

**ITU-T SG3 Meeting**  
***Workshop on Economic Impact of OTTs***  
**(Geneva, Switzerland, February 24<sup>th</sup>, 2016)**

*The impact of OTTs from an operator's perspective*

—

*Global and Local dynamics*

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# CONTENTS



## 1- Introduction : Evolution of Digital World



## 2- Facts and Numbers



## 3- Challenges and way Forward

# 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 !



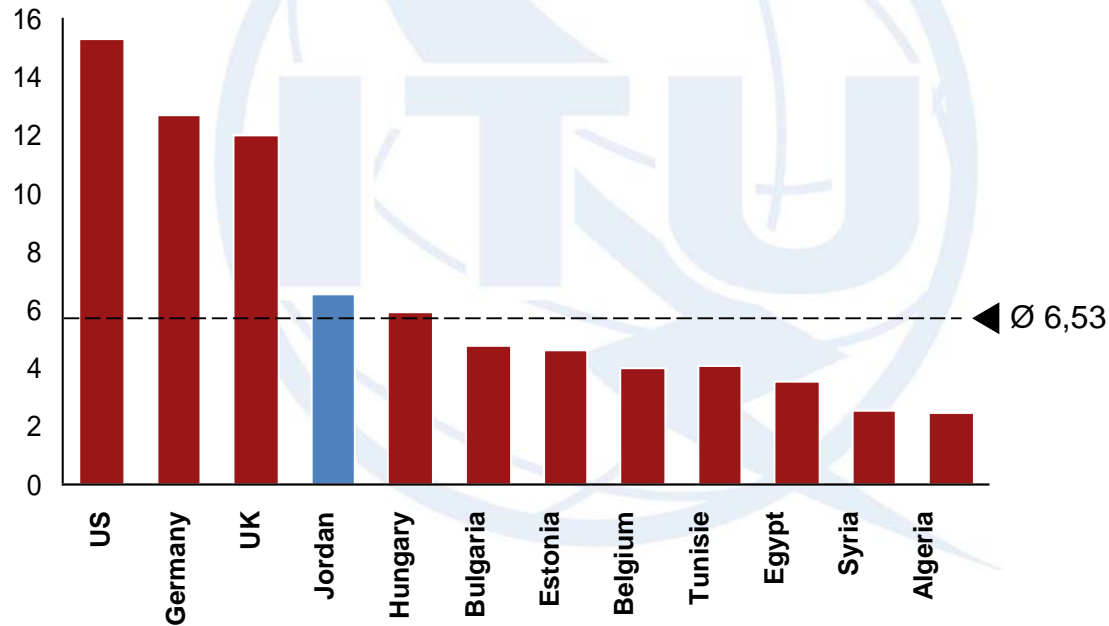
# Introduction

- The contribution of « **telecom industry** » to the global economy have been fastly growing since two decades and is expected to continue at an accelerated pace in the future.
- **Technology makers, telecom operators (Telcos) and Internet Players (CAPs, ...)** are **Key Actors** of this Growth and are sharing the created value.
- Appropriate **Regulation** almost worldwide ensured **fair competition**, and **enabled** the development of the sector and its **contribution to national economies and social welfare**.
- In most of Developing countries, Telcos are by far the **major sector contributors** to national economies (Turnover, Jobs, Investment, Tax).
- Developing the Digital Economy will require appropriate **Investment at global and local level**.

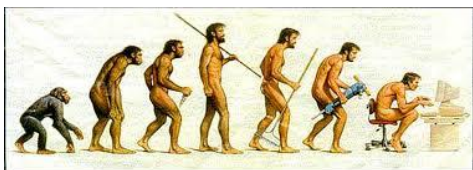


# ... ICT Contribution to GDP includes Developed and Developing

**ICT Revenue<sup>1</sup> / GDP**  
(2014, %)

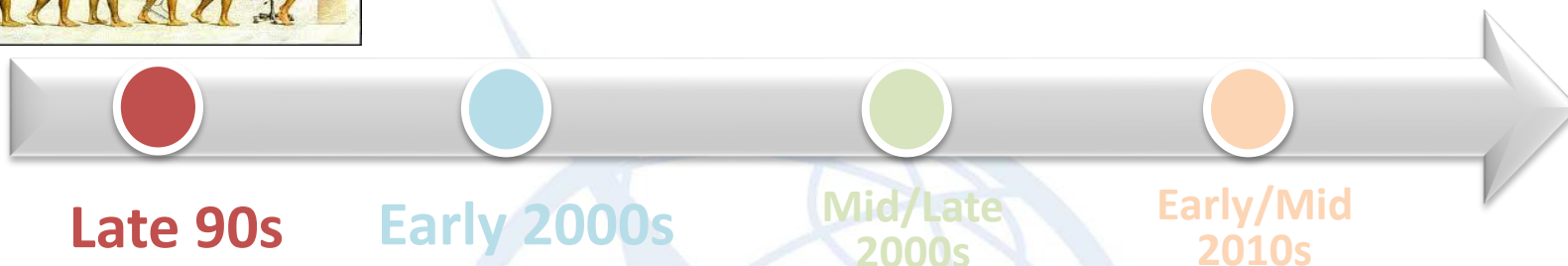






# A BIT OF HISTORY

1

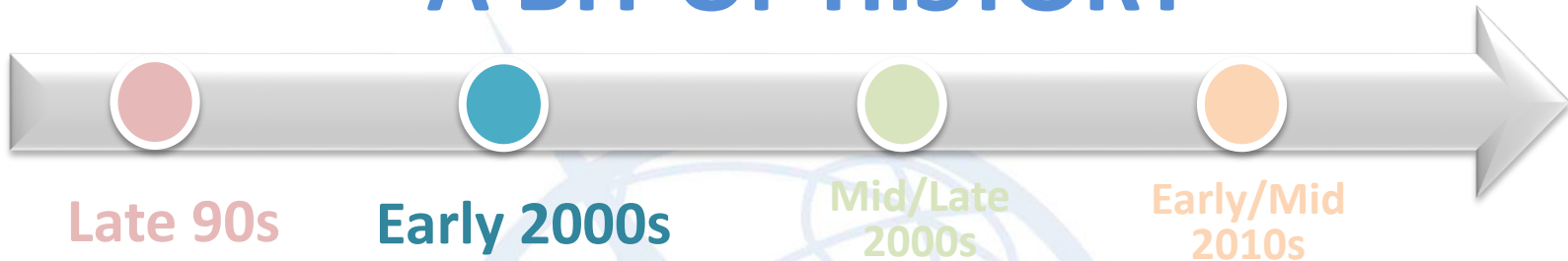


- **2G Networks** were « grown » all around the world allowing developing countries to catch-up for voice telephony (and SMS)
- **Data Communications** was limited to “professional” and high end and Investments in Fixed Infrastructure was not prioritized...**Internet** in the starting phase
- **3G Technology was full ready** and licensing initiated in Europe (supported by lobbying of Vendors and Cash need of Governments)



# A BIT OF HISTORY

2



- Fixed Internet started to grow
- 3G Standard was finalized by 3GPP (IMT-2000) 
- In Europe, almost all major Operators paid B€s to get 3G licenses but were **Reluctant to Invest** in large 3G infrastructure deployment (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

3



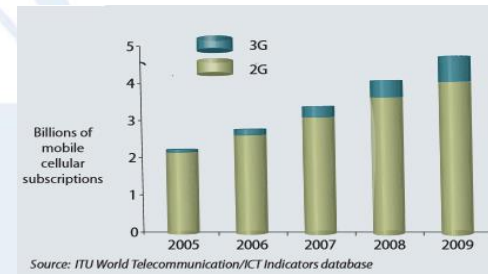
Late 90s

Early 2000s

Mid/Late  
2000s

Early/Mid  
2010s

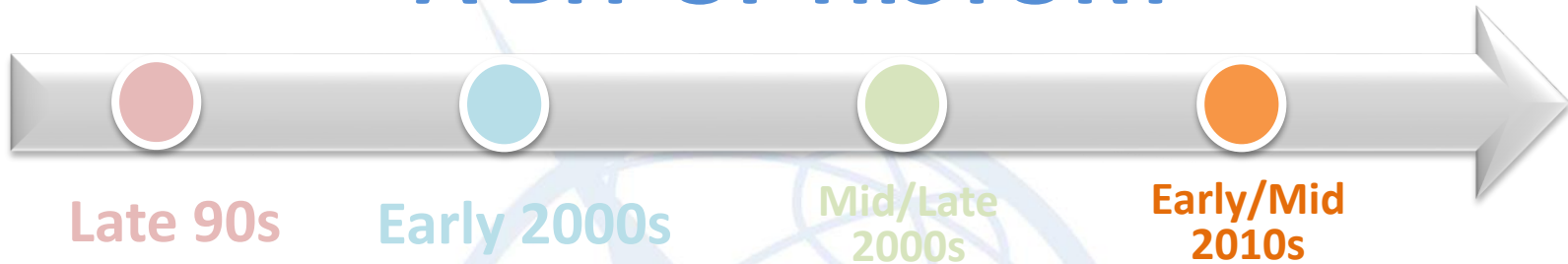
- “Killing Apps” came with Smartphones and 3G dongle for Internet in Mid-2000s and the development of on-line services (search, social, music, streaming video....)
- Fast deployment of 3G Networks to cope with Growing Data Communications demand. Trials then Commercial LTE Networks deployed (beginning from 2009)
- And Investments in Fixed infrastructure were boosted by Internet usage in many Regions of the World



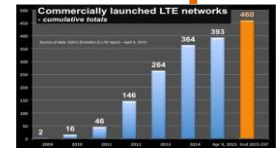
**Operators were Dominating the Communication Industry**

# A BIT OF HISTORY

4



- **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 Fixed networks, ADSL, FTTx** in developed/ing countries in some regions
- **But ....**
  - ➔ Operators are “**Rationalizing**” their Investments, as the **business Model** involving **on-line services** has become « **unbalanced** »

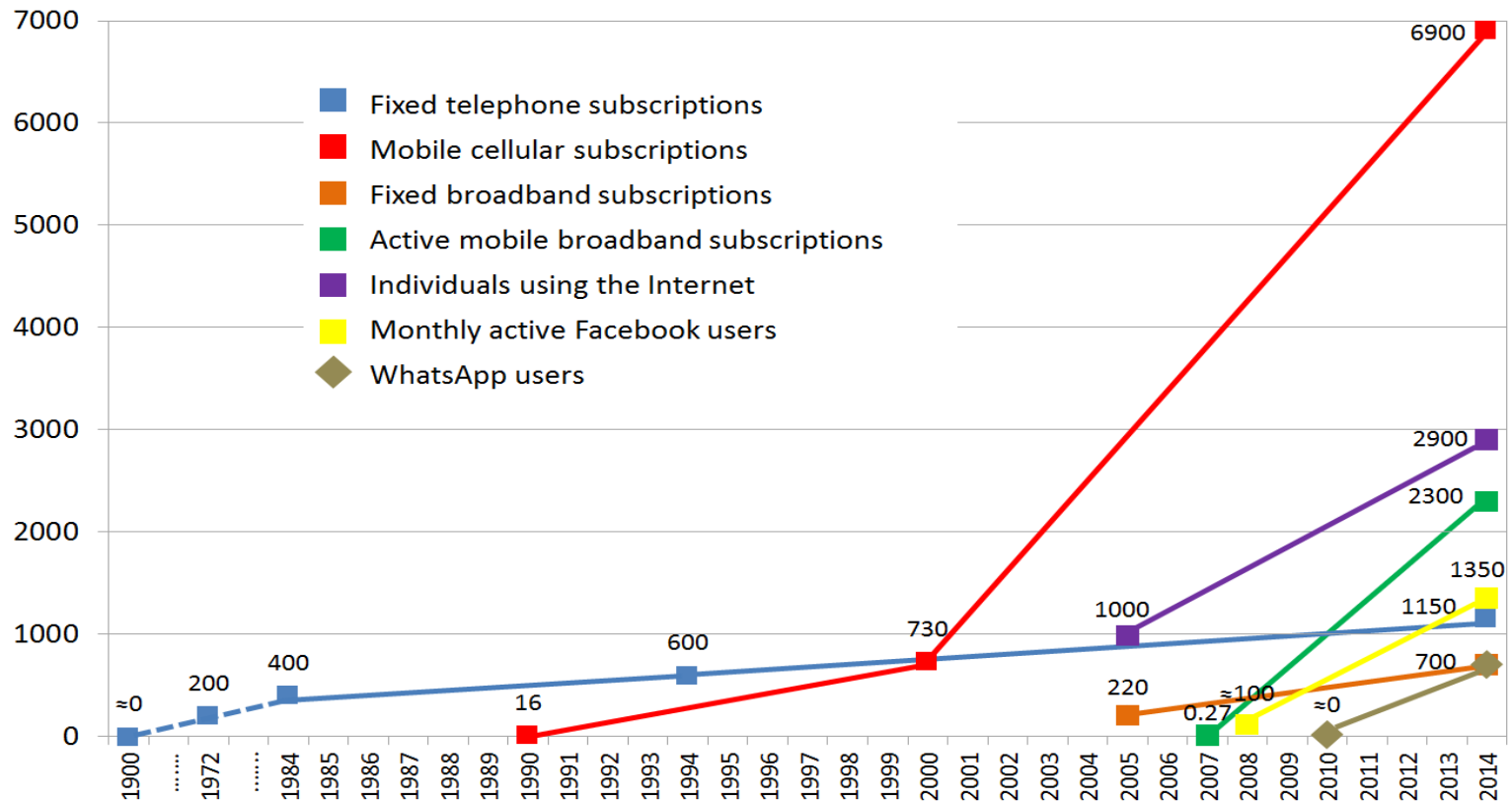


(\*) : Except in Roaming !

# Evolution over the last Decade...

1

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



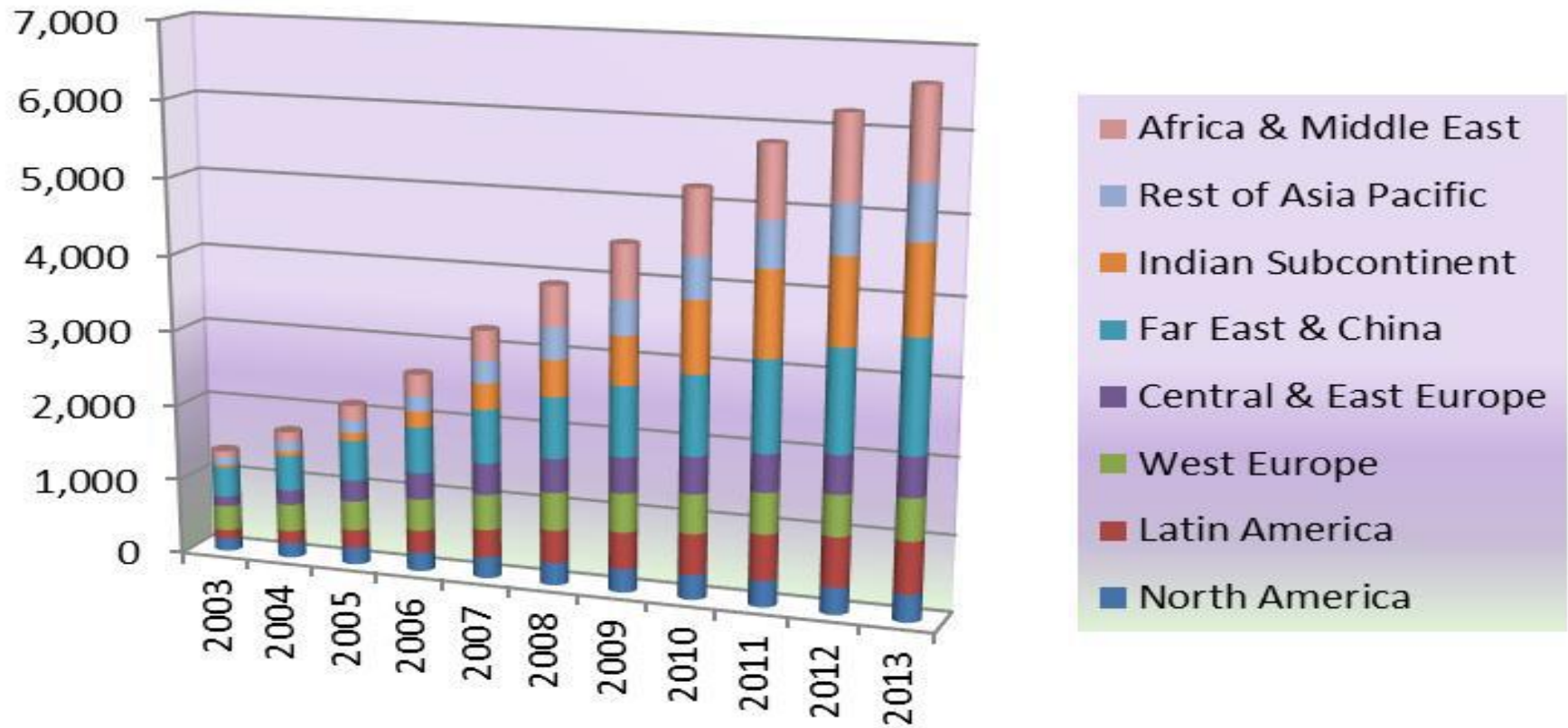
Source: WIK-Consult based on ITU statistics



# Evolution over the last Decade...

1b

## Global Mobile Subscriber Base per Region



Source: Juniper Research

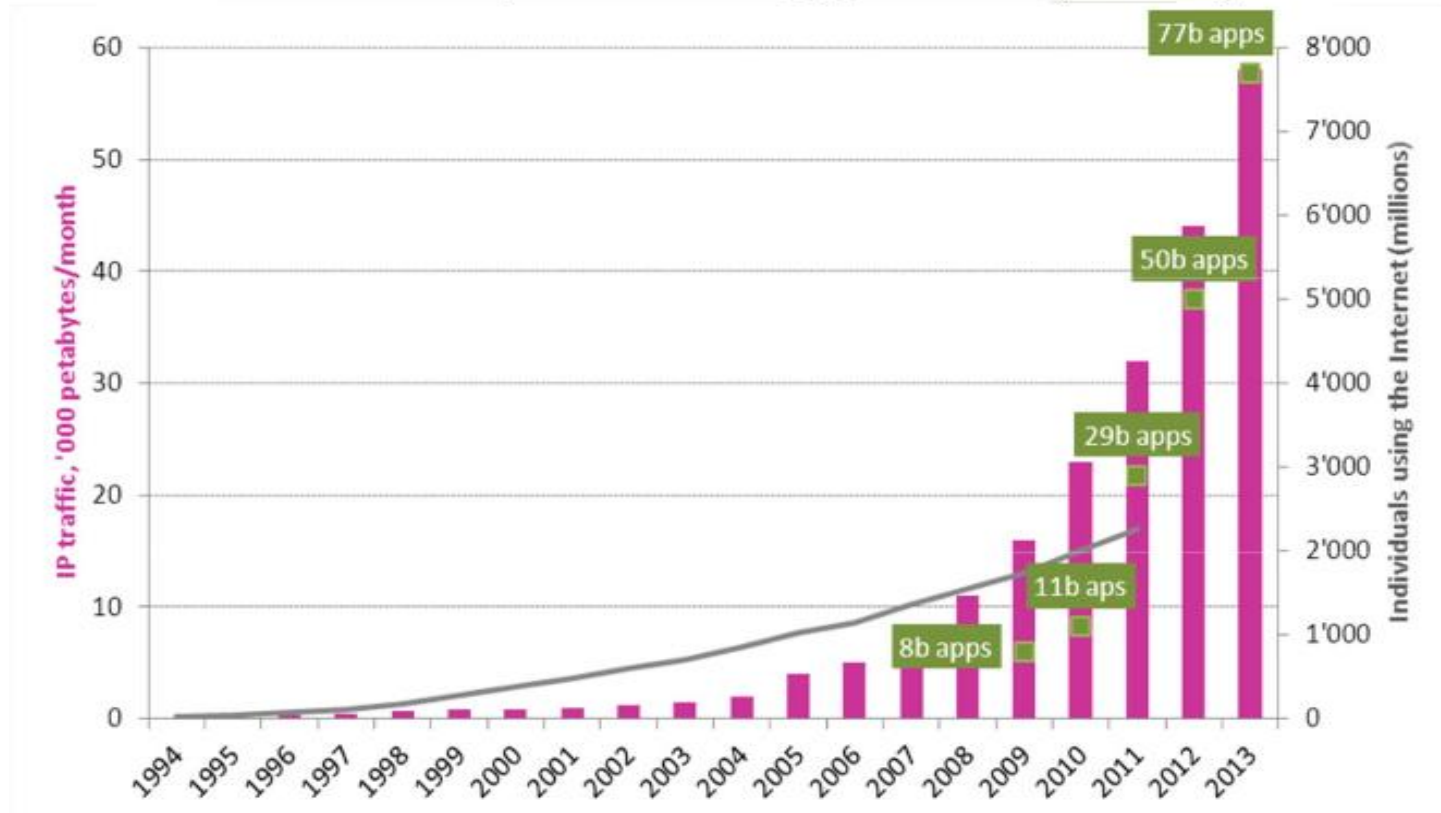


# Evolution over the last Decade...

## Boost in IP Traffic & Apps Downloads

2

Growth in IP traffic, Internet users and apps downloads (1994-2013)

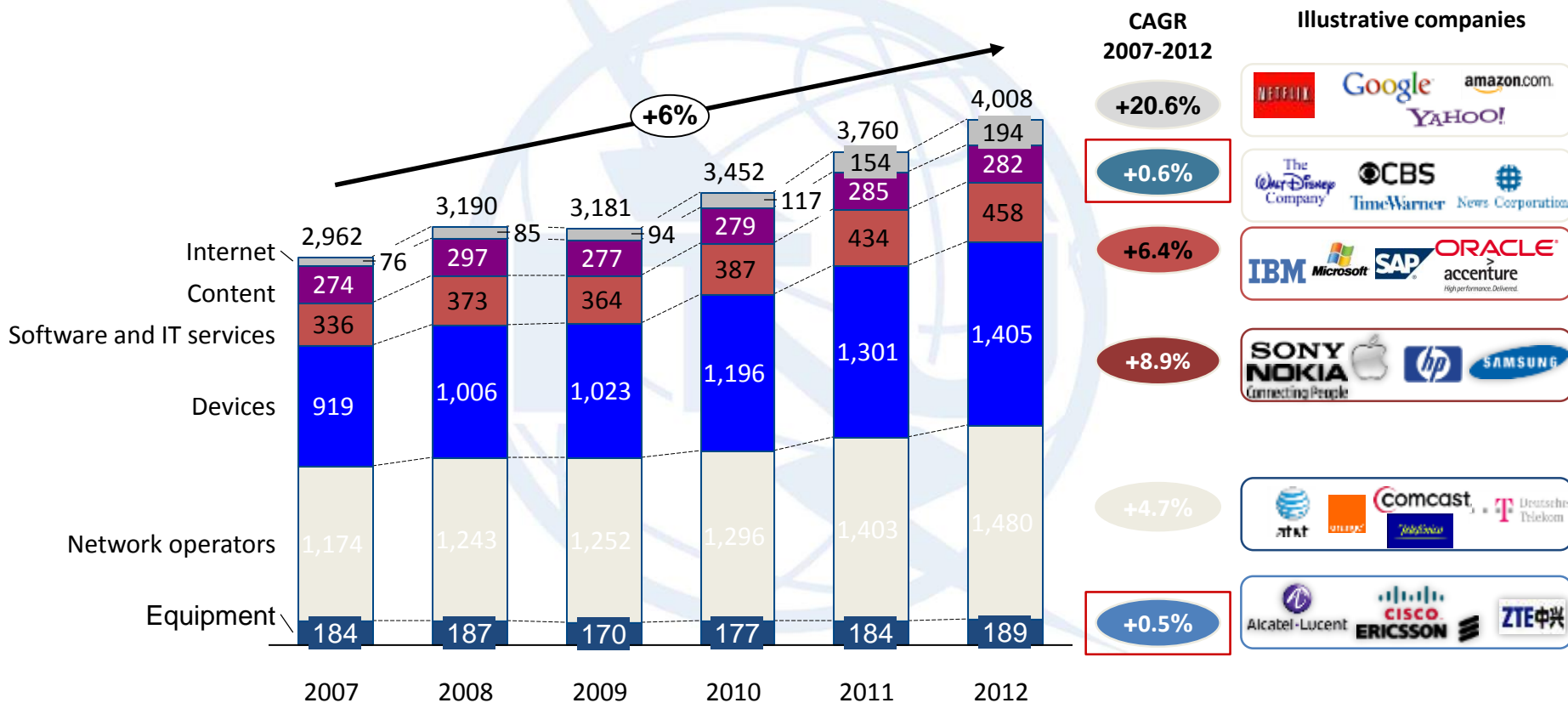


Source: Trends in Telecommunication reforms by ITU



# Evolution over the last Decade... Revenues Growing for Global and OTT Actors ....

3



Source: Thomson Reuters, Arthur D. Little analysis

(1) Top 30 per category by 2012 revenues

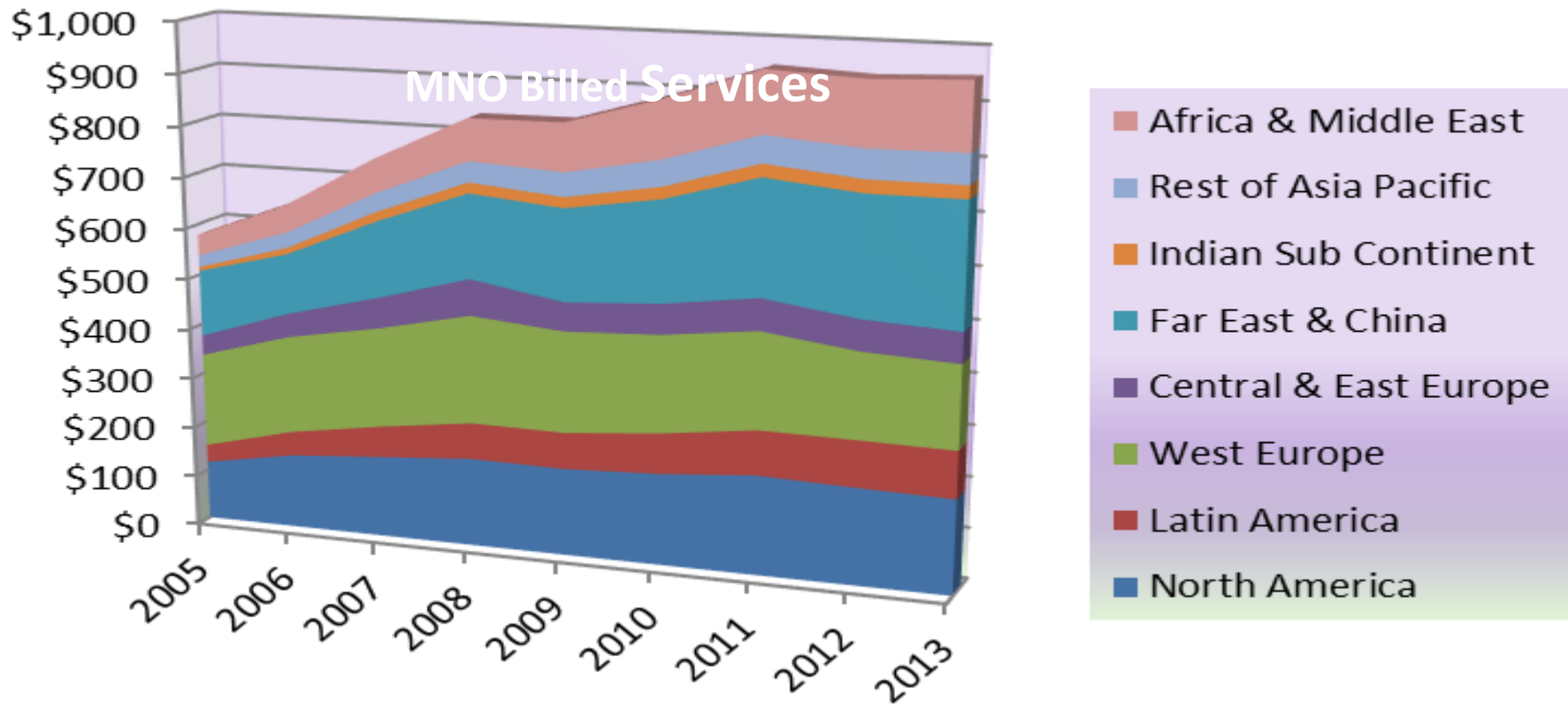




# Evolution over the last Decade...

## ...while Revenues of MNOs ...Declining !

4

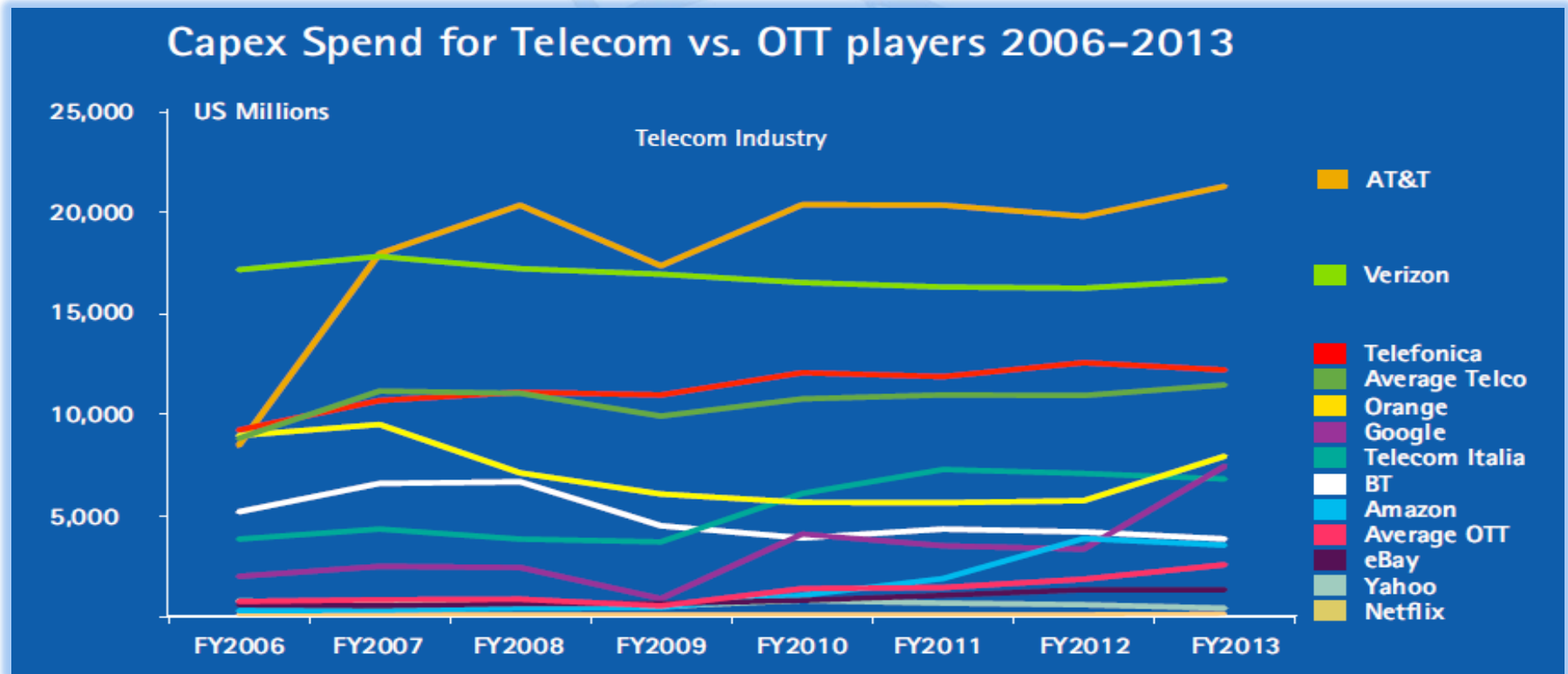


source: Juniper Research



# Evolution over the last Decade... ....and Investments... yet unbalanced !

4

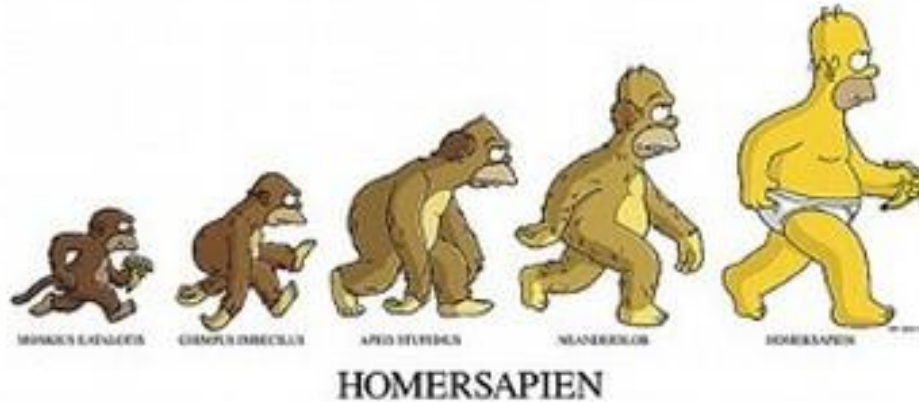


Source: Accenture- The new Digital Operator, 2014



# And the *EVOLUTION* Continues (Internet Era)

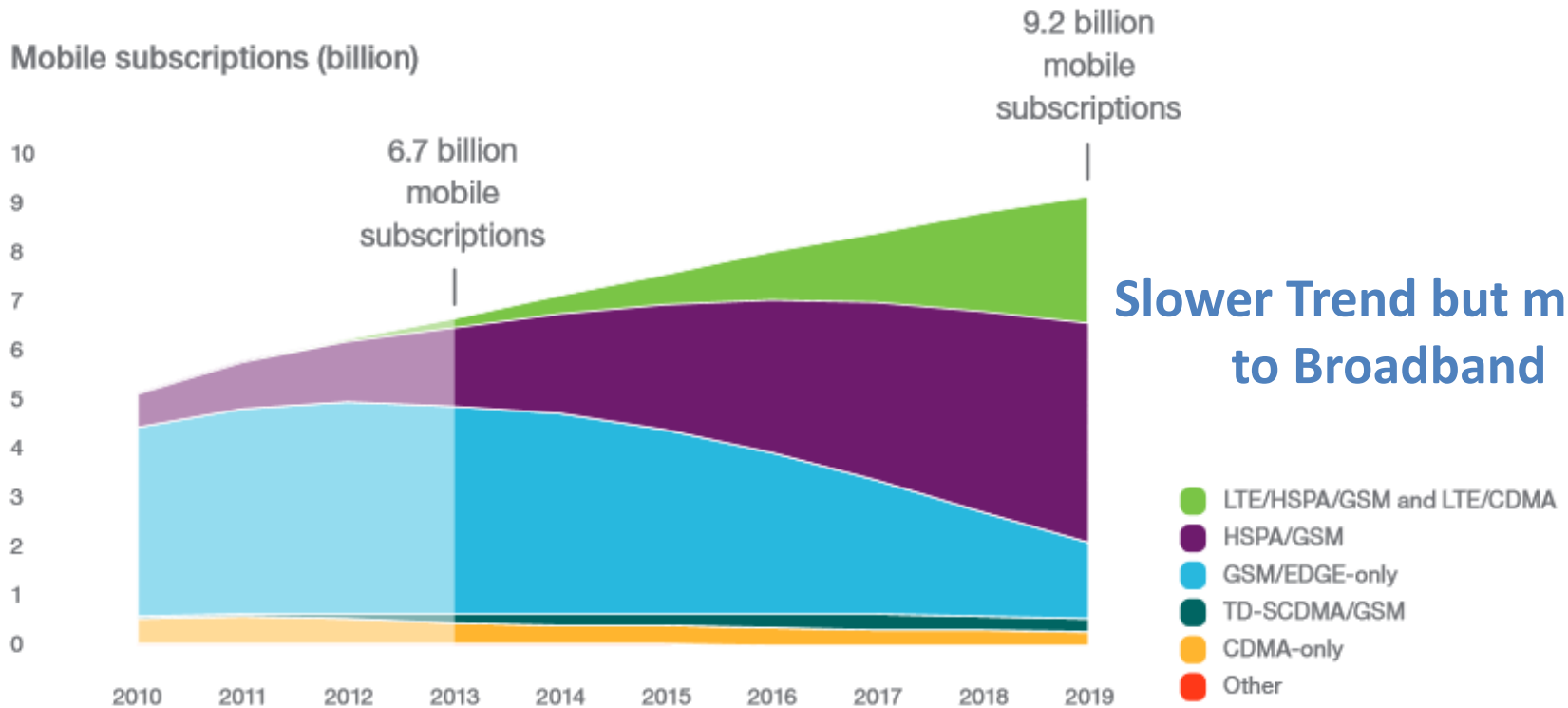
*.....even with various trends !*



*Since it is Affordable*

# ...and the Evolution Continues : Broadband Mobile Subscriptions

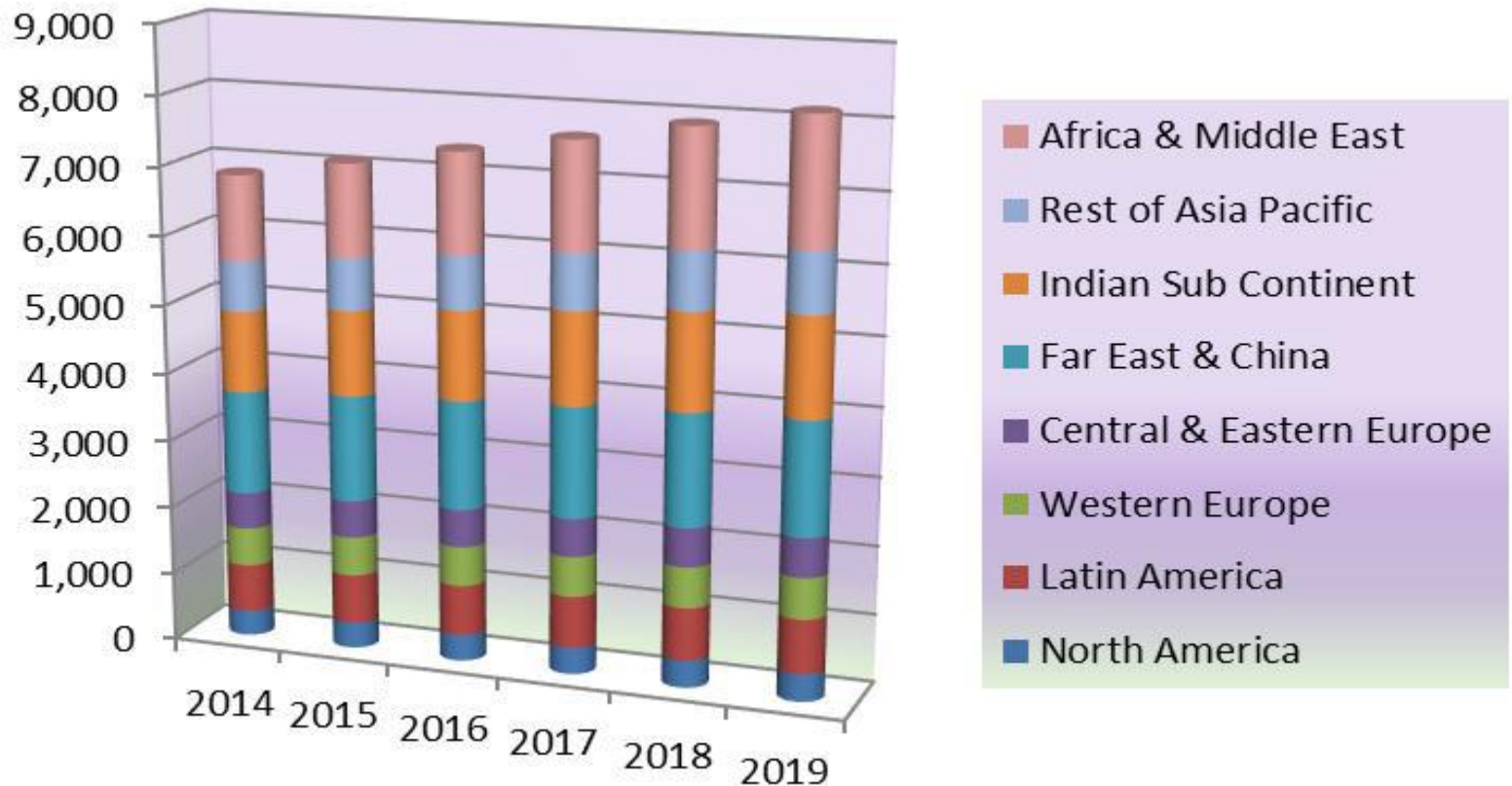
1



Source: ERICSSON MOBILITY REPORT, JUNE 2014

# ...and the Evolution Continues : 1b

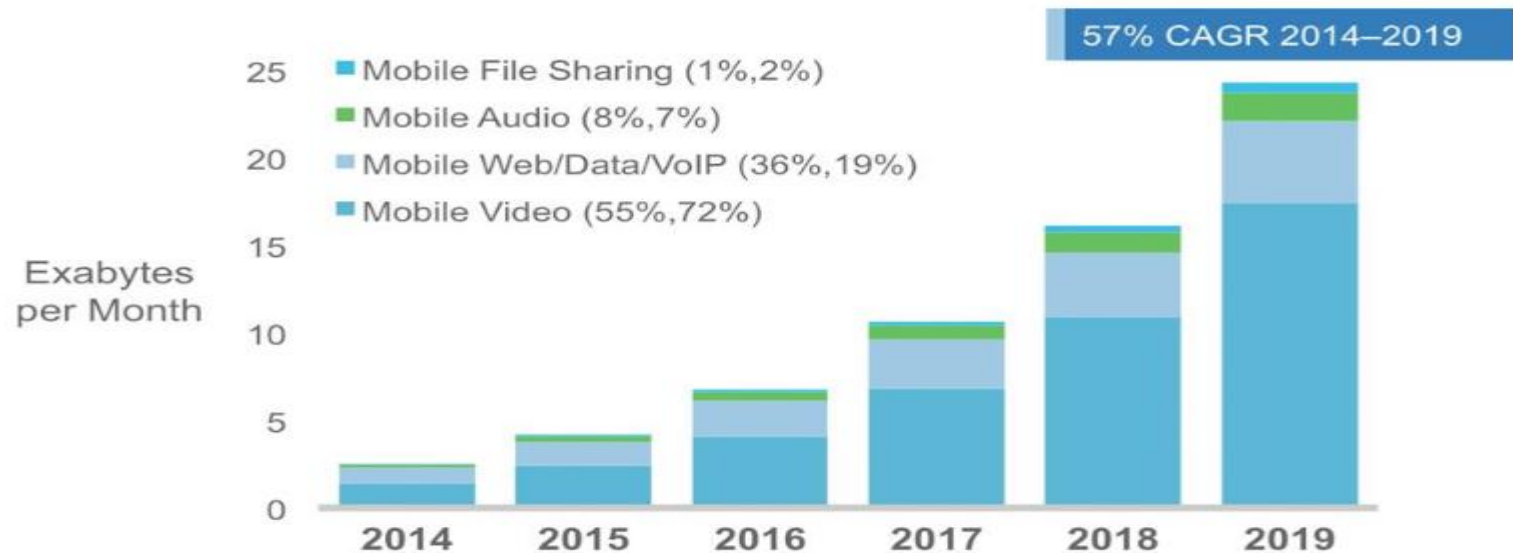
## Growth of Mobile Subscriptions (per Region)



Source: Juniper Research, Oct 2014

# ....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

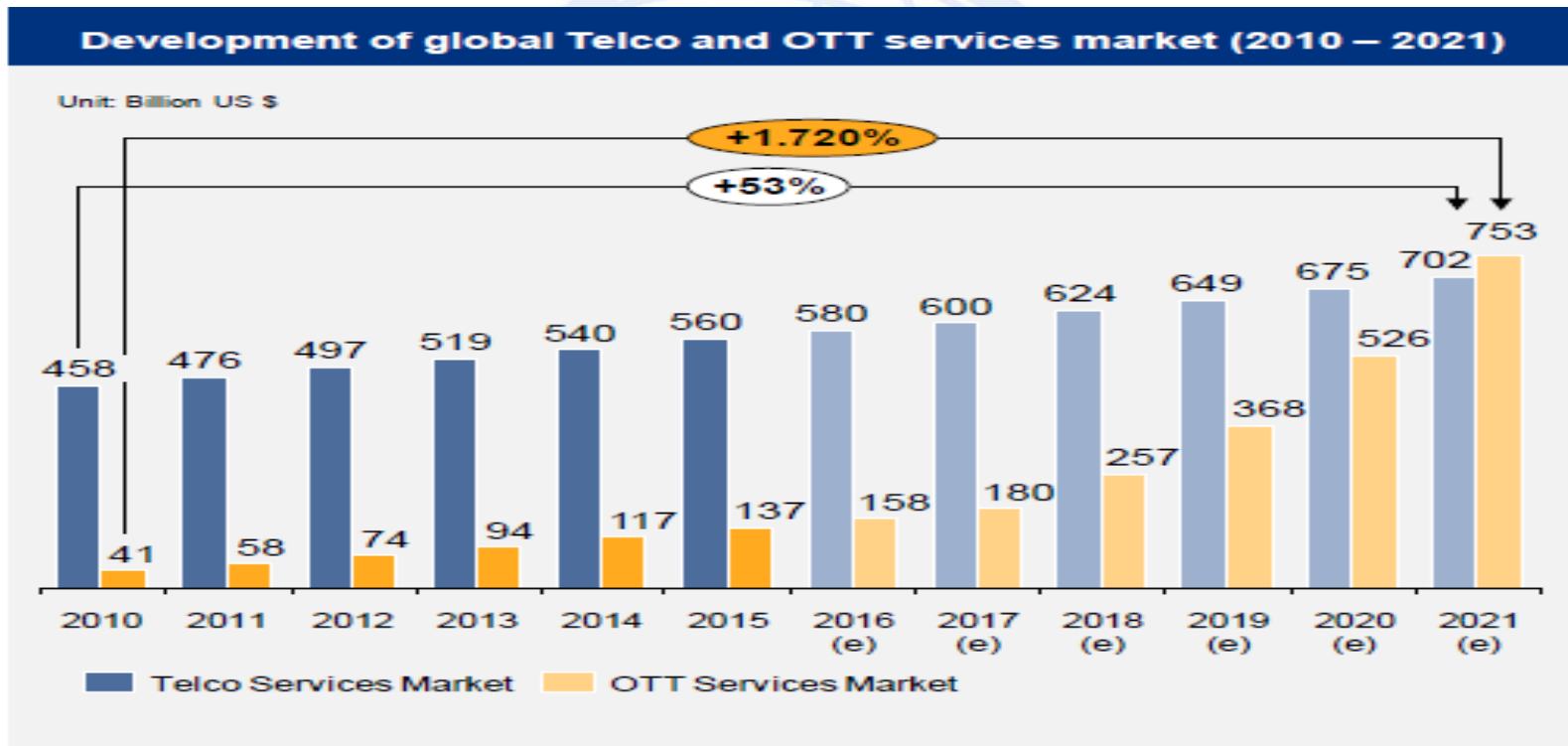
▶ **Video services and fast growing demand will make Mobile Networks “Struggling” to cope with it !**





# ...and the Evolution Continues : 4

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

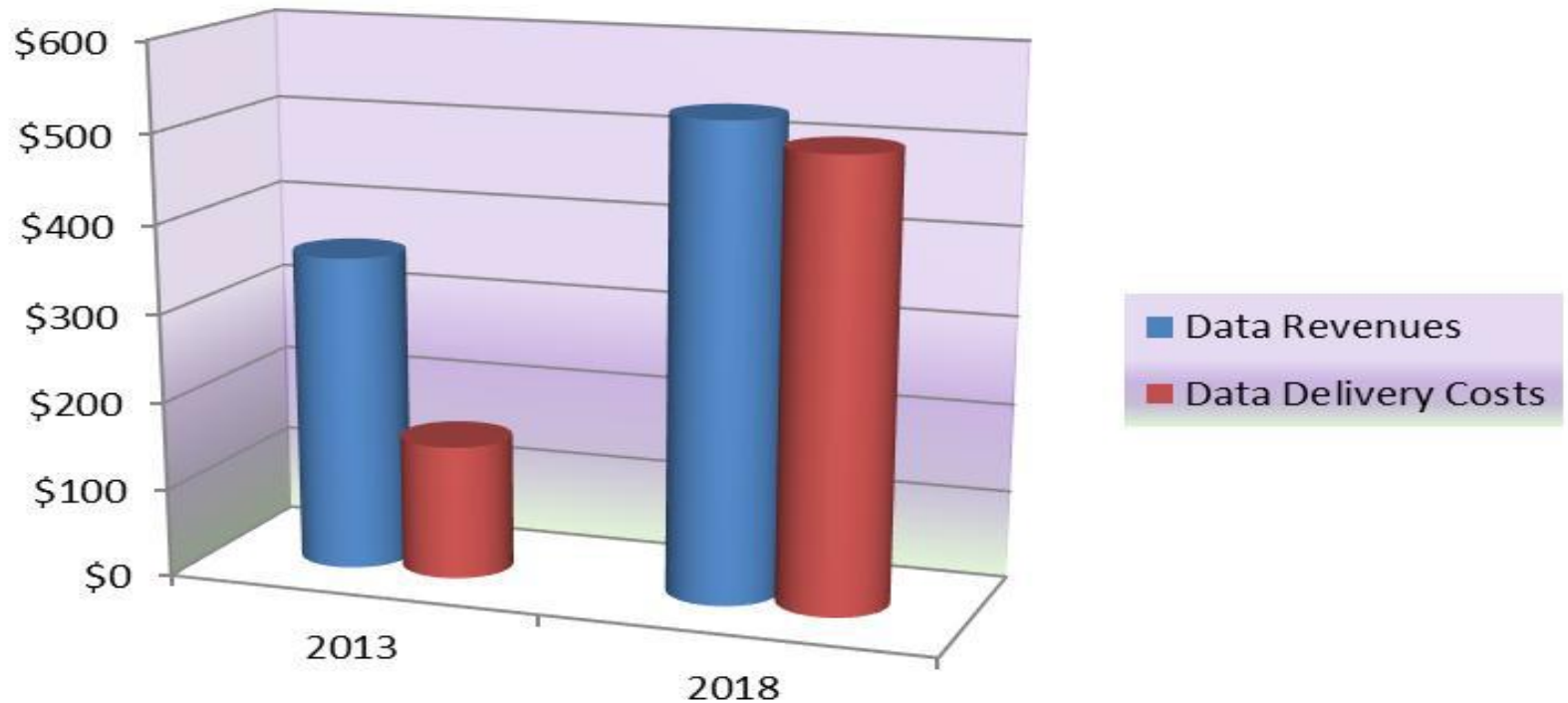


Source: IDATE - World Internet Services Markets 12/2013 and Detecon Forecast (e)

*With a particular focus on VoIP and messaging, as having direct impact on Operators revenues and affecting their investments' capabilities* 21

# ...and the Evolution Continues : 5

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

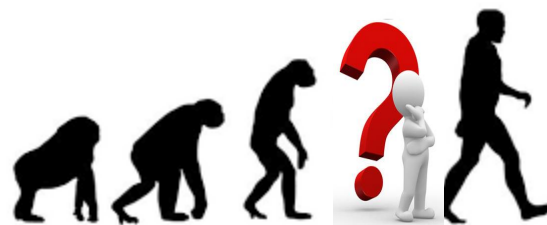


Source → Juniper Research, October 2014

# ...and the Evolution Continues : 5

.....

*Is the Eco-system of Digital Era Sustainable*



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## 1- Introduction



## 2- Facts & Numbers



## 3- Challenges and way forward

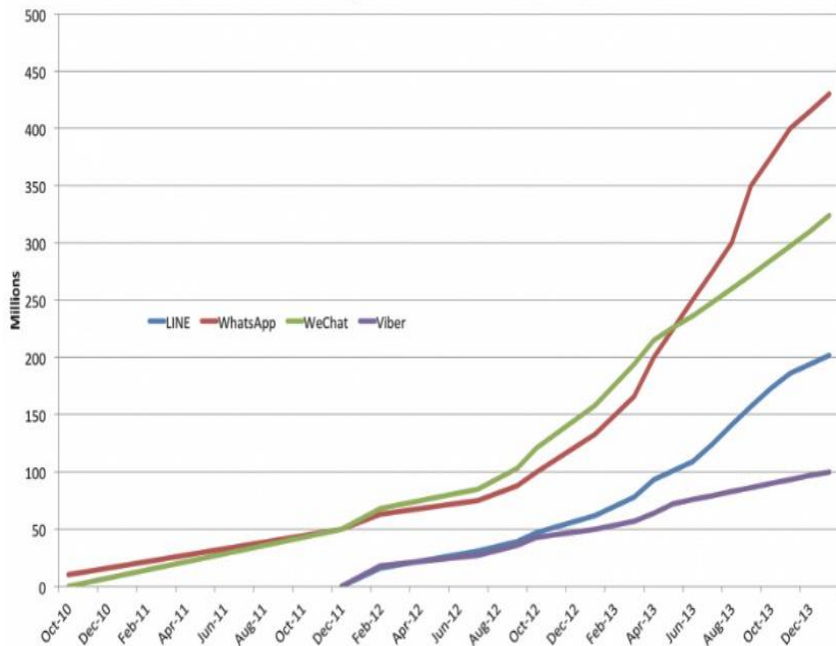
# It is a Fact that .....

1. Part of traditional Telco's Revenues are lost to "Communication" and messaging OTTs services.
2. While on-line and OTT business model is **Global** and has the **World** as market place, **Operators (Telcos)**'s market is Local and subject to local regulation and legislation. This generates a **Level Playing Field** issue.
3. **The Business Case of telcos is more and more challenged with more investment effort required.**
4. **In the frame of national broadband plans, not only developing countries are concerned, but also developed countries (1).**

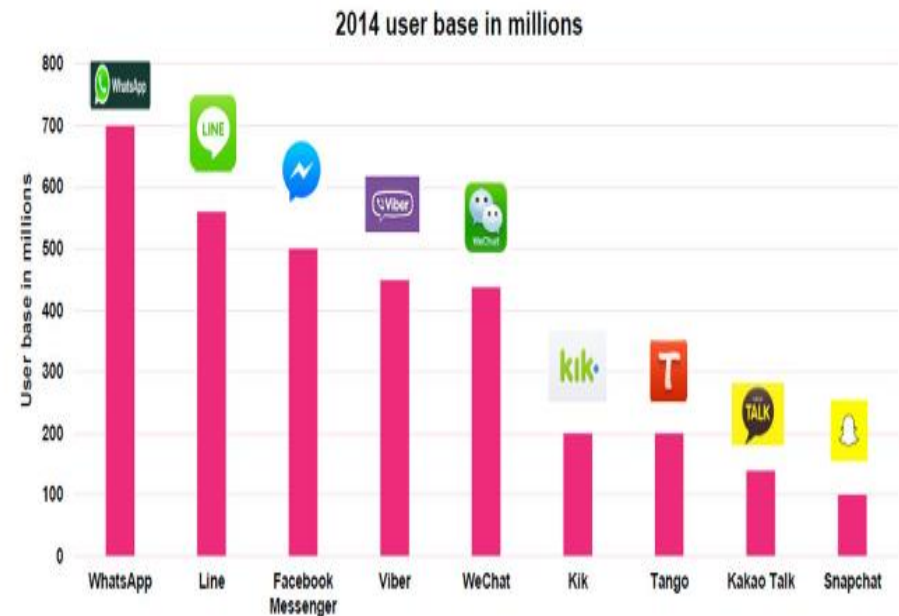
# Growing Base and Use of OTT's

## Voice & Messaging

WhatsApp, WeChat, LINE, And Viber  
Monthly Active Users (Global)



Global OTT Messaging Services



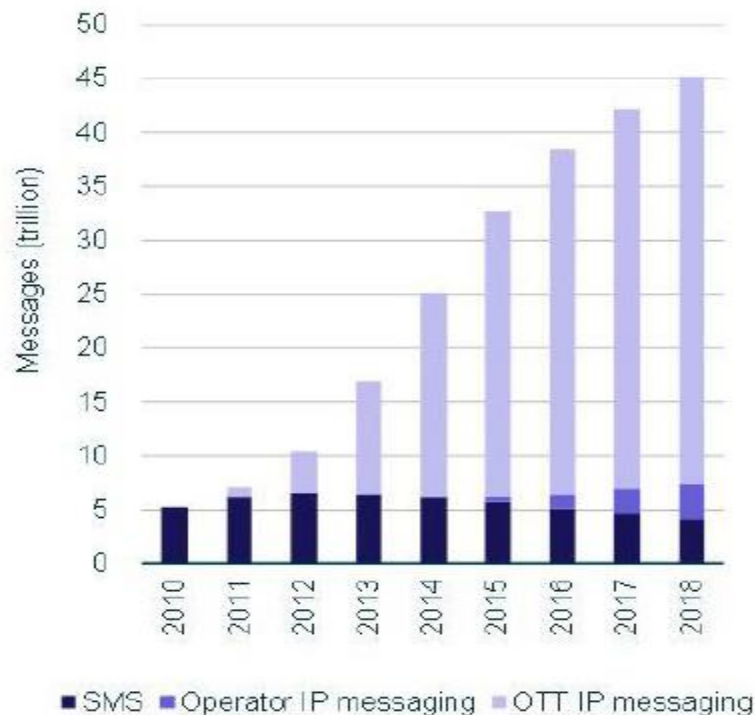
Source: DETECON Consulting & Deutsche Telecom Group, "The rise of OTT players – what is the appropriate regulatory response?", 2014



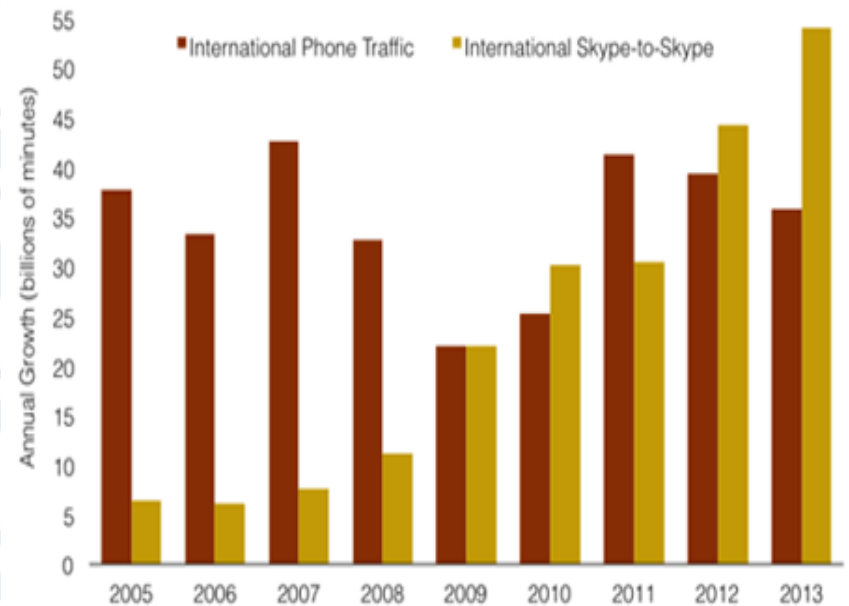
# Growing Base and Use of OTT's (2)

## Voice & Messaging

Messages sent via mobile handsets by service type, worldwide, 2010–2018 [Source: Analysys Mason, 2014]



Increase in International Phone and Skype Traffic

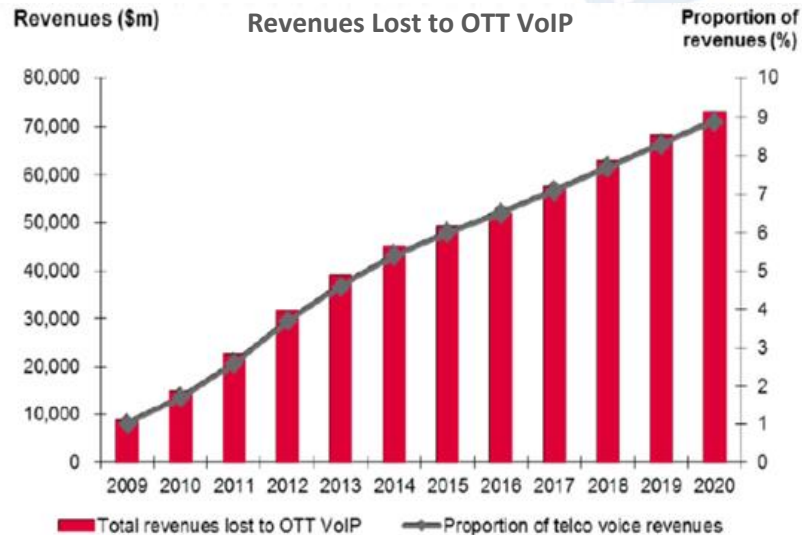


Source: TeleGeography

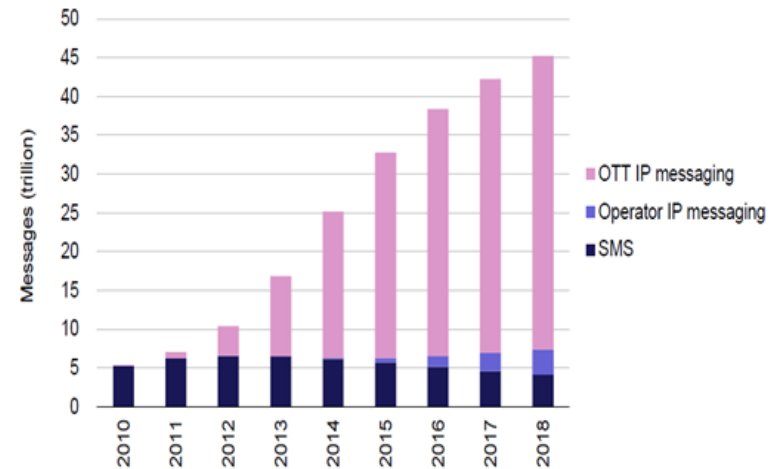
© 2014 PriMetrix, Inc.

# ..and a loss of Revenues by Telecom Operators

## Loss of Traditional Revenues to OTT



Messages sent via mobile handsets by service type, worldwide, 2010–2018 [Source: Analysys Mason, 2014]



© Analysys Mason Limited 2014

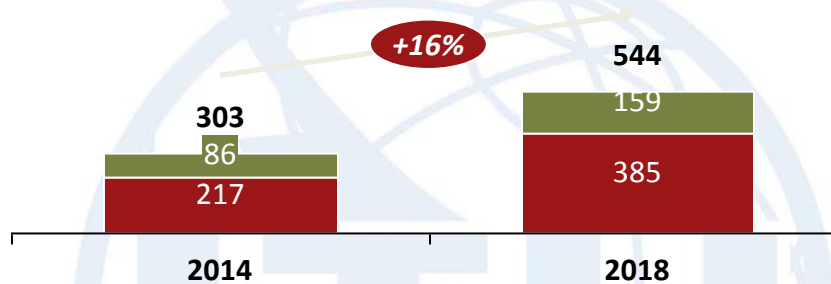
Source: Ovum

- Growth of VoIP CAGR of **25%** between **2012** and **2017**
- Loss to OTT Revenues in **2016** expected around **50 B\$** both in voice (**7%**) and messaging (**28%**) [Source: Cartesian – Study , 2014]

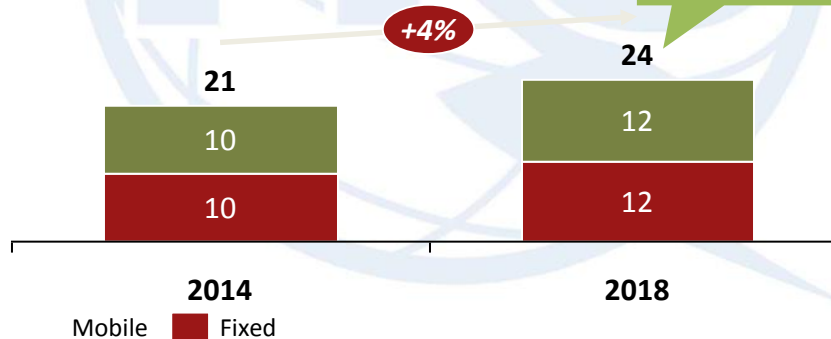
• **BUT Impact is higher on Developing such as India, Africa where Voice Revenues still count for around 80% of total revenues (1/6 in data vs circuit)**

# Example of Europe

**OTT VoIP usage<sup>2</sup>**  
Bn minutes, 2014-2018, Europe

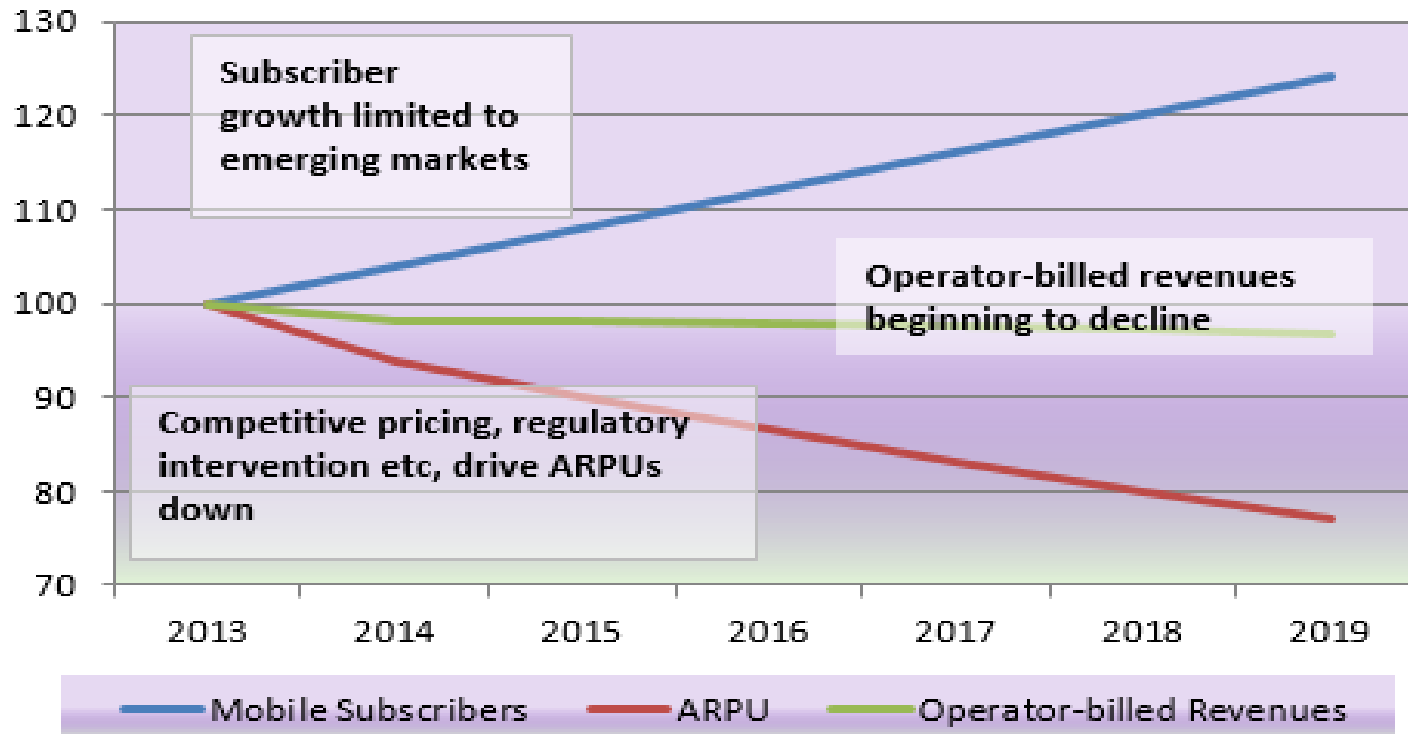


**Lost revenues to OTT VoIP<sup>2</sup>**  
USD Bn, 2014-2018, Europe



# Telco's business benefit from global traffic increase

*Lower ARPUs but Higher Traffic*

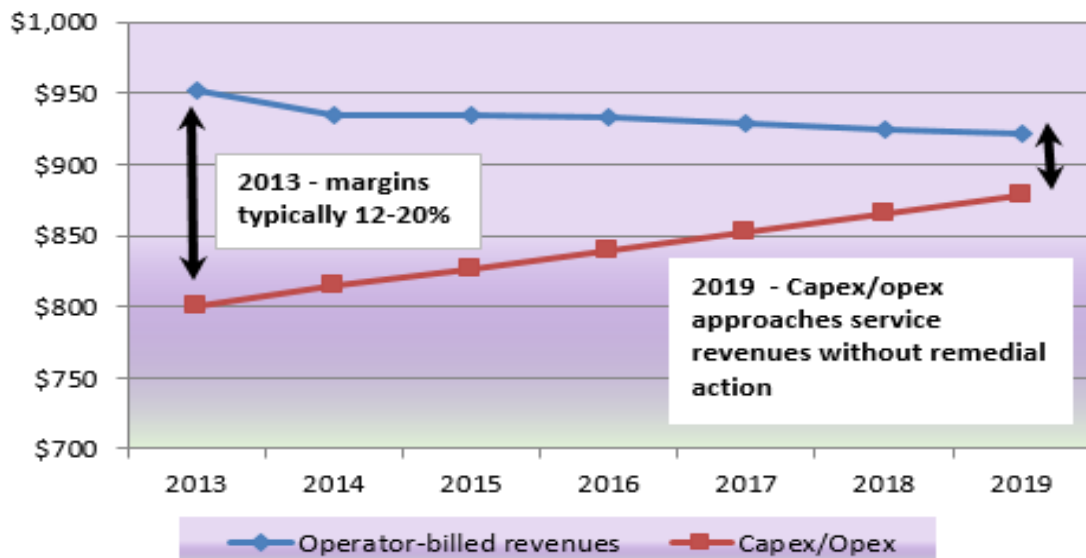


Source : Juniper Research, Oct 2014

▶ ARPU decline continues, stagnation of revenues

# ...but Impacting Investment Capabilities

Global MNO Service Revenues vs Capex/Opex (\$bn)



- ➔ Lower telecom Contribution to the national economy and state income
- ➔ Slower(!) BB -QoS-deployments in rural/ low income areas

Source : Juniper Research, Oct 2014

**It is to note that OTT are highly contributing to the global Investment ( Data Centers, Servers, F.O Links, Applications dev, etc....) These Investment contribute highly to the sector Growth**

# ... Example of Developed Country : France Telco's (*Evolution 2010- 2014*)

<b>1- Revenues :</b>	<b>83%</b>
<b>2- Investment (excl. freq fees *) :</b>	<b>108%</b>
<b>3- Investment Effort (“ ”) :</b>	<b>129%</b>

**Base 100 in 2010**

**(\*) Excluding Frequency Fees**

*Source : A.D.Little - Etude Economie des Telecoms, Nov 2015*



# ...Example of Developed Country

## France Telco's (as % of Ecosystem, 2014)

<i>1- Share of Sector Turnover :</i>	<b>58%</b>
<i>2- Share of sector Jobs :</i>	<b>75%</b>
<i>3- Contribution to Investment :</i>	<b>88%</b>
<i>4- Tax contribution :</i>	<b>87%</b>

Source : A.D.Little - Etude Economie des Telecoms, Nov 2015

# ...and a Developing Region : North Africa (Evolution 2012-13)

<b>1- Revenue Decrease ( partly loss to OTT)</b>	<b>-7%</b>
<b>2- QOS Perception(dissatisfied rate) (1)</b>	<b>60%</b>
<b>3- Investment Capabilities (2) :</b>	<b>-34%</b>

*(1) Effect of the Bill shock due to unsolicited roaming data. Telco's were blamed for that and had a serious untrust issue.*

*- Polls show that main dissatisfaction comes from connection quality ( in fact limitation due to network congestion.*

*(2) With a trend (baseline) to reduction of -18% /year from 2018*

# From Global to Local: Who Invests in What ?

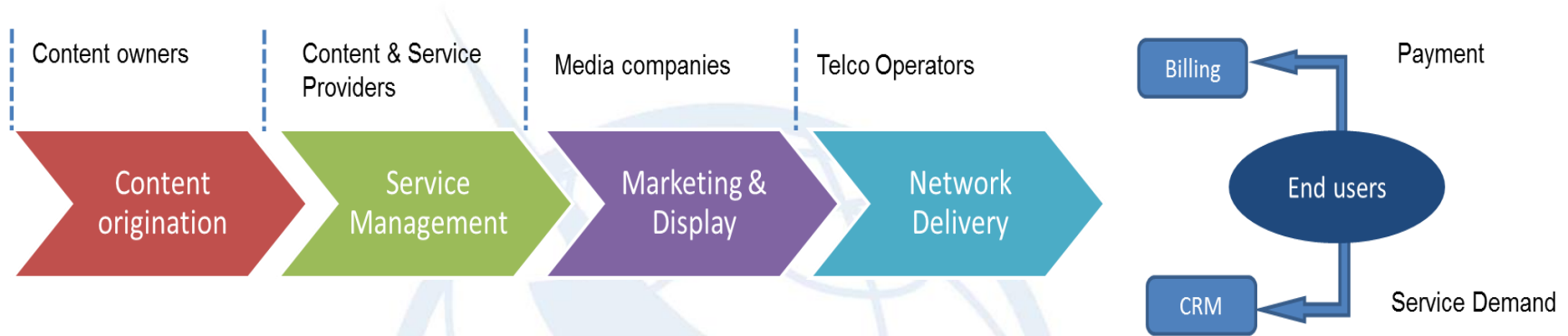


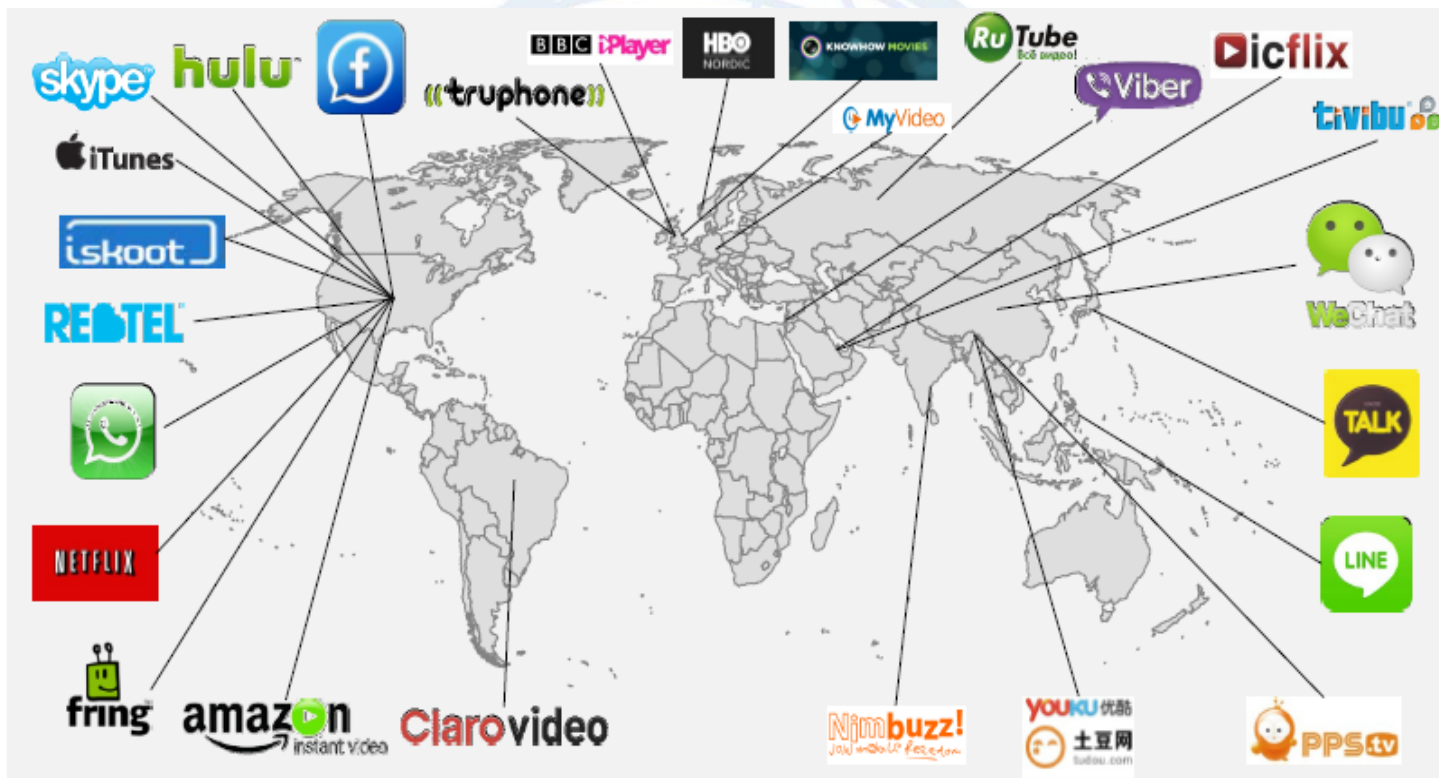
Figure 4.1: Investments in networks, facilities, and equipment required at each stage of the Internet value chain [Source: Analysys Mason, 2014]

Steps	Content and applications	Store, process, servers (Hosting)	Transport towards customer	Delivery to the IAP	IAP to end consumer
Activities	Provision of video, entertainment, search, news, social networking, e-commerce and other services	Provision of physical infrastructure for the storage of computing capacity and content	Transport of content from the CAPs to the end users	Transfer of traffic across players in the value chain. Content storage or creation of hubs for exchanging traffic	Provision (last-mile) to the end user of the access to the content provided in the network
Investments	Software development and content production	Data centres buildings and related equipment	Submarine and terrestrial cables	Internet Exchanges and related facilities	Last-mile fibre and investment in the backbone

# On-Line Services

## Global and .... “located”

3



Source: Delecon Research 2014

# ... and contribution on National resources

*Can State contribute to Investment ?*

	Capitalisation boursière (février 2015)	CA (Monde)	Profit (Monde)	Impôt / CA (USA)	Impôt / CA (hors USA)	Impôt / profit (USA)	Impôt / profit (hors USA)
	Md\$	Md\$	Md\$	%	%	%	%
Google	370	59,8	14,5	5,7	2,2	26,4	<b>8,6</b>
Apple	748	170,9	50,2	19,1	1	61	<b>3,7</b>
Facebook	223	7,9	2,8	32,9	1,5	31,2	<b>(pertes)</b>
Amazon	175	74,5	0,5	0	0,5	1,6	<b>(pertes)</b>
Coca-Cola	183	46,9	11,5	5,8	6,3	47,2	<b>18,8</b>
Pfizer	216	51,6	15,7	10,5	7	(pertes)	<b>12,5</b>
GE Company	223	146,0	16,2	-2,8	3,4	-31,9	<b>26,1</b>
Procter & Gamble	203	84,2	14,8	7,7	2	28,1	<b>16,9</b>

*Source : Expert Report For European Commission on Digital Taxation . May 2014.*

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# 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**



# 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 consumers and the industry. “



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

# Challenging Circle for Operatros and OTTs

- Virtuous Circle ( Mutual Interest)

While OTT benefit from access to broadband networks, those networks also benefit from **increased demand for bandwidth driven by applications. AutoSustainable system !**

OR

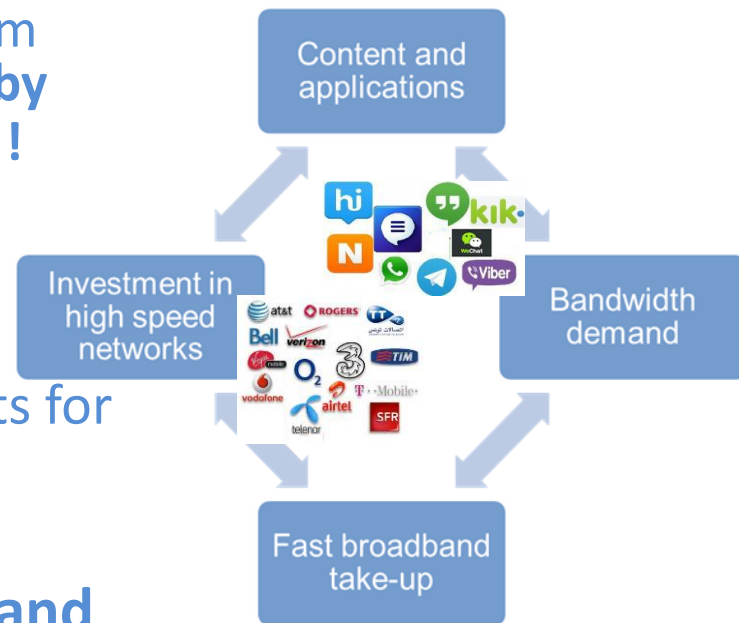
- Vicious Circle

Disconnect between Revenues and Costs for any actor in the Chain

**Profit Crunch → less Investment and then less connectivity/usage/Revenue:**

**The Chain is Broken**

*With inavoidable impact on Availability and Affordabilty for services to the largest population*



# Conclusion

1. The development of digital communication services and innovative business models is contributing substantially to national **economic growth and social welfare**.
2. New **challenges have raised for national economies** regarding the sustainability of their **digital eco-system**. The most visible today is the impact on Telecom Operators business.
3. **Operators**, as national actors, are facing **considerable investment challenges** while customer needs are high and willingness to pay remains low.
4. **OTT Players** as key actors of this growth rely for their business on Telcos' Infrastructure and Investments. They are therefore concerned by the sustainability of local eco-systems.
5. **Policy Makers & Regulators** played an extremely **positive role** in the past decade making the development happen. They are questioned today about ensuring **sustainability of the new ecosystem**.



[ WAITING FOR PLAYERS ]  
PLAYERS NEEDED

## Telcos 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

PLAYERS NEEDED



**ITU-T SG3 Meeting**  
***Workshop on Economic Impact of OTTs***  
**(Geneva, Switzerland, February 24<sup>th</sup>, 2016)**

**Thank You for your Attention**

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