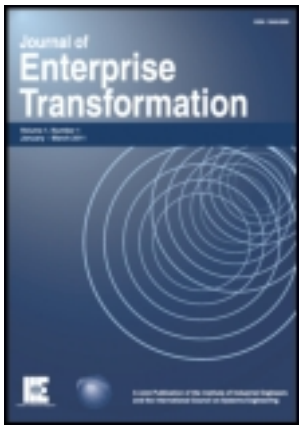

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A PRACTICAL APPROACH TO BUSINESS TRANSFORMATION: THE CASE OF THE TELECOMMUNICATION SERVICES OF TRINIDAD AND TOBAGO

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□ *This article outlines a novel, practical, and comprehensive business transformation model using a continuous life-cycle approach applied to three dimensions of a business (processes, people, and technology). It was used in the successful business transformation of the Telecommunication Services of Trinidad and Tobago (TSTT). During the implementation, the three business dimensions were decomposed into manageable changeover steps to achieve the desired improvements. For alignment, a business strategy model that takes into account the realities and constraints of the firm is included, followed by a transformation plan with the required governance and relevant steps needed for an operational business transformation. A goal-oriented recomposition process, utilized after pruning the decision tree of process leading indicators, is used by the business architects to map the strategy onto the desired business processes, incorporating the required empowerment and IT capabilities to sustain it. Throughout the transformation, a performance management review process was integrated to emphasize the learning and renewal capabilities associated with the life cycle.*

Keywords business process reengineering; restructuring; transformation plan; performance management; organizational change; competencies; total quality management; economic value added.

INTRODUCTION

Without a doubt, the world is in a continuous process of change. In the midst of this uncertainty, executives must make strategic decisions that not only affect the organization's current state but also put at risk the company's future in order to secure better results. Change has always been constant; but successful companies compete based on their ability to attract, expand, and maintain valued relationships with their customers (Hutchins, 1998). The need for rethinking the way to do business and to

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redesign existing business processes, as well as supporting technologies and human capabilities, are imperative to improve overall performance (Hammer, 1990). As a result, research interest in business transformation models has increased over the past decades.

The goal of business transformation models is to generate a description of the business processes that serve as the platform for a possible reengineering effort to eradicate non-value-added activities (Hammer and Champsy, 1993). From a different angle, the goal is to streamline the processes to capture, maintain, and enhance customer relationships to attain the objectives of the company's stakeholders.

Davenport and Short (1990) defined a process as a set of related tasks performed to achieve a defined business goal. They divide a process into two complementary concepts: (1) operational oriented, related to the product and customer and (2) management oriented, dealing with obtaining and coordinating resources. Love, Gunasekaran, and Li (1998) took into consideration the technical and social dimension of a process and incorporated four properties into them: (1) quality management, (2) technology, (3) information, and (4) people.

A preliminary version of the proposed model was used in the business transformation of the Telecommunication Services of Trinidad and Tobago (TSTT) during the period from January 2005 to September 2006. TSTT, owned by NEL (a publicly traded company controlled by the government of Trinidad and Tobago) and Cable & Wireless PLC (UK), was, at the time, the sole full-service provider of telecommunication services for this Caribbean nation of 1.2 million people, with telecom revenues in excess of US$200 million.

In a confidential study conducted for the company by McKinsey & Co., prior to the engagement and at the request of the shareholders of TSTT, the consulting firm concluded (based on their findings and their experience with similar incumbents in the Caribbean [when confronted with competition], the prevailing market conditions, and customer dissatisfaction with TSTT, as well as its lack of readiness for competition) that this incumbent carrier was expected to lose more than 60% of its earnings before interest, taxes, depreciation, and amortization (EBITDA) within two years after the opening of the telecom market.

During the last quarter of 2004, a complete due diligence of the state of the operation was performed, confirming the earlier findings of McKinsey & Co. but with sufficient granularity to propose a transformation plan that was approved by the board of directors of TSTT at the end of 2004. The key findings from the due diligence were (a) the organization was extremely bureaucratic, focused on theft controls with little attention to customer service or internal process effectiveness; (b) the state of the telecom network and IT capabilities were not adequate for a competitive environment; and (c) the organization was overstaffed and demoralized largely because of

the constant disrupting activities of the largest union and the sentiment of complacency from senior management. On the positive side, TSTT was properly funded and, because of its monopoly status at the time, enjoyed a decent EBITDA margin.

Brief Review

Business processes must undergo continual changes to improve productivity and quality (Hammer, 1990). In the past, reengineering has focused largely in either workouts or on incremental changes with extensive use of information technology (IT) while leaving the process flows without the required radical changes but still resulting in productivity gains. However, effective business process reengineering (BPR) involves understanding the underlying defects in existing processes, identifying sources of inefficiency, and redesigning processes to meet the changing requirements of the business and increase its performance in terms of quality, cost, and delivery (QCD) (Harvey and Millet, 1999). Radical changes in the relevant business processes, policies, procedures, structures, and the infrastructure supporting them are required to secure dramatic improvements. Reengineering is not about small or incremental changes but rather the radical changes necessary to achieve significant performance improvements in those companies that aspire to sustain continued and long-lasting success (Goetsch and Davis, 1995).

Related research on BPR was reported in the literature from the 1990s to date with important results for practitioners (Attaran, 2004; Collins and Porras, 1996; Davenport and Short, 1990; Davenport, 1993; Dixon, Arnold, Heineke, Kim, and Mulligan, 1991; Dodaro and Crowley, 1997; Hammer, 1990, 1996; Hammer and Champsy, 1993; Khosrow-Pour, 2006; Love et al., 1998; Khoong, 1998a, 1998b; Manganelli and Klein, 1994; Muthu, Whitman, and Cheraghi, 1999). The literature on BPR is extensive, and every author offers a different definition. The definition most commonly accepted by researchers and practitioners is that of Hammer and Champsy (1993), who defined reengineering as the "... fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed."

According to many practitioners in the BPR field, reengineering should focus on processes and not be limited to thinking about organizations. After all, the organization is only as effective as its processes (Hammer and Champsy, 1993). Having identified and mapped the processes, deciding which ones need to be reengineered and in what order are relevant and challenging questions that depend largely on the situation of a company. No company can take up the unenviable task of reengineering all the processes simultaneously (Holland and Kumar, 1995). Generally, they set their priorities based on three criteria.: (1) dysfunction: which process function is the worst? (2) importance: which are the most critical and influential in

terms of customer satisfaction, or cost? and (3) feasibility: which are the processes that are most likely to be successfully reengineered? (Hammer and Champsy, 1993).

The success and benefits of BPR have been widely reported and promoted by important researchers in this field, including Hales and Savoie (1994), De Bruyn and Gelders (1997), and Khoong (1998a). However the more significant failures have not been widely publicized (Harari, 1996). In this sense, Holland and Kumar (1995) reported that 60%–80% of the BPR improvement projects generate no benefits; Khosrow-Pour (2006) reported very high failure rates in the public sector and in not-for-profit institutions in the United States; and Hammer (1996) claimed that 70% of companies obtain no incremental gains in productivity. An explanation for these rates of failure is that companies usually consider BPR to be the solution to all their inefficiencies and that the problem runs far deeper than what can be fixed just by reengineering (Muthu et al., 1999). Or, it is conceivable that the failures are the result of faulty use of the paradigm rather than a limitation of the methodology per se (Khoong, 1998b)?

According to Hammer (1990), using a grounds-up approach that incorporates best practices and leveraging new technologies allows for maximum flexibility in process redesign. It is not feasible to transform processes from scratch and ignore the realities and constraints of current operations. The relevant deliveries of existing operations (even with all its inefficiencies) must continue during the reengineering process, and the knowledge and technologies used must be maintained during all phases of the transition alone with data integrity. Greater efficiency and security can be achieved through other means, including proper modeling, automation of processes, use of extensive tools of IT to document existing deliveries, and simplifying controls or acquiring new ones as needed (Davenport, 2006).

Transformation Models

The business transformation model must provide an unambiguous understanding of the activities to be undertaken, the dependencies among them, and the roles necessary for the operation of the transformation process. It should support the coordination and integration of tasks and the distributed human and material resources. Its complete specification includes the ordering and sequencing of the various steps, the information requirements, and the resources needed to accomplish the various tasks. The effectiveness of a proposed model depends largely on the ability of the modeling paradigm capable of representing and integrating the problem domain in a natural and coherent fashion.

With an understanding of the scope and limitations of BPR, five methodologies and their main components from contemporary literature are summarized in Table 1.

TABLE 1 Various Relevant BPR Methodologies

1. Methodology proposed by Harrison and Pratt (1993)
1) Determine customer requirements and goals for the process
2) Map and measure the existing process
3) Analyze and modify existing process
4) Design a reengineered process
5) Implement the reengineered process
2. Methodology proposed by Furey (1993)
1) Set direction
2) Baseline and benchmark
3) Create the vision
4) Launch problem-solving projects
5) Design improvements
6) Implement change
7) Embed continuous improvement
3. Methodology proposed by Manganelli and Klein (1994)
1) Preparation
2) Identification
3) Vision
4) Technical and social design
5) Transformation
4. Methodology proposed by Kettinger, Teng, and Guha (1997)
1) Envision
2) Initiate
3) Diagnose
4) Redesign
5) Reconstruct
6) Evaluate
5. Methodology proposed by Muthu et al. (1999)
1) Prepare for BPR
2) Map and analyze "as-is" process
3) Design "to-be" process
4) Implement reengineered process
5) Improve continuously

The use of these methodologies has produced mixed results, as mentioned in the literature. Failure rates of 70% have been quoted widely, perhaps irresponsibly, as such reports have significantly tainted the reputation of BPR. More recent surveys suggest the exact opposite—that the success rate of reengineering projects is closer to 70%. This appears to be the case even in Europe, where complex labor laws and industry–government relationships have made the continent less attractive to business transformation. In Singapore, where the public sector embraces reengineering openly and supports robust information platforms, the success rate is practically 100% (Khoong, 1998a).

Attaran (2004) outlined the main reason behind the failures.

1. Misunderstanding of the concept. BPR is commonly confused with: (a) downsizing, because BPR eliminates unproductive work, not jobs or people; (b) restructuring, although BPR deals with the how works gets done,

not with the way an organization gets restructured; and (c) automation, as BPR facilitates the design of new processes, not the automation of the old ones.
2. Misapplication of the term. It is often assumed that BPR is a low-cost investment or effort. BPR requires senior and middle management commitment. BPR is not a replacement for other valuable initiatives such as total quality management (TQM) and organizational development.
3. Lack of proper strategy. The lack of a clear and shared vision, as well as the supporting strategy, is a recipe for failure.
4. Unrealistic objectives. This occurs when the goals and objectives to be achieved by a BPR effort far exceed the capabilities of the organization.
5. Management failure to effect change. This is probably one of the most common causes of failure. The cases show that when success occurs, the people inside the organizations are highly motivated and have accepted the required changes.
6. Failing to recognize the importance of people. Change, in whatever form, will affect the lives of people, and this has to be a center point of the analysis process.
7. Information systems (IS) failure to embrace change. This is a key pillar for the success or the failure of a BPR project, so the early engagement and active participation of the IS organization is crucial.

Khoong (1998a) identified the key success factors (KSFs) of any BPR effort as the opposites of the seven reasons identified by Attaran (2004) as well as the need for a well-developed "transformation plan," the commitment of senior and middle management, and the proper management of the performance review process.

To quantify the magnitude or the lack of a timely transformation of an industry at a national level, Haber (2005) cited the case of the banking sector in Mexico, which, during the period of economic instability (1995–1996), caused the bankruptcy of thousands of businesses, the insolvency of many banks, and the cost to taxpayers of a bill equivalent to 15% of GDP. Confronted with the reality of not being able to affect the required changes in time, Mexico took two actions to avoid recurrence: (1) it allowed the capitalization by foreign banks and (2) it changed the accounting standards applicable to banks in 1997 (Haber and Musacchio, 2010).

Main Results

Competition is the primary driver for innovation and for creating value in organizations (Dyer, Gregersen, and Christensen, 2011). When there is limited competition, there is no interest or desire to improve. This was clearly the case in TSTT before the transformation took place.

The proposed model was largely used in the transformation of TSTT to achieve the objectives set in the transformation plan. Key ingredients in this successful experience were:

1. the quality and commitment from the transformation teams responsible for the reengineering effort;
2. the clarity of purpose, integrity, support, and guidance from the board of directors;
3. a well-executed "due diligence" process, rich in content in terms of the realities, constraints, resources, and capabilities of the organization;
4. the preparation of the transformation team and the organizational staff in terms of the capabilities required and the process to be undertaken;
5. senior and middle management agreement to the transformational priorities based on business needs;
6. the clear mapping of the existing processes, the identification of the deliverables at all levels of the process and its sub-processes, the proper construction of the decision trees containing all such deliverables, and the proper pruning to redesign the processes properly;
7. timely execution of the life-cycle transformational process proposed with all its components along the three business dimensions; and
8. the preparation efforts in order to prevent disruption of day-to-day operations and, at the same time, preparing the staff for the new tasks.

The cases where failure was confronted and corrective actions taken during the transformation of TSTT were largely the result of:

1. the lack of a strong, knowledgeable, and ethical team leader pursuing and directing a specific effort;
2. instances of a lack of knowledge and understanding of the realities, constraints, and capabilities of the organization;
3. team leaders over-promising and under-delivering;
4. team leaders not explaining and living the agreed "service culture" and the facilitation and establishment of the accountability and responsibility required to allow autonomy, mastery, and purpose needed to root empowerment in the processes (Pink, 2009; Jeston, 2012); and
5. too much reliance on external consultants with conflicting recommendations.

Key Questions

This article will attempt to address the following key questions related to operational business transformations in light of the case experience discussed.

1. Which are the critical success factor (and the failure factors) affecting a transformation process?
2. What are the required steps prior to embarking on a transformation process?
3. What are the required components of a transformation plan?
4. How should a strategic plan leading to a transformation plan be articulated?
5. Which are the merits of the proposed model for the transformation process?
6. What are the follow-up steps once a transformation process is started and the first round is completed?

Organization of the Article

This work consists of five sections organized as follows. The first section is an introduction to the topic of business transformation from an operational point of view, a short introduction to TSTT, a brief review covering the scope and work done thus far, a summary of the most relevant methodologies used by turnaround practitioners, an overview of the results reported from the experience in TSTT, ending and with a set of key questions.

The second section, "The Strategic Planning Model," presents an overview of a strategic planning model required at the start of a BPR project. The section entitled "The Business Transformation Model" contains the proposed model and methodology for a business transformation process. The fourth section, "The Transformation Model Being Used: The Case of TSTT," illustrates the usage of the model in the transformation of TSTT, and the final section contains conclusions and suggests further research on the topic.

THE STRATEGIC PLANNING MODEL

One of the early steps in a BPR effort is the formulation of the goals of the transformation process and the crafting of a shared and energizing vision (Collins and Porras, 1996). Associated with it must be a strategic plan capable of converting that vision into reality and considering the current condition, constraints, resources, and capabilities of the organization. Also during this early phase, the transformation champion with the support of senior management must assemble a team of capable and trusted individuals who will oversee the overall transformation process as well as the existence of proper governance and policies under which the team will act. The transformation team must clearly identify with all appropriate stakeholders, the key (current and future) requirements from customers and the rest of the stakeholders.

One key milestone in the formulation of the strategic plan is the senior management agreement to the strengths, weaknesses, opportunities, and threats (SWOT) analysis of the business. The model suggests a four-quadrant SWOT format where only two quadrants become relevant—the one where the strengths intercept the opportunities and the one where the weaknesses intercept the threats.

Figure 1 pictures a novel model to formulate a strategic plan. In the real world, its elements are composed by entities representing physical beings (people, governments, enterprises, etc.). These entities are related in terms of goals, value relationships, beliefs, etc. Entities, under events generation, change the environmental conditions. They take particular strategic positions through the network of relationships with other entities, where they play different roles (Clempner, 2008). The model is based on three fundamental components: interaction, adaptation, and evolution.

The interaction component comprises the dynamic behavior of the entities in the environment, leading to the incorporation or rejection of beliefs and facts associated with the environmental conditions. Interactions are established by the relationships among the roles that each entity plays in the domain of application. The behavior of the environment is induced by the

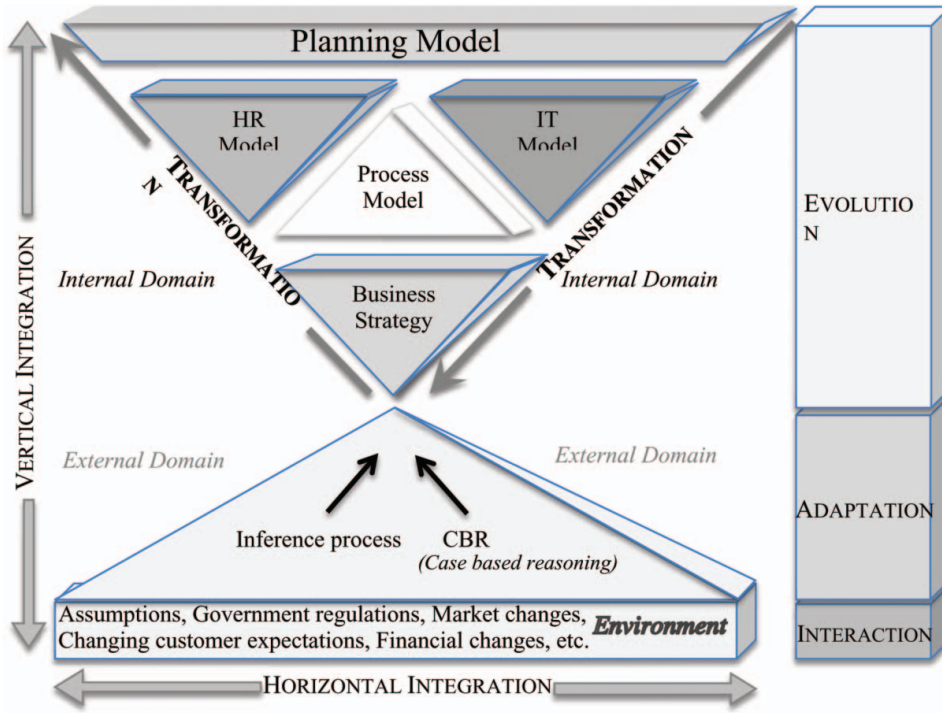

FIGURE 1 Strategic planning model (Clempner and Retchkiman, 2005) (color figure available online).

dynamic interaction of the entities. When an incident occurs (new regulation, belief, market reaction, etc.), it changes the environment conditions and is called an event. Each entity has the option to consider an event occurrence, and it incorporates or rejects the facts associated with changes in the environment. The acceptance or rejection will depend on the entities' interest. Some examples of conditions that can be accepted are adjustments in economic plans, political sentiments, new technological tendencies, interest rate alterations, etc.

The adaptation component includes business strategies using a logic inference method or case-based reasoning (CBR), which uses assumptions and facts to generate new strategic initiatives. This is a dynamic process where old business strategies are replaced by new ones corresponding with the new state in the environment. In the real world and in responsive organizations, there are always assumptions that, if they are proven to be unfounded, are easily rejected or amended. The environmental changes always take place in the course of events that invalidate any previous states. On the other hand, non-monotonic reasoning presents an opposite fact to this problem; it simply allows the retraction of "truth" whenever contradictions arise by forcing the incorporation of new assumptions.

The evolution component is a process in which the business strategy is transformed into operative and IT elements (the organizational model, the human resources model, the IT model, and the planning model). It considers a dynamic application domain, which integrates the organizational, human resources, and IT strategic partial visions into a unified and shared business vision. The evolution process is represented in Figure 1 by an inverse pyramid, where the business strategy represents the "axioms" of the archetype of the organization. These axioms are considered as true, i.e., fundamental principles because they are congruent with the realities of the environment. In every case, the IT strategic plan (ITSP) is aligned with the real world to give logical coherence to its construction. The propositions from the organization (Henderson and Venkatraman, 1993)—the organizational/process model, the human resources model, the IT model, and the planning model—are deduced from the axioms through a logic inference method. Thus, every proposition is true if it can be deduced from the axioms (Clempner and Retchkiman, 2005).

This definition is in agreement with the fact that the performance of an enterprise and the effective use of its IT capabilities depend on the concordance that exists with the business strategy. If the business strategy is incompatible with the physical structure of the enterprise and the configuration of its IT, then the functionality of the organizational areas will be inefficient. It is important to note that the organizational axioms are not necessarily absolute, but they evolve in response to the internal and external environmental changes.

THE BUSINESS TRANSFORMATION MODEL

Once the strategic plan and a shared and energizing vision have been articulated, the next and subsequent planning step in the process is to articulate the "transformation plan."

The Transformation Plan

The transformation plan is the document that summarizes the agenda and scope of works to be carried out in a transformation project. The three main inputs to such a plan are (1) the strategic plan, (2) the detailed findings from the "due diligence," and (3) a clear understanding and acceptance of the "constraints" (limitations) imposed by or on the organization by external forces or an internal mandate. The transformation plan resembles the content and scope of a business case of a project prepared for approval by senior management and/or principals of an organization.

The transformation plan must include the following items:

1. an executive summary;
2. main findings and quantifiable gaps from the "due diligence" process on the state of the enterprise, organized by the three business dimensions: process, people, and technology;
3. clear identification of the goals, objectives, and strategic initiatives in each of the three transformational dimensions and the KSFs identified in the strategic plan, derived from the benchmarking process used in the SWOT analysis;
4. an overall business process map with the core business processes of the current organization and their corresponding sub-processes;
5. a business assessment in terms of the key performance indicators (KPIs) for each of the core business processes as identified above, as well as the same KPIs for the sub-processes;
6. a priority road map for the processes to be transformed first; the determination of priorities is a balancing act between the urgent needs of the organization in terms of the desired levels for the KPIs, resources available for the transformation, and level of difficulty to be encountered;
7. the proposed team to carry out the transformation;
8. the "governance," i.e., policies and rules to be implemented to ensure the required coordination and active participation of all key business leaders;
9. the transformation methodology to be used;
10. the proposed timetable to execute the transformation;
11. the resources needed, the financial evaluation of the proposed transformation project in terms of economic value added (EVA), or any other

financial methodology acceptable to the organization (Kaplan and Anderson, 2007);
12. a clear assessment of the risks associated with the transformation and an estimation of the financial impact; and
13. a clear outline of the preparation work needed in the organization before the reengineering efforts starts.

The Transformation Model—Foundations

The basic structure of the business transformation model is shown in Figure 2 with its three dimensions and the overall "performance management" review process to oversee the transformation along the time dimension and to ensure compliance and the timely delivery of the expected KPIs.

Life-Cycle Nature of the BPR Model.

The performance management review process along the three business dimensions summarizes the very nature of the renewal process. From an overall perspective, the renewal cycle is a reminder of the multiple interactions occurring during the transformation of one process and that, once

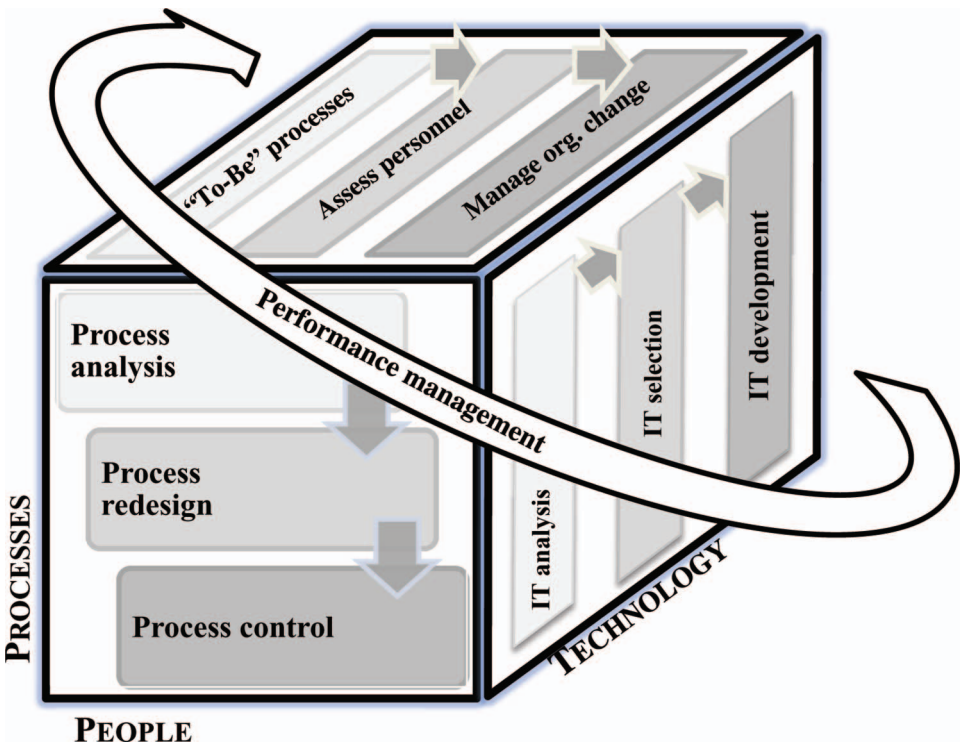

FIGURE 2 Three key dimensions in a business transformation plan and its performance management (color figure available online).

a complete business process has been transformed, another process is to follow as per the priorities set in the transformation plan. Within a cycle, the performance management process is the scorecard used to keep track of all intended changes and the tasks being accomplished in the transformation (Phusavat, 2010).

Analytical Foundations of the Model.

The proposed model is derived largely from the experience gained using the enhanced Telecommunication Operations Map (e-TOM) model adopted by the TM Forum (2011), as well as the IT Infrastructure Library (ITIL) under the IT Service Management (ITSM) organization and the daily routine work (DRW) and six sigma methodologies used in TQM. A fundamental principle from TQM adopted in the model is: "if you can measure it, you can improve it."

The foundations of the three dimensions of the operational transformation model follow.

1. *Business process.* The first task is to develop the "as-is" business process map in order to identify all deliverables (KPIs) from the current business processes. Business process modeling is based on business strategy decomposition. Using the DRW methodology, high-level strategic initiatives are refined to the point where they reach a tactical level, described in terms of goals and objectives. From there, a clear identification of the staggered KPIs for the processes and sub-processes (control items for the processes and verification items for the associated sub-processes), followed by, in a cascading effect, control and verification items for each lower level until a point where the last level, the micro-process (at the lowest management or supervisory level) with its associated control items (KPIs) and internal activities, become the verification items performed by individual employees. In summary, in the redesign, there is process decomposition mirroring the strategy in order to align the processes and sub-processes with the overall goals of the organization. With the mapping of the current process, a group of decision-tree-like structures is created with all of the resulting KPIs. The redesign of the process is largely a pruning process of the decision tree (of KPIs) to recreate the desired processes, sub-processes, and micro-processes that optimize its operation and meet the minimum requirement in terms of structure or complexity to deliver the goals represented by the KPIs. A decision process Petri net model of a business micro-process gives a specific and unambiguous description of the behavior of the process (Clempner, 2010). Its solid mathematical foundation has resulted in different methods of analysis and tools. Six sigma is achieved when the error in the output of a control items is reduced to a level of a few parts per million (Ching-Chow, 2010).

2. *People and culture*. Each business process is made up of sub-processes, and these are ultimately decomposed into micro-processes and their internal activities where individuals are responsible for their execution. These micro-processes consist of a set of activities, and each activity has associated a competence. As a result, these competencies are naturally aligned with the business strategy. The competency model provides a framework to define a "prototype employee" (reference or ideal employee) in terms of competencies. As part of the "business process redesign," an ideal, or "to-be," organization structure is proposed to make the processes, sub-processes, and ultimately, the micro-processes (with all of its associated competencies for the various activities) capable of delivering on the KPIs expected of the redesigned business process. For evaluating an employee against the prototype employee responsible for a micro-process, their competencies are compared (both from a credibility and behavioral point of view) against the standards set for the prototype employee, defined by a partitioned function with quantitative attributes consisting of classes, competencies, and sub-competencies. This implies the use of psychological tools to rate the competencies and, if needed, the sub-competencies. As a result, the model produces a "closeness degree" of how near a candidate is to the prototype. To represent the evaluation, a "slide-type chart" is proposed, highlighting the resulting gaps and where each arrow or dimension represents a competence. Other critical elements in the people dimension life cycle are: attract, engage, develop, and retain valuable employees, coupled with articulating the boundary conditions for each micro-process to allow empowerment to take root. The culture of the organization is a replica of the values adopted and modeled by its senior management, and the level of motivation is the result of the composition of autonomy, mastery, and purpose achieved (Pink, 2009).
3. *IT*. IT consists of three internal steps: analysis, selection, and development and testing. The analysis consists of determining the business baseline and information management capabilities, followed by identifying the management IS (MIS) requirements and value priorities, defining the MIS opportunities, identifying of the risks and security threats, and determining of the system requirements. The selection process is done once the business requirements have been identified and a feasibility study has been completed to ensure that the applications being considered meet the functionality and business requirements from the potential vendor and are compatible with the current architecture and platforms (or for internal development). The development and testing integrates the system design, required coding, security implementation plan, and building of the infrastructure, integration, and testing, followed by acceptance testing, training, and transition plans. A critical element of this dimension is how to govern the process of business, people, and IT integration around

technology-dominant changes and the key role played by the business architect in securing a balance.

To complete the basic model, a "performance management" process is incorporated to oversee the implementation continuously and to ensure the integrity and consistency of the transformation along the objectives of the transformation plans. The same performance management renewal cycle is not only a reminder of the need to continue improving the business process just transformed, but is also about the need to jump to the next priority business process identified in the transformation plan.

The Transformation Model—The Hands-on Approach

The three dimensions of the transformation model are shown in Figure 3. The overall life cycle of the business transformation process consists of nine steps, made up of three steps for each business dimension. The performance management continuously oversees the process to ensure the delivery of the KPIs.

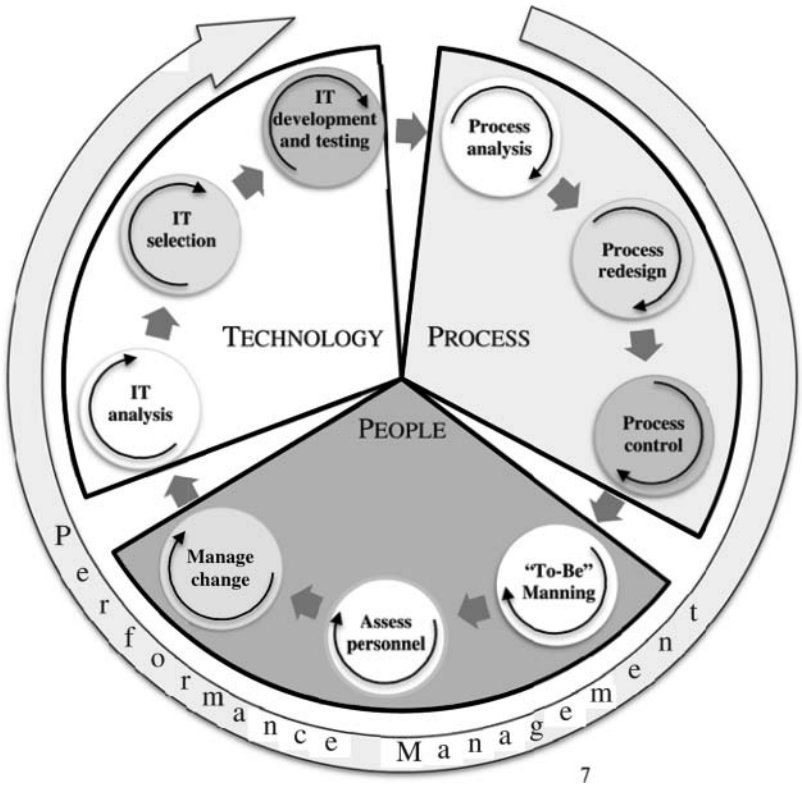

FIGURE 3 Life cycle model of a BPR.

The performance management process marks the beginning of each cycle. Its first overall round is the due diligence process, and later stages are used for continuous improvements within the same process.

The Process Dimension.

Figure 4 shows the relevant internal tasks (internal life cycle) for each of the three main steps of the process dimension. The reengineering team with outside support normally performs and reviews these tasks in order to identify the hidden opportunities.

The People and Cultural Dimension.

Figure 5 shows the internal life cycle (tasks) of the steps associated with the people and cultural dimension.

The Technology Dimension.

Figure 6 shows the internal life cycle (tasks) of the required steps in the technology dimension.

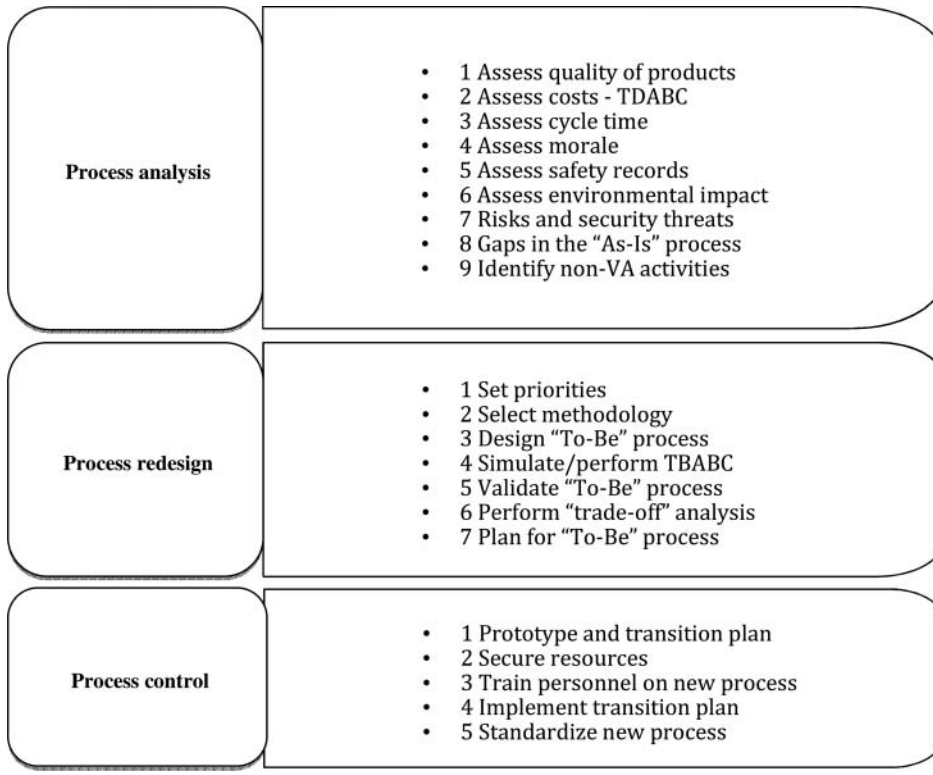

FIGURE 4 Tasks of the three steps of the process dimension.

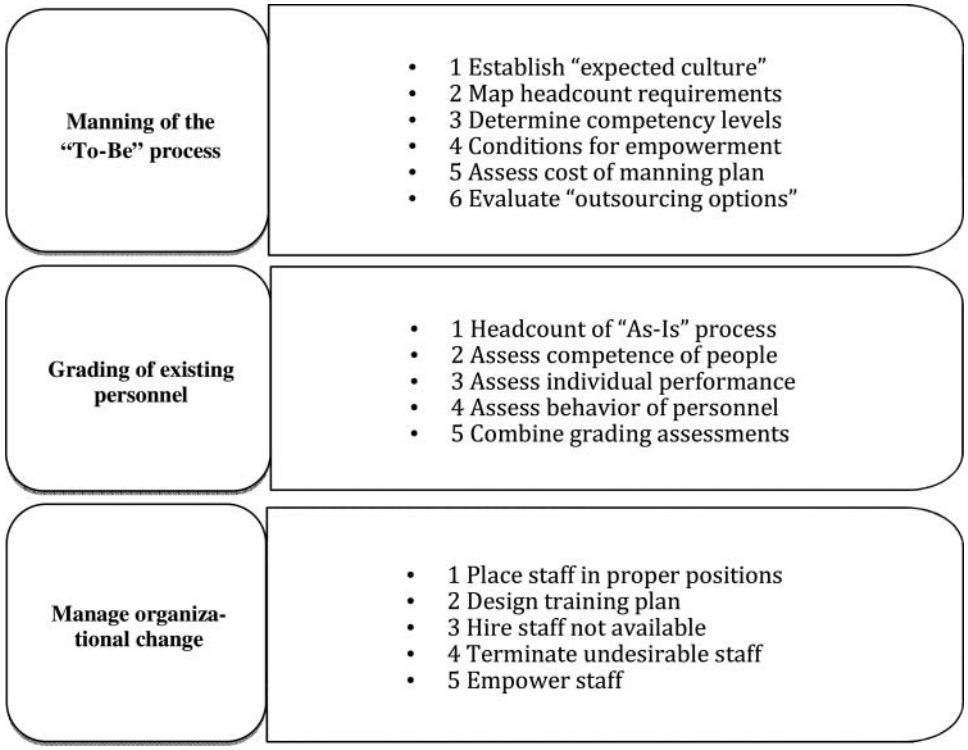

FIGURE 5 Tasks of the three steps of the people dimension.

THE TRANSFORMATION MODEL BEING USED: THE CASE OF TSTT

Preparation

The proposed model, in its preliminary format, was successfully used in the business transformation of key core processes of TSTT during a 24-month period from October 2004 to September 2006.

The first task during the last quarter of 2004 was of preparation: (a) to perform the due diligence process, (b) to assess senior and middle management, (c) to impose tight cash and cost controls, and (d) to articulate a strategy and propose a transformation plan agreeable to all relevant stakeholders.

The formulation of the strategic plan started with an agreement among representatives from the key stakeholders on a "shared vision," the strategic intent, and the KSFs. During the interaction phase, proper consideration was given to all socio-economic, political and environmental factors, the additional input from key stakeholders, as well as the relevant business drivers identified by McKinsey & Co. in their assessment of TSTT, prior to competition. During the adaptation phase, the proposed modified SWOT was used

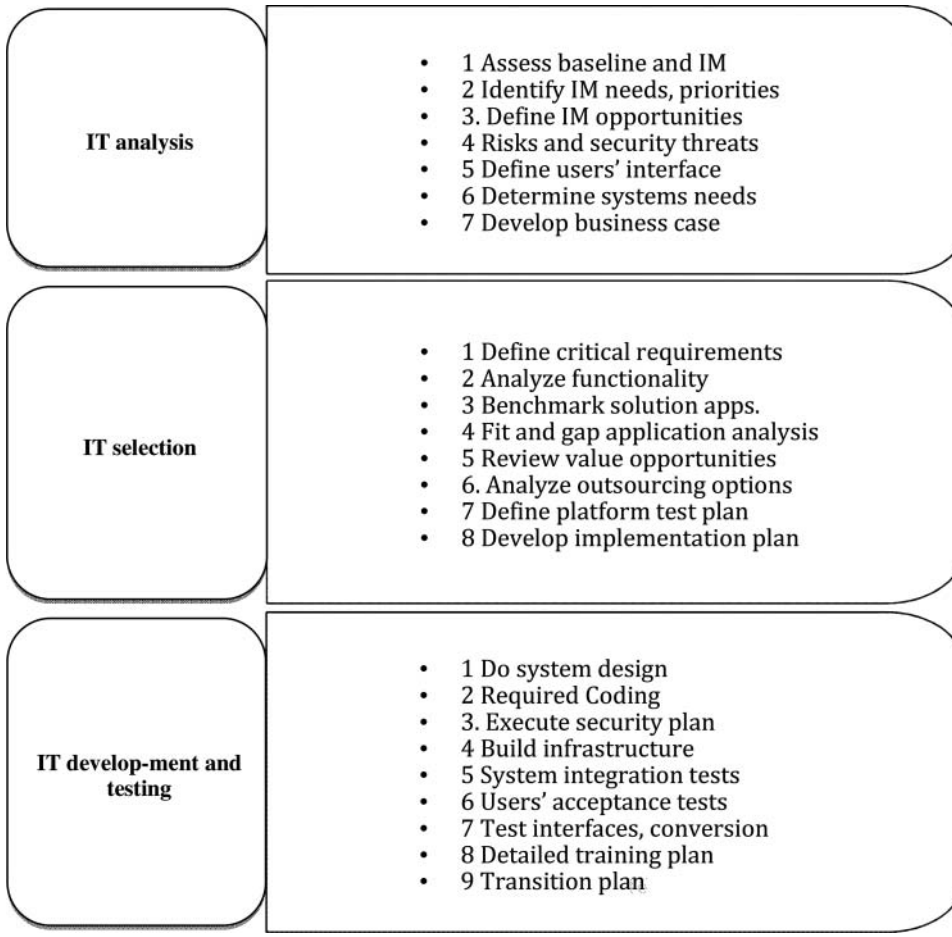

FIGURE 6 Tasks of the three steps of the IT dimension.

rigorously, for the company and each process, as part of the inference process. Special teams were assembled during the evolution phase, with external support, to articulate the model for each dimension and to integrate them into one coherent and executable strategic plan. The plan had the priorities of the transformation clearly identified, based on the KSFs and the strategic impact of each process, the changes in policy and governance, as well as the key goals and their timetable for implementation. For the business architect phase, the relevant control items for each process had been identified.

By late December 2004, after several rounds of lengthy meetings, the board of directors approved the strategic plan, the transformation plan, and the required funding.

During the same period, a transformation team was put in place with key internal leaders and outside experts in key relevant business processes, as well as contractors for the network and IT infrastructure upgrades. The

appropriate governance guidelines were issued to empower the role of the transformation team and coordinate their efforts with the rest of the organization as well as the funding for their work.

In addition to their daily tasks, senior and middle management spent a great part of their time implementing two key TQM programs: (1) 3S+1 (to keep the workplace clean, in order, and with every item within their responsibility classified as well as the discipline to sustain it) and (2) QC Stories (the kaizen methodology). These two initiatives motivated management and the frontline employees as they became very proud to show their work places clean and in order and felt part of the transformation.

Implementation

During the 15 months once the transformation process was initiated in January 2005 until competition started, the proposed transformation model was used to guide the reengineering effort in all selected areas where improvement was badly needed. During that transformation process, priority was assigned to all customer interfacing processes, service provisioning, and back office processes supporting customer services and frontline employees.

An overall process map similar to the one in Figure 7 was used as a guiding template to all the reengineering efforts in the selected processes.

Figure 8 shows an abbreviated version of the life-cycle methodology being used on a particular process.

The DRW methodology from TQM was largely used to document the KPIs (control and verification items) of the existing processes and subprocesses all the way to micro-processes. For each control item in the process being transformed, a decision tree was created to map the structural relationship of these KPIs (nodes) within a process. These KPIs were evaluated by internal transformation teams (business architects) in terms of their alignment with the strategy, their value creation, and impact with the customer. Figure 9 shows the results of a partial decision tree once the team had performed the pruning process (the process eliminated multiple marginal/non-value-adding nodes and leaves). The following phase was the re-composition of the process with its sub-processes all the way to the micro-processes with the capability to deliver solely on the KPIs included in the agreed decision tree.

The fact that senior and middle management had taken a key role during the 3S+1 and QC Stories training at the start of the engagement was instrumental in securing the trust and extra hours required by the multiple teams engaged in the process. The IT team was instrumental in supporting the efforts and in understanding the new scope of the processes and in the timely implementation of the required changes of the different IT systems.

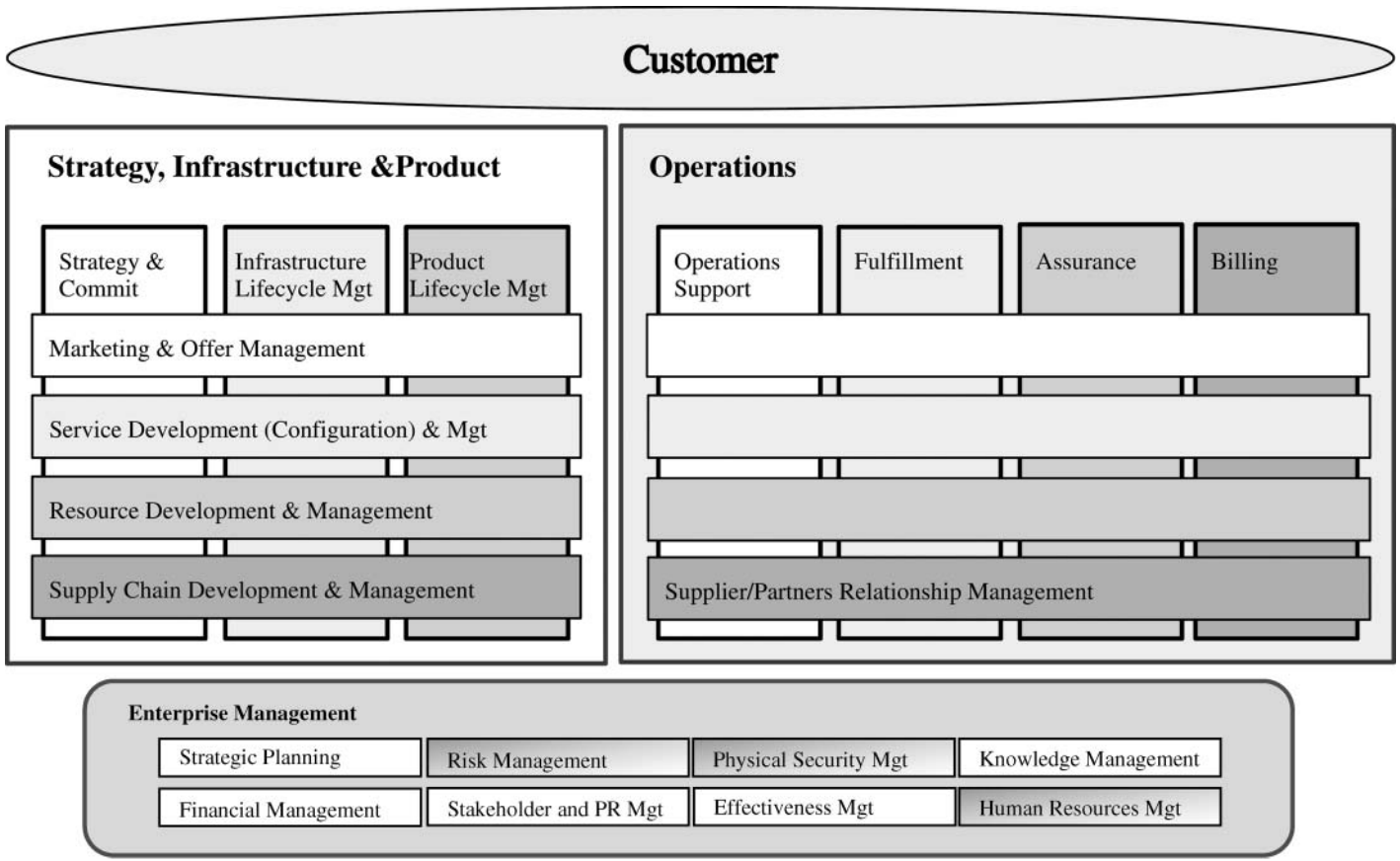

FIGURE 7 Typical process map of a telecom carrier (TM Forum, 2011)

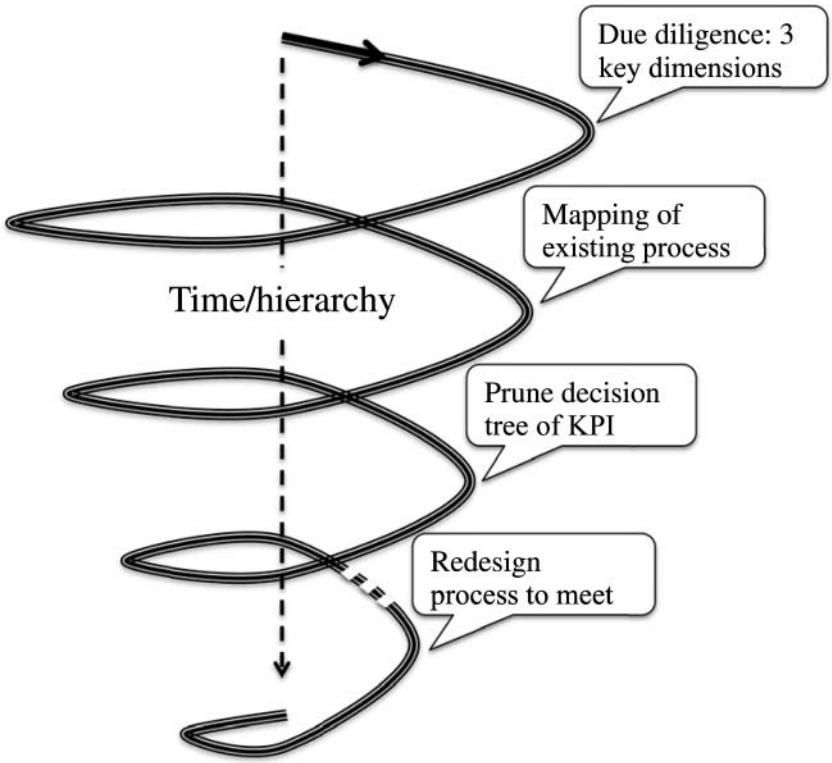

FIGURE 8 Life cycle being used on a business process.

A major undertaking was the upgrade of the technological infrastructure from a legacy fixed network to a next-generation IP network (NGN); to its mobile Global System for Mobile Communications/Universal Mobile Telecommunication System (GSM/UMTS) network, which went from 1 switch and 150,000 customers to 3 switches and a customer base in excess of 860,000 mobile users; the deployment of a new Multiprotocol Lavel Switching (MPLS) network to accommodate all data transmission requirements; the upgrade of the overall IT infrastructure, particularly the installation of a new billing system suitable for a competitive environment and to feed the relevant information into the new business intelligence (BI) platform.

Most, if not all, of these investment initiatives, as well as all products and services provided by TSTT, were evaluated for value creation using the EVA methodology. Major investments were made to upgrade the physical appearance of the customer service centers, as well as in all the areas where the rest of the employees were creating value.

Because of the history of concessions granted to the largest union and shared with the rest of the minor unions in the company, the transformation of the culture and the right-sizing of the people to the new needs in each key process was the most challenging experience; but, with the support

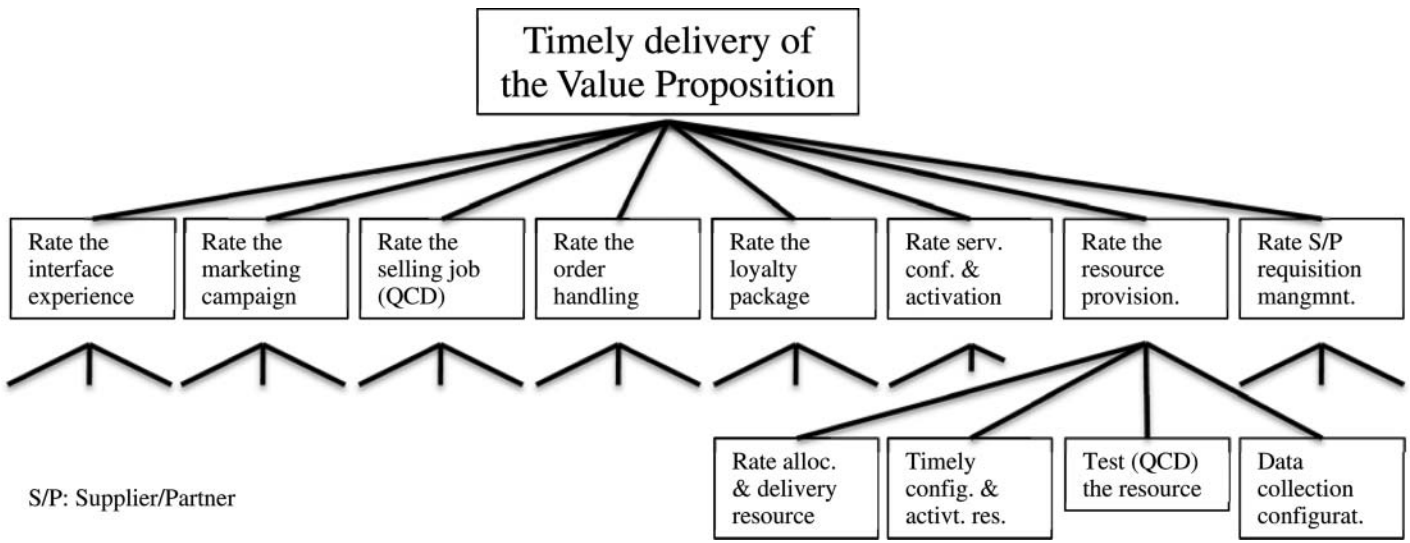

FIGURE 9 Partial view of a pruned decision tree used to redesign the fulfillment process in TSTT.

from the board, management, and the bulk of the committed employees who understood the benefits of the transformation, these changes were possible and the company was able to implement complex mechanisms in order to reduce significantly its headcount where redundant, hire new talent meeting the competency requirements in key areas, and implement a rigorous performance review process to bring the most capable individuals to the right position. Extensive coaching and training programs were implemented to cope with the new technological requirements and the empowerment embedded in the redesigned processes as well as to deal with the new competitive landscape.

Twelve months into the process, employee satisfaction began to improve substantially, and it was 3 months later, just in time for competition, that customer satisfaction began to show significant improvement as well. After competition started, the company embarked in an ambitious continuous improvement and renewal process as outlined in the model.

The transformation process of a few key core processes was successfully completed on time, and 2 years after full competition had started, TSTT still had more than 80% market share and in excess of 85% of the industry's EBITDA.

Challenges During Implementation

Despite the best efforts and support from key stakeholders, the transformation team faced multiple challenges, besides those mentioned in the "Main Results" section of the "Introduction." Some of the encountered difficulties follow.

Transformation team.

Because of various constraints and the availability of qualified senior executives, appointing the transformation team was one of the early difficulties, particularly considering that most of them had day-to-day critical responsibilities. In addition, the team needed to speak with knowledge, authority, and motivation to the rest of the organization to embark on this journey. The team ended up including functional experts in the three business dimensions and specialists in finance, risk management, business architecture, and project management. An intensive follow-up training program took place for members of the transformation team and the rest of the senior management on the model, its steps, and the tools (from TQM/6σ) to be able to deliver on all goals of the transformation.

Strategic Plan.

McKinsey & Co. had just completed the first round of the due diligence process and had made a compelling case for the need to transform the company. For the preparation of the strategic plan, the first step was to

craft a shared vision, strategic intent, and KSFs, followed by an interaction phase to perform a more specific due diligence with sufficient granularity by functional area and business dimension for all internal processes and all external environmental factors. Strategic initiatives included in the plan were: a detailed analysis of the customers' requirements by segments, the value proposition by product line, the regulatory framework, and modeling the anticipated behavior of the new competitors based on the experience in the rest of the Caribbean, the situation of the capital market to raise the capital to fund the investment plan; availability and quality of suppliers, distributors and agents. The people dimension section included a complete review of all applicable labor regulations, collective agreements, last evaluation (grading) of all employees, etc., as well as an assessment of the prevailing and desired culture, empowerment levels, and levels of motivation, based on more than 100 formal interviews conducted by the CEO with employees from different levels across the organization. For the adaptation phase, the modified SWOT mentioned in the "Strategic Planning" section was used to narrow down the inference process. The next step, evolution, put together the most appropriate process, people, and technology model using the industry's best practices in terms of business architecture, caring, and motivation for the people, as well as the experience of C&W in the Caribbean. These were extensive documents prepared to clarify the team and the organization about the transition plan from the existing company to the aspired organization. The resulting strategic plan had all the high-level ingredients of the type of company that would come out of the transformation plan, clear process maps, and the KPIs for each process; the aspired culture, people, capabilities, empowerment, and desired motivation; as well as the technology platforms needed to sustain the transformed enterprise.

Transformation Plan.

The transformation plan consisted of a set of agreed company values, vision, mission, and strategic directives, as well as specific metrics in terms of goals and time delivery. Project management for each of the business dimensions and a set of governance and policy changes were later enacted by the board to ensure compliance with financial and risk management guidelines. Creating an enterprise level multi-scheduling critical chain project review management process turned to be a real difficulty because of the complexity of such a tool and the severe limitation from key resources, but it was helpful to quantify the amount of external resources needed and to meet the aggressive timetable of the transformation plan.

Implementation.

Despite all the preparation, training, and plans, implementation suffered delays due to protracted discussions among camps who wanted a radical change and those who wanted only incremental changes in order not

to disrupt operations and those who were afraid of the required organizational changes they would confront. The original ambitious transformation program had to be scaled down to focus efforts only on critical customer interfacing processes, leaving all management support processes for a second phase, with the exception of the planning process, which was pivotal for future change initiatives. During this phase, the members of the transformation team worked in excess of 80 hours per week for a full year in order to meet the pressing needs of the transformation plan. Most of the working sessions were demanding and passionate, agreeing on issues such as the optimal decision tree to re-create a process, the right people for a particular group of positions and their required capabilities, the degrees of freedom in the redesigned process to allow empowerment, or on the proper deployment and features for a particular IT application. Weekly coordination meetings with the business architects were held to clear all pending decisions at an enterprise level or within a particular process. A constant challenge to this process was the frequent requests from the company's largest union, who wanted an input into every key decision affecting people, despite the best efforts in the integrity of the communication with them and on the outmost care in decisions affecting employees. This constant challenge required a mixed of legal strategic moves and extensive negotiations, as well as a good communication process with affected employees, in order to ensure that the required changes were implemented. Fortunately, because of the ability of the transformation team and commitment from members of the senior management and the majority of the employees who saw the benefits of the transformation, the company only faced a couple of minor incidents of labor interruption. Taking advantage of the technology and the nature of the company, a two-page e-mail was sent at the end of every month to all employees and key stakeholders, updating them on the status of the transformation plan.

Regulatory Issues.

In the midst of all the changes taking place within the company, the agenda of regulatory requirements demanded extensive senior management time and attention. Among the key requirements from the regulator were the need to renew the concession by TSTT as mandated by a recently enacted telecom law, the creation of a detailed cost model on which to base interconnection rates and protect competitors from cross-subsidy, and—the most challenging—negotiating with competitor interconnection agreements in the absence of interconnection rules but mandated by the regulator by a certain time during the first quarter in 2006.

Network Upgrade.

As mentioned previously, the network needed major upgrades on all fronts to accommodate the growth and expected interconnection traffic.

This turned to be a real challenge because of the limited resources available to manage a rapid network deployment and the limitations securing construction permits and when competitors decide not to share facilities.

CONCLUSION

The proposed operational transformation model incorporates the concept of life cycle and continuous renewal/improvement along three key dimensions of a business. It departs from the business strategy as an alignment beacon, and its congruence, practicality, and simplicity is suitable to its understanding and use as an effective tool to effect a successful business transformation.

New business transformation models have emerged, taking advantage of decades of experience, advances in IT, and a more conscious awareness of the key role of the people and their commitment in the success of these projects. The proposed model offers a methodology for achieving the required business transformation in a practical, comprehensive, systemic, and continuous manner. It requires that trust, leadership, and commitment be the central principles to effect the changes needed in the organization. The model describes the methodologies to be used in executing the performance management review process along the three business dimensions with the novel features introduced in each dimension to consider each of the steps along the transformation process.

BPR continues to evolve, prosper, and overcome the criticisms from the past. A variety of HR management issues need to be addressed in a timely manner by companies, including an examination of particular labor agreements and union practices, which quite often, prevent the creation of value in areas where past conventions precluded management from considering areas for growth and opportunity.

The underlying principles of BPR—the need for radical performance improvement achieved by considering radical new modes of operation, often enabled by better management and industrial engineering practices as well as advances in IT—will remain largely unchanged. The proposed model, with its clear understanding of the task at hand, its strategic alignment, implementation simplicity, and control mechanisms, is one of such attempts for long-term and sustained growth.

A preliminary version of the proposed transformation model with its constant renewal cycle process was successfully implemented in the business transformation of TSTT in Trinidad and Tobago, despite time and financial constraints as well as the major challenges presented in multiple fronts, both internal and external. Without the discipline and rigorous follow through of the transformation plan; its performance review cycles and the multiple project management programs associated with it; dealing with processes,

people, IT, network, and physical infrastructure upgrade; legal and regulatory compliance; as well as placing long-term bonds in the local market to fund the overall transformation program; it would have been impossible to perform this transformation on time and within budget.

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