

Mobile data usage (gigabyte volume) in Finland is set to overtake fixed-line broadband usage in Germany in 2016

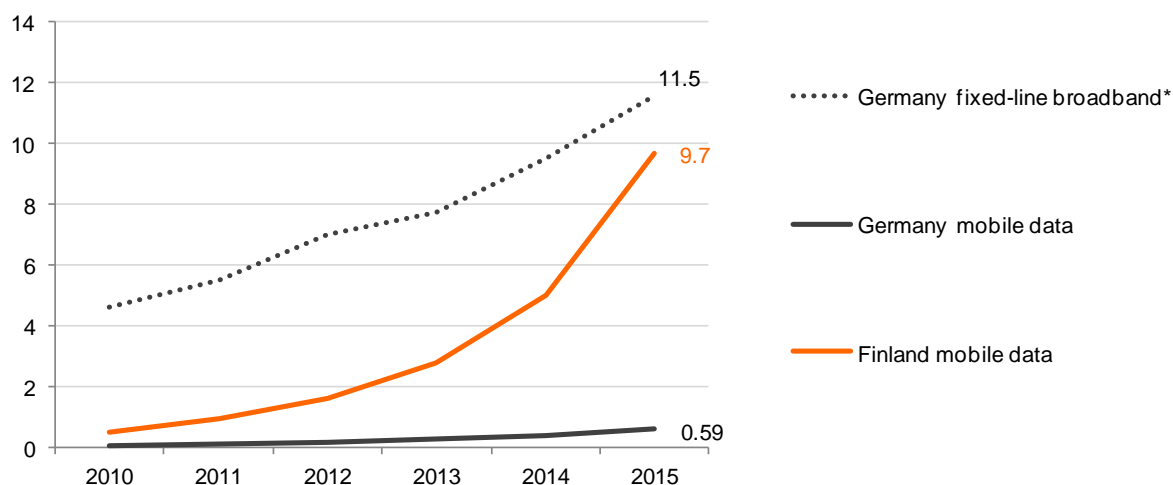
In 2016 mobile data volume consumption per person in Finland is set to exceed fixed-line broadband volume consumption per person in Germany.

Rewheel / Digital Fuel Monitor flash research note, 23rd May 2016

- Total mobile data volume transferred in Finland (5.4 million population) in 2015 was 627 thousand terabytes (93% YoY growth)
- Total mobile data volume transferred in Germany (83 million population) in 2015 was 591 thousand terabytes (50% YoY growth)
- Total fixed-line broadband internet-access data volume transferred in Germany in 2015 was 11500 thousand terabytes (21% YoY growth)
- In Finland 9.7 gigabyte mobile data volume was transferred in 2015 per person per month. In Germany 11.5 gigabyte fixed-line internet-access data volume was transferred per person per month
- The number of fixed-line broadband subscriptions has been decreasing in Finland since 2014
- The uptake of fibre (FTTH/B) subscriptions in Germany was 1.6% in 2015
- In Finland 34% of fixed-line broadband subscriptions were faster than 30 Mbit/s, in Germany 28%
- In Finland 22% of fixed-line broadband subscriptions were slower than 10 Mbit/s in Germany 29%
- In Finland mobile data (smartphone and data-only MBB) subscriptions are typically uncapped (unlimited volume allowance)
- Mobile operator costs are under control in Finland despite exponential mobile data consumption surge
- In Germany mobile data subscriptions have very restrictive monthly volume caps. Anecdotal evidence reported by WDR (German public media) indicated that younger users are frustrated by very restrictive smartphone plan volume caps

In 2016 mobile data volume per capita in Finland is set to overtake combined fixed-line + mobile broadband volume per capita in Germany

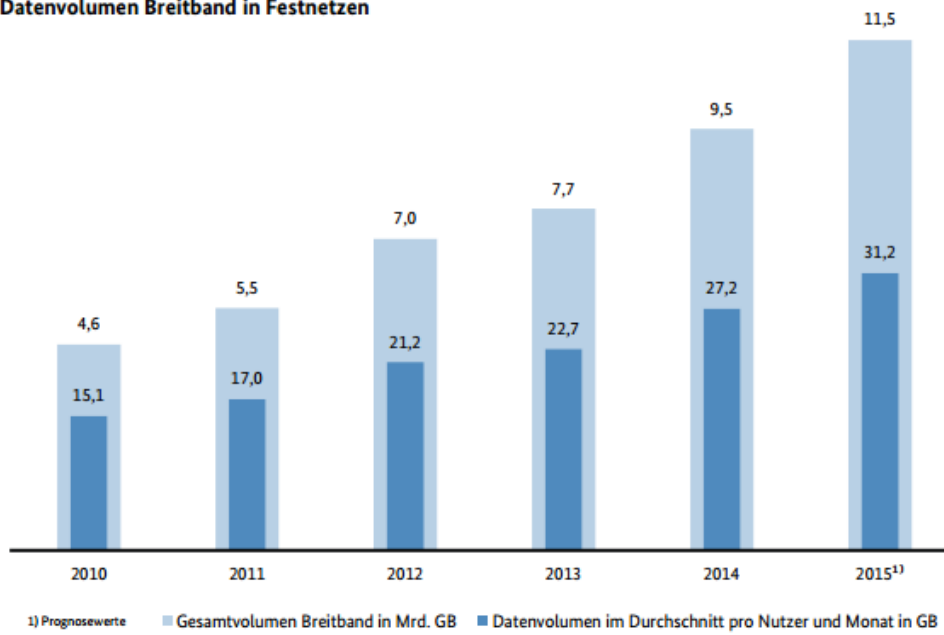
Data volume per month per capita (Gigabyte)



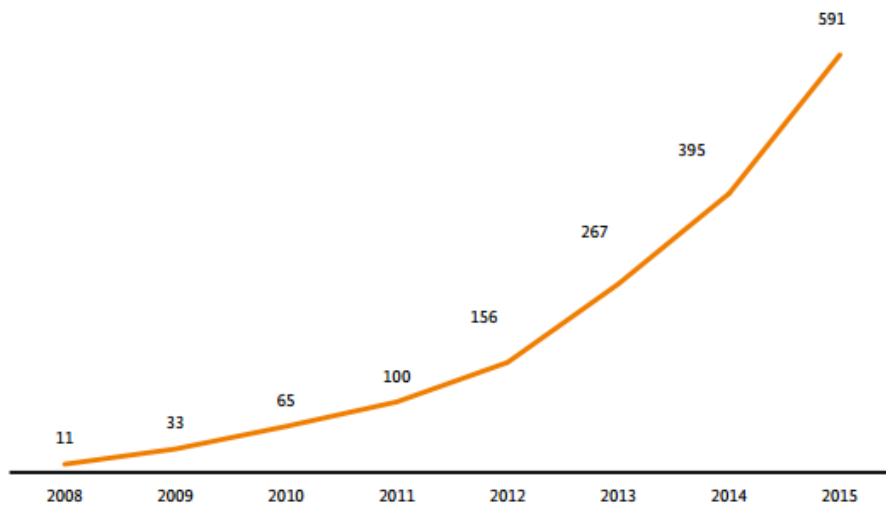
* Deutsche Telekom IPTV service generated volumes excluded
Source: Ficora, Bnetza, Rewheel/DFMonitor analysis

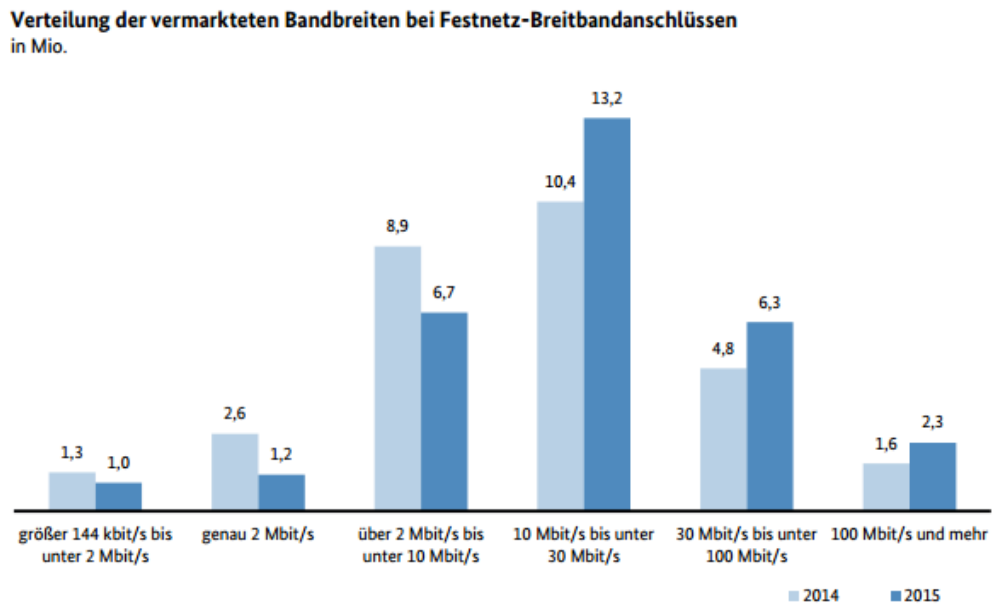
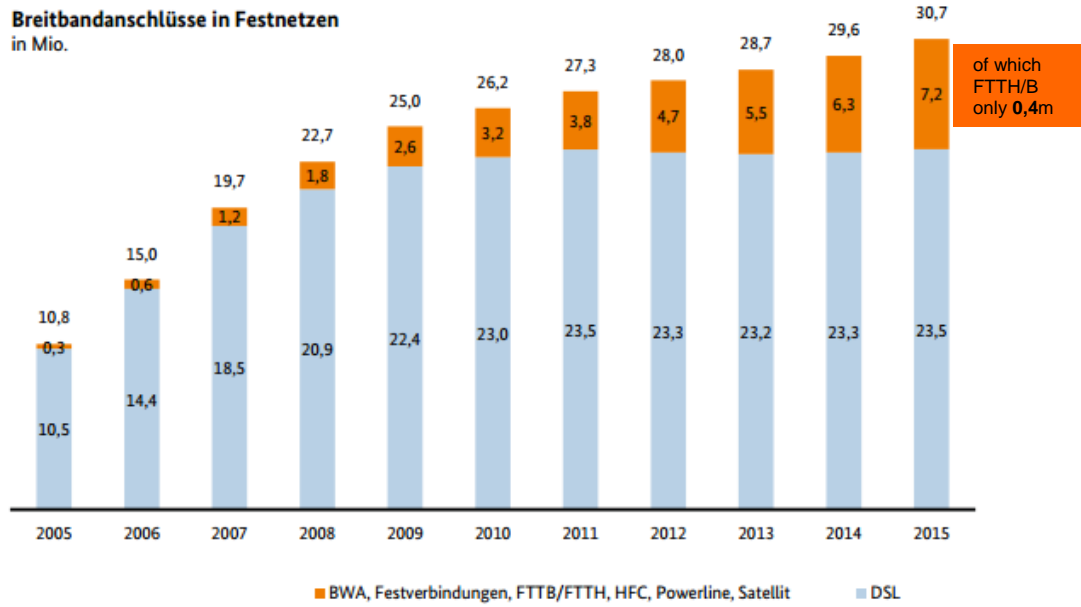
Germany

Datenvolumen Breitband in Festnetzen



Datenvolumen im Mobilfunk
in Mio. GB

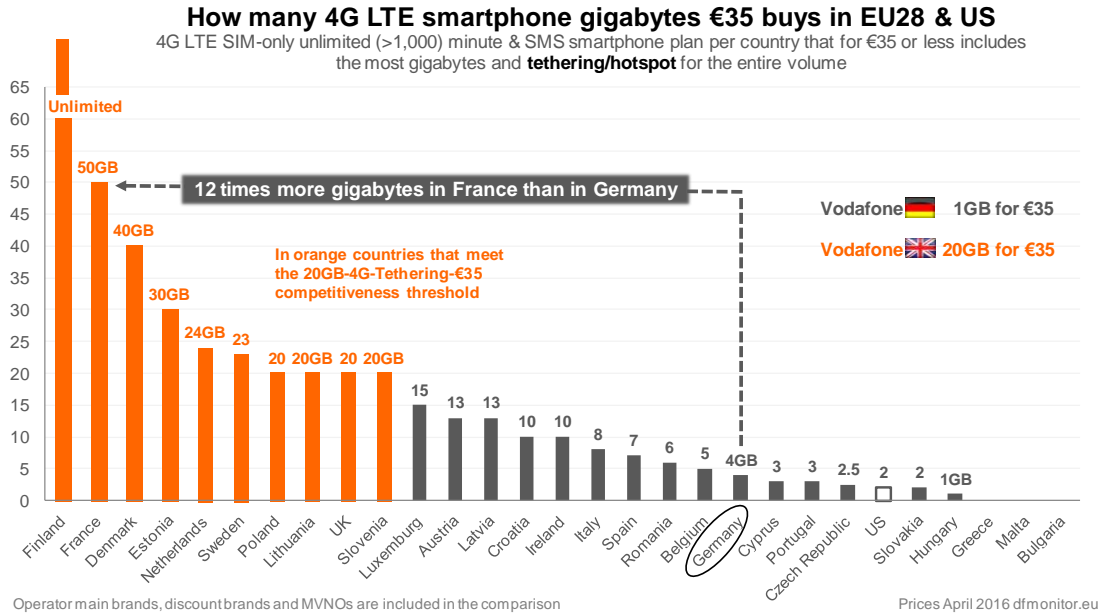




Source: Bnetza annual year book 2015¹

¹ <http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Allgemeines/Bundesnetzagentur/Publikationen/Berichte/2016/Jahresbericht2015.pdf>

Very restrictive mobile data volume caps in Germany



Source: Rewheel/DFMonitor **The State of 4G Pricing 1st Half 2016²**

Anecdotal evidence reported by WDR (Germany public media) indicated that younger users are frustrated by restrictive smartphone plan volume caps



Datenvolumen: zu schnell ausgebrems

markt | 11.05.2016 | 06:05 Min. | Verfügbar bis 11.05.2017 | WDR

Der Horror für alle mobilen Surfer: Das Datenvolumen auf dem Smartphone ist aufgebraucht und es geht nur noch im Schneckentempo weiter. Oder man muss zahlen. Warum gibt es keine unbegrenzten Flatrates?

markt | **video**

Source: WDR Markt 11.05.2016³

² <http://dfmonitor.eu>

Finland

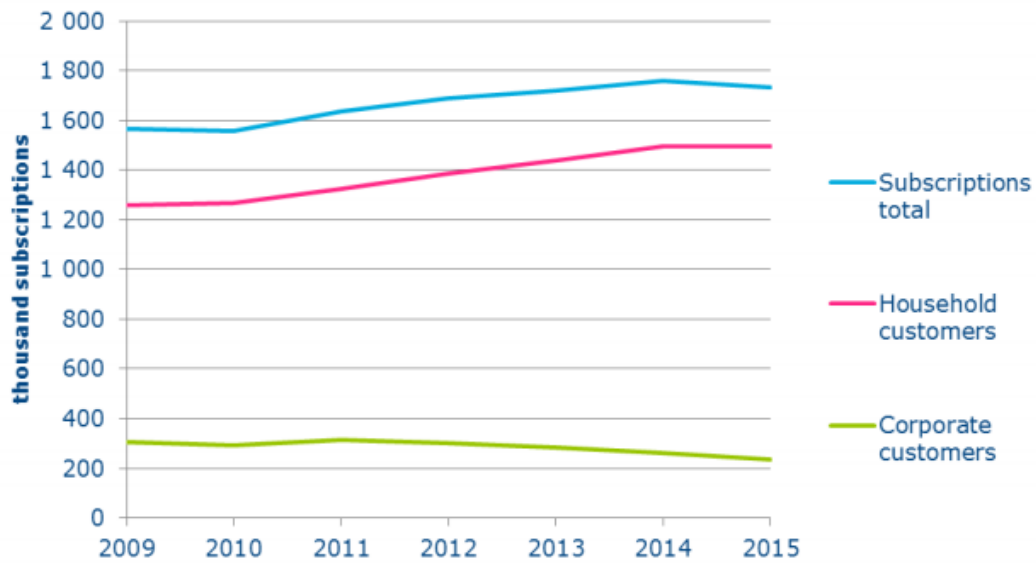


Figure 2 The number of fixed broadband subscriptions

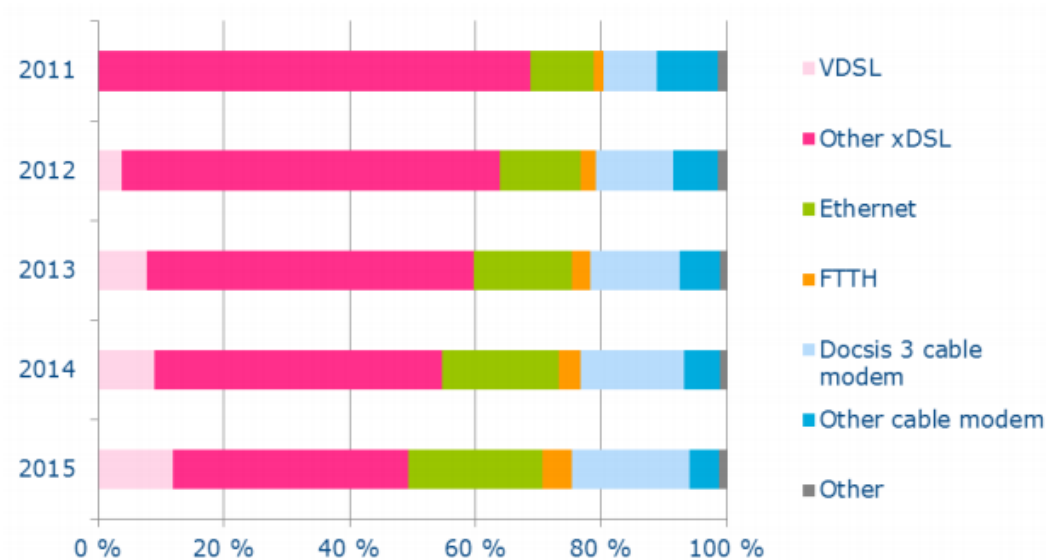


Figure 3 Fixed broadband subscriptions by connection technology

³ <http://www1.wdr.de/mediathek/video/sendungen/markt/video-datenvolumen-zu-schnell-ausgebremst-100.html>

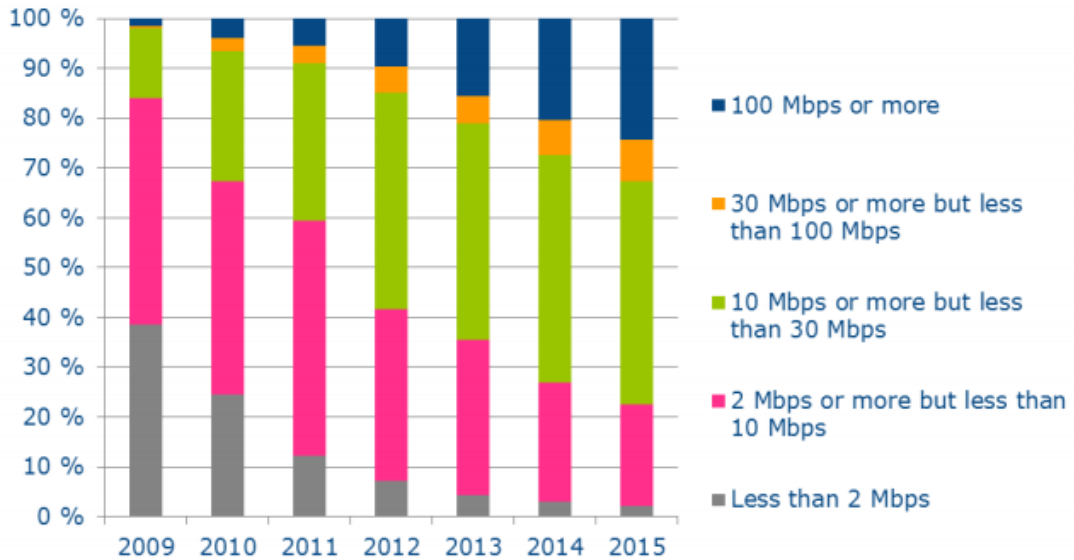


Figure 4 Fixed broadband subscriptions by connection speed

Year	Fixed network call (min)	Mobile call (min)	Mobile call (pcs)	SMS	MMS	Mobile data (terabyte)
2005	7 755	11 035	4 248	2 713	17	
2006	5 523	12 493	4 443	3 010	22	
2007	4 053	13 546	4 809	3 188	29	500
2008	3 048	14 559	4 967	3 487	36	5 000
2009	2 319	15 120	4 986	3 800	40	16 000
2010	1 867	15 919	5 137	4 003	40	33 000
2011	1 532	16 045	5 093	4 242	46	62 000
2012	1 258	16 074	4 945	4 326	55	103 000
2013	1 131	15 742	4 700	3 882	73	179 000
2014	935	15 299	4 350	3 290	88	325 000
2015	725	15 184	4 140	2 887	89	627 000

Figure 10 Use of voice and messaging services in the mobile network, call minutes in the fixed network and mobile data (figures for calls, call minutes and messages are in millions)

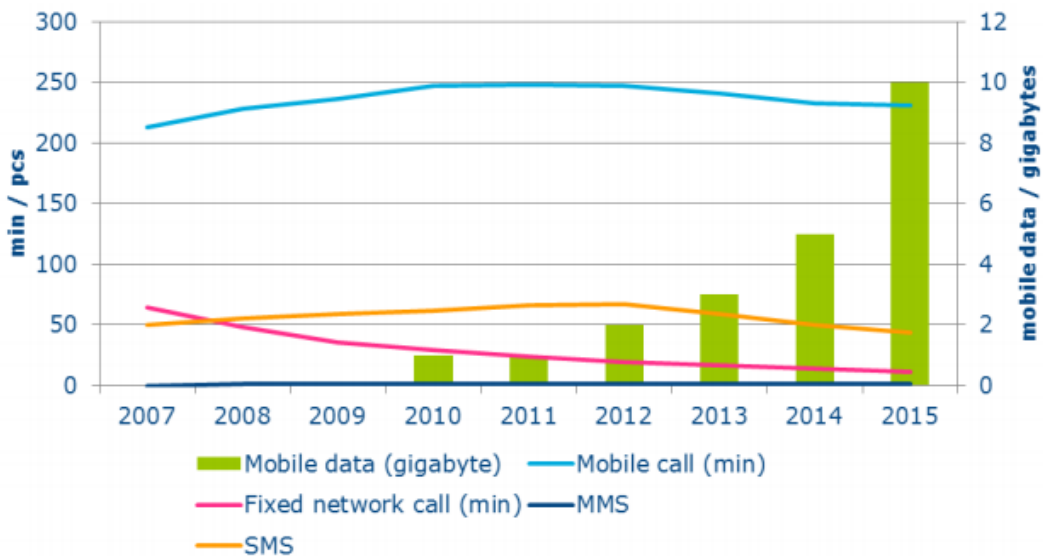


Figure 11 Usage volumes per Finnish person per month

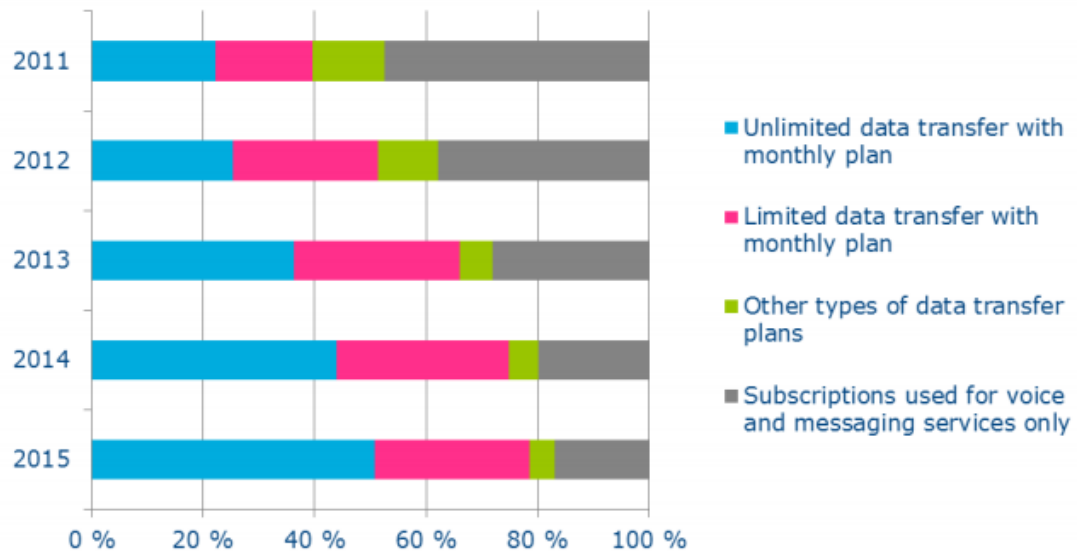
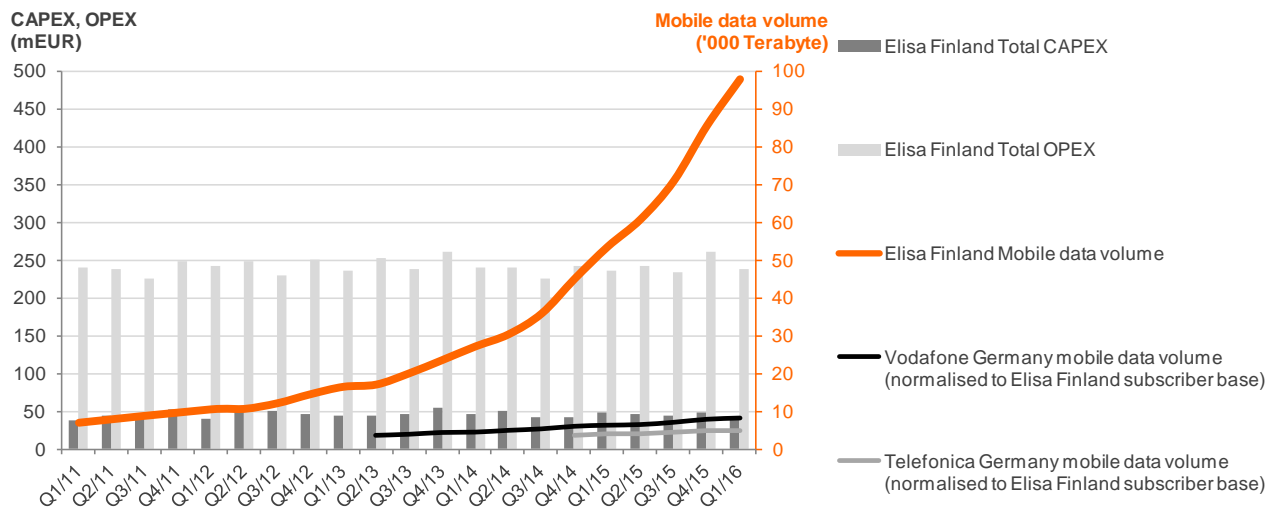


Figure 7 Mobile subscriptions with a data transfer agreement

Source: Ficora Communications Sector Review 1/2016⁴

Elisa Finland network costs under control (despite mobile data consumption per capita in Finland overtaking Germany fixed-line consumption)



Elisa Finland: 39% mobile subscriptions market share, >97% LTE population coverage, no network and spectrum sharing, up to 300 MBit/s peak internet access data rate, advertised up to 5-240 typical data rate (depending on price), unlimited data volume on all smartphone and mobile broadband tariffs, no tethering restrictions. Actively promoting large screen video over 4G/LTE access

Source: Elisa, Vodafone, Telefonica, Rewheel/DFMonitor analysis

⁴ https://www.viestintavirasto.fi/attachments/toimialatieto/Communications_sector_review__2016_EN.pdf