Fibre to the Home: Taking your life to new horizons!

Nadia Babaali, Communications Director, FTTH Council Europe

Roland Montagne, Director, Telecoms Business Unit, IDATE

Fibre to the Home Council Europe

Press Conference – BBWF, Paris 27 September 2011

Agenda

- **FTTH Council Europe**
- **FTTH Panorama overview**
- **FTTH Market Analysis**
- **Why FTTH?**

FTTH Council Europe

Photo by Nicolo Baravalle

FTTH Council Europe

Our Vision: A sustainable future enabled by Fibre to the Home

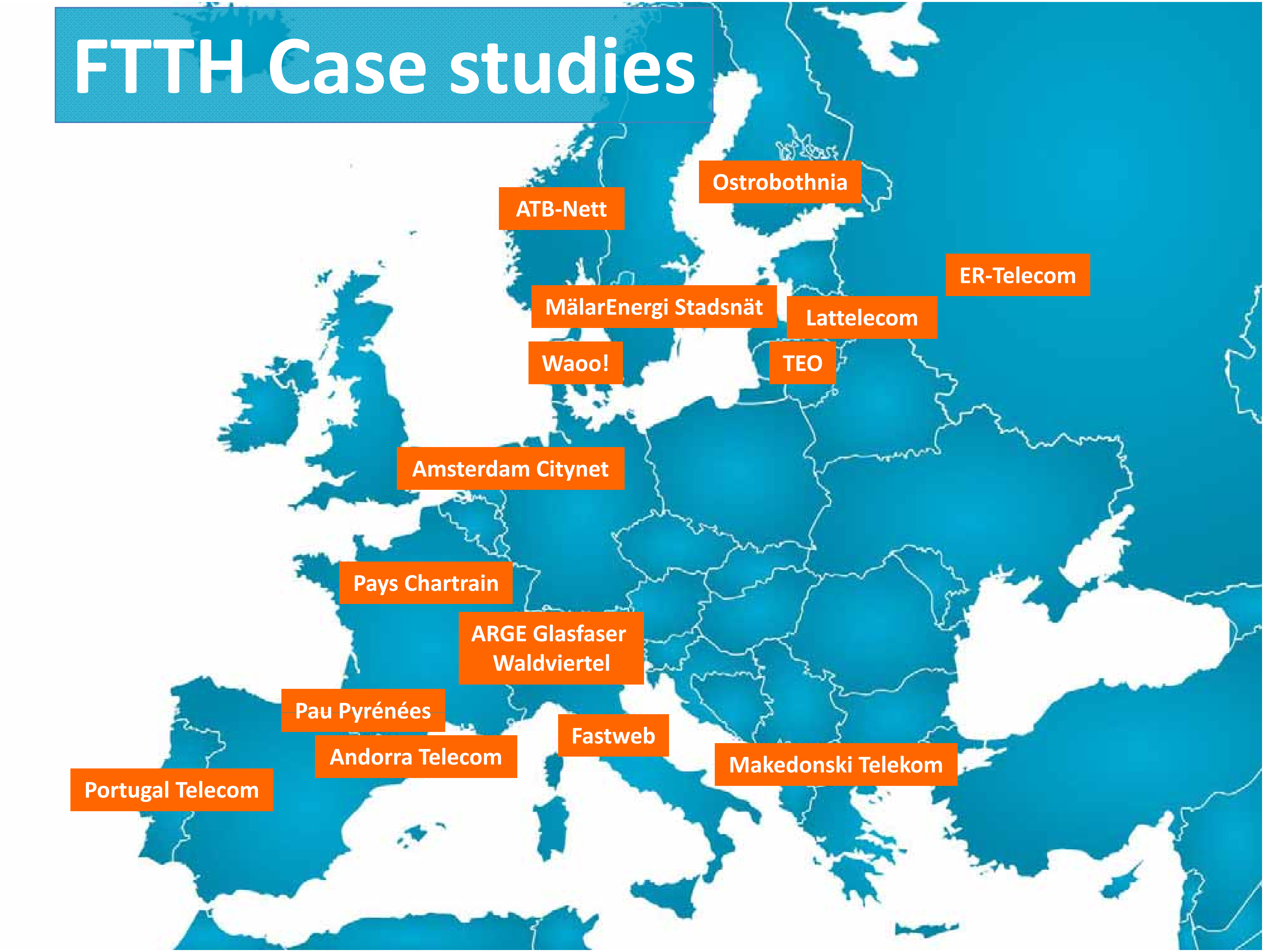
Our Mission

- To accelerate FTTH adoption through information and promotion in order to enhance the quality of life, contribute to a better environment and increased competitiveness

Organisation

- Founded in 2004, non-profit industry organisation
- More than 150 member companies

FTTH Case studies



FTTH Conference 2012

14 – 16 February 2012, Munich, Germany

www.ftthconference.eu

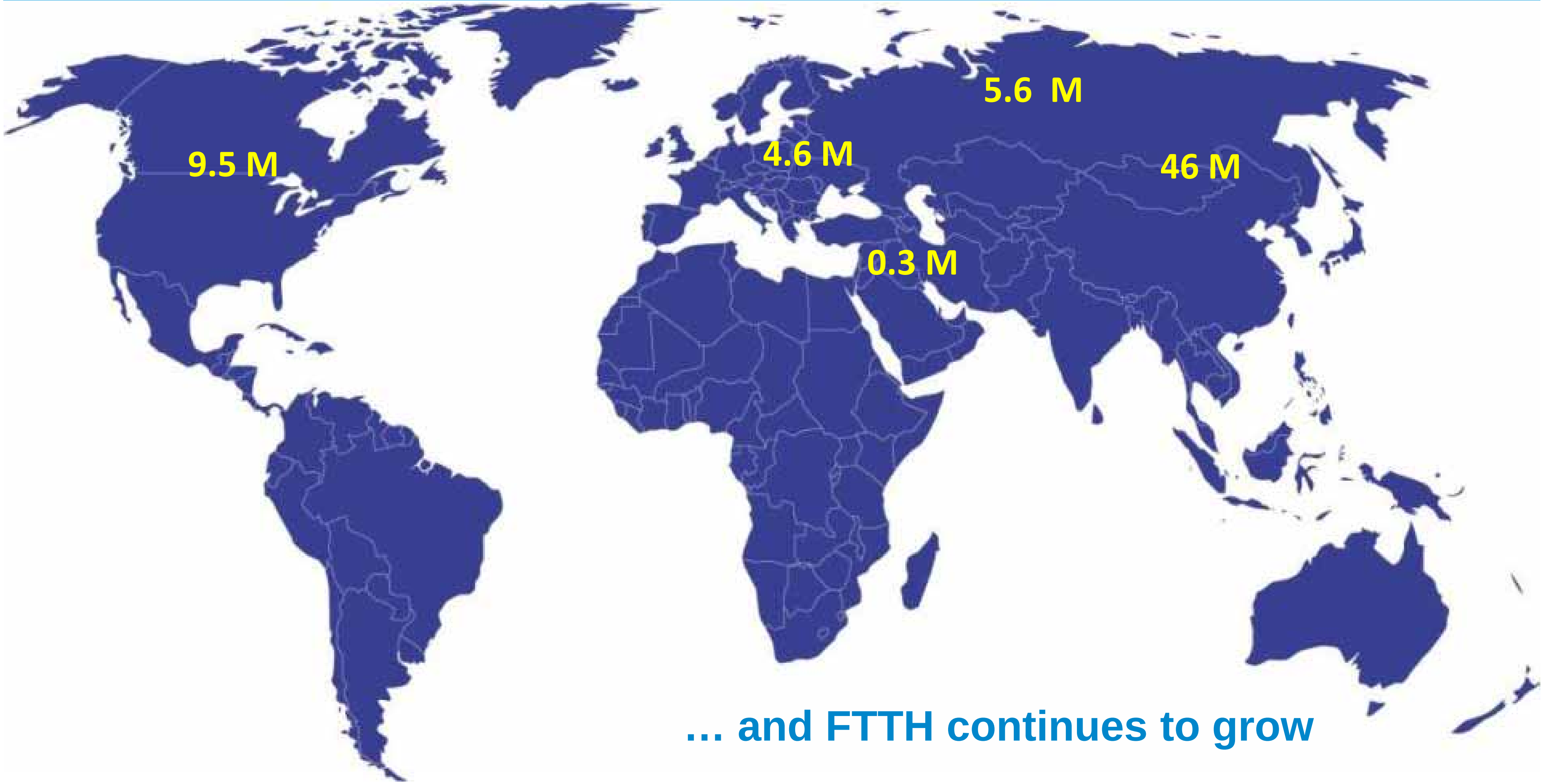





FTTH market panorama

Photo by Nicolo Baravalle

FTTH Global panorama mid-2011 – Total subscribers



… and FTTH continues to grow

FTTH in Europe – Overall Figures mid-2011

- **EU35: 4.6 million FTTH/B subscribers**
  - EU27: 4.1 million FTTH/B subscribers
  - CIS (Russia, Ukraine, Belarus, Kazakhstan): 5.6 million FTTH/B subscribers

- **EU35: 25.1 million FTTH/B Homes Passed**
  - EU27: 23.4 million FTTH/B HP
  - CIS (Russia, Ukraine, Belarus, Kazakhstan): 14.7 million FTTH/B HP

Average Take Rate EU35: 18.3% vs 19.4% in June 2010

Growth rates 1H2011EU35

+14% FTTH/B subscribers (vs 24% 1H2010)

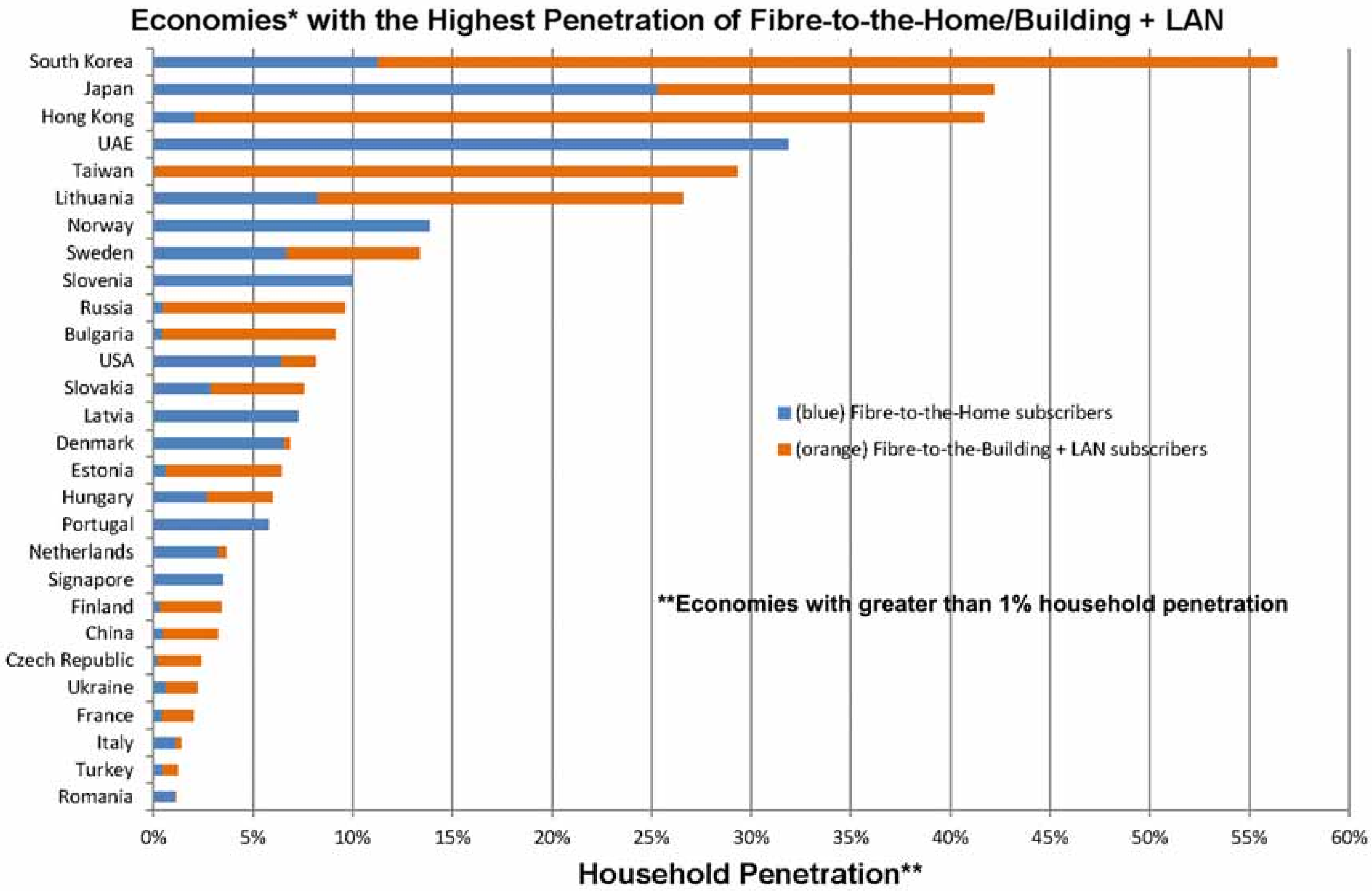
+26% FTTH/B Homes Passed (vs +12.5% 1H2010)

Expanding FTTH/B coverage is still a priority for players

Source: IDATE for FTTH Council Europe

(1) Our figures have already been processed to avoid overestimating homes passed when one home is passed by several operators in some countries. Figures take this into account at June 2011 in particular for Slovenia, Russia and France.

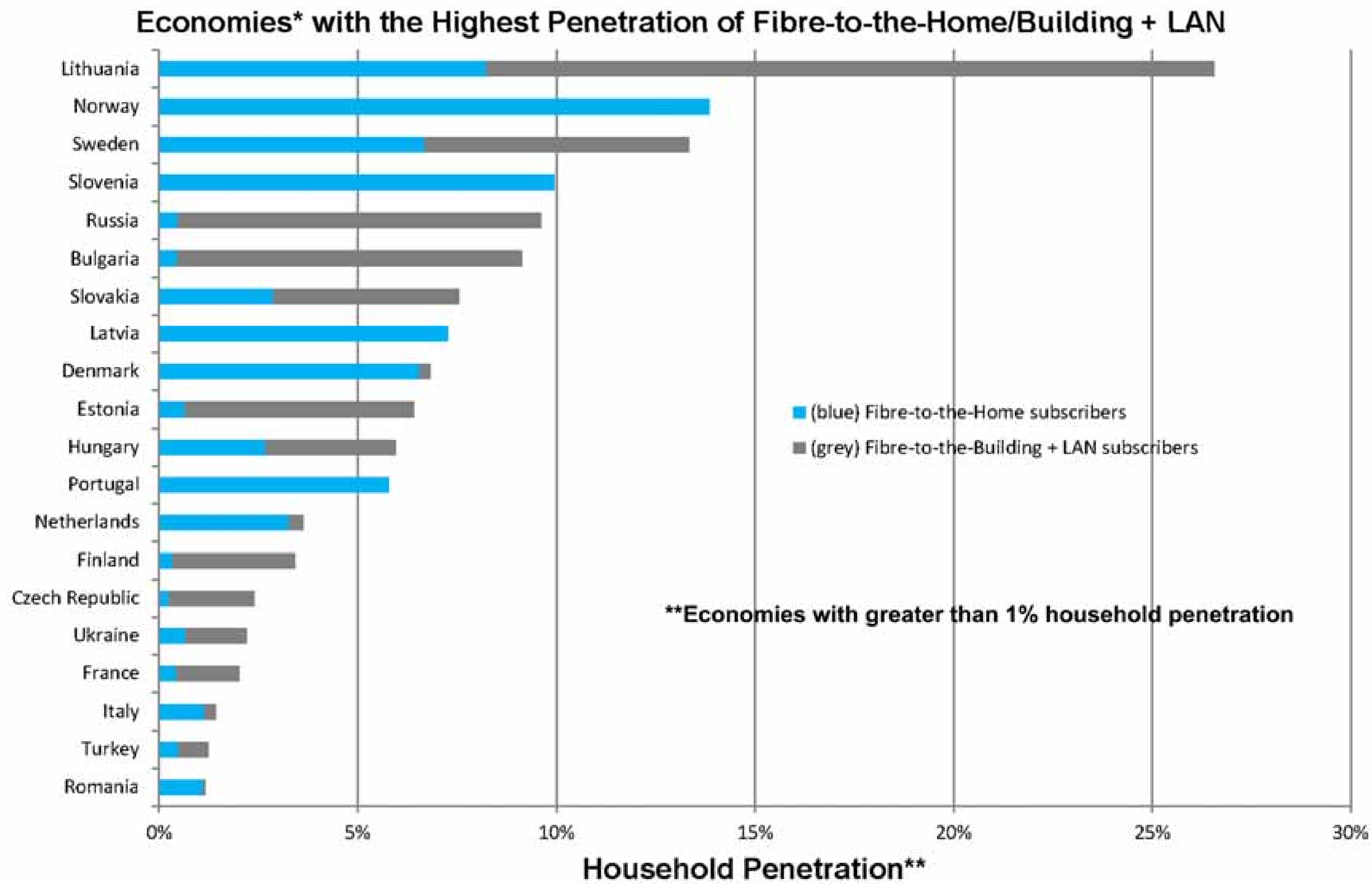
FTTH Global Ranking – mid-2011



June 2011 Ranking
Source: Fibre-to-the-Home Council
September 2011

***Economies with at least 200,000 households**

FTTH European Ranking – mid-2011



June 2011 European Ranking
Source: IDATE and
FTTH Council Europe
September 2011

***Economies with at least 200,000 households**

European Ranking

- The Ranking includes countries of more than 200,000 households where at least 1% of households are FTTH/B subscribers

At June 2011

20 countries in the European Ranking

Ukraine and Hungary new entrant

- Three Eastern European countries showed the highest progression in the ranking from 2% to 4 % : Lithuania, Bulgaria and Russia

- Major Western Economies such as Italy and France still at the

List of countries analysed in this study – mid 2011

Austria
Belgium
Bulgaria
Cyprus
Czech Republic
Denmark
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden
United Kingdom

EU 27

EU 27 + Andorra, Croatia, Iceland, Israel, Norway, Serbia, Switzerland, Turkey

EU35

EU 35 + Belarus, Kazakhstan, Russia, Ukraine

EU39

Background of the Study

- IDATE has been commissioned by the FTTH Council Europe to provide a comprehensive overview of FTTH/B deployments in 39 countries in Europe (1) (9th edition)

- Methodology used
- Desk research
- Direct contacts with FTTH players (questionnaires, phone interviews)
- Information exchange with FTTH Council Europe members
- Direct contacts with IDATE's partners in several European countries
- Objectives: to provide a complete summary of the status of FTTH/B in Europe, twice a year
- Identification of new projects
- Characterization of each project: organization initiating the project, Key parameters& Figures (Homes and Buildings passed), Technical parameters, Financing & Business model
- We distinguished FTTH/FTTB and FTTN (FTTN/C+VDSL, FTTLA, FTTx+LAN)

(1)When referring to Europe we take into account EU 35: EU 27+ Andorra, Croatia, Iceland, Israel, Norway, Serbia, Switzerland, Turkey.

When referring to EU 39 we take into account EU35 + 4 CIS Countries: Belarus, Kazakhstan, Ukraine and Russia.

Available results for EU39

- Around 300 FTTx projects listed in EU39

Quantitative

	June 2011	
	FTTH/B subscribers (*)	FTTH/B Homes/Buidings passed
Asturias	11 000	51 000
Telefonica	83 000	500 000
Orange	na	10 000
Others *(1)*	7 130	na
Total FTTH/B	**101 130**	**561 000**
	FTTN subscribers (**)	FTTN Homes/Buidings covered
Ono	270 000	7 000 000
Telefonica	na	na
Others *(2)*		
Total FTTN	**270 000**	**7 000 000**
Total Spain (***)	**371 130**	**7 561 000**

Qualitative

TEO

Identification Operator/Organisation

TEO is the Lithuanian incumbent, leader in the national broadband market.
The FTTH Project launched by TEO is one of its most important network modernisation projects. From 2007 to 2010 , the company planned to invest more than LTL 100 million (38.9 million USD) in the new optical access network in the context of an Internet plan called "Zebra".

Key parameters

TEO first planned to connect the residents of the 5 biggest cities of Lithuania with FTTH, beginning with the provision of fiber-optic Internet services in Vilnius.
At the end of 2010, TEO provides FTTH services to 86 percent residents of Vilnius, 95 per cent residents of Klaipėda, 75 percent residents of Kaunas, and more than half of Panevėžys and Šiauliai residents. It expects to expand this FTTH network to fifty lithuanian cities which should represent an investment of more than LTL 70 million.
The total investment in the next-generation network should exceed LTL 325 million by the end of 2011.
At end 2010, there are 90,120 FTTH customers and 13,640 FTTB subscribers including 200 office buildings.
In a long term perspective, TEO expects to be able to provide services at the speed of several Gbps. In this line, from May 2011, it increased speeds of its FTTH services ranging from 40 to 300 Mbps without additional cost for residential subscribers.

Figures

Number of Households/Business Units passed	340,000 FTTH/B homes passed at December 2009 355,000 FTTH/B homes passed at June 2010 (IDATE estimates) 570,000 FTTH/B homes passed at December 2010 **700,000 FTTH/B homes passed at June 2011 (IDATE estimates)**
FTTx subscriber base	11,600 FTTB and 51,000 FTTH subscribers at December 2009 84,500 FTTH/B subscribers at June 2010 103,760 FTTH/B subscribers at December 2010 **120,000 FTTH/B subscribers at June 2011 (IDATE estimates)**

Technical parameters

MDU 60% / SDU 40%

European Market Overview: Projects

- Around 260 FTTH/B European projects at mid-2011

Some significant FTTH/B deployments at June 2011

(> 200,000 Homes Passed)

Countries	Players		FTTH/B Homes/Buildings passed (June 2011)
Bulgaria	Blizoo	Cable operator	1 100 000
Denmark	TDC	Incumbent	250 000
Estonia	Elion	Incumbent	210 000
Finland	Telia Sonera	Incumbent	600 000
France	SFR	Alternative operator	550 000
	France Telecom	Incumbent	819 403
	Free	Alternative operator	450 000
	Numericable	Cable operator	4 500 000
Germany	Net Cologne	Power utility	240 000
	Wilhelm Tel	Power utility	200 000
Hungary	Magyar Telecom	Incumbent	290 000
Italy	Fastweb	Alternative operator	2 000 000
	Telecom Italia	Incumbent	550 000
Latvia	Lattelecom	Incumbent	357 485
Lithuania	TEO	Incumbent	700 000
Netherlands	KPN/Reggefiber	Incumbent	768 000
Norway	Altibox	Power utility	350 000
Portugal	Portugal Telecom	Incumbent	1 279 000
	Sonaecom	Alternative operator	300 000
	Vodafone	Alternative operator	200 000
Russia	Beeline/VimpelCom	Alternative operator	8 900 000
	Comstar UTS	Alternative operator	2 000 000
	ER Telecom	Alternative operator	5 000 000
Slovakia	Orange Slovensko	Alternative opertaor	320 000
	T-COM/Slovak Telecom	Incumbent	360 000
Slovenia	T2	Alternative operator	310 000
Spain	Telefonica	Incumbent	500 000
Sweden	Telenor	Alternative operator	500 000
	Telia Sonera	Incumbent	320 000
Switzerland	Swisscom	Incumbent	275 000
Turkey	SuperOnline	Alternative operator	718 000
UK	BT	Incumbent	250 000
Ukraine	Beeline/VimpelCom	Alternative operator	3 000 000

FTTH Market Analysis & Conclusions

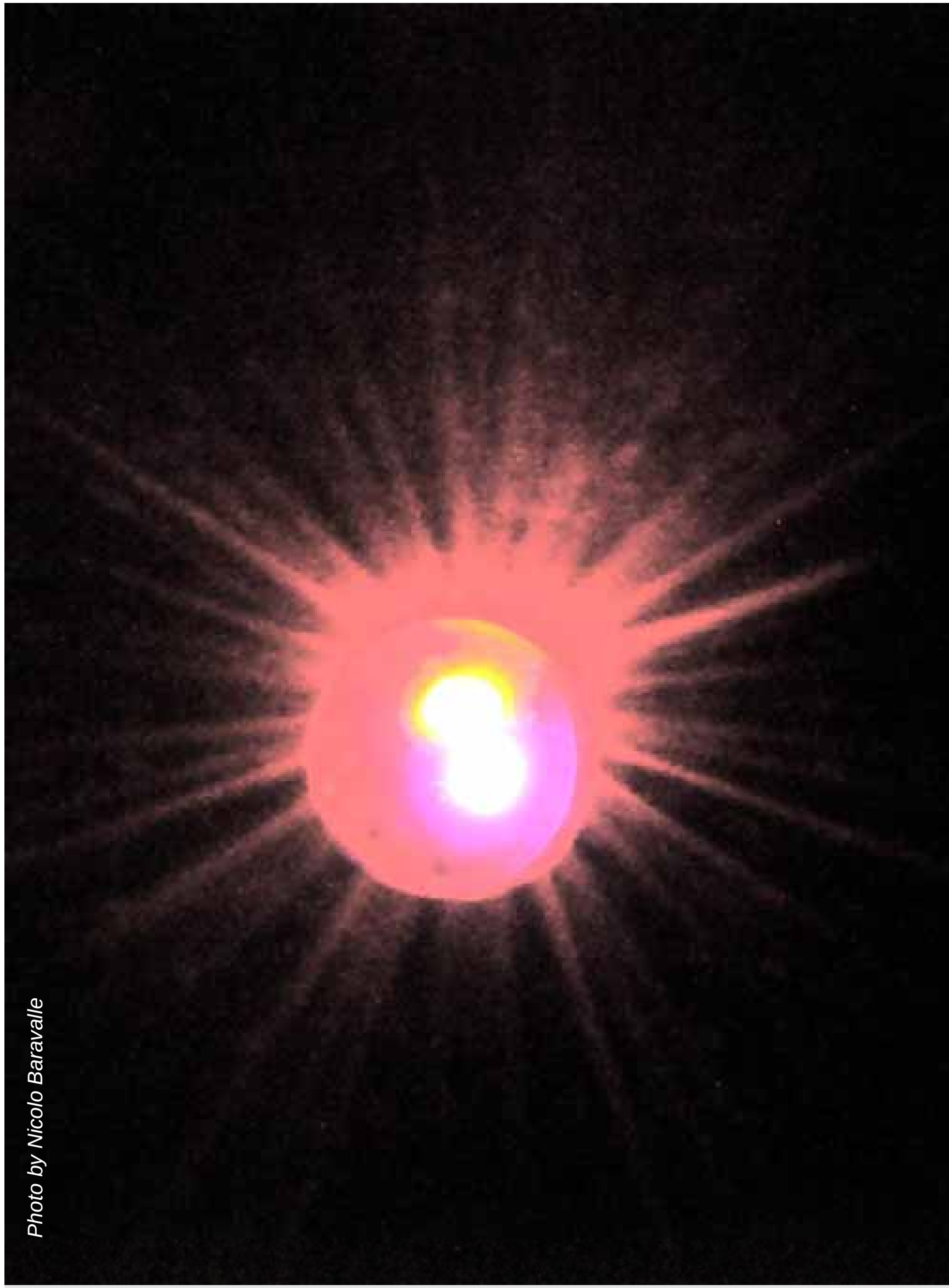


Photo by Nicolo Baravalle

FTTH in Europe - Players

► **3 main categories involved in EU35 FTTH/B deployments**

Municipalities & Utilities	Alternative operators / MSOs	European incumbents
More numerous	Most dynamic	Challenged on BB
Local deployments only	National or local deployments	National deployments
12% of total FTTH/B Homes Passed at June 2011	55% of total FTTH/B Homes Passed at June 2011	33% of total FTTH/B Homes Passed at June 2011

FTTH in Europe - Players

- **Municipalities & Utilities still strategic players**
  - **Coverage is optimal in Northern European countries, where projects are getting aggregated** (Stedenlink in Netherlands, Netixopen in Finland, Waoo in Denmark)
  - **Several objectives**
    - Knowledge sharing
    - Improvement in operating FTTH/B networks
    - To respect coverage targets
    - Branding & Mutualisation of services offers to end users (Waoo)
  - **Their involvement can initiate the market (Germany) and will probably increase in other countries, such as France through the National Program**

- **Housing companies, fourth category of players, but still the least involved**
  - **No strategy has emerged that could be applied on a international or even national basis**

FTTH/B European technologies

- In June 2011, the main architecture deployed is still FTTB (EU39)
- Regarding technology, players have mainly chosen Ethernet
- Then, MDUs are still the principal target for Fibre deployments in Europe

Main architecture deployed (homes passed segmentation)	June 2011	Dec 2010	June 2010
FTTH	39%	37%	34%
FTTB	61%	63%	66%

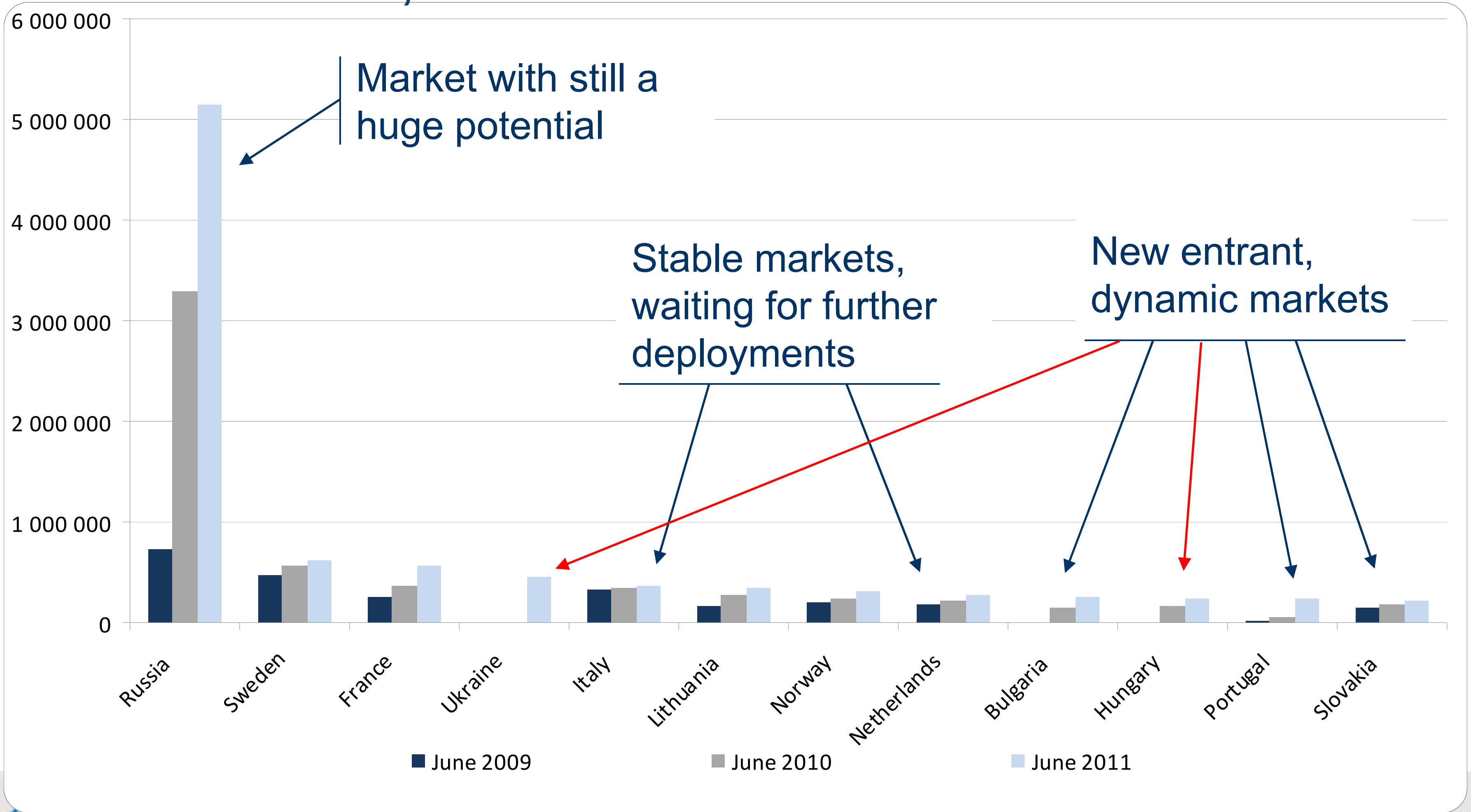
Main technology deployed (homes passed segmentation)	June 2011	Dec 2010	June 2010
PON	29%	27%	26%
Ethernet	71%	73%	74%

Dwellings deployed (homes passed segmentation)	June 2011	Dec 2010	June 2010
MDU	79%	77%	76%
SDU	21%	23%	24%

Source: IDATE for FTTH Council Europe

FTTH/B subscribers evolution

- **Countries > 200,000 FTTH/B subscribers at mid-2011**



Source: IDATE for FTTH Council Europe

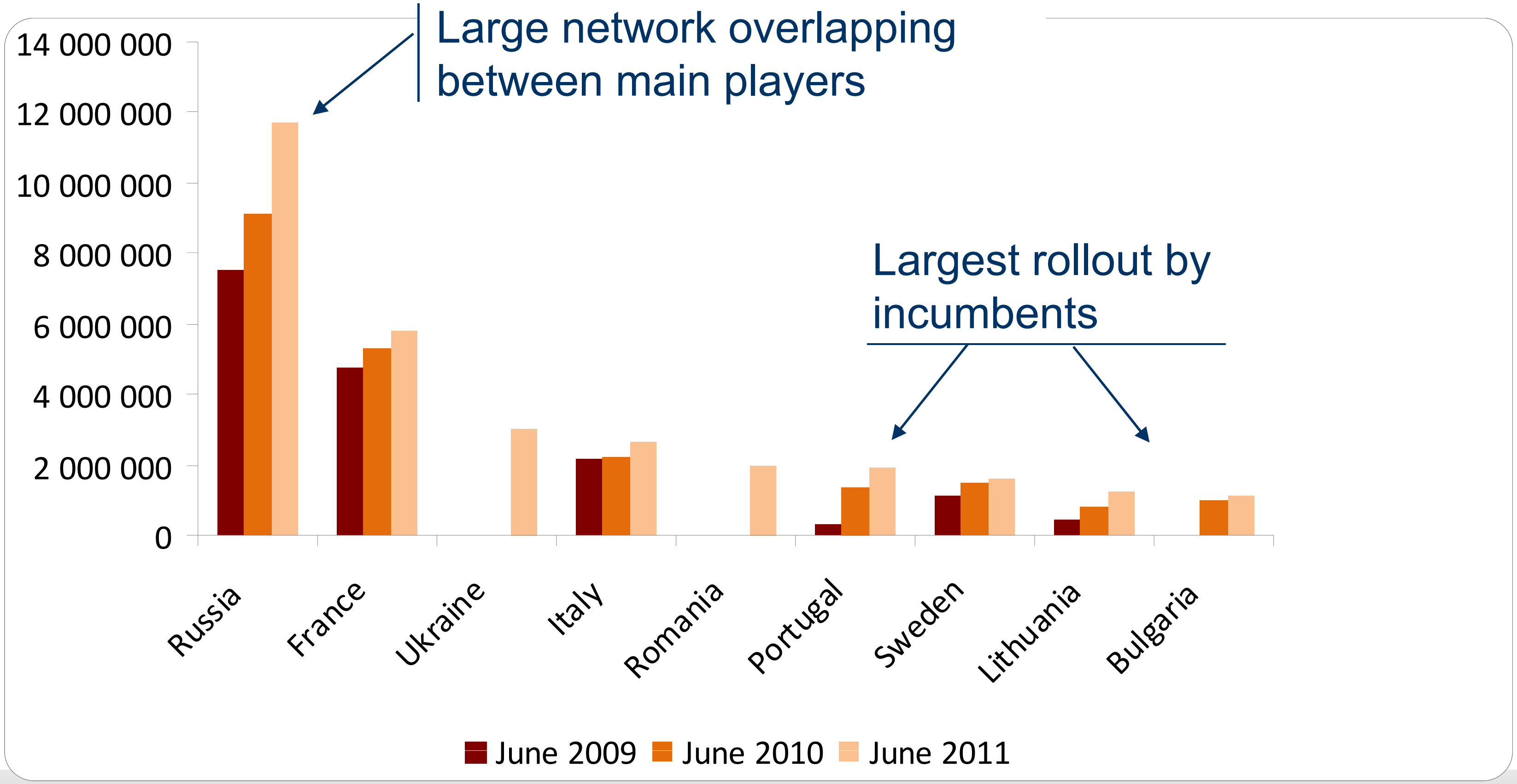
New FTTH/B subscribers 1H11

- **Top 5 countries**
  - France +87,300
  - Portugal +71,000
  - Bulgaria +69,000
  - Netherlands +43,000
  - Spain +41,149

(Russia: + 964,000)

FTTH/B Homes Passed evolution

- **Countries > 1 million FTTH/B Homes Passed at mid-2011**



Source: IDATE for FTTH Council Europe

FTTH/B Homes Passed trends

- Small growth in Italy, France, Sweden
  - With respectively 4%, 5% and 5% HP growth in 1H2011
  - Further rollouts planned in Italy on a national scale to be confirmed
  - Already good coverage in most dense areas, notably in France (FTTB)

- UK's accelerated coverage (>x2) reveals strong ambitions

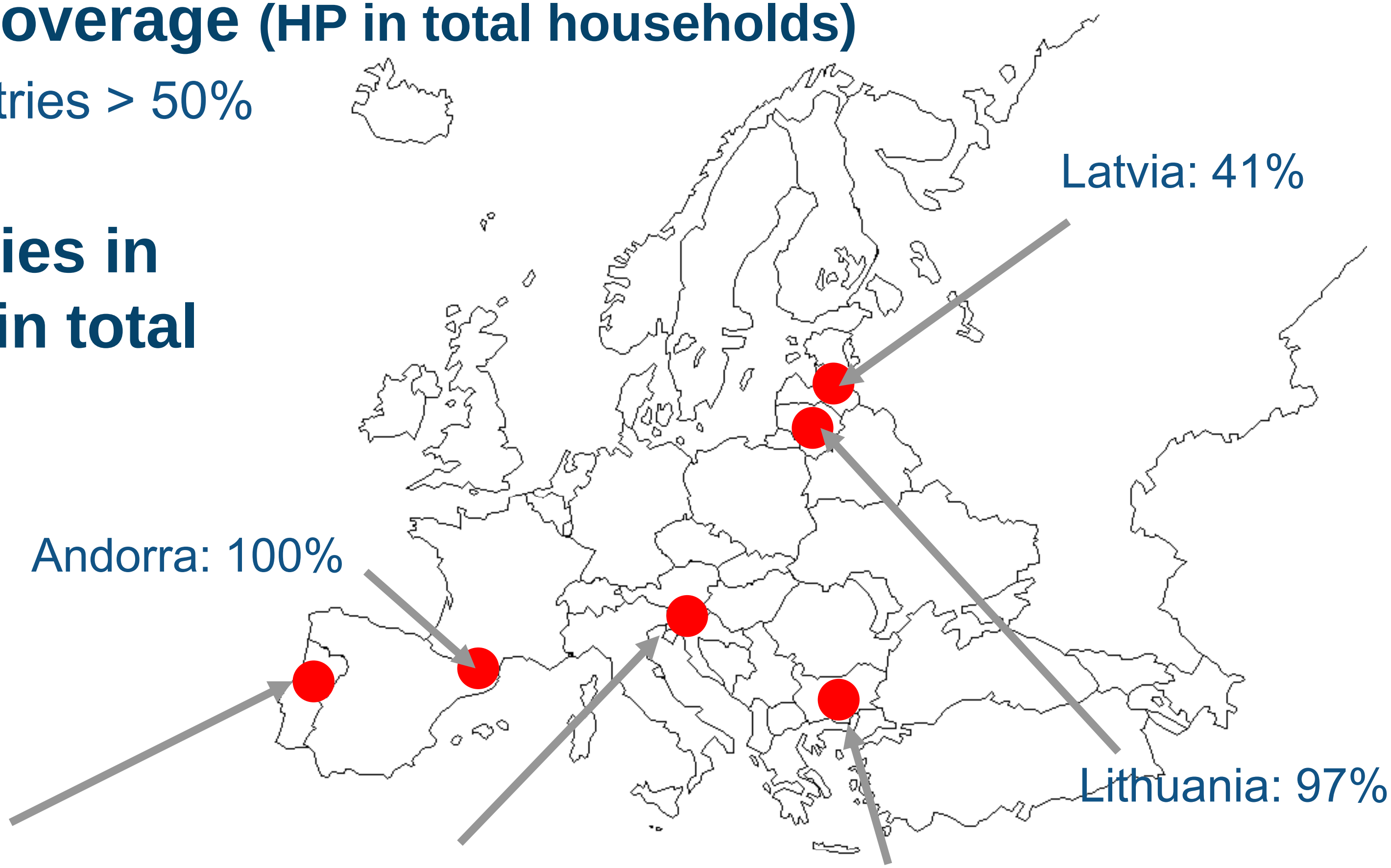
- European coverage supported by Eastern countries
  - Hungary : +172% during 1H2011
  - Poland : +77% during 1H2011
  - Estonia : +35% during 1H2011

FTTH/B Homes Passed in total HH

- **Number of Homes Passed not representative of effective coverage (HP in total households)**

  Only 2 countries > 50%

Top 6 countries in terms of HP in total households



FTTH/B leading countries

- **Pioneer Sweden always heading European FTTH/B market in terms of number of subscribers, but is getting really challenged by growing markets (France, Ukraine)**

- **Hungary's FTTH/B market is accelerating due to the multiplicity of local players**

- **The CIS countries case: potential of the market confirmed and still very huge for Russia and Ukraine**

- **A part from CIS, majority of subscribers concentrated in 7 countries**
  - Sweden, France, Italy, Lithuania, Norway, Netherlands, Bulgaria
  - Around 59% of total FTTH/B subscribers in EU35

FTTH/B leading countries

But number of subscribers less relevant than Take Rates *(1)*

From the highest…

In Scandinavian countries : 62% in Norway, 39% in Sweden

In Hungary (37%), Slovakia (32%) or Netherlands (32%)

In the Baltics : 27% in Lithuania

…to the lowest

In France (10%), Switzerland (5%), UK (<1%)

(1) Number of subscribers in total Homes Passed

Main conclusions & challenges for FTTH

- **Coverage still the priority of players, slow growth of subscribers in EU35**
  - +26% HP and +14% in terms of subscribers during 1H2011
- **Future growth to be led by Eastern countries**
  - Among which CIS (Russia and Ukraine), already dynamic markets both in terms of numbers of subscribers and homes passed
  - Dynamism of other markets is supported by the multiplicity of local players (Romania, Bulgaria, Hungary)
- **Hungary & Ukraine new entrants in the European Ranking**
- **National plans to leverage FTTH/B rollouts**
  - France, UK… Italy?

Main conclusions & challenges for FTTH

- **FTTH benefits not perceived by Consumers / Businesses**

  Especially in Europe: low Take Rate *(1)*!

  - At June 2011: South Korea at 59%, Japan at 45%
  - And Europe at mid-2011: 18.3% ... (France: 10% !!)

- **European incumbents getting more concerned by FTTH**

  Nearly all of them today Europe have a plan for FTTH or are deploying even if 55% of Homes Passed are still in the hands of Alternative operators & MSOs

- **Co-investment: the key for large scale national roll-out?**

  Announcements by main players in Italy, Switzerland, France, but results still expected

  One official objective: covering also non dense areas

(1) subscribers/Homes Passed

Summary

- Over 32m households connected to FTTH/B at end-2015 in countries covered by this forecast = about 11% of all homes in the region
- In the EU only, the total will touch 19m, or 10% of all homes
- Seven of the 21 nations analyzed should achieve “fibre maturity” (20% penetration) by 2015: Slovenia, Sweden, Denmark, Norway, Finland, Portugal and Slovakia. Five more should reach this figure by 2016
- Seven of the 21 nations still under 10% penetration at end-2015: Greece, UK, Poland, Belgium, Spain, Germany, Italy and Czech Rep
- Unlike most other regions, incumbents are not currently the major providers of FTTH, and this will remain the case
- The most striking feature of the market through the next five years will be its fragmentation across every dimension

European Commission Digital Agenda: 50% of European households connected to 100 Mbps by 2020

Why FTTH?

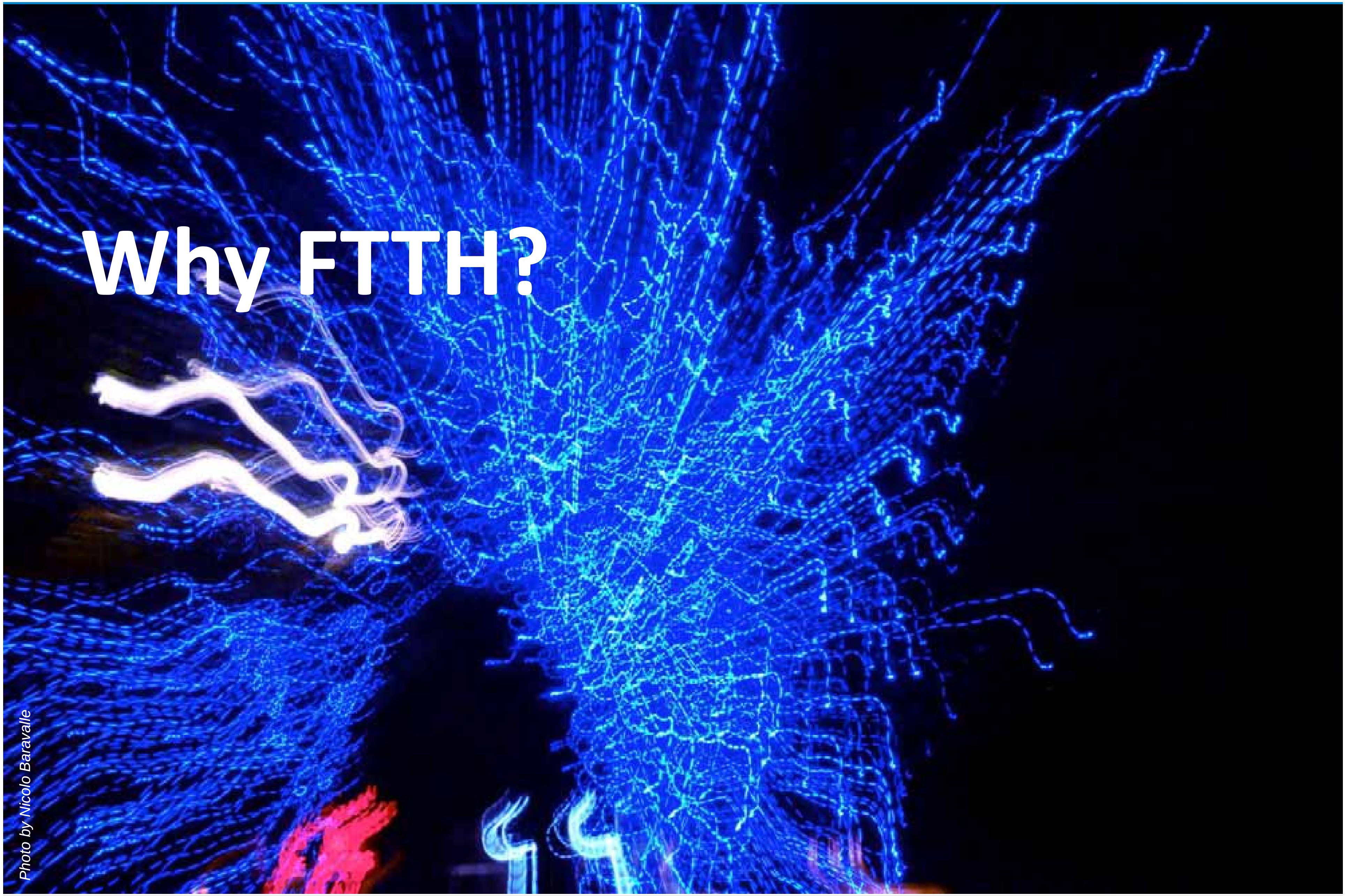


Photo by Nicolo Baravalle

FTTH for an enhanced experience

Fibre to the Home is an enabler

FTTH allows access to enhanced content & services:

- Real speed

  Download of 6.5 Gbyte DVD-film:

  10 Mbit/s DSL: 1.44 hours

  100 Mbit/s FTTH: 8.6 min

+

- Symmetry

  Upload of 300 holiday-photos (700 Mbyte):

  1 Mbit/s Upstream: 92 minutes

  10 Mbit/s Upstream: 9 minutes

  100 Mbit/s Upstream: 56 seconds

=

INTERACTIVITY

FTTH improves the way people live and work

FTTH for a better quality of life

FTTH for a better quality of life

Study by Ovum 2008 in Sweden for FTTH Council Europe

Study by Yankee Group 2009 in Bulgaria for FTTH Council Europe

- FTTH enables users to benefit from real broadband applications, content and services
- FTTH-users are ready to use new services for teleworking, eLearning, etc.
- FTTH-users are more satisfied
- Highest impact in rural areas

Study by PriceWaterhouseCoopers/Ecobilan 2008:

- Using FTTH and FTTH services can save up to CO^2 equivalent of driving a car for 4,600 km per year – for every household!

Only FTTH can save Europe’s healthcare systems

Only FTTH can save Europe’s healthcare systems

Higher life expectancy, fatter Europeans, more chronic diseases…

- Governments are pushed to reduce costs
- Regular monitoring is needed rather than hospital visits
- The trend is from a hospital centric system towards remote care

How can health service providers use FTTH to cut the rising cost of healthcare delivery AND improve service?

- FTTH provides high speed for download and upload, high quality of service, allowing interactive services over video
- Patients can stay in the comfort of their home, or be treated from their local doctors office
- Patients reduce their travel time/cost and their waiting time
- Hospitals reduce administrative costs and consultants’ time
- To make a change, 20% penetration of homes is needed

Some examples

Sweden – Nurse Gudrun

- Care channel: provides patients with online video consultations over their TV sets, reducing costs to 1/16

Portugal Telecom

- Part of the digitalisation of Portugal's healthcare system
- Doctors share diagnosis with their national & international peers, conduct remote consultations (10,000+ by April 2011), communicate with patients with serious or rare diseases

The Netherlands – town of Nuenen

- One of world's highest FTTH densities
- Video-based platform for elderly care, community exchange

FTTH is a key economic driver

FTTH is a key economic driver

FTTH is a critical driver for the knowledge economy

- Deployment of FTTH creates jobs
- New services create GDP growth, not only from ICT industry (entertainment industry etc.)

FTTH creates business opportunities & competitiveness

- Operators: increased ARPU (30%!), lower churn-rate, Opex savings
- Businesses: new ways of working, reduced travel & office rental costs, better time management, more innovation, better competitiveness
- Regions/Municipalities: retain and attract more businesses & investment, offer cost-efficient services to the community, increase local competitiveness

Conclusions

- FTTH improves the quality of life
- FTTH is a key economic driver
- FTTH contributes to a better environment
- **With FTTH, let’s build a sustainable future!**

Thank you for your attention!

www.ftthcouncil.eu

Fibre to the Home Council Europe