



# INTERNATIONAL TRENDS FOR NEW INVESTMENT MODELS IN NGA

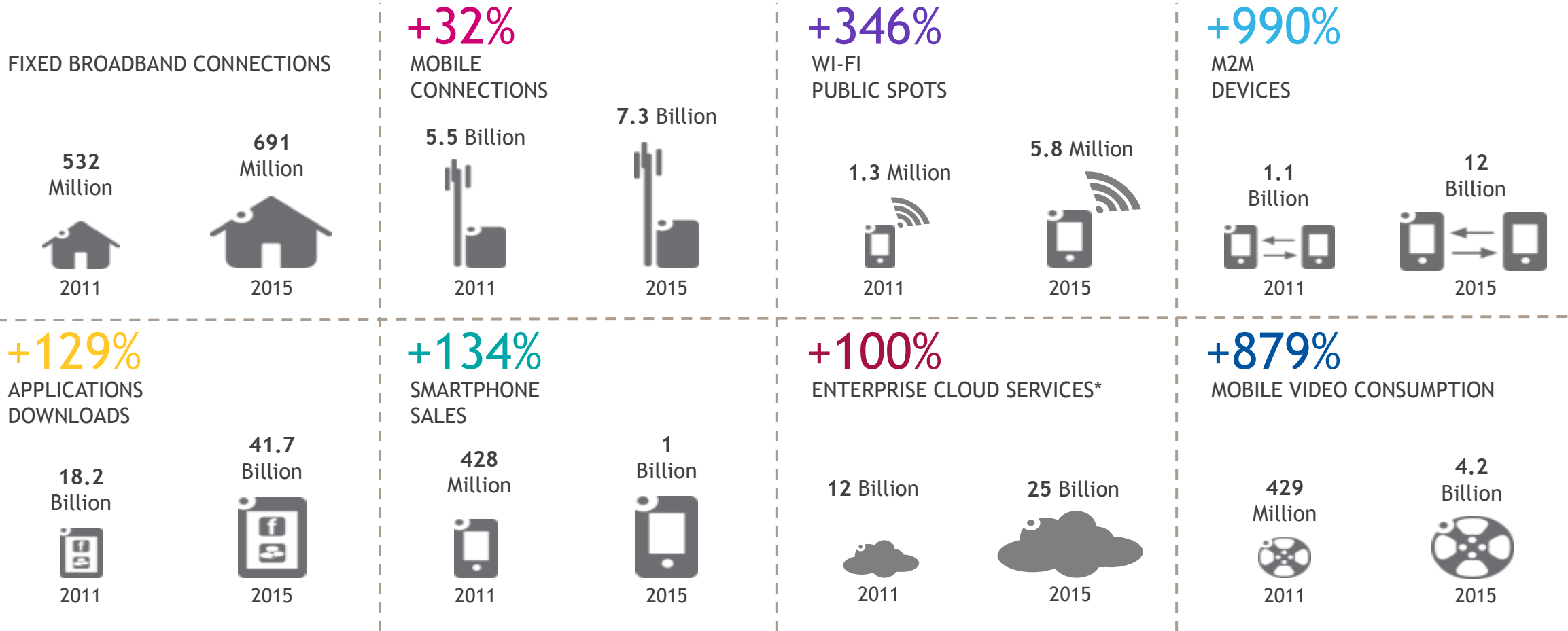
GLOBAL FORUM- TRIESTE

Gabrielle Gauthey –Global head of Government & Public Affairs

Oct 28<sup>th</sup> 2013

# INDUSTRY TRENDS

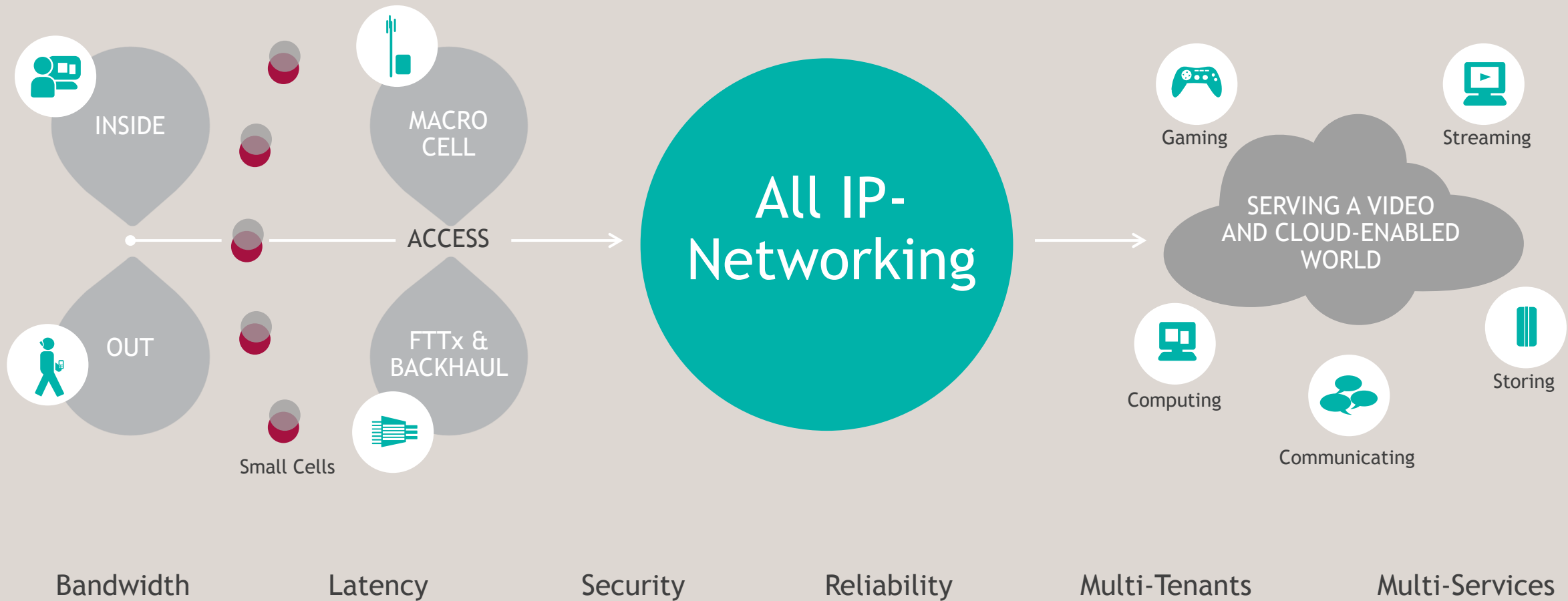
## FAST GROWING MARKETS



\* Source : Yankee

# NETWORK TRENDS

## FUTURE IS MOBILE, CLOUD, ALL IP

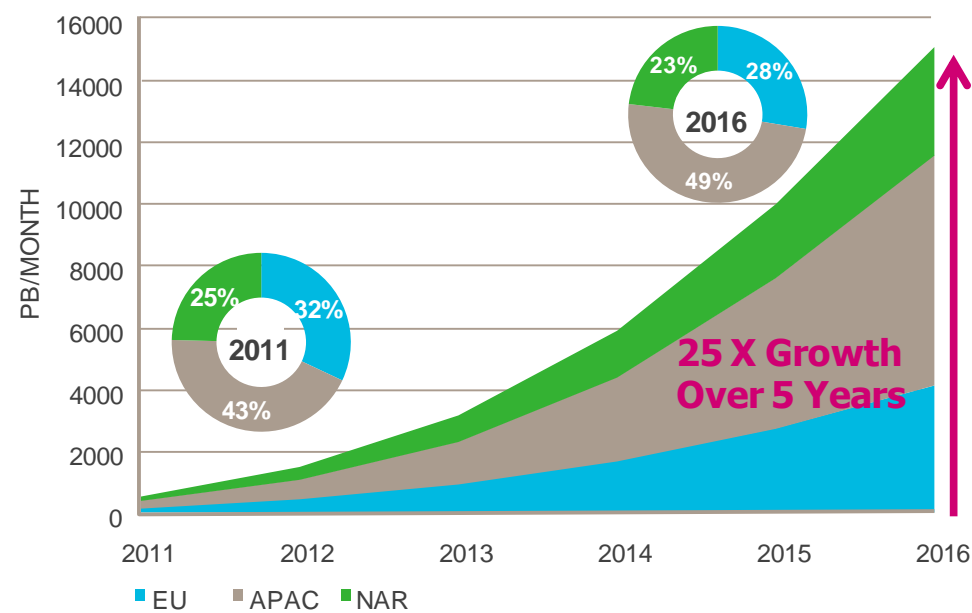


# MOBILE DATA TRAFFIC GROWTH

## A WORLDWIDE REALITY

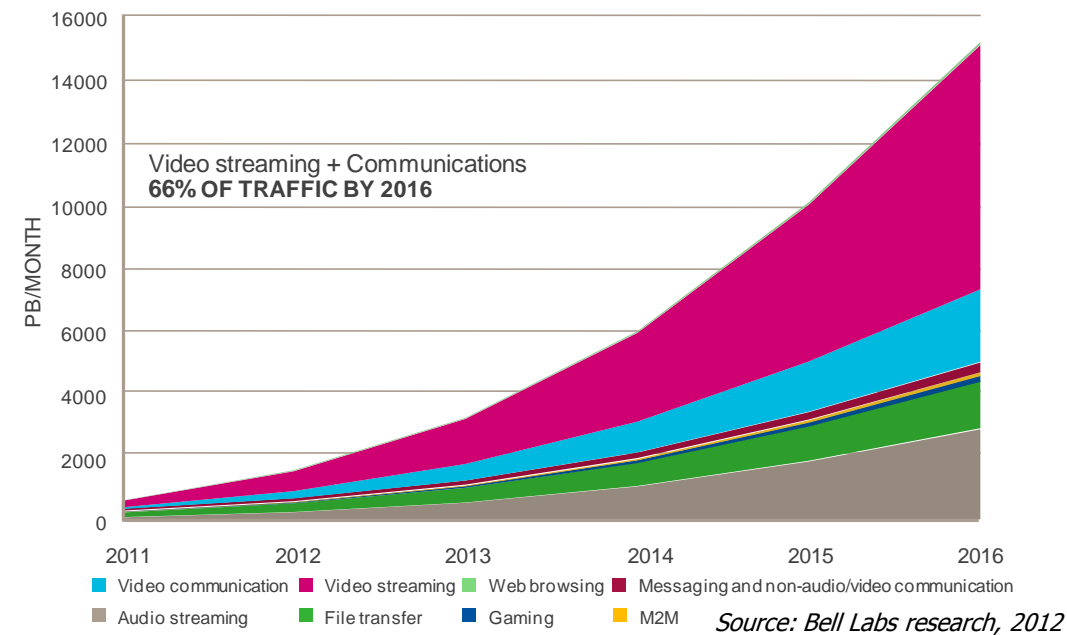
Mobile data forecast 2011 - 2016

Europe, North America, and Asia Pacific



Cumulative traffic distribution 2011 - 2016

Europe, North America, and Asia Pacific



**Video**

~ 70% of internet traffic  
by 2014

**Smartphones**

2.5 billion devices by  
2015

**Mobile Internet**

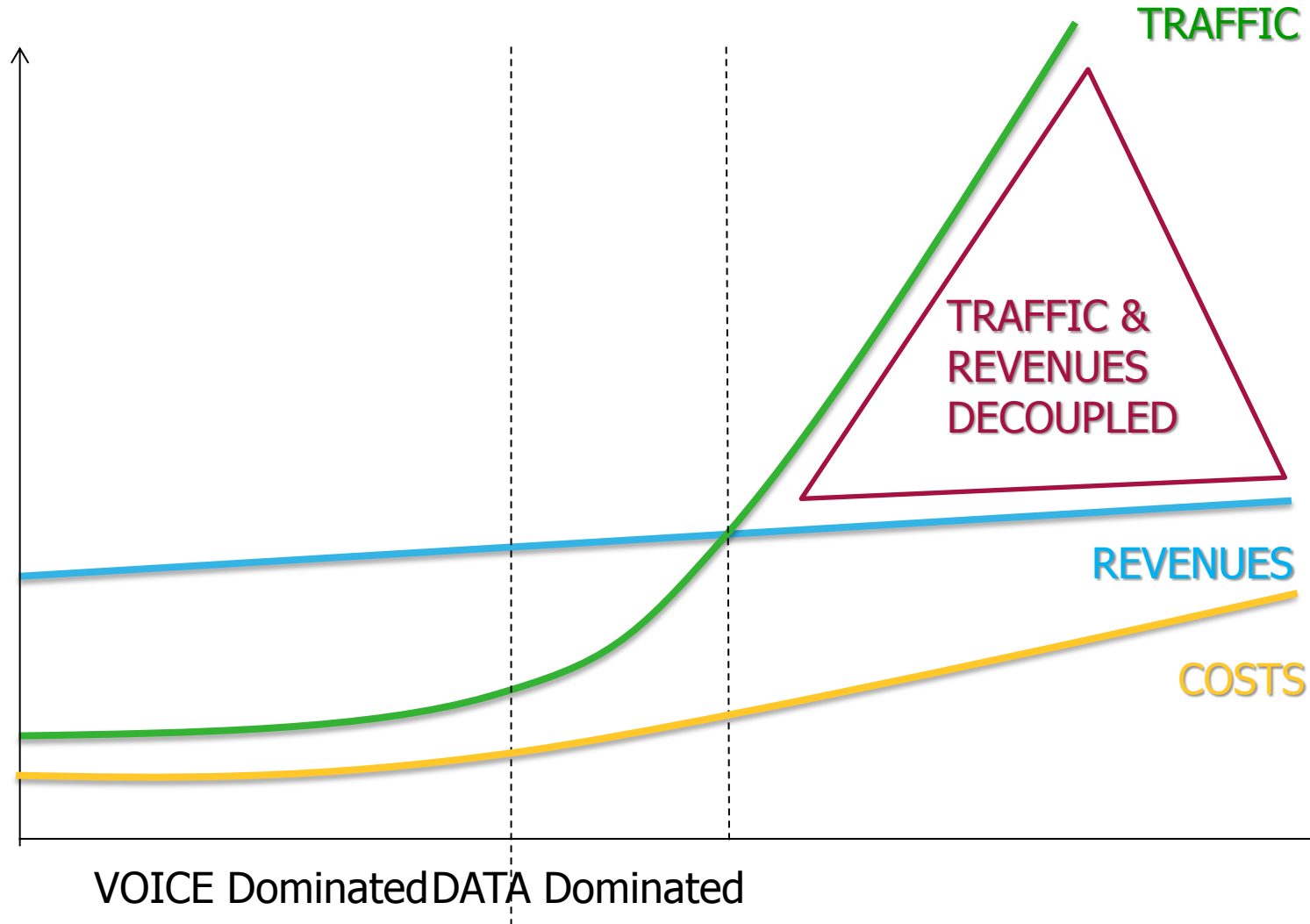
~ 70% of mobile traffic by  
2014

**Machine-to-Machine**

X3 growth in the next  
five years

# THE INDUSTRY REALITY

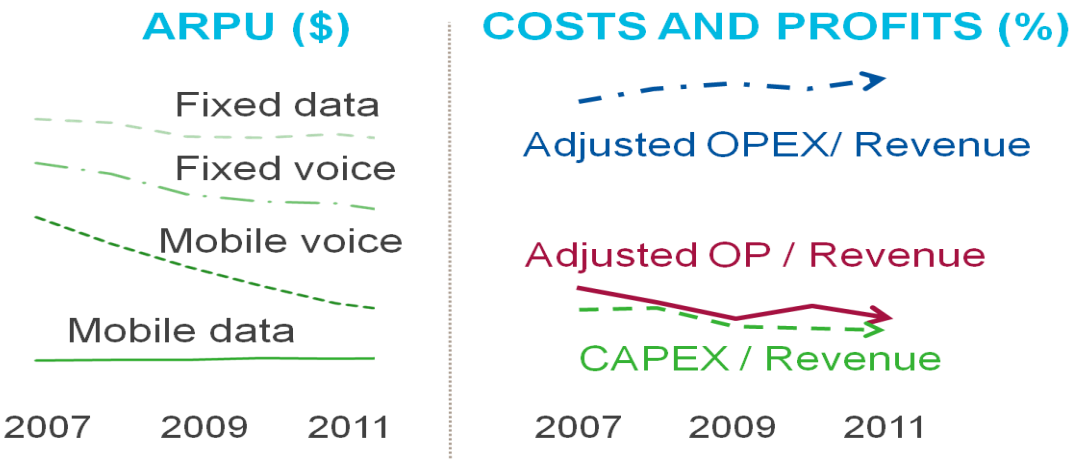
ERODING REVENUES, INCREASING TRAFFIC, HIGHER COSTS



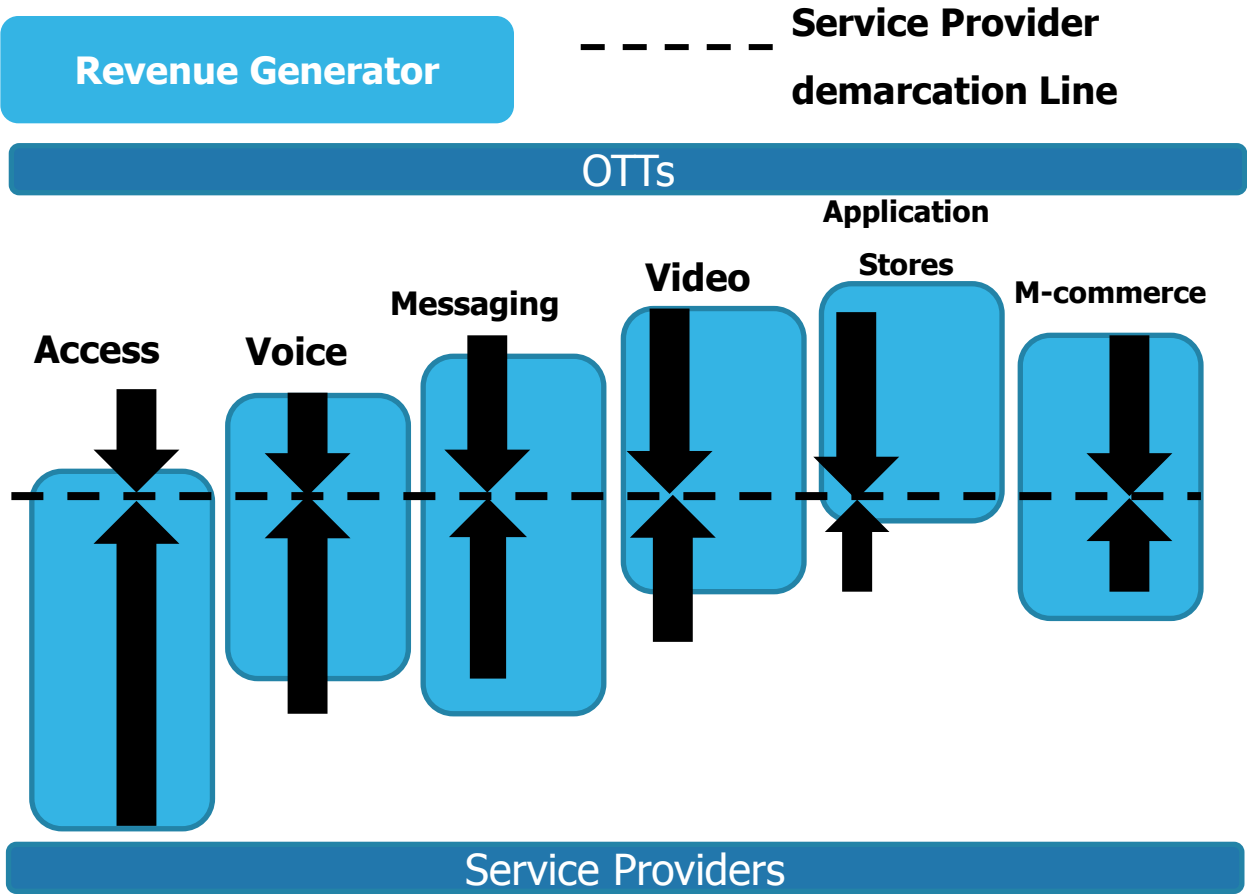
# TELECOMMUNICATIONS MARKETS ARE CHALLENGING

## REVENUES AND ROI ARE UNDER PRESSURE

### REVENUES UNDER PRESSURE

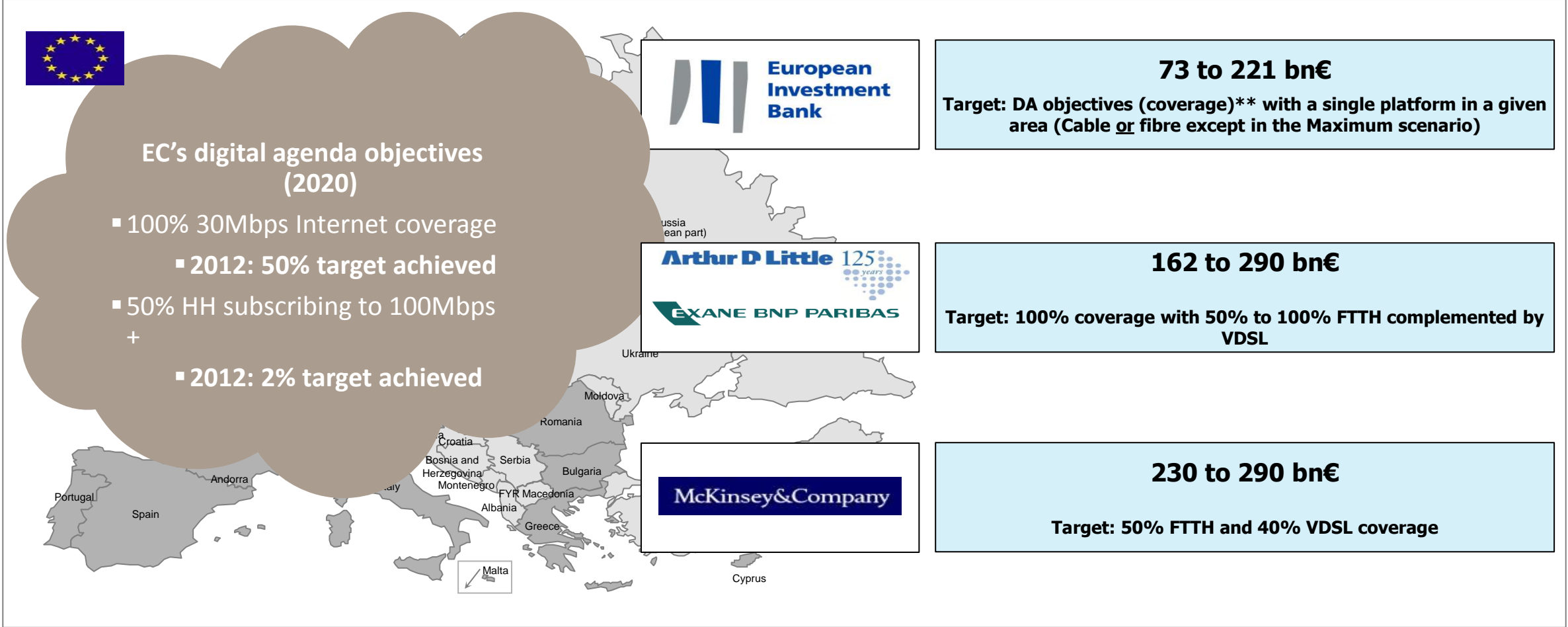


### OTTs TARGET SP CORE SERVICES



# THE INVESTMENT WALL IN THE EU

## Assessment of total investment needed for fibre upgrade in Europe (EU 27)

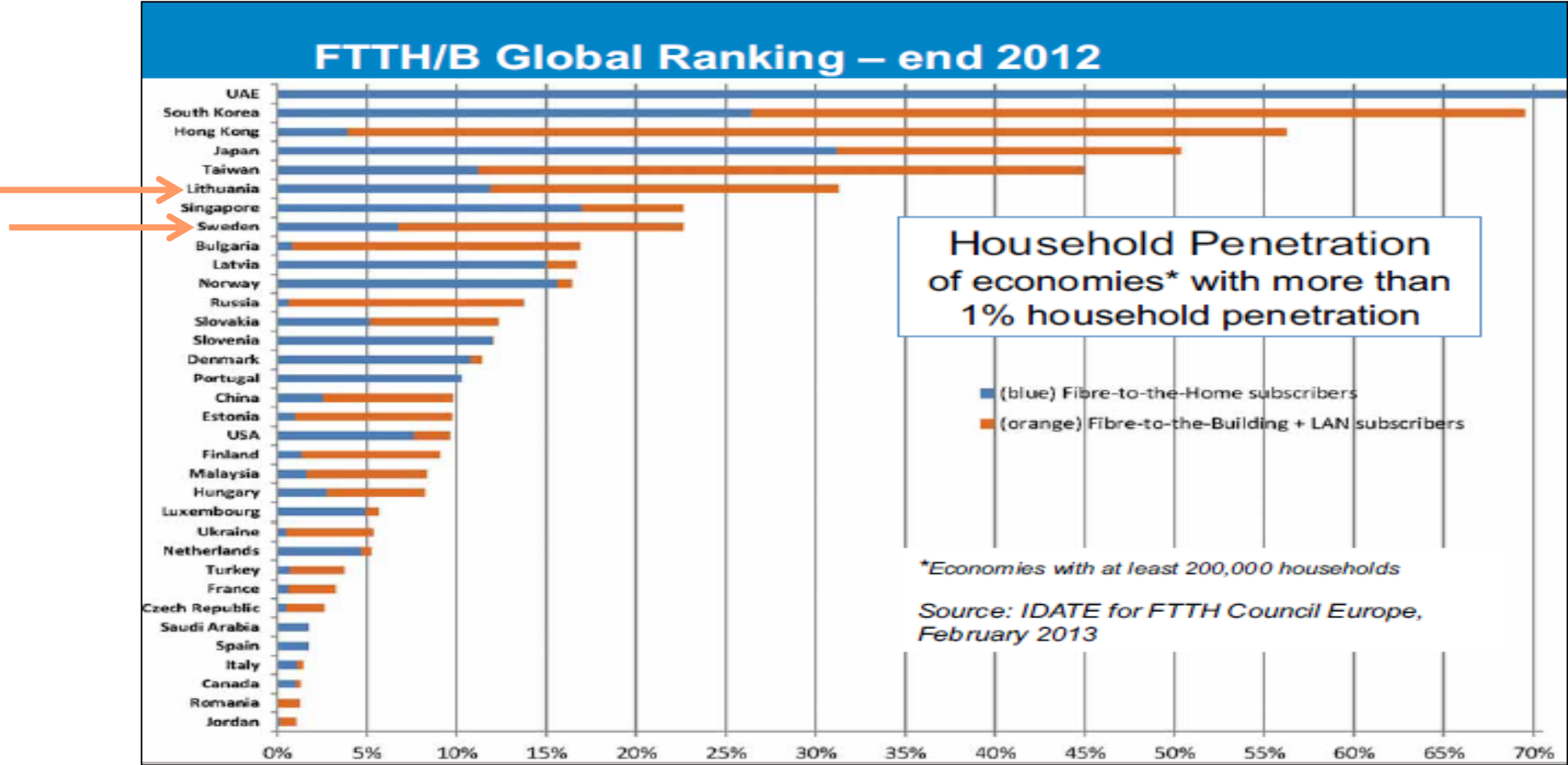


Source: The European Investment Bank, Mc Kinsey, Arthur D. Little analysis  
Note: \* - scenarios built with different technology mixes based on different interpretations of Digital Agenda targets  
\*\* - High or very high speed access to all by 2020 (>30 Mbps) and >50% of EU households subscribe to Internet access above 100 Mbps by 2020



# BRINGING FIBRE CLOSER TO THE END-CUSTOMER

## THE WORLD'S RACE TO FIBRE MATURITY...

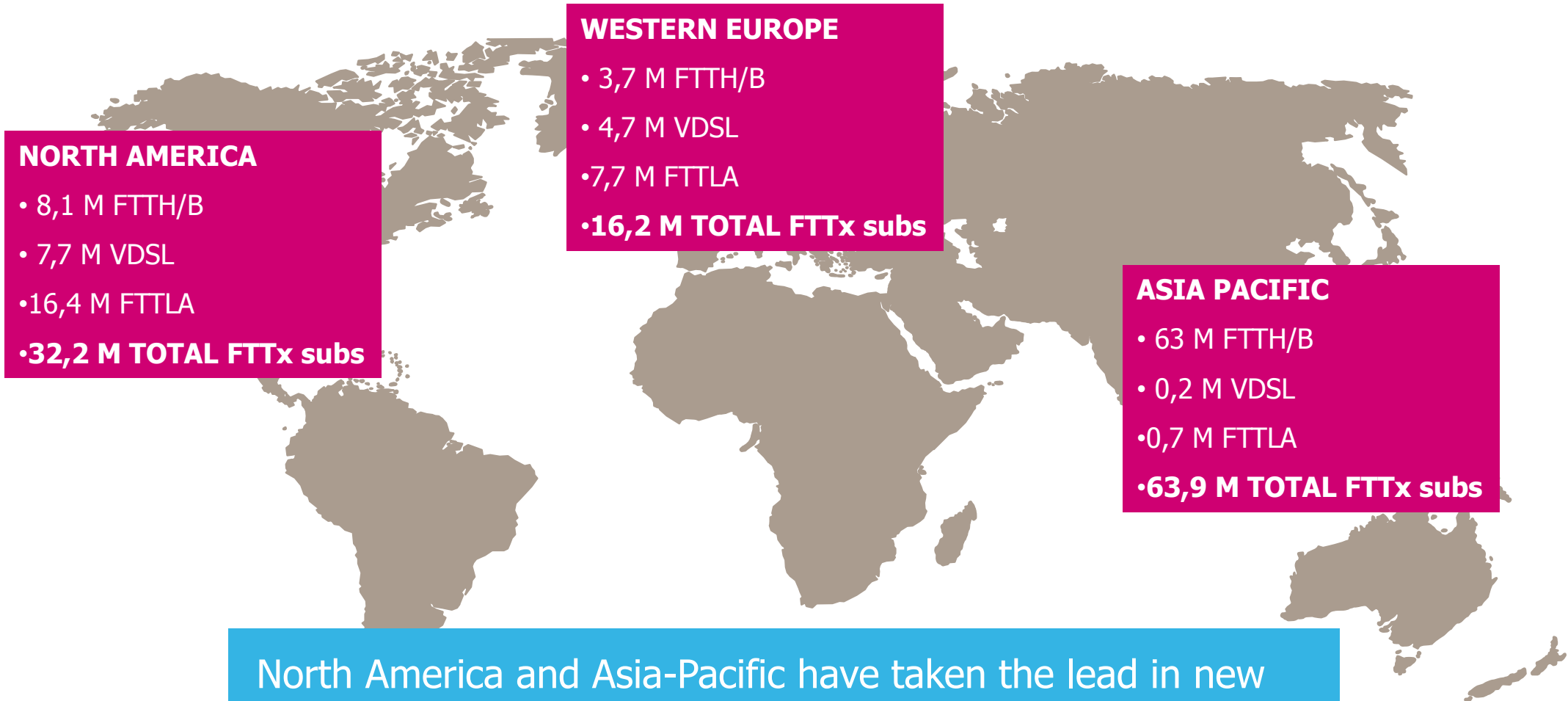


Today's FTTx leading countries, exceeding 20%, have **mainly Fibre-To-The-Building**



# NEXT GENERATION ACCESS NETWORKS ROLL-OUT

## EUROPE IS LAGGING BEHIND



North America and Asia-Pacific have taken the lead in new fixed infrastructure deployments

Source : IDATE 2012

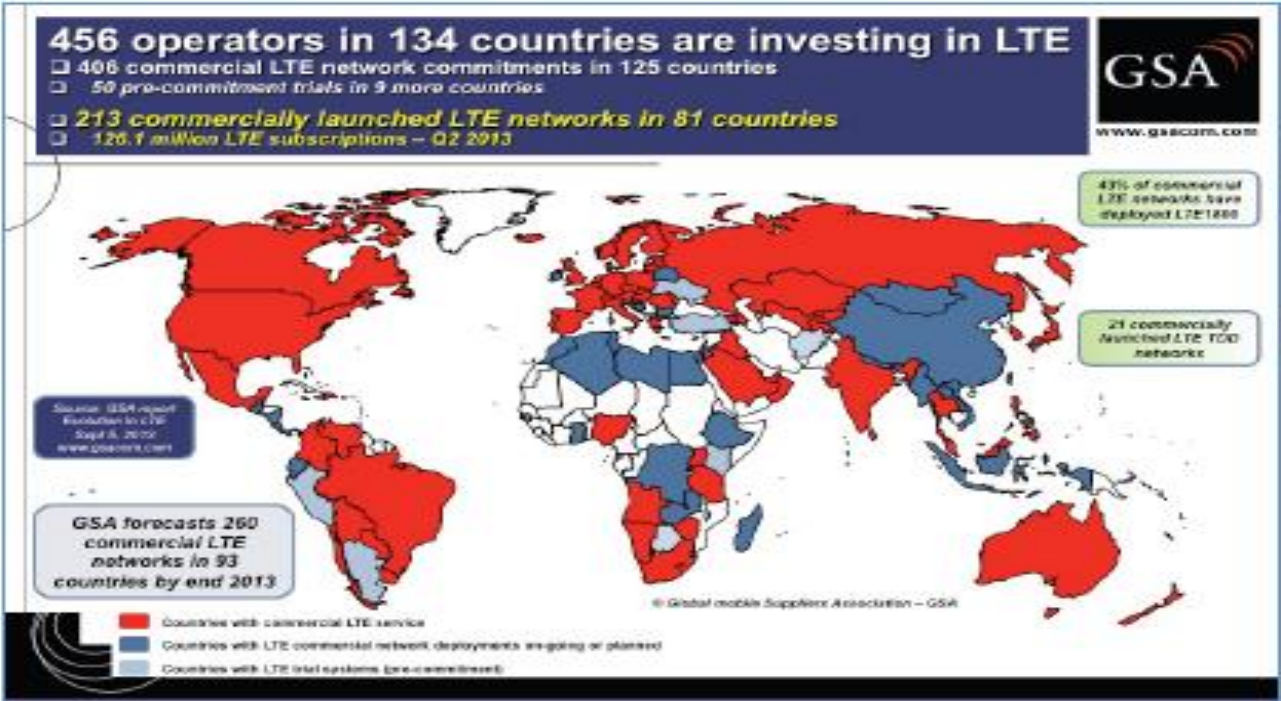
# LTE NETWORKS ROLL-OUT

## EUROPE IS ALSO LAGGING BEHIND

### LTE subs 2013

#1 ASIA PACIFIC	63,7 M	42%
#2 NORTH AMERICA	60,4 M	40%
#3 WESTERN EUROPE	13 M	9%
#4 CENTRAL & EAST. EU	9,7 M	7%
#5 AFRICA MIDDLE EAST	2,9 M	1%
#6 LATIN AMERICA	2,7 M	1%
TOTAL	152,4 M	

Source : IDATE Digiworld Yearbook 2013



# BROADBAND POLICY & REGULATORY TRENDS

## AMERICAS



### Vertical integration and platform competition

- US : Unregulated broadband markets in the No public intervention outside rural areas; Pro-active spectrum allocation policy
- CALA countries (Mexico, Colombia, Peru, Argentina) focus on open access wireless (APT Band Plan) and open backbones; Major regulatory reform in Mexico

## EMEA



### Infrastructure based competition and limited public Intervention

- EU : high fragmentation of markets; difficult balance between active infra competition and passive sharing; On going regulatory reform for NGA but lack of investment; State Aid in rural and medium density areas/infra sharing
- MEA : Open access backbones (Ghana, Burkina Faso), Open access wireless networks in digital dividend bands (Kenya); Nation broadband plans (Morocco, South Africa)

## APAC



### Network separation and service-based competition

- Heavy influence of government and regulation (SG, Aus, NZ)
- Structural separation, growth through premium connectivity wholesale
- Bitstream wholesale, open backbones & universal coverage lead network transformation
- Chinese market remains dominated by integrated operators

# VARIOUS MODELS AROUND THE WORLD

- **2 platforms countries**

- Competition between cable and telecom platforms
- This competition model has been adopted in the US and in a few Northern European countries and in Portugal
- Infrastructures are rolled-out in parallel and sometimes do not geographically overlap (e.g. US)
- Debate on competition model , and on coverage of less dense areas

- **1 platform countries**

- Active infrastructure competition on top of common passive network
- Model adopted in France, UK, Italy, Spain for copper. On-going debate on right model for NGA.
- Slow roll out, focused on dense areas
- Leads to patchwork segmentation /fragmentation of the territory between dense and non-dense areas
- Other copper enhancing technologies considered to ease the cost ( e.g. vdsl/vectoring)

- **0 platform countries**

- Case of developing/emerging countries where fixed infrastructure (access, backhaul, backbones) is poor and limits mobile and fixed internet access expansion
- Governments step-in to ensure coverage, speed, networks openness and services affordability
- Open Backbones (South America, Africa, ..), shared LTE access (Mexico, Kenya)

# INNOVATIVE APPROACHES TO FOSTER INVESTMENTS AND NETWORK DEPLOYMENTS AROUND THE WORLD

- **Facing the scarcity of fund and spectrum, innovative regulatory thinking and investment models emerge in developing countries**
  - Reduce cost through infrastructure sharing and innovative management of some spectrum bands (DD)
  - Attractive investment model compatible with long-term infrastructure funds criteria
  - Leverage technology evolution (IP LTE, bitstream) allowing service differentiation and competition on top of a collaboratively built infrastructure

## NATIONAL BACKBONES



- Fibre based open backbones
- Fixed /mobile backhauling, transit
- National/rural coverage

➤ Brazil, Mexico, India, Kenya, Nigeria, Sri Lanka, Ghana, Colombia, Argentina, Venezuela, Peru

## NEXT GEN ACCESS



- FTTx based access
- Passive & active wholesale
- Access network separation

➤ Australia, New Zealand, Singapore, Israel, Lebanon, Qatar,

## OPEN WIRELESS ACCESS



- LTE based open Access
- 700/800 MHz bands (DD)
- National/rural coverage, Public Safety

➤ Mexico, Kenya, Indonesia, Oklahoma State (U.S.)

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