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Digital Renewal

Addressing Transformational Challenges and the Monetization Conundrum

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Contents

1 Abstract

The Telecom, Media & Entertainment (TME) industry faces a series of challenges both in growing the top line by finding new sources of revenue growth and also increasing operational efficiency to enhance margins. These challenges, while not new, are increasing as a result of the continually evolving consumer demand, rapid technology developments, new business models, and increasing competition. The rise in data usage, fuelled by the proliferation of mobile devices such as smartphones and tablets, is exerting tremendous strain on the network of operators. In addition there is the challenge of operators to effectively monetize this rapidly growing data traffic. New business models and non-traditional competitors are also increasing competition in the industry. In order to effectively tackle these transformational challenges, telecom players have adopted a number of diverse measures aimed at renewing customer relationships, network infrastructure, operations, IT systems, and product management. We have assessed these responses here calling it Digital Renewal.

2 Introduction

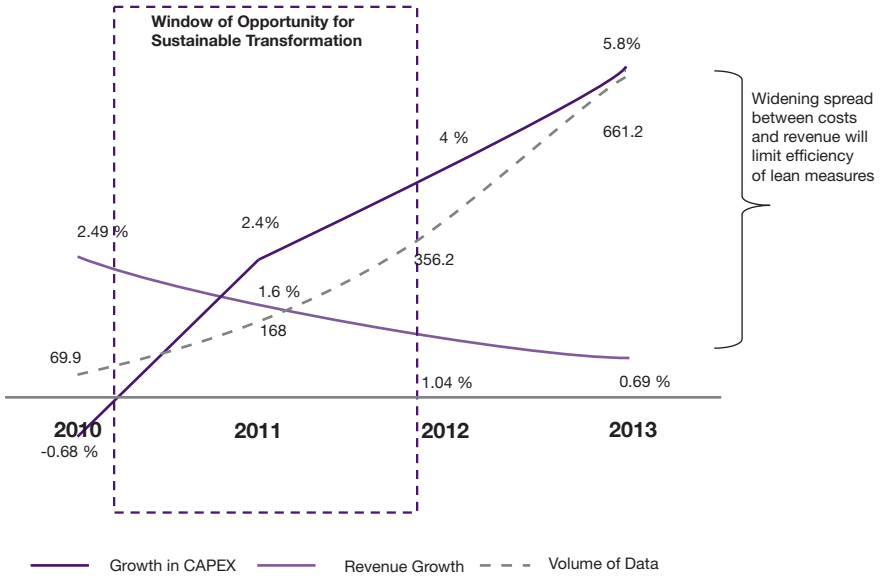
"Global mobile data traffic is expected to grow at a CAGR of 106% between 2010 and 2014"

Telecom operators are facing a complex series of challenges as they seek to grow the top line in an era of economic austerity and market slowdown. When combined with the competitive complexity and the ever-increasing demand for bandwidth, operators are adopting a number of measures so as to prosper. In this chapter we discuss these measures. First, we assess some of the unique challenges that are faced by telecom players.

Threat from All-You-Can-Eat Bundles

The increasing consumption of bandwidth hungry applications and the demand for higher speeds is resulting in an unprecedented surge in the amount of data traffic on networks. Global mobile data traffic is expected to grow at a Compound Annual Growth Rate (CAGR) of 106%[1] between 2010 and 2014. However, operators have not been able to successfully monetize this rise in data consumption. For example, at 66% of total traffic volume, mobile broadband dongles contribute only 5% to the revenues of Vodafone Europe. Whereas, at 23% of the total traffic, voice contributes a significant 73% to the operator's top line[2]. This trend can be primarily attributed to factors such as the growing usage of free online services which do not contribute to the operator's revenues and the increasing adoption of low priced, all-you-can-eat, bundled communications offerings.

Figure 1: Forecast of Mobile Service Revenue Growth in Western Europe (%), Global Telecom CAPEX Growth (%) and Volume of Network Traffic in



Source: Informa, Mobile Europe Revenue Forecasts, 2009; Cisco, *Cisco Visual Networking Index: Global Mobile Traffic Forecast Update*, 2009-2014; 2009 Infonetics Report: *Service Provider CAPEX to Bottom in 2010, Investments to Rise in 2011*, November 2009

1 Cisco Visual Networking Index: Global Mobile Data Forecast Update, 2009-2014.
2 Enders Analysis, *Mobile Data Economics: The Limit of Unlimited,* September 2010.

While we see mobile operators starting to change their pricing strategies to move away from all-you-can-eat bundles, if this trend continues, the growth in service revenues will not keep pace with the growth in network traffic and the resulting Capital Expenditure (CAPEX) commitment (see Figure 1) required to upgrade the capacity constrained mobile and fixed networks. As a result, in order to generate returns on the network investments required to maintain a high Quality of Service (QoS), operators need to innovate on the top line to monetize this network investment, while also enhancing operational efficiency by reducing costs and streamlining operations.

Threat from New Competitors

Another challenge, which poses a potential threat to operators, is the infringement of online players in the traditional telco territory. The recently announced Facebook-Skype alliance[3] which will enable Skype users to call and send SMS to their Facebook friends directly on their mobile phones and landlines has the potential to cannibalize voice and SMS revenues of operators.

While it is often easy to overstate the threat of these kinds of initiatives from non-traditional competitors, their global scale, all embracing nature, and network effect does represent a substantial threat if these kinds of services gain traction.

These types of transformational challenges, on top of the more traditional competitive and operational challenges, do require a new set of responses. In the next section we will discuss these responses in detail.

3 Company Website.

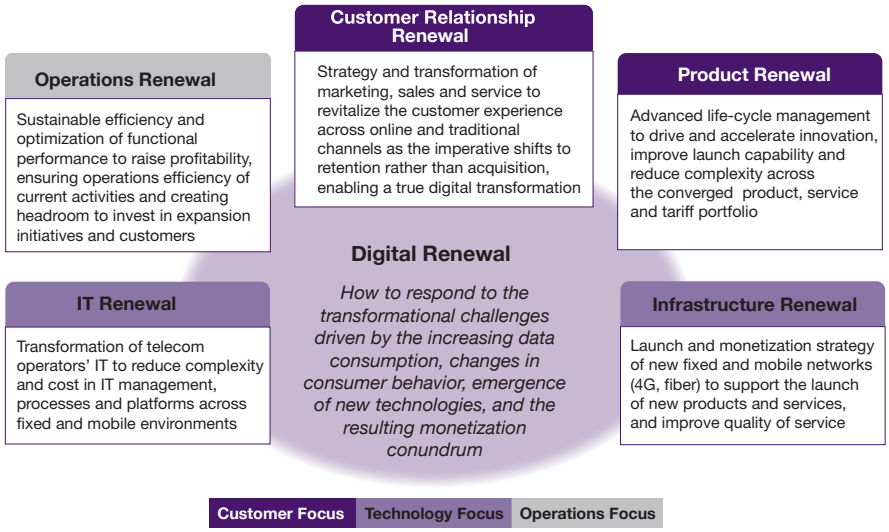
3 Digital Renewal: Key Priorities for TME Players

When assessing the range of response measures being adopted by telecom operators, it is possible to group them into five broad priority areas (see Figure 2):

- Enhancing customer relationship
- Upgrading infrastructure
- Simplifying IT
- Streamlining operations
- Improving product lifecycle management.

We have assessed these responses under the heading of Digital Renewal. In the subsequent subsections, we detail the five key elements of this approach.

Figure 2: Digital Renewal Approach of TME Players



Source: Capgemini Analysis

Customer Relationship Renewal

Key Issues

There are two broad themes under the heading of customer relationship renewal. The first of these is how to re-balance the acquisition and retention costs, and the associated approach in light of the shift towards retention and away from high volume customer acquisition. The second is to revitalize the customer experience (see Figure 3) through the improvement of the online experience in terms of both sales and service, and to improve the multi-channel experience so that customers are being offered a seamless experience across all channels. These twin challenges drive the key activities of operators in this area.

As part of the customer relationship renewal, the online channel strategy, online performance improvement, and multi-channel strategy seem to be the key priorities for TME players. In the subsequent subsection we detail these key focus areas.

Figure 3: Select Initiatives for Enhanced Customer Experience

Operator Measure	Description	Indicative Examples
Single Bill	Single bill for all services including fixed and mobile, free of cost	telenor
Simplified Invoice	Simplification of invoices so that charges are easy to understand for the customer	BT, Telefónica
Integrated Multi-channel Service Experience	Facilitate a consistent experience and seamless switch over across channels	O2
E-Shops	Web portal to drive online sales	telenor, orange
Social Media	Use of social media for proactive communication and resolving customer issues	at&t, vodafone
Chat-bots	Interactive automated online tool to address customer queries	T-Mobile, O2, verizon
Enhanced IVR	Personalized and intelligent IVR system, to reduce the volume of repeat calls	vodafone
Online Community / Web Forums	Community based portals for information dissemination and troubleshooting	NOKIA Connecting People, MOTOROLA, SAMSUNG

Source: Capgemini TME Strategy Lab Analysis; Company Websites

By 2013, online and online-influenced sales are expected to account for 62% of total US retail sales

Key Focus Areas

Online Channel Strategy

The online channel is emerging as the most efficient and cost effective customer touch point for TME players. In addition to affecting sales directly, the online channel also impacts offline retail sales. By 2013 online and online-influenced sales are expected to account for 62% of the total US retail sales[4]. From a service perspective, the online channel is not only increasing in demand from consumers but also is a cost effective means of post-sales support. When compared to call center technical support, the approximate cost per contact is nearly 92% cheaper for a virtual agent[5].

TME players are, therefore, developing their online channel strategy to use Web 2.0 and social media tools for driving marketing campaigns, enhancing sales, and optimizing customer service and support. Moreover, they need to identify and target the right customer segments by making their online proposition attractive and less complicated.

For example, having realized the importance of the online channel, operators such as SFR have put the Internet at the core of customer relationships. The share of SFR's online shop in the overall distribution increased threefold from 5% in Q1 2008 to 15% in Q1 2009[6]. Furthermore, the share of web in overall customer care doubled between Q1 2008 and Q1 2009 to reach nearly 42% at the end of Q1 2009[7].

Online Channel Performance Improvement

To enhance the customer experience, drive their top line, and reduce selling and service costs, operators are also taking measures to enhance the performance of their existing online marketing, sales, and service initiatives. A focus needs to be on measures such as optimizing the online channel for improved cross- and up-selling, achieving higher conversion rates, reducing post-order revenue losses through stringent credit checks, improving supply chain and inventory management, and analyzing online consumer behavior.

4 Forrester: *US Online Retail Forecast, 2008 to 2013*, February 2009.
5 Forrester: *It's Time To Give Virtual Agents Another Look*, March 2010.
6 Company Presentation.
7 Company Presentation.

Some operators have been able to successfully enhance the performance of their online channel through initiatives such as web exclusive offers, sales driven search engines[8], high shop visibility[9], and robust fraud policy to achieve significant benefits[10]. The online channel of a European based leading integrated telco was significantly underperforming compared to industry benchmarks with extremely low conversion rates. In order to address this challenge, the operator formulated a strategy focused primarily on selling to existing customers. The telco created an excellent experience throughout the digital customer lifecycle always guaranteeing availability, simplicity, and relevance. This enabled the operator to not only achieve online sales growth as planned but also benefit from the superior profitability of the online channel[11]. A European incumbent telco, on the other hand, significantly improved its online order to sales performance by reducing leakages arising due to faulty payments. By developing a stringent fraud detection and credit check policy, the operator aimed to achieve revenue improvement of more than €15 million in 12 months from implementation with retained benefits in future years[12].

TME players need to carefully assess the maturity of their existing online marketing sales and service system, identify key areas of improvement, and implement an 'online mindset' throughout their organization.

Multi-Channel Strategy

The evolution in consumer behavior with an increasing appetite for technology, strong desire for cross-channel flexibility, and demand for personalization, is the key driver for TME players to strengthen their multi-channel experience. For each transaction, customers seek the channel that provides them with the best experience. Therefore, to enable a seamless experience across multiple touch points such as retail stores, online portal, and call centers, players need to provide a balanced attention to all channels.

When compared to pioneers such as Dell, Argos, Apple, and Expedia, operators have not only been late in the adoption of an integrated multi-channel approach, but also have had a weaker online experience[13]. Even with the significance of the online channel increasing, other non-online channels including retail stores and telesales are still expected to account for the bulk (70%) of global retail sales in 2016[14]. This makes it imperative for TME players to define and formulate a multi-channel strategy in order to maintain a 360 degree view of the customer and balance sales, customer care, and retention across channels.

It is also important that players balance Subscriber Acquisition Cost (SAC) and Subscriber Retention Cost (SRC) across channels in order to maximize customer lifetime value. Furthermore, they need to ensure that organizational structures and incentives are aligned to drive maximum value across all channels.

Some operators such as T-Mobile, Orange, and Vodafone have already embarked on the journey to deliver a unified multi-channel experience to their customers[15]. For instance, T-Mobile offers its customers personalized multi-channel self-service over a mobile portal, SMS, or a voice portal with touch-tone (DTMF[16]) or speech recognition[17]. T-Mobile Germany launched a technology driven channel integration program to improve profitability and customer service. As a result, the operator witnessed a 3% increase of Average Revenue Per User (ARPU) in four months and a 25% increase in customer satisfaction[18].

8 The search feature on the portal is optimized so that customers can easily search and buy products.
9 The portal is designed such that customers can easily locate and access the e-shop.
10 Capgemini Analysis.
11 Capgemini Analysis.
12 Capgemini Analysis.
13 Capgemini Analysis; Forrester, *Best and Worse Cross-Channel Design*, 2007-2009.
14 Capgemini Analysis; Datamonitor: Global Internet and Catalog Retail Report, February 2009.
15 Company Websites.
16 Dual Tone Multi Frequency.
17 Voxeo: *Unified Self-Service: Delivering on the Value of Multi-channel Customer Interactions*, March 2010.
18 Capgemini Analysis; Cisco IBSG Survey, *Mobile E-Channel Experience: A Multi-Channel perspective; Cisco Multi-Channelling at T-Mobile Germany*, Tieto Presentation, Thomas Villinger, HET VCN Congress: NAARdeTOP, November 2007.

Several operators are exploring brand stretch across new growth areas such as energy, healthcare, and automotive sectors

Product Renewal

Key Issues

In order to increase competitiveness, operators are aiming for continual improvement on how they manage their portfolio of products and services. Not only is there a need to reduce time-to-market for new products but also an increased drive to simplify and rationalize the product portfolio. This will balance the organizational focus and investment in new versus existing products, including driving innovation.

To overcome these challenges operators are focusing on three initiatives: product portfolio management, product launch management, and product rationalization.

Key Focus Areas

Product Portfolio Strategy

Selecting the right products to launch and tracking their performance is one of the most critical challenges for TME players. Approximately 80% of new products fail within the first three years after introduction and many more fail to be of interest to consumers[19]. This can be attributed to the fact that a decision to develop and launch a product is often defined within organization silos, customer involvement is limited and happens only in the later stages, and product performance is not evaluated on a regular basis. Moreover, key tools, such as market sizing, segmentation, and customer purchase criteria, required to effectively formulate a new product strategy are not always used effectively. This drives players to re-define their product development strategy in such a way that it covers all key aspects impacting the product portfolio performance, including more efficient in-life product management.

A European based global operator presents a good example of a TME player that was able to successfully accelerate new product development by promoting collaborative working and intense brainstorming. In the analysis phase, the operator organized a series of facilitated events, bringing together all the right people from business and technology such as decision makers, subject matter experts, and experienced facilitators, to enable faster decisions and increased ownership. This accelerated the analysis phase of new product development from five to two months[20].

In addition, in order to offset the declining growth rate of traditional services and gain incremental revenues, TME players are increasingly exploring brand stretch across new product and service propositions. For example, the launch of application stores, diversification into content services, smart metering solutions, and mobile payments are some areas which have already witnessed activity from telecom operators. There are several success stories as well, such as that of Deutsche Telekom which is betting big on innovative services and sectors. The company expects revenues from its "intelligent networks" growth area for energy, healthcare, media, and automotive sectors to reach around €1 billion by 2015[21].

Product Launch Management

Product launches are frequently plagued by delays due to disparate product data, and legacy billing and CRM systems. In addition, limited senior stakeholder involvement and the lack of structured and a cross-functional project management approach results in launch inefficiencies. While entirely new offerings can take as long as 12 months or more to launch, even simple rate changes can take eight to twelve weeks[22]. Moreover, product development and the management of changes is often slow and inefficient because product information is stored in multiple places and formats. Therefore, in order to ensure a successful

19 Capgemini Analysis.
20 Capgemini Analysis
21 Deutsche Telekom Press Release.
22 Capgemini Analysis.

on-time and on-budget launch TME players need to adopt a proven program management approach and tools to accelerate time-to-market.

Product Rationalization

Product rationalization is a wealth accretive activity and is one of the hallmarks of competitive TME players. In most cases, a majority of subscribers are served by a small percentage of the total product portfolio resulting in reduced organizational efficiency and increased operational costs. There also exists a long tail of products and tariffs with few or no subscribers. Moreover, the presence of duplicated tariffs driven by legacy product catalogs structure, increases complexity. The key challenge is not only to identify unprofitable products, but also to effectively kill them. Achieving and sustaining a lean product portfolio of competitive, profitable, and innovative products through rationalization of products and tariffs could increase efficiency across business and technology areas.

Rationalization projects carried out by a global mobile operator demonstrate the significant value that can be delivered through such initiatives. Driven by the reduced ability to execute promotions, Vodafone Italy reduced its prepaid tariffs from 55 to 37. This resulted in the migration of 10 million SIMs[23] from the legacy tariffs to the new ones, and had more than a €15 million net impact on EBITDA[24] in the 2008 / 2009 fiscal year.

Infrastructure Renewal

Key Issues

Technology choices are becoming more and more complex as operators seek to balance the need to deploy high capacity bandwidth with the challenge of generating a Return on Investment (ROI) for such deployments. Fiber network rollout, Long Term Evolution (LTE) deployment, and network capacity upgrades all present competing demands for investment with a complex business case. With the emergence of all inclusive pricing for data services it becomes increasingly difficult to monetize these investments. At the same time new services such as application stores do not necessarily generate significant incremental revenue for operators yet bandwidth hungry devices put pressure on networks.

To keep pace with this rising bandwidth requirement and the rapid technology innovations in network and IT infrastructure, it is important for operators to future-proof their delivery networks and data centers. Mobile network traffic in Western Europe is expected to increase at 111% CAGR, between 2010 and 2013, from 69.9 Zettabyte per month to 661.2[25]. In order to ensure that service quality is not compromised, and to earn incremental revenues from high bandwidth services of the future, operators need to focus on rolling out the next generation networks. The deployment of such networks is also an important factor in driving down the cost of capacity provision and increasing efficiency which must feed into the business case.

Network deployment takes place against a backdrop of governmental and regulatory pressures to develop national infrastructure and is further impacted by the debate on net neutrality. Making the appropriate technology portfolio choices is, therefore, an essential step.

Moreover, to diversify their offerings beyond traditional services and leverage the potential top line benefits from systems infrastructure renewal, operators can consider the benefits of adding cloud service offers to their portfolio.

23 Subscriber Identity Module.
24 Earnings Before Interest Taxes Depreciation and Amortization.
25 Cisco Visual Networking Index: Global Mobile Traffic Forecast Update, 2009-2014,2009.

Key Focus Areas

Advanced Networks

The deployment of advanced networks can help operators meet the rising consumer demand for speed, reduce churn, and enhance ARPU. It can also help them reduce operating costs and improve environmental sustainability. For example, Sprint plans to invest between US$4 to 5 billion over the next three to five years in network upgrades which is expected to create cost savings from reduced energy costs, lower roaming expenses, and improved capital efficiencies[26].

Superior networks will not only enhance service experience, thereby increasing customer stickiness, but will also enable operators to earn higher revenues. The 4G network of TeliaSonera enabled Swedish TV stations to broadcast the royal wedding of the Crown Princess Victoria and Daniel Westling live[27]. This experience was not possible to imitate on the existing 3G networks of other operators in Sweden. The benefits from a revenue perspective can be illustrated through recent studies which have found that for operators having both legacy and fiber based broadband, ARPU from the fiber services is typically 20-30% higher than that of legacy broadband[28].

For operators, upgrading their existing networks, fixed or mobile, is not a question of if, but when. The timing of the upgrade largely depends on factors such as current and expected market demand for bandwidth and the ability of the existing network to serve this demand. While FTTx[29] and DOCSIS[30] 3.0 deployments are the technologies of choice for fixed players, mobile operators can upgrade their networks to 4G.

Cloud Computing

Operators have massive internal IT infrastructure as well as multiple large data centers through which they deliver enterprise services. Cloud computing can not only help telecom service providers optimize their internal systems but also enable them to offer cloud services by leveraging their strengths such as data center capabilities, managed service experience, and a global IP backbone. Verizon has leveraged the experience gained from virtualizing 2,100 of its internal servers for achieving internal efficiencies, to offer cloud deployment and consulting services to its enterprise customers[31]. Several other operators such as BT, AT&T, and Orange have also made an entry into cloud computing.

In order to successfully tap the cloud computing opportunity, it is important that operators carefully evaluate different cloud computing service segments within their market, identify the value proposition and create a roadmap for services, forge the right partnerships with technology enablers, and identify relevant sales channels.

IT Renewal

Key Issues

Telecom operators have built up expensive legacy IT systems over many years which have now become prohibitively costly to maintain. The cost of deployment is clearly one part of the equation, but operators are increasingly focused on reducing the total cost of ownership (TCO). The complexity of these legacy IT estates also creates challenges on the speed of deployment of new services which is increasingly important when competing with highly agile online entities.

26 Company Websites.
27 Company Website.
28 Yankee Group, *Next Generation Access Services: Analysis of Portfolios,* February 2009.
29 Fiber to the x: Where x can stand for Home, Curb, or Node.
30 Data Over Cable Service Interface Specification.
31 Verizon Case Study.

There is now a trend to simplify the IT estate and focus on the deployment of more standardized solutions which are implemented "out of the box" with minimal customization. This is linked to a simplification of business processes whereby best practice—often eTOM[32] based—industry standard processes are being selected at the expense of highly customized processes which, in practice, offer little differentiation in a highly mature industry.

Key Focus Areas

Addressing the given key issues, the need for most operators is a radical IT and business transformation to reduce TCO, to have a single consistent view of the customer, and accelerate time to market for new services. This can be achieved by focusing on commercial off-the-shelf solutions (COTS) based on standard business processes. Operators are increasingly adopting COTS from vendors such as Amdocs, Oracle, and Comverse for billing and ERP. However, the biggest challenge ahead for telcos will be to ensure transformation success, as only one out of three[33] IT transformations is successful in delivering within time and budget as they lack the necessary alignment and commitment. In order to successfully renew their IT systems, operators need to strive for a change in organization, business processes, and IT in an aligned manner.

Only one out of three IT transformations is successful in delivering within time and budget

Operational Renewal

Key issues

The pressure on TME players' margins due to slower revenue growth, increasing costs, and fierce competition has prompted several operators to embark on cost cutting programs. The challenge is to move from short-term cost cutting to creating sustainably efficient organizations and optimize functional performance in order to raise profitability. This would ensure that not only current activities are efficient, but also enable headroom to invest in new business expansion. Three example areas require attention: infrastructure sharing and outsourcing, sustainable efficiency, and environmental sustainability.

Key Focus Areas

Infrastructure sharing and outsourcing

Network infrastructure sharing and outsourcing all or part of network related operations is a key strategic option for operators to reduce costs and free up vital resources. It is expected that by the end of 2010, 60% of the world's wireless operators and 80% of the emerging market operators will have some form of network-outsourcing contract[34]. As operators rollout new networks, share active and passive infrastructure, outsource network management functions, and share and outsource network backhaul, this will not only help them save costs, but will also result in faster rollout speeds, broader coverage, and reduce the time-to-market for new services.

Network sharing and outsourcing is becoming a key priority for operators to enhance operational efficiencies and reduce costs. Leading global operators such as Orange, Vodafone, and TeliaSonera have all outsourced network operations in order to develop lean business models[35]. Similarly, in both emerging and developed markets, operators such as 3 UK, T-Mobile, and Bharti have forged network sharing deals[36].

Sustainable Efficiency

Today, TME players operate in an increasingly complex environment with a multitude of services, diverse geographical footprint, and numerous support systems. This has resulted in enlarged organizations, increased process complexity, and multi-layered technology platforms, all designed to meet the

32 *Enhanced Telecom Operations Map,* published by the TM Forum, it is the most widely used and accepted standard for business processes in the telecommunications industry.
33 Capgemini Analysis; Standish Group as quoted in the July Computer Bulletin from the BCS 2009.
34 The International Communications Project, Issue 12, Managed Services Partnering.
35 Company Websites.
36 Company Websites.

growing needs of consumers. Due to this, the profitability of operators has also suffered. The average EBITDA margin of major European operators[37] has witnessed a fall of nearly 12% between 2005 and 2009. Operators, therefore, require a step change in operational efficiency in order to remain profitable and competitive.

Sustainable efficiency is a holistic approach to drive value and reduce costs across the organization. In order to implement it, a behavioral change is required at the heart of the transformation and a change in the way employees and employers approach, plan, and execute their work. This lean thinking can ensure sustainability and continuous improvement at every level. TME players can achieve significant benefits by holistically revisiting their organizational structures, operating models, and processes to remove waste and balance resources in both the front- and back-office operations. However, players need to keep in mind that implementing a truly sustainable operational excellence culture demands time and should not be viewed as a quick fix.

Green Telco

Operational renewal measures should be aimed at not only saving costs but also making a meaningful contribution towards the environment and benefiting from the corresponding goodwill. Even customer decisions today are driven by environmental friendliness and sustainability. Many customers are increasingly opting for online or e-bills over paper bills. Therefore, deploying focused initiatives around improving cooling efficiencies, reducing energy consumption, and implementing low carbon programs to realize tangible savings, should be the key priority for operators.

Average EBITDA margin of major European operators has witnessed a fall of nearly 12% between 2005 and 2009

Some operators are already deploying focused initiatives such as low carbon programs and the reduction of energy usage for sustainable cost reduction. BT has achieved a 43% global carbon intensity reduction through initiatives such as sourcing 41% of UK energy requirement from renewable sources and adopting a global energy savings campaign[38]. In another example, Vodafone has implemented measures aimed at reducing energy usage and its associated costs in its operations across multiple locations. The company has deployed initiatives to improve cooling, modernize its network equipment, and reduce diesel usage[39].

In conclusion, the Digital Renewal responses of TME players enable them to effectively address their most pressing challenges. By focusing on the five key priorities of this approach, players can enhance customer experience, develop a robust product lifecycle management strategy, future proof their network, standardize IT systems, and achieve operational efficiency.

37 Belgacom SA; BT Group plc; Deutsche Telekom AG; France Telecom SA; Koninklijke KPN N.V.; Telecom Italia SpA; Telefonica SA; Telenor ASA; TeliaSonera AB; Vodafone Group plc.
38 Corporate Responsibility, *The BT story on Carbon Reduction,* April 2010.
39 Company Website.

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