Press Conference: FTTH Global Ranking mid-2010

Broadband World Forum, Paris – 26 October 2010

Chris Holden, President, FTTH Council Europe

Roland Montagne, Director Telecoms Business Unit, IDATE

Fibre to the Home Council Europe

Agenda

- **FTTH Council Europe**
- **Why FTTH?**
- **FTTH Worldwide market:**
  - Europe in the slow lane?
  - FTTH Global Ranking
- **FTTH Panorama Background**
- **FTTH projects, players, technologies**
- **FTTH Challenges**

FTTH Council Europe

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 145 member companies

FTTH Middle East Conference 2010

30 Nov & 1 Dec – Beirut, Lebanon

www.conference.ftthcouncilme.org



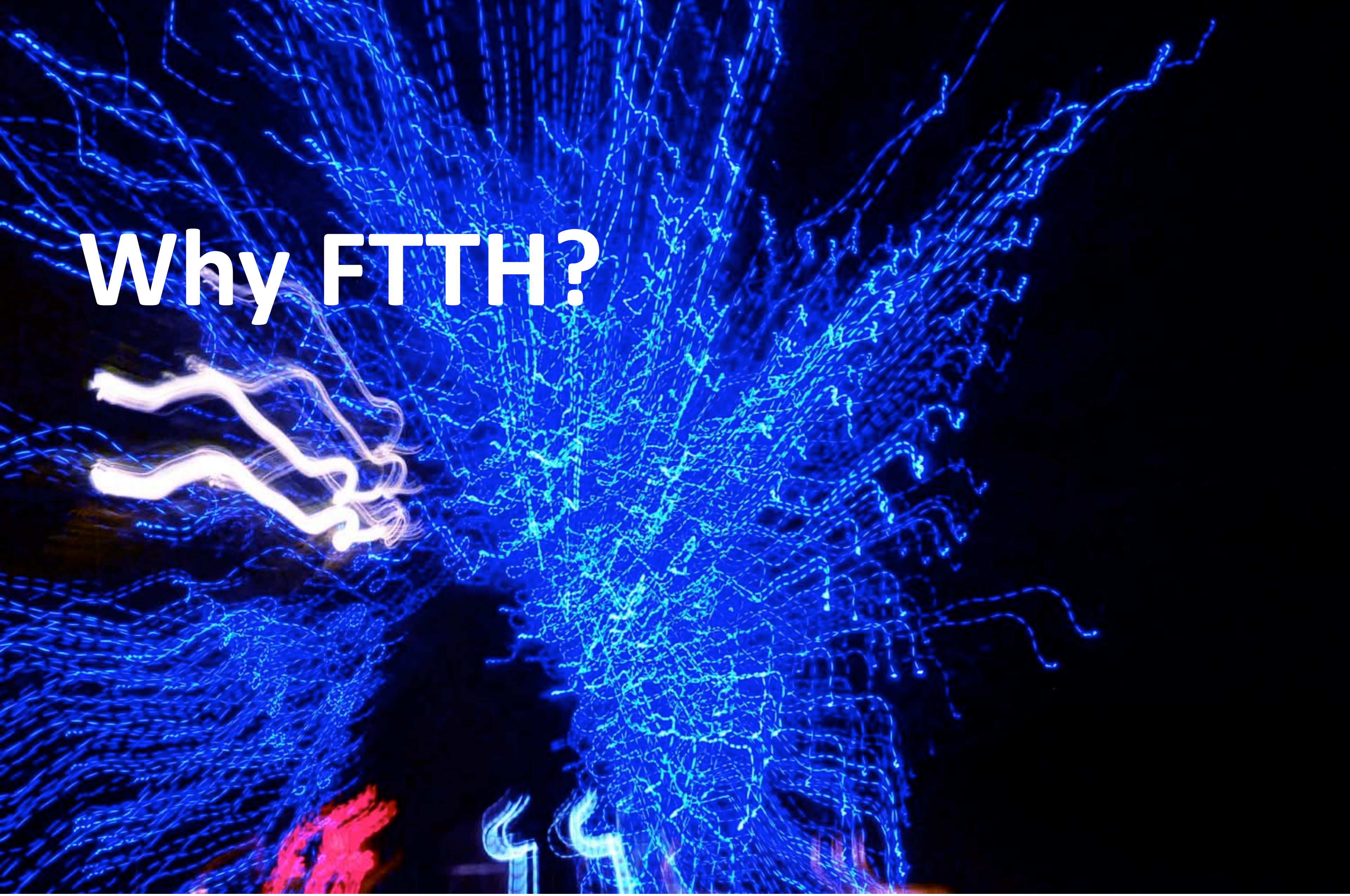



FTTH Conference 2011

9-10 February 2011, Milan, Italy

www.ftthconference.eu

Why FTTH?



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

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INTERACTIVITY

FTTH improves the way people live and work

FTTH for a better quality of life

Socio-economic impact

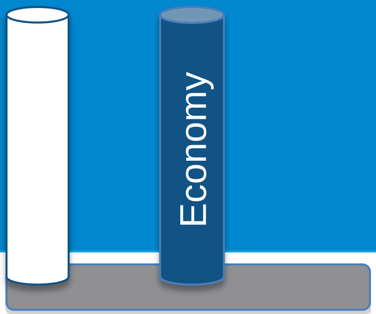
Society

Conclusions of Studies conducted for FTTH Council Europe, Ovum 2008 in Sweden + Yankee Group 2009 in Bulgaria:

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

FTTH is a key economic driver

FTTH is a key economic driver



FTTH is a critical driver for the knowledge economy

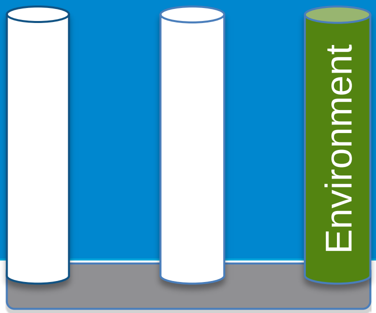
- Deployment of FTTH creates jobs
- New services create GDP growth, not only from ICT industry (entertainment industry etc.)

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

FTTH for a better environment

FTTH impact on the environment



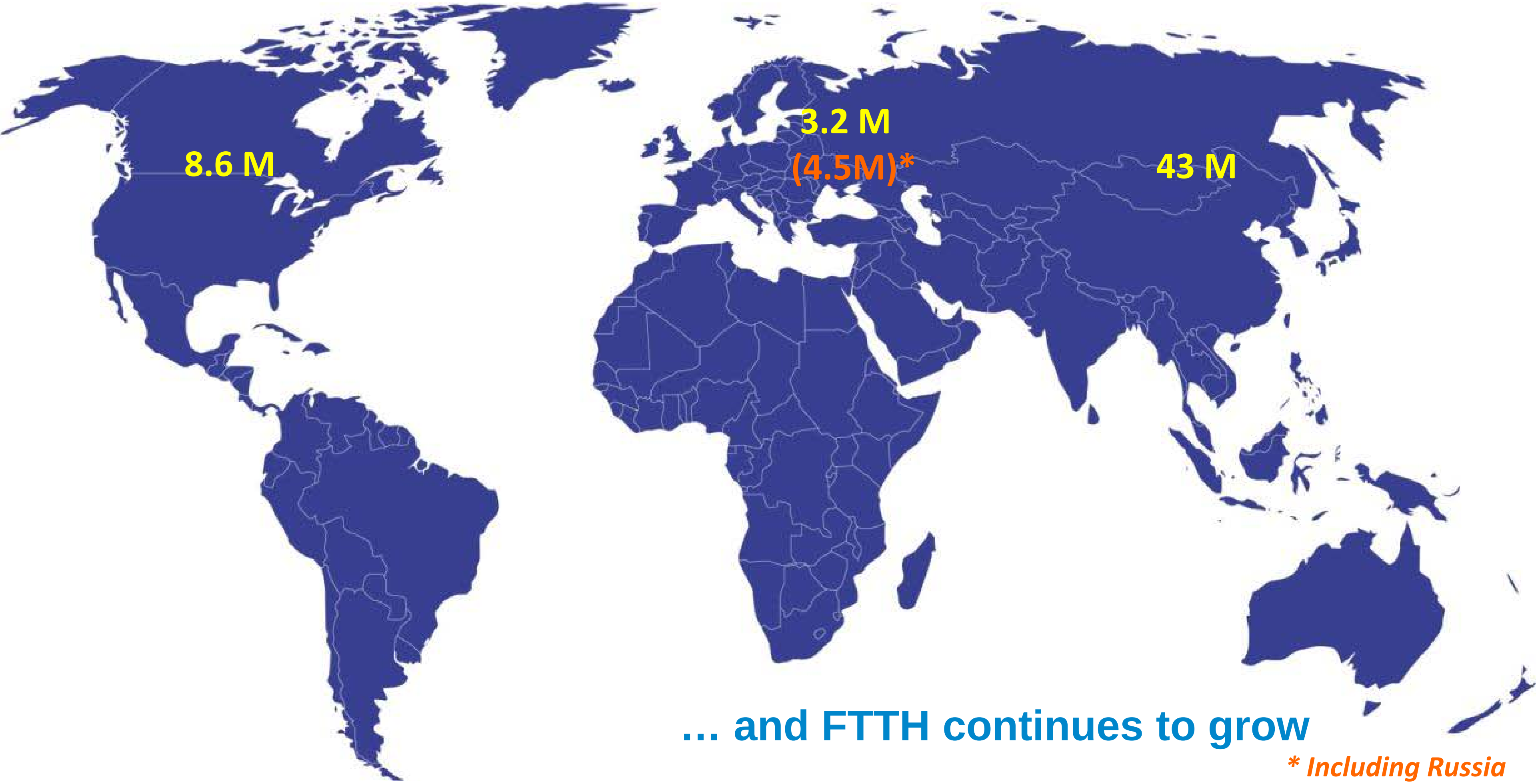
- FTTH has a positive impact on the environment: **1 million users** connected - at least **1 million tons of CO2 saved**
- FTTH is a **key sustainable utility driver** to **low carbon economic development.**
- **FTTH** can help nations, regions, municipalities, operators to meet their **carbon reduction objective**.

Conclusion

- 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!**

Europe in the slow lane?

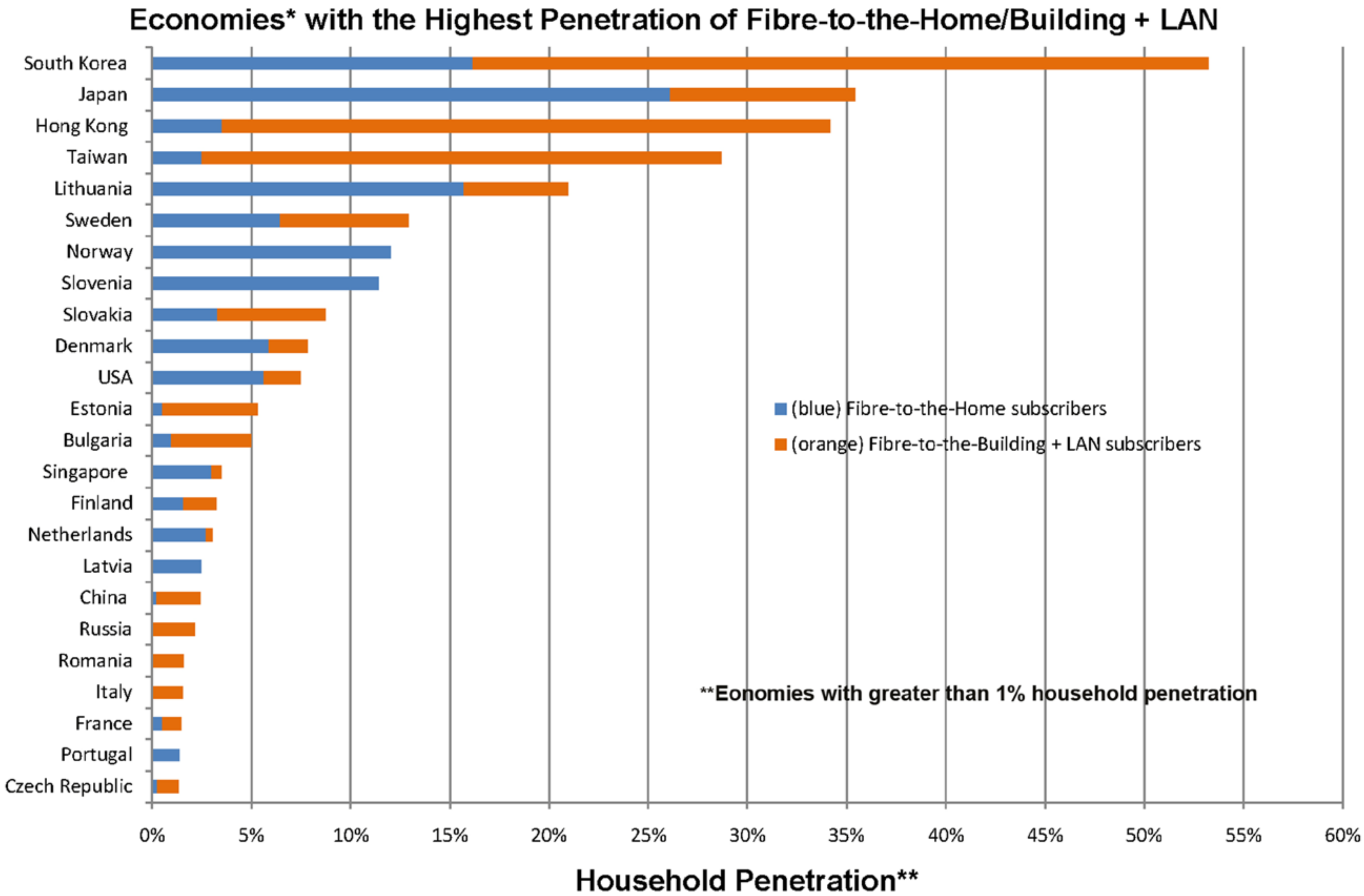
FTTH Global panorama mid-2010 – Total subscribers



… and FTTH continues to grow

*** Including Russia***

FTTH Global Ranking mid-2010



June 2010 Ranking

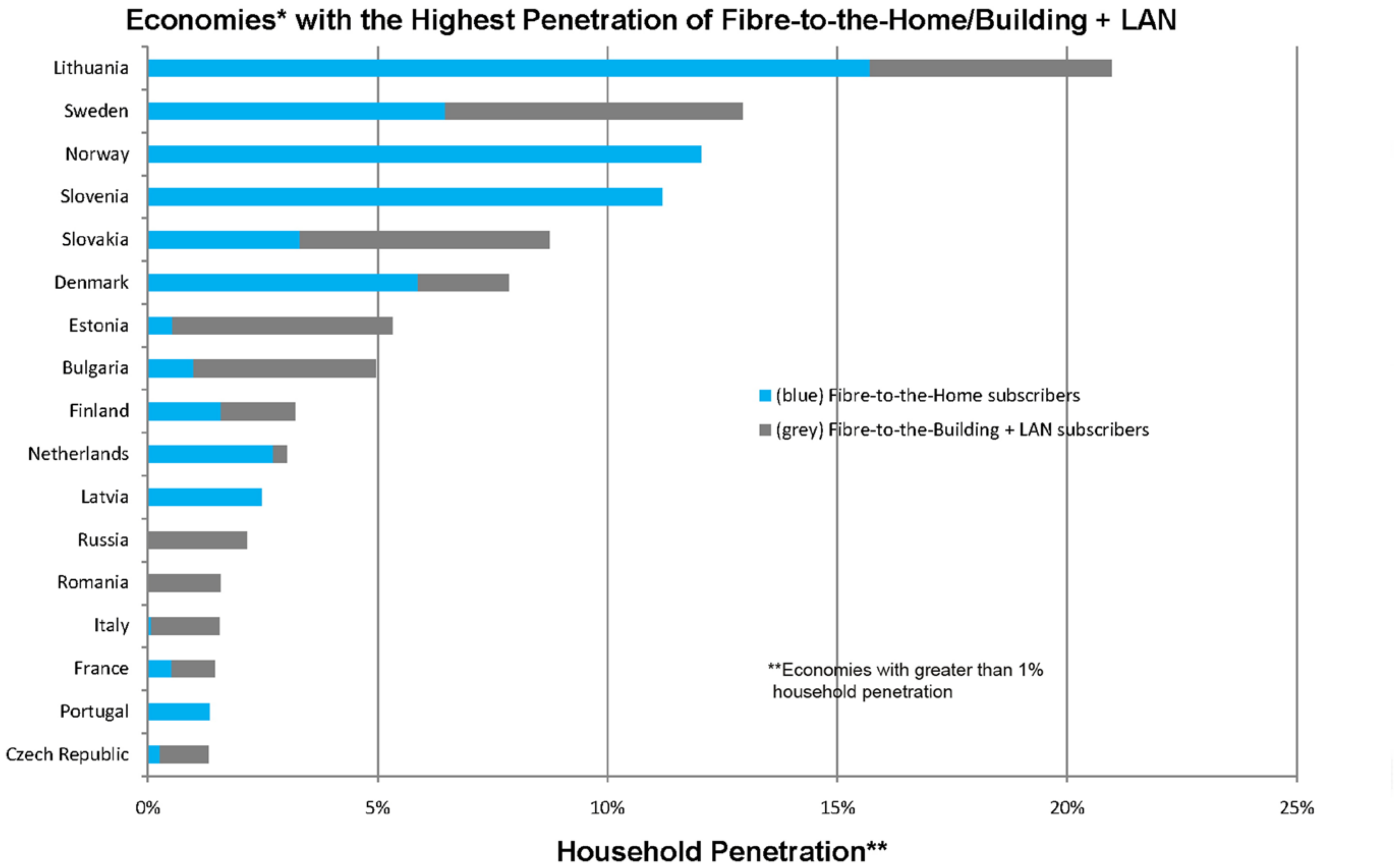
Source:

Fibre-to-the-Home Council

October 2010

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

FTTH European Ranking mid-2010



June 2010 European Ranking
Source: IDATE and
FTTH Council Europe
October 2010

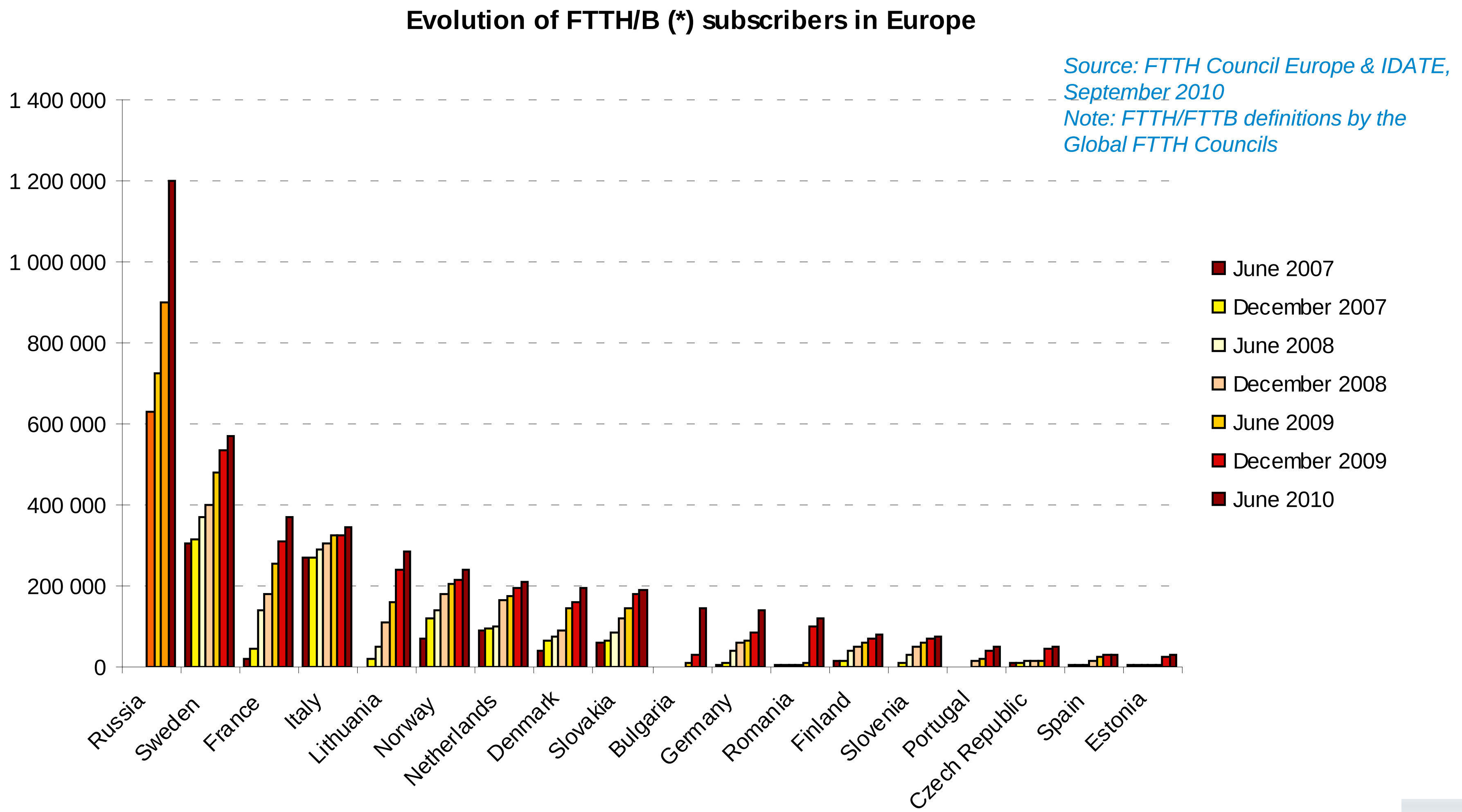
*Economies with at least
200,000 households

FTTH European Ranking – mid-2010

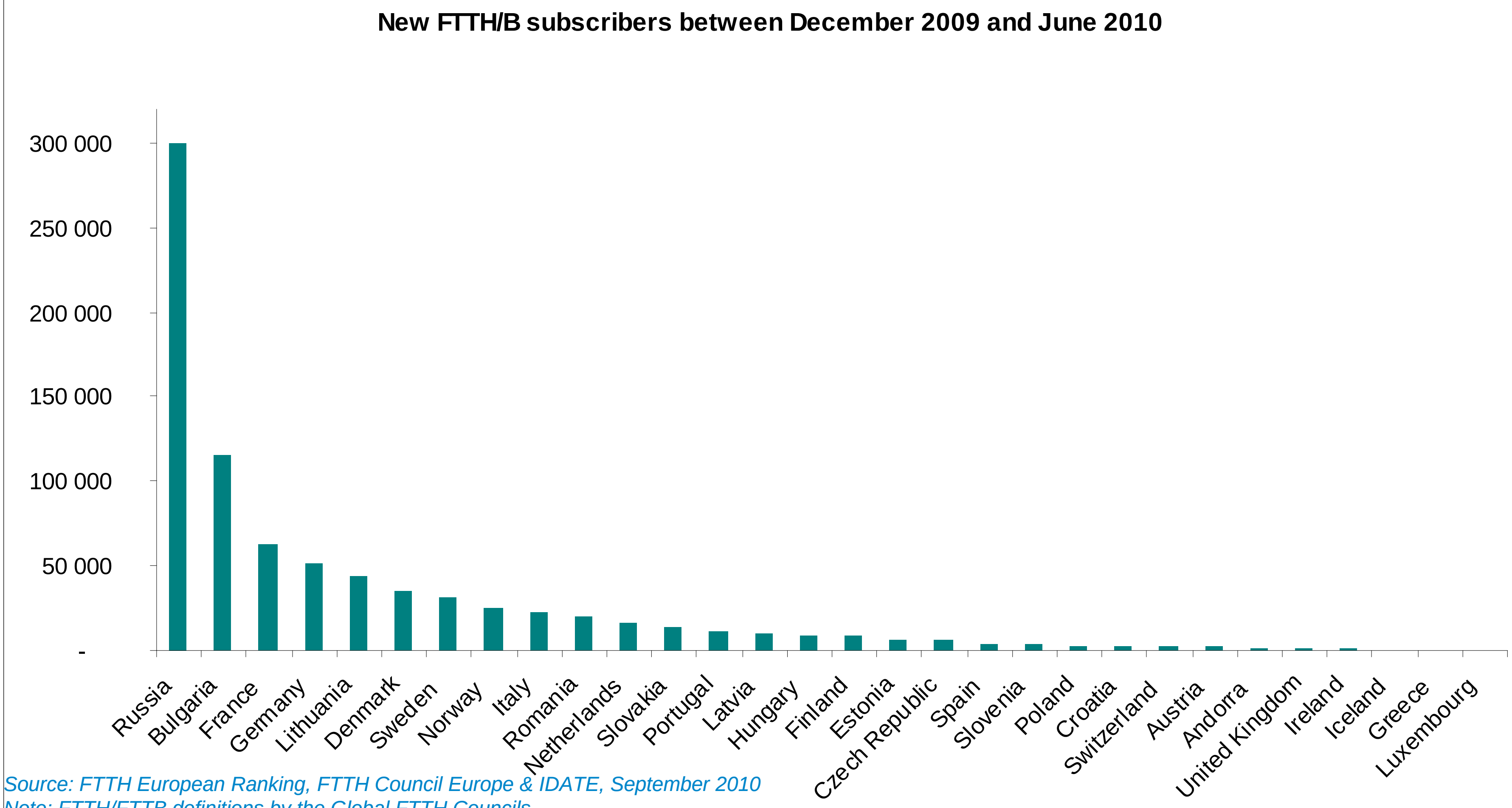
Countries	Households	FTTH/B subs June 2010	Penetration June 2010
Lithuania	1 357 000	284 400	20,96%
Sweden	4 400 000	569 000	12,93%
Norway	2 000 000	240 689	12,03%
Slovenia	670 000	75 000	11,19%
Slovakia	2 200 000	192 000	8,73%
Denmark	2 500 000	195 900	7,84%
Estonia	582 000	31 000	5,33%
Bulgaria	2 900 000	144 000	4,97%
Finland	2 476 500	79 390	3,21%
Netherlands	7 000 000	211 500	3,02%
Latvia	896 916	22 200	2,48%
Russia	55 869 494	1 200 000	2,15%
Romania	7 600 000	120 000	1,58%
Italy	22 300 000	347 000	1,56%
France	25 500 000	371 312	1,46%
Portugal	3 900 000	52 500	1,35%
Czech Republic	3 800 000	50 000	1,32%

Source: FTTH European Ranking, FTTH Council Europe & IDATE, September 2010
Note: The Ranking covers all countries with at least 200,000 households where FTTH/B penetration has reached 1% of the total number of homes.

Evolution of FTTH Subscribers in Europe - mid-2010

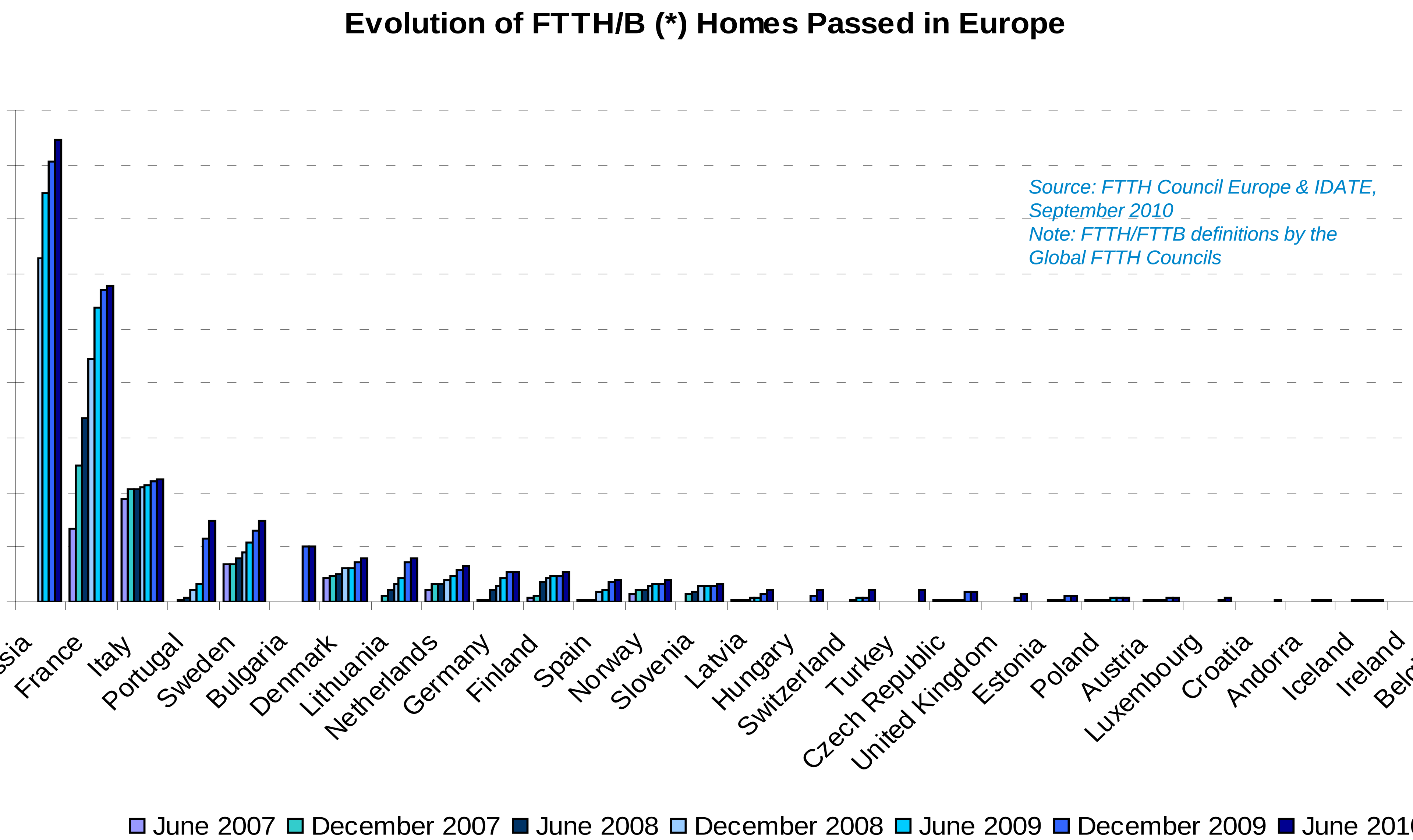


New subscribers per country in H1/2010

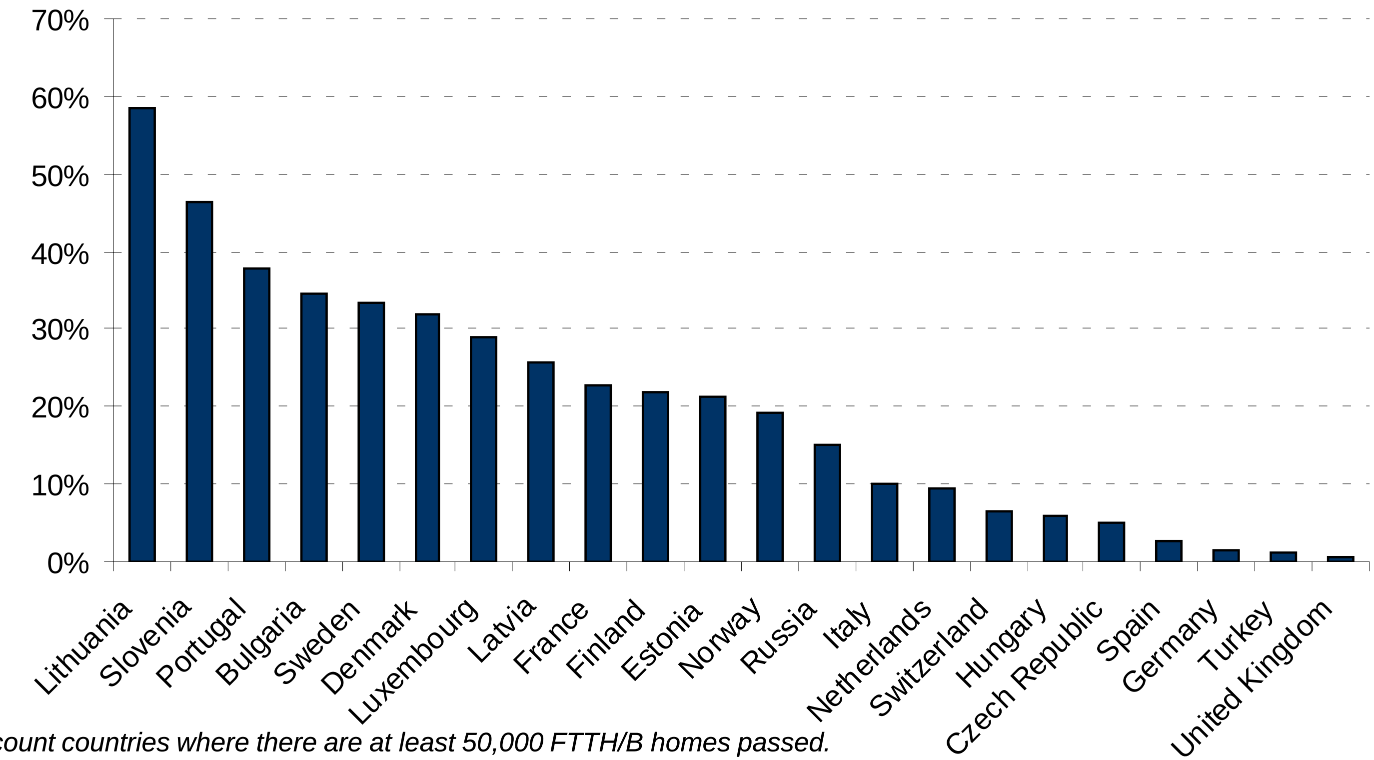


Source: FTTH European Ranking, FTTH Council Europe & IDATE, September 2010
Note: FTTH/FTTB definitions by the Global FTTH Councils

Evolution of FTTH homes passed in Europe - mid-2010



FTTH homes passed in Europe – mid-2010



1) *Taking into account countries where there are at least 50,000 FTTH/B homes passed.*

Source: FTTH European Ranking, FTTH Council Europe & IDATE, September 2010

Note: FTTH/FTTB definitions by the Global FTTH Councils

Conclusions – FTTH leaders

- **Strong growth of FTTH/B subscribers: > 50% in one year incl. Russia**
- **Growth of the FTTH/B market is led by Eastern European countries**
  - Bulgaria, Slovakia and Romania are showing their dynamics in terms of coverage and subscriptions
  - Lithuania is leading the EU Global Ranking with 21% penetration
- **However, most FTTH/B subscribers, in volume, are still concentrated in Western and Northern Europe (incl. mature markets in Sweden, Norway, France, Italy and Denmark)**
- **Efforts are to be made in order to increase penetration rates, which are still low**
  - This penetration rate can be high in small economies where FTTH/B deployment has been necessary to compensate lack of Broadband offers and where migration has been quite rapid

Conclusions – FTTH players

- **There are still more Municipalities and Power utilities than any other kind of FTTH/B players at mid-2010**

Players involved in FTTH/B Segmentation	June 2010		Dec 2009		June 2009		Dec 2008		June 2008	
Incumbents	28	11,0%	28	11,5%	26	10,8%	22	9,8%	22	9,5%
Municipalities / Power Utilities	134	52,8%	136	55,7%	135	56,0%	131	58,5%	136	58,9%
Alternative operators / ISPs	82	32,3%	70	28,7%	70	29,0%	61	27,2%	61	26,4%
Housing companies & Other	10	3,9%	10	4,1%	10	4,1%	10	4,5%	12	5,2%

Source: IDATE for FTTH Council Europe

- **Alternative operators are still the most dynamic and represent at mid-2010, including Russia, 72% of total European FTTH/B Homes Passed**

- **Incumbents are getting more and more involved: they represent more than 17% of FTTH/B homes passed at June 2010 compared to 15% six months earlier**

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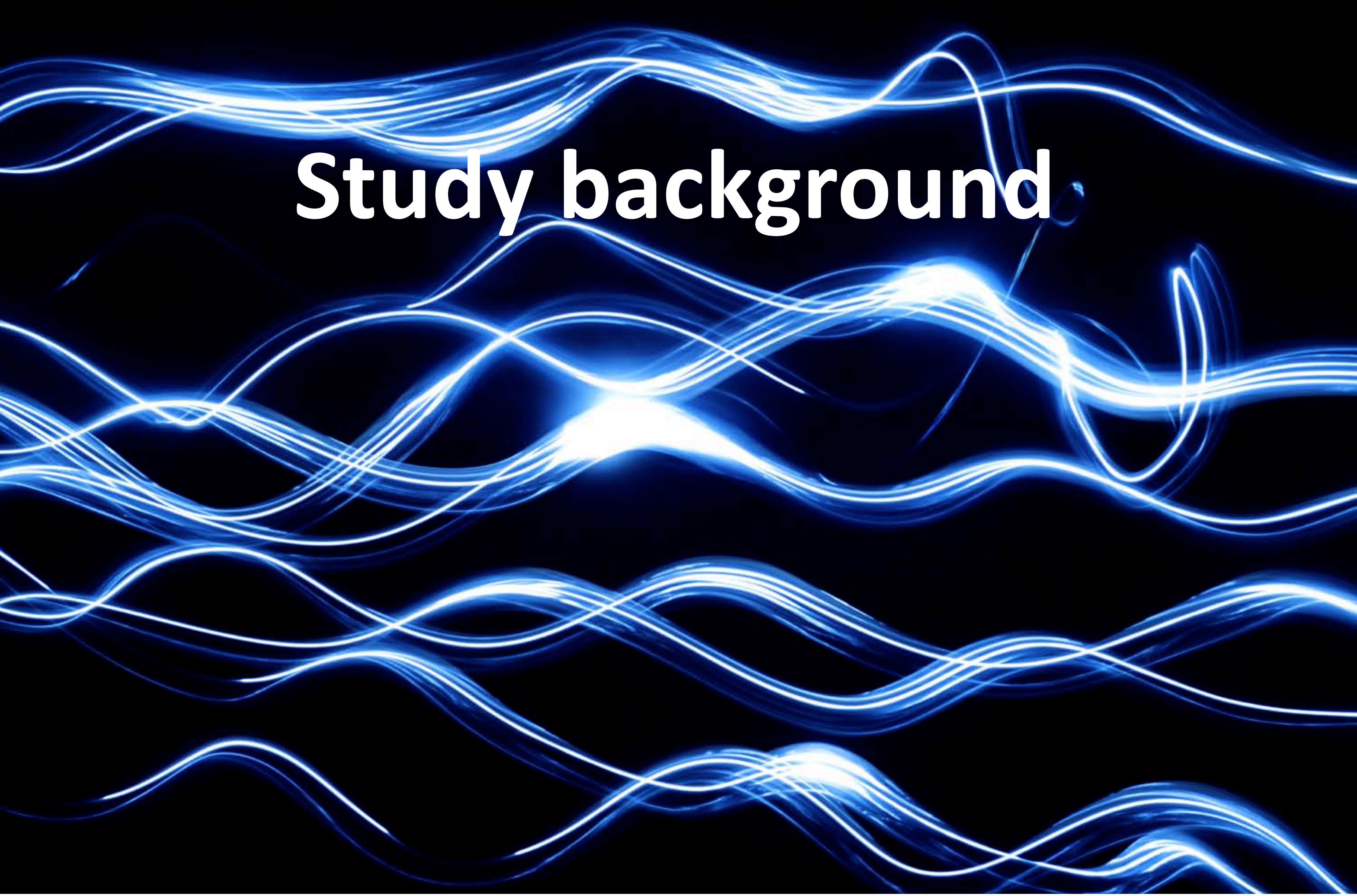
Study background



Background of the Study

▶ Objectives, available results

- IDATE has been commissioned by the FTTH Council Europe to provide a comprehensive overview of FTTH deployments in Europe 36 (EU 27 + Norway, Iceland, Switzerland & Andorra, as well as five countries in Eastern Europe : Russia, Ukraine, Croatia, Serbia and Turkey) and in 14 countries in the Middle East (8th 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 FTTx in Europe
  - Identification of **new projects**
  - **Characterization of each project:** Organisation 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)

Available results for EU36

About 260 projects listed in EU36

Quantitative

	June 2010	
	FTTH/B subscribers (*)	FTTH/B Homes/Buidings passed
Altibox (Lyse)	180 000	250 000
Tromsbynett / Pronea	17 000	26 500
Adger Energi	15 000	40 000
Kvinnherad Breiband	2 800	3 200
Alta Kraftslag	1 889	4 000
Tafjord	2 000	na
Telenor	na	na
Others (1)	22 000	58 000
Total FTTH/B	**240 689**	**381 700**
	FTTN subscribers (**)	FTTN Homes/Buidings covered
Total FTTN	**0**	**0**
Total Norway (***)	**240 689**	**381 700**

Qualitative

Orange Slovensko

Identification Operator/Organisation

Orange Slovensko is the largest mobile network operator in terms of subscribers in Slovakia.

The company launched a commercial offer in 2007 including triple-play fibre-to-the-home (FTTH) broadband internet, digital TV and fixed line voice telephony services under the FiberNet banner.

Before that a FTTH/GPON pilot has been launched in 2006.

Key parameters

Orange announced an investment of SKK1 billion (EUR32 million) to roll out a FTTH broadband network.
Currently the optical network is accessible in a total 15 cities in Slovakia, covering more than 301,000 households.

Figures

Number of Households/Business Units passed	30,000 households (December 2007) / 211,000 215,000 households at June 2008 (IDATE estimates) 215,000 househoIods at end 2008 (IDATE estimates) 280,326 Homes Passed at June 2009 293,000 Homes passed at December 2009 **301,000 Homes passed at June 2010**
FTTx subscriber base	500 Subscribers by December 2007 (IDATE Estimates) 4,000 FTTH subscribers at June 2008 (IDATE estimates) 8,000 FTTH subscribers at end 2008 (IDATE estimates) 29,000 FTTH subscribers at June 2009 37,500 FTTH subscribers at December 2009 **45,000 FTTH subscribers at June 2010 (IDATE estimates)**

Technical parameters

Nokia Siemens Network is the main provider for GPON.

MDU 70% / SDU 30%

FTTH Projects, Players, Technologies

FTTH in Europe: Projects

IDATE has identified about 260 FTTH/B projects in Europe of very different sizes

Some significant FTTH/B European deployments at June 2010

Different categories of players involved:

- **Alternative operators**
- **Cable operators**
- **Power Utilities**
- **Municipalities**
- **Infrastructure operators**
- **Incumbents**

Countries	Players		Homes/Buildings passed (June 2010)
Denmark	TDC	Incumbent	210 000
Finland	Telia Sonera	Incumbent	500 000
France	France Telecom	Incumbent	605 088
	Iliad/Free	Alternative Operator	380 000
	SFR	Alternative Operator	390 000
	Numericable	Cable Operator	4 400 000
Germany	Wilhelm Tel	Public	200 000
	M-Net	Public	120 000
	NetCologne	Power Utilitiy	170 000
Italy	Fastweb	Alternative Operator	2 000 000
	Telecom Italia	Incumbent	150 000
Netherlands	Reggefiber	Infrastructure	560 000
Norway	Lyse/Altibox	Pöwer Utility	250 000
Russia	Beeline (Vimpelcom)	Alternative Operator	8 300 000
Slovakia	T-COM	Incumbent	350 000
	Orange Slovensko	Alternative Operator	301 000
Slovenia	T2	Alternative	310 000
	Telekom Slovenije	Incumbent	110 000
Spain	Telefonica	Incumbent	350 000
Sweden	B2/Telenor	Alternative	500 000
	TeliaSonera	Incumbent	270 000
Lithuania	TEO	Incumbent	355 000
Hungary	Magyar Telecom	Incumbent	215 000
Portugal	Portugal Telecom	Incumbent	1 000 000
	Sonaecom	Alternative	300 000
	Zon	Cable Operator	170 000

FTTH in Europe: Players

Breakdown of homes passed for FTTH/B

Breakdown of players involved in FTTH/B (Number of homes passed as of June 2010)				
European Countries	Incumbents	Municipalities/Utilities	Alternative operators/ISPs	Housing companies and Other
Andorra	42 000			
Austria	10 000	47 500	5 500	
Belgium	1 250		2 500	
Bulgaria			1 000 000	
Croatia	35 500		16 500	
Cyprus			120	
Czech Republic			195 000	
Denmark	210 000	520 300	65 000	
Estonia	123 500			
Finland	500 000	6 606	11 250	26 144
France	605 088	8 500	5 170 000	
Germany		370 000	190 000	
Greece	na	na	na	
Hungary	215 000		na	
Iceland	4 000	29 000		
Ireland	100		16 800	
Italy	150 000	93 000	2 002 500	
Latvia	170 000		60 500	
Lithuania	355 000		439 000	
Luxembourg	56 000			
Malta				
Netherlands	na	331 997	69 410	261 093
Norway	na	381 700	na	
Poland	265	80 000	10 000	
Portugal	1 000 000		470 000	
Romania			na	
Russia			8 440 000	
Serbia				
Slovakia	350 000	na	301 000	
Slovenia	110 000		330 000	
Spain	350 000	42 500	20 000	
Sweden	270 000	589 500	520 000	85 000
Switzerland	180 000	32 500		
Turkey	na		200 000	
Ukrainia			na	na
United Kingdom	3 000	5 000	130 000	
Total homes passed	4 740 703	2 538 103	19 665 080	372 237
in %	17,4%	9,3%	72,0%	1,4%

FTTH in Europe: Technologies

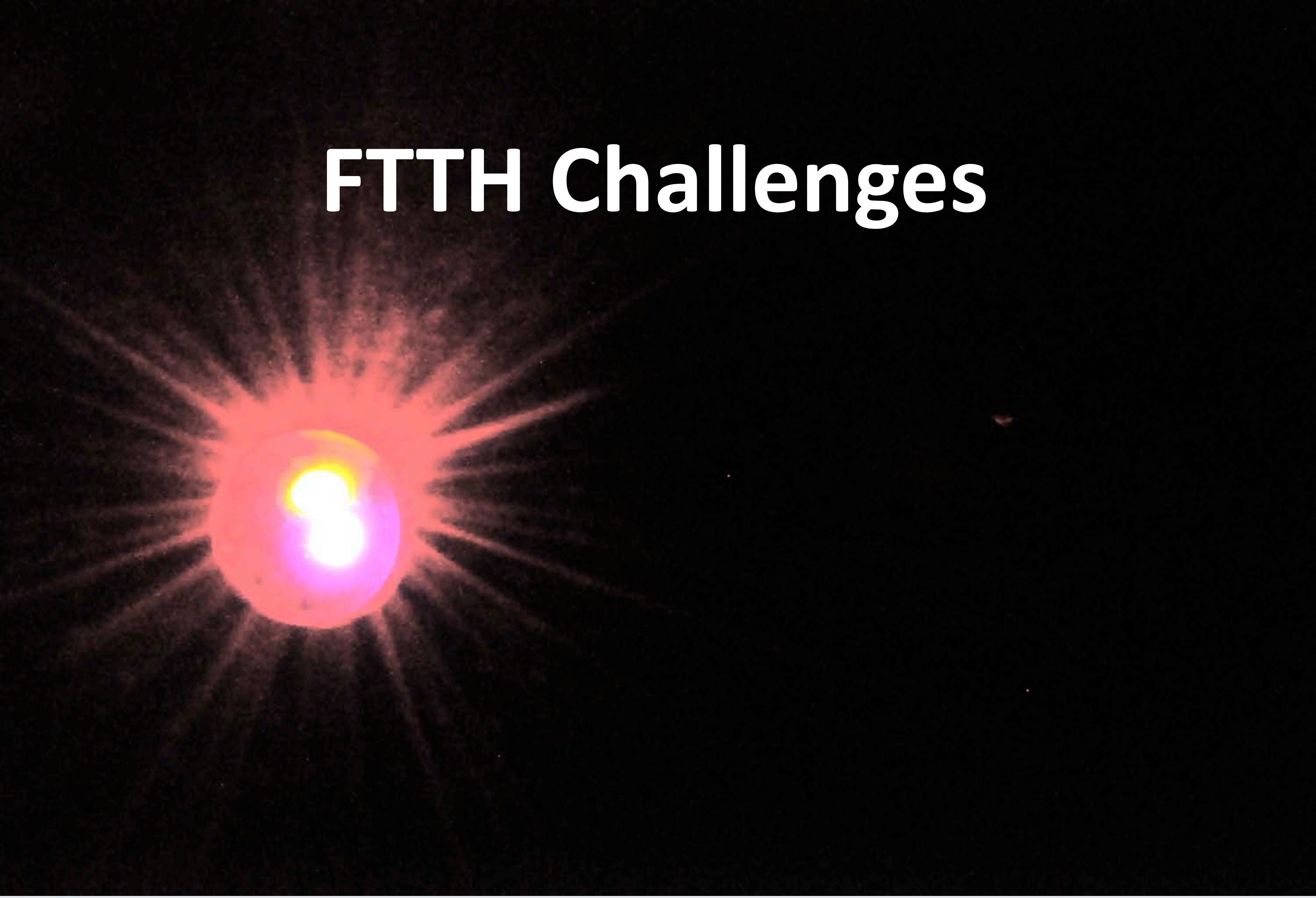
- In June 2010, the main architecture deployed is still FTTB
- Regarding technology, players have mainly chosen Ethernet
- Then, MDUs are still the principal target for Fiber deployments in Europe

Main architecture deployed (subscribers segmentation)	June 2010	Dec 09	June 2009
FTTH	37%	42%	42%
FTTB	63%	58%	58%

Main technology deployed (subscribers segmentation)	June 2010	Dec 09	June 2009
PON	18%	16%	19%
Ethernet	82%	84%	81%

Dwellings deployed (subscribers segmentation)	June 2010	Dec 2009	June 2009
MDU	75%	73%	71%
SDU	25%	27%	29%

FTTH Challenges



Technical challenges for FTTH

- **Consumers / Businesses need to understand FTTH benefits**
  - Especially in Europe: low penetration rate (subscribers/Homes Passed)!
  - At end 2009: Japan at 37%, USA at 29%
  - And Europe: 15%... France: 5% !!
  - A little better at June 2010: 17% for EU 36 and 6% for France
- **Property Managers need to be convinced!**
  - In Europe: 63% of FTTB subscribers at June 2010
- **Utilities Underestimate the Complexity of running an FTTH business**
  - Denmark has seen one of his main regional Power Utility (Dong Energy) resell its FTTH activity to the incumbent TDC in late 2009
- **Telcos in front of FTTH**
  - Telcos need to justify significant FTTH network investments
  - Telcos fear that high bandwidth means more disintermediation
  - FTTH to be deployed for final access… but also for LTE backhauling
- **OTT players underestimate the FTTH market**
- **Local Governments struggle to find Funding**

FTTH/B National plans: only a few in Europe

Main national FTTH/B programmes around the globe

Country/Programme	National investment (billion EUR)	Per capita spending (EUR)	Type of financing
Australia/ NBN	30	1,428.6	Construction of a national open access network
New Zealand/UltraFast BB	0.85	212.5	Acquisition of a stake, following local CFPs across the country
Greece	2.1	191.0	Construction of a national open access network
Singapore/ NGN National BB Network	0.56	124.5	Construction of a national open access network
France/ Plan National THD	2	32.8	Subsidy, following a local CFP
USA/ BB Stimulus	5.6 (only part of which is for FTTH)	Less than 18	Subsidy, following a local CFP

* Since total cost of the network has been revised down to around 37 billion AUD (nearly 26 billion EUR). The government in mid-2010 announced equity funding of around 18 billion AUD (12.8 billion EUR) over 4 years for the network's rollout

Source: IDATE , FTTx Watch Service 2010

Thank you for your attention!

www.ftthcouncil.eu

Fibre to the Home Council Europe