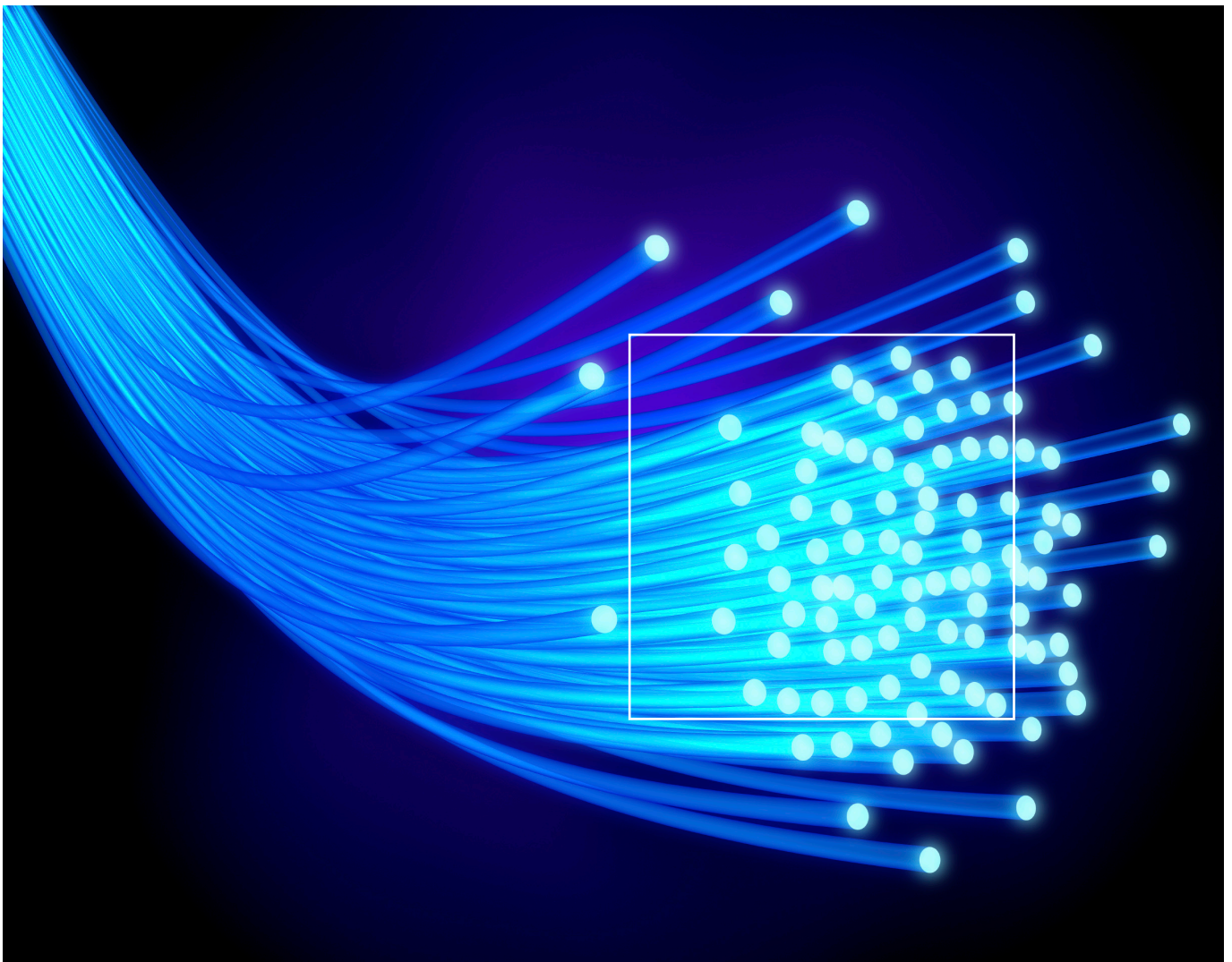


FTTH: Double Squeeze of Incumbents – Forced to Partner?

High-Speed Cable and FTTB/H Networks Deployed by Alt-nets and Utilities Put EU-Incumbents Into a Double Squeeze



Contents

Executive Summary	3
Customers' Demand for High-Speed Broadband Exceeds Expectations	4
Europe is Lagging Behind in FTTB/H Deployment	5
Incumbents are in an Ultra High-Speed Broadband Double Squeeze	7
Innovative Partnerships Enable Players to Share FTTB/H Investments	10
Incumbents are Beginning to Partner With Utilities and Direct Competitors	13
Conclusion	14
Acronyms	15
Contacts	16

Authors



Dr. Karim Taga
Managing Director Austria
Telecommunication, Information,
Media & Electronics
taga.karim@adlittle.com
+43 1 515 4143



Andrea Faggiano
Principal TIME Practice
faggiano.andrea@adlittle.com
+39 06 68882 309



Christian Niegel
Principal TIME Practice
niegel.christian@adlittle.com
+49 211 8609 539

Executive Summary

Consumers are continually exceeding expectations of ultra high-speed broadband demand. New platforms push ultra high-speed broadband services, and price them aggressively to ensure uptake. Demand for High Definition TV and video, the growing popularity of peer-to-peer applications and an increase in WiFi traffic to personal devices are factors contributing to an increase in demand for ultra high-speed broadband.

Cable operators are already addressing this demand and are able to offer 50 to 100 Mbps broadband services at very competitive prices. They are thus acquiring a very high share of broadband net additions, many of which adopt 50 Mbps broadband services. Arthur D. Little projects that around 25 percent of Western European cable operators' broadband subscribers will use broadband services with speeds of 50 Mbps or higher by 2012.

In Asia, the United States and also in the Middle East, governments and regulators have actively supported operators by co-financing fibre rollouts or protecting operators' investments. Most EU countries are now lagging up to seven years behind, primarily because governments did not fund FTTB/H deployment, and EU regulators did not actively encourage incumbents to invest into fibre.

Utilities and alternative operators have taken a strong lead in rolling out FTTB/H networks in Europe, squeezing incumbents' broadband market shares in their footprint. Alternative operators and utilities have split the value chain, as well as the financial investments, by forming innovative partnerships. A staggering 65 percent of all households with access to FTTB/H networks in Europe, are accessed by networks deployed by utilities (22 percent), alternative network operators (40 percent) or housing associations (3 percent).

Incumbent telecom operators have to react now to the double-squeeze from cable operators and from the FTTB/H deployments by utilities and alternative operators. If they do not act, they risk an erosion of their core business.

This paper should be a wake up call to EU governments and regulators. For ten years, discussions about how to regulate NGA (Next Generation Access) have been on-going. Meanwhile, the current regulatory policy is failing. Governments and regulators need to support FTTB/H investments now. Otherwise, the fibre gap between Europe and the United States, Asia and now the Middle East will further widen, and Europe's strategic and economic competitiveness will be affected.

Customers' Demand for High-Speed Broadband Exceeds Expectations

Demand for High Definition TV and video, the growing popularity of peer-to-peer applications and an increase in WiFi traffic to personal devices are factors contributing to an increase in demand for ultra high-speed broadband

Whenever network improvements enable higher speeds, market players ask whether there will be demand for it. Consumers are regularly exceeding expectations, taking up high speeds faster than expected. New platforms push ultra high-speed broadband services, and price them aggressively to ensure uptake. Apart from pricing, several factors drive the demand for high speed broadband:

- Increasing demand for services such as High Definition and 3D TV which are watched in several rooms in the household in parallel. Super High Definition will eventually become a mass market standard, requiring even 160 Mbps connectivity
- Adoption of peer-to-peer applications to exchange music and video files, to play online games, which increasingly require not only high downlink speeds, but also high uplink connectivity
- The increasing variety of WiFi connected devices in consumers' homes, such as iPads, notebook computers, televisions and BluRay players, gaming consoles and smart phones, will massively contribute to the demand for bandwidth
- The expected explosion of mobile data traffic further drives the demand for fixed broadband connectivity. We expect that mobile data traffic will increase by a factor of 30 - 40 from 2009 to 2015 – and up to a third of this mobile data explosion can be offloaded via Femtocells or WiFi hotspots. These are, in turn, linked to broadband connections
- Governments encouraging the uptake of eHealth (remote diagnostic), eEducation (remote presence - streaming) and eGovernment services

Market players who offer ultra high-speed services will acquire the most attractive clients: early adopters, typically relatively young and affluent, who live in mid-size to large cities. Once these consumers adopt ultra high-speed broadband services, they get hooked and tend to stay with their broadband provider.

Europe is Lagging Behind in FTTB/H Deployment

As long as European governments and regulators do not improve the FTTB/H framework by protecting investments or by providing direct funding, incumbent operators will not invest into any significant FTTB/H deployment. Providing access to alternative operators may actually slow down the FTTB/H deployment

In Asia, the United States and also in the Middle East, governments and regulators have actively supported operators by co-financing fibre rollouts or protecting operators' investments. The governments have provided subsidies when the fibre operators adapt an Open Access model, if fibre deployment takes place in less-economic regions or in regions in which cable operators are so strong that the regulators can exempt incumbents from the obligation to provide Open Access to their FTTB/H networks.

Singapore, Australia and New Zealand, for example, have provided subsidies in the range of US\$150 to 200 per household passed. In mid-2009, FTTB/H networks were available in 44 percent of households in South Korea and in 32 percent of households in Japan. In Singapore, 30% of households have access to FTTB/H early 2010. In the US, the leading FTTB/H provider, Verizon, invested US\$ 22.9 billion between 2004 and 2010, achieving 15.9 million homes and businesses passed by the end of 2009; Verizon has not been forced to wholesale its offers.

In the Middle East, FTTH networks will be increasingly deployed in the Gulf Cooperation Council (GCC) nations over the next five years. UAE is the main FTTB/H market with nation-wide fibre coverage expected by 2011. Etisalat's FTTH rollout in the UAE positions Abu Dhabi to become the first capital city in the world with 100 percent fibre deployment by end of 2010. Qatar has set an ambitious goal of having a ubiquitous broadband network with minimum access speeds of 50 Mbps by 2015. In Oman, Nawras is building a next generation network with nearly 2,000 kilometres of fibre-optic cables throughout the country, in order to achieve the goal of providing broadband coverage to 80 percent of households by mid-2011.

Most EU countries are now lagging up to seven years behind Asia, the US and the Middle East in fibre deployment. Primarily, this is because governments did not fund FTTB/H deployment, and EU regulators did not actively encourage incumbents to invest into fibre. Regulators require incumbents to provide Open Access to third parties on any deployed fibre infrastructure. Incumbents can hence not offer ultra high-speed broadband services on their fibre networks exclusively. Logically, a business case in which the incumbent has to bear all the FTTB/H investments and hence the business risk on the one side while it has to share the success in the end-user market with Third Parties at regulated prices on the other side is not necessarily the most compelling investment proposition for the incumbent's shareholders. Several of the major incumbents in Europe announced plan to deploy fibre – but only to cover 5-10 percent of households within 2-3 years, which is very low compared to >50 percent of households passed with FTTB/H in leading countries.

Most EU countries, therefore, need to urgently catch-up with fibre deployment and end the deadlock situation that has been in place for more than 10 years. Fibre services were deployed in Japan in 1997, which is an indication of how far behind some European countries are. National governments and regulatory bodies should begin to provide similar incentives.

Examples of how governments and regulators could support the rollout of FTTB/H include:

- They can co-finance FTTB/H roll outs in the form of public-private partnerships. Municipal governments can, for example, join a consortium with incumbents, CityCarriers or utilities to jointly roll-out FTTB/H infrastructure
- They can establish a fund to provide financing to selected FTTB/H roll out efforts. For example, France has set-up a broadband fund called the "DSP Program", which runs a set of tenders to finance Public Private Partnership (PPP) models to support ultra high-speed broadband network rollouts in rural areas, including the region around Paris. The DSP program selects the company that provides the most

compelling bid, including a sound business case and high fibre coverage commitments, in a reverse auction process and then provides funds to the winning concept. The UK Government's Digital Britain report, published in June 2009, announced proposals to add 50p per month to the cost of fixed telephone line rental to create a fund for super-fast broadband

- They can finance each household passed, in some areas. Market players in Portugal and Slovenia are not required to open up their fibre network to third parties in the mid-term. Consequently, Portugal Telecom and Telekom Slovenije have both invested substantially into FTTB/H rollout. To further stimulate deployment, the governments have also provided subsidies for the roll out of FTTH of up to US\$ 100 per home passed in less economic areas.
- Numerous other measures exist such as providing tax benefits, low cost loans or, simply, ensuring that the national regulator supports fibre roll-out by facilitating tasks such as

moderating the interests of potential partners, or by setting-up a catalogue of duct infrastructures of telecommunication operators, utilities, gas pipeline operators, etc. In Korea, the government provided low interest loans for private investments in next generation broadband deployment, and let the operators lead the way. In Japan, similar incentives (tax incentives, 0% loans) were provided to local self-governing bodies to establish the broadband networks offering Open Access to service providers

Contrary to common belief, regulators can actually increase investments and infrastructure competition by protecting the FTTB/H investments of incumbents instead of forcing them to provide Open Access to third parties. Not having to provide third-party access has encouraged Portugal Telecom's FTTB/H roll-out investments, which in turn motivates the cable operator, Zon, to further invest into its network and the mobile operators, Vodafone and Optimus, have now partnered to jointly roll out FTTB/H (400k homes passed).

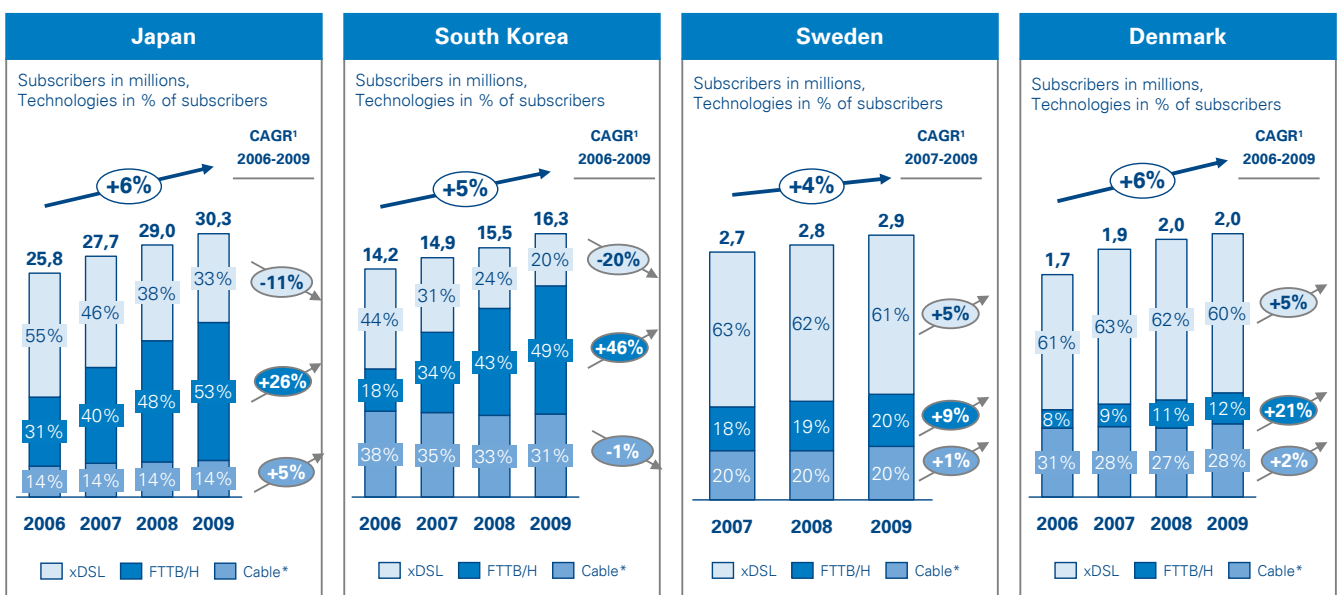
Incumbents are in an Ultra High-Speed Broadband Double Squeeze

Incumbents' broadband market shares, especially among high-value customers in key cities, are being squeezed from two sides: by cable operators providing 50-100 Mbps broadband services, and by utilities and alternative operators investing into FTTH/H

Cable operators have mostly updated their networks to DOCSIS 3.0, enabling them to offer 50 to 100 Mbps broadband services at very competitive prices. Consequently, they are acquiring a very high share of broadband net additions. In Germany, for example, cable operators acquired over 50 percent of broadband net additions in 2009 within their footprint. Many of these new subscribers adopt ultra high-speed broadband services, so that already 5-10 percent of broadband subscribers at German cable operators use services with 50 Mbps speeds or above. Across Western European cable operators, Arthur D. Little expects that around 25 percent of their broadband subscribers will have adopted broadband speeds with 50 Mbps or more by 2012.

Due to their strong price/performance broadband value proposition, Western European cable operators' broadband market shares remain stable even once fixed-operators rollout FTTH/H networks. Japan, Korea, Sweden and Denmark are all examples of countries where FTTH/H has already been deployed to a fair extent for several years now. In all of these countries, FTTH/H has gained broadband market share, but solely to the detriment of xDSL. The share of cable broadband subscriptions remains remarkably stable and can even increase within the cable footprint in spite of new FTTH/H network competition (see Figure 1).

Figure 1. Broadband subscriptions by technology in Japan, South Korea, Sweden and Denmark



1) CAGR = Compound Annual Growth Rate of subscribers
 *Nationwide market share. In their footprint, cable operators typically maintained or even increased their broadband market share
 Source: KCC, NRI, Arthur D. Little

While cable is resilient against fibre, incumbents do not have a strong high-speed broadband platform until they invest into FTTB/H. Their VDSL/VDSL2 services have not enjoyed high subscriber uptake rates, as VDSL is typically priced at a 10-20 EUR premium to DSL while offering a lower technical performance compared to cable.

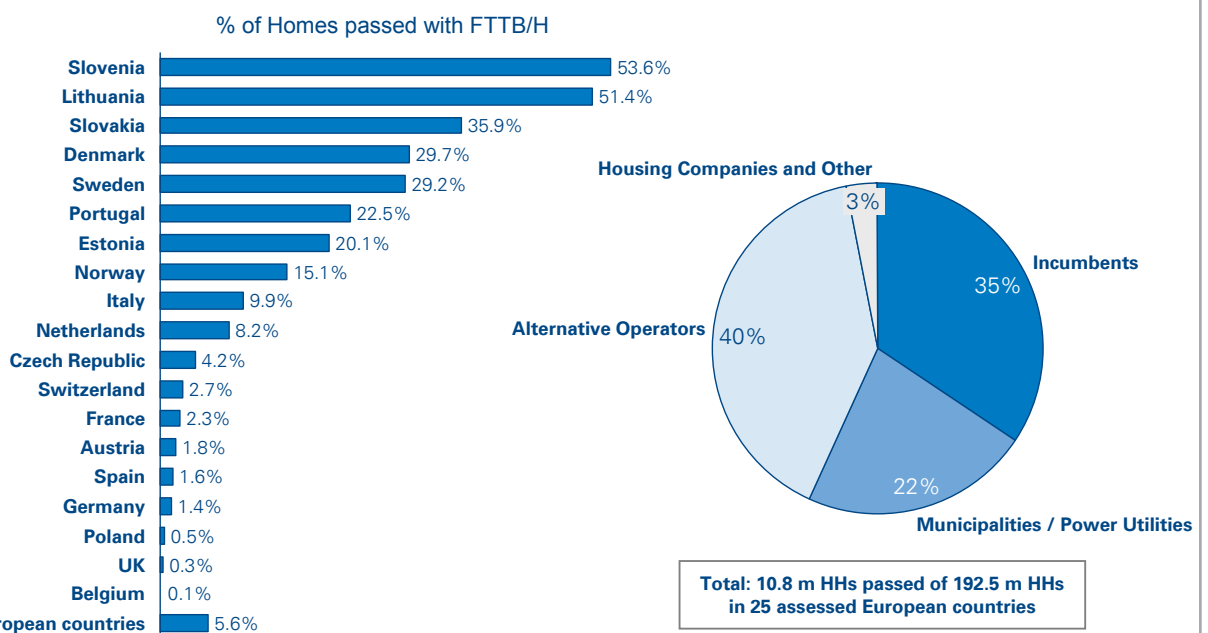
While cable operators had already put pressure on incumbents' broadband market shares, utilities and alternative operators are squeezing them with their FTTB/H rollouts. Of the 11 million European households passed by FTTB/H so far, a staggering 65 percent have been connected by utilities, alternative operators or housing associations.

As Figure 2 shows, leading Western European fibre countries, such as Denmark, Sweden or Portugal have already rolled-out fibre to pass over 20 percent of households. On the other end of the spectrum, the largest countries, such as France, UK, Spain and Germany, lag clearly behind; not even 3 percent of households have access to fibre in these countries so far.

Some Eastern European countries leapfrog VDSL deployment and went directly to FTTB/H. Consequently, countries such as Slovenia or Lithuania already enjoy FTTB/H networks passing over 50 percent of their households. In Slovenia, the alternative operator T2 took the lead, deploying 2-3 times more than the incumbent Telekom Slovenije. The incumbent had to react and also deployed fibre; now 54 percent of Slovenian households have access to FTTB/H networks. In Lithuania, 51 percent of households already have access to fibre, 36 percent in Slovakia and in Estonia still 20 percent.

Across Europe, the alternative operators and utilities have taken the lead in deploying FTTB/H infrastructure, while incumbents lag behind, responsible for 35 percent of households passed with FTTB/H. What motivates other players to take the lead?

Figure 2. The new leaders in FTTB/H – by country and type of investor, end of 2009



Source: IDATE, FTTH Council Europe, Bank of America, Merrill Lynch, Eurostat

Utility firms and municipalities are responsible for 22 percent of households passed with FTTB/H in Europe. These investments enable them to:

- Leverage their ability to raise long-term financing at fairly low interest rates
- Leverage their existing duct, sewer and other infrastructure, and
- Create a new source of revenue in the face of ongoing liberalization of the energy sector, particularly in smart grids solutions

Alternative fixed-line operators are responsible for 40 percent of households passed with FTTB/H in Europe. These investments enable them to:

- Provide ultra high-speed services in their footprints
- Save the ULL fee on the local loop of between EUR 6-10/month, depending on the market
- To provide services completely independent from incumbents' infrastructures for the first time

There are numerous examples of alternative operators having rolled-out FTTB/H, including Fastweb (Italy) and Free (France) as two of the larger deployments across Europe. There are even prominent examples of mobile operators starting to rollout FTTB/H infrastructure to remain in the bundling race; Optimus and Vodafone have, for example, deployed a total of 400,000 FTTH lines in Portugal, providing wholesale access to each other.

Housing associations are responsible for the remaining 3 percent of households passed with FTTB/H; they invest into the network in order to increase the appeal of their apartments.

Innovative Partnerships Enable Players to Share FTTB/H Investments

Business models often divide the value chain between a network company, an operating company and a service company, providing the flexibility to set-up partnership models tailored to the specific situation

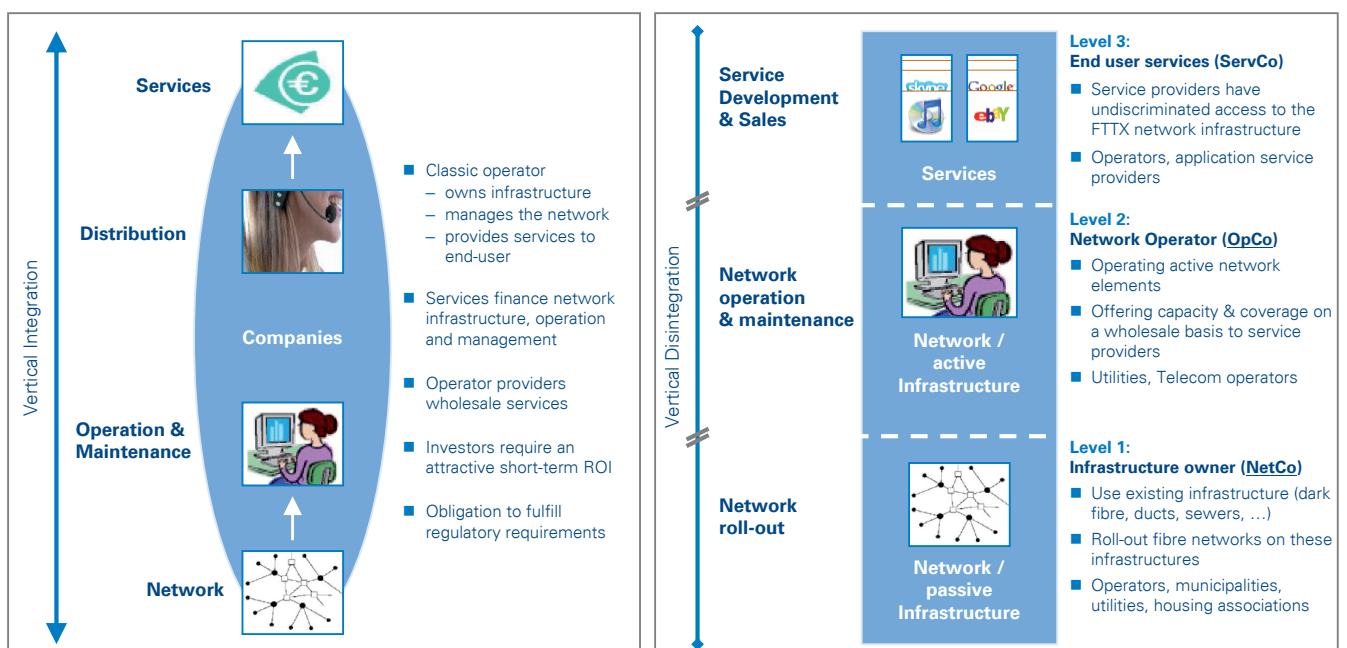
Fibre access networks are very Capex intensive. Investments vary widely depending on population density or whether households are located in multi-dwelling units or in stand-alone houses. In dense urban areas, investments can be as low as EUR 300-400 for FTTB and EUR 400-500 for FTTH deployment, while in rural areas FTTB/H rollout can require investments of up to EUR 3,000 per household. For this reason, initial fibre deployments focus on FTTB/H rollouts in dense urban areas.

Typically, operators expect long payback periods of 10 years or more for a FTTB/H roll out. In dense urban areas, however, alternative operators can already achieve break-even for selected households after approximately 3 years. For any household they connect to fibre, alternative operators immediately save

up to EUR 10 a month on the last mile rental fee; a household connected for EUR 360, thus already breaks even after 36 months. If, over time, every second household is acquired as a FTTB/H customer, then the entire FTTB/H network breaks even already after 6 years, which is fast for a next-generation network.

Individual companies can often not bear these high and long-term investments. Therefore, market players partner to form innovative business models. Typically, these business models involve a Network Company (NetCo), an Operating Company (OpCo) and a Service Company (ServCo) as shown in Figure 3. Partially, the NetCo itself relies on the services of a company owning the infrastructure. Such a company (DuctCo) provides ducts into which operators can roll-out fibre. In Singapore, this 3-tier structure has been implemented successfully with separate licenses awarded for provision of passive and active infrastructure. We observe also other simpler forms of partnership merely based on commercial terms (i.e. granting

Figure 3. The tree-tier business model for FTTB/H



Source: Singapore model, Arthur D. Little analysis

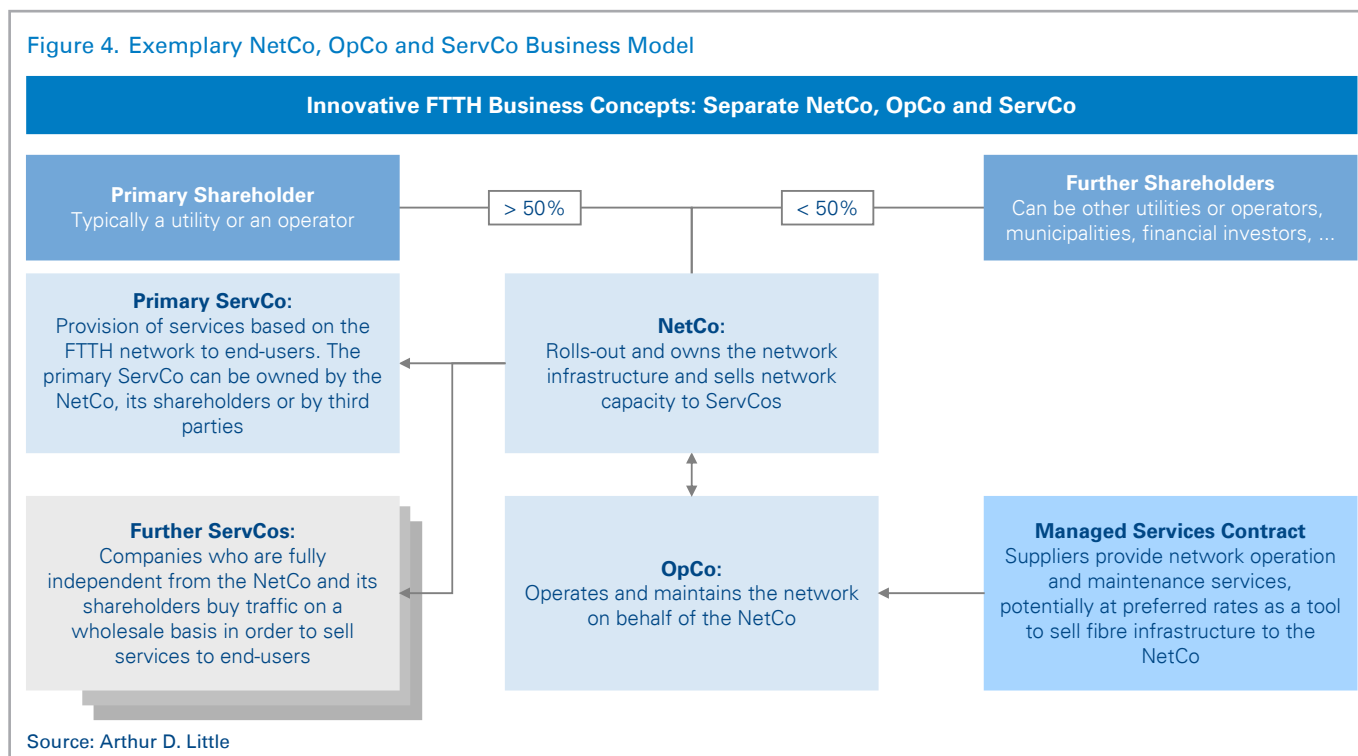
mutual access to each other’s network, splitting regional deployments with commonly pre-agreed geographical areas, etc.).

Innovative partnership models for fibre deployment have to agree on the role which each partner takes along the NetCo, OpCo and ServCo layers. But this is not all – they have to agree on multiple further dimensions such as:

- **Corporate structure** – The fibre business can be embedded into existing operations or carved out as a separate business. If a separate business is set-up, the parties need to agree who shall own which share in the business and who shall bear which financing obligations
- **Ownership** – The fibre business can be fully owned by private investors or by private and public shareholders in a Public Private Partnership (PPP) model. Suppliers can also take a share in a NetCo or provide preferential financing for the FTTB/H infrastructure they provide

- **Number of fibres per household and partner** – The partners need to decide whether the fibre network will deploy a single or a multi-fibre model
- **Open Access** – The partners need to decide whether they want to (or are obliged to) offer fibre capacity on a wholesale basis to any Third Party at non-discriminatory conditions (Open Access), whether they want to offer capacity only to a few Service Providers or whether they want to be the only ones having access to the fibre network (proprietary fibre network).

Dividing the value chain into NetCo, OpCo and ServCo levels provides the flexibility to set up a business model in which a variety of partners can take a role. We illustrate an exemplary business concept in Figure 4.



The NetCo level can have several shareholders that jointly bear the substantial investment requirements to rollout FTTB/H infrastructure. Suppliers sometimes seek to play a role in operating and maintaining the fibre network on behalf of the NetCo, taking on the role of an OpCo in order to secure that they are contracted to supply the infrastructure in the first place. Third parties act as ServCos. They buy fibre capacity, develop broadband, telephony, TV and other services and sell them to end-users.

Notable examples of NetCo, OpCo, and ServCo business concepts have emerged across Europe, including:

- *Lyse, a utility in Norway*, sold its successful FTTH roll out concept to other utilities across Norway in a franchise model, branded "Altibox". Approximately, 60 percent of households have subscribed, a total of 145,000 subscribers at the end of 2009
- *Mälarenergi, a utility company in Sweden*, rolled-out a city-wide FTTH network and offers open-access to many service companies who provide broadband service to over 50 percent of the 60,000 households in the city of Västerås
- The *openaxs alliance is a partnership of 17 Swiss utilities*, which cooperate in tasks, such as coordinating the technology used, development and billing of fibre wholesale services and network operation. Their plan is to coordinate roll-out fibre networks and to both sell capacity on a wholesale basis while also offering retail services to end users
- *BTEnia is a joint venture of BT and the Italian utility, Enia*. They cooperate in deploying a fibre network in Parma, Piacenza and in the Emilia region to offer very high broadband services to businesses
- *Numerous German utilities and CityCarriers* deploy own fibre networks or have concrete plans to do so. This includes EWETel, M-Net, NetCologne, the utility covering Kiel, as well as numerous smaller players such as the utility in the city of Schwerte or the telecoms unit wilhelm.tel in Norderstedt, which is also now entering Hamburg

Incumbents are Beginning to Partner With Utilities and Direct Competitors

While many of the partnerships involving incumbents are pilots limited to specific cities or regions, we expect to see more extensive partnerships formed as incumbents increasingly feel pressure both from cable operators and competing FTTB/H networks

Incumbents still usually aim to realize network rollouts on their own. However, their shareholders and bank analysts often do not support investment plans for fibre roll-out as the underlying business cases suggest unsatisfactory return of investment (ROI) levels and long payback times in the current regulatory framework. FTTB/H deployments are long-term investments, and many incumbents, therefore, still remain reluctant to invest substantially into FTTB/H deployments, and planned investments are often not fully executed. Alternative operators and utilities can thus further widen their lead in the race for high-speed broadband access.

In order to start to catch-up, incumbents have begun to partner with their direct competitors in an effort to share the network Capex. Some examples include:

- **Deutsche Telekom** is conducting a pilot project with EWE Tel, an alternative network operator in Northern Germany. Each partner is rolling out FTTH in regions of the federal state of Lower Saxony and grants FTTH bit-stream access to its partner. They split the FTTH investments, but can still compete in the end-user across the entire joint FTTH footprint. Deutsche Telekom has also partnered with the utility-owned CityCarrier, M-Net, to jointly rollout FTTB/H in Munich, and with Vodafone's fixed unit, Arcor, to rollout FTTB/H in Heilbronn and Wuerzburg. In addition, Deutsche Telekom announced plans in April 2010 to rollout FTTH to 4 million German households (10 percent of all German households) by end 2012

- **KPN** and the investment firm Reggeborgh established a joint venture, Reggefiber, which has rolled-out an FTTH network to 300,000 households in the Netherlands. KPN is the minority shareholder, but has a call option to buy further shares in 2012
- **Telecom Italia** entered into a Public Private Partnership (PPP) project with the municipality of Trento in northeast Italy, co-investing EUR 100 million to roll-out FTTH networks
- **Swisscom and Swiss utilities** have agreed to rollout FTTH networks in a multi-fibre model, enabling third parties to rent fibre capacity on a wholesale basis. Swisscom and its partners plan to rollout FTTH in numerous Swiss cities, including Fribourg, Luzern, St. Gallen, Zurich, Bern, Geneva and Basel. In Basel, Swisscom has begun to cooperate with the local utility IWB; Swisscom will bear 60 percent of the investments, and each party will provide approximately 50 percent of the required ducts. The fibre network shall cover 95 percent of all households in the city of Basel with FTTH infrastructure by 2017 and will use a multi-fibre model
- **France Telecom** announced plans to invest EUR 2 billion into FTTB/H network rollouts by 2015, focusing on urban areas, such as Paris and Marseille. In smaller cities and rural areas, France Telecom has started to form partnerships. In two cities, France Telecom has even started to partner with its competitor, SFR, the second largest mobile operator

Many of these partnership efforts by incumbents are pilots limited to specific cities or regions and others are still only in the planning phase. We expect to see more extensive partnerships formed, as incumbents increasingly feel the pressure coming from the double squeeze exerted on them from cable operators and from competing FTTB/H networks that are taking away high-value ultra high-speed broadband subscribers.

Conclusion

Customers are demanding ultra high-speed broadband due to the increasing number of bandwidth-hungry next generation multimedia services. Competitive high-speed broadband infrastructures are also a necessary factor in support of the European knowledge economies and should hence be supported proactively by governments.

Cable operators are already addressing this demand and are able to offer 50 to 100 Mbps broadband services at very competitive prices. They are thus acquiring a very high share of broadband net additions. Arthur D. Little projects that over 25 percent of Western European cable operators' broadband subscribers will use broadband services with speeds of 50 Mbps or higher by 2012. Cable operators could even resell their high-speed broadband services to mobile operators. In Singapore, M1 is currently reselling Starhub's broadband services, and Bouygues Telecom in France has partnered with Numericable. Both mobile operators offer ultra high-speed broadband services of between 50 to 100 Mbps, acquired as a wholesale service from the respective cable operators, under their own brand name.

Utilities and alternative operators have taken a strong lead in rolling out FTTB/H networks in Europe, squeezing incumbents' broadband market shares in their footprint. By splitting the value chain into NetCo, OpCo and ServCo layers, alternative operators and utilities address the need to finance high investment costs for FTTB/H rollouts and they have taken a strong lead in the market by adopting smart business models along these layers. A staggering 65 percent of all households with access to FTTB/H networks in Europe, are accessed by networks deployed by utilities (22 percent), alternative network operators (40 percent) or housing associations (3 percent).

Incumbent telecom operators have to react now to the double-squeeze from cable operators and from the FTTB/H deployments by utilities and alternative operators. If they do not act, they risk the erosion of their core business. Large EU countries, such as Poland, Germany, France, Spain, Italy and the United Kingdom, are up to seven years behind. The incumbents in these markets can act by entering into partnerships with utilities or even with alternative operators, their direct competitors. Incumbents now need to see FTTB/H investments as a means to maintain broadband market share – and hence need to factor in the stabilization effect on the DSL/broadband subscriber base into their FTTB/H business cases.

This paper should be a wake up call to governments and regulators; they need to support FTTB/H investments now. After 10 years of intensive discussions on how to regulate NGA (Next Generation Access) and the need for investments in the EU, governments and regulatory bodies need to act urgently. Lessons from around the world show that they need to either provide funds to subsidise FTTB/H rollouts, allocating these funds via tender processes or reverse auctions, or to protect investments, by exempting players from the obligation to offer open-access on their fibre investments in areas with competitive platforms (i.e. presence of cable networks or alternative FTTB/H investments). Otherwise, the fibre gap between Europe and the United States, Asia and now the Middle East will further widen, threatening Europe's strategic and economic competitiveness.

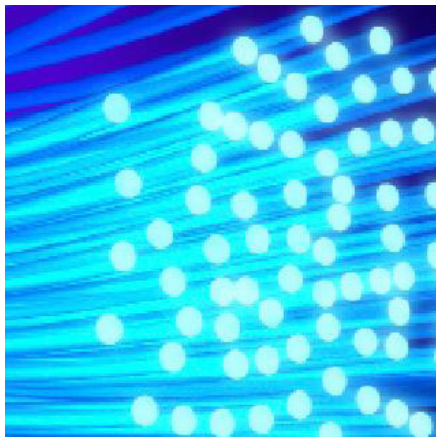
The French government has understood the need to act and has launched a massive support program. The government conducts public tender processes for FTTB/H coverage in rural areas as part of the DSP Program. Recently the program was extended to the Paris region. Those submitting the most compelling proposal (most cost-efficient roll-out, best coverage, etc.) are selected and receive public funds. France now has the largest potential number of FTTB/H homes passed with an estimated 5 million households prepared. Interestingly, the cable operator Numericable is winning fibre network deployment bids in key regions, demonstrating that cable operators can also act successfully in the FTTB/H deployment race.

Municipal governments may consider accelerating local fibre deployment by direct co-investing with incumbents and alternative operators, with the objective of boosting local productivity and, in general, creating positive externalities for regional business and residential communities.

Finally, **Private Equity firms have an opportunity to (co-) invest** into fibre deployment partnerships, which promise long-term stable cash flows. They can profit from the gap left by incumbents and co-finance fibre deployments – either in attractive key cities or in rural areas supported by public subsidies. These investments provide the security of being asset-based and the potential for stable cash-flow returns over a long-time period. Accelerating demand for ultra high-speed broadband services makes these investments yet more compelling. The Private Equity firms that have the expertise to form advanced partnerships – with utilities, public institutions, etc. – will be in a particularly good position to identify attractive investment opportunities.

Acronyms

- DOCSIS** – Data Over Cable Service Interface Specification
- DSP** – Délégation de Service Public
(PPP Public Private Partnership)
- DuctCo** – Company, which provides ducts for the fibre rollout
- FTTB** – Fibre to the Building
- FTTH** – Fibre to the Home
- GCC** – Gulf Cooperation Council
- HH** – Households
- NetCo** – Network company
- OpCo** – Operating company
- PPP** – Public Private Partnership
- ROI** – Return on Investment
- ServCo** – Service company
- ULL** – Unbundling of Local Loop
- VDSL** – Very high bit-rate DSL
- WiFi** – Wireless Fidelity
- xDSL** – Digital Subscriber Line technologies



Consumers are continuously exceeding expectations in demand for high-speed broadband. In Asia, the United States and the Middle East, incumbents have invested heavily into FTTB/H, motivated by regulatory support and government subsidies. Cable operators already offer 50 to 100 Mbps broadband speeds at compelling prices. Alternative operators and utilities have started to roll out FTTB/H. Incumbents are finding themselves in a double squeeze; cable operators are rapidly growing their broadband subscriber bases – and now FTTB/H networks compete at even higher speeds for high-value customers in key cities. Incumbent operators have to act now to that double-squeeze. If they do not act, they risk an erosion of their core business. Regulators need to support FTTB/H investments now; otherwise, the fibre gap between Europe and the United States, Asia and the Middle East will further widen.

Contact

If you would like more information or to arrange an informal discussion on the issues raised here and how they affect your business, please contact:

Austria
Karim Taga
Managing Director
taga.karim@adlitttle.com

Belgium
Ignacio García Alves
Managing Director
garciaalves.ignacio@adlitttle.com

China
Thomas Schiller
Managing Director
schiller.thomas@adlitttle.com

Czech Republic
Dean Brabec
Managing Director
brabec.dean@adlitttle.com

France
Didier Levy
Director
levy.didier@adlitttle.com

Germany
Klaus von den Hoff
Director and Global Practice Leader
vondenhoff.klaus@adlitttle.com

Italy
Giancarlo Agresti
Director
agresti.giancarlo@adlitttle.com

Japan
Yusuke Harada
Managing Director
harada.yusuke@adlitttle.com

Korea
Sukgeun Lee
Director
Lee.sukgeun@adlitttle.com

Middle East
Slim Saidi
Director
saidi.slim@adlitttle.com

The Netherlands
Sander Janssen
Director
janssen.sander@adlitttle.com

Portugal
Rui Lavado
Director
lavado.rui@adlitttle.com

Spain
Jesus Portal
Director
portal.jesus@adlitttle.com

Sweden
Erik Almqvist
Director
almqvist.erik@adlitttle.com

Switzerland
Klaus von den Hoff
Director and Global Practice Leader
vondenhoff.klaus@adlitttle.com

UK
Mark Mulcahey
Director
mulcahey.mark@adlitttle.com

USA
Martyn Rötter
Associate Director
roetter.martyn@adlitttle.com

Arthur D. Little

Arthur D. Little, founded in 1886, is a global leader in management consultancy; linking strategy, innovation and technology with deep industry knowledge. We offer our clients sustainable solutions to their most complex business problems. Arthur D. Little has a collaborative client engagement style, exceptional people and a firm-wide commitment to quality and integrity. The firm has over 30 offices worldwide. With its partner Altran Technologies Arthur D. Little has access to a network of over 17,000 professionals. Arthur D. Little is proud to serve many of the Fortune 100 companies globally, in addition to many other leading firms and public sector organizations. For further information please visit www.adl.com

Copyright © Arthur D. Little 2010. All rights reserved.

www.adl.com/Double_Squeeze