

Innovating the Telco Business Model

Drivers and Emerging Trends

Telecom & Media Insights

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1 Abstract

The operating environment for telcos is turning increasingly complex. Telecom operators who had grown on the back of traditional voice and data services are realizing that as consumption patterns are rapidly changing, value not only moves to other stages in the telco value chain but also into completely different markets. Subsequently, their old business models are coming under increasing pressure and appear to be crumbling. Some telcos have understood this rapidly evolving scenario and have taken steps to ensure that they are in tune with the changing times. How else can one explain the fact that a fiber operator convinces its customer to dig up the last mile connectivity, or that a telco enters into reselling energy and gas agreements, or that consumers in certain markets have opted for advertisements to be a core part of their mobile experience? These developments represent only a fraction of the innovation in business models that telcos can partake in. They, in turn, are being driven by a range of broader trends that are currently impacting business models the world over. Telcos should consider taking steps to incrementally change their business models, while striving to adopt radical approaches in select areas, and challenge traditionally accepted norms of where a telco fits into the larger ecosystem.

2 Need to Innovate Business Models

The telco business environment is rapidly evolving, creating the need for innovating the business model

The business environment for companies is rapidly evolving. Telcos are facing the constant threat of over-the-top business models from Internet players and from device players within the TME industry that threaten to reduce their importance in the ecosystem.

The coming of age of the digital consumer, a breakdown in current revenue streams, and emerging opportunities in new sectors are all playing a key role in ensuring that the business model of yesterday is becoming increasingly obsolete.

Monetization Challenges with Traditional and New Services

One challenge telcos face is the decline in their traditional fixed-line businesses and maturing mobile voice services. Mobile voice revenues of major European operators have declined, on average, by 7.5% every quarter in the period June 2009 - June 2010¹. An even bigger challenge lies around the monetization of new services such as mobile broadband. It is estimated that while data generated by mobile broadband dongles account for over 66% of traffic volume, it only contributes 5% of revenues². Yet, operators have to continue investing in network infrastructure to meet such surging demand. Analysts estimate that while operators' annual spending on network equipment in the period to 2014 is likely to surge by 28%, overall end-user revenues are expected to shrink by 1%³. Such metrics indicate the failure of the business model to match pricing to usage.

Evolving Consumption Patterns and Advent of Social Media

The rise in popularity of the 'mobile' Internet as well as the increasing use of rich and social media is driving significant changes to traditional consumption patterns. The popularity of web services is eating into traditional telco revenue streams. At the same time, telco pricing models to monetize such traffic do not appear to be working. Moreover, with large social networking sites such as Facebook erecting what is, in essence, a massive walled garden with extensive communication features, the telco's ability to monetize significantly diminishes.

Emerging Opportunities in New Sectors

The widespread deployments of wireless networks, coupled with an increased appreciation of the value of connectivity, have meant that opportunities for telcos have opened up in new sectors. Multiple operators are actively looking at opportunities in sectors such as healthcare, automotive, energy, and utilities. BT has ventured into the smart metering area by setting up an alliance with two other companies under the brand name SmartReach⁴. However, a move into these new sectors also means that telcos will have to change their traditional ways of doing business to be in line with the requirements of the new sector. Since opportunities span sectors, the key focus for telcos is to ensure that they have a model that they can deploy flexibly in other sectors.

These factors are forcing telcos to innovate their business models. In this article, we analyze the evolution and current trends impacting business models and how telcos could potentially address the need to innovate their traditional models.

1 Enders Analysis, *Mobile Revenue Growth and Outlook Q2 2010*, September 2010; Operators include Vodafone, Telefónica, France Telecom (UK, France), and Telecom Italia Mobile.

2 Enders Analysis, *Mobile Data Economics: The Limit of Unlimited*, September 2010.

3 Bloomberg, *Apple Asked to Pay Up for Network Improvement as Operators Face Data Flood*, December 2010.

4 ZDNET, *British Gas, BT Push Ahead with Smart Meter Plans*, October 2010.

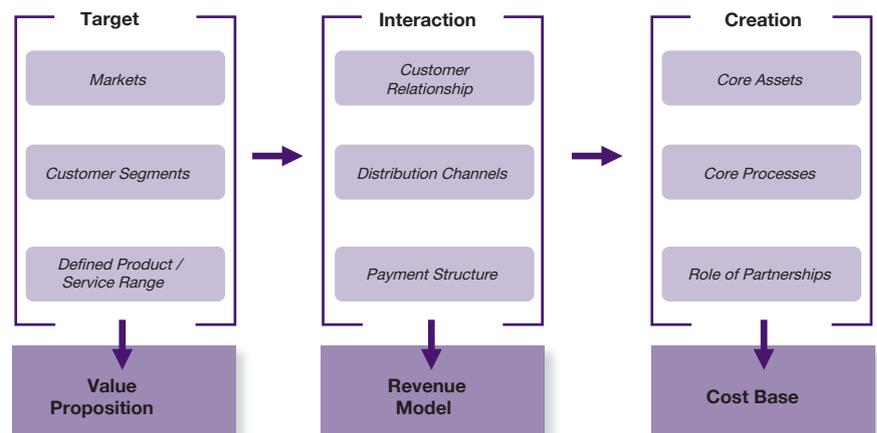
3 Business Models and their Evolution

Companies that want to be successful in the current environment have to fundamentally scrutinize their business model on a regular basis and challenge its components if necessary. However, in order to redefine its general orientation, it is critical to first understand the constituents of a business model.

Structure of a Business Model

The overarching goal of a business model is to address a business opportunity in such a way that value is created for customers as well as for the company. A business model encompasses the addressed value potential, the customer interaction, as well as the value creation model. A business model consists of three strongly interlinked dimensions: Target, Interaction, and Creation (see Figure 1).

Figure 1: Framework of a typical Business Model



Source: Capgemini analysis

Target involves defining the revenue potential. This is derived as a sum of three key elements. First, the geographical or vertical markets within which the company is aiming to deliver the service. Second, the customer segments that are to be addressed and their specific requirements. And, third, a clearly defined product/service range offered based on previously identified customer requirements. These elements together form the basis for creating a unique value proposition for the company's product/service.

Interaction defines the manner in which the company interacts with the customer to meet their requirements with products and services. It also consists of three elements. The first element is the customer relationship, with a focus on the nature of the relationship, the necessary intensity, the duration, the content and the typical and ideal sequence of events during customer interaction. The second element is the channels of distribution through which products and services should be marketed or which facilitate the interaction with customers before and after the sale. And the third element is the payment structure with a clear

A business model encompasses the addressed value potential, the customer interaction as well as the value creation model

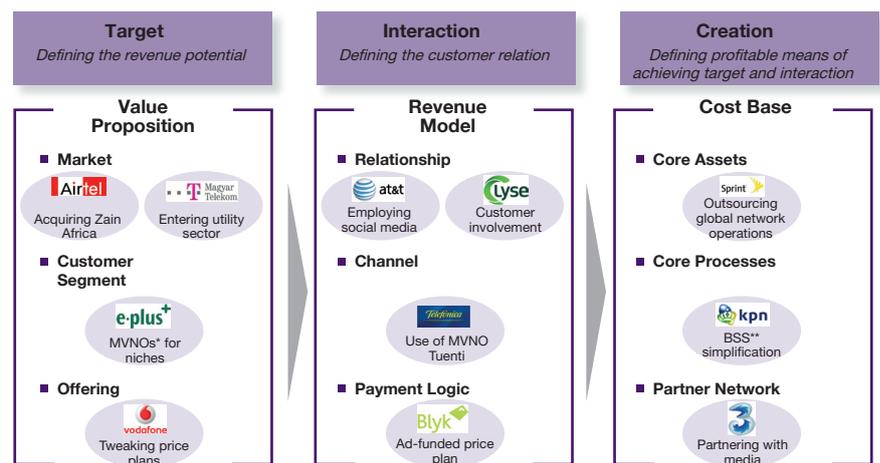
definition of the mode, point of time, and frequency of payments. In total, these elements define the structure of the business' income flow.

Creation builds on the first two dimensions of Target and Interaction. It defines how a company can profitably fulfil its value proposition. The essential elements are the assets and special capabilities that the company brings into value creation. These could be production facilities, the brand of the company, or technologies. Another element is the specific processes that the company has to master for delivering its services. Finally, it is necessary to address which service components have to be delivered in-house – considering the background of the desired quality, costs and flexibility – and which should be ordered from a network of partners. The organization of value creation essentially characterizes the cost basis of the company and also determines the competitive capacity and sustainability of the business model.

Evolution in Telco Business Models

Telcos have made efforts to innovate across the three major dimensions, through a combination of market, channel, and network initiatives (see Figure 2).

Figure 2: Actions taken by Telcos on their Business Model



Note: *MVNO – Mobile Virtual Network Operator **BSS – Business Support Systems
Source: Capgemini analysis; Company websites and press releases

Changes in Target

Telcos have begun to make changes to their core value proposition. Multiple telcos have realized the need for expanding their footprint in order to tide over maturing home markets. India's Bharti Airtel realized that competition in the Indian mobile market was growing rapidly, and in order to diversify, went ahead and acquired the African operations of Zain⁵. Similarly, operators have also entered completely new sectors. Magyar Telekom has recently entered the utilities market through a reselling agreement with E.ON AG for gas and energy. The operator is also offering smart metering services in select cities in Hungary⁶. Multiple operators have shown readiness to modify their offerings to address evolving business and consumer realities. Most operators started off mobile broadband pricing plans on a flat rate model. However, once it started becoming clear to them that there was a challenge of monetization, they are now moving onto tiered pricing based on downloads. Some operators have ventured

⁵ Company website.

⁶ Wireless Federation, *Hungary's Magyar Telekom & E.ON AG Sign Power Retail Sales Deal*, May 2010.

even further and now offer tiers by bandwidth offered. In the US, AT&T has moved away from a flat rate tariff to a tiered-download plan for mobile data on smartphones⁷. Similarly, Vodafone Germany has introduced plans that are tiered by speed for its LTE-based mobile broadband services⁸.

Changes in Interaction

Telcos are making fundamental changes to traditional revenue models. Norwegian fiber operator Lyse realized that the cost of digging a trench for the last mile between the home and the node is prohibitive. Accordingly, it came up with an innovative model by which it offered a discount to customers who dug the trench themselves. The company also pre-sells all of its services through town meetings and gatherings. Services are only started after at least 60% of people in an area have signed up⁹. By encouraging ownership of the last-mile connectivity, Lyse created an emotional bonding with its customers. The results are telling. Over 80% of the company's 130,000 customers have opted for the do-it-yourself approach. The churn rates for such customers are below 0.2%¹⁰.

Similarly, other players are also venturing into the creation of new revenue sources. Telefónica acquired a majority stake in Spanish social networking site Tuenti, and is now launching Mobile Virtual Network Operator (MVNO) services using the Tuenti brand¹¹. Companies are also experimenting with innovative ways of payments. Blyk, which started off as a B2C MVNO, allowed consumers to earn free messaging and airtime by receiving targeted opt-in advertisements. The company now works with operators in multiple countries to create such innovative advertising supported solutions.

Changes in Creation

Telcos are also effecting changes to areas that directly impact their cost base. In emerging markets a key approach is to outsource significant parts of network operations to equipment vendors. Multiple operators in India have outsourced network operations to vendors such as Ericsson and Alcatel-Lucent among others. In developed markets too, this approach has begun to gain traction. In the US, Sprint has signed a US\$5 billion network outsourcing contract with Ericsson¹². Another approach is to work towards simplifying complicated Operation Support Systems / Business Support Systems. KPN used solutions from Oracle in an effort to simplify and transform its IT systems¹³.

Operators are also looking at other avenues of cost savings. Multiple operators are looking at reducing the impact of their operations on the environment while hoping to save costs. A1 Telekom Austria's Smart Energy Control pilot project has helped it save over €175,000 due to the intelligent reduction in the power consumption of its mobile network¹⁴.

While telcos are innovating within the ambit of individual elements of the business model framework, there are larger trends with varying spans of influence that are impacting companies across multiple elements of this model. In the next section, we discuss some of these broader trends.

7 The Washington Post, *AT&T Wireless Scraps Flat-rate Internet Plan*, June 2010.

8 TeleGeography, *Vodafone Unveils LTE Rollout Plans, Confirms Tariffs*, September 2010.

9 The Sydney Morning Herald, *Waiting on a Missed Connection*, August 2010.

10 Connected Planet Online, *NAB: FTTH provider's Customers Bury their Own Fiber*, April 2009.

11 Bloomberg, *Telefonica's Tuenti to Start Low-Cost Mobile-Phone Service, Expansion Says*, November 2010.

12 Fierce Wireless, *Sprint Inks \$5 Billion Network Outsourcing Deal with Ericsson*, July 2009.

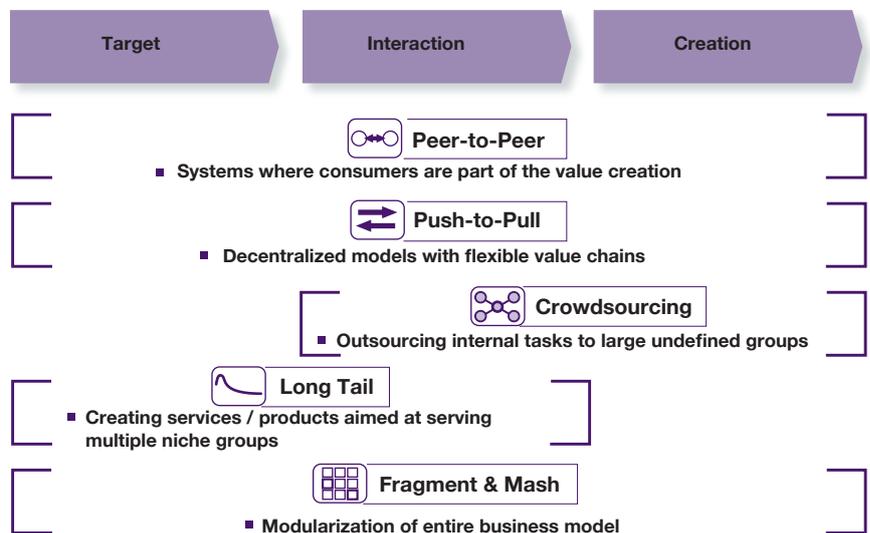
13 Company websites.

14 Environmental Leader, *Telecom Firm Cuts Energy Costs \$223,000 Annually*, August 2010.

4 Trends Impacting Business Models

Capgemini's experience with multiple clients across the globe has helped us to identify five broad emerging trends in business model innovation. We believe peer-to-peer, push-to-pull, crowdsourcing, long tail, and fragment-and-mash are among the key trends that have an impact on business models (see Figure 3).

Figure 3: Trends Impacting Business Models and their Span



Source: Capgemini analysis

Peer-to-Peer

The advent of new technologies is constantly forcing the disintermediation of the stages that make up the linkage between a service provider and a consumer. In extreme cases, the customer even takes over tasks originally belonging to producers. An example is the question and answer site, Stack Overflow. The site offers around 34 distinct communities in which users can ask questions and get answers from fellow members. The site attracts over 10 million monthly unique visitors and is very popular in the technical programming community¹⁵.

Such examples indicate the trend and the importance of involving users of a service and letting them create the core that can then be monetized by the service provider. Stack Overflow sells advertising on top of content created by its users.

Push-to-Pull

Centralized business models rely on the predictability of demand, ensuring product development, and optimizing the supply chain. These models are centered on the basis that strategic decision making is best done at a central/corporate level. In an increasingly competitive environment with shortened lifecycles, more complex distribution channels, and a more powerful and ever-better informed customer, the centralized approach is destined to fail.

¹⁵ TechCrunch, *Stack Overflow Hits 10M Uniques, Boldly Goes Where No Q&A Site Has Gone Before*, November 2010.

Trends impacting business models broadly include peer-to-peer, push-to-pull, crowdsourcing, long-tail and fragment-and-mash

Decentralized models take the opposite approach, with the customer center stage. To ensure that customer-centricity is not just an empty phrase, the entire value chain has to have the flexibility to react quickly and to cope with varying customer requirements. This often demands the adaptation of the entire supply chain and production methods to manufacture individual or new products faster, more flexibly, and economically.

Deutsche Telekom's IPTV service in Germany, T-Entertain, offers a good example of a company that has addressed the impact of this trend. The company offers a service called Liga Total that allows subscribers to create customized live broadcasts of the Bundesliga soccer series. Users can put together their personal conference of matches happening simultaneously and are alerted through on-screen pictures whenever interesting moments happen in other matches. Users can then switch to that match and ensure that they do not miss out on the action. The service shows how companies are taking a decentralized approach and are letting the customer take control, while offering enough flexibility to mass customize¹⁶.

Crowdsourcing

Crowdsourcing refers to the outsourcing of activities that are traditionally done in-house to external, undefined user groups, which in many cases are either current or prospective customers. Companies increasingly source goods and services via open networks of external service providers, extending from open source software to product design to research and development. Such approaches help reduce procurement costs and time-to-market.

France Telecom has an established program called the Orange Partner program for allowing third-party developers to create innovative services for Orange's subscriber base. Developers enrich the application and service portfolio that Orange brings to its customer base, while being a part of the growth. The program has over 45,000 members¹⁷.

Some companies have taken crowdsourcing to interesting lengths. GiffGaff, an MVNO in the UK owned by and operating on O2's network, relies extensively on crowdsourcing in its business model. Subscribers are awarded points and are encouraged to answer other customer support enquiries or submit ideas for marketing, advertising or pricing models. Users can then convert these points to cash, mobile credit, or donations to charity. As of June 2010, the company had a 6,000 strong online community and over 40% received their first bi-annual cash payout with the average user receiving UK£14¹⁸. The company claims that 100% of questions raised are answered by its community, with an average response time of four minutes¹⁹.

Long Tail

'Long Tail' defines a new approach based on technology enablers that allows companies to profitably serve niche segments that were not attractive to serve previously. The basis of the Long Tail approach is that minimal/next to zero incremental cost makes targeting niche groups a potentially profitable business model.

A successful deployment of the Long Tail business model can be seen in E-Plus, a German operator. The advancement in IT systems has now enabled operators such as E-Plus to actively deploy multiple MVNOs that can function with an independent identity, without incurring significant additional costs. The operator has, over the years, entered into a series of agreements with MVNOs to launch services focused on multiple niches in the market. For instance, its BASE service

¹⁶ Company website.

¹⁷ Orange website.

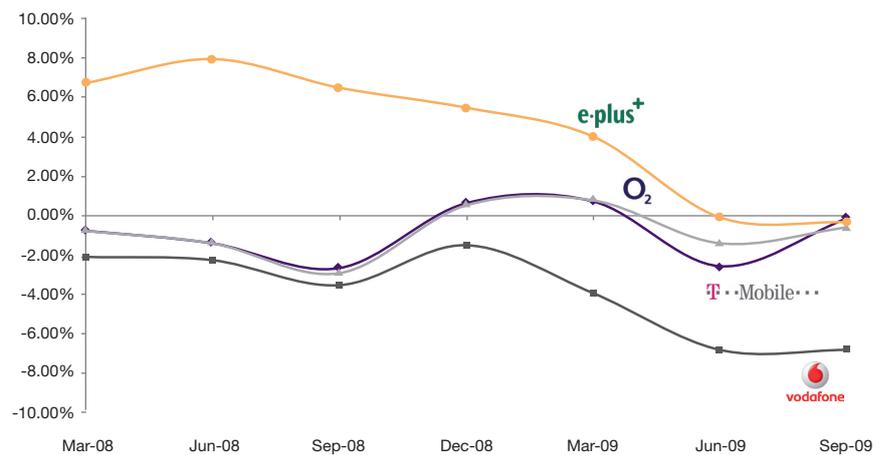
¹⁸ Guardian, *Mobile Provider Giffgaff Makes First Customer Payouts*, July 2010.

¹⁹ Company website, October 2010.

Telcos should strive to create a culture that encourages risk-taking and rapid iteration

is aimed at heavy mobile usage subscribers, while Simyo is targeted at low usage subscribers. Similarly, it has a service targeting Turkish immigrants and a separate service targeting teenagers. While E-Plus was able to address this market even before the launch of such MVNOs, however, their launch helped it create a strong value proposition for customers. This focus on long tail helped E-Plus weather the tough times in the German market (see Figure 4).

Figure 4: Mobile Service Revenue Growth for E-Plus Germany, (%), Mar 08-Sep 09



Source: Enders Analysis, *Mobile Revenue Growth and Outlook Q2 2010*, September 2010

Fragment and Mash

This trend describes the consistent modularization of the entire business model. Companies start building skill sets across a range of sub-activities that are required to deliver a larger activity. By standardizing the best practices and creating enablers for letting such secondary skills flourish, companies can create platforms for new services based exclusively on these skills. The result is the break-down of the classical sequential value chain into a value network. Here, the company’s competencies, which have been built up during the course of delivering services, are taken apart to help create new products and services, thereby giving rise to a “mashable” company.

One example of this trend is Amazon. The rapid growth of the online retailer meant it had to establish special technological competencies, especially the operation of highly scalable server structures for the operation of its electronic trade platform. As Amazon ventured into other product areas, and as it gained scale, the company increasingly had to create systems that could scale rapidly to support the increasing traffic. Amazon uncovered a new area of business from this emerging competency. Namely, the leasing of these structures, which we also know now as cloud computing. Amazon developed a complete business model around this idea, from product development to accounting and administration processes to new marketing channels, currently marketed under the Amazon Web Services brand.

5 The Road Ahead for Telcos

The need to innovate business models has never been more pressing for telecom operators. Telcos will need to innovate across all three elements of the business model if they are to make a successful transition to a future digital society where they can play a significant role in the entire ecosystem. Companies that fail to do so expose themselves to the risk of being undermined in their core markets. Telcos should take a twin-pronged approach at innovation that attempts to both change their business model incrementally while constantly expanding the boundaries by experimenting with radical approaches towards delivering traditional and next-generation services.

Change Business Model Incrementally

Over the years, telcos have morphed into large complex organizations with multiple layers. Such hurdles can create artificial barriers for innovative employees. Product development in the online space typically takes an approach where start-ups rapidly iterate between various versions/features of a product, sometimes in weeks. However, in a typical telco environment, the timelines can span multiple months, often exceeding a year, before a typical product release.

Some telcos have realized that they need to bring in outside expertise if they are to receive an innovation boost. One example is Orange which has set up 18 innovation labs in research hotspots in nine countries. However, for telcos, it is imperative that while they attract top talent, they should also create a culture that encourages risk taking and rapid iteration. An innovation promoting culture distinguishes itself by intensive, cross-functional communication, creativity, error tolerance, and the entrepreneurial willingness to take risks.

Telcos should also be flexible about incorporating best practices from successful players in other industries and third parties. Online players have successfully proved that employee contribution can make a significant impact on driving innovation. Telcos need to create systems that encourage lower-level employees to contribute ideas that they can potentially consider. Some operators have begun to move in this direction. Telstra, in Australia, has deployed a Salesforce.com service to run a web-based forum that allows all employees and partners of the operator to submit and discuss ideas that can be voted on before passing onto senior management²⁰.

Experiment with radical approaches

Telcos should consider creating new value propositions by enabling access to content anywhere and anyplace through the use of new technologies. Similarly, they should look at creating new models of monetization where they work closely with content owners and device vendors to create innovative bundles that have the potential to generate synergy. For instance, 3 UK offers free bundled access to *The Times* and *The Sunday Times* together with its mobile broadband connections²¹.

²⁰ Telecom Asia, *Crowdsourcing the Workforce*, November 2010.

²¹ CNET, *3 Offers Free Access to The Times, Don't All Rush at Once*, November 2010; The service is free for three months for prepaid and contract subscribers. After three months, the access remains free for prepaid consumers who top up every 30 days and it costs UK£2 a week for postpaid subscribers.

Going forward, telcos should consider working closely with content owners in defining new models that best serve mutual interests while delivering the maximum value for the consumer. For consumers to be able to enjoy data-intensive content services on the Internet, telcos need to convince content providers on the need to consider the costs of building high-bandwidth data networks in their business models. In the future, telcos can work towards creating models where they agree with content players on a dedicated Quality of Service provisioning to ensure network asset monetization. Telcos can consider experimenting with models where they not only charge consumers for access to network resources, but also potentially work with content providers to create dramatically different pricing models that move away from charges for data consumption.

Some telcos have already begun to stretch traditional boundaries of telco operations. The US operator Verizon and Google have come together to propose a framework that can potentially create dedicated monetization models for next generation services²². While the proposal has sparked significant debate on aspects around net neutrality, it is critical that operators continue to engage with the larger stakeholders, including other companies, regulators, and consumers, on the need for an ecosystem where everyone, carriers included, are compensated fairly for their respective contribution. In doing so, the benefits of such new business model innovations need to be clearly stated to both the industry and the consumer. It should be subsequently separated from the controversial aspects of net neutrality, *vis-à-vis* censorship of free speech, slowing down “free” Internet services and the creation of an alternate Internet.

Telcos need to actively look at breaking new ground across all three elements of the business model. They should move from providers of connectivity to aggregators and innovators of third-party offerings. Telcos will need to continue to stretch the boundaries of what current revenue models allow. While they have traditionally followed B2B and B2C models, increasingly, innovative B2B2C models are more likely to be the norm in the future.

On the cost side, the opening up of both the IT and processes will ensure that they seamlessly fit in with demands from new sectors. In going forward in all these ventures, it remains imperative that telcos continue to utilize their core assets such as the ability to implement complex IT systems in order to provide an ecosystem to other sectors.

Telcos need to embark on a series of such changes in order to ensure that they can build upon their successes in delivering telecoms services. In the end, they will need to ensure that they continuously challenge established models and notions on their role if they are to truly innovate their business model.

²² Google Public Policy Blog, *Finding Common Ground on an Open Internet*, October 2009

About the Authors

Oliver Schön is a principal for the Capgemini Consulting Strategy and Transformation Practice. He helps companies across various industries to design growth and innovation strategies as well as the required transformation programs. Oliver is head of the strategy competency within Capgemini Consulting Germany and has published a range of articles and cases on Business Model Innovation. He is based in Frankfurt.

Philipp Zimmermann is a principal in Capgemini Consulting's TME practice. He specializes in serving large telecommunications, media and high-tech clients on a range of strategic, organizational, operational, and regulatory issues, bringing 10 years of sector expertise. His clients include some of the largest telecommunication operators and media companies in Europe, the US and the Middle East. He is based in Berlin.

Subrahmanyam KVJ is a senior consultant in the TME Strategy Lab. His recent work focused on identifying the telecom operator opportunity in social networking. He has worked extensively on the impact of convergence and changing consumer behavior on telecom and media players. He is based in Mumbai.



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For more information contact:

Jerome Buvat

Head of Strategic Research
Telecom, Media & Entertainment
jerome.buvat@capgemini.com
+44 (0) 870 905 3186

Argentina

Manuela Pedraza 1545
C1429CBA
Buenos Aires
Tel: +5411 4735 8000

Australia

Level 777
King Street
Sydney NSW 2000
Tel: +61 2 9293 4000

Belgium

Bessenveldstraat 19
B-1831 Diegem
Tel: +32 2 708 1111

Brazil

Av. Francisco Matarazzo
1500 – torre New York – 18° A
Bairro – Água Branca
São Paulo
05001-100– SP – Brazil
Tel: +5511 3525 0100

China

42F Hong Kong New World Tower
300 Middle Huaihai Road
Shanghai 200120
Tel: +862 161 822 688

Denmark

Delta Park 40
DK-2665 Vallensbaek Strand
Tel: +45 70 11 22 00

Finland

Niittymäentie 9
02200 Espoo
Tel: +358 (9) 452 651

France

Tour Europlaza
20 ave. André Prothin
92927 La Défense Cedex
Tel: +33 (0)1 49 00 40 00

Germany

Konrad-Adenauer Ufer 7
50668 Cologne
Tel: +49 (0) 211 912644

India

Piroshanagar, Vikhroli
SEP2 B3 Godrej Industries Complex
400 079 Mumbai
Tel: +91(22) 5555 7000

Italy

Via M. Nizzoli, 6
20147 Milano
Tel: +39 02 41493 1

Mexico

Av. Guillermo González # 1600 – 3er. Piso
Col. Centro Ciudad Santa Fe
C.P. 01210 México, D.F.
Tel: +5255 8503 2400

Middle East

P.O. Box 502 420
Dubai
UAE
Tel: +971 50 884 77 64

Netherlands

Papendorpseweg 100
3528 BJ Utrecht
Postbus 2575
3500 GN Utrecht
Tel: +31 30 689 0000

Norway

Hoffs veien 1D,
0275 Oslo
Tel: +47 24 12 80 00

Poland

Piekna 18
00-549 Warsaw
Tel: +48 (22) 464 7000

Portugal

Av. Colégio Militar
37 - Torre Colombo Oriente
Piso 10
1500-180 Lisboa
Tel: +351 21 412 22 00

Spain

Edificio Cedro
Calle Anabel Segura, 14
28100 Madrid
Tel: +34 91 675 7000

Sweden

Gustavlundsvägen 131
PO Box 825
161 24 Bromma
Tel: +46 8 5368 5000

Switzerland

Rue du Rhône 65
1204 Geneva
Tel: +41 22 879 16 50

United Kingdom

40 Holborn Viaduct
London, EC1N 2PB
Tel: +44 20 7936 3800

United States

623 Fifth Avenue
33rd Floor
10022 New York
Tel: +1 212 314 8000