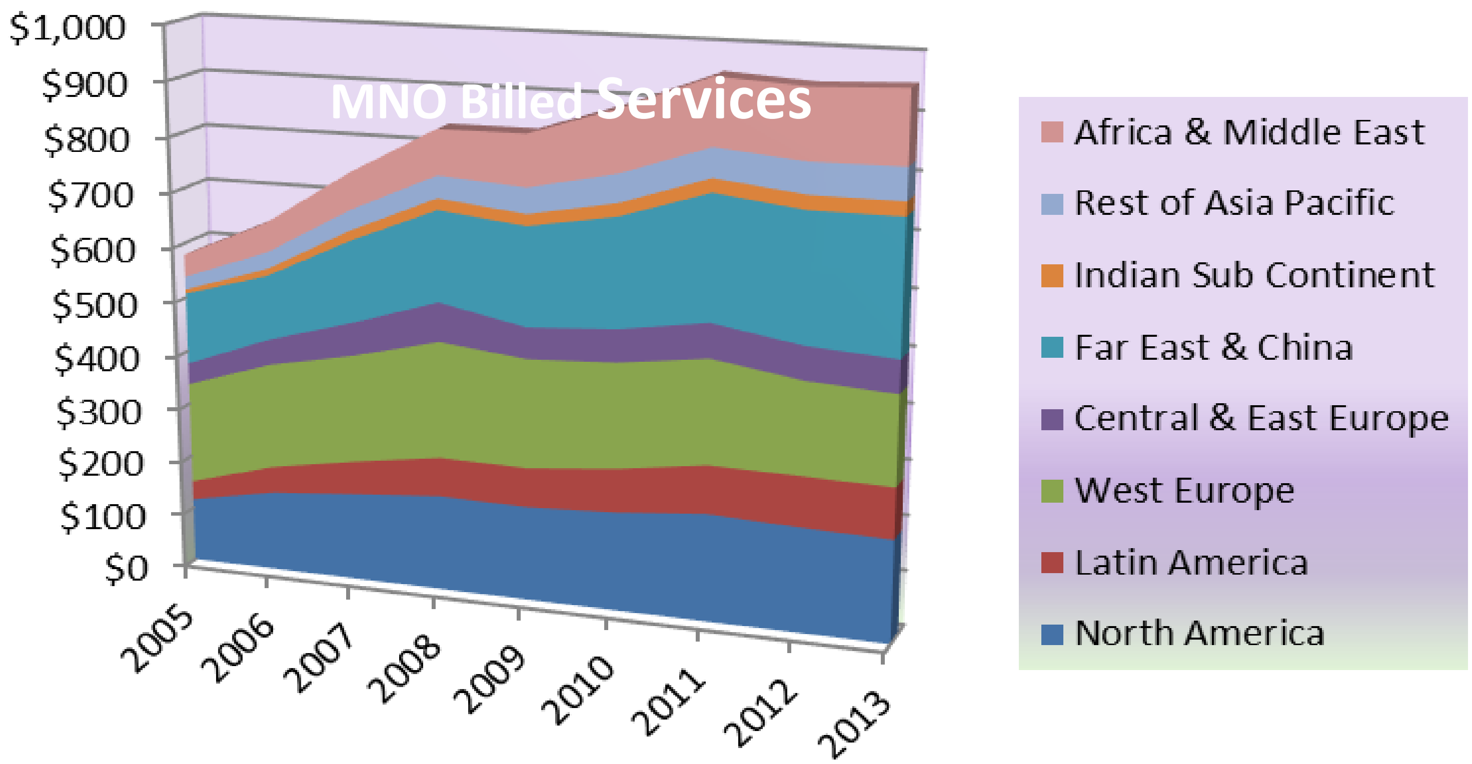
- Source: Thomson Reuters, Arthur D. Little analysis

(1) Top 30 per category by 2012 revenues

Evolution over the last Decade…

…while Revenus of MNOs ….Declining !

4

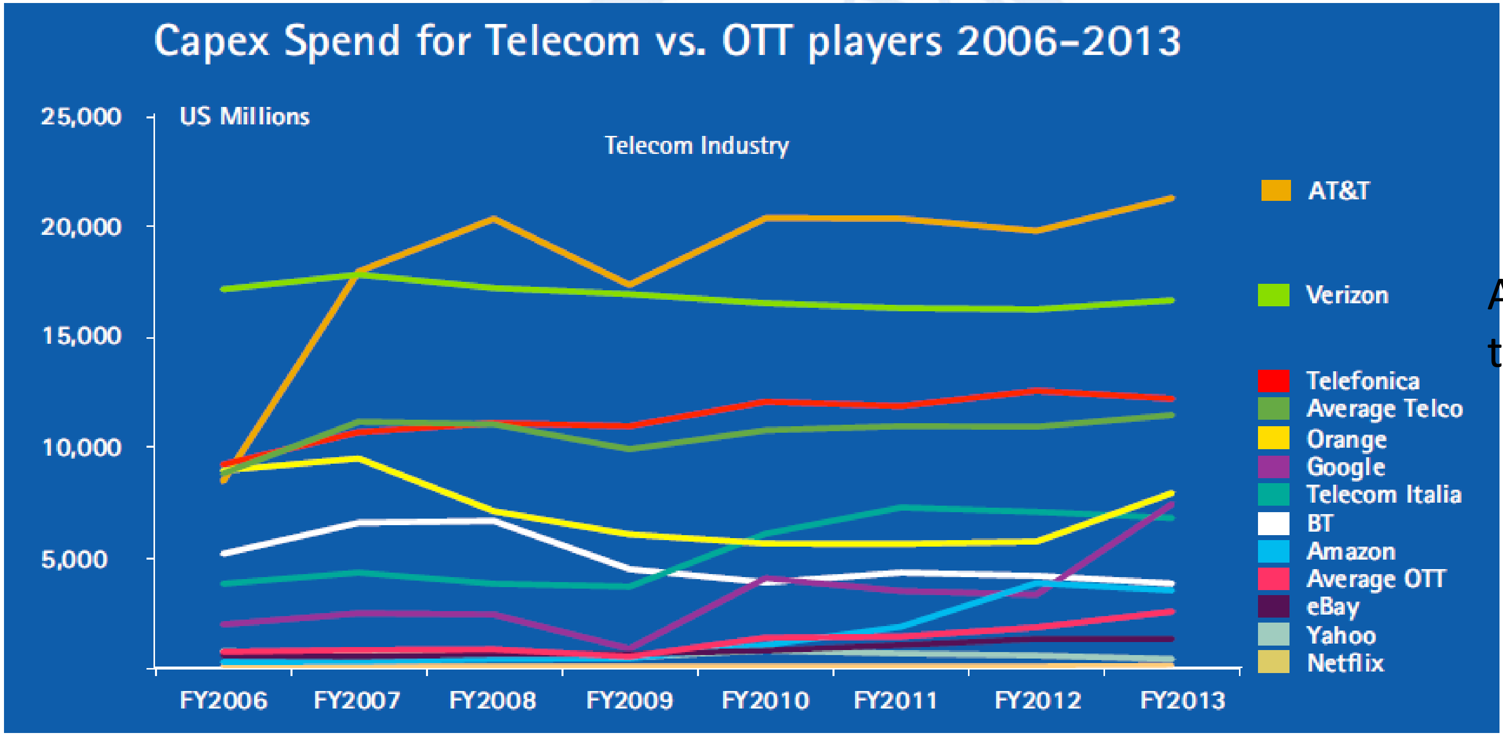


- Source: Juniper Research

Evolution over the last Decade…

….and Investments… yet unbalanced !

4

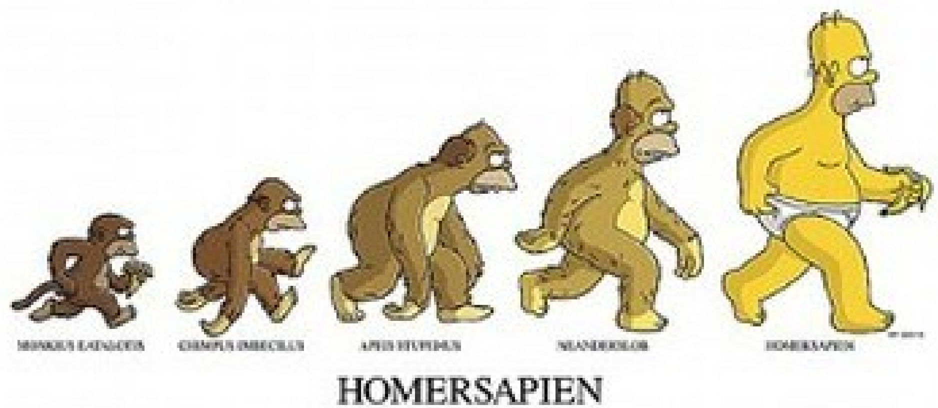


As % of Revenue
the difference is

Source : Accenture- The new Digital Operator, 2014

And the *EVOLUTION* Continues

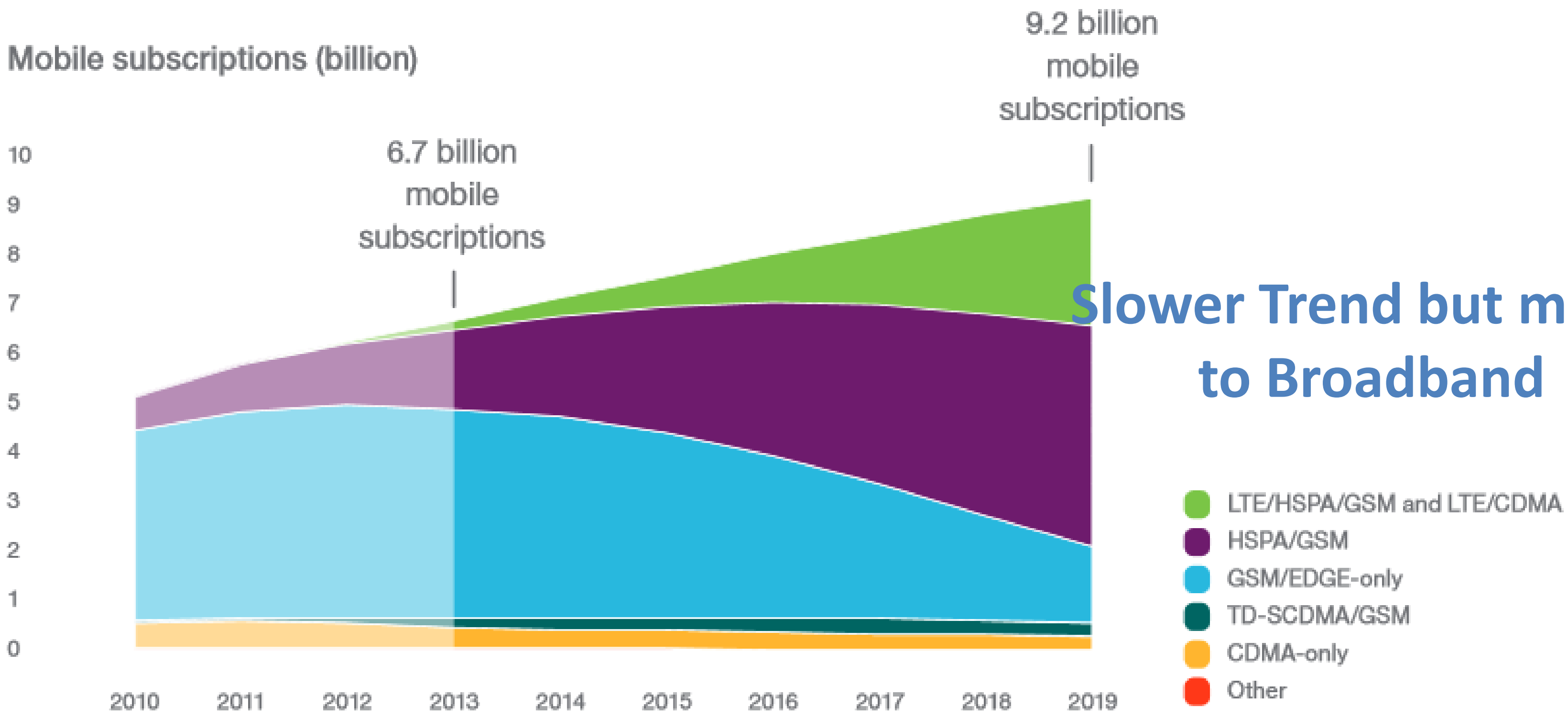
……..*even with various trends !*



Since it is Affordable

…and the Evolution Continues : 1

Broadband Mobile Subscriptions



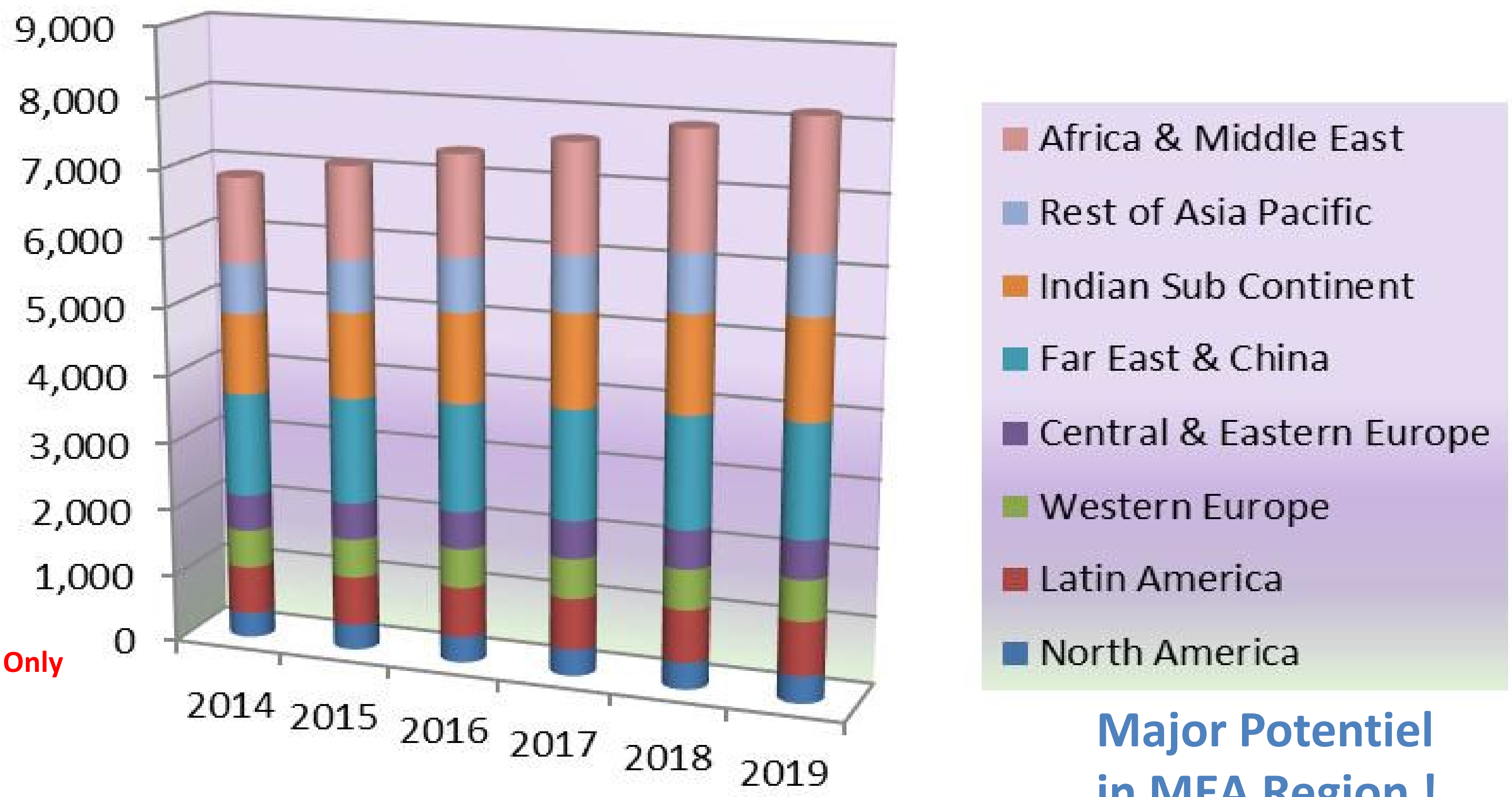
Slower Trend but move to Broadband

Source: ERICSSON MOBILITY REPORT, JUNE 2014

…and the Evolution Continues :

1b

Growth of Mobile Subscriptions (per Region)



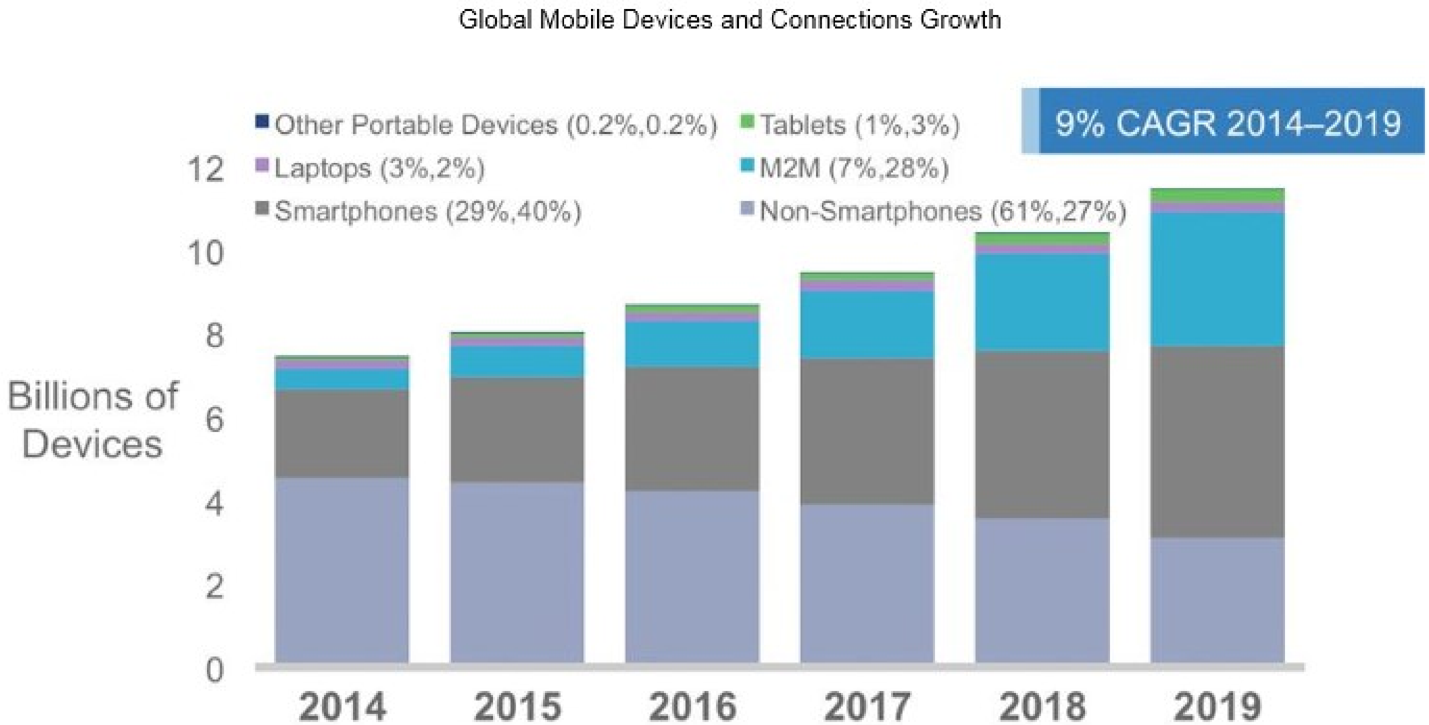
Verif Mobile Only

Major Potentiel in MEA Region !

Source: Juniper Research, Oct 2014

...and the Evolution Continues : 2

Predominance of Smartphones with M2M take-off !

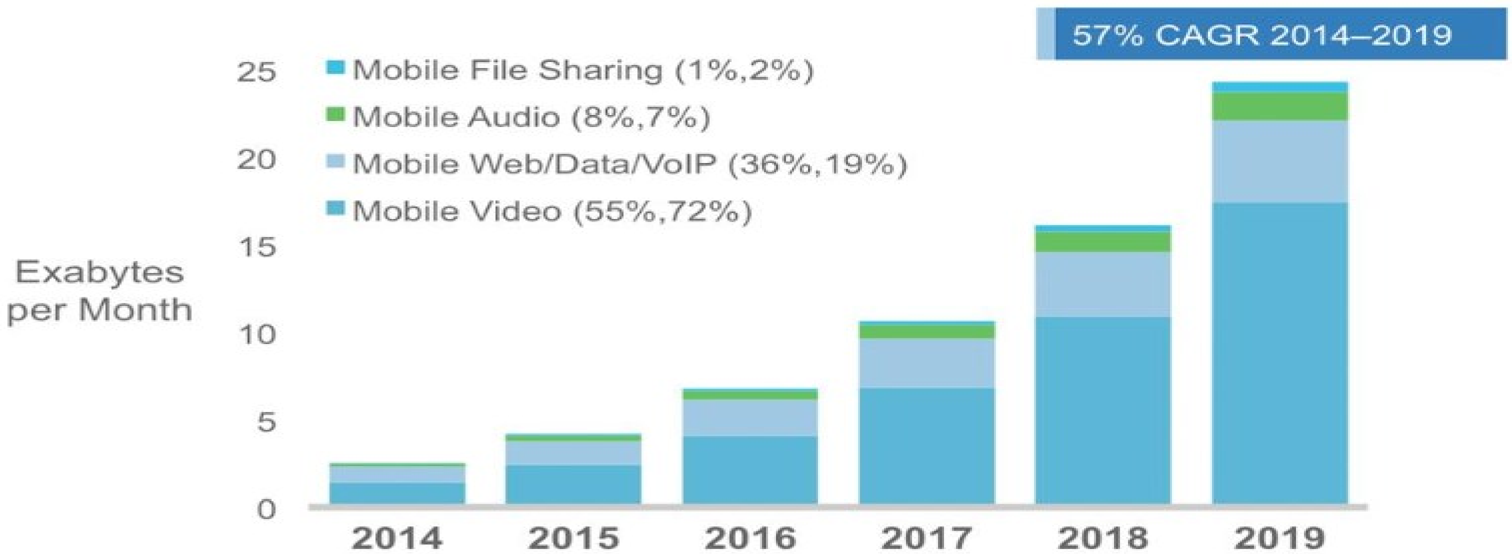


Figures in parentheses refer to 2014, 2019 device share.
Source: Cisco VNI Mobile, 2015

Will Machines Connectivity "balance " Traffic of Smartphones ?

....and the Evolution Continues : 3

Traffic: Mobile Data Boosted by Mobile Videos Services

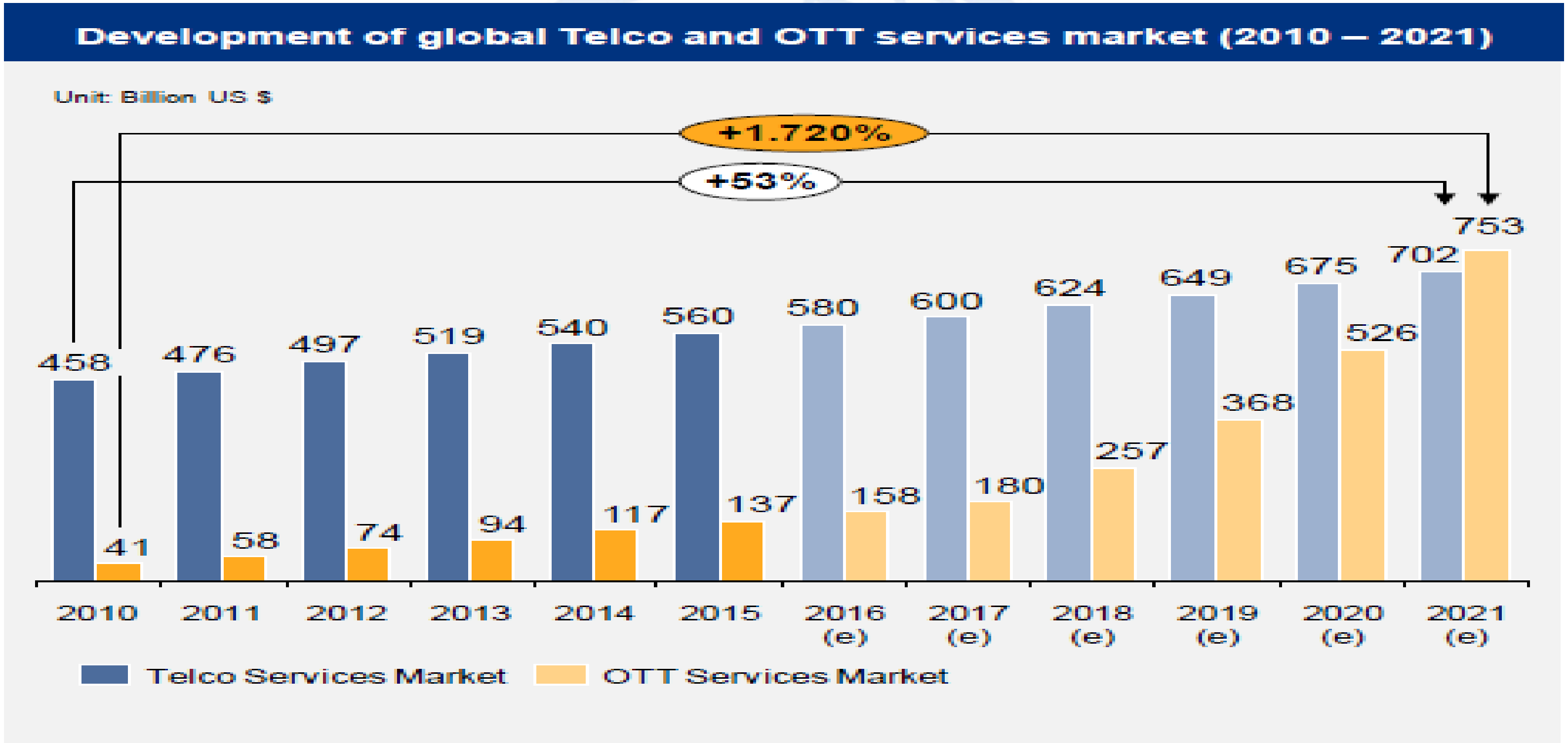


Figures in parentheses refer to 2014, 2019 traffic share.
Source: Cisco VNI Mobile, 2015

▶ **Video services and fast growing demand.will make Mobile Networks "Struggling" to cope with it !**

…and the Evolution Continues : 4

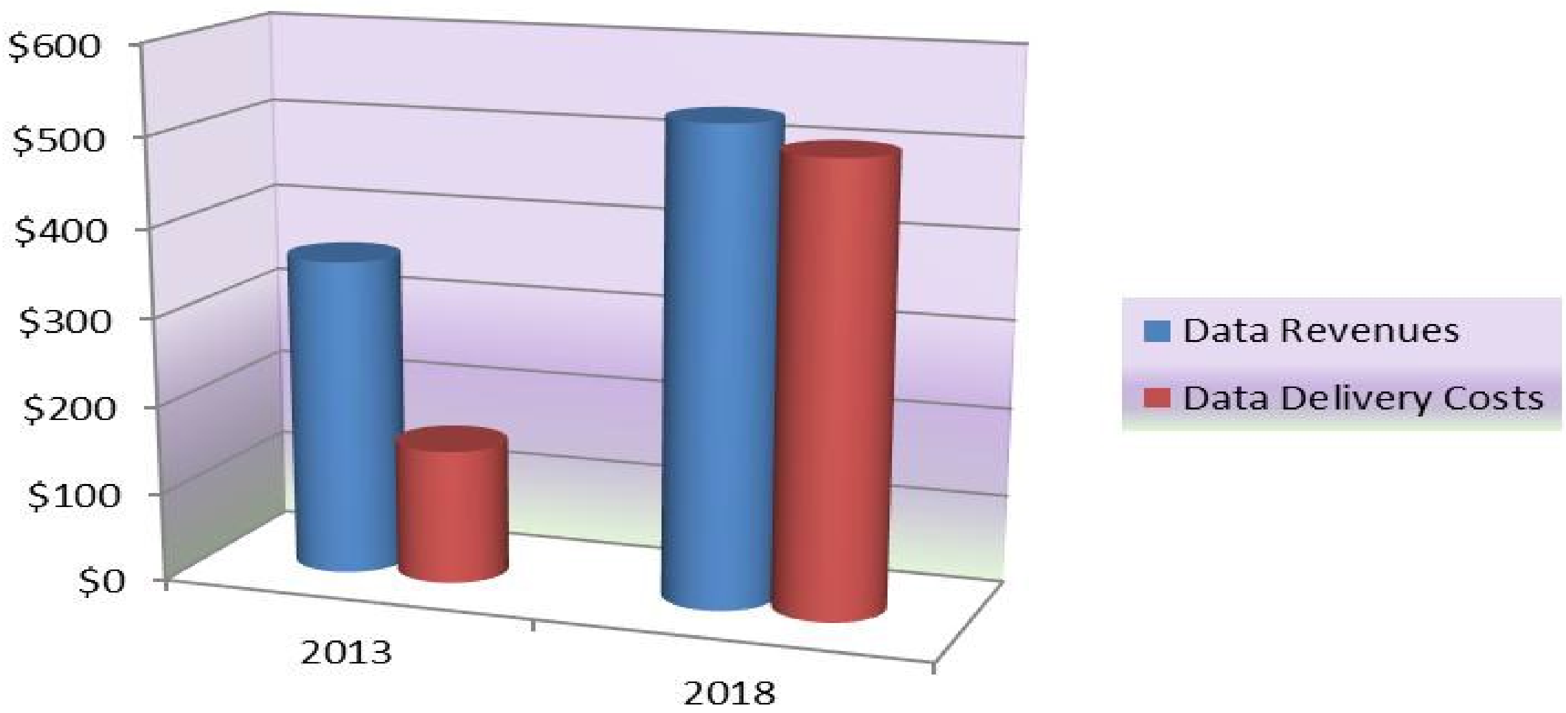
with Growing Revenus for OTT and Stagnation of Telco's !



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

…and the Evolution Continues : 5

..and the « Unbalance » of Costs vs revenus for MNO will continue !



Source : Juniper Research, Oct 2014

…and the Evolution Continues : 5

……………………

Is the Eco-system Sustainable

CONTENTS

1- Evolution of Data Communication World

2- On-Line Services: Drivers & Issues

3- Challenges for Sustainable Eco-System

On-Line Services
Who are OTT ?

"OTT (Over-The-Top) refers to applications and services, which are ***accessible over the internet and ride on Operators' networks offering internet access services*** *e.g. social networks, search engines, amateur video aggregation sites, etc."*

Examples:

On-Line Services : Main Actors

Content Providers

Films, Videos, Music,…

but also

- Individuals
- Publishers
- Governments, …

On-line Service Providers

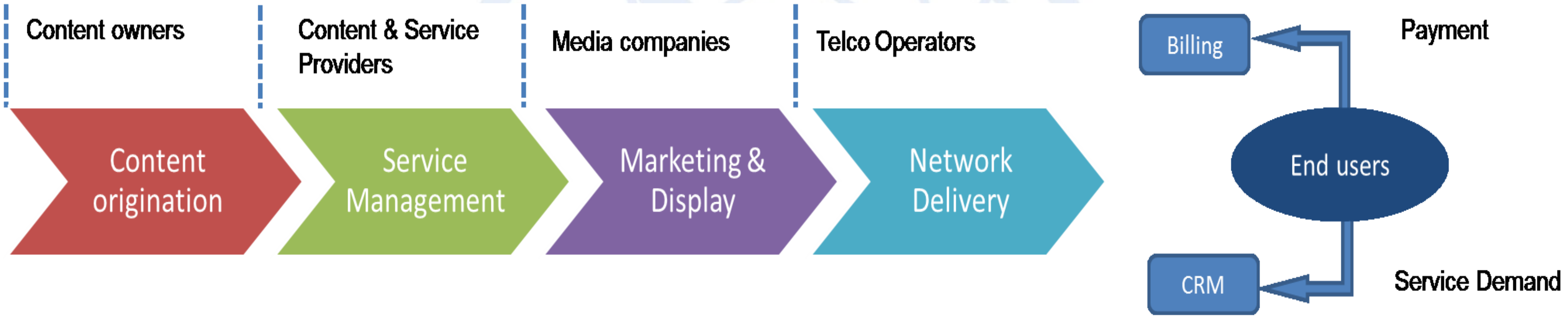
- ***Communication :*** Skype, Viber, …
- ***Search:*** Google, Yahoo, Baidu, …
- ***Social:*** Facebook, Twitter,….
- ***Video:*** Netflix, Youtube , Amazon,
- …

Connectivity Providers

- Fixed and Mobile Network Operators
- ISP
- VNOs
- Cable operators
- Satellite,…

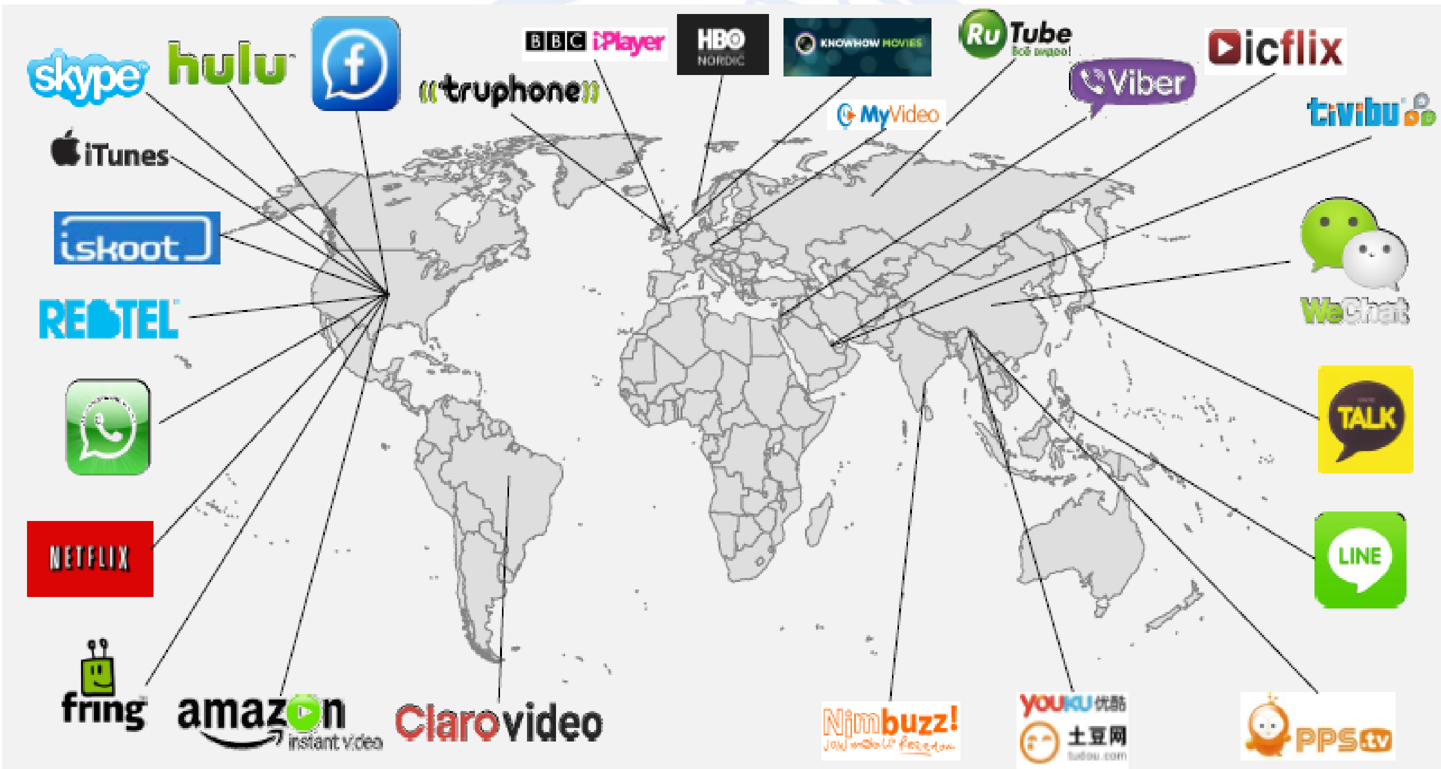
….and e-Education, Health, Commerce, government, etc….

On-Line Services : Value Chain



On-Line Services

Global and …. “located”



Source: Detecon Research 2014

On-Line Services : Model & Drivers

1. No Regulation (own policy/rules)
2. No service license required, no interco Obligation
3. Disruptive models (free,freemium, Ad based etc)
4. The World as Market Place
5. Low, scalable investment
6. Limited direct employment
7. IP based. Internet based standards (IETF)

Compared …to Telco's

1. Subject to National Obligations : Licence, Tax regime
2. Heavy Regulation (SLAs, USO, Control…)
3. High pre-investment required and Local Resources Cost (Frequencies, etc..)
4. Mostly Local Market space and Rules
5. Traditional business models

...But Partners in the "Circle"

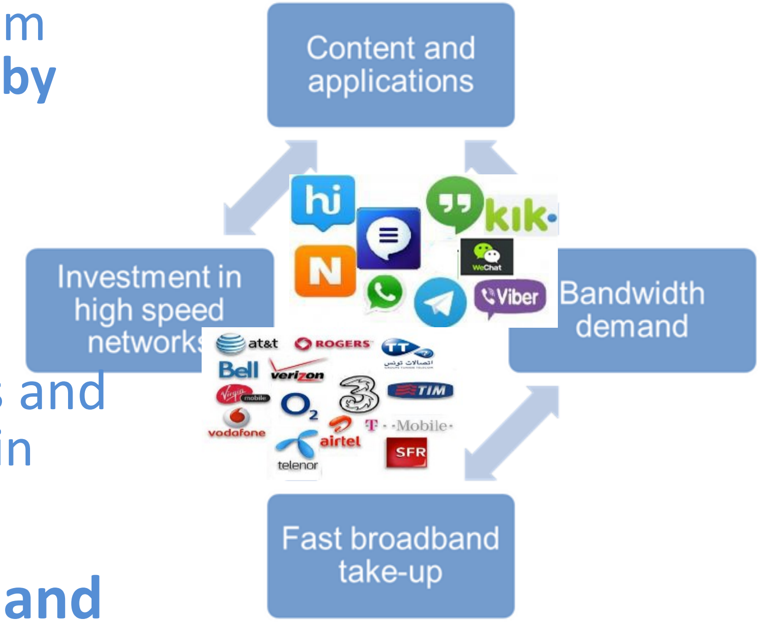
- **Virtuous Circle (Mutual Interest)**
  While OTT benefit from presence of broadband networks, those networks also benefit from **increased demand for bandwidth driven by applications. AutoSustainable system !**

OR

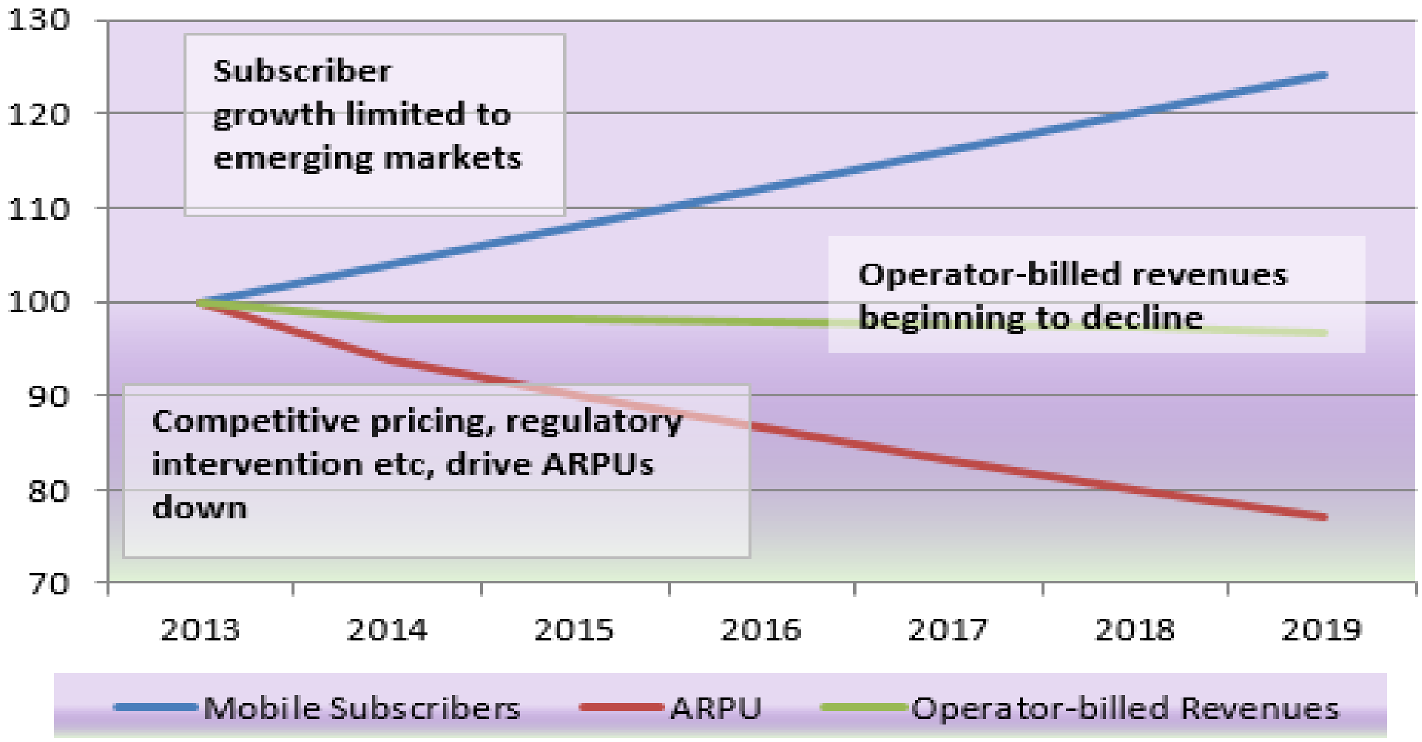
- **Vicious Circle**
  Disconnect between Source of Revenus and Source of Costs) for any Actor in the Chain

Profit Crunch ➔ less Investment and then less connectivity/ usage/Revenu:

The Chain is Broken



Operators Profit Crunch : 1
Lower ARPUs but Higher Traffic

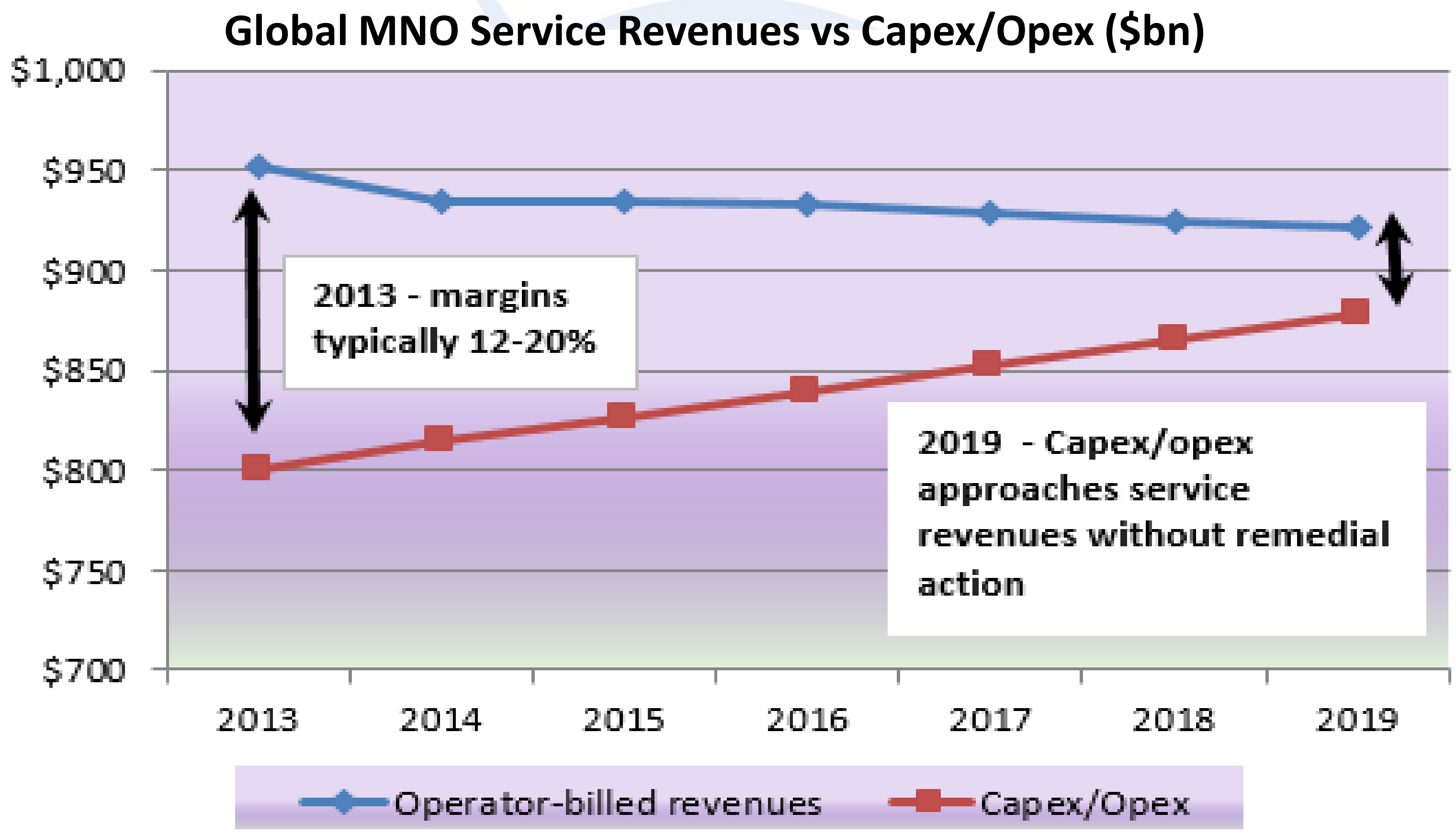


Source : Juniper Research, Oct 2014

ARPU decline continues, revenus stagnation

Operators Profit Crunch :
Threat to Investment

2

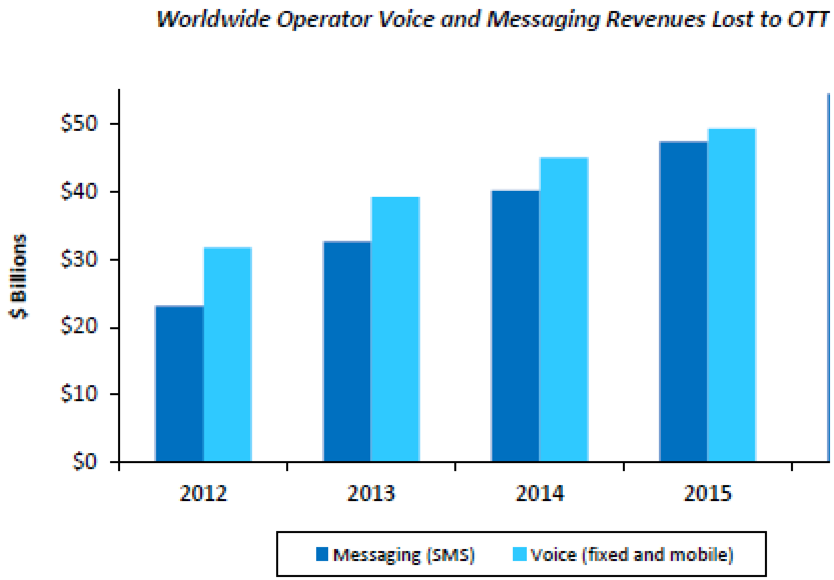


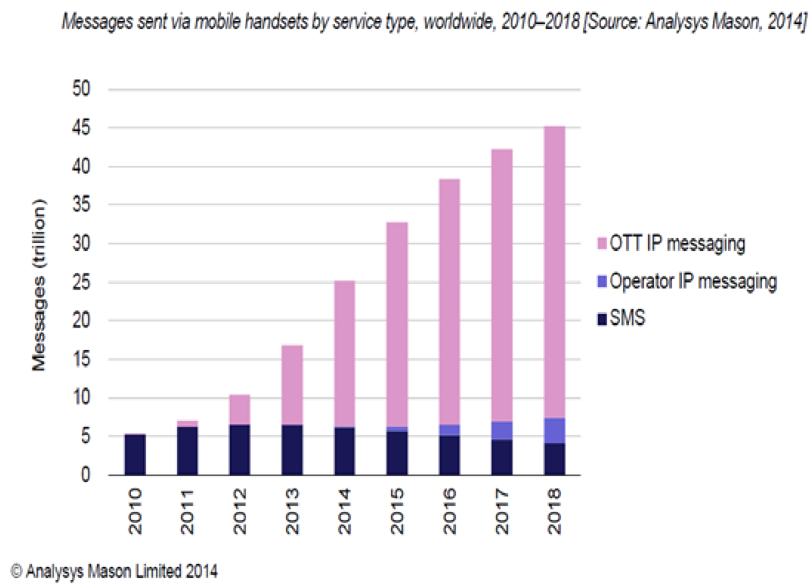
Source : Juniper Research, Oct 2014

Operators Profit Crunch :

Loss(*) of Traditional Revenus to OTT

4





Source: Ovum (2012), Cartesien (2013)

(*) Some use « Cannibalisation »

…and the Impact on the Global Eco-System

1. Threat to Investment in Infrastructure
2. Risk on Weak Enconomies : External Competition, Employment, Tax ..
3. Risk on Net Neutrality by National Regulation
4. Economy Protection : Value Destruction vs Creation

CONTENTS

1- Evolution of Data Communication World

2- On-Line Services: Drivers & Issues

3- Challenges for a Sustainable Eco-System

Duty of National Regulators

1. People : Security, Development
2. Local Economy development
3. Sovereignity : Applicable Rules, Data Protect
4. Economy Protection : Value Destruction vs Creation

Challenges for Regulators

“We have to :

- Protect our citizens’ interests,
- provide incentives to the industry,
- attend to national-level needs and issues,
- create and sustain investor confidence, and..
- remain mindful of future needs of the consu mers and the industry. “

Dr. Syed Ismail Shah,
Chairman of Pakistan Telecommunication Authority, April 2015

Challenges for Policy Makers

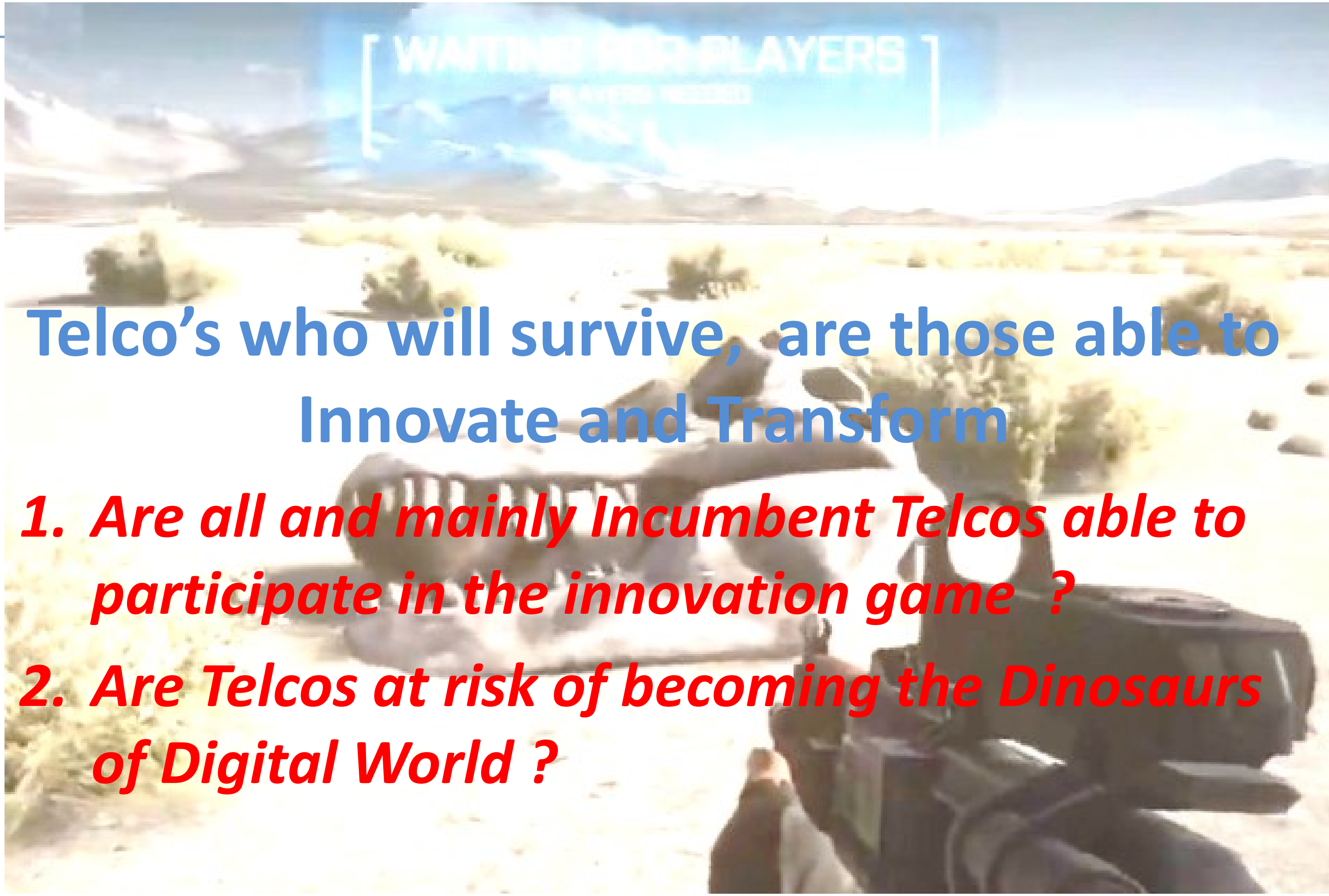
Affordable Access Africa

Affordable Access is not just a matter of **connecting people** at the ‘Bottom of the Pyramid’ with the **cheapest devices** and **lowest price/quality** connectivity. African connectivity is expensive in relation to income and in relation to global ‘like for like’ price comparisons. Businesses and business people in Africa do not want basic services, they want effective services at affordable rates and many of the answers lie within the Continent. A coordinated and concerted effort by Policy Makers, Service Providers, Investors, Solution Providers and Major End Users will move Africa towards the goal of making Access Affordable, bringing all of the associated Socio Economic benefits

Moto of IAD Summit 2015 Victoria Falls, Zimbabwe

Conclusion

1. Evolution of **Data communication** is expected to continue at an accelerated pace over the next decade
2. **Operators** have **dominated the communications industry** for more than two decades. Now they are challenged by new players in a reshaped Eco-system. They must re-think their business models to adapt to a new digital era. Will they focus on connectivity? On providing digital services? On finding new revenue streams?...
3. **Regulators** played an extremely **positive role** in the past decade making the development happen. They are questioned today about ensuring sustaibailily of the new ecosystem. **Are they ready for that ?**
4. **OTT Players** are taking full benefit of Telco's Infratructure and Investments to grow their Business. Will they accept to "Contribute " to rebalance Value share and Cost/Revenus vs Net Neutrality Assurance?



Telco's who will survive, are those able to Innovate and Transform

1. ***Are all and mainly Incumbent Telcos able to participate in the innovation game ?***
2. ***Are Telcos at risk of becoming the Dinosaurs of Digital World ?***


WAITING FOR PLAYERS

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"Future Networks: Regulatory and Policy Aspects in Converged Networks”.
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Thank You For Your Attention

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