European FTTH Forecast, 2009-2014

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Introduction

- Forecast created for the FTTH Council Europe
- Based on individual analyses of 21 countries, and brief reviews of a further 17 countries
- Covers a total of just over 290 million households, 195 million in the EU and 95 million outside the EU
- Forecast downgraded for the second year running
  - Slow start by large incumbent telcos
  - Many municipal builds are behind schedule (build or customer acquisition)
- Some good news
  - Strong FTTB build-out to East led by Russia,
  - North and east Europe generally leading, and these look set to continue to lead through the next two years
  - Strong signs that the market could catch fire in late 2010 and 2011 in some countries that have been slow to date

Positive Leading Indicators In 2009/2010

- Continuing trend to higher-speed non-fiber products anticipated – ADSL2+, VDSL and DOCSIS all driving customer appetite for pre-FTTH bandwidth levels
- Equipment and construction costs continue to fall steadily
- Sales of high-spec consumer electronics products (e.g. flat screen HDTVs) did not fall off that much in the recession and should fly this year
- Strong drive to FTTB in eastern Europe will continue
- Continuing new commitments to FTTH among municipalities in France, Netherlands, Germany, Switzerland
- 2009 was more positive year for homes passed than homes connected– boding better things in 2010
- Economy is recovering strongly, increasing telco confidence in building

Negative Leading Indicators In 2009/2010

- Commitment to FTTH among major incumbents remains patchy and some continuing vacillation is likely
- Slowdown in the housing market is affecting pull-through from green-field development
- Few significant **new** commitments made to FTTH in 2009 by major builders
- There are still regulatory barriers and issues in many countries that may take a while to resolve
- Public sector debt is an issue in some countries
- Impact of next-gen cable and mobile broadband products unclear

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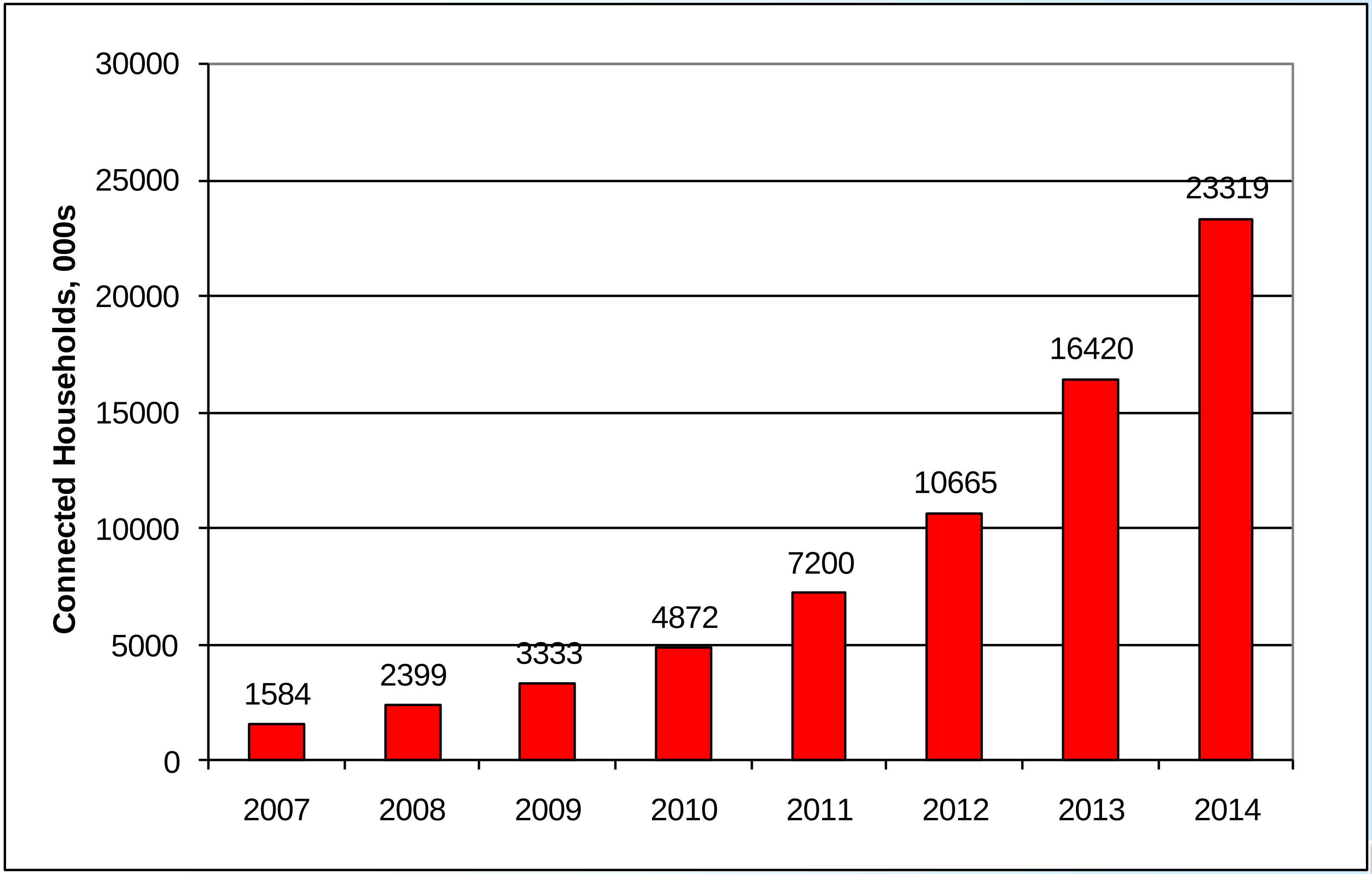
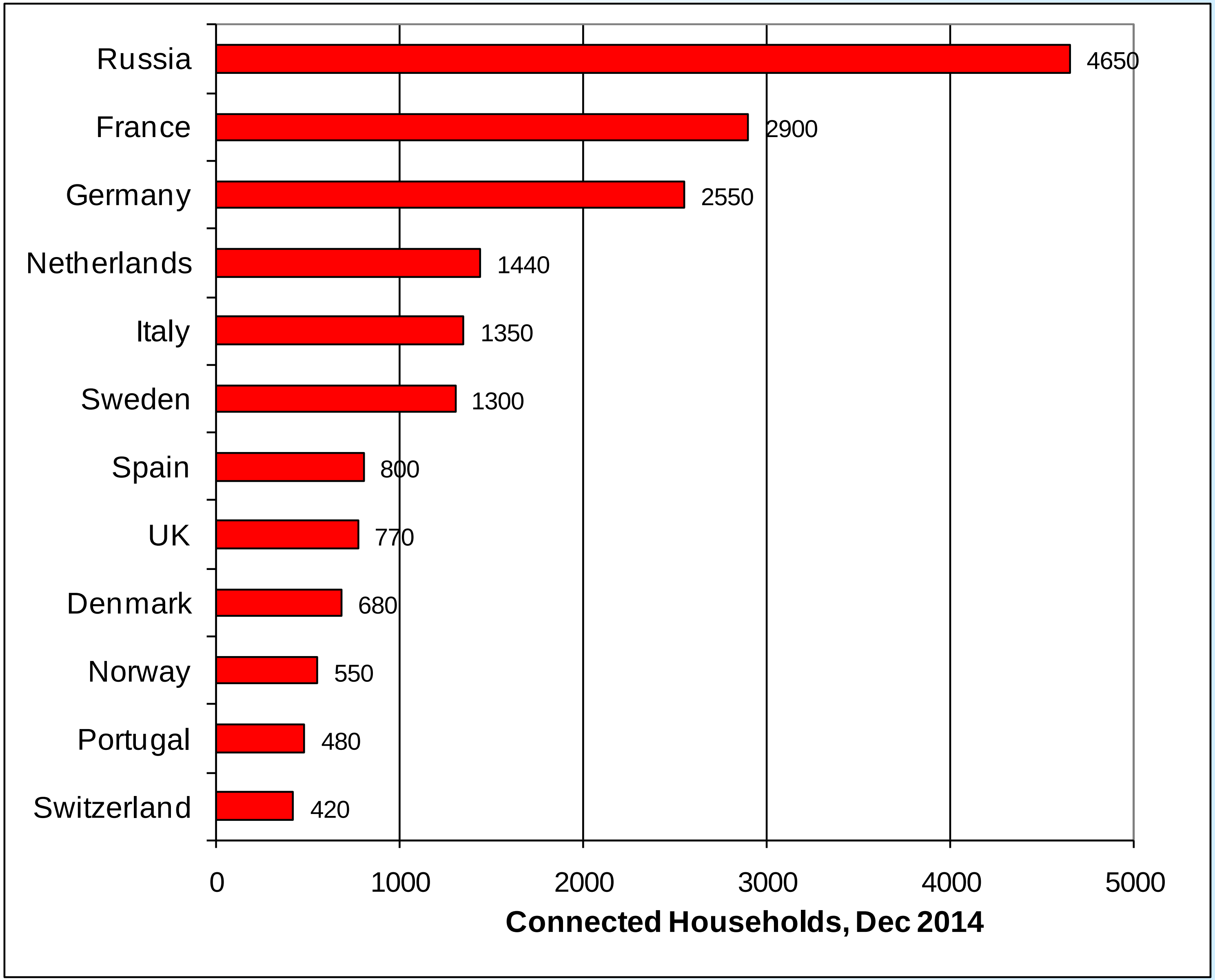
European Region FTTH Forecast



Note: Households connected directly to fiber and apartment connected via basement fiber termination (FTTB)

Top FTTH Countries In 2014, By Number Of Connected Households



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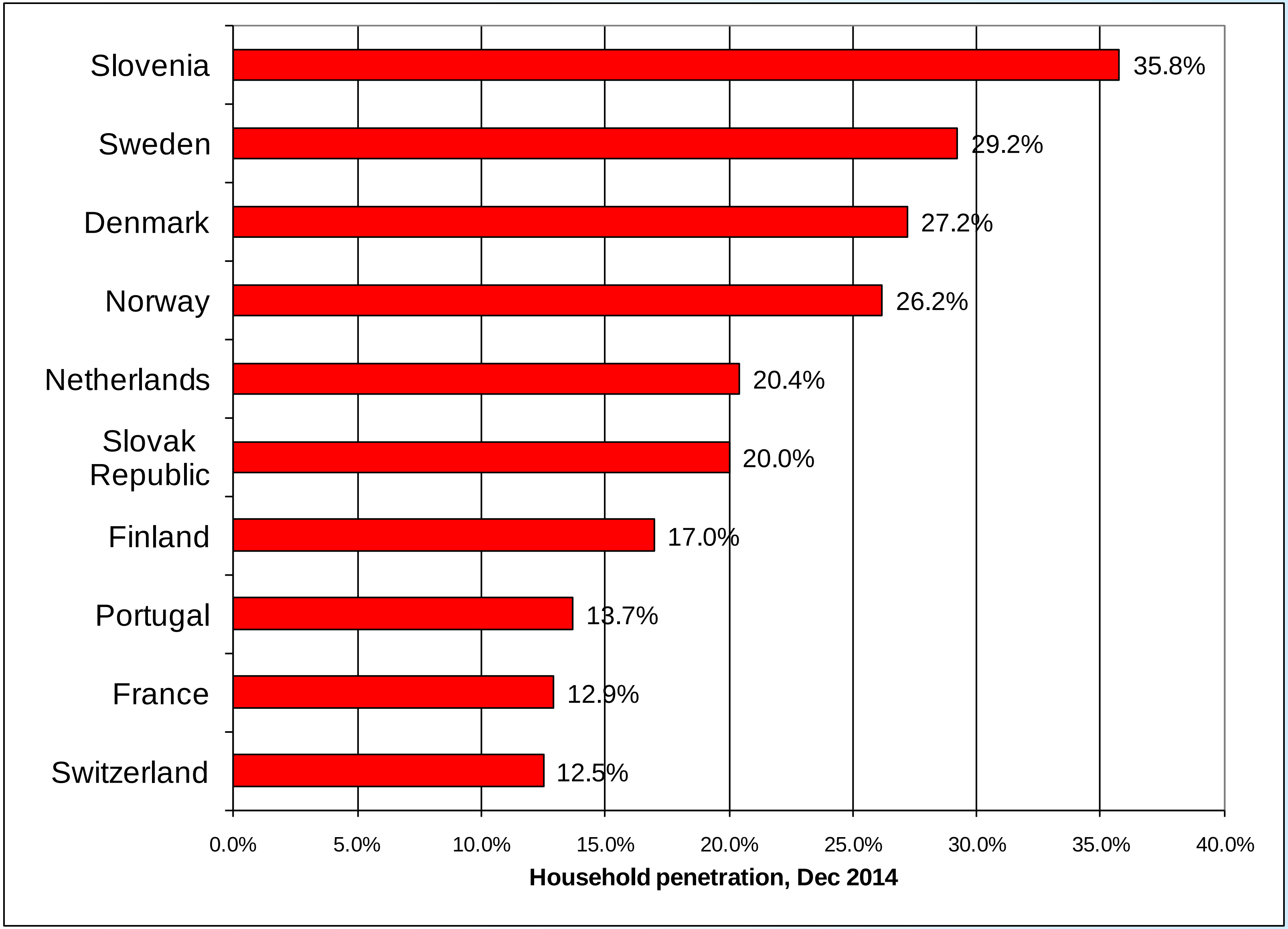
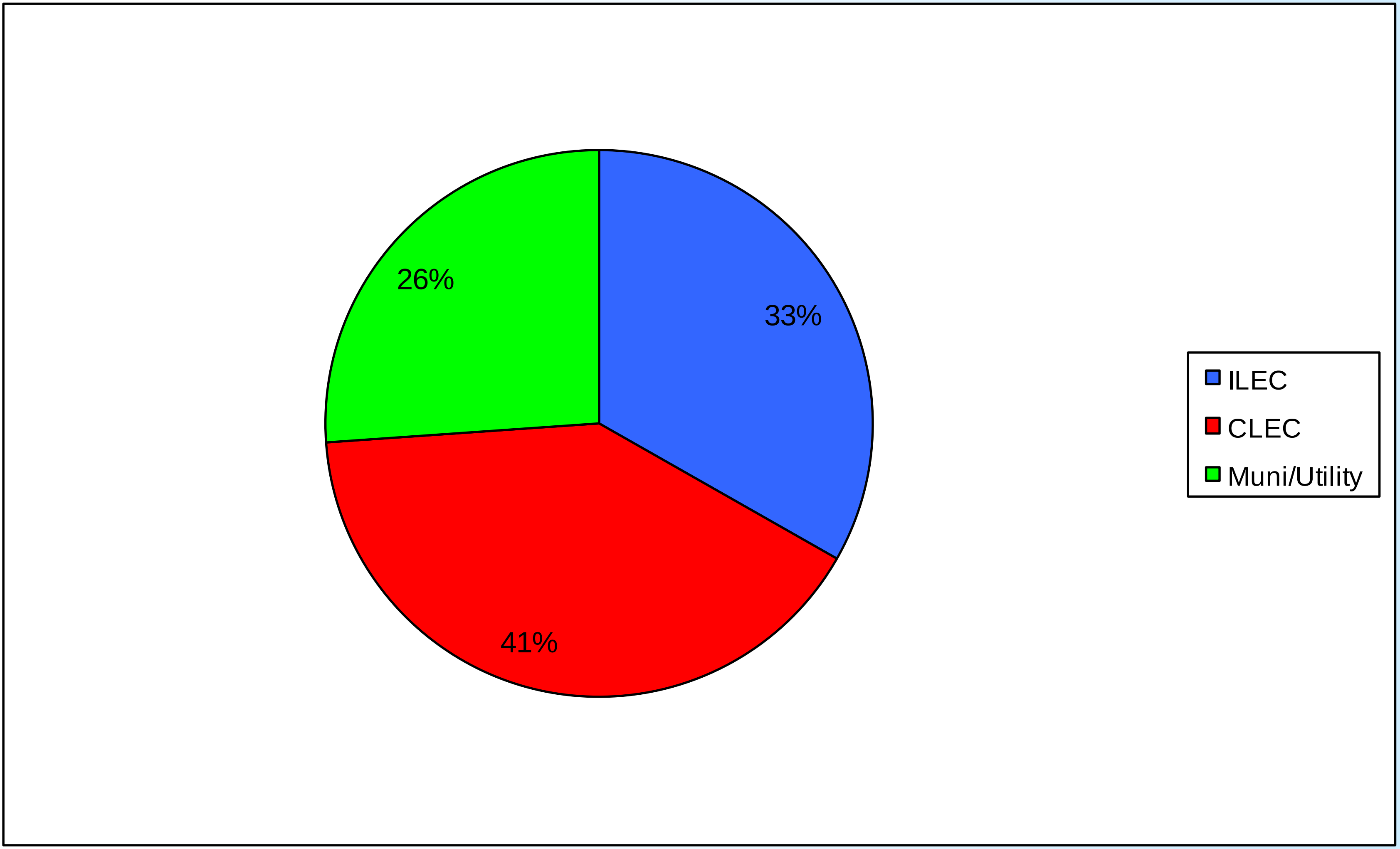
Top 10 FTTH Countries In Europe, 2014, By Household Penetration

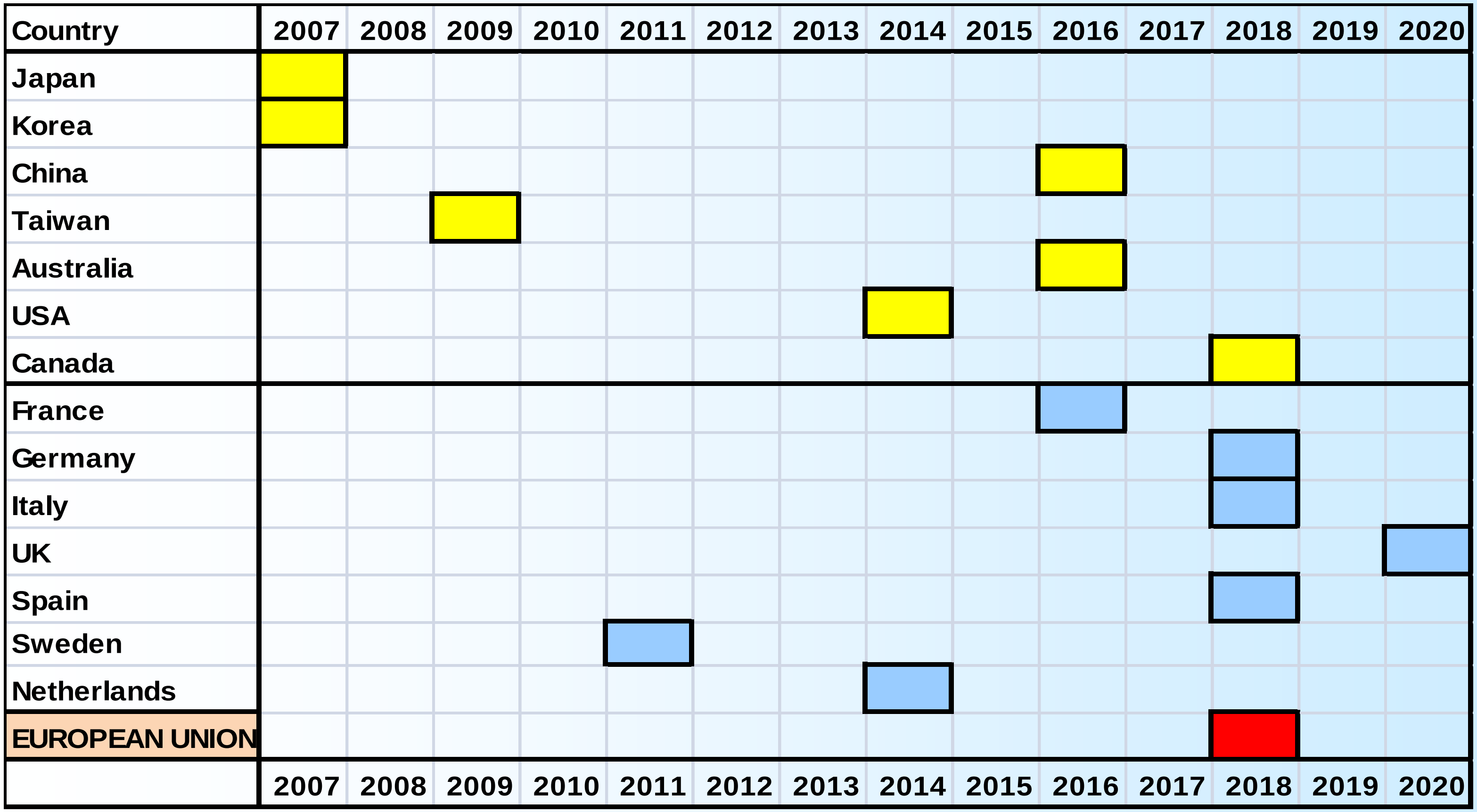


FTTH Connections In Europe, 2014, By Type Of Builder



Note: ILEC = former incumbent monopoly telco (PTT). CLEC = competitive or alternative telco or broadband provider. Muni/Utility = network built by municipal local authority or by a power utility

Europe In Context: The Race To Fiber Maturity



Note: chart shows the year in which each territory is expected on current trends and plans to achieve "fiber maturity", defined here as 20% household penetration of FTTH or FTTB

Summary

- Just over 23m households will be connected to FTTH or FTTB at the end of 2014 in the countries covered by this forecast– this is about 8% of all homes in the region
- In the EU only, the total will touch 16 million, or 8.3% of all homes
- Six of the 21 nations individually analyzed should achieve “fiber maturity” (20% penetration) by 2014– Slovenia, Sweden, Denmark, Norway, Netherlands and Slovakia
- On current trends, seven of those nations will still be under 10% penetration at the end of 2014– UK, Belgium, Poland, Spain, Greece, Italy and Germany
- Unlike most other regions, incumbents are not currently the major providers of FTTH, and this will likely remain the case through the next five years
- The dominance of FTTB and municipal build-outs means that P2P Ethernet is the main technology in use, though the proportion of PON will gradually increase