

IT Renewal

A Business Transformation

Telecom & Media Insights

Issue 61

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1 Abstract

Operators across the world are increasingly realizing the imperative of transforming their IT systems. Driven by the need to focus on new products and services, while countering increased competition from Internet players, operators are looking to ensure their IT systems are in sync with the need of the hour. Key factors driving this change include a renewed push from telcos to cut down on their time-to-market while cutting down on their costs. Telcos will have to bear in mind that a successful IT transformation is the result of the coming together of a variety of elements from the business and IT side of operations. In doing so, the first step is to identify and understand the building blocks of a business transformation. Thereon, a strong understanding of the key success factors of a transformation program completes the early steps towards creating a large-scale successful IT transformation.

Convergence of services and networks is hastening the need for upgrading IT systems

2 Rationale for IT Transformation

Operators are increasingly looking to launch new services for driving revenues while optimizing current systems in order to reduce their cost structure.

The need to launch new services has a direct impact on operations and IT infrastructure as operators need to upgrade their IT systems for supporting an expanded service portfolio. In order to address these growing requirements, operators are launching comprehensive renewal transformation programs that involve a shift from the current bespoke processes¹ to standardized processes supported by packaged solutions and out-of-the-box IT implementations.

In this section we discuss the reasons why operators are launching IT renewal programs.

Operators are demanding a faster time-to-market

Telcos are under constant pressure from fast-moving Internet players that are not only threatening their core revenue streams, but are also doing it in a fundamentally different manner. We see this in how telcos have traditionally developed product features. Internet players have perfected an approach where they first release products in beta, and then incrementally and rapidly add product features to it. This approach helps them incorporate user feedback rapidly back into the system. For instance, Google's most popular services including Gmail and Google Talk had the beta label for over five years, during which time Google made multiple rapid iterations of product features, while still having a strong base product available to consumers². On the other hand, telco product testing and launch typically takes months and product iterations subsequent to launch are usually few. This is changing in recent times. For instance, Telefónica, which acquired social networking site Tuenti in August 2010, rapidly launched a low-cost invitation-only Mobile Virtual Network Operator (MVNO) using the brand by December 2010³. The need for rapid turnaround in terms of launching services is putting increasing pressure on IT systems.

Reducing costs is a high priority area for telcos

Another major challenge for telecom operators is coping with the rising cost of maintaining IT systems. In comparison to other sectors, players in the telecom sector already spend a significant amount on information technology (see Figure 1). Global telco spend on IT systems is estimated to increase from around \$71 billion in 2008 to over \$86 billion by 2014⁴. Such rising costs of IT are forcing operators to take a closer look at ways and means to control it.

Growing costs of operations are forcing operators to look at new models involving infrastructure sharing and network outsourcing. Multiple telcos have also initiated cost rationalization programs in order to ensure that they use the recent financial slowdown as a good driver for removing superfluous costs.

Proliferation of multiple systems and platforms is hindering growth

Over the years, telco IT systems have grown into multiple disparate platforms for a variety of reasons. Most major telecom operators have grown to their current market position after a series of mergers and acquisitions. Each such transaction

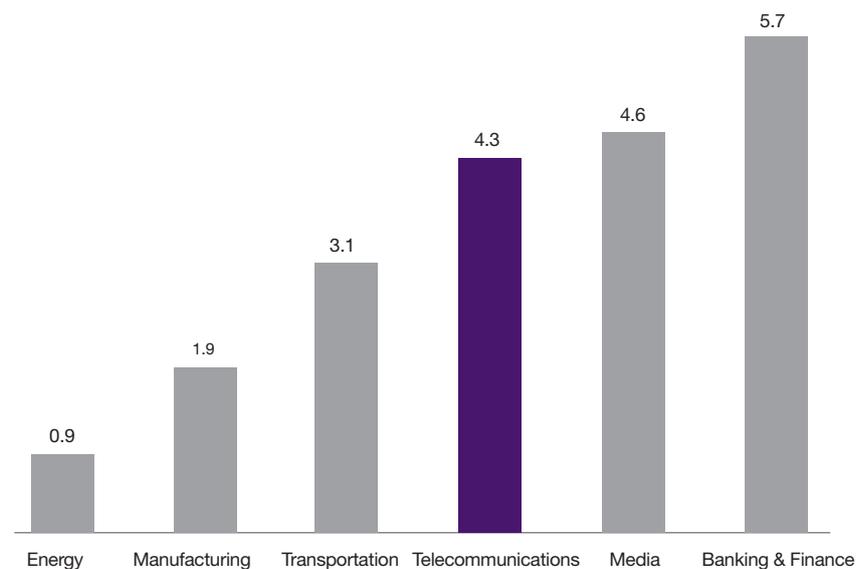
¹ Bespoke Processes: Home grown processes developed by operators not based on any industry standard.

² PC World, *Google Removes 'Beta' Label from Gmail, Calendar, Other Services*, July 2009.

³ Telecom Paper, *Telefónica's Tuenti launches MVNO in Spain*, December 2010.

⁴ Gartner, *Forecast: Enterprise IT Spending by Vertical Industry Market Worldwide, 4Q10 Update*, 2010.

Figure 1: IT Spend as Percentage of Revenue, Select Industry Verticals, 2010, Global



Source: Gartner, *IT Metrics: IT Spending and Staffing Report, 2010*

brings with it its own set of existing IT platforms that are rarely integrated back into the parent company's IT systems. This results in an operator running several versions of the same system within the organization. Similarly, many product lines within an operator typically ran in a silo fashion, implementing their own IT systems that rarely integrated seamlessly with other product lines. This also led to a situation where multiple IT systems began to co-exist and were developed independently.

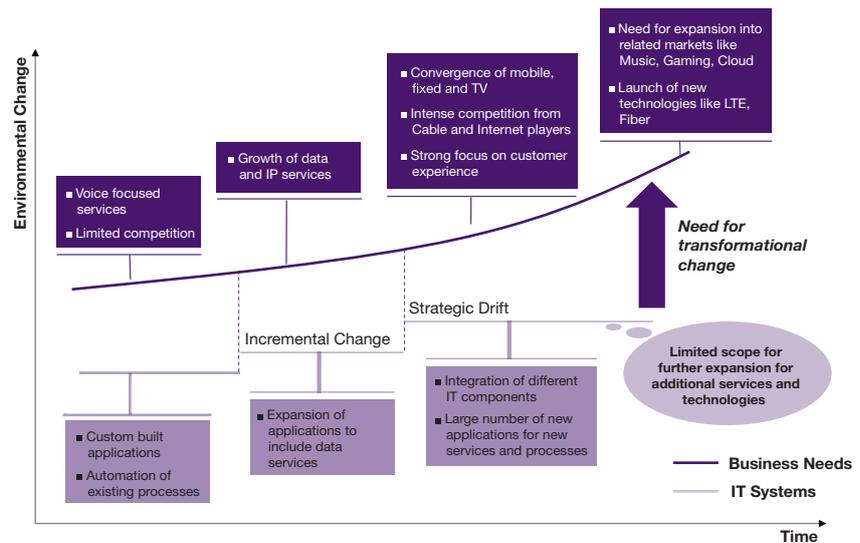
Another problem leading to the fragmented nature of IT systems is the lack of maturity in commercial off-the-shelf solutions (COTS). COTS solutions traditionally allowed only a limited amount of customization which did not permit operators to fully benefit by installing these systems. Moreover, process standardization was a significant challenge for telecom operators given the lack of established and accepted industry standards for IT architectures. Such proliferation has resulted in IT systems becoming unwieldy in time.

IT systems have not kept pace with the evolving business environment

In a scenario where most developed markets are nearing saturation, the industry is seeing a steady move towards consolidation and a renewed push towards improving the customer experience. Furthermore, with the increasing role of customer experience in retaining customers, operators are now exploring new channels for customer care. The growing adoption of the Internet is driving operators to launch Web-based self-service channels to augment the existing channels such as contact centers and retail stores.

While the business environment is seeing a substantial shift, the operations and underlying IT systems and processes have seldom been upgraded at the same pace. Considering the broad environmental changes in recent years, most operators are fast reaching the limits in terms of time-to-market and total cost of ownership of integrating new services, channels, processes and/or system stacks. This often results in a misalignment between the business needs and IT systems and opens a competitiveness gap for the operators (see Figure 2).

Figure 2: Misaligned Evolution of Business Environment and IT



Source: Capgemini Analysis

There is a growing need to improve the customer experience

A growing challenge for telcos is to ensure a consistently high level of customization across all customer experience channels. With growing customer touch points, operators are looking to create a uniformly rich customer experience. For instance, in the US, AT&T allows consumers to control data plan subscription to their iPads directly through an application on their device. Operators are looking to create such frictionless processes which therefore require highly flexible IT systems.

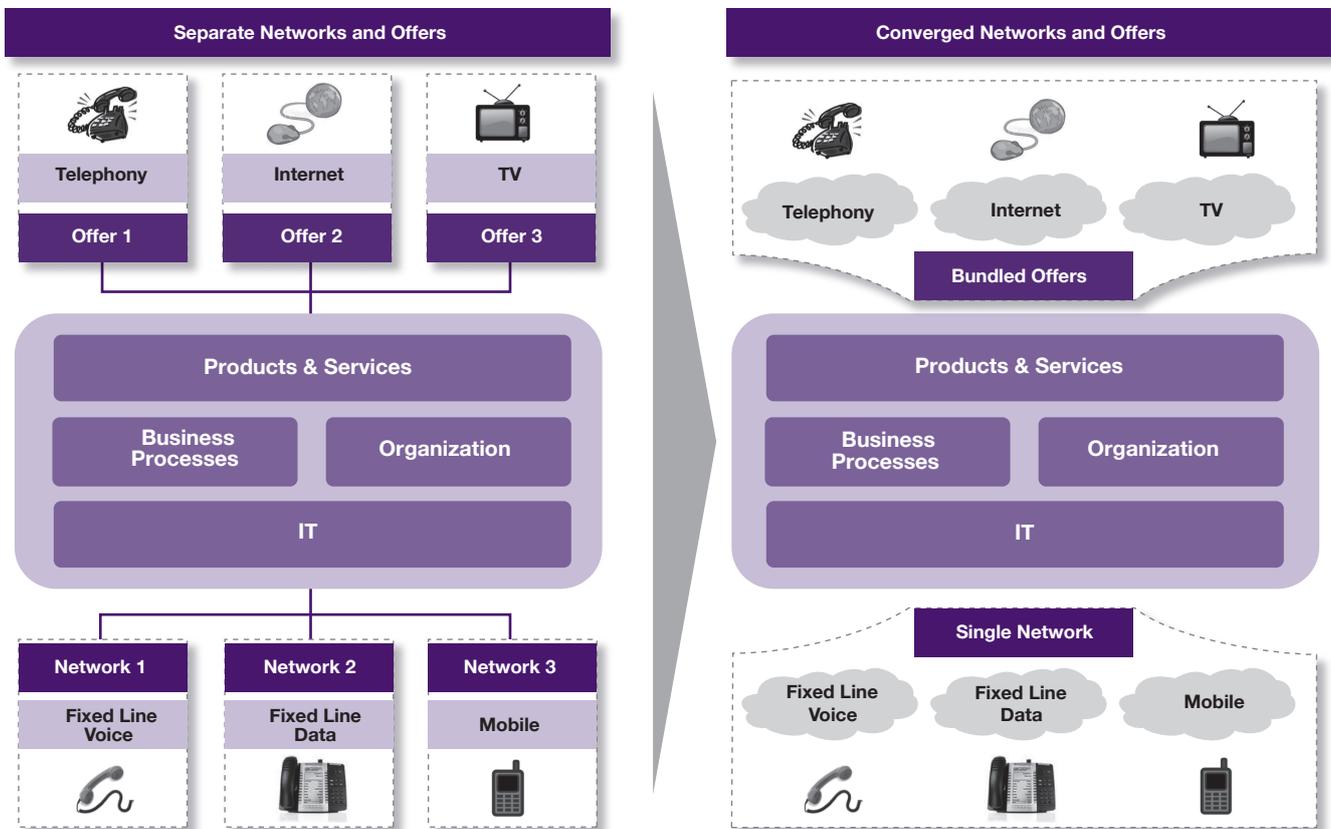
Convergence of networks and services is driving the need for a new breed of IT systems

Of late, there has been an increasing trend towards convergence of service offerings where telcos deliver multiple services over the same access connection. Customers appear to be increasingly comfortable in having a single operator for voice, Internet and TV services. For instance, Virgin Media reported that more than 60% of its cable customers received broadband Internet, television and fixed line telephony services in 2009⁵.

Moreover, operators are now moving towards a single network for all services. The emergence of Next Generation Network (NGN) is allowing operators to converge their mobile and fixed line networks. Such convergence of different networks enables operators to reduce the cost of maintenance, while providing enough flexibility to offer a wide array of services.

⁵ Virgin Media Annual Report 2009.

Figure 3: Convergence of Networks and Offers



Source: Capgemini Analysis

While operators are addressing the need for network and service convergence, most operators are not structurally transforming their business support systems to respond effectively to these changes. Instead, they are showing a preference for evolutionary and focused tactics. Most telcos have typically launched new channels, partners, products or services by adding new IT stacks “on top” of legacy billing and customer care systems without real efforts at portfolio cleaning.

Such initiatives are increasing the complexity in managing the existing processes and systems of an operator. This is resulting in compelling operators towards IT transformation in order to bring their IT systems up-to-date with the rapidly changing operational requirements (see Figure 3).

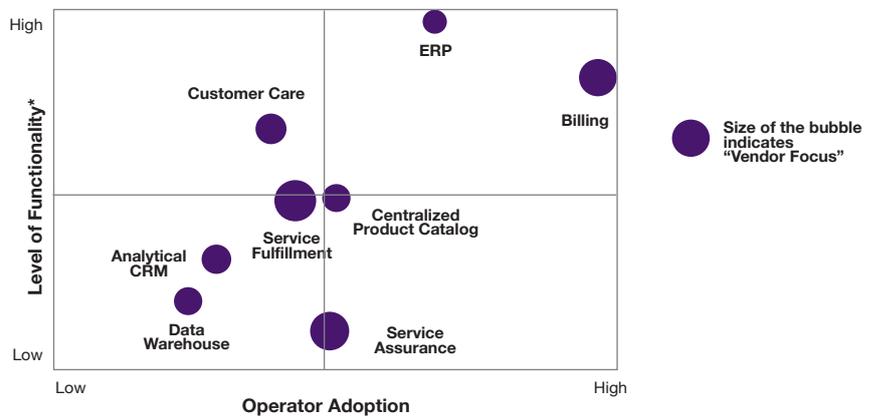
The mature state of COTS solutions offers a strong case for their usage

A number of operators including American major AT&T, which relied on custom-made IT systems, have traditionally faced high costs for IT development and maintenance⁶. With margins coming under pressure, operators are now looking to transform their IT systems from current custom-made solutions to lower cost systems. COTS solutions offer significant cost advantages over custom-made solutions, due to research, development and maintenance costs being spread over a large number of implementations.

⁶ Billing and OSS World, *Case Study: AT&T's Migration to Service-Oriented Architecture*, 2005.

Large vendors such as Amdocs, Oracle and Comverse are ensuring a strong supply of COTS solutions in the market. Although the maturity of different business support systems/operations support systems (BSS/OSS) components vary, some of them such as billing and Enterprise Resource Planning (ERP) have reached a high degree of maturity in terms of the level of functionality provided by different vendors and adoption by various operators (see Figure 4). For instance, billing solutions from various vendors today cover all aspects of rating, mediation and partner settlement.

Figure 4: Maturity Matrix for COTS Solutions



* Level of functionality: Indicative of functionality provided by Amdocs, Oracle, Comverse, Convergys, SAP and Ericsson products
 Source: Capgemini Analysis; Company Websites; TM Forum Website

However, the market still lacks the availability of complete suites of various BSS/OSS components from a single vendor, driving operators to prefer best-of-breed solutions that combine components from different vendors. Consequently, some vendors including Amdocs and Oracle are now focusing on developing end-to-end solutions providing all BSS and OSS components required by the operators.

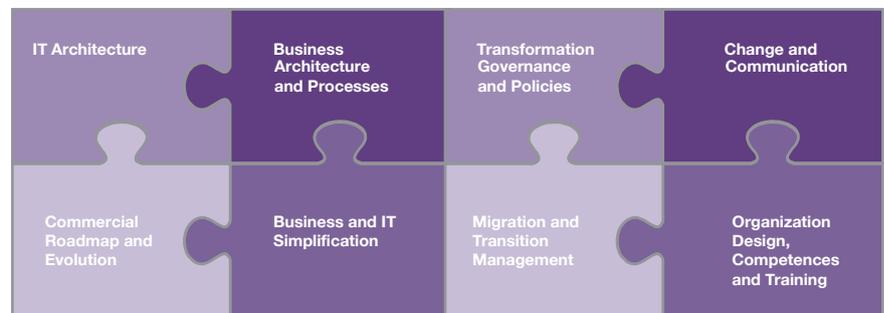
Considering these evolutions, most operators are embarking on IT transformation programs. However, in these implementations the main challenge is to create a comprehensive business plan and business case, besides addressing the IT complexity that is required to manage in the course of the transformation.

In the next section, we take a look at the building blocks of a successful IT transformation program.

3 Building Blocks of a Successful Business Transformation

In order to respond to the rapid environmental changes in the industry, operators need to revisit their IT strategy. The changing business environment requires operators to make key changes in their processes and IT architecture. In this section we discuss the main building blocks of an IT renewal program (see Figure 5).

Figure 5: Building Blocks of Digital Transformation



Source: Capgemini TME Strategy Lab Analysis

IT architecture and solution implementation

IT architecture and solution implementation is an important component in the assessment of the readiness for a transformation. It provides the key interaction point and alignment with the roadmap of the IT integrator. Key readiness aspects that need to be in place in order to perform an efficient and effective IT release process need to be defined beforehand. This includes synchronized roadmaps between business and IT, where each step in the IT transformation phase generates true business value. Furthermore the process should ensure that all the stakeholders are aligned on a common platform.

Business architecture and processes

The rationale behind the creation of the business architecture and processes stream is the need to prioritize the area where the bulk of the delivery work will need to be performed during the transformation. The different elements that need to be designed are: scoping and defining the business requirements approach, business process re-engineering based upon the best-of-suite processes, business data management and metrics and Key Performance Indicators (KPIs).

Transformation governance and policies

The need for business and IT alignment as well as the integration of the solution editor and/or solution integrator within the operator requires a specific focus on the transformation governance and policies. These include organization model and business/IT arbitration.

The right set-up of the transformation governance and policies is critical for a successful transformation. It requires not only looking at the governance but also involves setting up the necessary governance structures, decision making processes, policies and monitoring of the transformation progress and realized benefits. It describes the structure, processes, organization, planning and

Advancements in IT systems have not kept pace with changes in business environment

transformation KPIs. The whole transformation is then phased and steered through the design and follow-up of a global transformation roadmap aligning all the streams in order to reach the right level of transformation readiness. The important aspect here is that the roadmap must combine and synchronize both business and IT roadmaps. At each phase there should be a clear deployment that generates business value.

The other key component of the transformation governance is arbitration. It needs to guarantee timely and effective business decisions, specifically in the context of a best-of-suite driven IT solution implementation. Arbitration must be done after multi-dimension analysis in order to reconcile the short- and long-term views, internal and external benefits and financial performance. By having the arbitration process running in parallel to all business requirement gathering activities, a fitness for use delivery is guaranteed while managing out-of-the-box compliance at the same time.

Change and communication

Change and communication is crucial in generating the necessary buy-in, motivation and mobilization amongst the different stakeholders in order to achieve common appreciation of goals and commitment in working towards it. It also underpins the transition of an organization from the current state to target state aiming at empowering employees to accept and embrace changes in their current business environment. Within this stream it will be crucial to set up a change and communication plan that will identify all the necessary actions and measures to ensure change readiness, involvement, commitment and acceptance by all the different stakeholders, both business as well as IT.

Organization design, competencies and training

Changes to business processes will result in the need to learn new process sequences and tasks, and potentially new skills, roles, responsibilities and new ways of working within the organization. Competency development should fulfill these needs all along the transformation and should be considered up-front. The training plan should describe the training approach and the training program required to provide operator staff with the skills to guide the IT transformation. This program must be closely aligned to the To-Be organization's design and culture, to the related processes and procedures, as well as to the new roles, tasks, responsibilities.

Migration and transition management

Three migration scenarios essentially arise in any large transformation. In the first scenario, enterprises build the new IT infrastructure by prioritizing urgent evolutions, and progressively evolve to support business and technology/network evolution. In the second scenario, which represents a turnkey solution with a "big bang" migration, enterprises build the new IT and migrate in "one shot" the existing business to the new environment and then enhance the system. In the third scenario, which is essentially a turnkey solution with incremental migration, enterprises build the new IT beside the legacy systems in order to provide a new, robust, end-to-end solution, designed for innovation and business strategy and later on migrate existing business according to priorities.

Once a decision is made on the migration strategy, both business and IT aspects have to be detailed and synchronized. All transformation dimensions have to be re-considered, planned and tested in such an exercise.

Business and IT simplification

Business and IT simplification is a crucial element in a successful transformation program. Business and IT simplification guidelines and decisions should be based upon the effects of the overall business case. It encompasses simplification of the organization, products, channels, communication methods, terminologies, and

The need to create a uniformly rich customer experience is a key driver for IT system transformation

processes from hypotheses testing over design and planning to execution and validation.

A key element while planning the IT renewal program is to simplify the IT architecture through application rationalization and integration of different applications for data consistency. Software application rationalization can help operators achieve significant reduction in the overall IT costs as it results in lower development and maintenance costs. A simplified IT system will also enable operators to gain competitive advantage by reducing the time-to-market for new services. For example, in efforts to simplify and transform its IT systems, KPN implemented Oracle's Application Integration Architecture to enable the integration of its billing and Customer Relationship Management (CRM) systems thereby accelerating the time-to-market for new products and services by 30%⁷.

The ability of an operator to reach its total cost of ownership (TCO) and time-to-market business objectives while keeping the transition as transparent as possible for its customers is closely linked to the capacity to change quickly and adapt itself. In order to do so, operators should focus on critical business simplification and transformation areas including product catalogue, product lifecycle, project portfolio, organizational design and opportunity scouting.

Commercial roadmap and innovation

In the course of the IT transformation program, new products and services and technical innovations will have to be incorporated in the operational and IT infrastructure. A set of rules have to be defined to decide on whether to incorporate these innovations in the incumbent or replacement infrastructure. Additionally, the inception of new innovations needs to be stimulated and consequently new structures and methodologies should be developed.

In the next section, we conclude the paper with insights on what constitutes a successful IT transformation program and highlight the potential pitfalls of which operators should be aware.

⁷ Oracle Customer Case Study, *KPN Drives a Customer-Centric Approach and Simplifies IT Systems with Prebuilt Integrations*, 2009.

IT transformations, at their core, are business transformations

4 Key Success Factors for a Winning IT Transformation Program

A winning IT renewal program requires the successful coming together of various elements in order to ensure completeness, secure delivery readiness and manage risks.

Any IT transformation is firstly a business transformation

Almost systematically, IT transformations are initiated and initially driven within the offices of the Chief Information Officer (CIO) or Chief Financial Officer (CFO). However, IT transformation objectives are generally divergent in terms of delivery priorities and planning from short/mid-term sales and marketing objectives. At the end, the To-Be solution must serve business objectives and be used by customers and partners themselves in addition to internal business and IT operations. To ensure full company commitment, realistic qualitative and quantitative business objectives and KPIs must drive the transformation.

The success of a transformation lies in its design, partner selection and its kick-off phase

The program design phase plays a crucial role along with solution and partner selection in realization of the objectives. Specific attention encompassing all business and IT change dimensions should be set in the initial 100 days of the transformation. This design period must not only build confidence in the solution in the various stakeholders and in the transformation path, but also deliver early results and reveal unknowns and gaps requiring specific focus to secure the full transformation program delivery. Not identifying them early enough will dramatically increase the failure rate.

Senior management commitment is paramount for success

Considering the scope, impact and risks of an IT transformation, it is essential to create up-front alignment on vision and objectives across departments. CxOs should build, share and commit on a clear picture of the To-Be situation and the business and personal benefits the transformation will bring to customers, partners and their own departments. They must then translate it into qualitative and quantitative objectives for all individuals involved in the transformation and ensure direct support and the right empowerment. CxOs and transformation leaders must more than all “walk the talk” as they are *de facto* the first level of change agents within the organization and will be regarded as such within their own department.

Constant focus on To-Be state is necessary

A continuous focus on To-Be target leads to the complete realization of all transformation benefits. However a focus on To-Be requires additional efforts in designing a realistic transformation path.

People change management needs to be addressed right from the start

With transformation programs typically impacting the bulk of a company’s workforce, it becomes imperative that companies have a strong focus on change management. It requires companies to design and plan a clear change strategy and roadmap integrating progressively all the stakeholders right at the start and then constantly managing change through well structured orchestration during the program delivery. Correctly skilled transformation teams and change agents must be identified, incentivized, trained and coached as effective transformation happens only from the inside.

Senior management belief and commitment to a transformation program is critical**Effective engagement with partners is a pre-requisite for successful delivery**

Transformation programs are long and painful. It is the capacity and the commitment of the involved third-party partners to successfully overcome program difficulties as one team that will build the successful conditions for transformation delivery. Reaching such equilibrium requires at least two key conditions. It requires the development of a true win-win partnership where all parties are contractually incentivized to do everything possible to deliver the program. The collaboration and program governance must reflect this situation. On the other hand, the up-front definition, communication and close management of strict roles and responsibilities in program activities and deliverables must be enforced. A collaborative approach will help the transformation stakeholders to achieve better, faster, more sustainable results through seamless interactions and collaboration-focused methods and tools.

Strong business arbitration safeguards need to be established

A key challenge during large transformation programs is to quickly resolve disagreements that might arise between stakeholders. In such cases it becomes important that both parties come to a quick agreement against the defined KPIs in order to ensure that the business objectives and overall timelines of the program are not impacted. A clear and timely arbitration process up to CxO level must therefore be set up involving business, IT and integration/solution partners. To ensure that decisions are driven by the business case, systematic evaluation and decision of the business and IT scenario impacts is required.

Industry standards should be put at the center of IT renewal

For the success of IT renewal programs, it is necessary for operators to change the fundamental way of planning the different processes and IT systems. Traditionally, operators have tended to put business and their requirements at the center of IT development. Each operator typically developed systems in line with their own understanding and requirement. However, today both business and IT should orient towards accepted industry standards in defining requirements, processes and solutions. Processes and IT systems based on industry standards such as the Enhanced Telecom Operations Map (eTOM)⁸ result in significant improvement in operational efficiency as standards are based on industry best practices incorporating a large number of business situations and capitalize on vast practical experience. Also, standards can help operators in streamlining processes across different business units as these are easier to understand and implement across different teams. Implementing standardized processes can help operators reduce the TCO of their IT systems as most IT products today are based on industry frameworks. BSS solutions such as Siebel and Clarify are based on eTOM. Operators following the eTOM standard can quickly implement such solutions without any customization, reducing the TCO and implementation time.

In conclusion, a successful IT renewal program requires an understanding and appreciation that it is, at its core, a business transformation program, requiring companies to systematically take a series of steps aimed at achieving their stated goal.

About the Authors

Jean Diop is a Vice President in the Capgemini Consulting Telecom Media & Entertainment practice group. He leads the Mobile Financial Services (MFS) strategic & business consulting group. He's been involved in the strategic definition, financial appraisal, and business creation, development and launch of several MFS initiatives in the Telecoms, Banking, Retail and Transport sectors in different geographies. He is based in Utrecht.

Frédéric Vander Sande is a principal consultant within the Capgemini Consulting Telecom Media & Entertainment's practice. With ten years' balanced business and technology background, he has been involved in strategic planning, business transformation and business creation initiatives with telecom, media & entertainment companies worldwide. Frederic's expertise lies overall in digital content distribution strategy and operations including IPTV, mobile TV, Digital Cinema, and intellectual property management. He also advises and delivers in areas such as MVNO, business/IT transformation, operations excellence or new product and service launches. He is based in Brussels.

Manik Seth is a manager in the TME Strategy Lab. He has over five years of experience in strategy, planning, market analysis and consulting. His recent work includes being part of a one year technology-driven business transformation program for an integrated operator and helping a leading equipment manufacturer with identifying BSS/ OSS-related acquisition targets. Prior to joining the Lab, Manik was involved with identifying new technology initiatives in next-generation networks for a leading software services provider. 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 9126440

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

World Trade Center
Leutschenbachstrasse 95
CH-8050 Zürich
Tel: +41 44 560 24 00

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