_telecom
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FTTH/B Panorama

European Union (36) at December 2010

FTTH Council Europe Conference

Milan, 9th & 10th February 2011

Understanding the Digital World

IDATE Consulting & Research

www.idate.org

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Agenda

- **Study Background: Objectives, available results**
- **FTTH/B in Europe: Overview**
  - Projects
  - Overall figures
  - Players involved
- **Europe's FTTH/B leaders**
  - Countries subscribers bases
  - Countries Homes Passed
  - Architecture & Technologies
- **Main Conclusions & Challenges**

Study Background

Objectives, available results

Background of the Study

- ► **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 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, 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)

Available results for EU36

About 280 projects listed in EU36

Quantitative

	December 2010	
	FTTH/B subscribers (*)	FTTH/B Homes/Buidings passed
Hindersby	100	na
Karis Telefon	2 500	12 000
Kuuskaista	3 800	13 000
Liljenet	190	380
Netixopen	3 500	5 000
SSP	0	0
Telia Sonera	64 000	550 000
Others *(1)*	9 000	16 500
Total FTTH/B	**83 090**	**596 880**
	FTTN subscribers (**)	FTTN Homes/Buidings covered
TeliaSonera	na	na
Nebula Oy	200	300
Total FTTN	**na**	**na**
Total Finland (***)	**83 090**	**596 880**

Qualitative

ER Telecom

Identification Operator/Organisation

ER-Telecom is the a telecom company in Russia which implemented a mass Cable TV project based on fiber optic deployment based on FTTB architecture.

Key parameters

ER Telecom operates in Russia's Volga, Urals and Siberian federal districts.

At the end of 2009, several FTTB projects were launched in 5 cities: Saratov, Barnaul, Lipetsk, Krasnoyarsk and Voronezh with an total investment of RUB 2 billion (EUR 50,9 million). ER Telecom's objective is to expand its network coverage and deploy a network in new cities until end 2012.

Figures

Number of Households/Business Units passed	3,500,000 FTTB homes passed at December 2009 (IDATE estimates) 3,600,000 FTTB homes passed at June 2010 **4,328,000 FTTB homes passed at December 2010**
FTTx subscriber base	2,140,000 FTTB subscribers at December 2009 (IDATE estimates) 2,160,000 FTTB subscribers at June 2010 **2,716,000 FTTB subscribers at December 2010**

Technical parameters

FTTB

Source: IDATE for FTTH Council Europe

FTTH in Europe

Overview

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Overview: Projects

About 250 FTTH/B European projects at end 2010

Some significant FTTH/B deployments at December 2010

Countries	Players		FTTH/B Homes/Buildings passed (Dec 2010)
Bulgaria	Blizoo	Cable operator	1 000 000
Denmark	TDC	Incumbent	230 000
Finland	Telia Sonera	Incumbent	550 000
France	SFR	Alternative operator	500 000
	France Telecom	Incumbent	640 000
	Numericable	Cable operator	4 500 000
Germany	Net Cologne	Power utility	200 000
	Wilhelm Tel	Power utility	200 000
Hungary	Magyar Telecom	Incumbent	235 000
Italy	Fastweb	Alternative operator	2 000 000
	Telecom Italia	Incumbent	450 000
Lithuania	TEO	Incumbent	570 000
Netherlands	KPN/Reggefiber	Incumbent	658 000
Norway	Altibox	Power utility	260 000
Portugal	Portugal Telecom	Incumbent	1 000 000
Slovakia	Orange Slovensko	Alternative operator	310 000
	T-COM/Slovak Telecom	Incumbent	370 000
Slovenia	T2	Alternative operator	310 000
Spain	Telefonica	Incumbent	350 000

Source: IDATE for FTTH Council Europe

FTTH in Europe – Overall Figures

In December 2010

> 3.9 million FTTH/B subscribers

(+ 4.2 million in Russia)

> 22.3 million Homes Passed *(1)*

(+ 10.6 million in Russia)

Average penetration rate : 17.5% vs 16.1% in Dec. 2009

Growth rates 2H2010 (excluding Russia)

+18% FTTH/B subscribers (vs 19% 1H2010)

+23% FTTH/B Homes Passed (vs +5% 1H2010)

➡ **Expanding FTTH/B coverage is still a priority for players**

(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 end 2010, for Slovenia, Russia and France.

Source: IDATE for FTTH Council Europe

FTTH in Europe - Players

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►3 main categories involved in FTTH/B deployments

Municipalities & Utilities

- More numerous
- Local deployments only

8% of total FTTH/B Homes Passed at end 2010

Alternative operators / MSOs

- Most dynamic
- National or local deployments

73% of total FTTH/B Homes Passed at end 2010

European incumbents

- Challenged on BB
- National deployments

19% of total FTTH/B Homes Passed at end 2010

Source: IDATE for FTTH Council Europe

FTTH in Europe - Players

- **Decrease in Homes Passed by Municipalities & Utilities**
  - **Projects getting aggregated in Northern European countries**
    - 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)
- **Housing companies, fourth category of players, but still the least involved**

Europe’s FTTH/B leaders

FTTH/B subscribers evolution

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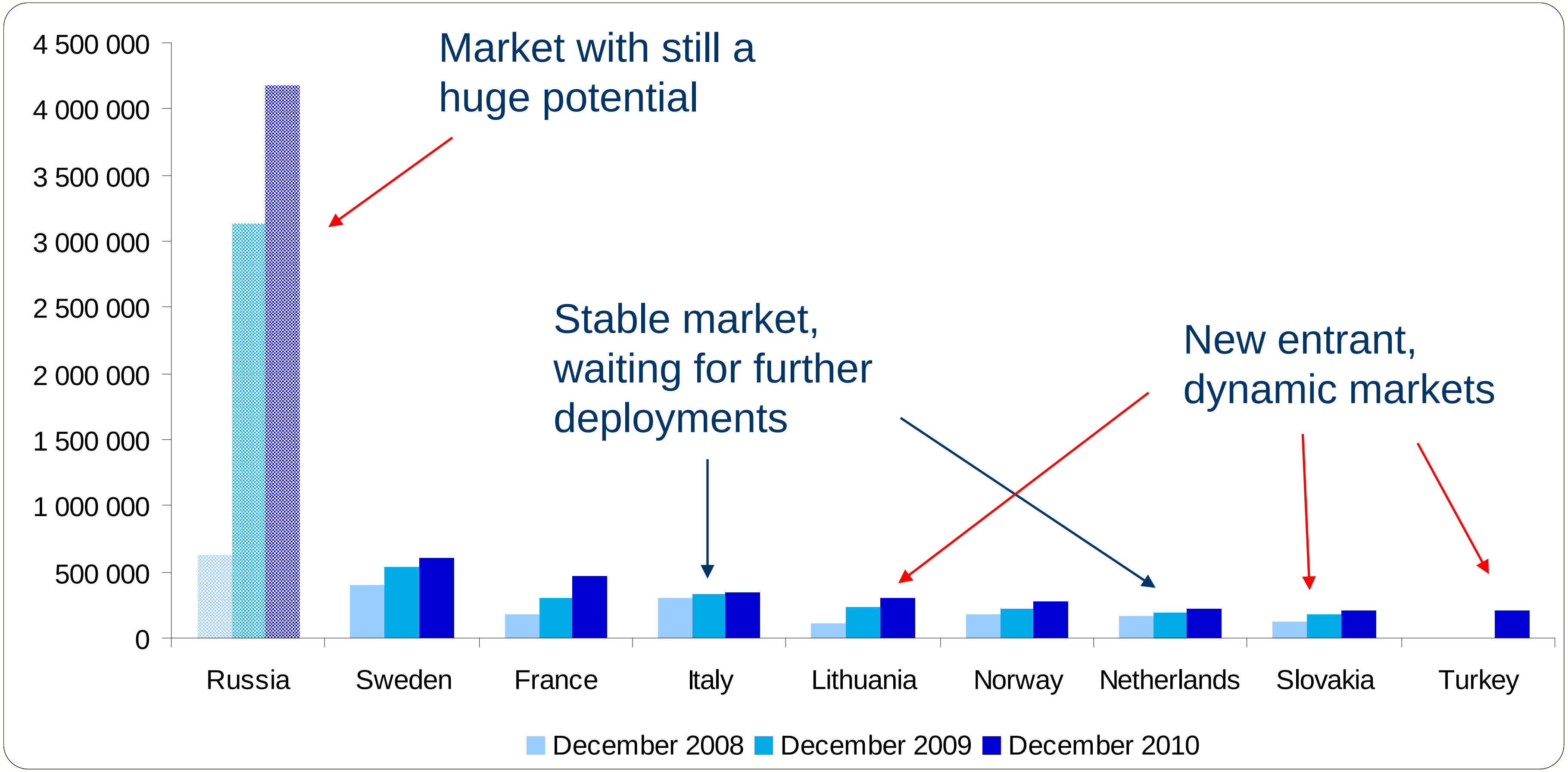
►Countries > 200,000 FTTH/B subscribers at end 2010



Source: IDATE for FTTH Council Europe

New FTTH/B subscribers 2H10

▶ Top 5 countries

- ▶ Portugal +107,500
- ▶ Turkey +99,400
- ▶ France +97,400
- ▶ Latvia +40,000
- ▶ Norway +32,000

(Russia: + 895,000)

Source: IDATE for FTTH Council Europe

FTTH/B Homes Passed evolution

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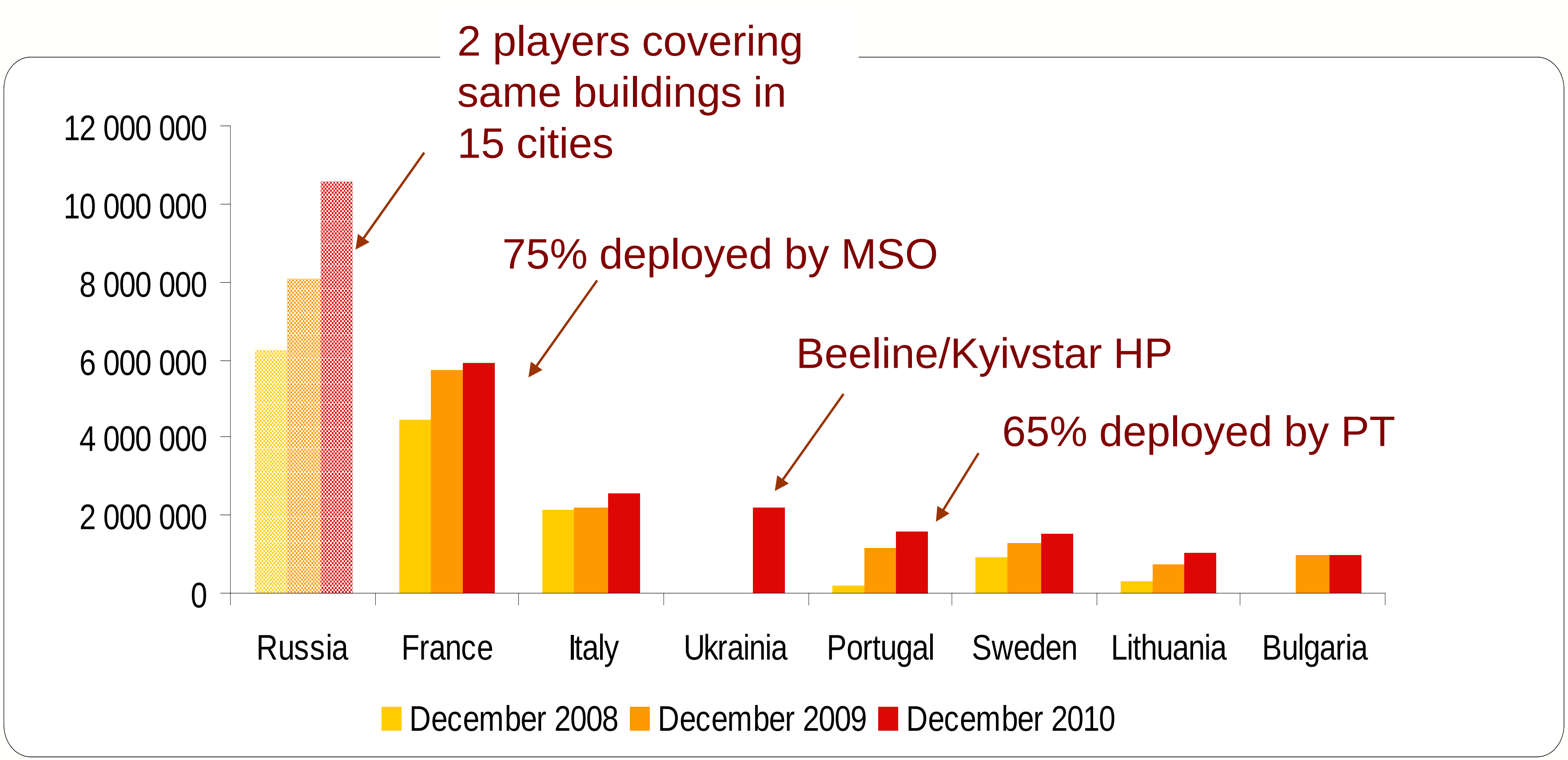
►Countries > 1 million FTTH/B Homes Passed at end 2010



Source: IDATE for FTTH Council Europe

FTTH/B Homes Passed trends

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► Small growth in France, Sweden and Norway

- With respectively 2%, 4% and 5% HP growth in 2H2010
- Already good coverage in most dense areas, notably in France (FTTB)

► Highest growth in Eastern European countries

- Latvia : + 61% during 2H2010
- Lithuania : +33% during 2H2010
- Estonia : +26% during 2H2010

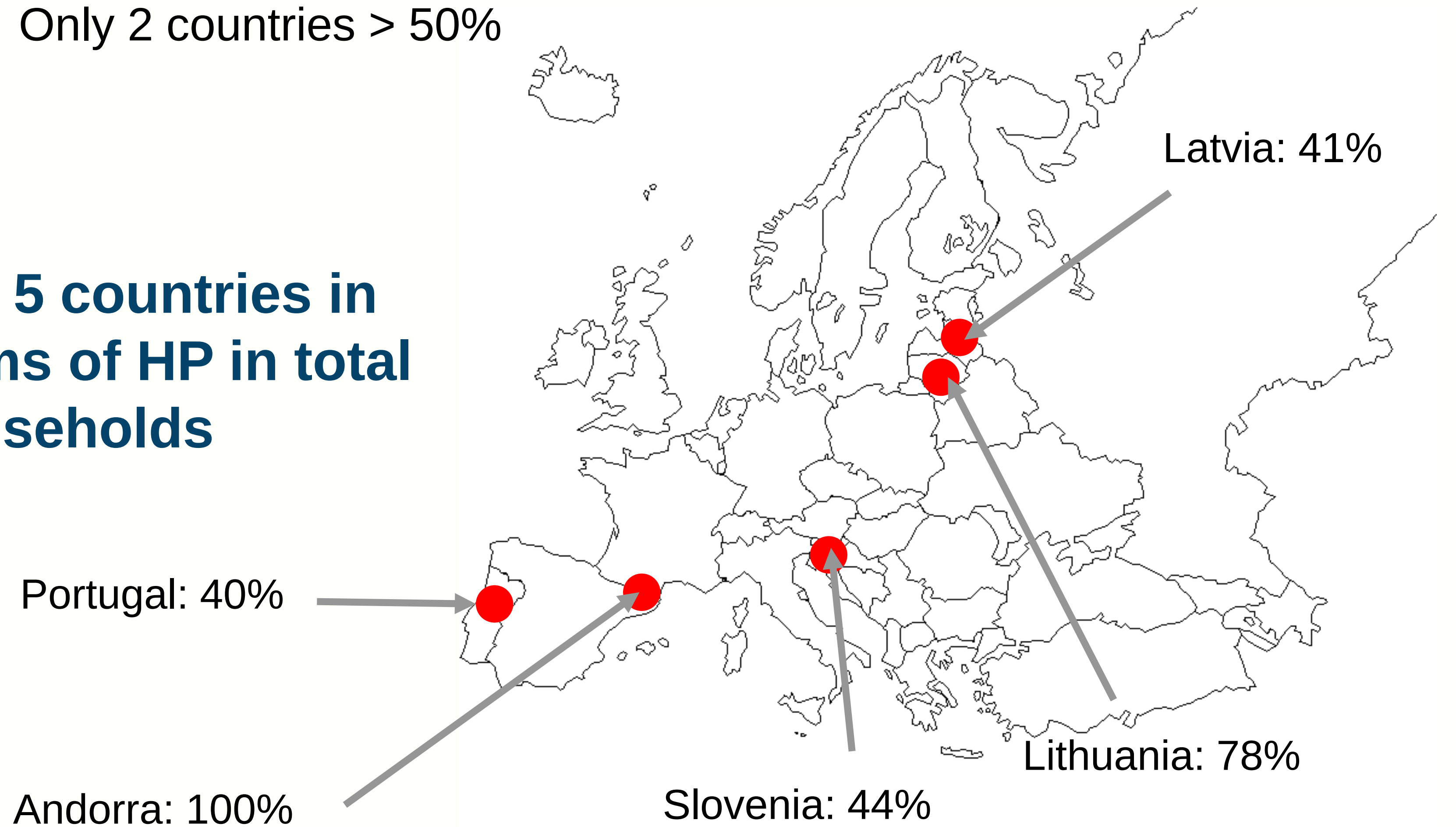
► Acceleration of coverage in new markets: Ukraine, Turkey

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 5 countries in terms of HP in total households



Source: IDATE for FTTH Council Europe

FTTH/B leading countries

- ► **Pioneers Sweden and Italy always heading European FTTH/B market in terms of number of subscribers**
- ► **French market: towards migration from BB to FTTH/B?**
- ► **Leading Eastern European countries: Lithuania and Latvia still at the top**
- ► **The Russian case: potential of the market confirmed and still very huge**
- ► **A part from Russia, majority of subscribers concentrated in 8 countries**
  - Sweden, France, Italy, Lithuania, Norway, Netherlands, Slovakia, Turkey
  - Around 67% of total FTTH/B subscribers in Europe excluding Russia

FTTH/B leading countries

But number of subscribers less relevant than penetration rates *(1)*

From the highest…

In Scandinavian countries : 68.3% in Norway, 39.5% in Sweden

In Turkey (30.8%)

In the Baltics : 29% in Lithuania

…to the lowest

In France (8%), Switzerland (5.5%)

Source: IDATE for FTTH Council Europe

(1) Number of subscribers in total Homes Passed

European Ranking

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

- ► **At December 2010**
  - 18 countries in the European Ranking
  - Turkey new entrant

- ► **Two Eastern European countries showed the highest progression in the ranking: Latvia and Lithuania**

- ► **Five others have progressed by more than 1%**

- ► **Major Western Economies such as Italy and France still at the bottom of the Ranking**
  - Others like UK, Germany or Spain absent

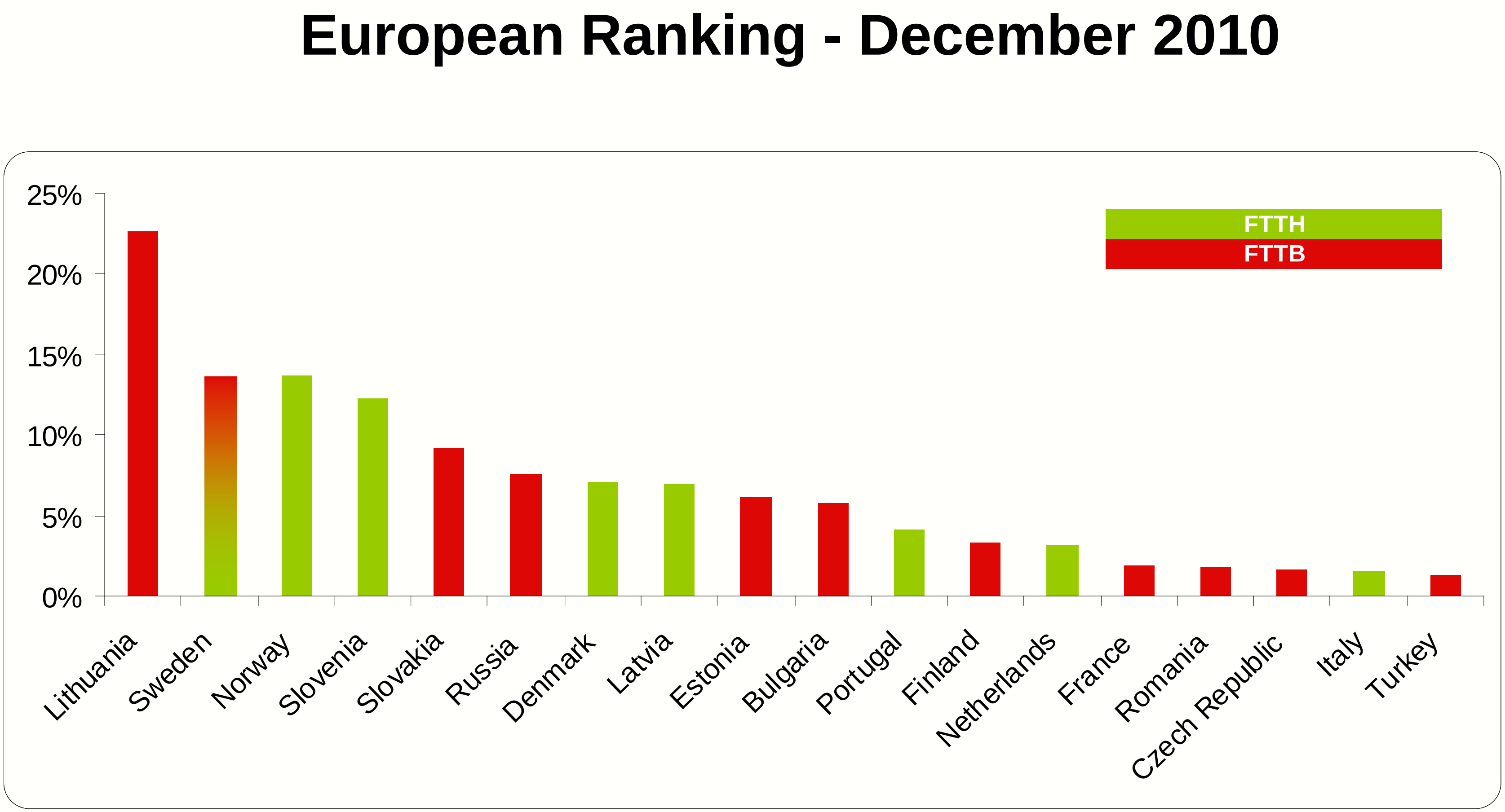
European Ranking

Highest progressions (>1%) **in the European Ranking during 2H2010**

▶ Latvia	**+4.4%**
▶ Portugal	**+2.2%**
▶ Lithuania	**+2%**
▶ Slovenia	**+1.8%**
▶ Russia	**+1.6%**
▶ Norway	**+1.6%**
▶ Turkey	**+1.3%**

Source: IDATE for FTTH Council Europe

European Ranking



Source: IDATE for FTTH Council Europe

FTTH/B European technologies

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- In December 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 (homes passed segmentation)	Dec 2010	June 2010	Dec 09
FTTH	37%	34%	33%
FTTB	63%	66%	67%

Main technology deployed (homes passed segmentation)	Dec 2010	June 2010	Dec 09
PON	27%	26%	24%
Ethernet	73%	74%	76%

Dwellings deployed (homes passed segmentation)	Dec 2010	June 2010	Dec 2009
MDU	77%	76%	75%
SDU	23%	24%	25%

Source: IDATE for FTTH Council Europe

Main conclusions & Challenges

Main conclusions & challenges for FTTH

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► Steady growth of European FTTH/B market

- + 40% in terms of subscribers during 2010

► Future growth to be led by Eastern European countries

- Among which Russia, already the main market both in terms of numbers of subscribers and homes passed

► Turkey new entrant in the European Ranking

- Italy, France & Russia are no more the only large economies in the EU ranking

► European incumbents getting more concerned by FTTH

- Nearly all of them today Europe have a plan for FTTH or are deploying and 73% of Homes Passed are in the hands of Alternative operators & MSOs

► National plans

- Taking over local initiatives and trigger for players announcements

Main conclusions & challenges for FTTH

►FTTH benefits not perceived by Consumers / Businesses

- Especially in Europe: low penetration rate *(1)*!
  - At mid 2010: Japan at 39%, USA at 34%
  - And Europe at end 2010: 17.5% ... France: 8% !!

►Property Managers: interest to arouse

- In Europe: 63% of FTTB Homes Passed at end 2010

►FTTH business: sometimes to complex to run for Municipalities & Utilities

- Main Danish regional Power Utility (Dong Energy) resold its FTTH activity to the incumbent TDC

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

- Announcements by main players in Italy, Switzerland, France
- One objective: covering non dense areas

(1) subscribers/Homes Passed

Thank you!

FTTx Watch Service Calendar - 2011

		January	February	March	April	May	June	July	August	September	October	November	December
Database	Markets, Operators & Vendors market shares, FTTx projects, Forecasts up to 2015					DB1						DB2	
Insights	Monthly		I-1	I-2	I-3	I-4	I-5	I-6		I-7	I-8	I-9	I-10
Reports	FTTx Strategies FTTx Business Models				R-1					R-2			
Complementary Reports	Telcos TV Strategies Telcos backhaul strategies					CR-1					CR-2		
Consulting Hours	5 hours - on demand												
Analyst Brief	30 min. Conference Call - on demand												
On-Site Presentation	Optional Report Presentation												

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