The background of the entire page is a complex, abstract composition. It features a grid of numerous small, rectangular images, each tilted at various angles. These images depict a wide variety of subjects, including natural landscapes like mountains, forests, and waterfalls, as well as abstract patterns and textures. The colors are vibrant and diverse, ranging from deep blues and greens to bright yellows, oranges, and reds. The overall effect is a sense of dynamic movement and interconnectedness.

Solon Survey of European Cable Communication 2014

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Key Findings

■ **Cable industry to accelerate growth:**

The European cable operators participating in this year's survey are forecasting a revenue increase of 6% per year until 2016¹, a growth rate slightly above that of our previous survey. On top, the industry is expecting a further EBITDA margin increase, reaching 51% on average in 2016.

■ **ARPU growth returns – both on TV and broadband:**

Driven by improved products and broadband speeds, operators are currently showing increasing ARPUs for TV access, Pay-TV and broadband, and expect this to continue over the coming years.

■ **Management focus is back on TV, but clearly as a defensive move:**

Next generation TV is the focus of the industry's management attention, which is a defensive move as TV value growth is forecasted to be limited and impacted by competitive pressure. Main competition for TV access is expected from fiber/DSL players (43% of customer churn in 2016) and less from OTT (7% of customer churn).

■ **TV access penetration is forecasted to decrease further, but unique subscribers to grow again:**

Due to increasing competition, the participants of this year's survey continue to expect a shrinking TV access penetration of 1pp per year until 2016. However, they also see growth in the number of unique subscribers – forecasted to rise by 2% yearly – driven by broadband-only products as well as selected network expansion.

■ **Massive broadband speed increase – over 150Mbit/s for the average new customer in 2016:**

A remarkable trend is seen in the development of broadband speeds as the industry plans to serve the average new customer in 2016 with download bandwidths of over 150Mbit/s.

■ **B2B is the largest new value driver, but the industry is struggling with SME customers:**

B2B is perceived as the largest growth driver after broadband and is overtaking mobile, which was unable to meet the expectations raised in the previous survey. While 44% of participants report high B2B success regarding SoHo customers, none of the participants reports similar success with SMEs.

■ **Capex levels seem to flatten out – the industry reports average Capex as a % of revenues of 20% in 2012 and expects values of 22% and 19% in 2014 and 2016:**

After 10 years of slowly decreasing Capex levels and very low but growing Capex forecasts, the industry is now expecting a more stable development. Average Capex levels appear to flatten out at approximately 19-20% of revenues – depending on company scale and strategy.

¹ 2012-2016.

Solon Survey of European Cable Communication 2014

Editorial

The 6th Solon Survey of European Cable Communication presents a detailed picture of the European broadband cable industry. Conducted since 2004, the bi-annual study covers both strategic assessments and expectations of top management as well as benchmarks and forecasts of financial and operational KPIs.

The 14 participating operators run leading businesses in 12 countries and represent the multiple opportunities and challenges that shape the cable industry today.

We would like to take this opportunity to thank all participating executives for sharing their views and data, which has helped to produce a comprehensive overview of the state of the European cable industry.

It should be noted that this document only covers a small and selected part of the survey's analyses. While all participating operators receive detailed individual feedback presentations and customized assessments, we have selected a set of aggregated high-level information to be made public within this study.

Management Consulting for Media and Telecoms

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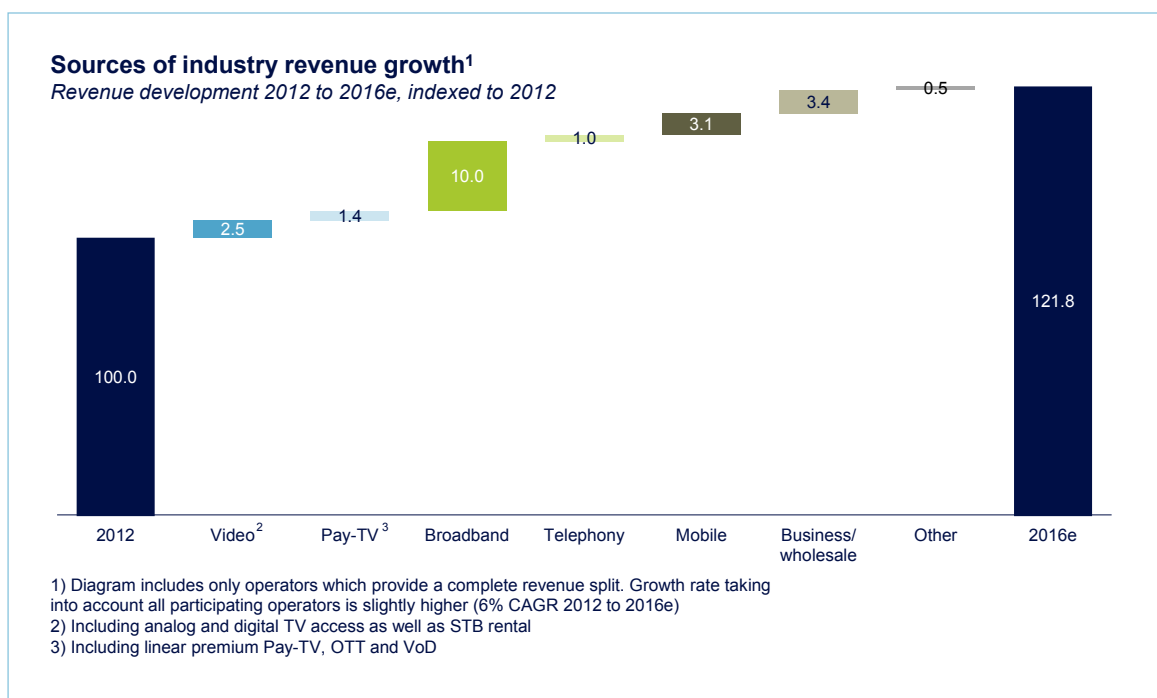
NOTE: A more comprehensive set of data is available upon request. Please contact Yasmin Aktas (yasmin.aktas@solonstrategy.com).

Cable industry to accelerate growth

The European cable industry is expecting to accelerate its growth and is forecasting revenue increases above those 2 years ago. The participating operators forecast a yearly growth of 6% (2012-2016 CAGR), compared to 5% in the previous Solon European Cable Survey.

The largest growth driver is again expected to be broadband, accounting for nearly 50% of the forecasted top-line increase. For the first time, B2B becomes the second strongest driver, followed by mobile, TV access, Pay-TV and telephony.

Graph 1



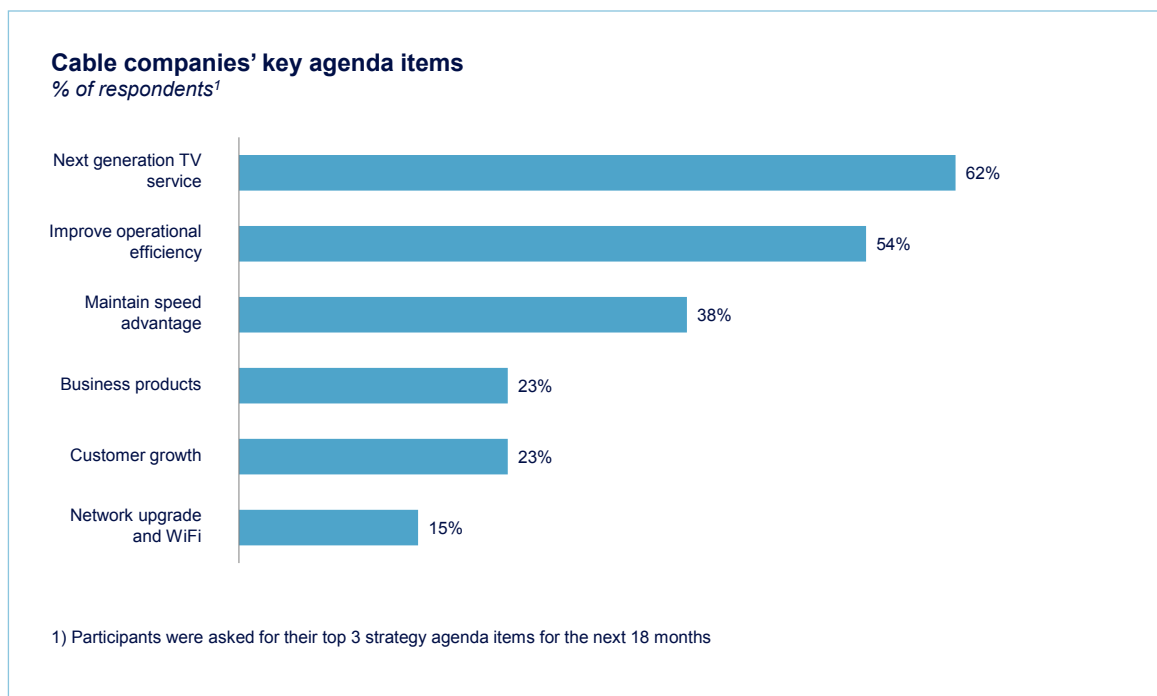
The big winner is B2B; compared to the previous survey, B2B grew in importance while mobile – expected to be the largest ‘new’ driver in the last report – decreased. Correspondingly, the cable operators’ focus shifted from further monetizing the existing B2C customer relationship – even if using a different infrastructure – to building new customer relationships utilizing the cable network’s capabilities.

The low expected growth of Pay-TV reflects the increasing competitive pressure, in particular by OTT. The low forecast of telephony reflects the ongoing shift to mobile, although it must be noted that the industry continues to expect a corresponding revenue increase.

The key agenda items of the industry's top management reflect the operators' need to defend their base: 62% of respondents see next generation TV services as a key topic, despite its lack of expected growth (see Graph 1). Management attention appears to focus on a defensive strategy, that is, to sustain the existing TV subscriber relationships, its high cash flow and its up-selling potential.

For the first time, operational efficiency (54% of respondents) moves to second place on the management agenda, indicating the growing relevancy of margins and quality of service. Maintaining the speed advantage is ranked third with 38%, underlining the importance of high bandwidth products for the industry.

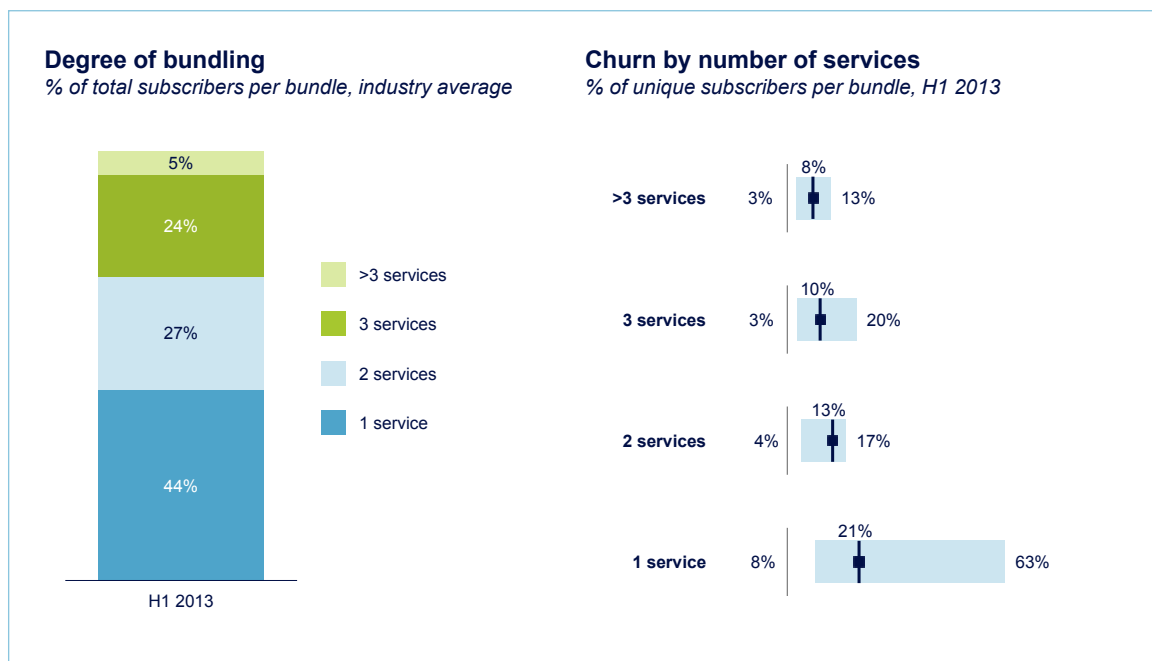
Graph 2



It is notable that 23% of respondents indicate business products as a key topic, which is the same share as customer growth.

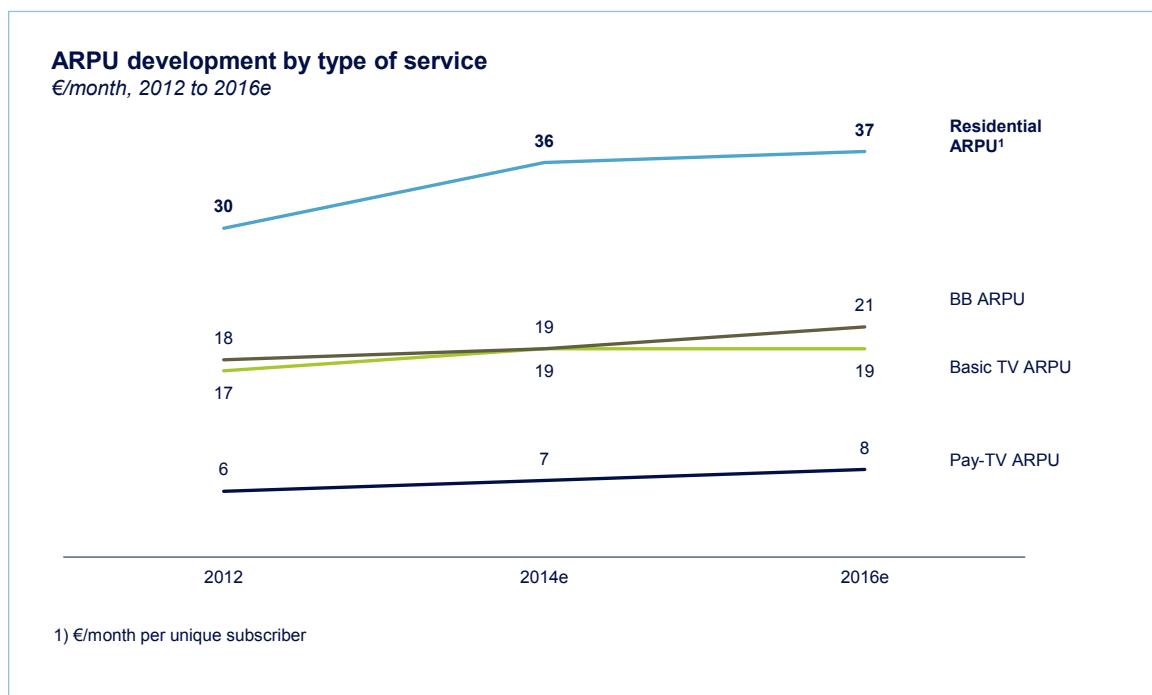
Bundling remains a key trend, allowing operators to monetize existing customer relationships via up-selling/lower SACs and improved loyalty. As in previous years, it can be observed that customers of multiple products and bundles are significantly more loyal, that is, less likely to churn. The churn rate of customers with over 3 services is on average nearly 3 times lower than the churn rate of customers with a single service.

Graph 3



After years of pressure, ARPU is showing clear signs of renewed growth; participating cable operators expect growth on TV access, Pay-TV and broadband ARPUs. On average, the residential ARPU is forecasted to rise from 30€ per month per unique subscriber in 2012 to 37€ in 2016.

Graph 4

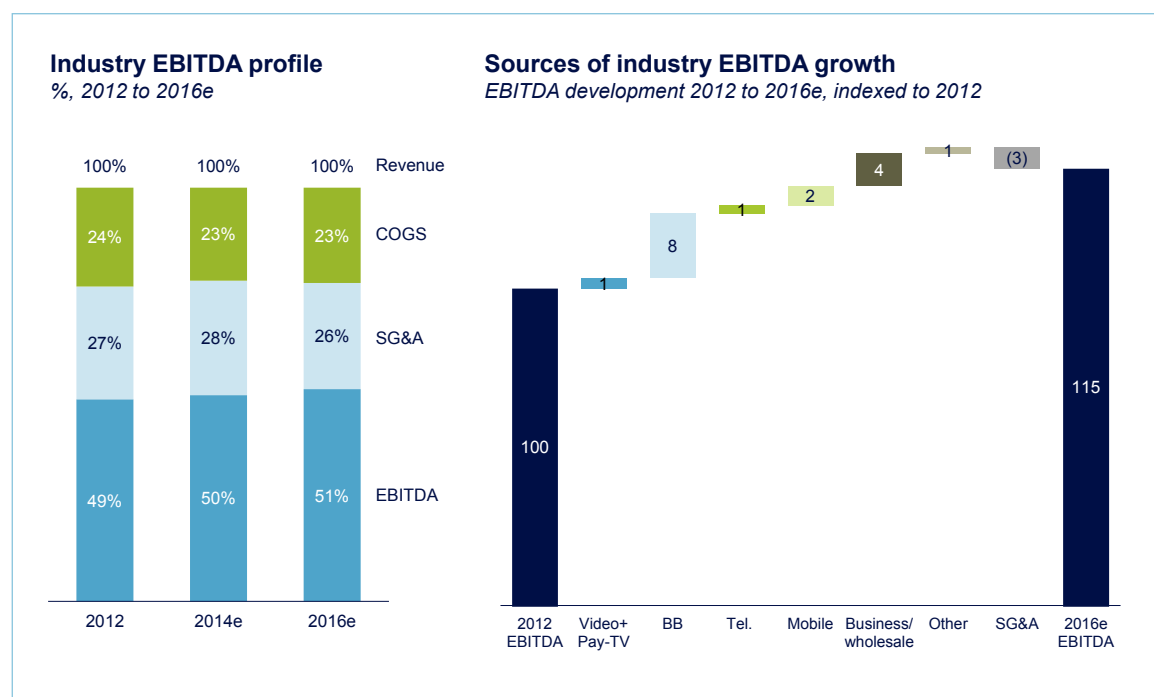


EBITDA margin and OpFCF growth

European cable operators expect slightly growing EBITDA margins – reaching an average of 51% in 2016 – driven mostly by the continuous success of high margin broadband products as well as an expected efficiency increase in SG&A in 2016.

These two developments thereby more than compensate for the margin pressure created by the growth of lower margin products such as TV, mobile and B2B.

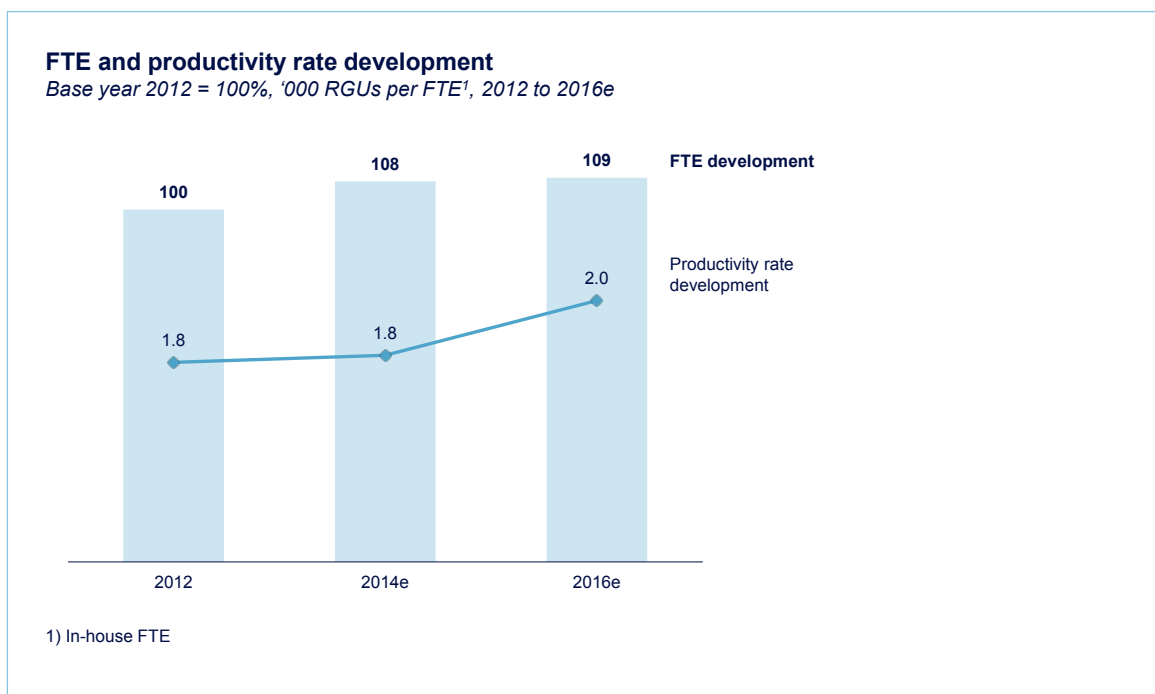
Graph 5



In absolute terms, broadband is clearly the largest source of EBITDA growth, followed by B2B. Mobile shows a lower contribution to EBITDA growth than to revenue increase due to the limited product margin of MVNO contracts.

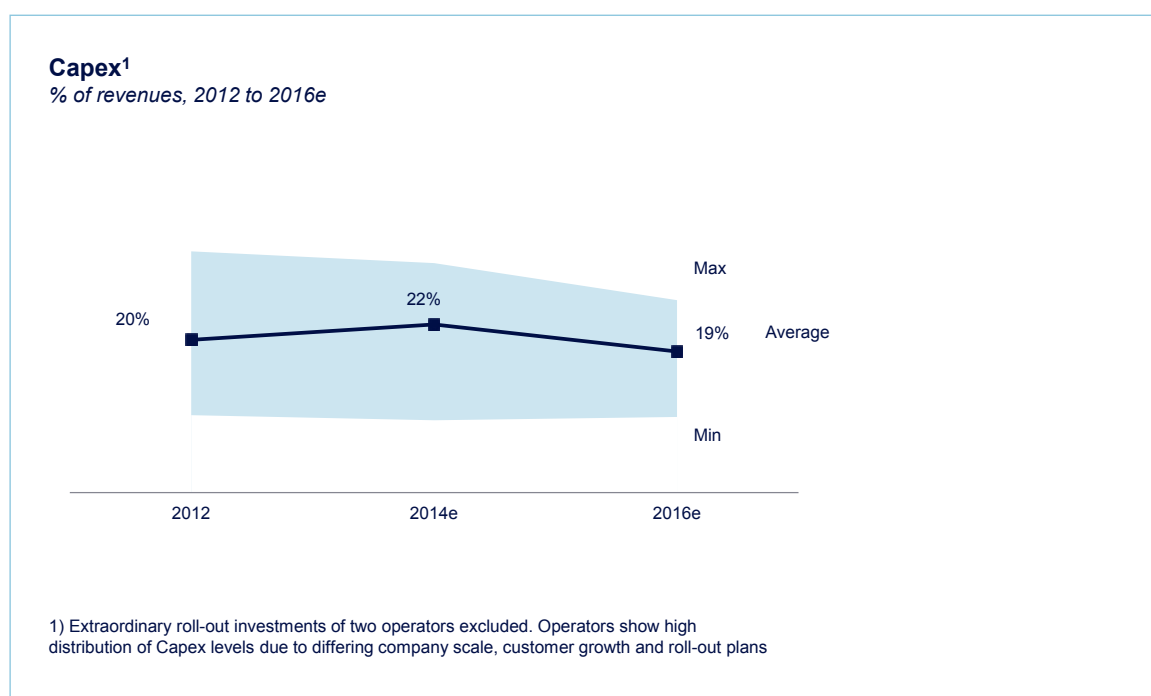
Looking at the expected personnel development, the European cable industry plans to slightly increase its FTE base. This development is combined with a growing productivity, i.e. RGUs are expected to grow stronger than FTEs.

Graph 6



The reported and forecasted Capex levels are unique to the history of this survey. While an average Capex of 20% of revenues in 2012 represents an all-time low, the operators expect a fairly stable development reaching an average of 19% by 2016.

Graph 7



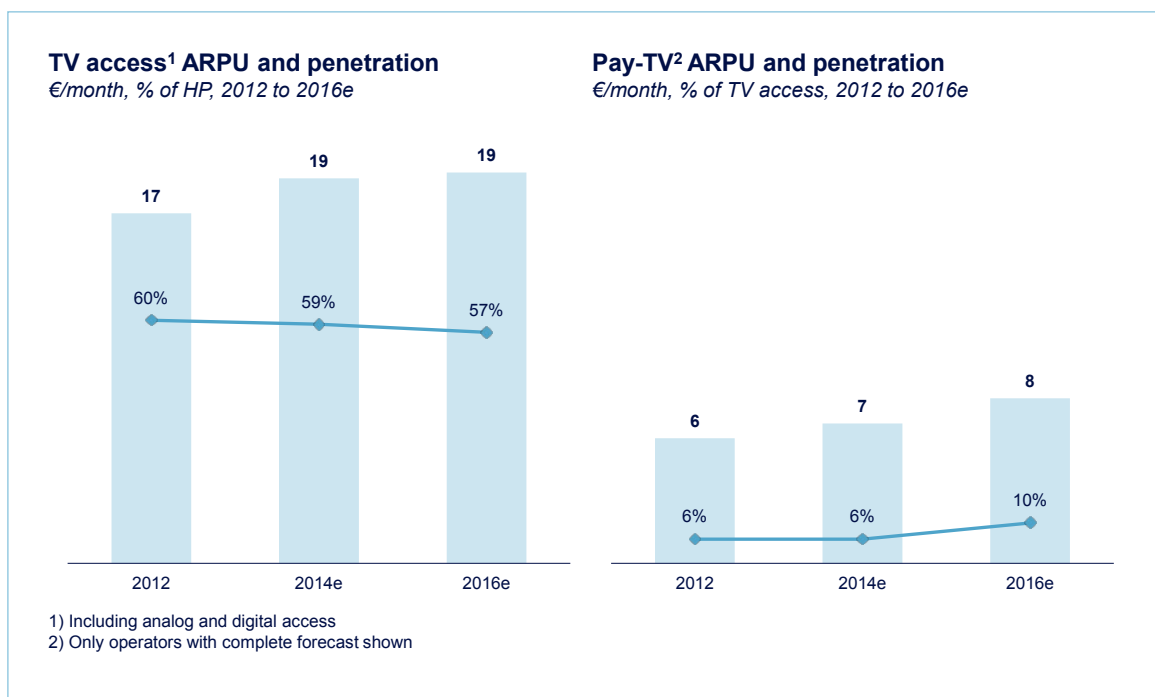
The Capex split is forecasted to remain relatively stable, with nearly 40% being invested into customer growth (CPE, installation, commission), around 25% used for network upgrades or capacity and 8% for IT.

Video - defending the base

For the second time in the history of the cable survey, operators expect a decrease in TV access penetration; a development that is more than compensated for by an expected growth of unique subscribers – in particular non-TV customers – and of bundling success.

Pay-TV penetration is expected to remain stable between 2012 and 2014 but to improve significantly over the following 2 years.

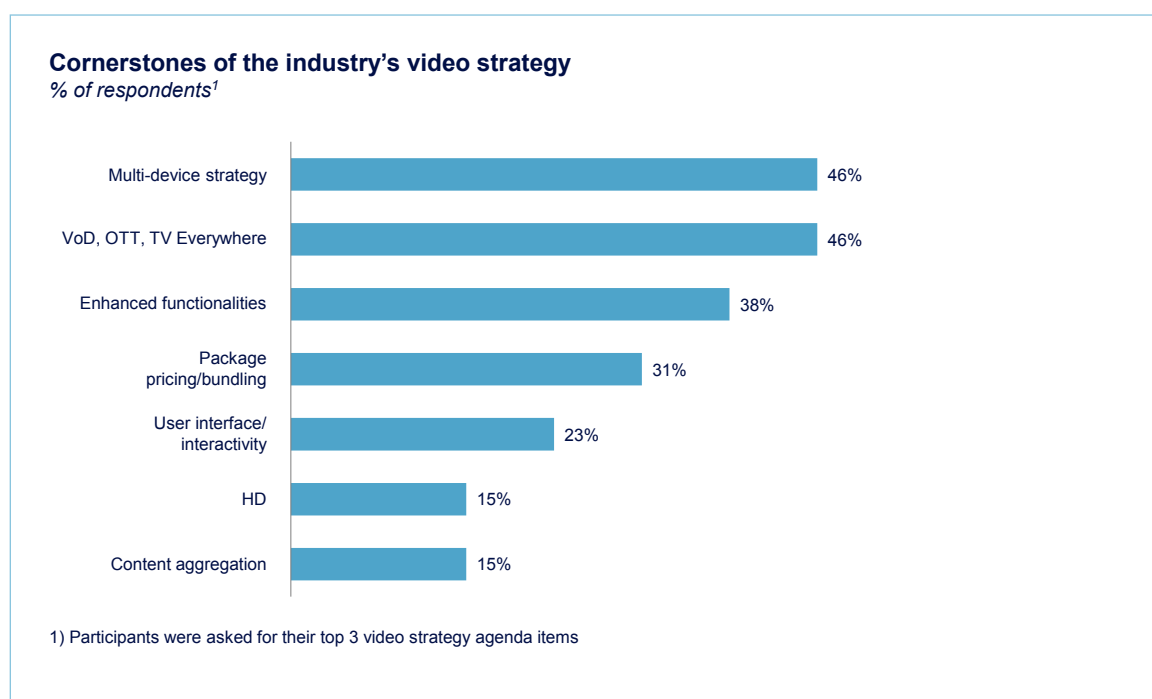
Graph 8



As described in Chapter 1, the European cable industry additionally forecasts an increase of TV ARPU – both of TV access and of Pay-TV.

These expectations are linked with the industry's video strategy, which is focused on multi-devices as well as on VoD, OTT and TV Everywhere – both of these areas were labelled high priority topics by 46% of respondents. Enhanced functionalities were indicated by 38% of the operators, while 31% mentioned package pricing and bundling.

Graph 9



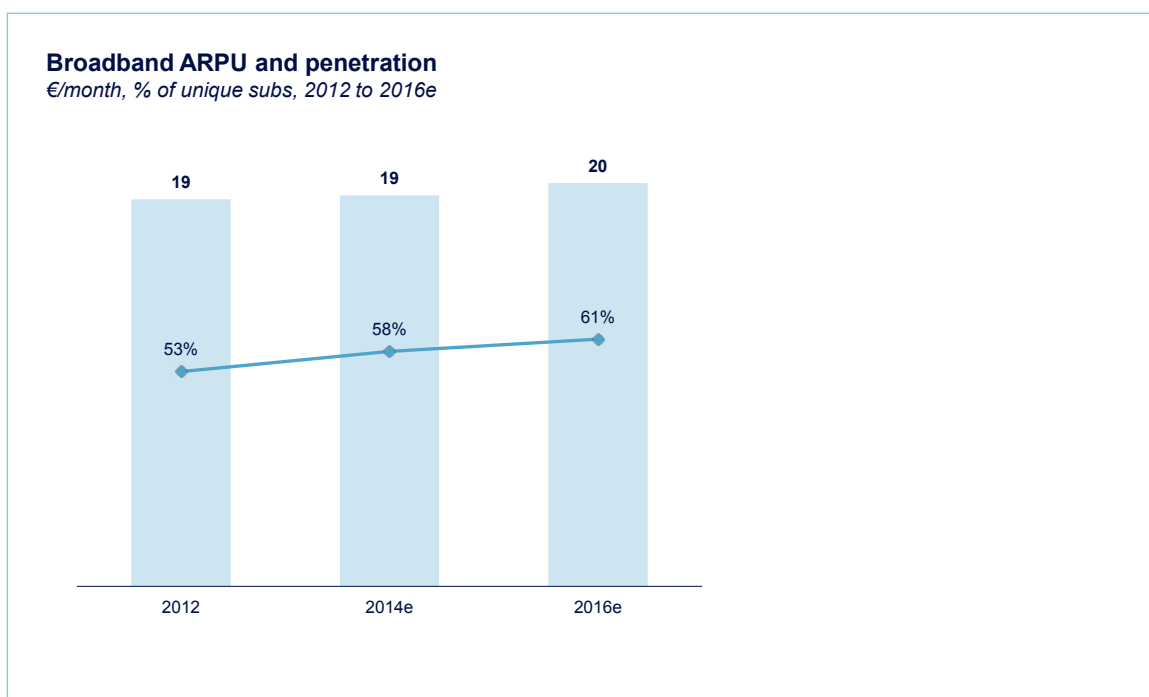
Our analysis of video churn shows that in H1 2013, an average of 35% of total TV access churners left in the direction of cable's key competitor: fiber/DSL operators. For 2016, the industry expects this number to increase to 43%. The main reasons for this development are lower prices (54% of respondents report high or very high impact) and efficient bundling (46% report high or very high impact).

26% of total TV access churners moved to other cable operators in H1 2013. 20% churned to DTH, 16% to terrestrial TV and 3% to OTT. For 2016, the operators expect all these shares to decrease with the exception of OTT, which is forecasted to increase to 7%.

Broadband speeding up

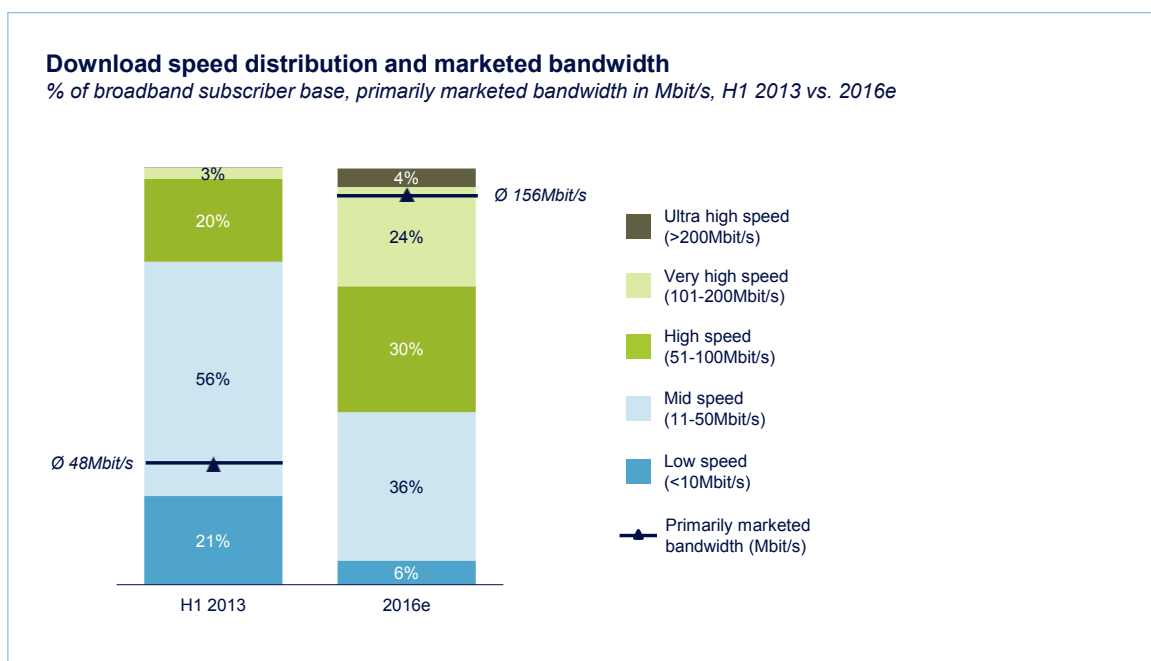
As in the previous surveys, broadband is by far the largest revenue and EBITDA growth driver of the industry, showing only limited signs of approaching maturity in terms of customer penetration. Additionally, the participating operators expect an increase in broadband ARPU.

Graph 10



This development is mainly driven by significantly growing broadband speeds. The average European cable operator expects to deliver, on average, over 150Mbit/s to new customers in 2016 (primarily marketed bandwidth) – a higher speed than that offered by most competing infrastructures. Over half of the existing customer base in 2016 is forecasted to receive over 50Mbit/s, with 28% receiving above 100Mbit/s.

Graph 11



The cable operators' competitive situation is obviously defined by the degree of overbuild with other infrastructures, which significantly varies between the markets. In general, European network competition is expected to increase across all network types. FTTH overbuild was at an average of 25% in H1 2013 and is expected to grow by 10pp until 2016. FTTB overbuild is forecasted to rise from 29% to 37%, VDSL from 41% to 48%. The most obvious increase is expected for LTE, which is expected to grow to 68% in 2016 from 30% in H1 2013.

The survey indicates that 59% of cable operators' broadband gross adds churn from DSL. The participants expect this share to decrease by 1pp until 2016. A major increase is forecasted for gross adds churning from FTTH/FTTB players. In H1 2013 they represented 19% of the cable operators' new customers – this share is expected to grow to 28% in 2016.

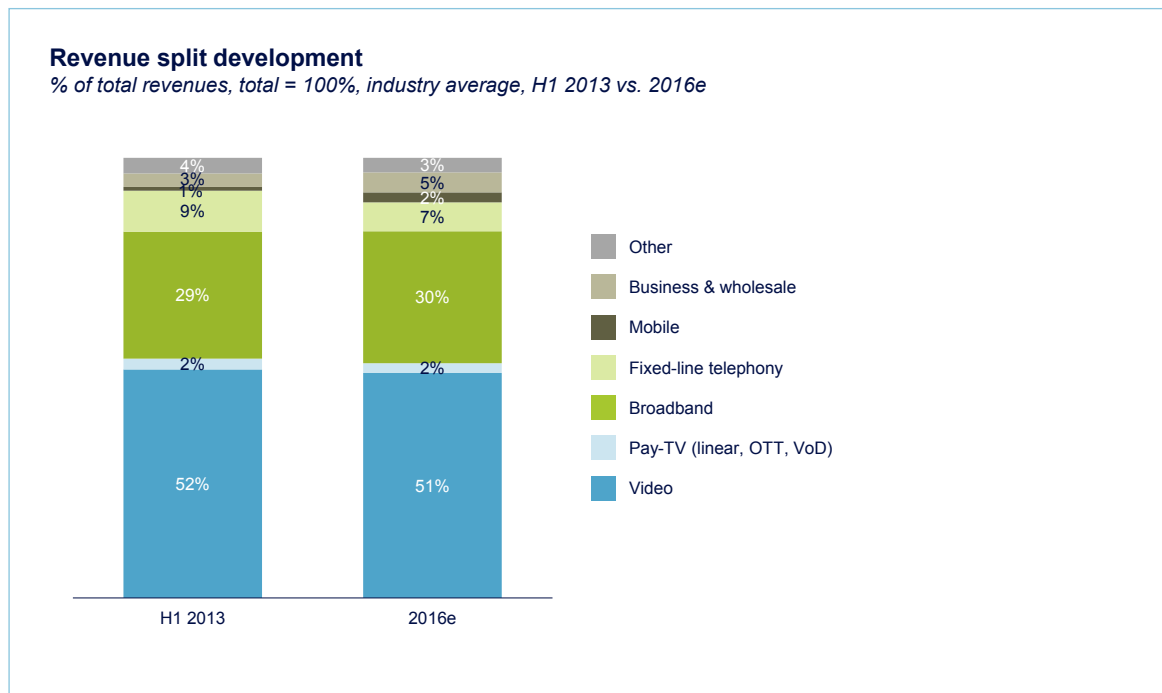
The most expensive broadband sales channel remains door-to-door, with an average SAC per gross add of 6.1 months of broadband ARPU. The most efficient channel is inbound calls reaching costs per gross add of on average 2.8 months of ARPU.

B2B, mobile and WiFi

In the last survey, mobile was seen as the second largest revenue driver after broadband, however this place now goes to B2B. B2B is expected to increase revenue share from 3% in H1 2013 to 5% in 2016, while the share of mobile revenue is forecasted to remain basically stable over the same period of time.

This means that the cable operators' infrastructure advantage is expected to create higher value than the utilization of existing customer relationships, for example, B2C up-selling to mobile.

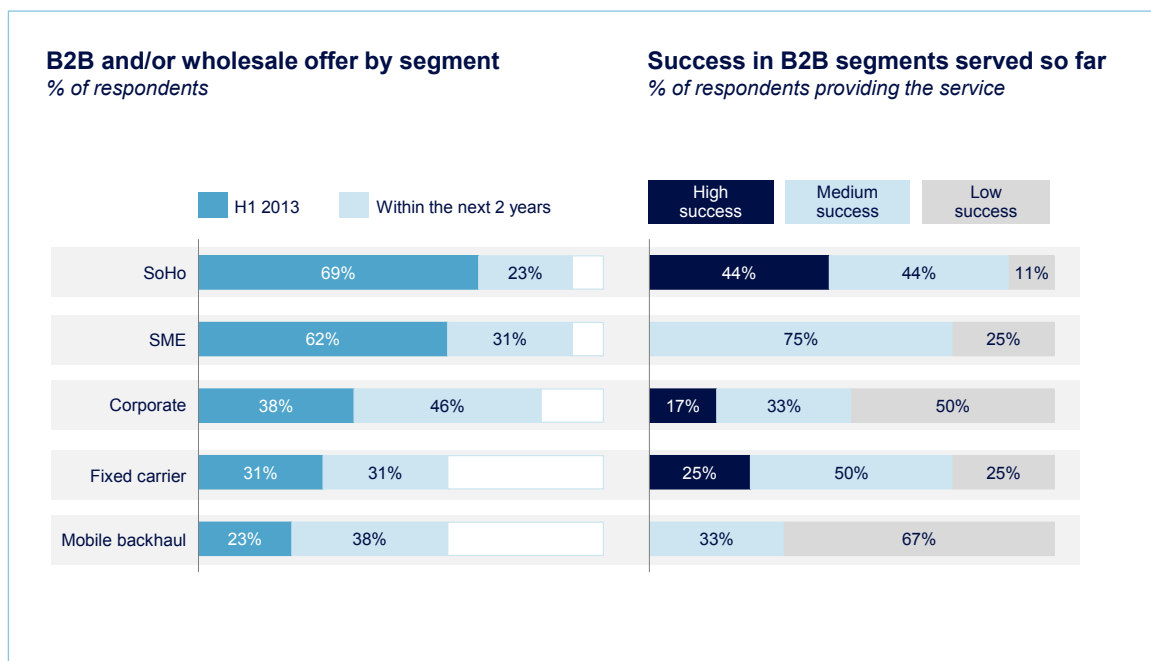
Graph 12



The key challenge for cable operators in successfully launching B2B is to develop the necessary operations in parallel to the existing – and typically well-optimized – B2C business. Operators had previously been reluctant due to the initial investment and management effort, alongside the worry of negatively impacting on B2C efficiency.

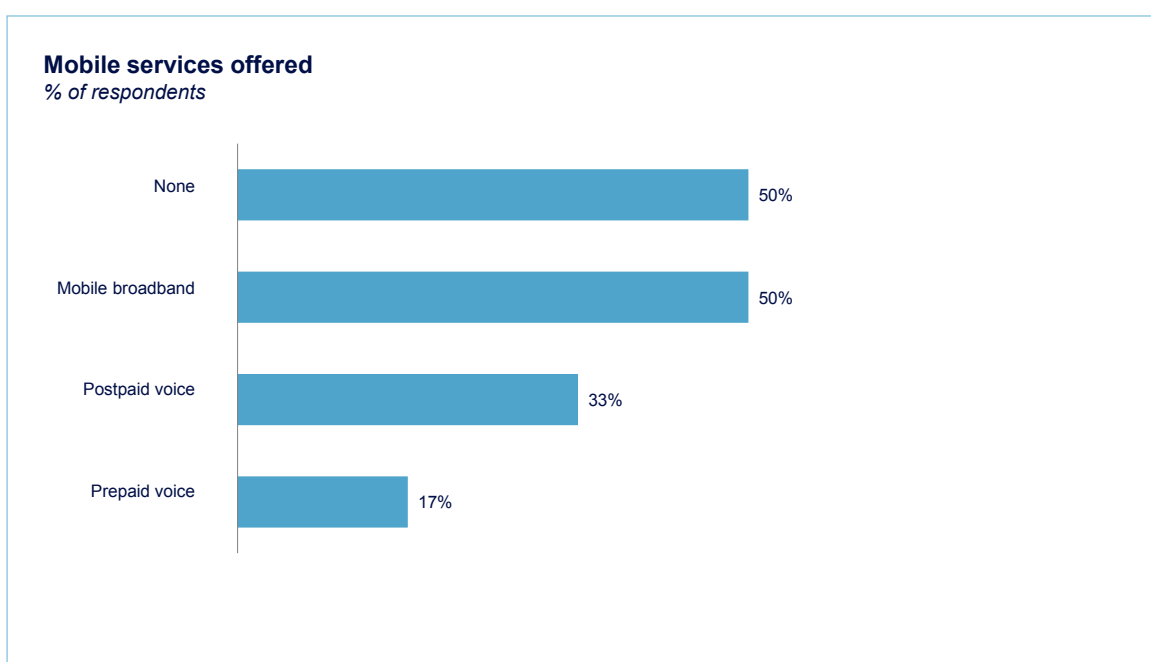
While SoHo products are very similar to B2C and comparably easy to launch, SME and even corporate clients require significantly higher product complexity. The survey reflects these challenges as 44% of participants report high success regarding SoHo, while in comparison, no participants report high success with SMEs.

Graph 13



The mobile business was unable to meet the expectations raised in the previous survey. Mobile offers are still not a standard product for the average cable operator, with half of respondents not offering mobile services. While all existing mobile offers include mobile broadband, 33% of all respondents offering mobile services also provide postpaid voice and only 17% offer prepaid voice.

Graph 14



Despite several European cable operators being very successful on mobile, it appears that the industry as a whole is still struggling to monetize its B2C customer relationships with regard to this product segment. Reasons include the comparatively low MVNO margin, the challenge to differentiate from other mobile products (e.g. via attractive bundles) and the dissimilarities between serving individuals and households.

The significant growth of WiFi services offered by cable operators is mainly considered as a marketing tool: 72% of operators answering the corresponding questions see a very high or high marketing impact. The second most important reason is offloading of mobile data, which has very high or high impact for 36% of the operators. ARPU push is of clearly lower importance, with none of the operators believing it to have a very high or high impact.

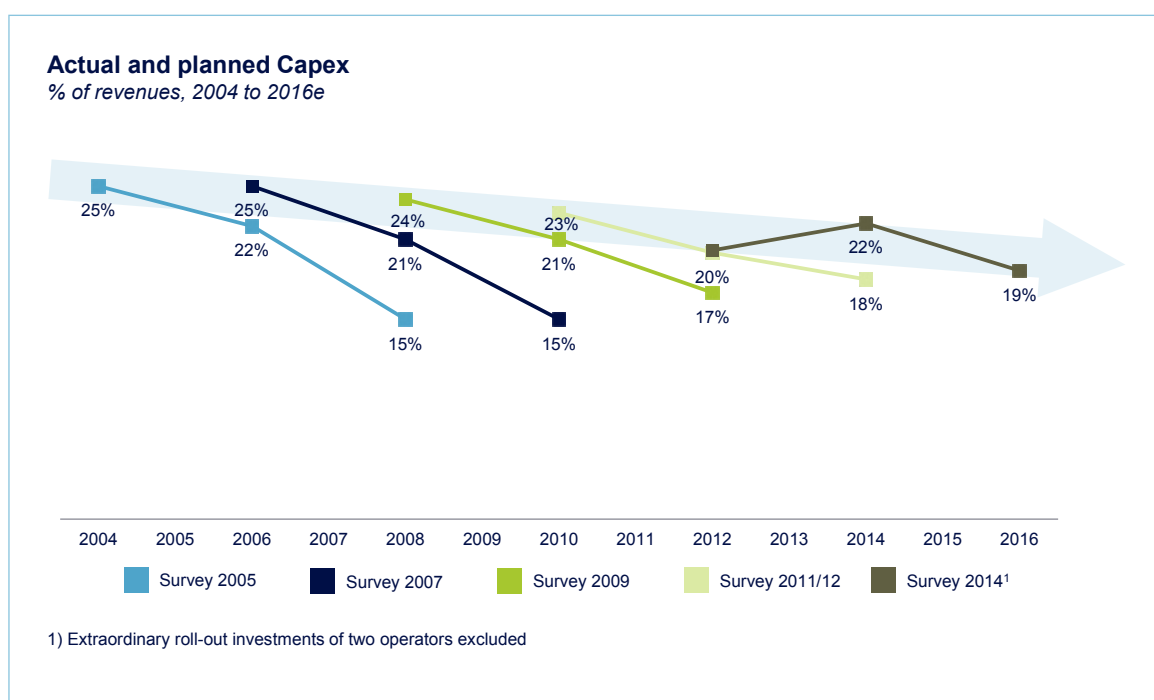
Network - dealing with increasing data traffic

Finally, European cable operators' average Capex as a % of revenues seems to flatten out at approximately 19-20%. In previous years, the European cable industry has shown slowly decreasing Capex levels while also continually forecasting significant drops in the future.

This survey shows a different picture. Firstly, the reported 2012 value corresponds with the forecast of the previous survey and represents an all-time low average Capex level of 20%. And secondly, for the first time in the history of the survey, the participating operators expect a more or less stable Capex as a % of revenue level with 22% in 2014 and 19% in 2016.

It should be noted that Capex levels depend significantly on aspects such as company scale – i.e. larger operators are able to reach lower levels – and customer growth as well as network roll-out plans (see also benchmark distribution in Graph 7).

Graph 15

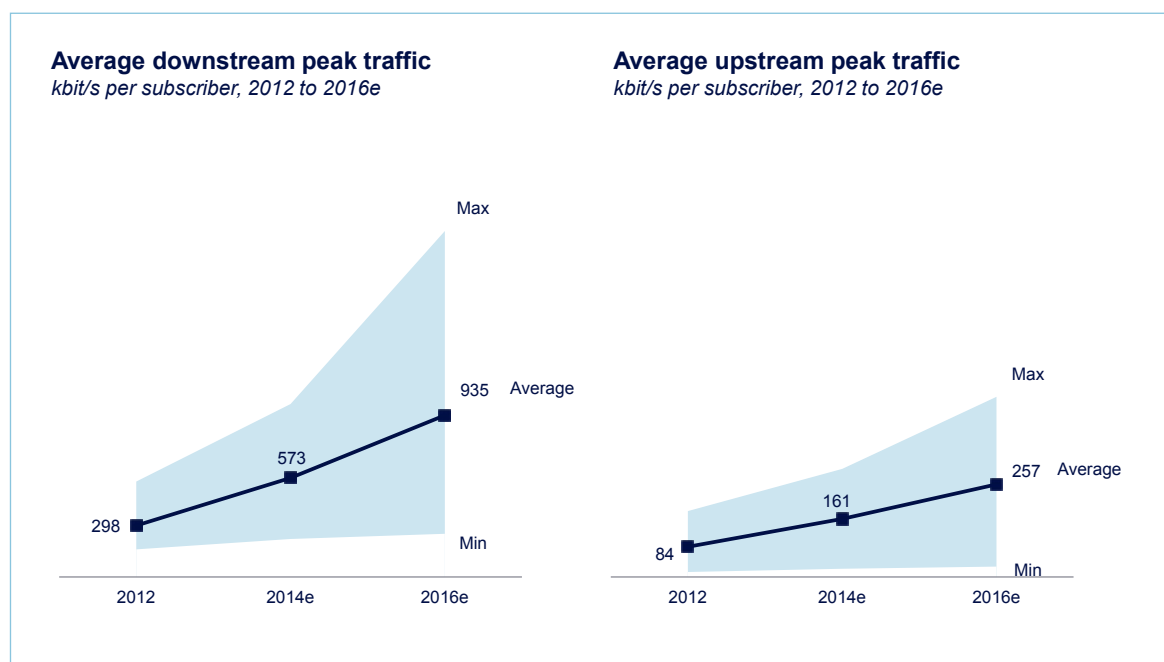


The Capex split is forecasted to remain fairly stable in the future. In line with past results of the European Cable Survey, most Capex is planned to be spent on CPE and installation – namely 39% of total Capex in H1 2013. This share is not expected to change by 2016, however the survey respondents expect the share for core equipment to reduce from 8% to 3%.

A key challenge for the cable industry and its investment plans clearly is the management of increasing bandwidth demand, which is driven mainly by video content and cloud services. As a result, downstream and upstream peak traffic is forecasted to more than triple between 2012 and 2016.

While the average downstream peak traffic in 2012 was 298kbit/s per subscriber and the average upstream peak traffic was 84kbit/s, the respondents expect downstream to reach 935kbit/s and upstream 257kbit/s in 2016.

Graph 16



The top priority in terms of network projects for the coming 2 years will be capacity upgrades, highlighted by 50% of respondents. Network extension (42%) and fiber installation/upgrade (33%) rank second and third. DOCSIS upgrade, network quality control and WiFi hotspots are ranked lower, with each category being mentioned by 17% of respondents.²

² Each operator was asked for the top 3 elements of its network strategy.

Glossary of abbreviations

A	ARPU	Average Revenue Per User
B	B2B	Business To Business
	B2C	Business To Consumer
	BB	Broadband
C	CA	Conditional Access
	CAGR	Compound Annual Growth Rate
	CAPEX	Capital Expenditure
	COGS	Cost Of Goods Sold
	CPE	Customer Premises Equipment
D	DOCSIS	Data Over Cable Service Interface Specification
	DSL	Digital Subscriber Line
	DTH	Direct To Home
E	EBITDA	Earnings Before Interest, Tax, Depreciation And Amortization
F	FTE	Full-Time Equivalent
	FTTB	Fiber To The Building
	FTTH	Fibre To The Home
H	HD	High Definition
	HP	Homes Passed
I	IPTV	Internet Protocol Television
	IT	Information Technology

K	kbit/s	Kilobit Per Second
	KPI	Key Performance Indicator
L	LTE	Long-Term Evolution
M	Mbit/s	Megabit Per Second
	MVNO	Mobile Virtual Network Operator
	MNO	Mobile Network Operator
O	OpFCF	Operating Free Cash Flow
	OTT	Over The Top
P	PVR	Personal Video Recorder
R	RGU	Revenue Generating Unit
S	SAC	Subscriber Acquisition Cost
	SD	Standard Definition
	SG&A	Sales, General And Administration
	SME	Small And Medium Sized Enterprises
	SoHo	Small Offices Home Offices
	STB	Set-Top-Box
V	VAS	Value Added Services
	VDSL	Very High Speed Digital Subscriber Line
	VoD	Video On Demand

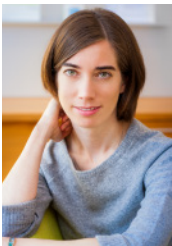
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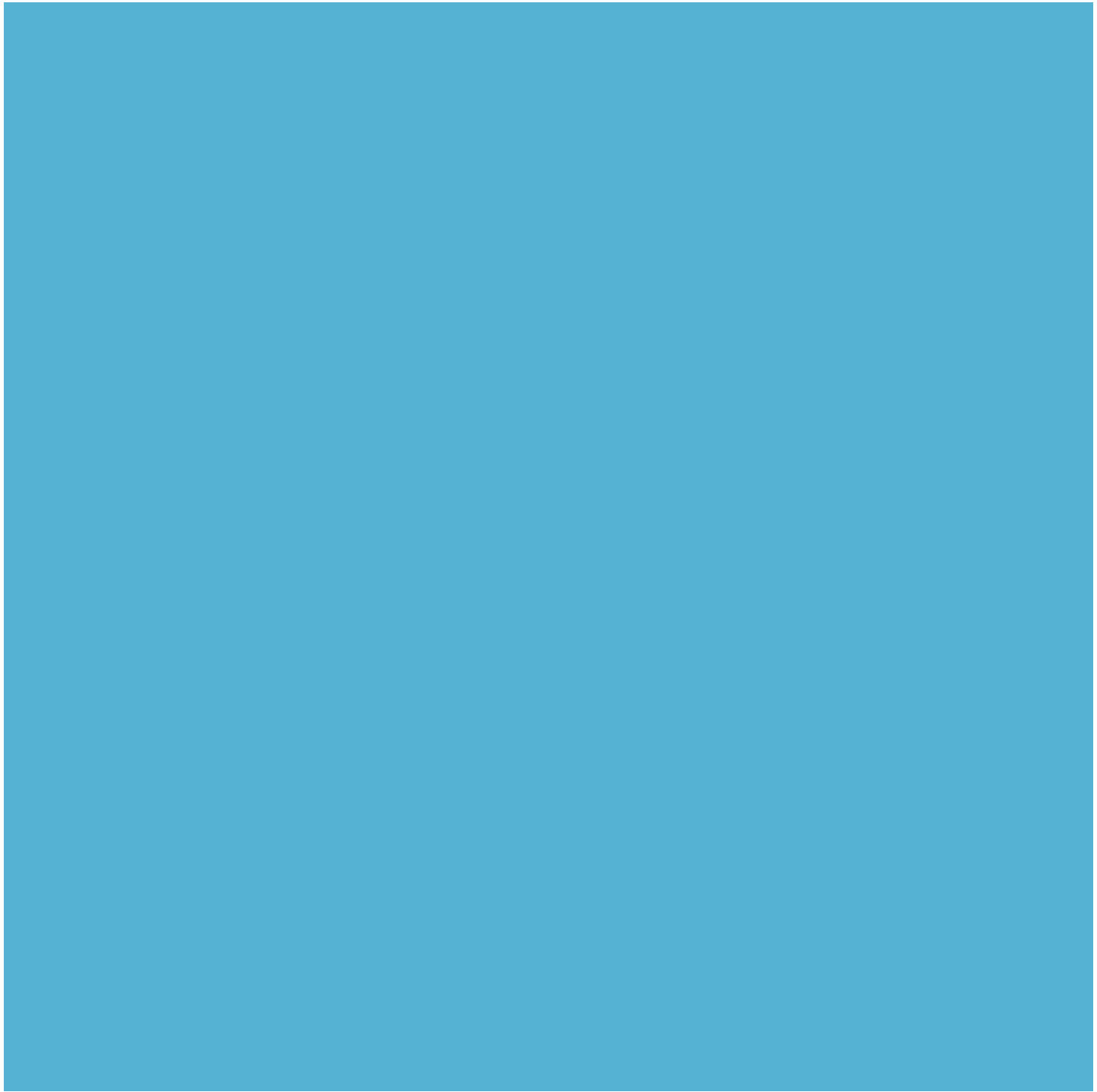
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