



# INTERNATIONAL TRENDS FOR INVESTMENT PROMOTION AND COMPETITION IN NGA

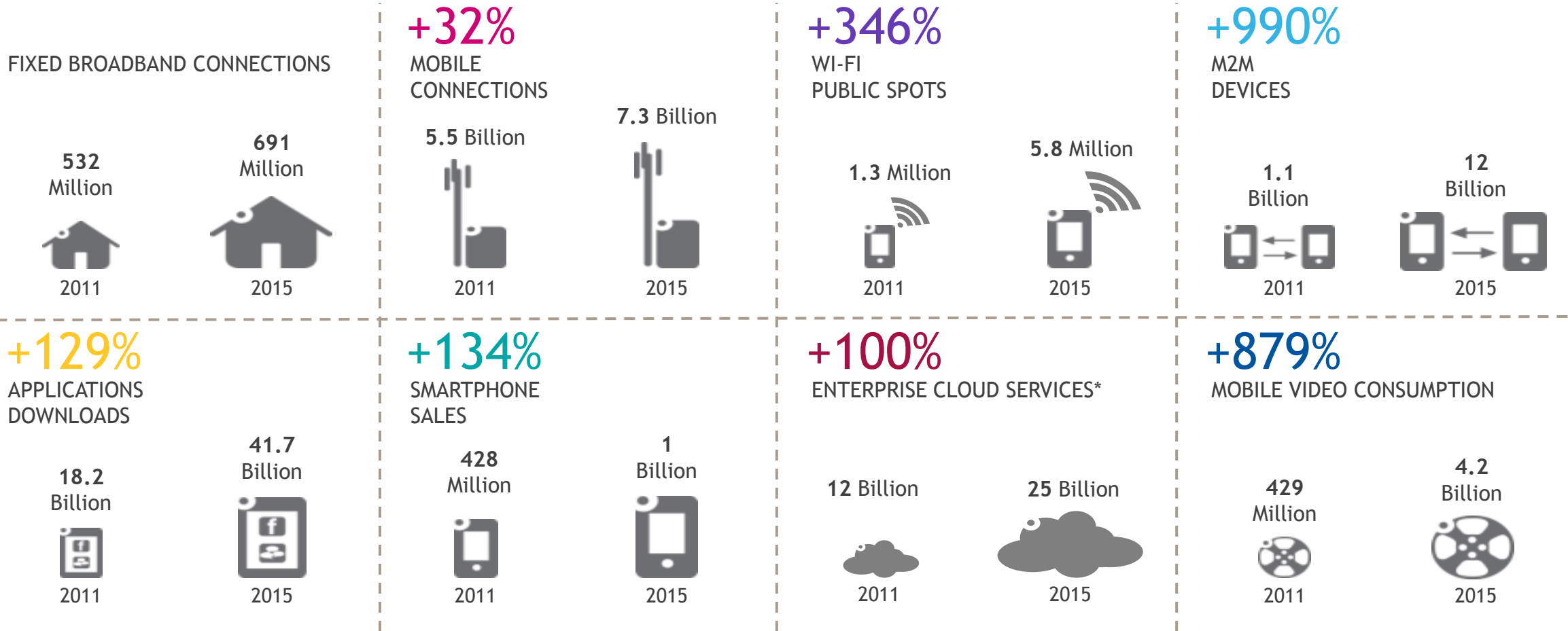
## 6th ANACOM CONFERENCE : FINANCING THE FUTURE

Gabrielle Gauthey – EVP Global Government & Public Affairs

July 1<sup>st</sup> 2013

# INDUSTRY TRENDS

## FAST GROWING MARKETS

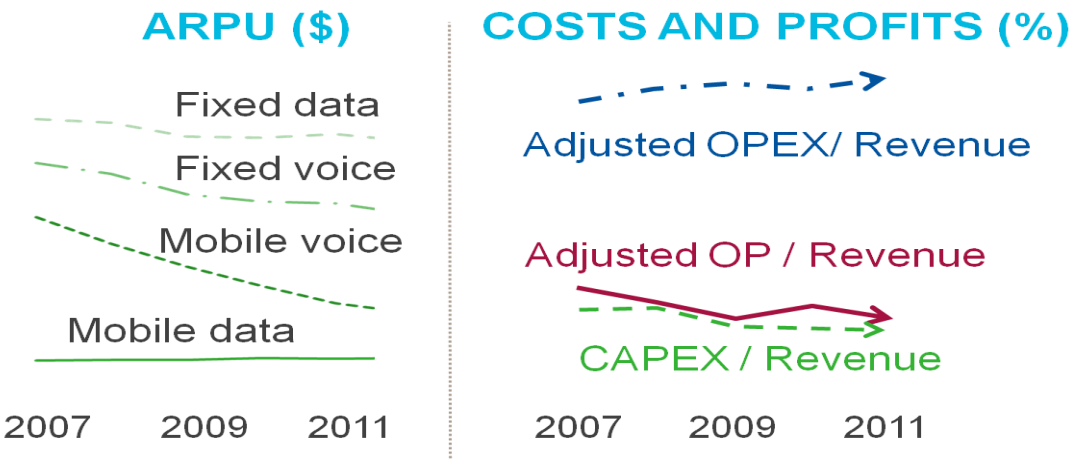


\* Source : Yankee

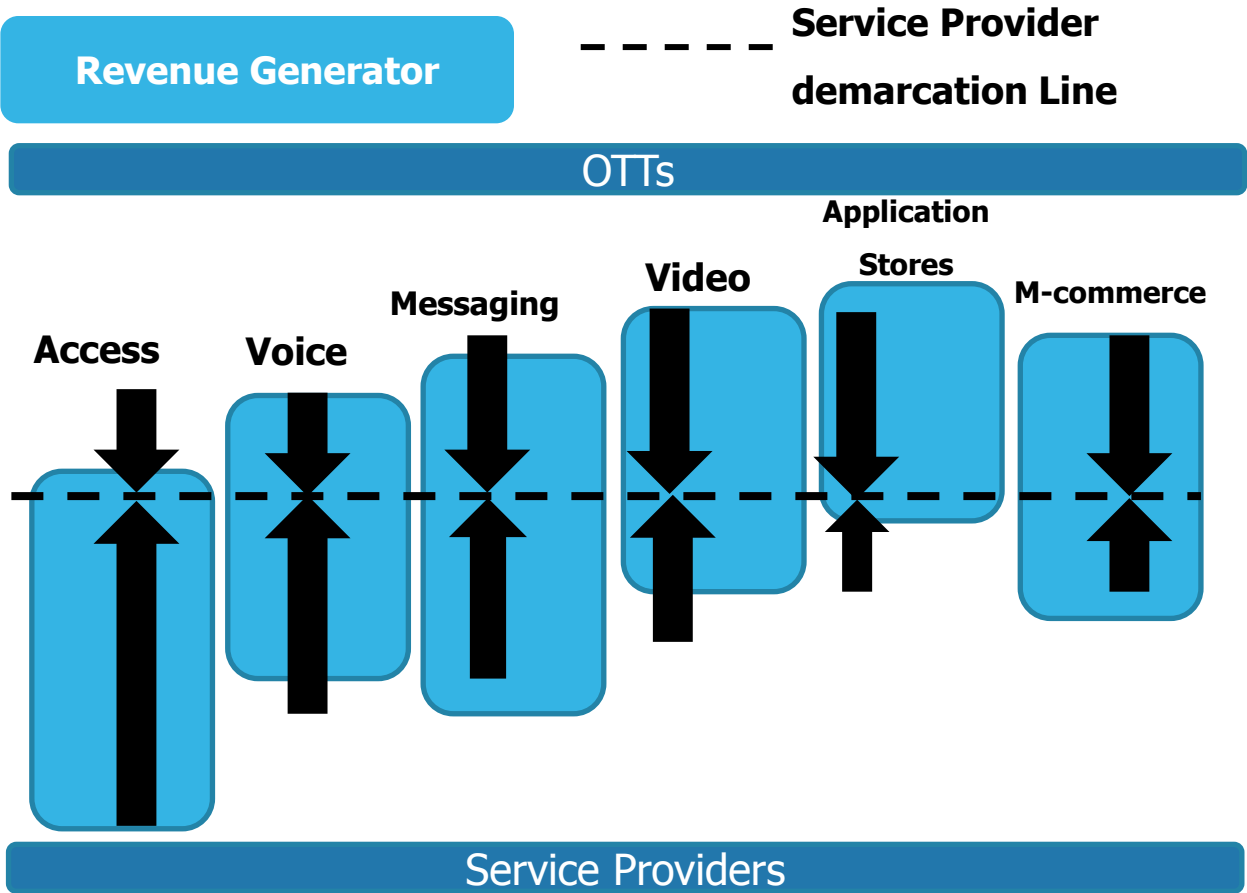
# TELECOMMUNICATIONS MARKETS ARE CHALLENGING

## REVENUES AND ROI ARE UNDER PRESSURE

### REVENUES UNDER PRESSURE



### OTTs TARGET SP CORE SERVICES

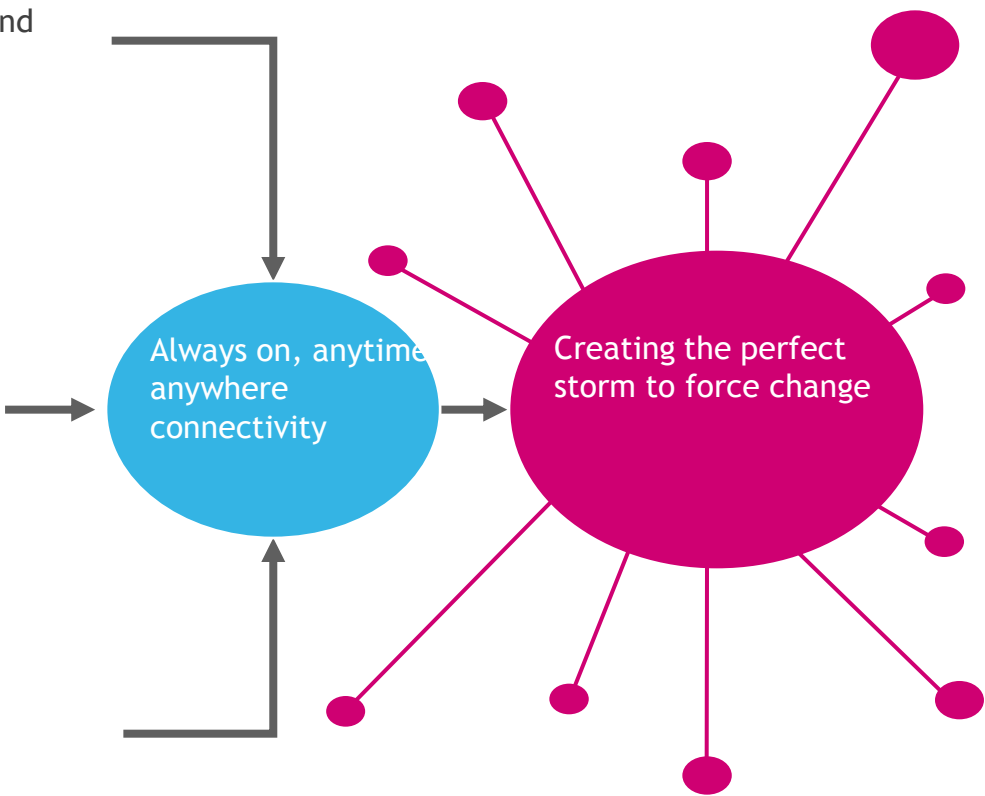


# DATA EXPLOSION REQUIRES NEW INVESTMENTS IN ACCESS AND CORE NETWORKS

Ubiquitous BROADBAND and MOBILE access

User-friendly DEVICES

Compelling CONTENT, APPLICATIONS and VIDEO



BY 2016

25 X

MORE MOBILE DATA TRAFFIC

99%

OF TRAFFIC IN NAR  
For 3G/4G connections

VIDEO STREAMING  
TO GROW

89%

(70% OF USERS access  
mobile video through WiFi)

AUDIO STREAMING  
TO GROW

73%

27%

OF MOBILE DATA  
On Wi-Fi

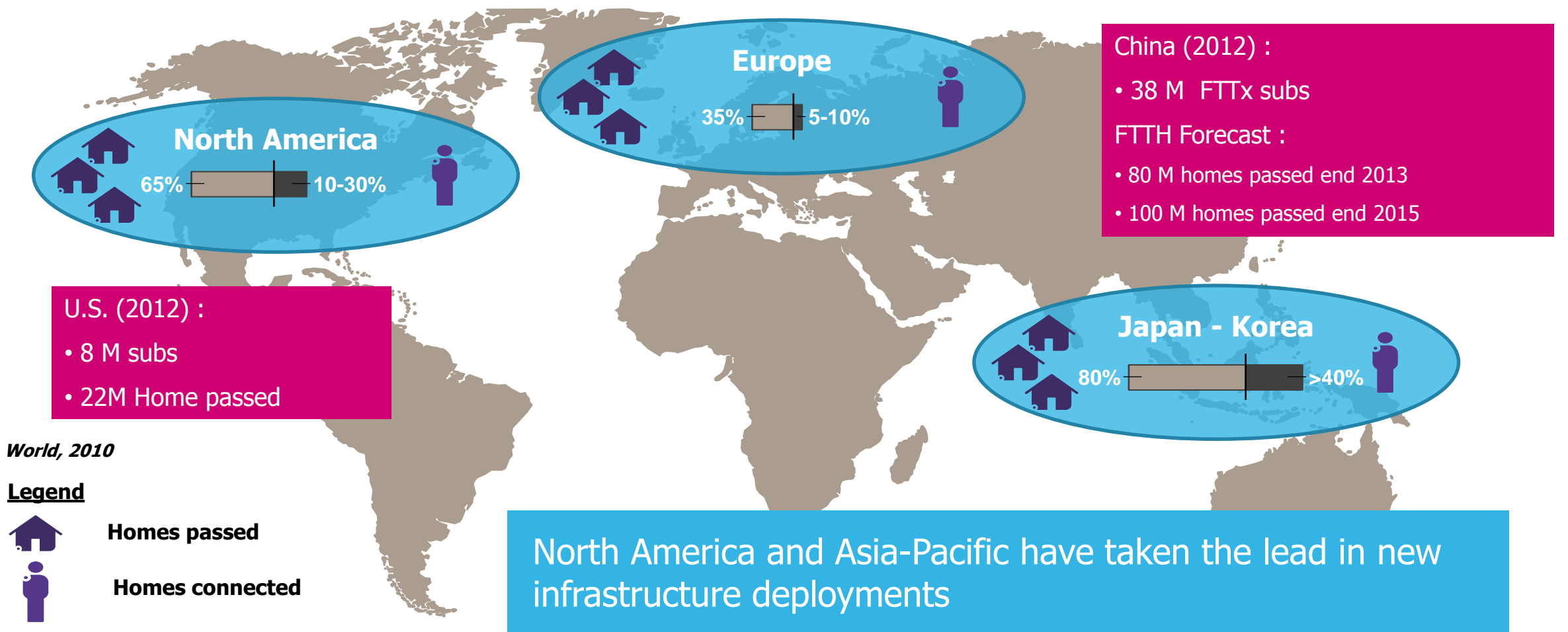
VIDEO COMMUNICATIONS  
TO GROW

95%

Source: Traffic Index, 2012 - Bell Labs modeling

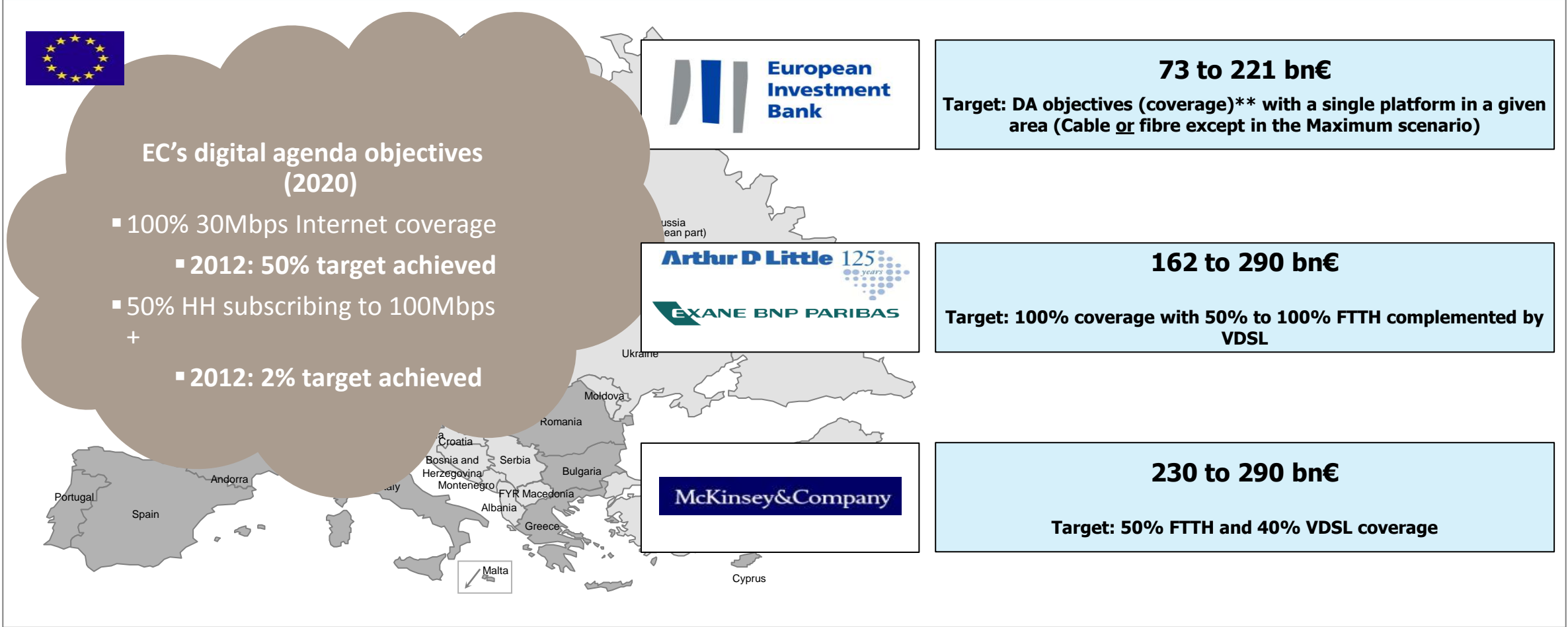
# NEXT GENERATION ACCESS NETWORKS ROLL-OUT

## EU IS LAGGING BEHIND



# 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

# 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
- Slow roll out, focusing 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), shared LTE access (Kenya)



# 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, Burkin Faso), Open access wireless networks in digital dividend bands ( Kenya); Nation broadband plans (Morocco, South Africa)

## APAC



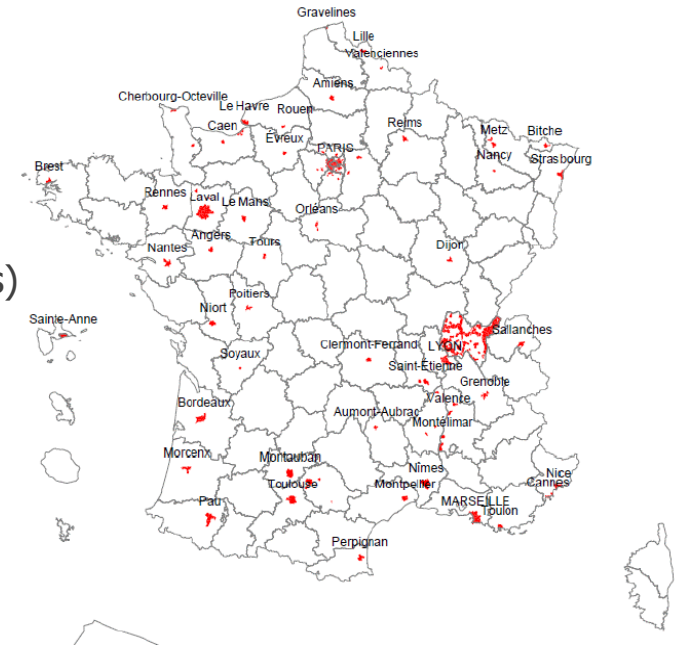
### Network separation and service-based competition

- 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

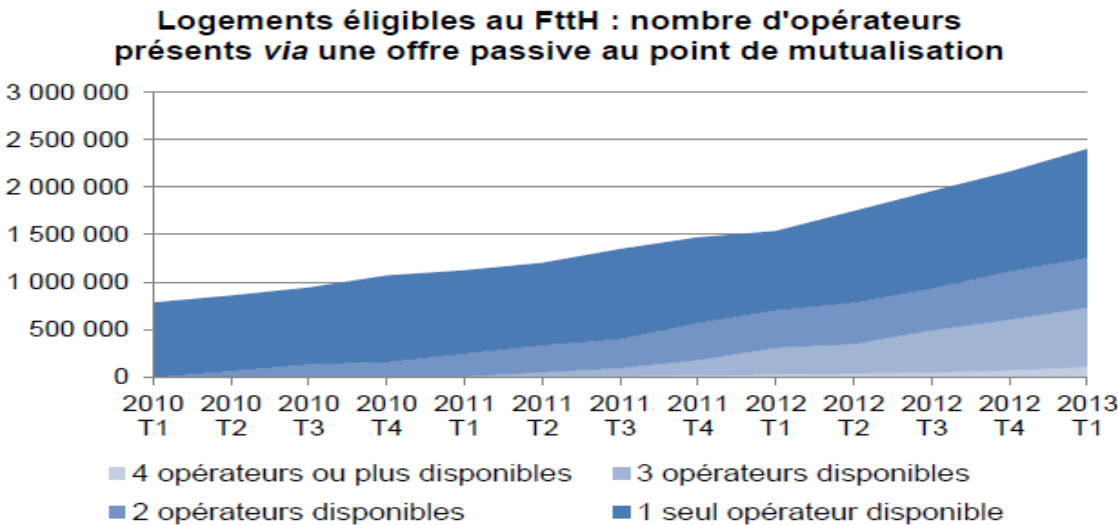


# THE FRENCH APPROACH TO FTTH

- **A mix of asymmetrical and symmetrical provisions**
  - Access to incumbent’s ducts and dark fiber for backhaul
  - Access to terminating segment (in-house cabling in dense areas or fibre subloop in less dense areas)
  - No mandatory Bitstream wholesale offer
- **Geographical segmentation**
  - Dense areas : private co-investment prevail
  - Less dense areas : private co-investment and public intervention
  - Rural areas : public intervention prevail
  - A balanced way to push for private initiative and ensure FTTH coverage
- **Fibre can be mutualized in more than 50% of homes passed**



FTTH deployments as of March 2013



	31 mars 2012	30 juin 2012	30 septembre 2012	31 décembre 2012	31 mars 2013 <sup>3</sup>	Évolution annuelle <sup>3</sup>
Linéaire de génie civil loué à France Télécom	6 514	7 189	8 170	8 990	9 924	+ 52 %
Logements éligibles au FttH	1 580 000	1 750 000	1 960 000	2 165 000	2 405 000	+ 52 %
Dont logements éligibles via la mutualisation <sup>4</sup>	704 000	785 000	933 000	1 113 000	1 260 000	+ 79 %

Source : Arcep March 2013

# GERMANY CHOOSES VDSL + VECTORING

- **BNetzA published draft decision** (April 9th, 2013)
- **SLU mandate remains in place (in principle)**
- **DT can refuse access to street cabinets for competitors if :**
  - Second fixed network exists (can be cable)
  - DT has developed more sub-loops than competition in that area
  - Appropriate L2 bit-stream offering is in place
- **In all other cases access is mandatory**
  - Competitor needs to introduce vectoring and offer bitstream
- **Cabinets already connected remain unchanged**
  - Obligation to introduce vectoring (before 2017) + bit-stream offering
  - If not, DT can cancel existing contacts

FRANKFURT | Tue Apr 9, 2013 5:00am EDT

(Reuters) - Deutsche Telekom has received conditional regulatory approval to upgrade its copper network via a process called vectoring, or VDSL2, in order to offer faster Internet.

The German federal network agency said on Tuesday in a draft decision that Deutsche Telekom would have to give its competitors access to the new technology but it could deny access in areas where alternative networks are available.





# Telefonica Germany to hitch a ride on Deutsche Telekom's VDSL network

By [Nick Wood](#), Total Telecom

Thursday 02 May 2013

## MoU enables German incumbent to mitigate investment risk in high-speed copper infrastructure.

Telefonica Germany and Deutsche Telekom on Thursday signed a memorandum of understanding that will see the latter provide the Spanish incumbent with wholesale access to its vectored VDSL network.

The deal enables Telefonica to upgrade its fixed broadband offering from ADSL to a technology that can support connection speeds of up to 100 Mbps. The upgrade will be carried out in phases, starting this year and running to 2019.

"In combination with our high-performance mobile data network, we will be able to accelerate our convergence strategy even more effectively," said René Schuster, CEO of Telefonica Germany, in a statement.

It is an important step for Deutsche Telekom too, which has embarked on a €30 billion, [three-year network investment programme](#). €6 billion of that sum is being ploughed into fibre-to-the-cabinet (FTTC) and vectored VDSL infrastructure in Germany. It received regulatory permission to deploy vectored VDSL in April.

"Deutsche Telekom is prepared to make massive investments in Germany's fixed-line network," said Niek Jan van Damme, head of Deutsche Telekom's domestic business activities. "But we need partners to share investment risks and accelerate the upgrade of high-performance networks."

Thursday's agreement is in addition to an existing deal that allows Telefonica to purchase a certain number of VDSL lines from Deutsche Telekom at a discounted price. Telefonica also previously contracted Deutsche Telekom to provide fibre backhaul.

Vectored VDSL technology is popular among many European incumbents because it enables them to upgrade their existing copper networks to meet national broadband speed targets without incurring the high costs that come with a fibre-to-the-home (FTTH) deployment. For a more in-depth look at vectoring, see the [November 2012 edition of Total Telecom+](#).

<http://www.totaltele.com/printablearticle.aspx?ID=481007>

# 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.)



# NEW ZEALAND ULTRAFAST BROADBAND INITIATIVE

- **Ultra Fast Broadband, a government driven initiative**

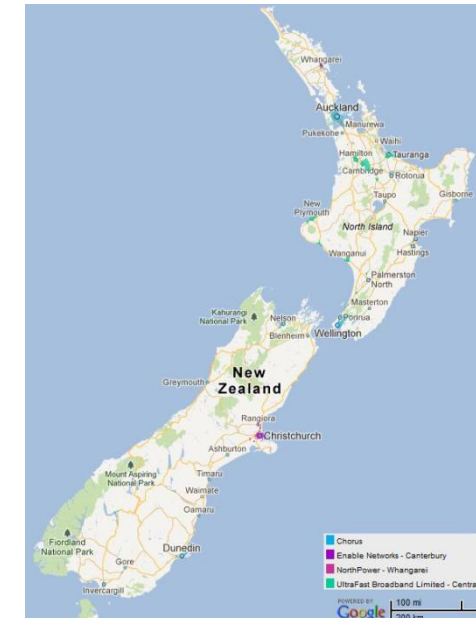
- NZ government investment amounts to 1.1 B US \$ to roll-out an FTTH network covering 75% of population
- Creation of Crown Fibre Holdings (CFH) as special purpose vehicle to invest in Local Fiber Companies (LFCs)
- CFH selected Chorus to deploy in 70% of UFB, 30% remaining was granted to three LFCs (North Power Fibre, Ultrafast Fibre Ltd and Enable Networks Ltd)

- **Rural Broadband Initiative dedicated to remote areas**

- In parallel to UFB which covers high and medium dense zones, NZ Government launched the Rural Broadband Initiative (RBI)
- RBI covers 25% of the population living in rural areas
- Telecom NZ and Vodafone were awarded the tender and will deploy a combination of fixed and wireless solutions to deliver at least 5 Mb connectivity to 250 000 households

- **Network separation**

- CFH investment rules forbid fiber wholesaler to operate on retail market
- Chorus (access network) was therefore separated from Telecom NZ
- Chorus received a 929 M NZ\$ from CFH to roll-out UFB
- Chorus and the three LFCs wholesale bitstream access to retail operators including Telecom



# ISRAEL GOES FOR UTILITY/PPP LIKE MODEL

- **A Special Purpose Vehicle announced June 2013**

- New Telecommunication Company created to deploy a FTTH network in Israël
- Consortium formed by State owned Israël Electric Company (IEC) and private investors (ViaEuropa, Cisco, Tamares Telecom, Rapac, BATM, Bynet Data) which own 60% of the SPV
- Multi billion € investment over 20 years
- New company will act as “carrier of carriers” and wholesale fiber access to retail operators

- **Objectives**

- Network will be deployed over 20 years and will cover 65% of population by the 9<sup>th</sup> year
- Total fiber : 32 000 km
- Fiber To The Home technology – 1 Gb/s bandwidth as long term target
- Israël Electric Company will contribute with its existing fibre network (3000 Km) and sites (poles, ducts)



REUTERS

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## Viaeuropa wins deal for high-speed Israeli fibre optic network

Sun, Jun 16 2013

By [Steven Scheer](#)

JERUSALEM, June 16 (Reuters) - A group led by Sweden's Viaeuropa has been chosen to build a super-fast Internet network across Israel that will compete with existing phone and cable companies.

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