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Beyond Communications

Identifying New Markets for Telcos

Telecom & Media Insights

Issue 59

Contents

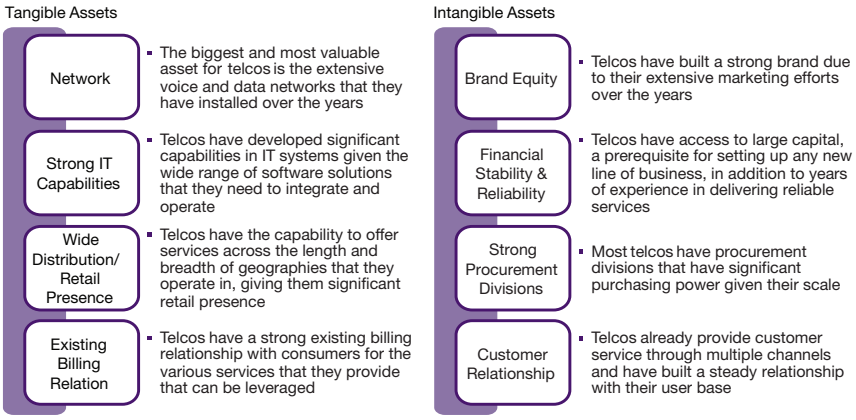
1 Abstract

Fixed and mobile operators across the developed world are faced with the prospect of increasing pressure on their voice and data revenues. Telcos are also facing a strong challenge from over-the-top Internet players who have been taking an increasing share of the consumer spend on digital media and communications. These developments are forcing telcos to identify new revenue streams for the future. Consequently, they are looking at entering new sectors that hold revenue potential, while being able to leverage their existing assets. While telcos have entered into a variety of new services involving content, advertising and cloud computing, among others, some of the more exciting opportunities lie in healthcare, energy, and automotive. These hold significant potential for telcos to enter and create a whole new ecosystem where they can place themselves at the center, and in the process generate significant value in the future. However, in order to tap into this potential telcos will need to adopt different go-to-market strategies for different service opportunities. Telcos will need to assimilate changes in how they have traditionally operated their organizational structures if they are to effectively address upcoming opportunities and challenges.

2 Introduction

Telecom operators are in the midst of challenging times. While they are just recovering from the impact of the financial slowdown, they are also facing the prospect of contending with increased competition from over-the-top players. Consumers increasingly expect connectivity to add value to their day-to-day activities, and are looking to emulate their PC-based experiences on the mobile. Telcos are also keen to re-use assets that they have built-up over the years and deploy them to more effective use (see Figure 1). These factors are playing a key role in telecom operators looking for new revenue streams beyond communications.

Figure 1: Key Telco Strengths Developed Over the Years



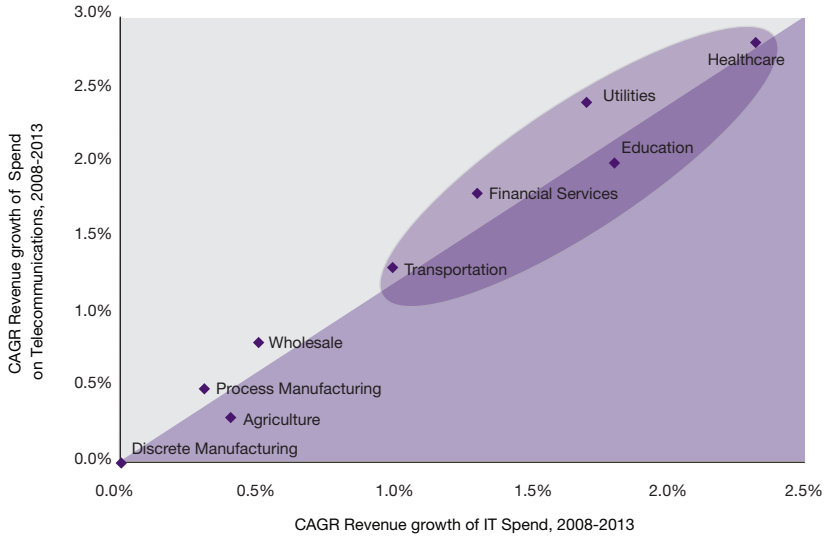
Source: Capgemini TME Strategy Lab Analysis

Telco opportunities in new areas can be ascertained through a combination of proxy data-points. An increased IT spend in any industry is usually a good pointer to greater usage of technology and communications which can be correlated to enhanced opportunities. As such, an analysis of IT and communications spending forecast is likely to help identify those sectors that could potentially hold future opportunities and which are likely to grow (see Figure 2).

The projected IT and Telecom spends in different sectors leads us to look at three key sectors namely, healthcare, energy, and automotive that telcos can target in order to exploit their latent potential. These sectors, while offering strong growth potential, also have low entry barriers, allowing telcos to re-use some of the assets they have built up over the years.

In this chapter, we take a look at the opportunities, challenges, capability gaps and some potential services that telcos can offer in these sectors. We conclude with a set of recommendations aimed at giving initial direction to telcos as they venture into these new sectors.

Figure 2: IT Spend and Telecommunications Spend Comparison by Sector, Global, CAGR, 2008 – 2013



Source: Gartner, *IT Spending by Industry Market, Worldwide, 2007-2013, 3Q09 Update*, 2009

3 Telco Opportunities in Healthcare

The healthcare industry offers a variety of opportunities owing to its critical role across developing and developed markets

Market Overview and Opportunity Areas

Opportunities in healthcare are closely tied to the critical role that the industry occupies in both the developed as well as developing markets. In developed markets, healthcare-spend as a percentage of GDP varies between 8-11%[1]. Such significant spending indicates a sizable opportunity across the healthcare value chain. Similarly, in emerging markets, the biggest opportunity arises from the fact that healthcare coverage is sparse and limited to urban areas. Countries such as India have under 0.6 physicians per 1,000 people, when compared to an European Union average of 3.3[2]. Such wide disparities also point to latent opportunities for innovative solutions that can better address the needs of the people in such geographies.

Service offerings in the healthcare market can be classified as consumer services and enterprise solutions. Consumer services primarily involve delivering healthcare offerings to retail consumers, spanning the traditional healthcare value chain (see Figure 3). These services include remote diagnostics, continuous monitoring, self-monitoring and home-emergency solutions, e-health record solutions and awareness services. The opportunity for telecom operators primarily lies in creating services where connectivity adds significant value to the overall experience. This can be achieved by close collaboration with healthcare industry players. For instance, Orange Austria launched a health package for monitoring blood sugar and pressure levels service in partnership with Alcatel-Lucent and an Austrian charity in May 2010. The service is available to Orange Austria's subscribers to sign up in their retail stores for a cost of €10, on top of any Orange tariff. Subscribers could use one of the approved blood glucose meters to interact with an application installed on their mobile phones that communicated with the server[3].

Figure 3: Indicative Activity Chain of Consumer Services in the Healthcare Industry

	Diagnosis	Treatment	Rehabilitation	Management	Prevention
Description	Identification of a patient's condition and likely remedies	Addressing the cause of the patient's condition through medication	Nursing a patient back to good health and lifestyle	Enabling patient and doctor greater control over information gathered	Encouraging consumer education through information and awareness campaigns
Potential Services	Remote diagnosis solutions	Continuous monitoring solutions aimed at ensuring the rapid treatment of patient	Self-monitoring and home emergency monitoring solutions	Electronic health record solutions, either for the healthcare service providers or for patients	Awareness and information dissemination services

Source: Capgemini TME Strategy Lab Analysis

1 World Bank, *World Development Indicators*, 2010.
2 World Bank, *World Development Indicators*, 2010.
3 Company website.

Enterprise solutions typically involve working with healthcare institutions and regulatory authorities in building the technology and communications infrastructure. Orange offers a secure communications platform for healthcare facilities to send automated reminders on appointments, while another service allows hospitals to route incoming calls amongst a pre-set group of numbers. Similarly, BT's initiatives in e-health are focused on solutions in collaboration with regulators and medical institutions. BT has also built and currently manages the N3, a secure national broadband network for the UK's healthcare authority, NHS.

Key Challenges and Capability Gaps

Telcos will face stiff competition from online players such as Google and Microsoft in certain elements of the consumer activity chain. Specifically, in areas such as management of personal health records, online players are looking to create models that bypass healthcare industry players looking to enter new service areas, as well as other new entrants including telcos. Google offers a service called Google Health where patients can upload, update and manage their health records in a single location. Similarly, Microsoft offers a personal health record system known as Microsoft HealthVault, which is offered direct to consumers and to healthcare institutions and regional authorities in various geographies. However, telcos have significant advantages that they can leverage to compete with such over-the-top players. The telcos' relationship with their subscriber base, including fixed and mobile networks, helps them offer remote diagnostic services (see Figure 4).

Figure 4: Comparison of the Relative Advantages of Telcos and Over-the-Top Players (OTT) in the Generic Healthcare Industry Activity Chain

	Diagnosis	Treatment	Rehabilitation	Management	Prevention
Telecom Operator	• Remote diagnosis using specialized hand-held devices that require connectivity • e-health systems rely heavily on a telco's network assets	• Mobile and tele-health systems allow for continuous monitoring of patients and constant communication requires high Quality of Service that telcos can offer	• Telcos are better positioned than OTT players to deploy healthcare solutions that allow for self-monitoring and home emergency monitoring solutions	• Telcos would need to develop healthcare record management solutions that are robust and easy to use	• Prevention of disease is closely tied to patient education that telcos offer in a limited way through help lines
OTT Players	• OTT players can offer services only on standardized devices such as mobile phones with mobile Internet	• OTT players will have to rely on Internet Service Providers to offer high Quality of Service for device communication	• OTT players will need to develop an ecosystem that would support healthcare systems and monitoring	• OTT players with their personal health record solutions offer the ability to collate a patient's medical records and organize them effectively	• OTT players have a potential edge, given their increasing number of touch-points including email, instant messaging, social networking where they can spread the message

Source: Capgemini TME Strategy Lab Analysis

One way of working around this challenge is for operators to take a collaborative approach. The Canadian operator Telus signed an exclusive license with Microsoft's HealthVault solution to offer it to regulatory and municipal authorities in Canada[4].

4 Company websites and press releases.

The other significant challenge that telcos will face in their entry into the healthcare sector is around the strict regulations that are imposed on collection, retention, storage, and transfer of medical data. This heightened regulatory oversight acts as a significant entry barrier to new players. Telcos will need to ensure that they are well versed with regulations and should take necessary steps to stay compliant.

While these challenges are broad hurdles that telcos face in their entry into the healthcare sector, there are other specific capability gaps that they will need to plug as well. Telcos need to be able to work with, and help co-develop, a wide range of healthcare monitoring devices. Traditionally telcos have limited themselves to working with handsets, and in some cases, netbooks and tablets. However, going forward, telcos need to develop capabilities that will help device vendors to target various healthcare needs rapidly to bring their devices to market with connectivity from the operator.

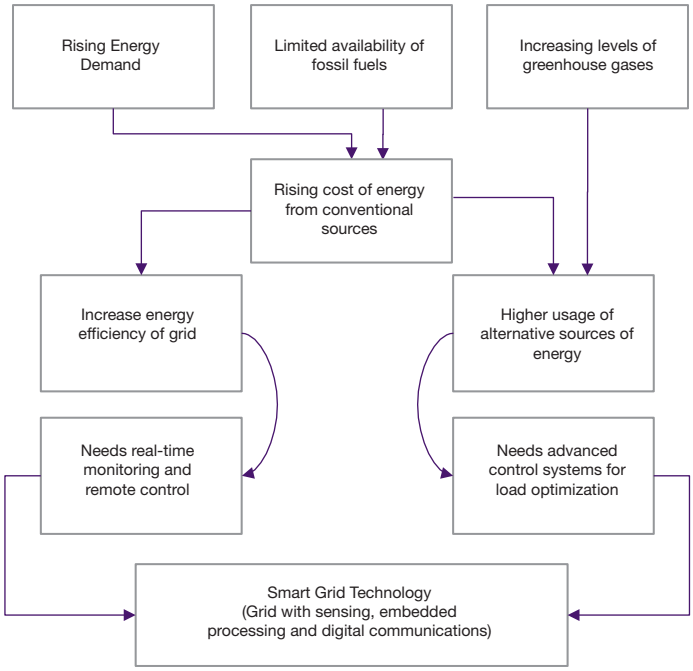
4 Telco Opportunities in Energy

Advent of smart meters allows creation of new services on top of existing industry value chain

Market Overview and Opportunity Areas

The energy industry finds itself in times of rapidly increasing demand and end-user costs. Demand for global energy is estimated to be more than doubling in the time period 1980-2030[5]. Similarly, electricity costs in the UK are estimated to have grown at a CAGR of over 11% during the period 2005-2009[6]. These developments are forcing utility service providers to look for solutions that can help both utilities and consumers manage energy in a more efficient manner. This need is largely addressed by the emergence of smart grid technologies, and primarily through the smart meter (sees Figure 5).

Figure 5: Needs Served by Smart Grid Technology



Source: Capgemini TME Strategy Lab Analysis; World Economic Forum, *Accelerating Smart Grid Investments*, 2009; Xcel Energy, *Smart Grid: A White Paper*, 2008

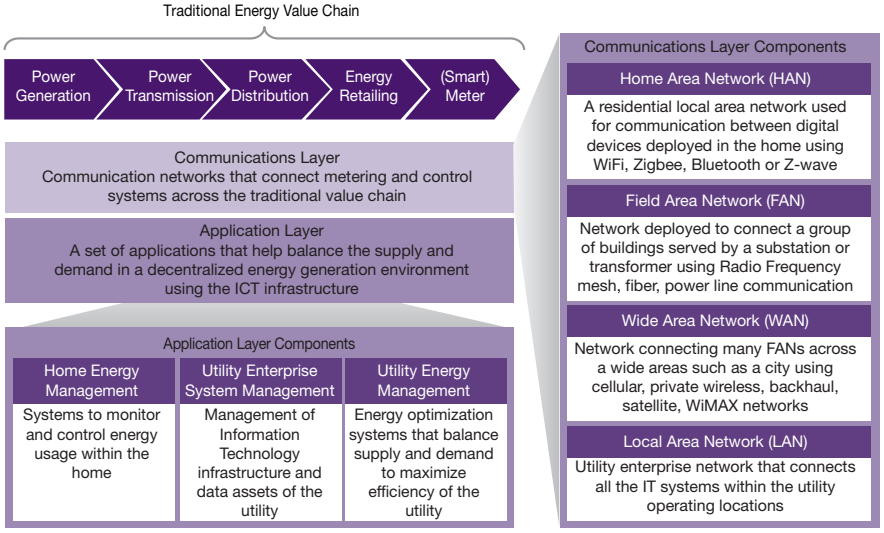
The advent of smart meters has created wholly new application and communication layers on top of the existing industry value chain and this brings with it multiple opportunities (see Figure 6).

Opportunities in Communications

The communications layer spans multiple network topologies allowing telcos to offer traditional data-driven solutions that leverage their network assets. Telcos can potentially partner with utilities to re-use the existing telco communications infrastructure, rather than allowing utilities create alternate channels of transmitting smart metering data. The size of the opportunity can be gauged

5 *IEA, World Energy Outlook*, 2009.
6 DECC Statistics Database 2009.

Figure 6: The Evolving Energy Industry Value Chain



Source: Capgemini TME Strategy Lab Analysis

from the fact that data consumption in the energy industry is expected to ramp up significantly, on the back of the increasing requirements for data processing and transfer. It is estimated that smart meter data is likely to grow up to over 35 Petabytes[7] by 2015[8].

Opportunities in Home Energy Management

Home area networks[9], enabled by smart meters, allow telcos to offer home energy management together with multiple value-added services. Connectivity to smart appliances could be routed through existing network assets, including femtocells[10]. Telcos can also potentially build services such as home automation and remote appliance control on top of this connectivity to tap into the fast-growing smart appliances market. Indeed, it is estimated that the global smart appliance market is likely to grow at a CAGR of almost 49% in the period 2011-2015, reaching a market size of US$15 billion[11].

Opportunities in Utility Enterprise Systems Management

Utility Enterprise Systems Management involves telcos offering data management and related services using their existing assets. Key services that telcos could offer include meter management[12], meter data management[13] and revenue management[14]. Telcos are rightly positioned to offer these services given their experience of handling large consumer usage data sets, well established IT processing systems, and revenue management capabilities. This market is estimated to grow from US$5.9 billion in 2009 to over US$6.7 billion globally by 2015[15].

7 A Petabyte is 1024 Terabytes.
8 UtiliPoint, *The Utility Industry Enters the Petabyte Era*, June 2010.
9 A home area network is a residential local area network used for communication between digital devices deployed in the home using WiFi, Zigbee, Bluetooth, Z-wave, among others.
10 A Femtocell is a small cellular base station used to expand coverage of mobile network within a building.
11 ZPryme, *Smart Grid Insights: Smart Appliances*, March 2010.
12 Meter Management is the management of the installation and servicing of smart meters and related services.
13 Meter Data Management is the processing of meter data for energy management applications.
14 Revenue Management is the management of billing and collection for the utility.
15 Newton-Evans Research, *Utility CAPEX Report*, January 2010.

Opportunities in Utility Energy Management

The primary opportunity for telcos in Utility Energy Management lies in energy industry specific applications such as advanced metering infrastructure (AMI)[16], demand response[17] and grid optimization[18]. AMI includes services such as remote meter reading, remote activation/de-activation of services, among others. In the US alone, it is estimated that revenues from the AMI market are likely to grow at a CAGR of 22% in the period 2009-2015 up to US$8.4 billion[19].

Key Challenges and Capability Gaps

Telcos will face significant competition from smart meter vendors wanting to move up the value chain; large IT solutions providers looking for new outsourced services, and over-the-top players that will want to create solutions aimed at consumers to efficiently manage their power consumption.

One of the biggest challenges in typical smart metering projects is cost estimation and project management. Smart metering projects are usually complex, given the wide variety of partners that they involve, including the smart meter vendor, the utility, the regulator, the local municipality, and the telecom operator. Another key factor is that consumer distribution is likely to be varied and wide-spread, creating another variable that might offset the best of project plans. Managing these uncertainties, while staying profitable, is a key challenge as witnessed by Telenor's entry into smart metering solutions through its subsidiary, Telenor Cinclus. The company failed to estimate the cost of large scale project implementation, eventually leading to its closure[20]. Telcos will also have to contend with competition from over-the-top players such as Google and Microsoft who are looking to create consumer-facing models through online energy management solutions.

The telco entry into the energy sector is contingent on them filling up of various capability gaps that exist. While some telco assets are definitely re-usable in launching new services in energy, telcos will still need to ensure that they rapidly build specific capabilities for specific services. In order to exploit opportunities in utility energy management, telcos should recruit a specialized workforce with knowledge of power systems. They should strive to gain understanding of software applications that are used in the energy sector and ensure they are on top of utility industry technologies such as SCADA[21].

16 AMI-Networking of sensors and devices that form the basis for advanced applications.
17 Demand Response is the management of peak time demand by incentivizing consumers for higher efficiency.
18 Grid Optimization is the optimization of the grid performance in real-time, improving reliability, efficiency and security.
19 Frost & Sullivan, *The United States Advanced Meter Infrastructure Market*, 2009.
20 Dagens IT, *Electrical shock to Telenor*, May 2009.
21 Supervisory Control and Data Acquisition is a process control application that collects data from multiple remote locations sending them to a central server.

5 Telco Opportunities in Automotive

An increased focus on safety and desire for in-car services is driving the growth of automotive telematics

Market Overview and Opportunity Areas

The global automotive sector has been growing steadily over the past few years, although the recent financial downturn has resulted in a dip in demand. Nevertheless, the global market for light vehicles is expected to grow at a CAGR of over 4.8% during the period 2010-2020, growing to over 88.5 million vehicles[22]. The rapid evolution of technology, a growing regulatory focus on safety, and an increased consumer demand for in-car connected services are among the key drivers for automotive telematics[23]. Regulatory authorities are pushing for increasing the deployment of eCall and bCall systems with the aim of reducing vehicle fatalities[24] and this is likely to result in these markets growing to almost 20 million unit shipments by 2017 in Europe[25].

These factors are expected to boost the overall automotive telematics market which is forecast to grow globally from 6.2 million units in 2008 to over 16.5 million units by 2013[26]. Telco service opportunities arise through three categories of services, namely safety / security services, infotainment services, and efficiency services.

The range of services that are aimed at improving passenger safety/security include accident and emergency assistance, vehicle tracking, and remote vehicle operations. Infotainment services span navigation, location-based services, and entertainment services within the vehicle. The advent of GPS-enabled smartphones potentially allows telcos to provide navigation and concierge solutions to users. Efficiency services help customers reduce the total cost of ownership and increase efficiency to help mitigate rising fuel costs. B2C efficiency services potentially include vehicle diagnostics and green telematics. Remote vehicle diagnostics involves the service provider running a series of diagnostics of the vehicle systems and recommending actions. The telco opportunity in each of these service areas can be viewed through the channels in which a telematics system can be bought (see Figure 7).

Potential services in the B2B segment include fleet management services that require a combination of telematics services. A typical fleet management service could potentially include navigation, vehicle tracking, communications, security, vehicle diagnostics, and geo-fencing[27] among others.

Key Challenges and Capability Gaps

Telcos will face significant challenges around addressing privacy concerns, overcoming the lack of standardization, and coping with a risk of marginalization.

Addressing privacy concerns

Telematics services require the vehicle position data to be accessible to service providers. However, the ownership of this data can be misused and regulations

22 R. L. Polk & Co.,*The Changing Automotive Industry-Forecasting Global Vehicle Demand*, May 2009.
23 Automotive telematics is a set of systems that combine global positioning (GPS), onboard computing, and telecommunications technologies that enable a range of services within the vehicle.
24 eCall is an emergency call system which is deployed automatically or manually notifying the vehicle location, severity of accident and help needed to the nearby emergency center in the case of an accident.
bCall is a breakdown assistance system where the driver manually alerts the nearby emergency centre in case of a vehicle breakdown.
25 R. L. Polk & Co., *The Changing Automotive Industry-Forecasting Global Vehicle Demand*, May 2009.
26 Frost & Sullivan, *Second Innings for Telematics - but the On-going Auto Market Crisis will Decide the Future*, January 2009.
27 Limiting vehicles withing certain geographic boundries using GPS.

Figure 7: Classification of Telematics Systems and Corresponding Telco Positioning

	Description	Telco Positioning	Compatibility with Channel: Safety/Security Services	Compatibility with Channel: Infotainment Services	Compatibility with Channel: Efficiency Services
Built-In (GM OnStar, BMW Connected Drive)	• Telematics systems that come with the car and are installed by vehicle manufacturer • Safety services (e-call) and vehicle maintenance and diagnostic systems are normally built-in	• Telco will have to tie up with OEMs in order to offer basic telematics services through the built-in channel • Forming alliances with automotive manufacturers could also increase market penetration	●	◑	●
After Market (TomTom, Garmin)	• These are systems that can be purchased after vehicle purchase and installed in the vehicle • Navigation and entertainment systems are generally fall in the after market category	• Telcos would have to partner with device vendors and embedded systems companies to address this market	◔	◕	◑
Bought-In (Ford Sync, Mercedes Mbrace)	• This is a growing class of telematics systems in which mobile phones or other mobile internet devices (MID) are used by tethering with the built-in systems	• Telcos are most strongly positioned for this market as they already have significant influence in the MID market • Telcos can provide services through mobile apps	◔	●	◔

○ Not compatible ● Completely compatible

Source: Capgemini TME Strategy Lab Analysis

are not clear on ownership. Consequently, consumer concern over potential abuse of such data persists and telcos will need to manage issues around perception. However, telcos have historically had a strong record on managing consumer privacy, despite handling sensitive personal data and this is likely to help them stand in good stead.

Overcoming lack of standardization

The strong opportunity in automotive telematics has led to the entry of a wide range of players across the value chain. However, with each player using its own set of technologies and protocols for delivering services, there has been a profusion of multiple modes of communication and operating systems that can be used for telematics systems. Moreover, given the nascent state of this industry, there is a lack of industry standards that can be uniformly applied.

Threat of being commoditized

Automotive telematics offers the first real chance for players in the automotive value chain to create new revenue streams beyond their traditional product lines. Consequently, multiple players are focusing their efforts at gaining a vantage position in the new service environment. In doing so, many of these firms are encouraging solutions and services in which mobile connectivity is treated as a commodity. For instance, Ford Sync service offers an in-car communication and entertainment service through a one-time charge due at purchase of car with no recurring connectivity charges.

While the automotive sector offers potential for a wide range of services, telcos will still need to build their capabilities in order to effectively compete with other players in the automotive ecosystem that are looking to expand into the services realm. Specifically, telcos will need to build up skills in areas spanning embedded software, device design, and sensors.

6 Recommendations

Telcos should prioritize their entry into new sectors based on their existing assets and market attractiveness

The opportunity for telecom operators to create new revenue streams beyond their traditional focus areas do exist. However, in order to tap into these emerging opportunities, they will need to take a structured approach towards deciding on the choice of sector, selecting their go-to-market strategy for each sector, and making fundamental changes to their organizational DNA. Given the diverse nature of the sectors, and the services within each, these recommendations should be viewed as basic guidelines that will help telcos better assess the opportunity at hand.

Priority of sector should be closely tied to an operator's existing assets and market attractiveness

Entry into specific sectors needs to be closely tied to the operator's existing assets including markets that they operate in. These should then be mapped into the attractiveness of a specific sector, from the perspective of ARPU[28] and the potential amount of control that telcos can exert. Beyond the initial stage of identifying the ideal sector to enter, telcos should then take steps tailored to address the specific needs and requirements of the sector.

As telcos venture into new sectors, it is imperative they adopt a collaborative approach, while assimilating changes required to organizational DNA

Telcos in Healthcare

An entry into healthcare leverages multiple existing telco assets. In emerging markets, telcos should focus on capitalizing on their wide retail presence for driving the uptake of mobile healthcare solutions, to capitalize on the limited healthcare availability in such geographies. Moreover, given the fact that multiple services in mobile healthcare are going to be delivered through third-party devices, it remains imperative that telcos draw upon their extensive M2M[29] experience. Telcos should start off as a basic connectivity provider and then move on to creating platforms that support other healthcare service providers. Once they have gained significant understanding of the space, they should actively look at creating, managing, and selling integrated healthcare solutions (see Figure 8).

Figure 8: Strategic Options for Telecom Players in Healthcare

	1 Basic Connectivity Provider	2 Service Enabler	3 Complete Solution Provider
Description	• Telco restricts itself to the role of a connectivity provider that can offer wholesale and secure access network for transmitting health information	• Telco provides platforms on which developers and third-party healthcare service providers can build applications and services	• Telco creates, manages, and sells end-to-end integrated solutions to either healthcare institutions, regulatory authorities or to end consumers
Rationale for Role	• Telcos operating in markets where a competitive electronic and mobile healthcare ecosystem already exists can benefit significantly by positioning themselves as an access provider of choice for multiple players in the space	• Telcos can effectively co-operate with over-the-top solution providers rather than compete • Telcos can also look at co-branded service offerings enabling them to cut down on the time-to-market while gaining credibility through partnerships	• This option enables telcos to effectively leverage the full potential of the healthcare opportunity • Telcos can launch branded offerings that can help establish their line of business

Source: Capgemini TME Strategy Lab Analysis

28 Average Revenue Per User.
29 Machine-to-Machine.

Large operators such as Orange and Vodafone are currently focused at offering services across the consumer activity chain. However, players such as BT have moved aggressively in the enterprise space and have already launched multiple large-scale initiatives in collaboration with regulators and medical institutions.

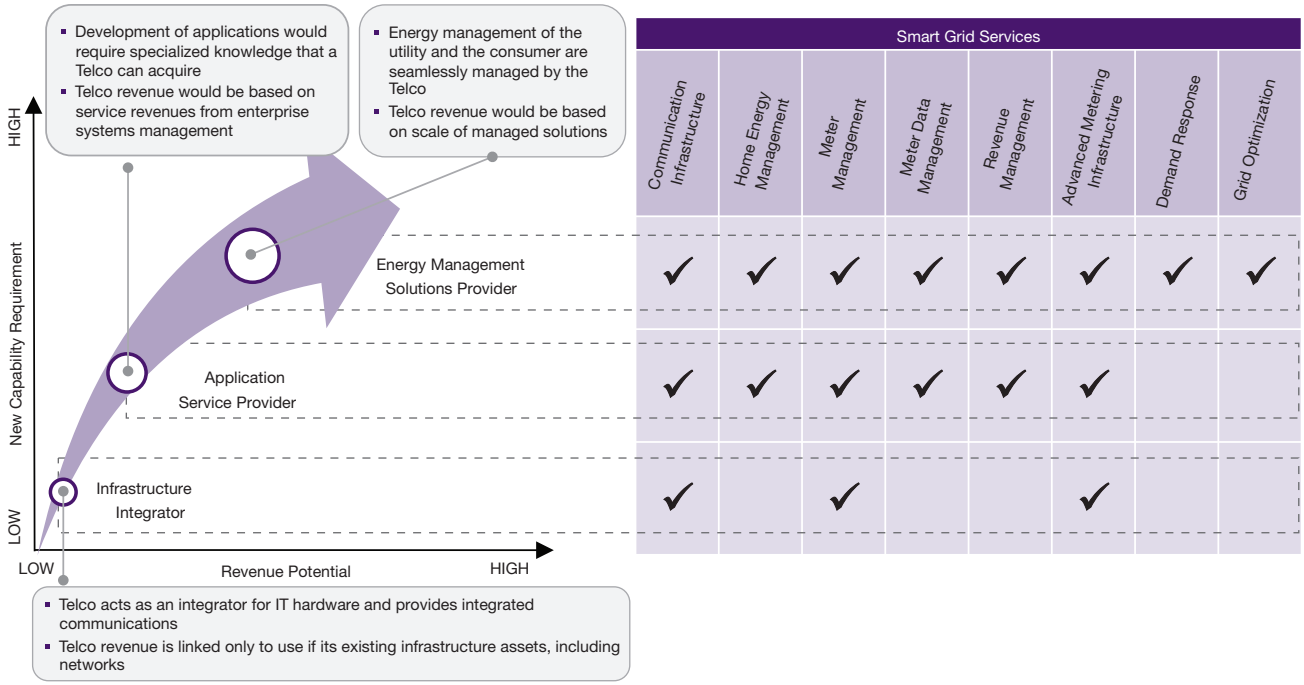
Telcos in Energy

The telco capability gaps in the energy sector are best addressed by selective partnerships. The potential partners include smart meter/control system vendors, system integrators, and software service providers. Telcos should adopt a phased approach towards becoming an energy management solution provider to maximize revenue potential. They should start off by being an infrastructure integrator, move on to being an application service provider before finally evolving to an energy management solutions provider that offers the entire range of smart grid services. These include communications, management of home energy, meter, meter data, and offers advanced metering infrastructure, demand response and optimizes the grid (see Figure 9). Most telcos including Vodafone, T-Mobile, and AT&T are currently in the infrastructure integrator phase where their primary engagement with utilities is built around using network infrastructure.

Telcos in Automotive

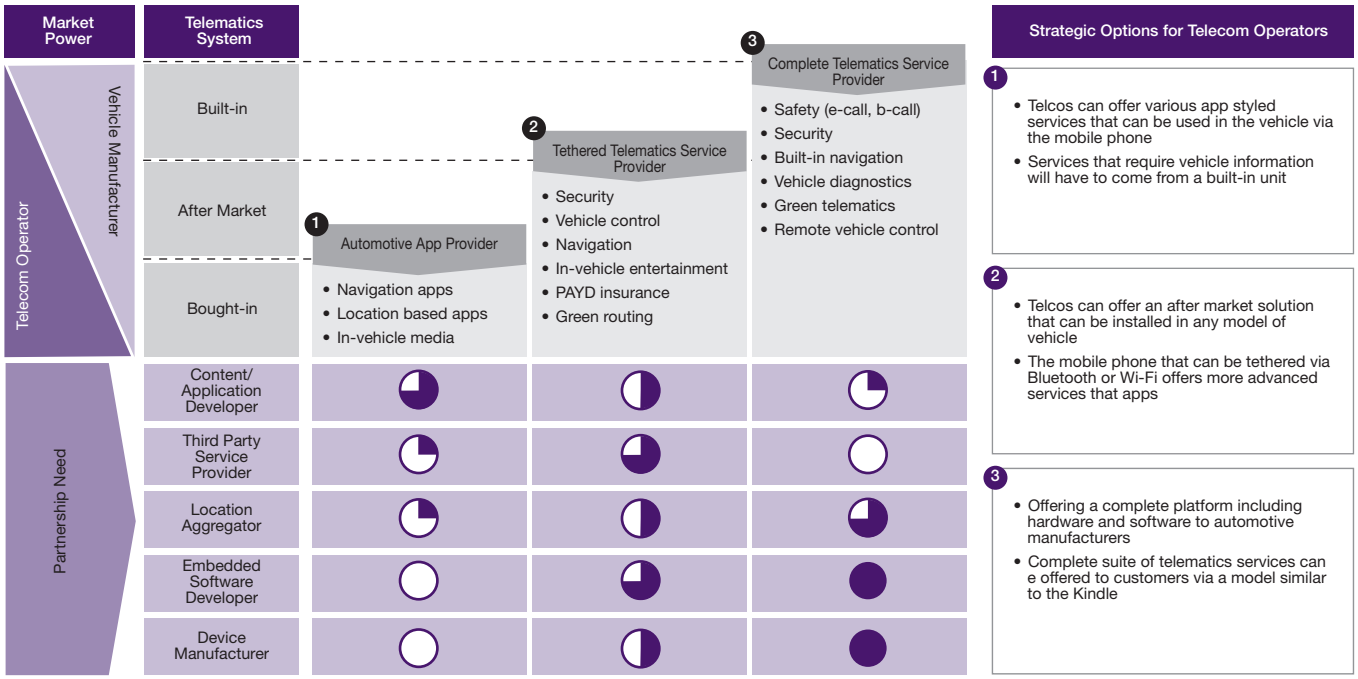
Telcos should aggressively move forward in the automotive sector in order to create solutions with which they can directly reach out to the consumer. This requires them to build services that can be deployed on existing consumer devices, with specific value additions to be used inside a vehicle such as navigation and concierge services. At the same time, they should also partner with a range of players including device vendors, vehicle manufacturers, application developers, embedded software providers, location aggregators and third-party telematics service providers in order to create professional solutions that they can co-market. They should begin with automotive applications, using their experience with mobile apps, and progressively move on to being a complete telematics service provider that offers a complete platform to car manufacturers

Figure 9: Telco Evolution as Service Provider in the Energy Space



Source: Capgemini TME Strategy Lab Analysis

Figure 10: Telco Evolution as Service Provider in the Automotive Space



Source: Capgemini TME Strategy Lab Analysis

(see Figure 10). Some operators are already taking early steps in this direction. Telecom Italia has created a joint venture with auto-component manufacturer Magneti Marelli aimed at developing innovative solutions that connect vehicles to cell phone networks and providing new on-board infomobility services.

Adopt differentiated go-to-market strategy for each sector

The telco approach towards launching services in new sectors will need to be differentiated on the basis of the nature of service. In sectors where telcos intend to create additional value rather than replace the incumbent, they should strive to work their way up the value chain through partnerships. This would require the telco to take a more collaborative approach and a willingness to work with industry players. On the other hand, in services where telcos will attempt to directly compete with incumbents, they should adopt a more aggressive and rapid approach in terms of going to the market and establishing a clear value proposition for their service. In such cases, telcos need to bear in mind that here they are attempting to supplant traditional players which will likely result in the incumbents responding with full force.

Adapt and assimilate change s required to organizational DNA

Traditionally, telcos have conceived, launched and operated new services in the telecoms space on their own. However, increasingly, as telcos look to new sectors for emerging opportunities, it becomes imperative for telcos to adopt a collaborative approach towards launching services. This could mean the creation of separate business units, in some cases. Some operators have already realized the need for organizational structures that are different and separate from their traditional telecoms units in order to expand into new sectors. Deutsche Telekom has launched three business segments in order to target opportunities in smart grid, smart vehicles and networked healthcare[30]. Telcos will need to ensure

30 Company website.

that such new segments are able to work independently with various existing business units of the company such as wholesale, B2B and retail. Moreover, such standalone units allow for faster response to market forces, since the pace of competition is likely to be significantly different in each sector, and is also likely to vary with what the telecoms sector has to offer.

For telcos in developed markets staring at the prospect of maturing telecom markets, the need to identify new revenue streams is adequately matched by the opportunities in new sectors. While the move into new sectors is likely to be challenging, going forward, it is safe to say that only those telcos that stay nimble and alert to such opportunity areas are likely to stand out from the competition.

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