The European Cable Industry currently faces a lot of challenges: Changing customer demands, new products, new competitors, new technologies. In this rapidly changing environment, surveys like the European Cable Survey 2007 guide the future development of the industry since they provide not only insight into its current status but also show us the direction in which we are headed. We at CTAM Europe are proud to have worked with Solon in order to produce this year’s Survey, as we are fully aware that it is a source of valuable information and a powerful reference for all who want to be prepared for challenges and opportunities in the world of European Cable. CTAM Europe would like to thank Solon for their partnership on this important project.

Dennis Hodges
Chairman CTAM Europe and VP Marketing & Sales UPC Hungary

Over the course of the last ten years, Cable operators have come a long way from often poorly managed public utilities towards sales and marketing-driven communications providers. After years of high investment into networks, products and competitiveness they have succeeded in over-achieving even their own plans. Now, with competition between Satellite, DSL and DTT in full swing, operators are planning to move to the next level - a complete focus on the customer experience. We hope that this study of 18 of the leading European Cable operators will be of help to these operators in achieving their goals. And we want to thank all of the participating executives, from CEOs to financial controllers, for sharing their views and data in this undertaking.

Martin Weiss
Partner, Solon Management Consulting
Project Leader: Dr. Dorothea von Wichert-Nick

Dr. Dorothea von Wichert-Nick is head of the Telecom Practice Group at Solon Management Consulting. Her project work includes M&A support and strategy development for cable operators, telcos, media companies and their investors. Besides her project work for cable operators, Dorothea has also co-authored the European Cable Survey both in 2004 and 2005.

Solon Management Consulting

Solon is the leading consultancy for the European Cable TV industry. Services range from the development and implementation of corporate strategies to M&A transaction support. Clients include Cable operators, telecommunication and media companies, as well as banks and private equity funds.

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EXECUTIVE SUMMARY

- Cable operators have successfully continued to expand both their product and customer base. Internet and Telephony in particular have exceeded expectations while digitization of Cable is lagging behind. Despite an ongoing price war, Cable operators have been able to maintain their margins - and expect to do so in the future.

- Compared to 2005 the CEO agenda of Cable operators sees a clear shift from product towards customer focus: Customer service, marketing and sales excellence are the new top issues, while mere product expansion has moved down in importance.

- In order to stay ahead of competition, namely Satellite, DSL and Web-based TV, Cable operators will have to manage three challenges in the years to come:
  - Improve the product offering further to stay competitive: New TV experience, rather than just more channels for TV, outpaces DSL on price for communication access.
  - Create an encompassing customer experience by moving from just offering numerous services to servicing customer needs.
  - Strive for operational efficiency as well as economies of scale in order to drive and ultimately win the ongoing Broadband and upcoming TV price war.

EBITDA Margin: Cable industry still highly profitable

Source: Solon Cable Survey
THE NEW CABLE CEO AGENDA

CEO Agenda rewritten: Less focus on expansion of product base, more on excellent customer experience

The European Cable industry is entering a new stage in its development. During the last three to five years, Cable operators have successfully developed themselves from mere utility companies to multi-service providers by introducing a broad range of new content and communication services. Most operators have also done their homework with regards to network upgrade and operational efficiency.

Strategic positioning: Core issues

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>Source: Solon Cable Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service excellence</td>
<td></td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Triple / Quad play bundles</td>
<td></td>
<td>4.7</td>
<td>N/A</td>
</tr>
<tr>
<td>Marketing &amp; sales excellence</td>
<td></td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>Expansion of content offering</td>
<td></td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>Network performance</td>
<td></td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Efficiency improvements</td>
<td></td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Expansion of communications offering</td>
<td></td>
<td>3.6</td>
<td></td>
</tr>
</tbody>
</table>

However, a broad product offering alone is not enough in the effort to capture a sustainable market position in competition with both managed Satellite platforms and still-developing TV over DSL. Cable operators must also create an encompassing customer experience that addresses all customer interactions: timely development of new products and the introduction of attractive bundle offers, the generation of efficient marketing and sales processes, excellent customer service and finally the sustainability of efficient retention measures.

European Cable operators are well aware of these shifting demands. Customer service and Marketing and Sales excellence have made their way to the top of the new CEO Agendas, competing for priority status with the creation of attractive product bundles. Simply expanding product offering – especially on the communications side – is decreasing in importance. Also, the expansion towards new target groups such as business customers is not seen as a priority. Rather, doing things right with the existing consumer target group has become the prominent discussion in board rooms across the continent.

As a result of Private Equity involvement and market consolidation, many Cable operators have engaged in rigorous cost-cutting exercises in the past few years, and therefore put less focus on further efficiency improvements. A price war and resulting margin pressure might however make re-evaluation necessary.
The reward for all these activities will be an increasingly diversified revenue and subscriber base, increasing revenues and, as a result, further increasing EBITDA contributions per customer.

**New competitive landscape evolving due to success of DTT and TV over DSL**

The European TV and Broadband markets are still in turmoil with a multitude of new competitors trying to get their share of either market:

- Analog Terrestrial TV is being switched off and making room for better quality and more channel-laden Digital Terrestrial TV.
- While defending their home turf, the communication market, DSL operators have entered the TV landscape with their own IPTV platforms.
- Using the ever increasing Internet bandwidth, a completely new generation of TV competitors is arising, accessing the customer without possessing their own network platform: major “Video over the Top” providers include YouTube, Joost, MTV Overdrive and many more.
- And there is still the old foe: Satellite.

So far, however, most of these shifts – although widely discussed for some time now – have hardly been realized. Actually, market share distribution within the TV markets has been rather stable over the last two years, and within Broadband markets Cable operators have in many instances been much more successful than expected two years ago.

![Market share distribution TV access](image)

Source: Astra (2006)

Despite so far only gradual market shifts, the changing competitive situation has a major impact on the strategy and positioning of the European Cable industry.
Terrestrial TV: Full digitization well on its way

Within Western Europe the migration from Analog to Digital Terrestrial TV is progressing well – actually better than expected by Cable operators two years ago:

- Migration is expected to be completed by 2010 in all Western European countries covered within our survey.
- Increased attractiveness helps Terrestrial TV to stabilize its market share especially in those markets with a well-managed Terrestrial TV platform.
- Managed Digital Terrestrial TV platforms (e.g. in Sweden) have shown to be much more successful than non-managed platforms (e.g. in Germany) in increasing terrestrial penetration again.

In Central Europe, Terrestrial TV is still the dominating platform and digitization is just starting. The still low number of channels available via Analog Terrestrial provides all other access-infrastructures with an excellent position for market share expansion.

TV over DSL: Delayed, but with stronger position

Over the last two years “TV over DSL” has been introduced in nearly all Western and some Central European countries. In order to reduce market share losses, the Telco incumbents in particular have built their own TV platforms and started offering a wide range of public and private TV stations, some pay channels, attractive premium content including top sports and a VoD library.

Although TV over DSL has seen some success in high price Pay TV markets such as France, none of the participating Cable operators has experienced market share losses to DSL. Yet, in many markets, DSL operators are about to overcome the hurdles that have delayed mass marketing TV over Broadband. So far:

- Platform development has seen many delays, but most DSL operators have finally managed to get it up and running.
- DSL penetration may have just reached the mass market, but it is currently increasing strongly and is even showing initial signs of maturity in some advanced markets.
- Consumer education on the advantages of TV over DSL has yet to be enforced.
- Finally, the average bandwidth households subscribe to is not yet sufficient for a high quality TV offering, but since operators are continuously upgrading their networks (ADSL2+, VDSL) to offer high bandwidths to every customer, this is simply a question of time.

As a result, European Cable operators expect TV over DSL to capture on average 7% of the TV access market over the next three years – twice as much as they expected for 2009 in the 2005 survey. The impact on the Cable market share is expected to remain limited in most markets – where DSL is taking over market share from Terrestrial and Satellite. Market share losses are so far only expected in countries currently dominated by Cable.
“Video over the Top”: Hype or major threat?

Web-based TV providers (e.g. YouTube, Joost, MTV Overdrive) are taking advantage of growing Broadband penetration and increasing access speeds to directly access the end-customer. Network operators are limited to a pure transport function.

In order to pose a significant threat, quality of content and picture quality of Video over the Top needs to improve. Nevertheless, customizable on-demand content viewing is highly attractive to consumers. In order to stay competitive, Cable operators must take a more active role in content acquisition, secure attractive, exclusive content, invest in interactive VOD platforms and provide excellent customer service.

Satellite: Attractive alternative to Cable especially within Central Europe

Satellite operators continue to be core competitors against Cable operators, mainly by using their broad and partially exclusive content offering. In Western Europe the market balance between Cable and Satellite is rather stable, with no major win-overs from Satellite expected. Satellite might even lose market share in the future, since bundling with communication services is increasing in importance. In Central European countries a strong Satellite penetration has the potential to limit the expansion of late-to-market Cable networks.

What does all this mean for Cable?

Despite intensifying competition in the TV market, most Cable operators do not foresee major market share losses in the coming years until 2010. Central European Cable operators particularly expect to be able to extend and expand their networks and thereby improve their market position. Only operators in markets with a rather high Cable market share such as the Netherlands and Switzerland expect to lose some market share.
With or without midterm market share losses, the new market participants are definitely increasing the competitive pressure:

- TV subscriber acquisition will become harder and churn rates can be expected to increase. Web-based TV offers have the potential to snatch the TV customer relationship away, leaving Cable only with the pure access offering.
- The price war that already characterizes the increasingly maturing Broadband markets will potentially also hit the TV access market – especially once bundled Broadband and TV offers are widely available from DSL operators.
- Additional TV and Broadband services will enter the market at low cost, be it a wider range of free TV channels as offered by Digital Terrestrial TV or more interactive services and bandwidth as offered by DSL operators.

In order to maintain and strengthen their market position, European Cable operators should work on three main challenges:

1. Increase competitiveness of own product offering in order to stay ahead of Satellite, DSL and Web-based TV offers
2. Create an encompassing customer experience by moving from just offering numerous services towards servicing the customers’ individual needs
3. Strive for operational, marketing and sales efficiency in order to win the existing and upcoming price wars

Challenge No. 1: Improve product offering to maintain competitive edge

In the past few years, European Cable operators have been rather successful at expanding their product range from a handful of Analog TV channels towards a broad range of TV and communication services. With the ongoing introduction of Mobile Telephony, Cable operators will be able to cover all entertainment and communication needs of today’s households.

To continue their success story, Cable operators will have to continuously improve their offering according to customer needs. The core challenge for the TV offering is “Move from more to better”.

With their large Digital channel offering Cable operators match the TV bouquets of their Satellite peers - however only for a still rather limited digital subscriber base. Besides increasing their digital penetration, Cable operators have to move towards Next Generation TV products. Personalized and “anytime, anywhere” TV products including VoD, PVR and HDTV, are essential in competing with the IPTV offers of DSL operators and with platform-independent web-based players.

For their communication access offering Cable operators should head for offering “ever cheaper rather than ever faster”. As Broadband markets reach maturity, growth will increasingly be generated by winning over customers from other competitors. With their own last mile, Cable operators have a structural margin advantage, which they should use to outpace DSL operators on price. Although this approach reduces margins in the short term, increasing penetration, economies of scale and increased ARPU can be expected to more than make up for this.
Challenge No. 2: Moving from offering services to serving customers’ needs

An optimized product offering only partly drives competitiveness. Having a broad range of various operators at hand, the consumers’ decision will not only depend on which services are delivered but also on how these services are delivered. Branding, service quality, reliability, service transparency & simplicity, speed of delivery – all of these issues create an encompassing customer experience. In order to provide this experience, Cable operators have to optimize all processes related to their customers: From product and service definition, to the creation of brand awareness, marketing and sales, smooth activation and installation processes, customer service, billing and collection and finally customer retention and churn management. European Cable operators are well aware of this and have changed their priorities accordingly.

In practice however, all European Cable operators show a significant need for improvement within at least one of the customer experience dimensions. The graph below compares the performance of five operators along selected ranking dimensions (4 out of 8).

<table>
<thead>
<tr>
<th>Customer Experience Performance (Sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall ranking</td>
</tr>
<tr>
<td>Subscriber base / RGU:</td>
</tr>
<tr>
<td>Product Introduction:</td>
</tr>
<tr>
<td>Branding &amp; Marketing:</td>
</tr>
<tr>
<td>Customer Service:</td>
</tr>
</tbody>
</table>

Position of selected participating Cable operators in selected categories

Position in ranking: Top 3, 4-9, 10-15, Lowest 3, N/A

Source: Solon Cable Survey

While the Best Practice operator shows excellent penetration rates and superior brand awareness, its customer service is lagging behind significantly. Operator No. 8 on the other hand – even though it has yet to reach best practice in any of the dimensions – shows a rather strong performance with regards to customer care and productivity.

1. “Subscriber base / RGU”: Up-selling rate / Product penetration;
2. “Product introduction”: Duration of product development cycle, Activation time;
3. “Branding / Marketing”: Unaided / Aided brand awareness, Marketing spending;
4. “Customer Care”: First contact solution rate, Reachability, Call answer rate, Call center productivity
Challenge No. 3:
Maintaining margin advantage by striving for excellent efficiency

A core asset of Cable operators in the ongoing Broadband and potentially the upcoming TV price war are their strong margins. Having their own access networks provides Cable operators with a clear cost advantage compared to alternative fixed-line operators and resellers.

With ever increasing customer acquisition costs and increasing personnel demands from customer care and service management on the one hand and continuing price war on the other hand, margins will increasingly come under pressure. In addition, many Central European Cable operators are still lacking economies of scale.

The challenge for Cable operators is therefore twofold:

- Further improve efficiency levels by moving towards more efficient sales channels, closely managing personnel levels – especially for new services – and finding the balance between insourcing and outsourcing.
- Striving for external growth and further market consolidation – if possible. If consolidation has already been realized – trying to leverage scale and further reduce costs with intelligent partnering concepts.
Groundwork: Pursue continuous network upgrade, quickly build-up VoD capabilities

With the further development and deployment of DSL technology (ADSL2+, VDSL) and FTTx, current Cable infrastructures are in danger of losing their current bandwidth advantage. The question, however, is whether this is actually a threat: “20mbps for all” must not be a value proposition for Cable customers.

Their individual bandwidth usage is usually much lower and broadcast TV streams are transmitted as multiple, simultaneous DVB-C streams, rather than jamming the IP line. Even though there is no technical requirement for Cable operators to deliver ever higher speeds to their mainstream customers, Cable operators will still use premium priced flagship products at very high speeds greater than ADSL2+ (24mbps), i.e. 30mbps or even (QAM256 or DOCSIS 3.0) 50+mbps, to support the Cable operators’ image as bandwidth leader.

However, as penetration and bandwidth per user are increasing, the network has to continue matching this need in order to assure high customer satisfaction. Network upgrade is thus a continuous process rather than a one-time effort. In addition, the necessary enhancement towards VoD capabilities will lead to significant investment into networks, i.e. into decreasing cluster size by laying fiber lines, VoD servers, CMTS/Edge-QAMs (in the case of a hybrid DVB-C/IP-based solution) and CPEs.

Capex forecasts of this survey’s participants strongly suggest that many operators do not plan significant further network upgrades. However, increased success of Next Generation TV Services like VoD and IPTV might force Cable operators to adjust their networks faster than currently assumed. Rather than finishing their Capex cycle, Cable operators might see the necessity to keep Capex at higher levels in order to match market challenges.
The rewards: Attractive positioning within the market, diversified revenue base and continued stable EBITDA margins

Following a clear agenda towards product diversification, Cable operators have already been very successful over the last few years and expect to continue on their path. On average, European Cable operators forecast a revenue growth of 9% p.a. between 2006 and 2010. The main growth driver is further up-selling activities, but ARPU increases also help to expand the revenue base.

The number of services sold per Basic Access subscriber has increased significantly over the past five years: while in 2002 less than 10% of all TV access subscribers also used other services, the number increased to about 30% in 2005 and jumped to more than 40% in 2006. The current up-selling rate even slightly surpasses expectations. For the future, with growing competition and maturing Broadband markets in mind, Cable operators have become more cautious: The forecasted CAGR for the ’06-’10 is 3.4%, down from 7.7% for the ’04-’07 period.

The declining dependence on TV access is especially visible in the revenue share distribution: in 2006 already 38% of average European Cable revenues were generated by Pay TV, Internet and Telephony. By 2010 basic access is expected to generate less than half of Cable operators’ revenues, while communication services – including Broadband access, Fixed and Mobile Telephony should contribute close to 40% of revenues (2006: 28%).
Revenue growth will not only be generated by up-selling to new services. Actually, Cable operators plan to further increase ARPU across all products, even including Internet access. Telephony is expected to yield the highest ARPU growth rates, mainly due to increased usage especially in Central European markets. Still rather strong growth rates are expected for Basic TV. In fact, most operators have just increased Basic Access prices and plan to increase further within a year. However, ARPU growth in communication services might especially be overestimated, as a strong price war prevails in all European Broadband markets. Actually, in both preceding Cable surveys Cable operators had been overly optimistic with regards to Internet price levels going forward.

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**Service ARPU 2006 and 2010**

<table>
<thead>
<tr>
<th>Service</th>
<th>2006</th>
<th>2010</th>
<th>CAGR 2006-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic TV</td>
<td>10.94</td>
<td>12.77</td>
<td>+3.9% p.a.</td>
</tr>
<tr>
<td>Pay TV</td>
<td>10.64</td>
<td>11.20</td>
<td>+1.3% p.a.</td>
</tr>
<tr>
<td>Internet</td>
<td>17.11</td>
<td>18.06</td>
<td>+1.4% p.a.</td>
</tr>
<tr>
<td>Telephony</td>
<td>12.35</td>
<td>15.74</td>
<td>+6.2% p.a.</td>
</tr>
</tbody>
</table>

Avg. (median) Service ARPU 2006 and 2010 (€ / subscriber / month, CAGR 2006-2010). Source: Solon Cable Survey
Margin pressure within the Cable industry is starting to show. Compared to the 2005 survey the average EBITDA margin has slightly decreased from 45.0% to 43.5%. Operators are optimistic that their efforts in managing their cost base will be successful and result in a slight margin increase (+1% p.a.) by 2010.

The margin spread however continues to be rather strong – especially for full triple play operators. Here, the best practice operator yields close to three times the EBITDA margin of the worst performing.

**EBITDA margins and contributions**

Left side: EBITDA margin in %, Right side: margin contribution (€, EBITDA / Basic Access subs)

Source: Solon Cable Survey
PRODUCT PORTFOLIO: FURTHER IMPROVEMENT ENSURES COMPETITIVENESS

TV: Increase channel offering and move to more interactivity

TV continues to be the core competence and main EBITDA driver on which the Cable operators are building their success stories. Increasingly, existing and new TV competitors threaten to take a piece of this cake. In order to defend their home turf, European Cable operators have consequently put an attractive and broad TV offering rather high on their agenda. Moreover, the long-term competitiveness of Cable operators within the TV market depends on their ability to develop modern, multi-channel and interactive TV platforms. Comfortable PVRs with easy to use, rich EPGs are expected to complement the Cable TV offering.

Features of an attractive TV offering

<table>
<thead>
<tr>
<th>Feature</th>
<th>Importance Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad Channel Offering</td>
<td>4.3</td>
</tr>
<tr>
<td>PVR</td>
<td>3.7</td>
</tr>
<tr>
<td>Rich VOD Library</td>
<td>3.7</td>
</tr>
<tr>
<td>Rich EPG</td>
<td>3.4</td>
</tr>
<tr>
<td>Exclusive Premium Content</td>
<td>3.3</td>
</tr>
<tr>
<td>Interactive TV Offering</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Importance of TV offering features in positioning against Video over the Top; Ranking from 1: no importance to 5: very high importance  
Source: Solon Cable Survey

A broad content offering is important for both Western and Central European operators. With maturing Broadband markets and the increased marketing of TV over DSL packages in mind, Western European Cable operators put a significantly higher focus on interactivity-oriented TV features such as PVR, EPG and interactive TV. Central European Cable operators instead head for more exclusive content, as in these markets competition against Satellite and Terrestrial TV is still more relevant than fighting TV over DSL.

Digitization lagging behind expectations – but hopes still high

The planned expansion of the TV offering can, however, only be realized with modernized, digitized networks that provide sufficient room for additional channels. Unfortunately, Cable operators still struggle with the migration of their customer base from Analog to Digital access. Currently, they are lagging behind their 2005 forecasts by about two years.
Cable operators do however believe that the speed of migration will increase. This time their trust might be justified, as the premises have improved compared to 2005:

- With the ongoing digitization of Terrestrial TV, “Digital TV” is becoming a household name.
- Better TV screens and attractive Set Top Boxes including Digital Video Recorders may lure TV viewers towards Digital TV.
- Aggressive migration programs as started by some Cable operators may bear fruit, e.g. only offering Digital Access to new subscribers, handing out STBs to all subscribers.
- Increasing relative attractiveness of Digital Basic packages as realized by most operators who plan to melt off the Analog Access bouquet and simultaneously add channels to Digital Access packages.
Channel offering: Melt analog and expand digital offering

<table>
<thead>
<tr>
<th>Analog Basic Bouquet</th>
<th>Digital Basic Bouquet</th>
</tr>
</thead>
<tbody>
<tr>
<td>59</td>
<td>100</td>
</tr>
<tr>
<td>44</td>
<td>60</td>
</tr>
<tr>
<td>59</td>
<td>73</td>
</tr>
<tr>
<td>44</td>
<td>100</td>
</tr>
<tr>
<td>40</td>
<td>65</td>
</tr>
</tbody>
</table>

Left side: # of analog channels within basic package, Right side: # of digital channels within basic package
Source: Solon Cable Survey

Margin Booster: Regular price increases for Basic Access – still with only limited churn

Price increases for Basic TV Access are both a popular and successful measure for instant margin increases. In our 2005 Survey operators had forecasted a Basic Access ARPU increase by 10% p.a. from €8.10 to €10.90 – a target that was actually met already in 2006.

Over the next four years the ARPU is expected to increase further towards €12.80, i.e. by 4% p.a.

The majority of operators is conducting annual to bi-annual price increases in the range of 5-6%. In 2007 alone, 11 out of 15 operators have increased their prices and ten intend to raise their prices again in 2008. Amazingly, these frequent price increases do not induce extraordinary churn levels, with the resulting churn reaching around 1% for a 3% price increase.

ARPU induced churn within rather narrow range

Realized and planned price increases (%) and resulting additional churn (%)
Source: Solon Cable Survey
In the future, increasing competition limits room for further price increases. Western European operators in particular expect that from 2008 onwards annual ARPU increases will not exceed the low single-digit range.

**Will hopes for Pay TV materialize this time?**

The lower Basic Access ARPU increases, the higher the hopes for additional Pay TV revenues. On average, Cable operators expect to more than quadruple Pay TV penetration from currently about 7% to 30% in 2010. These quite ambitious targets are partly supported by the increased digital uptake and an improved Pay TV offering including a growing number of channels, HDTV and VoD. Still, Cable operators will have to be very successful marketers if they want to meet their targets.

### Pay TV and HDTV Channel offering in particular expected to increase further

![Graph showing Pay TV and HDTV Channel offering](image)

Left side: Average (median) # of Pay TV channels, Right side: Average (median) # of HDTV channels

Source: Solon Cable Survey

HDTV is still in its infancy with only a rather low number of channels available. In Western Europe HDTV is and will be mainly positioned as a Pay TV product, while Central European operators plan to offer a higher share of HDTV channels for free. Also, VoD is positioned as a premium product, and to a limited extent free VoD is offered on top. Operators still seem to be indecisive about which VoD model – Pay per View or VoD subscription – will prevail in the long run.

**Two-tiered Set Top Box strategy**

Most operators pursue a two-tiered Set Top Box strategy, offering a basic box with standard features and a more elaborate premium version.
Dual offering: Standard Set Top Box and multi-function Premium Set Top Box

The standard box is currently simply a Digital Access Box, often including an interactivity option. Additional features such as HDTV are currently only offered by few operators. However, if looking towards the future, operators seem to realize the importance of add-on features and enhance their boxes with HDTV ready or PVR.

A premium box is offered by 56% of operators with HDTV and HD-DVR being the major add-ons. None of the Western European operators sees a multimedia home platform (MHP) as a current or future trend and thus does not include this option in their Set Top Box offering. Some Central European operators still plan to offer MHPs. However, as modern hybrid (DVB-C and IP) boxes might lead to an overlap of MHP technologies, it remains to be seen if this technology will ever reach the markets.
INTERNET AND TELEPHONY AT EVER HIGHER SPEEDS

Within the last two years, Internet and Telephony products have become standard for all Cable operators. Their success, at least in terms of penetration, continues to exceed all expectations.

Internet penetration: 2004 - 2010

![Internet penetration graph](image)

Internet penetration in % of Basic Access subscribers (median)
Source: Solon Cable Survey

Internet strategy: Increase bandwidth, keep prices low

The core competitive advantage of Cable operators against DSL is their general ability to deliver high speed levels at attractive prices. Currently most Cable operators focus on the bandwidth advantage by offering above-market speed levels at market prices. To win the price war, this strategy will see a shift towards market bandwidth at below-market prices.

As a result of the ongoing speed war, the bandwidth offered within the “Standard” package has increased quickly and is expected to continue to do so in the future. If subscribers were not frequently locked in contracts with durations of up to 24 months, penetration of high-speed access would happen even faster.

Bandwidth development: Core product and customer base

![Bandwidth development graph](image)

Left side: Bandwidth of standard Internet product in MBit/s,
Right side: Bandwidth distribution within subscriber base
Source: Solon Cable Survey
Currently, the focus is still on download speed without much regard at all for upload speed. However, as Web 2.0 generation customers increasingly participate in the creation and thus upload of content, upload speed might quickly increase in importance.

The strong Internet uptake has partly been counterbalanced by strong ARPU declines. For the years to come, Cable operators are positive that they will able to stop the price decline, and maybe even increase their Internet ARPUs. However, it remains to be seen whether Cable operators are not again too optimistic, as price decline has always proven to be much more fierce than anticipated.

In order to differentiate and increase the stickiness of their Internet access offering and to prepare for own Web-based TV offerings, Western European Cable operators in particular have started to offer own Internet content. Of all operators, 2/3 already offer or at least plan to realize their own Broadband portals, Internet-based VoD platforms and user-generated content. Of the already introduced products, more than 60% have been launched recently (2006-2007). Central European Cable operators still do not really see the need of an own content offering. It remains to be seen, whether these, once their markets have reached higher degrees of saturation, change their mind.

**After success of fixed-line offering – mobile now on the agenda**

Fixed-line Telephony is an integral part of the Cable operators’ product offering, with Telephony penetration quickly closing in with Internet penetration. The growth is driven by attractive flat rates and bundling with Internet offering, allowing customers to forget about second access fees and minute prices.
Telephony ARPU is expected to see a rather quick increase between 2006 and 2008 and stabilization afterwards. Telephony usage is generally more stable; however Western European markets show signs of fixed-to-mobile substitution and eventually a slight decrease in Telephony minutes.

2007 is the “Mobile Year” for Europe’s Cable industry. About half of the respondents will be offering Mobile Telephony by the end of 2007 with another 20% following at a later stage. In order to enable Mobile Telephony offers, all Cable operators set up MVNOs in close cooperation with mobile network operators. Alternatives such as resale or co-branding of MNO products are not considered.

At the time of the survey, only two operators had already launched their mobile offerings, thus providing only little empirical evidence on subscriber and revenue development. Hence, revenue and subscriber base are still hard to estimate and most of the operators refrained from any forecast.

Hotspot offerings are installed or planned by 40% of all operators, mainly from Western Europe. 30% of operators, mostly from Central Europe, plan for a Wimax roll out. Whereas Hot Spots are deployed as an additional service for existing customers, Wimax is mostly intended to reach further households beyond the current networks’ coverage. The productivity of both mobile options, however, remains to be seen.
Business services: Expansion if already established, otherwise no further attempts

Although no core strategy, business services are a reality for many Cable operators. More than 70% of European Cable operators already offer or plan to offer business services. The offering builds on the strength of Cable operators: The ability to transmit very high bandwidths. However, a guaranteed QoS has to be realized, which is new territory for traditionally B2C-oriented Cable operators. About half of the operators also offer some value-added services.

Bundling: From triple to quadruple play

In the attempt to offer customer-oriented offers rather than single products, bundling plays an increasingly important role for Cable operators. Also, bundling is perceived by many operators as a core retention measure, as it ties in customers for more services and provides the opportunity to offer attractive discounts.

Bundling currently focuses on communication services and triple play. With more and more Cable operators adding mobile offering to their product range, “one-stop” quadruple play offerings are expected to become a reality. As most consumers already have long standing relationships with their mobile operator, the actual take up can be slower than anticipated.

Currently, a good third of all Cable households take one of the specified product bundles. This share is expected to increase to almost 70% by 2010. The average bundling price advantage is rather limited at 10%-15% compared to the single products - with no significant differences across the markets.
Take up of product bundles and price discount

<table>
<thead>
<tr>
<th>Product Bundle</th>
<th>2008</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV &amp; Internet</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Internet &amp; Fixed-Line Telephony</td>
<td>13%</td>
<td>-9%</td>
</tr>
<tr>
<td>Triple play</td>
<td>13%</td>
<td>-10%</td>
</tr>
<tr>
<td>Quadruple play</td>
<td>21%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total bundle take up:
2005: 36% of Basic Access subscribers
2010: 67% of Basic Access subscribers

Share of subscribers taking specified product bundles; average discount vs. single products (in italics)
Source: Solon Cable Survey
CUSTOMER EXCELLENCE:
SERVE THE CUSTOMER ALONG ALL DIMENSIONS

In the current and future competitive environment, mere product delivery is not sufficient anymore. As products and prices of the different TV and communication platforms become interchangeable, the customer will increasingly select his provider for its overall "customer experience". Only a few customers actually decide on price and product features alone.

In the past, Cable operators were not particularly known for closeness to their customers, and most operators still prefer to think of customers in terms of “revenue generating units” rather than perceiving them as human beings whose needs have to be fulfilled with encompassing service offerings.

On their way towards “excellent customer experience” Cable operators will have to rethink all areas of interaction with their customers: Starting from the creation of products and product packages that really fulfill customers’ needs, to customer acquisition, service installation and activation, ongoing customer service up to adequate customer retention and churn prevention measures.

The strategic agenda shows that Cable operators are generally aware of the need to change. Excellent customer service and marketing & sales excellence have made their way to the top of the CEO agenda. The question however is: how far Cable operators actually manage to meet these new requirements - and how they will continue in their change process.

Within our survey we have attempted to measure the progress Cable operators have made along all these dimensions. Some progress can be seen, and some Cable operators even show excellent results in certain areas. However, none of the operators, including the top European players, has been able to excel in all dimensions - an encompassing customer experience has yet to be created.
In the following chapter, we will go through the different dimensions of customer experience and show how Cable operators can learn from each other on their way towards excellence.

**Product & Service Definition: Shorter development times should be targeted**

In the past years, Cable operators have gone a long way from being TV utilities to becoming multi-service platforms. When embarking the multi-service universe, Cable operators had to learn how to set up efficient product development processes, starting from the development of ideas via the actual realization towards the full launch of the product.

![Phases of product development process (in # of weeks)](chart)

Currently, the duration of an average product development cycle – here presented for Telephony (mostly introduced between 2003 and 2005) and VoD (introduction ongoing) – lasts about a year. Not only the total cycle but also the different core stages from conceptualization to full launch show similar time frames.

The competency levels, however, vary strongly across the Cable operators: A significant share of operators managed rather short product introduction processes: 50% of the participants introduced their Telephony products in less than 3/4 of a year, 40% for VoD. In contrast, most of the remaining operators needed 1.5 to 2 years to bring their products to market. Even worse: Only a very few of these slower operators had been able to significantly cut down development time in later development processes while quick operators continued to do well in later product launches.

Only if Cable operators are able to overcome their organizational problems and cut down development cycles significantly will they be able to react quickly to market changes.
Awareness, Marketing & Sales: Invest in awareness – manage cost of sales

Marketing and Sales go hand in hand. Marketing activities prepare the ground by creating trusted brands and increasing product awareness – while sales activities actually turn prospects into paying customers. Both activities are vital for Cable operators’ success – but also bear the risk for incalculable costs. Actually, marketing spending and subscriber acquisition costs continue to increase, not only for Cable but also for its competitors. Setting up effective, cost-saving marketing and sales activities is therefore an important aspect in maintaining a cost advantage to DSL.

Brand building supported by growing marketing spending

Most Cable brands – usually covering only limited regions – are disadvantaged compared to their nationally operating competitors, be it Satellite or DSL. In most cases average unaided brand awareness of Cable operators is currently closely related to the Cable market share within respective markets.

To position against increasingly strong competition Cable operators have significantly increased their marketing spending: In 2006, total marketing spending amounted to on average 2.6% of revenue, more than 40% up from 2004. This increase is mainly driven by Western European operators, whose average spending level has reached 3.2% of revenues. Central European operators are still lagging behind (1.5% of revenues) - but as competition within these markets is often quite fierce, a further increase in marketing spending should also be expected. Marketing spending is distributed quite evenly to classical and below the line activities. There is however a slight tendency for operators from rather fragmented Cable markets to focus on below the line.

### Marketing spending as % of revenue

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<thead>
<tr>
<th></th>
<th>Min</th>
<th>Median</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total media spending / total revenues</td>
<td>0.1%</td>
<td>2.1%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Below the line media spending / total revenues</td>
<td>0.0%</td>
<td>0.6%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Classical media spending / total revenues</td>
<td>0.1%</td>
<td>1.0%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

Media spending as percentage of revenues; min, max and median of 2004 vs. 2006

Source: Solon Cable Survey
Marketing campaigns already show results with aided brand awareness being much higher than unaided, i.e. 88% vs. 58%. With future marketing activities Cable operators expect to continuously expand brand awareness. By 2010 unaided brand awareness is expected to reach on average 75%, aided even 95%.

**Sales concentrated in a few channels**

To reach their customer base, most Cable operators have developed a diverse portfolio of sales channels: In 2006 Cable operators used on average five channels, and by 2010 they even expect to take advantage of six different channels. Actual sales are however rather concentrated: About 90% of all sales are realized via three channels - this dominance will only be slightly reduced by 2010 (80%).

The sales strategy varies strongly depending on the specific country. Central European players still generate quite a high share of sales via cash offices and Door-to-Door distribution, and they consequently have a rather low share of other channels such as Internet or direct mail.

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**Share of gross adds via Top 3 channels and via inbound, direct mail & Internet**

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<thead>
<tr>
<th></th>
<th>2006</th>
<th>2010e</th>
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<tr>
<td><strong>Top 3 Channels</strong></td>
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<tr>
<td>Total</td>
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<td>81%</td>
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<td>82%</td>
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<table>
<thead>
<tr>
<th></th>
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<th>2010e</th>
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<tbody>
<tr>
<td><strong>Inbound, Direct Mail, Internet</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>WE</td>
<td>CE</td>
</tr>
<tr>
<td></td>
<td>71%</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>42%</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>33%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Left side: Average (median) % of sales generated via the three most important channels, Right side: Average (median) % of sales generated using the least expensive sales channels - Inbound, Direct Mail and Internet. Source: Solon Cable Survey

The Internet as a sales channel is highly important in markets such as the Netherlands, Sweden or Switzerland, where the general Internet penetration is comparably high and where triple play offers of Cable operators are already well established. However, rather costly channels such as Door-to Door also play a strong role.

Over the coming years, Cable operators expect to slightly balance their sales channel structure. While Central European countries are more likely to shift towards more inbound activities, Western European operators plan to invest in an own retail network.
Activation and Installation: Moving from prospect to client

Once a client has signed the contract, Cable operators have to actually install and / or activate the service. In order to achieve high customer satisfaction and to avoid churn, the time between order and activation of service should be kept as short as possible. In a completely upgraded and well managed network, activation can be realized within one day. This best practice example is so far only realized by few, very advanced players.

Even for additional TV services such as Pay and Digital TV, activation usually takes a few days. This time is normally required to send out the Set Top Box, add the customer to the system, activate the billing process and finally switch the customer’s connection on.

As soon as the customer has to be actively involved in the process or if a truck roll is necessary, time from order to installation increases significantly. In these cases, average activation times amount to 6 work days and more. The longest installation times have to be expected for Telephony. To activate a regular Telephony service, the Cable operator has to install the necessary equipment, and even more important: it must be assured that the Telephony service including phone number is transferred from the former Telephony provider in due time.

Cable operators would prefer to avoid installation by truck rolls, a rather expensive option. The more advanced the Cable network, the higher the share of self-installation by the subscriber - who sets up the modem or STB on his own.

40% of Cable operators report that they have incorporated a “geek squad service,” experts who physically support the customer at home in installing digital devices. Their presence in the customers’ home not only ensures that the service functions well, but they also lay the foundation for creating a personal customer relationship.
Customer Service: High on the agenda – but only insignificant improvement

Excellent customer service is the main building block in creating an excellent customer experience. After the installation of the service, customer interaction can be experienced in three ways:

- Semi-personal contact via the operators’ general or technical hotlines.
- Impersonal via the customer self care section on the operator’s web site.
- Via their cash offices Central European operators realize additional direct personal contact while Western European operators are only slowly moving towards own retail infrastructures.

Call center activity indicates improved overall service quality - but call center performance is decreasing

Call center activity in number of calls is a rather good indicator for the overall quality of service and network: The better the quality of an operator, the less customer care-related call center activity can be measured.

Despite strongly increasing service penetrations, call center activity has been rather stable on a per access level: In 2006 about 1.3 call center calls were made by every single access subscriber, down from 1.4. The number of calls per RGU has even decreased by 33% from 2004 to 2006. Also the ability to quickly find solutions for their customers’ problems has improved – more than 80% of all call center requests can be solved within the first call. Cable operators have obviously been able to optimize the general service level even in times of strong customer growth.
The actual average call center performance has slightly decreased: both, call answer rate and reachability cannot reach their 2005 levels. Cable operators are however optimistic to improve call center performance in 2007.

The performance of the call centers is not the only thing lagging behind expectations: Cable operators have also not been able to reach their 2004 targets for the implementation of more encompassing customer self care (CSC) sections on their web sites. Clear improvement was only made in the implementation of personal information spaces – finally adding some interactivity to CSC sections. The access to local network properties, i.e. product availability is still limited. In the future, this kind of information could be used to support up-selling via online sales. The advent of web-based VoD and STBs with integrated booking features will render PPV functions within the personal space irrelevant over the next few years.
Western European operators show that customer self care sections can actually be used to better manage the service needs of a strongly growing customer base and increase service productivity. 80% of the Western European operators have already implemented all vital self care features: Contact form, personal information space and troubleshooting. The customer is thereby motivated to take over some responsibility in managing his account. Due to the reduced call load per subscriber, call centers can be kept at a smaller size and still deliver the same quality of service.

All in all: Customer care is on the top of the CEO agenda and should definitely stay there. Customer service can be a core differentiator in competition with DSL. So far, Cable operators in many cases have not been able to present a stable, high customer care performance. Especially with a further increasing outsourcing share, the management of customer care quality will continue to be a key challenge.

**Billing & Collection: Save costs – keep bad debt at bay**

Billing is more of a necessity and cost factor than a differentiator. Cost reductions can be achieved by moving from paper towards online billing. While operators hope to see this migration since some time, subscribers are less receptive. Actually neither the share of subscribers that uses online billing nor the forecast for the future has changed from 2005 to 2007 – only delayed by two years.

Western European operators have started to encourage the adaptation of online billing. All operators with a very high share of online billing (>50%) already impose an extra fee on subscribers that prefer to receive a paper-based bill.

Overall, the bad debt situation has improved significantly. In our 2004 survey the average bad debt was still at 1.5% – about a third higher than in 2006 (1.1%). Bad debt has especially decreased for Telephony (3% in 2004) and TV access (1% in 2004).
Customer retention: At the end of the customer life cycle

Customer experience ends with the customer’s decision to cancel the service. Churn rates are driven by three factors: The competitive situation, the relative importance of a single product for the subscriber and, last but not least, customer satisfaction. Generally, the Central European markets, being characterized by strong platform competition and partially even Cable overbuild, show significantly higher churn rates than Western European markets.

The Top 3 churn reasons are quite similar across all services. Natural churn due to relocation leads the ranking (65-76% of respondents depending on service). Price increases are the second important reason (35-59% depending on service), especially in lower income Central Europe, especially for Basic Access. As discussed earlier, a price increase of 3% triggers churn in the range of 1%. Third in the list are insufficient content for TV access and Pay TV (around 45%) and technical problems for Internet (41%) and Telephony (35%).

Churn rates must not to be accepted as a given fact. In the past years Cable operators have started to introduce retention measures and win-back programs as a means to actively influence. The majority of retention measures has been introduced since 2005 and many operators still plan to introduce additional retention measures. Most measures try to improve the general customer satisfaction, as improved product features, bundling, good customer service and programs for special customer situations (e.g. such as relocation service, member-get-member). Customers who already show an intention to churn are lured back by special offers and proactive outbound calls.

Dedicated win-back programs are a rather new tool for Cable operators, with most of them having just been introduced. Win-back programs usually combine active customer contact (win-back calls) with special “Stop” promotions.
Only a very few advanced Cable operators have already managed the move towards a customer experience and customer lifetime philosophy – most operators still just work on the symptoms and start activity only if necessary. With potentially increasing churn especially for new services in mind, Cable operators must start developing more encompassing approaches for customer service and get a better understanding of customer satisfaction.
PRODUCTIVITY: STRONG ECONOMIES OF SCALE FORCE FURTHER MARKET CONSOLIDATION

As discussed before, Cable operators currently have a clear margin advantage that can be used to outpace DSL. In order to maintain their competitive advantage most Cable operators strive to further increase their productivity.

Having rather low personnel costs, Central European operators so far have put less focus on efficiency, averaging 1.1k RGU / FTE in 2006. Driven by increased personnel costs and market consolidation a strong increase in productivity towards 2.2k RGU / FTE and, as such, some catching up with Western European operators is planned for the near future.

Just taking into account the share of personnel, the main levers for realizing productivity gains are the customer care and network department, which add up to nearly 70% of the average personnel base. In order to decrease labor-related costs, companies usually make use of two approaches: Outsourcing and actual personnel reduction.
Already high average outsourcing rates within these two departments show that Cable operators have already used this option to a fairly large extent. Further increases in outsourcing are mainly planned for the network construction and operation departments.

Functions which are critical for the direct customer experience, i.e. customer care and network field service, are not expected to see further outsourcing activities.

The potential for further personnel reductions varies strongly by operator and by functions. Best practice productivity rates for most functions are much higher than the average - showing significant room for improvement for majority of operators. The most important productivity driver is economies of scale: While large Cable operators (> 850k RGU) yield average productivity rates of 2.1k RGUs per FTE, the smaller operators just manage 0.9k RGUs per FTE. Economies of scale affect all functions but one: Sales.

The strong scale economies are the drivers of the ongoing consolidation of the national Cable markets. In many Western European countries the Cable market share of the Top 1 or 2 operators already exceeds 70%. Central European markets will be following suit.
Ongoing investments into both core networks and product platforms are the foundation for a sustainable market position of Cable operators. The past years have been characterized by major upgrade activities and the creation of all platforms necessary for delivering communication products.

This investment cycle now seems to come to an end. Cable operators expect that Capex as share of revenue will decrease strongly from 26% in 2006 to 12% in 2010. Not only the total amount of Capex is affected, but the Capex composition also changes.

The relative importance of network maintenance and network extension is expected to increase while investments into network upgrade become less important. However, high Internet bandwidth needs, VoD and IPTV offerings might eat enormous amounts of bandwidth and eventually require costly fiber deployments which could be underestimated in terms of Capex requirements.

Network upgrade still not entirely completed but improving

After having upgraded the majority of their city networks, the focus now shifts to the in-house upgrade, which will be mostly realized directly by the operators themselves. By 2010, 84% of city networks and 77% of in-house networks are expected to be upgraded, thereby providing an excellent base for new product roll out.

Only in some countries – especially in Germany – a mixed model exists, where the owners of large buildings and operators of in-house networks have to invest into in-house network modernization. The result are lower upgrade and consequently penetration rates, as the property owners have a limited motivation to invest into a second Broadband infrastructure with DSL already being in place. Also, operators of in-house networks still often disagree on the conditions of the shared business model with signal-delivering operators of city networks.
Smaller clusters and move towards further DOCSIS generations accommodate for higher bandwidth requirements

With a shared medium like Cable, the need for ever increasing IP bandwidth can be met with four strategies, which have been realized to different degrees:

- Increasing IP bandwidth by means of upgrading is mostly accomplished
- Melting down analog channels ongoing
- Increasing the number of IP DOCSIS channels
- Reducing the number of connected subscribers per shared bandwidth, i.e. by reducing the size of the cluster.

With the first two options being already implemented, European Cable CTOs will focus on further developing DOCSIS and reducing cluster size as next steps.
With DOCSIS 1.1 and 2.0 still being today’s standard, and DOCSIS 3.0 only slowly entering the product portfolio of CPE manufactures, operators are planning to migrate to DOCSIS 3.0 in the upcoming years. This is remarkable as it entails significant investments into network IT and CPE equipment. However, the underlying reason is not only the capability to offer higher speeds than VDSL, but also to gain significant technologic advantages and flexibility for the realization of next-generation TV products like VoD/IPTV or switched broadcast.

The median cluster size is planned to develop from 800 homes connected in 2006 down to 500 in 2010, which allows high bandwidth per user at moderate penetrations. It would however not allow for the introduction of massively used, high bandwidth products like free-VoD. Therefore, some operators have already started to cut down clusters to as low as 120 homes - a size that would accommodate these services even on a larger scale. Ever smaller clusters and fiber moving close and closer to the end-customer, is the general direction Cable infrastructures have to develop long term. This is, in fact, a FTTC structure that has generally to be built up in order to transport Next Generation TV services.

The traditional “utility” operators still have some way to go. They are currently in the process of splitting nodes in order to get down from mass clusters with several thousands of homes connected, down to at least 2,000-3,000. Here, high efforts are needed to provide the necessary fiber infrastructure.
LOOKING BACK: WHAT HAS CHANGED SINCE 2005?

Many discussions that characterized the 2005 survey have prevailed over the last few years:

TV diversification yet to become reality…

The top issues of 2005 were Digitization, HDTV, VoD and PVR; the top issues of 2007 are Digitization, HDTV, VoD and PVR. Most European Cable operators are still struggling to realize the brave new world of innovative and interactive TV services in order to be prepared for the - still to come - TV over DSL competition.

… but communication exceeds expectations

Cable operators’ communication offers continue to be a roaring success in most markets. The operators have quickly expanded their product range to include not only high-speed Internet and Telephony by also mobile and business services. Bundling has become a reality for all operators. But no success without some letdown: Prices have sunk further than anyone had expected – thereby reducing the revenue impact of the penetration increases.

Customer excellence on top of CEO agenda – still strong improvement needs

The awareness for customer service issues has increased significantly. For example: in 2005 only about 70% of all operators actually knew the performance levels of their call centers. In 2007, 90% do. Targets have become more explicit, and now the realization must follow. Even the most advanced Cable operators still have some way to go towards reaching customer excellence.

Investment cycle never ends

Cable operators always expect the next year to be the last with high investment needs as always. With DSL operators’ first steps towards increased fiber deployment, the war of platforms is moving from a price and product war towards investment competition. In the foreseeable future Cable operators will have to invest in further capacity increases and innovative TV platforms.

Fad of the day - from a Cable operators perspective

Asked for the most overrated trends of the last 3 years, Cable operators answered:

- Importance of Digital TV, Pay TV and interactive TV
- Wimax and fiber to the home
- Internet portals
- Triple and quad play
- Further efficiency increases due to consolidation

For 2005 to 2007 most of these answers are true – the interesting question is however, whether the next two years will see a change, therefore:
AND WHAT COMES NEXT? AN AGENDA 2009 PREVIEW

The competitive environment of European Cable will finally see those changes realized which have been discussed over the last years: In 2009 TV over DSL can be expected to have gained a more than just marginal market share at least within Western Europe. Video over the Top might be on the brink of entering the market on a broader scale and thereby forcing Cable and DSL to rethink their positioning as transport platforms. The Broadband markets will finally reach maturity. Crowding out will put further pressure on access prices.

Against this development the Cable CEOs agenda will focus on four core issues:

- Further diversification to hedge endangered TV access revenues:
  - Expansion of Pay TV and further development of innovative, more interactive TV products (and this time for real)
  - Penetration increase for communication services including newly introduced mobile and business services

- Balancing customer excellence with cost efficiency: Cable operators will strive to further improve customer experience but at the same time have a close eye on cost efficiency in order to keep on top of price competition.

- Consolidation and realization of synergies: Consolidation within the different Cable markets will be followed by cross-infrastructure and cross-border consolidation.

- Continued investment into network upgrade: Fiber network activities of fixed-line operators will be met with investment into further capacity increases. Investments into interactive TV platforms are essential counter measures against TV over DSL and Video over the Top offers.

We are looking forward to discussing these issues and many others in the European Cable Survey 2009, beginning in February 2009.
PROFILE OF PARTICIPATING COMPANIES

The European Cable Survey 2007 covers 18 Cable operators from ten different countries of widely varying backgrounds. Ten participants from Western Europe and eight participants from central European countries allowed for a more differentiated analysis of Cable operators strategies across Europe. Although most participants originally started with analog distribution networks, they now operate in distinctly different competitive environments:

- Cable penetrations from below 20% to over 90%
- Digitization from 5% to over 40%
- Revenue share of new services between less than 10% and up to 90%

The participating operators represent a total of close to 25m RGUs. The cut-off point for participation was set at a minimum of 100,000 Basic Access subscribers.
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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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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<td>CAGR</td>
<td>Compound Annual Growth Rate</td>
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<td>Capital Expenditures</td>
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<td>Customer Self Care</td>
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<td>Digital Subscriber Line</td>
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<td>DTT</td>
<td>Digital Terrestrial TV</td>
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<td>Electronic Program Guide</td>
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<td>Interactive Voice Response</td>
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<td>Mobile Network Operator</td>
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