EDITORIAL

The fourth Solon European Cable Survey presents an in-depth look at the opportunities and challenges cable operators in Europe are facing today. With 17 participating operators across all major markets, the 2009 edition of our survey again provides an abundance of references, benchmarks, business ideas and market opportunities for cable operators.

Despite the economic downturn and turmoil in the financial markets, the Solon European Cable Survey 2009 finds its participants in a healthy state, with so far only limited impact from the current economic woes. Cable operators are confident and well positioned to participate in the future growth opportunities of the media and telco markets.

Furthermore, cable operators have moved, for the first time, to the centre stage of the ongoing discussion on overall economic development and social welfare. First, they are as of today the most cost effective provider of the next generation of high-speed broadband services beyond 50 Mbit/s, an important political goal of the EU commission and many member states. And second, they are launching new interactive services, bringing a whole new world of television to consumers.

With all these opportunities, it now rests upon the operators themselves to diligently work on achieving and sustaining the competitive edge against other infrastructure providers and reap the economic rewards. The industry is set for exciting times as it finally has the ability to outgun its competition from DSL providers for broadband and satellite players for TV.

We would like to take this opportunity to thank all participating executives, from CEOs to financial controllers, for sharing their views and data and making this study into what it is today: A comprehensive overview of the state of the European cable industry 2009.

Martin Weiss
Dorothea von Wichert-Nick
EXECUTIVE SUMMARY

- **Cable operators successfully master the current economic crisis** and anticipate continued, profitable growth for 2009 and beyond, although limited financial room to manoeuvre may inhibit growth trajectories
  - Although a negative impact of the economy on TV is expected, CEOs believe broadband sales may actually profit from the current downturn
  - Some operators may need to stretch planned network investments in order to accommodate the changed funding and financing environment
  - Overall, the participating cable operators project revenues to grow by 6.6% annually 2008 – 2012, while EBITDA gains 8.6% per annum
- **Cable broadband is finally able to escape ruinous price competition with DSL** by offering unmatched speed levels at attractive prices
  - New Docsis 3.0 broadband technology allows for quick and inexpensive entry into next generation Internet access networks – offering speed levels of 100 Mbit/s and above, which cannot be matched by DSL without deep fibre deployment
  - Successful speed up-selling leads to increasing broadband ARPs, which for 2009 were above the plans communicated in 2007 – the first overperformance in Internet ARPU development since the start of this survey series in 2004
- **Cable TV strategy shifts focus towards interactive TV services.** Operators are increasingly focusing on on-demand services instead of enlarging channel line-ups
  - A new trend is interactivity, with emerging services like catch-up TV, free VoD and transaction VoD
  - Traditional cable competitors, like satellite and terrestrial, are unable to compete adequately with these services due to a technical lack of backchannel constraints
- **Capex levels remain high at 25% of revenues.** The constant quest to compete on best features and highest speed levels against telco players renders aims to sustainably reduce investment levels unachievable
- **Cable operators may play an important role in a potential market consolidation,** as DSL and mobile operators are reaching out for their own alternative networks
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1. CABLE CEO AGENDA 2010

The Solon European Cable Survey has seen another two years of growth and prosperity for the industry. The operators have continued to expand their product offerings, have continued to gain broadband market share and are investing into innovative networks.

Since 2006, the overall revenue of the European cable industry has grown by 17%, whereas the overall economy in terms of GDP has only grown by 8%. And while the economic situation across Europe suffered a contraction of the economy in 2009, participating cable operators expect to maintain their current revenue growth and expand their revenues by another 14% until 2010.

1.1. Market challenges to be overcome

However, cable CEOs are acutely aware that in order to realise their projected expansion, several core market challenges have to be managed – while not losing sight of the overall targets. These market challenges can be grouped into three topics:

- Managing life post-Lehman
- Addressing increased competition in the TV market
- Attending to the encroaching maturity of the broadband market

1.1.1. Life post-Lehman: Managing slowed economy and credit crunch

The financial market crisis, and the following economic slowdown hit cable from two sides. First and foremost is the impact of the financial meltdown on financing for cable operators, many of which are currently highly leveraged. Prolonging the current credit lines or restructuring the financial base has put strong pressure on European cable operators over the past 12 months. Many ambitious growth strategies had to be revised in order to accommodate for the new realities of the financial markets.

Regarding marketing communication and entertainment products in a recession, common sense suggests that harder economic times cause people to shift consumption from non-entertainment focused and more costly forms of leisure towards TV at home. Cable CEOs find that this is only partially the case.

They expect two negative effects from the economic downturn:

- Households cutting their TV subscriptions: Expensive premium Pay TV products are cancelled more easily than during prosperity. Competitive offers for basic access, be it DTT or IPTV, are evaluated closely. Increased churn is expected.
- ARPU pressure from two sides: Pure price pressure on the one hand and a growing share of downgrading subscribers on the other.
In contrast to these negatives, broadband penetration is set to increase, mainly due to growing unemployment as people who formerly accessed the Internet predominately at work now require access at home. Also, some operators see potential for increased usage of lower tier TV services, as users cut back on more costly recreational alternatives.

### 1.1.2. Broadband markets are maturing

With a broadband penetration of 70% and higher, the first European broadband markets are reaching the state of maturity, with nearly all computer households connected via broadband. Crowding out competitors still puts pressure on prices. Competition is further fuelled by market entries of often publicly funded or at least publicly supported fibre operators offering high-speed at low prices.

At the same time mobile broadband has finally become a mass market product. In 2008, some Western European markets including Austria, Sweden and Ireland, experienced the rise of very price-aggressive mobile broadband operators. With hefty price discounts and promotions, these players were able to funnel all broadband net adds to mobile or combined fixed and mobile, leaving fixed-only broadband services with zero or even negative growth. In 2009, the pressure has eased a somewhat, as many mobile operators have suspended their aggressive – and often cash negative – market entry campaigns.

This gives cable operators the needed reprieve to reconsider their market approaches and revise their strategies. Having a clear-cut USP is critical in this market environment: While DSL and fibre operators have moved towards TV and triple play, cable operators have chosen the path of speed and price. Both are adding mobile broadband to their product portfolio to address all communication needs of their subscribers. And soon the

### Economic downturn and expected impact on cable operators

<table>
<thead>
<tr>
<th>Share of operators expecting...</th>
<th>Negative impact vs. positive impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscriber development</strong></td>
<td></td>
</tr>
<tr>
<td>Basic Video access</td>
<td>-24%</td>
</tr>
<tr>
<td>Premium Pay TV</td>
<td>-41%</td>
</tr>
<tr>
<td>Broadband</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Tiering &amp; Pricing</strong></td>
<td></td>
</tr>
<tr>
<td>Downgrade activity</td>
<td>-47%</td>
</tr>
<tr>
<td>Price pressure</td>
<td>-59%</td>
</tr>
</tbody>
</table>

(Which impact does the economic downturn have on your company?)
Source: Solon European Cable Survey 2009
hunt will start for so far untapped potentials for new subscribers, especially in the small and medium enterprise segment.

1.1.3. TV competition increases

TV over DSL / fibre: Large investments, but steady uptake

The complex competitive situation in which cable increasingly finds itself is a result of its successful entry into the traditional market segments of fixed-line telco providers.

This strategic positioning changes the competitive dynamics for cable significantly and impacts the way cable companies do business. The asymmetric economics among rapidly converging telco and TV markets continue to fuel cable growth while telco’s IPTV upside appears somewhat limited.
There are two main inhibitors for telcos in the TV space: The often unsuitable infrastructures that prohibit a customer experience comparable to that of cable TV or satellite, and the marketing and sales challenge to sell an emotionally charged product like entertainment.

Regarding the technical hurdles, at present a real competitive viewing experience can only be attained if the customer lives relatively close to the MDF or in built-out fibre networks that deliver stable bandwidths of at least 16 Mbit/s. Although theoretically even 4-6 Mbit/s should support a respectable TV experience, in practice, viewing TV at these speeds is deemed unacceptable by viewers. This is due to high latency times, image remnants after switching channels or in fast moving shows, and limited picture quality.

In marketing and sales, we have seen numerous attempts to create convincing, exciting sub-brands for telecommunication providers like Telia Smart, Swisscom Bluewin TV, and Deutsche Telekom’s T-Home Entertain. Similar to some cable operators’ experience with marketing communication products like broadband and telephony for the first time some years ago, it can take some time for telcos to learn the ropes of marketing a new product line effectively.

These challenges explain the slow uptake of telco TV services in most European countries. However, more and more operators have overcome the technical limitations and the marketing challenge and now show a decent pacing in IPTV growth. Examples include the Nordic countries (e.g. Telia in Sweden, around 10% IPTV market share, although driven in parts by aggressive price discounts), as well as Belgium (>10% of total TV market) and even Germany (~3% of total TV market), after an aggressive marketing push in 2008 and an expensive FTTC roll-out to provide a TV experience similar to cable TV.

The standard IPTV offer normally encompasses far more features than the analogue or digital basic access package from a cable competitor. The platforms cover features like

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**Theoretical bandwidth requirements for TV services – Exemplary**

*Mbit/s, depending on country specifics*

<table>
<thead>
<tr>
<th>Year</th>
<th>ISDN/Modem</th>
<th>ADSL</th>
<th>EuroDOCSIS 20</th>
<th>ADSL2+</th>
<th>VDSL</th>
<th>EuroDOCSIS 30</th>
<th>FTTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>0.064</td>
<td>6</td>
<td>50</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>2010+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Solon
catch-up TV, time-shifting, instant rewind, full PVR functionalities, a very attractive VoD offer and complex ESGs / EPGs. Sometimes all of these features are brought to the consumer with the help of just one box.

These offers are usually attractively bundled with Internet and telephony packages to ensure a full customer-lock-in along the telecom-TV value chain and are directly targeted at cable's core offering. Nevertheless, the IPTV impact for cable players is still marginal and taking place on the fringes of the market to date.

“Video over-the-top”: A hype becomes reality – is the United States a role model for Europe?

Over years, the threat of over-the-top (OTT) has loomed as a potential challenge for the industry. In contrast to the United States, OTT may not have hit the mass market in Europe so far, but it does represent a fast growing, if still small, market.

So far, free OTT content is hard to come by in Europe: Besides a few dispersed websites, snippets like those available on YouTube are the most common format. In contrast, US-based Hulu and TV.com have been able to create free, cross-channel, high-value and advertising-financed distribution platforms for past and recent TV and movie content over the last 18 months. However, for paid models (subscription or PPV), the situation is different and extensive libraries exist for the consumer.

The general trend seems to point more strongly into the direction of OTT video than ever before, with the content creators taking the lead in bringing their content directly to the customers by free riding over the different pipes.

So far, European cable operators have not seen any adverse impact on viewing time or Pay TV subscription volumes. This is due to the small size of the current user group as well as the fact that current OTT consumption appears to substitute standard Internet usage rather than TV usage of the respective customers.

However, should growth continue and OTT make it to a new mass market application backed by the large broadcasters, cable operators could be hit by revenue losses due to a reduction of Pay TV subscription or a slowed take-up of VoD usage. Rising infrastructure costs due to an explosion of the usage of Internet bandwidth could also be a looming effect.

Therefore, cable operators should monitor the evolution of OTT closely and evaluate whether, in the long-term, it is more attractive to partner with these players – for example by giving them access to the EPG in exchange for a revenue-sharing model – instead of attempting to maintain a “walled garden” VoD environment.

The first efforts to bring Internet-based OTT video directly to the TV screen through a set top box have already taken place, although some were instantly blocked by several broadcasters (e.g. boxee in the United States). Hulu itself is considering launching its own box and is already offering a convenient TV client for the PC, as independent providers such as Veoh.com already did 2-3 years ago.
Satellite: Still an attractive alternative to cable, but with a number of service disadvantages

Satellite operators continue to be the strongest competitor of cable in most European countries. However, DTH growth is taking place mostly at the expense of DTT rather than cable, which is in part protected by bans on satellite reception dishes in many urban areas. DTH can book the most significant gains in the Central European countries such as Poland, Hungary and Lithuania. Conversely, the market shares in Western European countries have remained fairly stable. However, the more integrated the products and bundling efforts become, the harder it is for pure play competitors to compete with integrated offerings. These tendencies can be observed in most Western European countries, while in Central Europe, strong competition of DTH is mainly caused by the lack of bundle offers and more competitive pricing and content. So far, Sky in the UK is the only satellite platform that has successfully entered interactivity by adopting a LLU strategy.

Terrestrial TV: Full digitisation nearly completed, but capacity and strategic scope limited

Terrestrial TV strengthened its competitive position through intensified digitisation and increasing channel capacity. Attractive technological options, such as small DTT sticks, integrated DTT tuners in TVs and relatively good indoor coverage in metropolitan areas foster the growth of DTT usage.
However, DTT is increasingly used as a secondary TV platform for mobile usage and secondary TV sets, especially in countries with a strong cable market share. As a primary TV platform, it is mainly used by consumers who are satisfied with a limited, low-cost TV offer. Additionally, some countries are starting to employ MPEG-4 codex and using higher modulations in order to gain more space on the DTT platform. With growing capacity, an increasing share of DTT platforms will be expanding from Free TV to more elaborate Pay TV offers, providing access to attractive channels including HD. However, DTT also suffers from its lack of a backchannel and thus lacks the capacity to offer new services.

Summarising the TV trends, the competitive environment of cable operators is changing dramatically. In the past, with analogue terrestrial TV and satellite, competition for the home was the dominant mode of competition. Once a cable operator “owned” the home, switching was relatively hard to realise. Now, with DTT, IPTV and OTT, competition takes place in the home. Rather than relying on a single TV access per home, consumers increasingly use several transmission platforms in parallel to suit their entertainment needs.

1.2. A clear strategic agenda

To maintain their strong growth despite growing competition and to defend healthy margins, cable CEOs have set an agenda with three directions:

- Take the position as leading Next Generation Access (NGA) provider for high-speed broadband. This means aggressively rolling out Docsis 3.0
- Protect and further leverage subscriber base by focusing on subscriber retention and cross-selling
- Balance improved service capabilities with efficiency to adhere to tight cost budgets

Market moves from competition “for” the home to competition “in” the home
1.2.1. Position as leading NGA provider

Leapfrogging DSL operators with a quick roll-out of Docsis 3.0\(^1\) and positioning themselves as first NGA operators with significant market reach provides cable operators with a “once in a lifetime” chance. Similar to the very early days of cable broadband roll-out, cable operators can now use very high-speed offers to shape the market and redefine the rules of the game. New speed levels force the incumbent to follow suit with its own investments into fibre networks.

PSTN-based DSL operators start to realise that cable might be their best chance to get access to an owned infrastructure without the need to roll-out fibre on a large scale.

Thus, the move towards Docsis 3.0 provides cable operators not only with superior growth but also makes them attractive partners in market consolidation. So far, primarily operators in CEE markets, Germany and Finland foresee the emergence of hybrid DSL-cable networks. The German market saw two first smaller landmark transactions in mid 2008. However, once the first larger scale transactions have been successfully implemented, hybrid takeover will be a phenomenon that can quickly jump to other markets.

To leverage this enormous opportunity, cable operators must push their Docsis 3.0 roll-out and actively present their approach for the new high-speed broadband infrastructure to the market. Highest speed levels at attractive prices are a good sales argument. But to finally convince end users of the necessity of 100 Mbit/s and more, cable operators – as well as their DSL and fibre peers – must create an appealing offer for customers to utilise the augmented capacity. One solution could be the development of products and applications like Web TV, VoD and a whole range of interactive services (photo upload, backup services, gaming etc.) to help convince potential users. A stronger focus on services will help selling broadband.

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\(^1\) In the context of this study, Docsis usually refers to EuroDocsis for most Cable operators in this survey. Some players, however, deploy Docsis to deliver broadband.
57% of operators in WE expect a shrinking subscriber base

Moreover, national broadband policies should be actively monitored and managed. To fight the economic downturn, many European countries have set up huge investment programs fostering the build out of NGA infrastructures. European cable operators must ensure that these funds are not used to nurture new fibre competitors which would destroy the current infrastructure advantage that cable enjoys at present.

1.2.2. Protect and further leverage subscriber base

The increased competition in the TV market is showing its effects especially in Western Europe. Among Western European cable operators, 57% expect that their TV subscriber base in 2012 will be smaller than the current base, while the other half assumes only very limited growth, i.e. not more than 1.5% p.a.

Considering that on the one hand, TV subscribers are the base for further up-selling, and that on the other hand, cable operators are still planning considerable revenue growth, strategies should push in two directions:

- Protect the existing base with thrilling products, efficient service and excellent churn management
- Improve the leverage of the subscriber base by implementing price increases, higher penetration of existing products and the introduction and up-selling of newer products
These two approaches must be integrated within an encompassing customer value optimisation (CV max) approach that covers all stages of the customer life, from acquisition over loyalty building and further up-selling down to retention and win-back activities.

Optimising customer value is the top priority for European cable operators, with 4.7 out of 5 importance points. This approach is further supported by a strong awareness for marketing and sales excellence which is also highly ranked.

Cable operators leverage their subscriber base with a growing range of different products. Besides the expansion of fixed-line communication services, cable operators currently work hard on evolving their TV and mobile services. In both product segments, the strategic focus has shifted significantly between 2007 and 2009:

- **Mobile – Focus shifted from voice to broadband:** 2009 is the year of mobile broadband. 50% of all European cable operators have already implemented their own mobile broadband offers. Another 25% will follow over the next 12 months, but none of the operators expects mobile broadband to boost revenues. Its introduction is a defensive move and is supposed to decrease churn (4.4 importance points compared to 2.4 for revenue generation).

- **TV – Focus shifted from quantity to functionality of content:** Just two years ago, expanding the sheer content variety was still one of the most importance challenges. But variety is not the only thing that counts. Providing a sufficiently high number of TV channels, cable is now working on improving the functionalities of its TV offering: VoD, catch-up TV and other new video revenues are growing in importance. Competing with IPTV over DSL or over fibre, these functionalities will soon be the industry standard. Before 2009 only a fifth of all European operators had launched VoD offers, and by the end of 2010 the share is expected to surge to 90%. The same is true with catch-up TV: While currently offered by less than 15% of operators, this share might soon be 70%.
Once all the potential blockbuster products are in place, the focus will shift further towards smaller levers, e.g. fees for services around the products (paper bill, installation, premium service etc.) or tapping into new (B2B) customer groups, be it the advertising industry or business customers. So far these target groups are only addressed by a few operators.

1.2.3. Balance improved service capabilities with efficiency

A centrepiece in customer value optimisation and churn management is excellent customer service. The strong growth of the past years has taken its toll on service quality at many operators. Rather low call centre KPIs and long installation lead times are just two examples of service issues with which cable operators are currently struggling. Luckily, service performance of DSL competitors is usually as bad or even worse. Customer service quality of DSL operators and incumbents gets a lot of criticism and the lead times of LLU-based DSL operators can reach weeks rather than days.

Operational excellence in customer service is important on two fronts. Customer service issues are key drivers of contract cancellations and must be tackled to reduce churn rates. At the same time, customer service contacts are prime up-selling venues for operators – assuming customers gain a favourable impression from the interaction. Considering this, cable operators have reprioritised customer service excellence and put it amongst the top 3 strategic issues of 2009 / 10.
Cost cutting is vital in the current economy…

Nevertheless, customer service improvements come at a price, as they usually mean hiring additional and skilled staff and building new organisational departments. These measures must therefore be balanced with the strongly increasing pressure to be efficient (4.1 out of 5 importance points up from 3.7 in 2007 and 3.1 in 2005) which cable operators are experiencing.

Therefore cable operators were also asked how they cope with the external economic pressure. Cost-cutting projects lead the ranking, but these standard reactions will only show adequate effects if the crisis turns out to be temporary.

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### Balance improved service capabilities with efficiency

<table>
<thead>
<tr>
<th></th>
<th>Survey 2009</th>
<th>2007</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service excellence</td>
<td>3.8</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Efficiency improvements</td>
<td>3.7</td>
<td>3.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Increased outsourcing</td>
<td>2.3</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

Which relevance do the following strategic issues have for your company? (1=not at all, 5=very high)
Source: Solon Cable Survey 2009

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### Levers addressed as a reaction to the economic downturn

#### Average

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost savings</td>
<td>3.9</td>
</tr>
<tr>
<td>Less network expansion</td>
<td>3.2</td>
</tr>
<tr>
<td>Less upgrade constructions</td>
<td>2.9</td>
</tr>
<tr>
<td>Personal restructurings</td>
<td>2.8</td>
</tr>
<tr>
<td>Financial restructuring</td>
<td>2.6</td>
</tr>
<tr>
<td>Price decreases/increases discounting</td>
<td>2.5</td>
</tr>
<tr>
<td>Slowed digitisation</td>
<td>2.0</td>
</tr>
<tr>
<td>Postponement of product launches</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Which strategic levers will you address in reaction to the economic downturn?
(1=no change at all, 5=key lever)
Source: Solon Cable Survey 2009
Operators remain at usual Capex levels, but again forecast end of investment cycle soon

1.3. End of the investment cycle has not materialized

With the roll-out of Docsis 3.0 and constant investments into the digitisation of the subscriber base, cable operators are continuing to invest heavily into the future.

In 2008, European cable operators spent on average 24% of their revenues on network and service build-out. Contrary to past expectations of cable operators, Capex as a share of revenue did not decrease at all. However, the current 2010 and 2012 forecasts again show the by now well-known optimism of a Capex cycle that soon will come to an end.

![Actual and planned Capex: % of revenue and indexed to starting year](image)


…” but postponing investments is not a dominant topic yet.

Although postponement of network expansion and network upgrades is not the dominating topic yet, it might soon take centre stage. Most of the European cable industry is PE-owned, and the terms of credit contracts made in the days of pre-crisis financing will run out for many firms. However, sacrificing network upgrades and maintenance to meet agreements (especially Capex agreements) may prove to be a dangerous solution. While providing a company with short-term financial flexibility, it reduces its competitive edge and future room for manoeuvres against rival infrastructures.

Price decreases are not considered a viable measure in the current economic situation, as the overall effect to the financial situation of cable operators may be negative. A slow-down in digitisation and the postponement of product launches also appear unattractive as they are needed to support the continued growth of cable.
The harsh truth may be that costly network investments will continue many years into the future, and the investment cycle is, at best, a redistribution of funds between different Capex positions. Infrastructure competition with the incumbent and emerging fibre operators will force cable to maintain its investment pace. Across all growing product segments, the USP will always be driven by new technologies, rather than service levels. This observation appears even more apparent when looking at the dominating past and current investment themes:

- **2004-2006**: Launch broadband with bi-directional upgrade and capacity increases
- **2007-2008**: Speed increase with backbone capacity increases and continued in-house upgrade
- **2009-2010**: Further speed increases and overtaking incumbent speed levels with Docsis 3.0 and subsidise digital TV and broadband take-up with CPE investments

Once the current Docsis 3.0 investments are realised and digitisation is pushed further, the next investment themes are already appearing: In broadband, maintaining speed advantage by bringing fibre to the building and eventually to the couch; and in TV, staying competitive with IPTV by moving to HD and PVR boxes as the new standard.

### 1.4. Continued strong growth expected

Following this strategic agenda, European cable CEOs are highly optimistic regarding the potential rewards of their efforts. Continued up-sale success in combination with an excellent market position will allow for slight price increases despite economic pressure. The results will be continued strong revenue growth and strong, stable EBITDA margins.
1.4.1. “Bundling rules”: Independence from basic TV access revenues increasing

Very high-speed Internet offers and the increasing product range for TV are the foundation for the continued success in up-selling of European cable players. By 2012, some operators will be approaching the critical mark of two products per unique subscriber. So far, this has only been achieved by those operators that have always offered more than just TV (e.g. in UK, Spain, Portugal). Now, even some cable operators with a legacy as pure TV providers will cross that line.

Up-selling continues to change both the RGU split and the revenue split of cable operators. Cable operators’ revenue forecasts still show basic access as the dominant cash cow, though with declining RGU and revenue numbers. As a result of the continued digitization, the split of analogue and digital subscribers and revenues is changing: In 2008, two-thirds of the base was still analogue – in 2012 that same share is forecasted to be digital.
By 2012, the single most important product by revenue will be fixed broadband access. While its share of total RGUs only changes marginally, broadband is expected to contribute a significantly higher revenue share in 2012, showing the effect of ARPU increases that are driven by aggressive up-selling to higher speed levels.

Only 4% of RGUs and 3% of revenues are expected to come from mobile products – showing the defensive approach cable operators are taking with these products. Actually most operators completely refrained from giving any forecasts for their mobile products. This is quite a change compared to the 2007 survey, where European cable CEOs were much more bullish with regards to the success of their mobile offering.

### 1.4.2. Slight price increases despite economic pressure

On average, cable operators expect only slight price increases for the next year, which will just compensate for inflation. In detail, ARPU expectations of European cable operators follow roughly the same trend for communication products, whereas the pricing structure of the video products varies strongly across the different operators and is thus only partially comparable.

For broadband services, 70% of the operators are expecting ARPUs to stabilise or even grow, driven by migration to higher speed levels. The opposite can be applied for telephony: Close to 65% of the participants are expecting further ARPU declines, mainly driven by increased penetration of flat-rate plans as well as declining mobile minute prices.
1.4.3. Harvesting the fruits of hard labour: Continued strong revenue and EBITDA growth

The hard work along the different directions of the strategic agenda can be expected to bear fruits. Not only is cable best positioned to conquer the evolving NGA market with its ability to quickly roll out very high-speed networks, but it can also build on a healthy cash generation that will help to finance further growth.

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**Service ARPU 2008 and 2010**

*Average, CAGR 2008-2010*

<table>
<thead>
<tr>
<th>Service</th>
<th>2008</th>
<th>2010</th>
<th>CAGR 2008-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue video access</td>
<td>13.1</td>
<td>13.5</td>
<td>+1.5% p.a.</td>
</tr>
<tr>
<td>Digital video access</td>
<td>12.0</td>
<td>13.5</td>
<td>+5.8% p.a.</td>
</tr>
<tr>
<td>Premium video packages</td>
<td>12.2</td>
<td>12.7</td>
<td>+2.1% p.a.</td>
</tr>
<tr>
<td>Fixed-line broadband</td>
<td>19.4</td>
<td>20.2</td>
<td>+2.1% p.a.</td>
</tr>
<tr>
<td>Fixed-line telephony</td>
<td>13.3</td>
<td>12.3</td>
<td>-3.8% p.a.</td>
</tr>
</tbody>
</table>

Source: Solon European Cable Survey 2009

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**Revenue and EBITDA Development**

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue / EBITDA growth</th>
<th>CAGR '08-12</th>
<th>ARPU / EBITDA per unique sub</th>
<th>CAGR '08-12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indexed to 2008</td>
<td></td>
<td>€ / month</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>100%</td>
<td>8.6%</td>
<td>24.8</td>
<td>6.4%</td>
</tr>
<tr>
<td>2009</td>
<td>115%</td>
<td></td>
<td>15.4</td>
<td>5.0% Opex</td>
</tr>
<tr>
<td>2010</td>
<td>122%</td>
<td>6.6%</td>
<td>16.3</td>
<td>8.7% EBITDA contribution</td>
</tr>
<tr>
<td>2011</td>
<td>129%</td>
<td></td>
<td>16.3</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>139%</td>
<td></td>
<td>15.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: Solon European Cable Survey 2009
On average, EBITDA margins are currently at 41%, with a wide spread of 17-60% depending on operator and market. Successful up-selling activities in combination with at least stable product ARPU are expected to result in growing revenues and EBITDA. Total revenues are expected to grow by close to 7% p.a., while EBITDA is expected to grow even stronger at almost 9% p.a. Even if this might sound like an aggressive growth plan, the comparison with preceding studies shows that the operators have quite a robust history of reaching their improvement targets.
2. INVESTMENTS THAT CHANGED THE GAME

Over the past years, cable operators invested heavily into the upgrade of their networks to offer more than just basic TV services. These efforts led to nearly 90% network coverage with IP-ready networks. The more expensive in-house upgrades are partially done on an as-needed basis. By 2010, 80% of WE homes are expected to be upgraded end-to-end, and even 90% of CEE homes.

A key driver for current and future investments is the constantly increasing bandwidth demand of the end users. Cable operators have significantly underestimated this growing demand and have had to adjust their forecasts accordingly. Currently, average peak hour downstream and upstream usage must be expected to increase by 30%-50% p.a., mainly driven by uptake of video and user-generated content consumption.

The next step in the evolution of general network capacity is performed by rolling out Docsis 3.0, which will be implemented by a large majority of operators by the end of 2010. As Docsis 3.0 is fully backward compatible, it will take some time until the modem base is completely exchanged – which helps cable operators by stretching the Capex over a longer period.

Another issue on the Capex front is the ever-closer deployment of fibre to the customer’s premises. While already a hot topic for several years in the telco industry, cable operators also see fibre – and with it the reduction of cluster sizes – as the remedy against networks running out of capacity. In further optimising their networks, operators will again follow a demand-driven approach: Wherever capacity constraints arise, cluster splits will move fibre a bit closer to the home. And again, this is not a single Capex chunk to be spent, but rather a continuous stream that needs to be applied successively.

<table>
<thead>
<tr>
<th></th>
<th>Average peak traffic per subscriber in Kbit/s</th>
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<tbody>
<tr>
<td>2006</td>
<td></td>
</tr>
<tr>
<td>Upstream</td>
<td>20</td>
</tr>
<tr>
<td>Downstream</td>
<td>30</td>
</tr>
<tr>
<td>2008</td>
<td></td>
</tr>
<tr>
<td>Upstream</td>
<td>40</td>
</tr>
<tr>
<td>Downstream</td>
<td>90</td>
</tr>
<tr>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>Upstream</td>
<td>140</td>
</tr>
<tr>
<td>Downstream</td>
<td>180</td>
</tr>
<tr>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Upstream</td>
<td>250</td>
</tr>
<tr>
<td>Downstream</td>
<td></td>
</tr>
</tbody>
</table>

Source: Solon European Cable Survey 2007 and 2009, Median
With this purely demand-driven approach, cable operators have a clear Capex advantage compared to DSL players. The currently targeted speed levels of 100 Mbit/s and more are only achievable for DSL operators if they leapfrog ADSL and VDSL investments and move towards deeper fibre deployment. However, investments necessary for this kind of fibre roll-out can lead to additional Capex of €1000 per fibre home or more.

For the same speed level, cable operators only need moderate investments. Starting from an already bi-directionally upgraded home, the incremental Capex is no more than €110-120 including the Docsis 3.0 modem. Upgrading existing customers (with Docsis 2.0 modem) reduces the investment needs to a mere €60 per home. Only if, in the long term, the cable
access is converted into FTTH, the cumulative amount spent on cluster splits and incremental fibre build-outs will be the same as for fibre access DSL operators are currently building. However, there is a dramatic difference: The timing of investments. Cable operators can stretch the spending over a long period of time. In the mean time, the free cash flow can be used for marketing, sales campaigns, price declines or service improvements. All this will further improve the competitiveness of cable compared to both incumbent and alternative carriers.

This very specific investment dynamic is a core reason for the increased interest of both altnet and mobile operators in the potential acquisition of cable operators. For a DSL operator it might well be more attractive to acquire an already upgraded cable home and integrate it into a hybrid network than building out its own fibre network. The latter would only result in additional competition and price pressure and thus further inhibit a quick payback of the investment.
3. COMMUNICATION: BETWEEN BANDWIDTH AND MOBILITY

Internet uptake again exceeds all expectations and is clearly the biggest success story in European cable today. Having the best price / performance ratio with superior bandwidths and a generally low price point resulted in a tripling of penetration values over merely four years. As more and more operators move towards Docsis 3.0, thereby easily allowing for price efficient upgrades to 100 Mbit/s and more, cable is set to continue its stellar performance.

The current economic downturn has hardly affected cable’s success in communication services. Europeans have rather saved on vacations and larger investments into consumer durables than cut communication expenses. Moreover, scarce financial resources should further motivate consumers’ purchase decisions in favour of competitively priced cable offerings.

CEE operators generally display a higher Internet penetration. This is for two reasons: First, fewer legacy networks had to be upgraded, as first cable deployments took place much later than in Western European countries. Second, there was an overall time lag in the broadband market development compared to WE, which allowed cable operators participate in the broadband competition right from the start.

Following the introduction of Docsis 3.0, cable operators especially in WE expect to move to higher speed levels quickly. By 2012, the main marketed offer will have an average speed of 60 Mbit/s for WE operators, while CEE operators will only reach 30 Mbit/s. A closer look at the individually planned bandwidths even shows wide differences among WE operators. While some do not expect a significant increase, others plan to take full advantage of a Docsis 3.0 roll-out with bandwidths of over 200 Mbit/s. The main reason for this is the varying intensity of competition in the respective markets. Also, ownership structure of operators (strategic vs. financial investors) may influence network investment activity.

[Diagram: Internet penetration of basic access subscribers]


By 2012, WE operators expect to market 60 Mbit/s on average

Cable broadband penetration tripled in merely 4 years
In the last years, operators have underestimated the speed demands of consumers: Whereas in the last survey, 4% of customers were forecasted to subscribe to bandwidths of more than 10 Mbit/s by 2008, this number now amounts to 26%.

In CEE, the mid-tier segment, i.e. bandwidths between 10 and 20 Mbps, is comparably underrepresented. Operators seem to pursue a two-class strategy: “Low-Speeders” vs. “Ultra-High-Speeders”. This could be explained by a more selective network upgrade, focusing on metropolitan regions only, while WE players roll-out their upgrades throughout most parts of their networks, thereby achieving a seamless speed distribution.

### 3.1. Light at the end of the tunnel – monetisation of speed

Bandwidths superior to ADSL2+ enable cable operators to escape the current price war, where DSL and cable operators both marketed a very comparable product – with the price tag as sole differentiator.

A good indicator that higher speeds can now be successfully monetised may be that it is a Solon European Cable Survey first that actual 2008 ARPUs are above the forecasted levels from the survey two years ago.
3.2. Mobile more than just a defensive move?

Mobile voice offers in the cable world continue to be launched across Europe, but the nature of these market entries is often in the form of a me-too, resale-based offer, lacking the potential to be integrated in the general cable experience. For mobile broadband, some interesting offers with first integration attempts have appeared.

However, launching mobile voice and, more recently, broadband is a purely defensive move by cable operators to get their foot into the mobile part of the converging telecommunication access world. This also shows in the fact that cable operators rate churn prevention as the single most important reason for the introduction of mobile broadband.

However, significant additional revenue generation is not expected. This also shows in the revenue and RGU forecasts, where operators shy away from giving any predictions at all.

As cable operators increasingly develop towards full service telco providers, they will eventually no longer be able to avoid offering mobile services. While a number of European cable operators have started to offer mobile broadband access using resale models, others have been setting up Mobile Virtual Network Operations (MVNO). A few smaller operators have even started to realise their own networks or consider applying for mobile frequencies. Nevertheless, today mobile services – both voice and broadband – do not seem to play an important role for cable operators yet.
It remains to be seen whether cable CEOs are able and willing to invest the necessary funds and resources into developing their mobile offer into something other than a purely defensive move. Which business models will be pursued to create economic value for cable operators through mobile is yet to be determined. Besides the option of building out its own mobile network using own spectrum licenses, options of integrated features between cable and mobile and integrated devices for telephony may be considered. But as of today, no clear path is apparent.

3.3. Is cable ready for B2B?

For the next big growth driver, Cable might have to look across the Atlantic. B2B services for SoHo and SME customers already make up significant shares of some of the US cable operators’ business (between 5% - 20% of revenue). US operators also assume a continuously strong growth in this business segment (10% - 15% CAGR until 2012). In Europe, however, cable companies are just about to test the waters, although a few already have smaller operations targeting the B2B segment, e.g. Ono and Telenet. The survey provided an indecisive picture on the strategic importance of these services. The only common ground is the general interest to understand the situation and potential threats and opportunities better at this point in time.
4. TV: FROM QUANTITY TO INTERACTIVITY

European cable operators are shifting the focus of their TV strategy away from generating additional value by just adding new channels (lean back), towards innovative, interactive TV services (lean forward). On demand, catch-up TV and HD seem to be the core promises of tomorrow’s video offering.

4.1. Digitisation in full swing – building a basis for further growth

The foundation for these new TV products is the digitisation of the TV base. The analogue / digital switchover process finally seems to be picking up – for the first time in the history of the Solon European Cable Survey, digitisation levels exceeded the expectations of the preceding study. In some countries, e.g. Finland and Luxembourg, the analogue switch-off has already been completed, while others like the UK and Norway are about to follow suit.

To speed up digitisation, cable operators are giving customers incentives to switch to digital offers with several approaches:

- Offering digital TV subscription at prices equalling or even undercutting analogue access
- Including a higher number of channels in the digital TV subscription packages
- Decreasing the size of the analogue TV subscription packages in cooperation with media regulation and content providers
- Setting up special trial offers for customers deciding for digital services, e.g. free Pay TV channels for a limited period of time, or trial access to VoD libraries
- Providing digital set top boxes at no additional costs to the end customer
Even though this strategy might resemble the approach cable operators have been following for years now, a strong shift towards digitisation has taken place especially in Western Europe.

While the continuous reduction of the analogue offering is still on the agenda – and expected to continue at a stable pace similar to past years – the digital offering shows a completely new strategic thrust. In line with the rather low importance of “expansion of content offering” (3.5 importance points after 4.4 in 2007 and even 4.7 in 2005) as a strategic challenge, cable operators across Europe have significantly scaled down their plans regarding the size of the digital access offering. Rather than heading for 100 digital channels, 40-60 now seem sufficient for most operators.

In a world of OTT and long tail effects, having a large basic offering is not working as a USP anymore. Rather than spending all their resources on the access package, operators – in particular Western European – are improving the attractiveness of their Pay TV offering. Their underlying motto seems to be: If the sheer amount of content does not lure a customer over to digital access – why give valuable content away for nothing?

![Graph showing channel offering](source: Solon European Cable Survey 2007, 2009)
4.2. Non-linear TV getting traction: VoD and catch-up TV soon standard cable products

So far, VoD services are just used by a few trend setters in the market. In the beginning of 2009, only 23% of European cable operators had launched VoD offers. This will, however, change significantly. Currently, no month seems to pass without another cable operator announcing its new VoD platform. About 90% of the operators are planning to have installed a VoD service by 2010, usually based on video libraries with about 1000 hours of content. By then, the majority of the customers is expected to use this service as a transaction based offer. Subscription VoD users are expected to use transaction VoD as well, even to a higher degree than other VoD consumers. It is expected that free and transaction VoD customers will use the PPV service one to two times per month.

VoD is also the entry to a new state of cooperation with TV channels. So far, cable operators and TV channels rarely work together, although other providers of TV services, most notably DTH players, have had good experiences with a closer cooperation in the past. In the future, cable will also start moving towards new co-branding models. Using attractive content brands to boost VoD usage can be as attractive for cable operators as having a branded sales outlet for TV channels.

Catch-up TV is expected to make its way into the cable platforms at a comparable pace to VoD. Currently less than a fifth of cable operators are able to provide this service – but another 50% are planning to do so over the next two years. However, the service itself still needs fine-tuning. Usually, 4 to 5 channels are planned, but the range between operators is quite high, with 1 to 15 channels in catch-up mode. Here, again, a close cooperation with content providers and TV channels will be key for a successful service introduction.
Generally, the trend towards more individualised TV services, e.g. via VoD or catch-up TV services, is just starting to materialise in the cable industry. While telco players are already offering over-the-top TV and other advanced services (e.g. in Germany Videoload in connection with T-Home), cable operators are now reacting to the increasing competitive pressure. Several new services are already planned out on their roadmaps.

A key success factor cable operators need to remember is that usage behaviour of consumers does not change towards the acceptance of premium VoD services overnight. Instead, cable operators have to make first inroads into lean-forward services by offering attractive free content in order to lure customers into testing the new services. Only then, a slow “education” towards charging for single takes of content can start.

4.3. HD – Will Europeans pay for high-quality TV?

The trend towards high-definition TV offers can be observed over the past couple of years. Equipment providers have heavily pushed new HD devices and “85% of the purchasers of flat-screen sets this year will choose a high-definition television” (EITO 2009). The movie industry has reacted to this trend as well, increasingly offering movies in HD, e.g. on Blu-Ray DVDs. These high-quality offers make customers aware and used to the benefits of the new standards. In addition, across the different TV infrastructures in Central and Eastern as well as in Western Europe, operators are beginning to offer HD channels and movies in their content line-ups. Especially telco providers are offering channels and VoD movies in HD quality as part of their IPTV services.

In Belgium, for example, the telco incumbent Belgacom claims to already be able to offer TV services to 86.6% of the population and further to offer HD content to 65%. In several Central and Eastern European countries, DTH and DTT providers are either testing or already offering HDTV to their customers. With the roll-out of HDTV across infrastructures, cable providers are increasingly under pressure to adapt to this trend. However, as with most new technologies, a smart follower strategy could be the right choice for cable operators, nevertheless requiring close monitoring of the environment and specific plans to react to the changing market.

The results of the survey further show that, while trying to leverage the existing customer base, cable operators are more conservative regarding the availability of attractive HD content, which has been lagging behind expectations for years.
4.4. Set top box strategy: Advanced boxes make their way

Considering the expected development of set top boxes shipped to customers, cable operators have started to prepare for higher-quality TV offers. HD STBs are anticipated to be the primarily shipped type of set top boxes by 2010. HD-PVRs are also becoming a standard as cable operators try to push the improved interactivity of their services.

Renting out the set top box is still the main business model for cable operators: 70% of the basic boxes are rented out to subscribers at a price of € 2-5 / month. Some cable operators are even fully subsidising the rental of the box. For advanced set top boxes, the rental model is not as prevalent: The number of rented HD-PVR boxes – at an average monthly price of € 9.90 – is about the same as the number of sold boxes of the same type.
Unfortunately, the increasing competition from IPTV has the potential to shift the balanced purchase-rental-ratio towards the “free rental” model. This is especially true in markets where aggressive IPTV operators start to hand out boxes for free in order to acquire new subscribers. Due to the larger share of advanced boxes, as well as the increasing digitisation trend, advanced set top boxes have a strong potential of becoming the first major challenge to Capex reduction programs cable CEOs are currently planning for.
5. OPERATIONAL EXCELLENCE: LEVERAGE YOUR BASE

The market environment of European cable operators is changing rapidly. Strong competition challenges cable operators along all dimensions. IPTV, DTT and over-the-top offers make inroads into the so far stable TV access subscriber base, while mobile broadband and fibre operators try to lure cable broadband customers over to their platforms.

In this highly competitive environment, the key to survival is keeping and leveraging the existing customer base. European cable CEOs are acutely aware of this and have put “customer value optimisation”, “customer service excellence” and “marketing & sales excellence” on the top of their agendas.

Only operators that develop an encompassing approach to customer excellence along the whole customer lifecycle will maintain their market position and generate healthy margins and growth perspectives.

Over the past few years, cable operators have started to rethink all their customer-related processes. Most cable operators are right in the middle of managing the transition to customer-centric operations. On their way, they have to find the right balance between the increasing complexity of services, growing customer demand, and the need to maintain or even improve efficiency. 2009 benchmarks show that cable operators on average still have some way to go before really taking the lead in customer excellence.

5.1. Marketing & Sales: Growing at the expense of the telcos comes at a price

With slowing growth and increased market maturity, the role of marketing and sales is changing away from brand-building and forced customer acquisition towards leveraging and maintaining the existing subscriber base.

5.1.1. Marketing: Cable operators seem to have found their optimal spending levels

Over the past years, operators have continuously expanded their marketing spending. In 2004, marketing spending had just crossed the “2% of revenue”-level. Between 2005 and 2007, many cable operators rebranded – either to attain a more state-of-the-art market appearance or as part of a merger with other local cable operators. Consequently, a high share of marketing spending went into brand building.

In 2009, marketing spending of cable operators has reached a steady level. The time of large branding campaigns is over. Now marketing must support the continuing success of the existing broadband and telephony products and position cable against the new TV competitors. Marketing is becoming an ongoing business – and marketing spend as share of revenue is not expected to increase further.

While the overall marketing budget has not changed significantly compared to the 2007 survey, the contrary is true for the marketing mix. As long as most European cable markets were rather fragmented, the marketing mix focused on below-the-line measures. Now, the consolidation of many cable markets renders classical marketing campaigns more effective. The only operators still preferring below-the-line marketing are operators in still fragmented cable markets such as Germany or Bulgaria. As consolidation continues in those markets, the shift towards classical marketing will be even more notable.
5.1.2. Sales activities: Moving closer to the client

While marketing becomes more national, the sales organisation becomes more local. Cable operators’ sales organisations have to balance cost pressure with customer proximity. As a result, the channel mix is shifting:

- Away from push channels towards channels that combine sales and service, i.e. retail.
- Away from expensive channels towards cost efficient online and direct mail channels.

Retail channels are the clear winners: In 2006, only 20% of gross adds in Western Europe were generated via retail. This number has now increased to more than a quarter for broadband and a third for digital access. In the past two years, many cable operators have either started to build out their retail channel or at least strengthened it significantly – beyond their 2006 expectations. Even in CEE markets, where “cash offices” were always the main sales outlet, retail has not lost its importance.
With the expansion of retail and cost-efficient pull channels, cable operators have significantly reduced their investment into push channels. Between 2006 and 2008, WE operators halved the share of door-to-door sales, while CEE operators reduced it by about 30%. The same happened to the share of outbound calls in WE markets. For CEE operators, it has never been a considered option.

5.1.3. Subscriber acquisition costs driven by CPE spending

Despite an adjusted sales mix, subscriber acquisition costs are still significant. Western European operators spend about 9.5x ARPU on acquiring a digital TV subscriber and 4.8x ARPU on a broadband customer. CEE operators spend slightly more, with 11.2x and 7.5x ARPU respectively.

An obvious explanation could be that the difference is related to the relative importance of the products for the customer: “Nice-to-have” digital TV being a high-cost sale and “essential broadband” being a low cost sale. This is, however, not true: The main difference between the product SACs arises from the cost difference between the CPE, i.e. set top box and modem. All other SAC components, be it commission, rebates and marketing, are about the same level, independent of the product sold.

Marked differences, however, exist between WE and CEE operators. Driven by much lower revenue levels, the latter spend significantly less on marketing. Low commission costs per gross add are a direct result of the high share of sales via “cash offices”, where often, if at all, very low commissions are paid. Also, the cost of installation is much lower, driven by a lower cost of labour and, in some cases, more flexible installation policies.
Different factors drive the CPE cost. Next to discrepancies in procurement effectiveness, features are a major reason why CPE costs vary between regions. For digital TV, WE operators hand out a significantly higher share of HD-ready set top boxes with DVR functionality. For broadband, CEE operators focus on pure broadband modems, which are exchanged once the subscriber also takes telephony, while WE operators prefer to distribute EMPTs to support an easy up-sale towards telephony.

5.2. Activation and Installation: The weak spot in the customer acquisition process

After spending quite an amount on subscriber acquisition, it is essential that the customer “survives” the first critical interaction with the cable operator, i.e. the activation process.

The process between order and activation of the service usually takes some time, as it involves a whole range of interrelated tasks. Depending on the upgrade level and the operator’s process automation this can take between one day and several weeks. Even in the “best case” of premium Pay TV, most cable operators need a few workdays to send out the set top box and smart card and activate the customer.

The average activation time for the less automated installation of access products is six to seven days. This is much better than the respective activation times of many LLU-based DSL operators, but still far away from the benchmark mobile experience, where the activation takes place in hours, if not minutes.
As long as the activation is not completed, cable customers are usually able to churn easily. Therefore, the duration of the installation process becomes a critical factor. The level of pre-installation churn is directly correlated with the duration of the activation process. Improving the activation process is the most efficient measure for reducing PIC and consequently bringing down subscriber acquisition and customer service costs.

Aside from PIC, a smooth activation process is also essential for creating a trustworthy and long-term customer relationship. Customers who experienced an unsatisfactory activation process are often negatively inclined to remain with the operator for longer periods and are more likely to churn at the earliest time possible.

5.3. Customer Service – Work hard on not losing ground

Customer service excellence is a top priority for cable CEOs. Operators across Europe must continue to work hard on improving customer service. The growing product complexity in combination with an increased efficiency focus has taken its toll: Cable operators struggle along all customer service quality dimensions. Especially the reachability, measured as the share of calls answered within 20 seconds in this survey, has dropped significantly – down to the level of 2004.

Cable CEOs, however, have placed timely and efficient customer service on top of their agenda and have set quite aggressive improvement targets. Targets for 2009 show quality metrics that have not been reached by operators over the course of this survey. In order to reach these goals, cable operators must optimise the whole service delivery process:

- Implement service assurance: Implement monitoring systems as early detector of problems
- Drive self care: Increase the share of self care and call automation to take load off from call centres
Optimise customer interaction: Simplified bills can save thousands of calls, a high first contact solution rate reduces the need for repeat calls etc.

Operational excellence: Work on reducing manual steps and inefficient work-around solutions, as well as simplifying error-prone process steps, in order to reduce time, cost and jitter of daily operations.

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The existing customer relationship as a solid basis for up-selling is one of the key assets of European cable operators. But without an excellent customer experience, cable operators will be challenged to adequately leverage this asset.

5.4. ARPU Optimisation – Effective use of value enhancers

The core lever in ARPU management is up-selling towards a new service, be it broadband, telephony, or mobile services. But increasingly, cable operators also “fine-tune” ARPU per unique subscriber by implementing a whole range of additional fees and value added services.

Trend setters in the use of additional revenue levers are mobile and broadband operators. Especially low-cost providers have established long lists of additional services and VAS that can be added to the low-cost basic product. The typical service buckets are related to activation (e.g. additional installation support, shipping fee), customer service (e.g. customer service quality

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<th>2005</th>
<th>2007</th>
<th>2008</th>
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<td>Call answer rate</td>
<td>77%</td>
<td>90%</td>
<td>87%</td>
<td>85%</td>
<td>93%</td>
</tr>
<tr>
<td>Reachability</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>First contact solution rate</td>
<td></td>
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</tbody>
</table>

Call answer rate: % of calls answered at all, reachability: % of calls answered within 20 sec, first contact solution rate: % of queries solved within first call.

Source: Solon European Cable Survey 2004 -2009
paper bill, service call fee), contract management (e.g. downgrade fee or early termination fee) and selected broadband VAS.

Scandinavian cable operators are most advanced in the use of value enhancers, having on average implemented six measures. For most of the other operators, there is still significant improvement potential (on average four measures). Also, the management of these measures could be optimised, as currently only a handful of operators is actually able to monitor their impact.

A few comments on selected measures:

- Charging a fee for paper bills helps by pushing the use of online billing – while at the same time turning billing into a profit centre instead of a cost centre
- Service call fees can help to keep excessive call centre usage at bay – but should be used carefully in case of technical faults or other operator-induced problems. A potential workaround are fixed fees per call, which are paid back in case of network problems
- Additional VAS such as web-hosting can also help to increase customer loyalty, especially if combined with features like picture storage systems

All in all, cable operators should learn a lesson from their mobile and broadband peers and take a much more aggressive approach to using value enhancers.

5.5. Churn & Retention - Keep what you have

Churn is a big issue for the telephony products. Only very few cable operators have been able to keep Internet and telephony churn below 10%. The vast majority of European cable operators sees churn rates in the range of 17-20% p.a. A few, mostly CEE players, even turn around their subscriber base every third year. And with increasing TV competition, significant market induced churn will soon also reach the basic TV access product.

The European cable industry has reacted to this and implemented a broad range of retention measures. Many cable operators today use at least three to four different measures to bring down churn levels. By the end of 2009, the average number of implemented measures is expected to increase to five to six.

One of the most efficient retention measures is the implementation of dedicated “save teams” that call potential churners and try to win them back. On average, 60% of the churners are contacted by save teams, which convince close to 30% of them to stay. Yet, success rates vary significantly, from 10% to 40%, showing the improvement potential many operators still have. The cost savings are in any case significant. Retention costs are only at 10% of the costs spent on a new subscriber.
Having realised their retention basics, cable operators are now moving towards an active customer lifetime management. Customer profiling and segmentation are used by most advanced players to improve their understanding of customer needs. Only a few have so far implemented churn prediction models. However, the number of operators employing this tool is expected to increase strongly over the year.

Once cable operators know their customer base, they can take-up active communication. E-mail newsletters will soon be common among all cable operators.

With all these measures, cable operators pave the way towards longer, deeper and more profitable customer relationships – and thus create the basis for continued prosperity.
6. REALISE EFFICIENCY INCREASES

Driven by margin pressure and limited access to additional funding, efficiency improvement has finally has moved up on the CEO Agenda.

However, cable operators' ability to downscale operations seems somewhat limited. While general cost savings are perceived as a good measure to react to economic downturn (3.9 out of 5.0 points), only very few cable operators are actually planning to implement personnel reduction programs. With a lot of parallel product launches and increasingly complex services, many cable operators already work at their capacity limits. Significant productivity increases can therefore only be realised if the current employment level can be maintained as RGUs increase.

Increase productivity by better leveraging personnel base

Not only the personnel base, but also the split is rather stable. Since 2007, the normalised personnel structure (including outsourced labour force) has barely changed. Limited shifts mainly affect network and IT personnel, which cancel each other out. Upgrade activity is mostly fulfilled while process automation and monitoring become more important. Consequently, personnel has shifted from network (38% in 2008 vs. 41% of personnel in 2006) to IT functions (6% versus 4%).

Productivity levels still vary significantly between the operators with two core levers: Economies of scale and relative personnel costs. Larger cable operators show a significantly higher personnel productivity than smaller operators.

Optimal personnel split has crystallised

No new developments on outsourcing

Overall productivity, indexed FTE and RGU development

k RGU per internal FTE, RGU and internal FTE indexed to 2008 level, median each

Source: Solon Cable Survey 2009
For CEE operators, low personnel costs so far eased the pressure to increase personnel productivity. Combined with a small size and a low degree of process automation, this resulted in very low productivity rates. However, we expect this to change in the future. Increased consolidation and financial pressure will also force CEE operators to optimise and improve their processes.
7. PROFILE OF PARTICIPATING COMPANIES

The European Cable Survey 2009 covers 17 cable operators from 13 different countries of widely varying backgrounds. Ten participants from WE and seven participants from CEE countries allowed for a differentiated analysis of cable operators’ strategies across Europe. The participating operators represent a total of close to 22m RGUs.

Although most participants originally started with analogue distribution networks, they now operate in distinctly different competitive environments:

- Own broadband penetration from 20% to 65%
- Own Pay TV penetration up to 51%
- Total revenue share of new services between less than 10% and 75%

The cut-off point for participation was set at a minimum of 100,000 basic access subscribers.
## 8. GLOSSARY / ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>ADSL</td>
<td>Asymmetric Digital Subscriber Line</td>
</tr>
<tr>
<td>ARPU</td>
<td>Average Revenue per User</td>
</tr>
<tr>
<td>B2B</td>
<td>Business to Business</td>
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<tr>
<td>BSS</td>
<td>Business Support System</td>
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<tr>
<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
</tr>
<tr>
<td>Capex</td>
<td>Capital Expenditures</td>
</tr>
<tr>
<td>CEE</td>
<td>Central and Eastern Europe</td>
</tr>
<tr>
<td>CPE</td>
<td>Customer Premises Equipment</td>
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<tr>
<td>CV</td>
<td>Customer Value</td>
</tr>
<tr>
<td>DSL</td>
<td>Digital Subscriber Line</td>
</tr>
<tr>
<td>DTH</td>
<td>Direct-To-Home (Satellite)</td>
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<tr>
<td>DTT</td>
<td>Digital Terrestrial TV</td>
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<tr>
<td>DVB-T</td>
<td>Digital Video Broadcasting Terrestrial</td>
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<tr>
<td>EPG</td>
<td>Electronic Program Guide</td>
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<tr>
<td>ESG</td>
<td>Electronic Service Guide</td>
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<tr>
<td>FTE</td>
<td>Full Time Equivalents</td>
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<td>FTTC</td>
<td>Fibre To The Curb</td>
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<tr>
<td>FTTH</td>
<td>Fibre To The Home</td>
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<tr>
<td>HD</td>
<td>High-definition</td>
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<tr>
<td>HD-PVR</td>
<td>High-definition Personal Video Recorder</td>
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<tr>
<td>HDTV</td>
<td>High-definition TV</td>
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<tr>
<td>HP</td>
<td>Home Passed</td>
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<td>IPO</td>
<td>Initial Public Offering</td>
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<td>IPTV</td>
<td>Internet-based TV</td>
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<tr>
<td>LTE</td>
<td>Long Term Evolution</td>
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<td>MDF</td>
<td>Main Distribution Frame</td>
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<tr>
<td>MVNO</td>
<td>Mobile Virtual Network Operator</td>
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<tr>
<td>NGA</td>
<td>Next Generation Access</td>
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<tr>
<td>OSS</td>
<td>Operating Support System</td>
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<tr>
<td>OTT</td>
<td>Over-the-top</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>PE</td>
<td>Private Equity</td>
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<tr>
<td>PIC</td>
<td>Pre-Installation Churn</td>
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<td>PM</td>
<td>Product Management</td>
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<td>PR</td>
<td>Public Relations</td>
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<tr>
<td>PSTN</td>
<td>Public Switched Telephony Network</td>
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<tr>
<td>PVR</td>
<td>Personal Video Recorder</td>
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<tr>
<td>RGU</td>
<td>Revenue Generating Unit</td>
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<td>SAC</td>
<td>Subscriber Acquisition Costs</td>
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<td>SD</td>
<td>Standard Definition</td>
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<td>SME</td>
<td>Small and Medium Enterprises</td>
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<tr>
<td>SoHo</td>
<td>Small Office, Home Office</td>
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<td>STB</td>
<td>Set Top Box</td>
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<td>LLU</td>
<td>Local Loop Unbundling</td>
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<td>UGC</td>
<td>User Generated Content</td>
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<tr>
<td>USP</td>
<td>Unique Selling Proposition</td>
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<td>VAS</td>
<td>Value Added Service</td>
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<tr>
<td>VDSL</td>
<td>Very High Speed Digital Subscriber Line</td>
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<tr>
<td>VoD</td>
<td>Video on Demand</td>
</tr>
<tr>
<td>WE</td>
<td>Western Europe</td>
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</tbody>
</table>
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