

Understanding the Digital World

FTTH/B Panorama

Europe (EU39) at December 2013

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Roland MONTAGNE and Valérie CHAILLOU

Agenda

- Study background & available results
- General overview
 - Figures at end 2013 per zone
 - Major projects
 - Main categories of players
 - Architectures and technologies
- Leading countries
 - General ranking (Homes Passed & Subscribers)
 - Highest growths
 - Key points
- European ranking
- Conclusions

Study background & available results

Study background

- Mission on behalf of the FTTH Council Europe – 12th edition
- 39 countries analyzed in 2013
 - For each country, IDATE provides data per player for FTTH/B and other fiber-based architectures
 - Each player is characterized via dedicated parameters : technical, financial, business model, figures
- Methodology: bottom-up approach
 - Desk research
 - Direct contacts with leading players and IDATE's partners in the countries
 - Information exchange with FTTH Council Europe members

Available results for EU39

Around 360 fibre projects listed in EU39

Quantitative information

FTTH/B data	December 2013	
	Nb of Subscribers	Nb of Homes passed
Total FTTH/B in Denmark	359 230	1 048 700
Wao	300 000	800 000
TDC	9 230	128 700
Others (1)	50 000	120 000

Qualitative information

Makedonski Telekom

Identification Operator/Organisation

Makedonski Telekom (Maktel) is the incumbent in the country and owned by Deutsche Telekom group. It operates on the fixed market under the brand name T-Home and on the wireless side under the brand name T-mobile.

Key parameters

At end of 2013, Maktel has invested more than EUR 25 million to deploy its FTTH network. Initially, it started to deploy its FTTH network in August 2008. The buildout concerned firstly the capital Skopje. Then the network has been extended to other cities including Bitola, Tetovo, Kumanovo, Ohrid, Stip, Strumica and Veles. Its objective is to cover 50% households at end 2016.

More generally in the country, the Ministry of Transport and Communications' plan regarding Next Generation Broadband, announced in April 2009, includes the switch from copper to fibre optic networks in the future.

In October 2013, MakTel launched a 1 Gbps solution. Triple play offers with Internet connection from 40/40 Mbps to 1/1 Gbps, TV services (from 50 to 80 channels) and phone call options are available for a monthly fee from 1,499 MKD (~24 EUR) to 5,399 MKD (~87 EUR).

Technical parameters

<u>Number of Households/Business Units passed</u>	60,000 FTTH Homes passed at June 2012 88,068 FTTH Homes passed at December 2012 130,000 FTTH Homes passed at Dec 2013 (IDATE estimates)
<u>FTTx subscriber base</u>	7,000 FTTH subscribers at June 2012 12,333 FTTH subscribers at Dec 2012 22,000 FTTH subscribers at Dec 2013 (IDATE estimates)

Technical parameters

FTTH GPON

Huawei is the partner to deploy the FTTH network

General overview

Figures at end 2013 per zone
Major projects & categories of players
Architectures and technologies

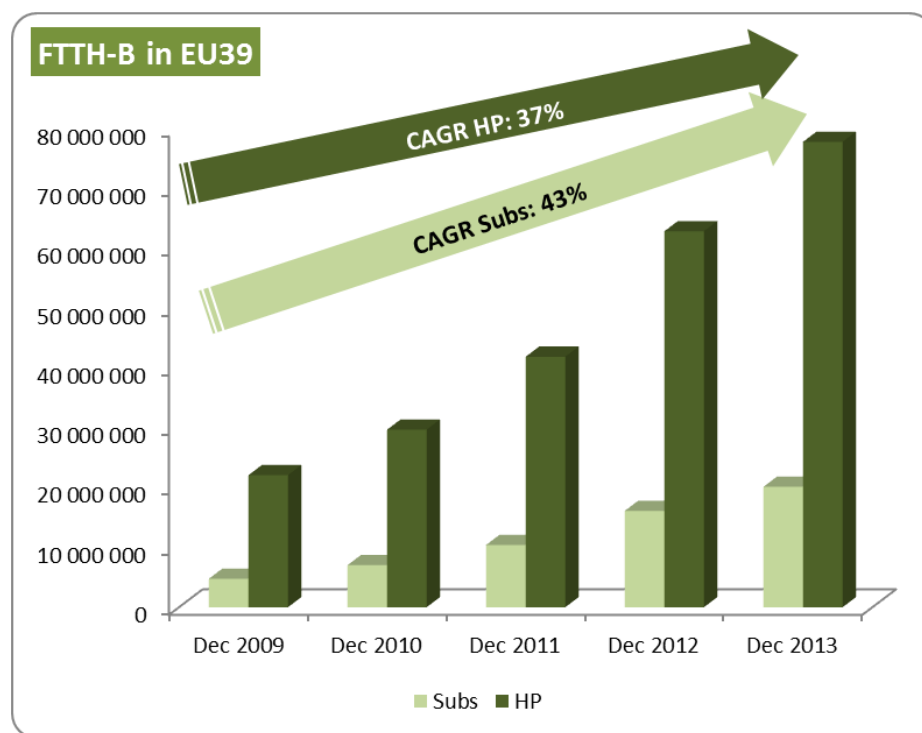
FTTH/B figures at end 2013

EU39: 20.1 M subscribers and 77.8 M Homes Passed

CIS countries (): 10.6 M subscribers*



Number of FTTH/B subscribers and Homes Passed
(Dec 2009 to Dec 2013)



Average take up rate in EU39 at end 2013: 25.9%

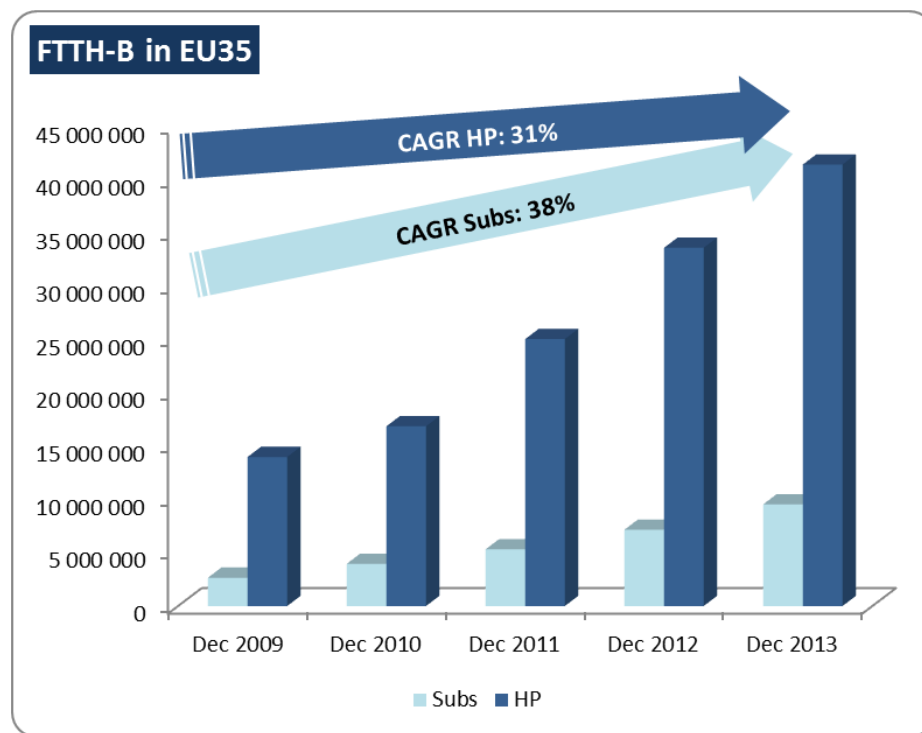
(*) Russia, Ukraine, Kazakhstan and Belarus

FTTH/B figures at end 2013

EU35: 9.5 M subscribers and 41.4 M Homes Passed



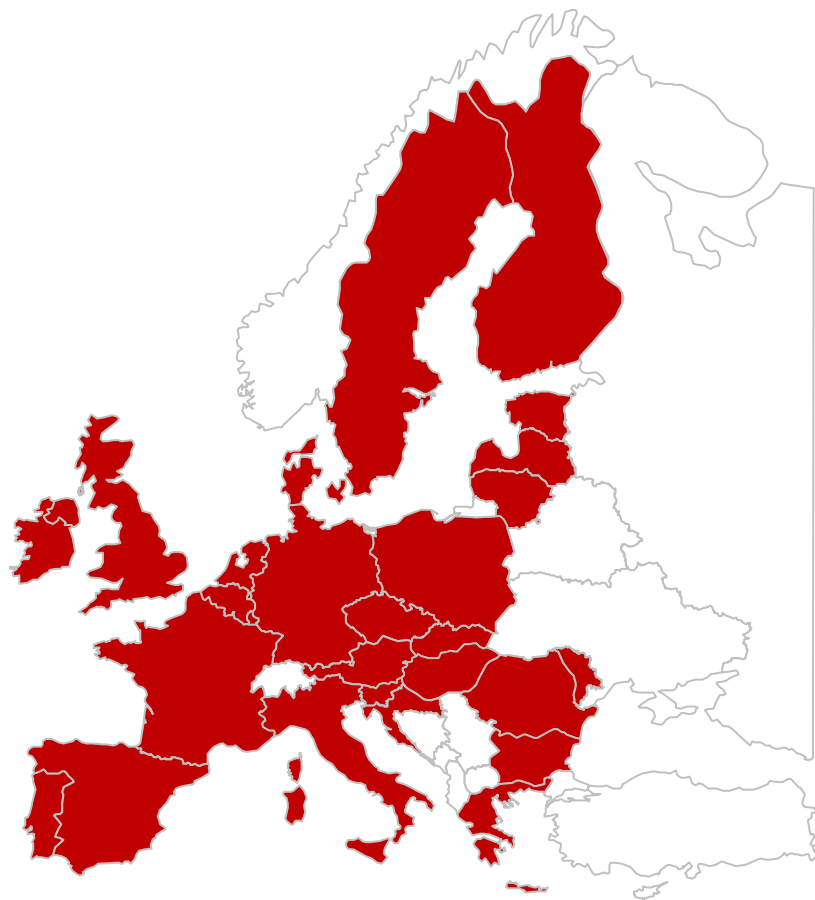
**Number of FTTH/B subscribers and Homes Passed
(Dec 2009 to Dec 2013)**



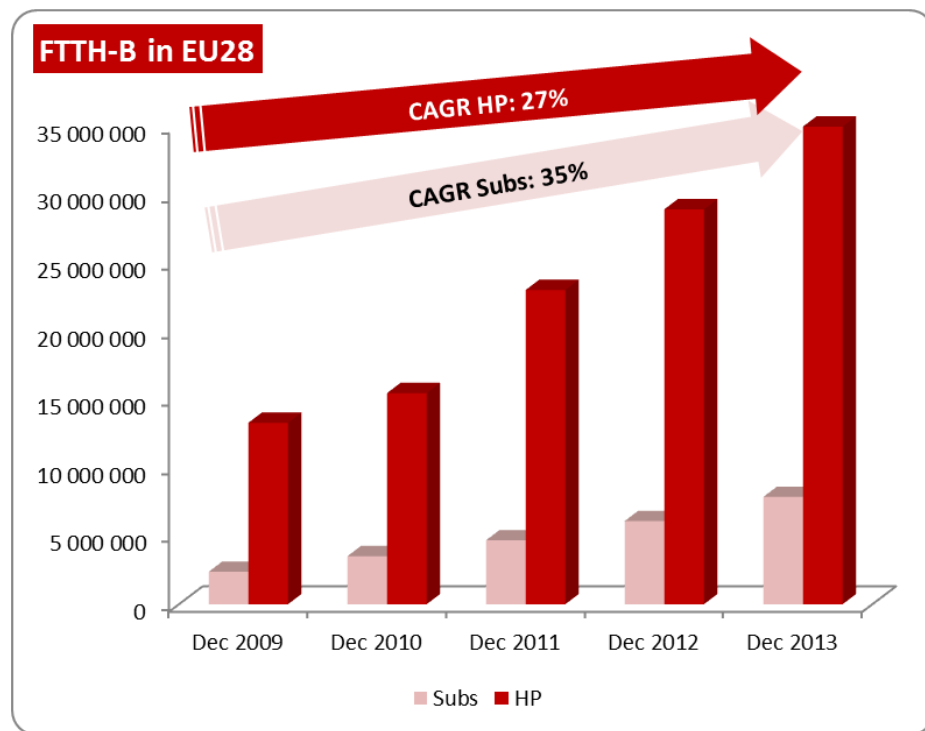
Average take up rate in EU35 at end 2013: 23%

FTTH/B figures at end 2013

EU28: 7.8 M subscribers and 34.9 M Homes Passed



Number of FTTH/B subscribers and Homes Passed
(Dec 2009 to Dec 2013)



Average take up rate in EU28 at end 2013: **22.5%**

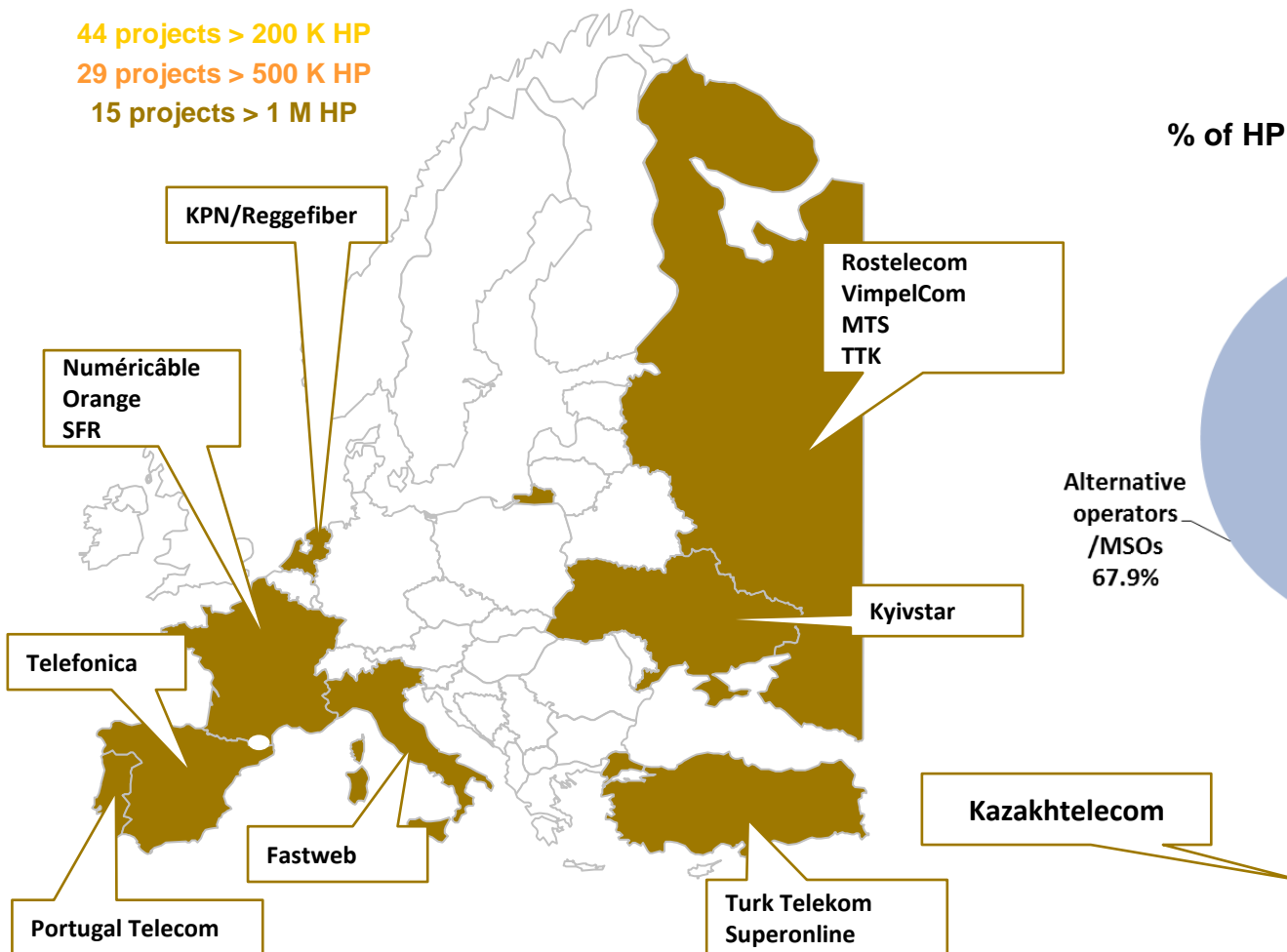
Major projects / categories of players

Around 320 FTTH/B projects in EU39 at end 2013

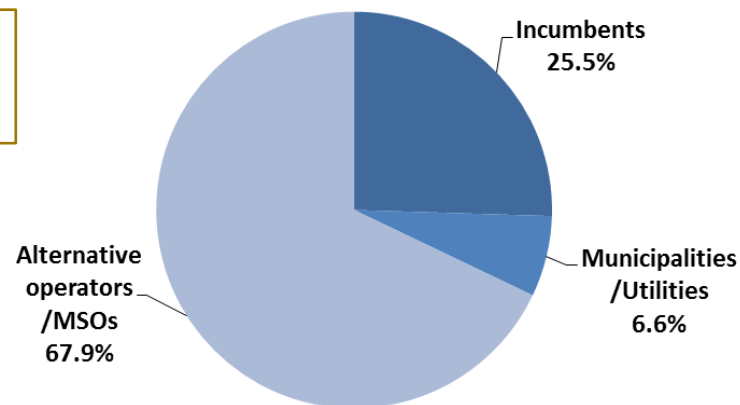
44 projects > 200 K HP

29 projects > 500 K HP

15 projects > 1 M HP



% of HP per category of player



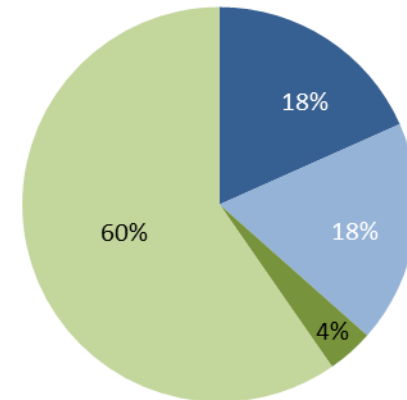
Technologies and architectures

EU39: 66% FTTB vs 34% FTTH - 29% PON vs 71% P2P

EU28: 43% FTTB vs 57% FTTH - 45% PON vs 55% P2P

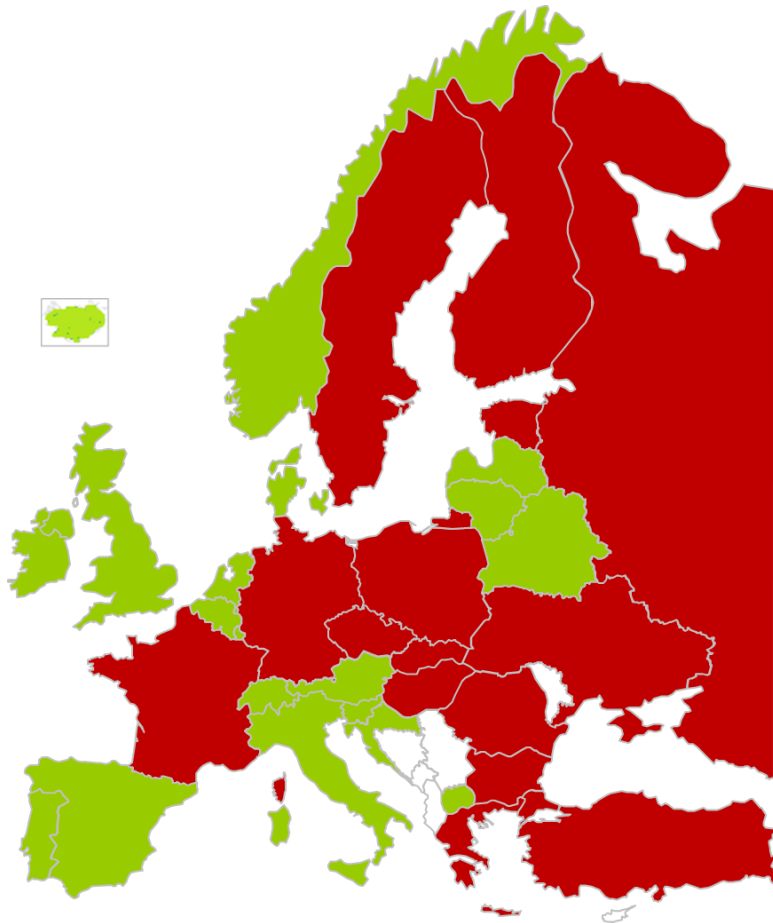
(Homes Passed segmentation)

% of HP per technology in EU28



Countries where coverage is:

■ 100% PON ■ >= 50% PON ■ 100% P2P ■ > 50% P2P



Mainly FTTB

Mainly FTTH

Leading countries

General ranking HP & subscribers
Highest growths
Success stories

General ranking: FTTH/B Homes Passed

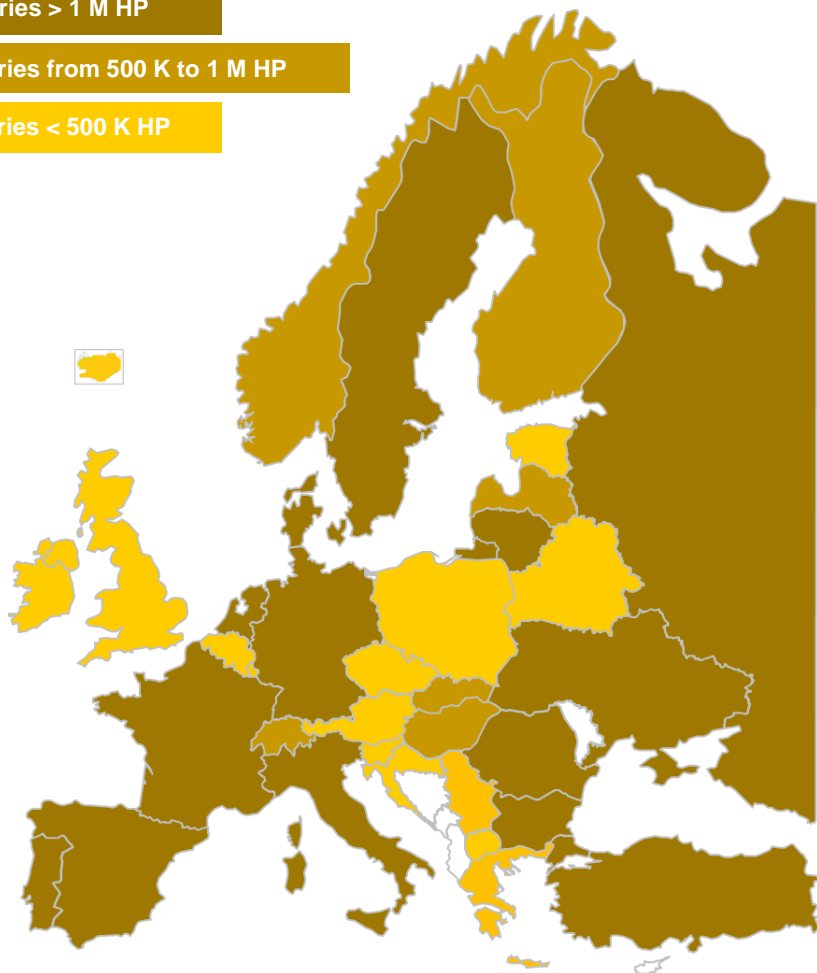
15 countries with 1 M HP or more in EU39

11 countries in EU28

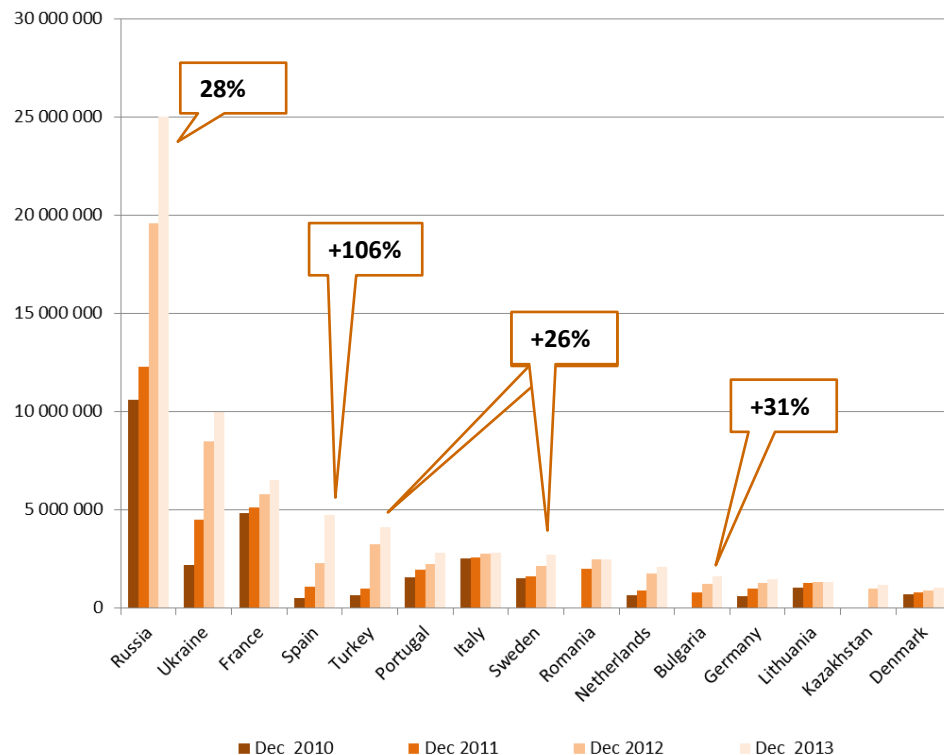
Countries > 1 M HP

Countries from 500 K to 1 M HP

Countries < 500 K HP



Countries with 1M HP or more at end 2013
[Top 5 Growth rates 2013]



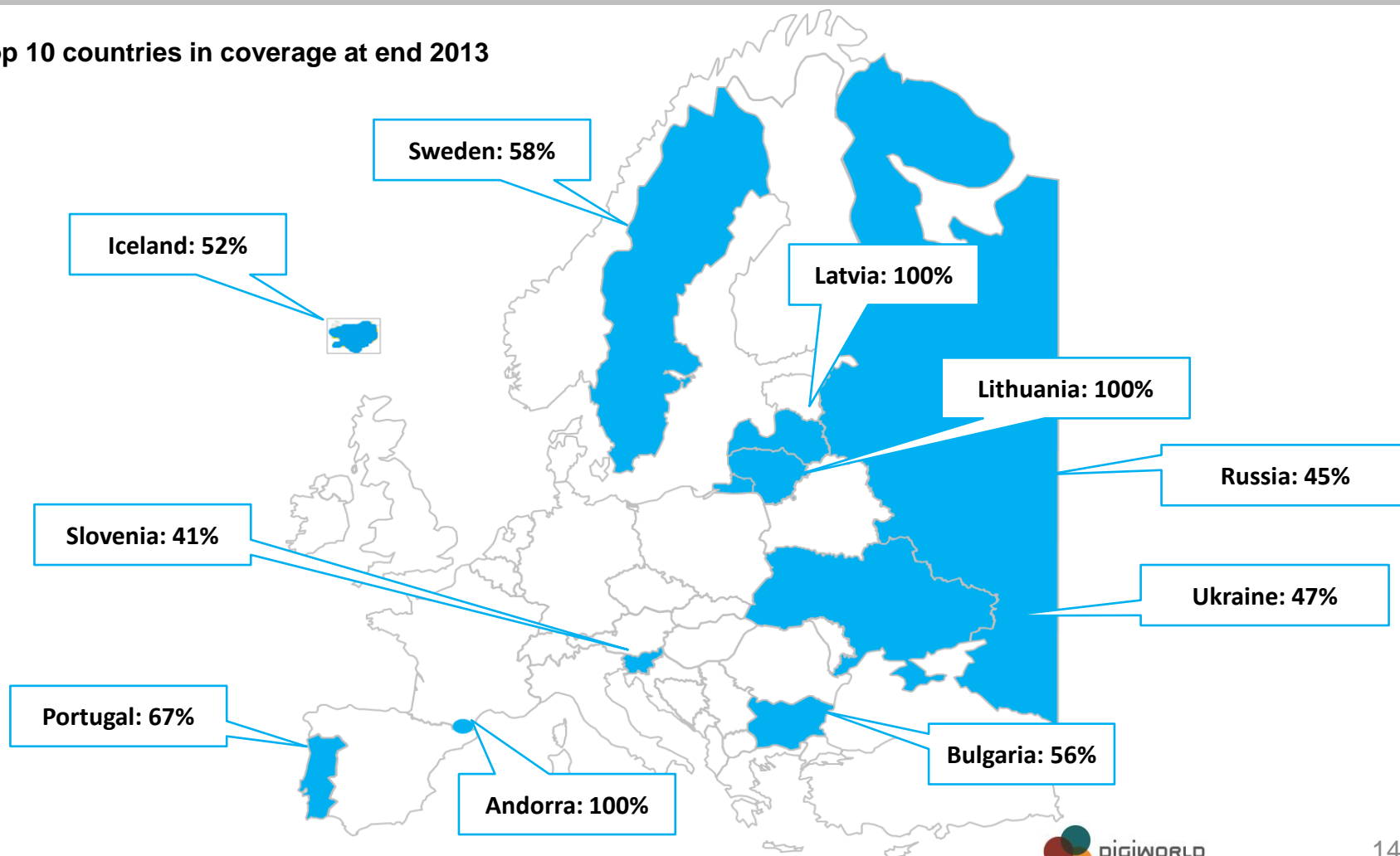
General ranking: FTTH/B Coverage

Average FTTH/B coverage (*)

EU39 : 24%

EU28: 16%

Top 10 countries in coverage at end 2013



General ranking: FTTH/B Subscribers

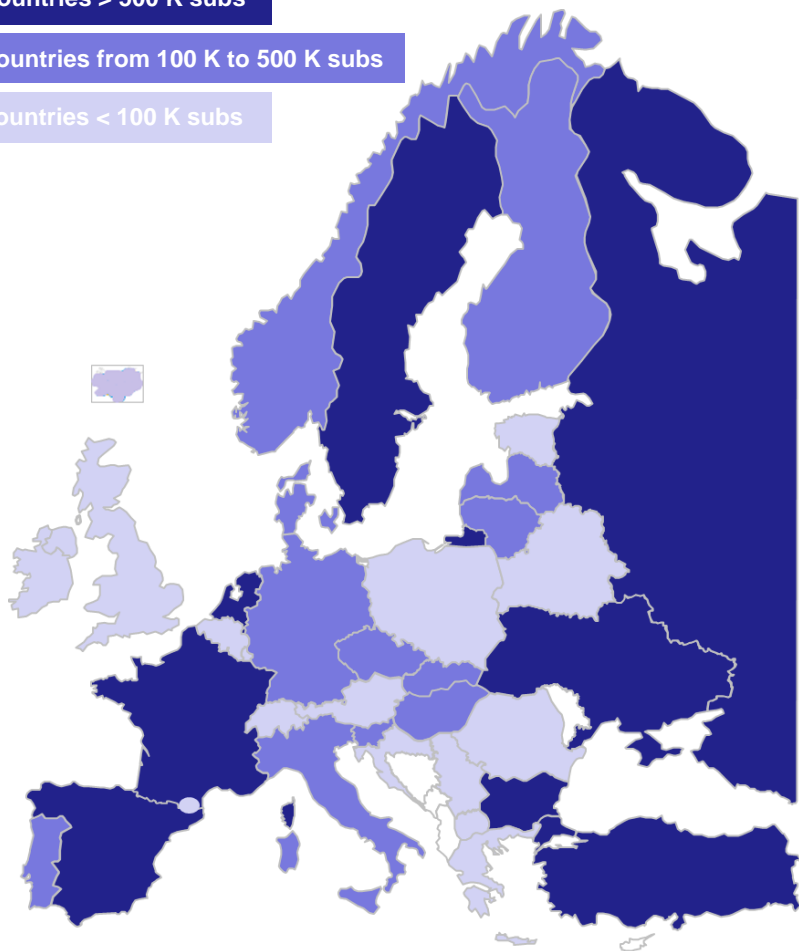
5 countries with 1 M subs or more in EU39

Sweden and France in EU28

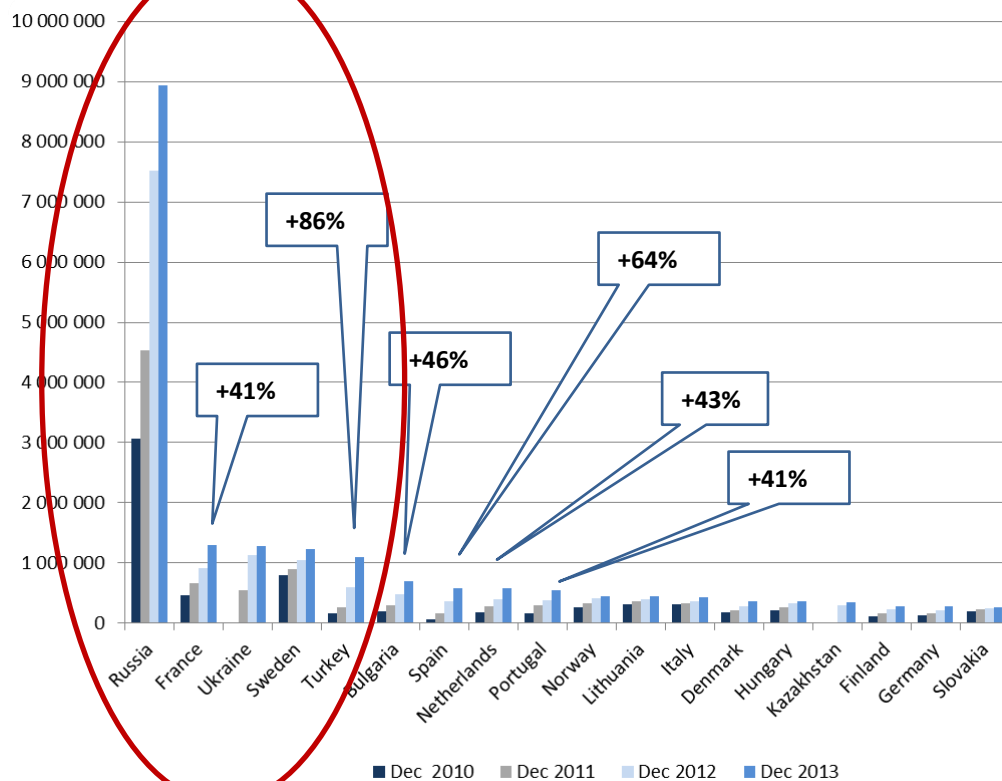
Countries > 500 K subs

Countries from 100 K to 500 K subs

Countries < 100 K subs



Countries with 200 K subs or more at end 2013
[Top 5 Growth rates 2013]



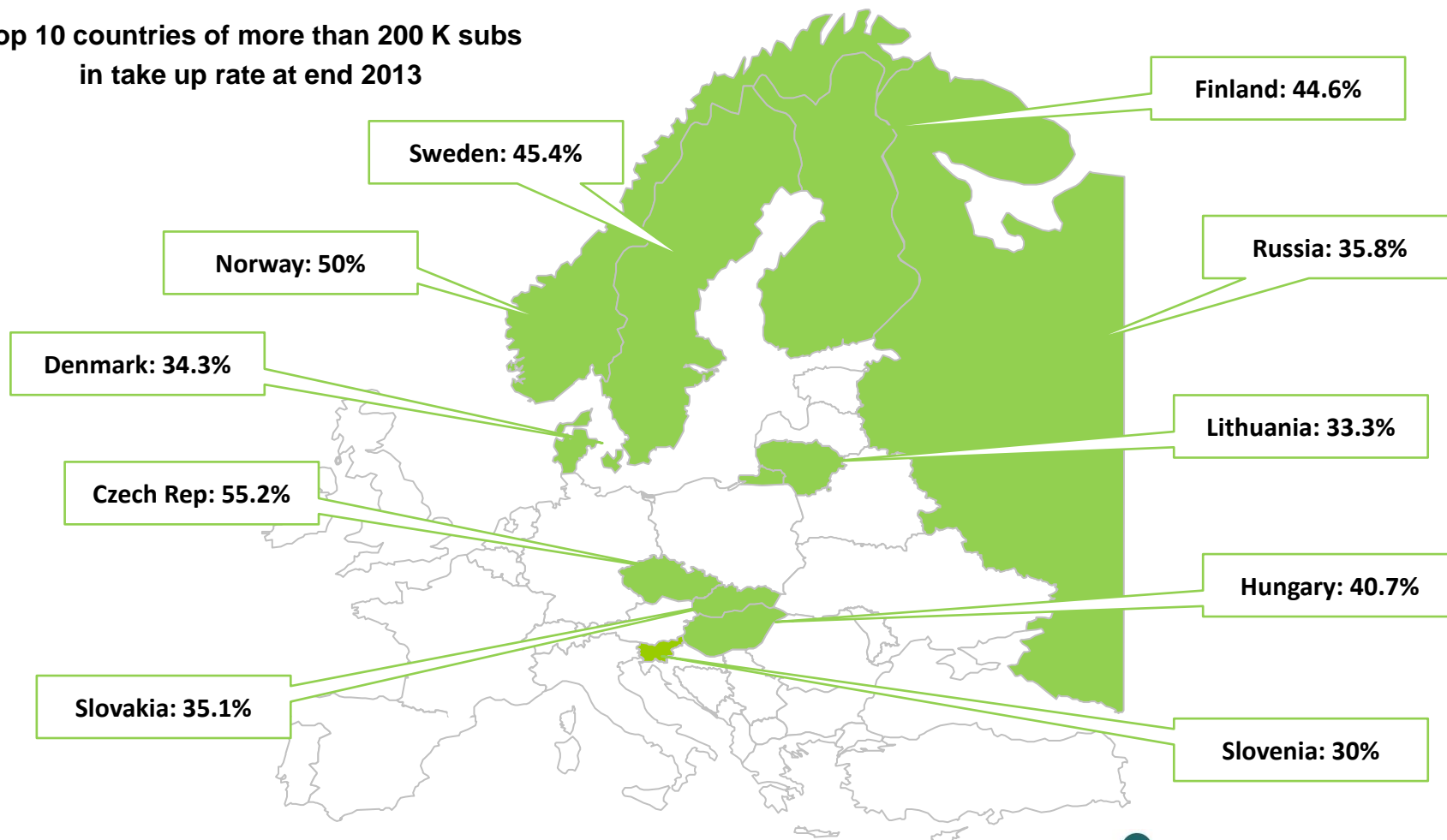
General ranking: FTTH/B take up rate

Average FTTH/B take up rate (*)

EU39 : 25.9%

EU28: 22.5%

Top 10 countries of more than 200 K subs
in take up rate at end 2013



Highest growths: New FTTH/B subscribers in 2013

20% of FTTH/B subscribers in EU39 are 2013 “new subscribers”

This rate reaches 22.5% in EU28

Top 4 countries for 2013 new subs in EU39

Russia	→	+ 1.423 K
Turkey	→	+ 510 K
France	→	+ 373 K
Spain	→	+ 227 K



← % of EU28 2013 new FTTH/B subscribers

France + Spain + Portugal => 31%

Scandinavian countries + Netherlands => 31%

Eastern countries => 25%

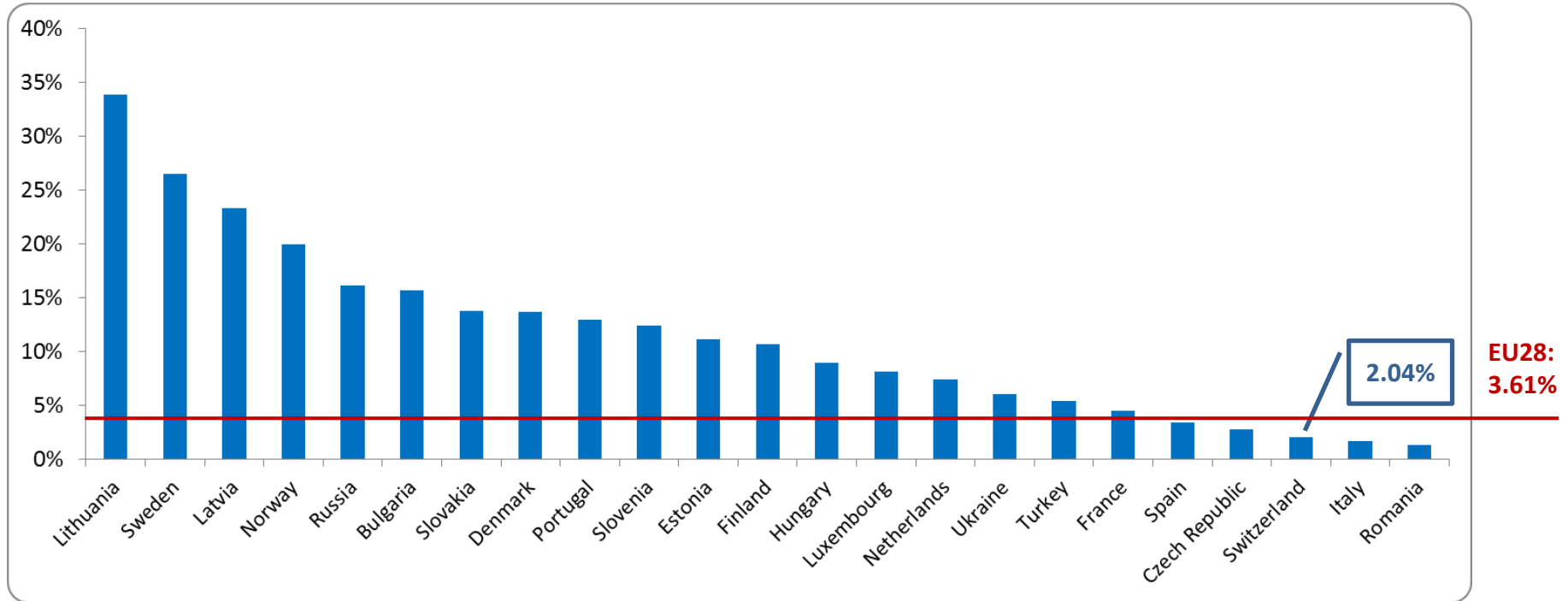
Rest of EU27 => 12%

Key points

- The coverage is still expanding significantly
 - In Scandinavian countries
 - +26% coverage in Sweden during 2013, among the 5th largest growth in countries with 1 MHP or more
 - Denmark is entering the list of countries with at least 1 M HP
 - In Western countries
 - Spain, Portugal
 - In Eastern countries
 - Latvia is the third country to reach exhaustive coverage
- In terms of subscribers
 - 5 countries with 1 M or more subscribers:
 - +2 compared to end 2012
 - Sweden and France in EU28
 - France and Spain in the Top4 growth in terms of new subscribers
 - No EU27 countries in this Top4 in 2012
 - Leading countries: Russia and Turkey

European ranking

European ranking



Next to enter: Austria? Ireland?... Germany?

The European Ranking includes countries of more than 200k HH where the part of FTTH/B subs in the total number of HH is at least 1%

Conclusions

Conclusions

- The European FTTH/B market remains dynamic
 - Between 20 and 30% growth in EU39 and EU28 for both coverage and number of subscribers
- Incumbents are playing a key role in coverage expansion...
 - 15 incumbents with 500,000 HP or more: +5 compared to end 2012!
 - Noticeable involvement of Telefonica in Spain
- ...and in new subscriptions
 - Netherlands, Switzerland, Turkey, Luxembourg
- Alternative telcos are in the driving seat in some countries
 - Vodafone in Portugal and Spain, Lyse in Norway, Wao! in Denmark, Turkcell in Turkey, Finnet in Finland
- Russia still dominate the enlarged European market
 - France now has more than 1M subscribers, only EU28 country along with Sweden, and overpasses Ukraine!

Conclusions

- Important challenges to ensure nationwide coverage in countries with a dedicated national program and to reach the DAE
 - The involvement of communities is becoming more and more obvious to ensure rural coverage
 - Still a large place to be for utilities
 - Co-investment could be a solution but is limited to very few countries
- The technical competition with VDSL is real but “timely limited”
 - But FTTH/B seems more successful: the take up rate is higher than for other architectures in more than 25 countries
 - Even incumbents clearly focused on VDSL consider that FTTH/B is the only future proof technology that will be deployed in a long term perspective
- The competition with cable players can also be considered as a driver, forcing FTTH players to innovate on the offering side
 - During the last quarter, 5 telcos have launched a 1 Gbps FTTH service in Europe!!

Wireline

doc	Report	FFTH/B European Panorama - Focus on FTTx in the UK	07/03/2013	16
doc	Report	NGN - Deployment costs & access market revenue	20/05/2013	18
doc	Report	FTTx Vendor market shares	17/06/2013	16
doc	Report	FTTx Services & Pricing	06/08/2013	19
doc+ppt	Report	Cable: solution for UFB?	18/10/2013	69
doc	Report	FTTx: National Broadband Plans	22/11/2013	24
doc	Report	FTTx: VDLS2/GigaDSL/FTTdp	18/12/2013	14
xls	Dataset	World FTTx Market - at mid-2013, forecasts up to 2017	23/12/2013	n.r.
ppt	Report	FTTx State-of-the-Art	23/12/2013	46
xls	Dataset	World FTTx Market - data & forecasts up to 2018	June/Dec. 2014	n.r.
ppt	Report	State of FTTx worldwide	June/Dec. 2014	40-60
doc + ppt	Report	Services over FTTx & Tariffs <i>(indicative title)</i>	01/04/2014	20-40
doc + ppt	Report	Vendor market shares, strategies & technologies <i>(indicative title)</i>	01/06/2014	20-40
doc + ppt	Report	National Broadband Plan: assessments & realities <i>(indicative title)</i>	01/09/2014	20-40
doc + ppt	Report	Prospects for fixed access revenues	01/10/2014	40-80
doc + ppt	Report	Cable dynamics <i>(indicative title)</i>	01/11/2014	20-40

Thank you !

Roland MONTAGNE

Principal Analyst

+33 467 144 426

r.montagne@idate.org

Valérie CHAILLOU

Director of Studies

+33 467 144 464

v.chaillou@idate.org