
Establishment of a Central Process Governance Organization Combined with Operational Process Improvements

Insights from a BPM Project at a Leading Telecommunications Operator in the Middle East

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Abstract

- (a) **Situation faced:** Because of customer churn, strong competition, and operational inefficiencies, the telecommunications operator ME Telco (*fictitious name due to confidentiality*) launched a strategic transformation program that included a Business Process Management (BPM) project. Major problems were silo-oriented process management and missing cross-functional transparency. Process improvements were not consistently planned and aligned with corporate targets. Measurable inefficiencies were observed on an operational level, e.g., high lead times and reassignment rates of the incident management process.
- (b) **Action taken:** The project was structured into three phases. First, countermeasures were identified and planned based on an analysis of the current situation. Second, a new organizational unit responsible for a central BPM was established and equipped with BPM methods and tools. Based on the reference model *enhanced Telecom Operations Map* (eTOM), a company-wide process framework was defined. A process ownership model linked the central governance with the execution. As a pilot implementation, the incident management was improved on an operational level. The project was accompanied by continuous communication and training. Third, the project results were monitored and transferred to daily operations.
- (c) **Results achieved:** Quantitative performance improvements in the incident management process were achieved, such as reducing the average lead time from 13.0 days to 3.6 days. Those results confirmed the BPM artifacts that were developed. All of the artifacts (methods, tools, process framework, and process models) were officially accepted and communicated. The new

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BPM department was staffed with eight employees. The process ownership was implemented through nominations of responsible persons. In total 290 employees were trained in the new BPM methods and operational process changes. A company-wide repository was introduced that contains the process framework and all detailed process models.

- (d) **Lessons learned:** (1) Process content is an important success factor in a BPM implementation. (2) Process ownership requires consideration of the various BPM elements. (3) Early involvement of stakeholders from top management to the operational level is essential for successful implementation. (4) Customization of reference models requires a transparent approach to decision making. (5) General BPM governance and methods are important for an operational process improvement.

1 Introduction

The telecommunications industry is going through a major transformation (Grover and Saeed 2003; Picot 2006). New, innovative players have entered the telecommunications market, leading to a restructuring of the whole telecommunications industry (Pousttchi and Hufenbach 2011; Wulf and Zarnekow 2011). As a result, many telecommunications operators have launched extensive transformation programs to adapt their structures to the changed market conditions (Czarnecki et al. 2012; Czarnecki and Dietze 2017). This case describes a Business Process Management (BPM) project undertaken by the integrated telecommunications operator *ME Telco*¹ in the Middle East. More than 100 million customers make *ME Telco* a leading telecommunications operator with a strong footprint in the region. Once a monopolist, the company now must cope with strong competition and the need for ongoing innovation. Declining customer satisfaction has led to the risk of customer churn. Furthermore, internal inefficiencies on an operational level were observed. The project described here is part of the company's strategic transformation program with the objective to increase its competitive advantage, customer satisfaction, and operational efficiency.

The project started with an analysis of the existing situation related to BPM, identification of major problems, and definition of countermeasures. In particular, central process governance and continuous process improvement were missing. Therefore, a new organizational unit—*BPM department*—was established that is responsible for the overall management of processes, comparable with the *BPM Center of Excellence* proposed by Dumas et al. (2013). Establishing this department included introducing BPM methods and staffing new positions in the department. Based on the industry-specific reference process model *enhanced Telecom Operations Map* (eTOM) (Kelly 2003; Czarnecki et al. 2013), a company-wide

¹For reasons of confidentiality, ME Telco, an abbreviation for Middle East Telecommunications Company, is a fictitious name.

process framework was developed, and its organizational implementation was assured through a detailed process ownership model. Improvement of the incident management process was conducted as a pilot implementation, which led to measureable performance improvements on an operational level, such as reducing the lead time from 13.0 days to 3.6 days. The whole project was accompanied by continuous communication and training, based on the identification of stakeholder groups and their information needs. In total 290 employees were trained according to their roles. The last project phase was the transition from the project to daily operations as well as the monitoring of the achieved results. The project lasted 8 months.

The case illustrates the interrelation between central governance combined with BPM methods, mapping to organizational responsibilities, and resulting quantitative improvements in efficiency. It also shows the reuse of a reference process model and its customization through a transparent approach. The case shows the interrelation between BPM methods and concrete process content. The identification of relevant stakeholders and their involvement throughout the project is explained as an important success factor. The case can be linked to the BPM life-cycle (Dumas et al. 2013) with concrete artifacts related to a broad range of BPM elements (Rosemann and vom Brocke 2010).

From a general perspective, the case can be used as an exemplary reference for structuring and planning company-wide BPM implementations, especially when existing reference process models are used. With respect to the telecommunications industry, the case illustrates an example of the intensive transformations that are currently typical for this industry (e.g. Grover and Saeed 2003; Bub et al. 2011; Czarnecki et al. 2012; Czarnecki and Dietze 2017).

The situation faced (cf. Sect. 2), the action taken (cf. Sect. 3), and the results achieved (cf. Sect. 4) are a summarized description based on the author's observations as a consultant on the project as well as official project documentations. The lessons learned (cf. Sect. 5) are a retrospective discussion of the case based on general BPM concepts and literature. In addition, some of the actions taken are related to the reuse of the industry specific reference process model eTOM. The author has been involved in the development of those artifacts following the design science research paradigm (Hevner et al. 2004), see Czarnecki et al. (2013) for further details.

2 Situation Faced

The subject of this case is the vertically integrated telecommunications operator ME Telco, which offers fixed and mobile telephony, Internet, IPTV, and business solutions to residential and business customers in the Middle East, Asia, and Africa. The company held a monopoly for a long time, but it is now facing competition from other local telecommunications operators and IP-based Over-the-Top (OTT) providers.

Regular customer surveys indicated that customer satisfaction was declining. From a market perspective, the company's top management needed to avert the risk of customer churn and the resulting loss of revenue. In addition, competition and ongoing innovation of communication technologies led to a race to launch new products and to realize additional product propositions. From an internal perspective, ME Telco was experiencing inefficiencies on an operational level. For example, the lead times for answering requests and incident resolutions were not meeting targets, and unclear responsibilities had led to reassignments of tasks. Those problems were intensified by the ongoing need for product innovations. The launch of a new IPTV offer was planned which might increase the operational problems through additional complexity. In short, ME Telco faced the typical problems of telecommunications operators with historically grown structures and systems (e.g., Grover and Saeed 2003; Czarnecki et al. 2010; Bub et al. 2011). The organization followed a functional structure that was grouped around specifics of the technical infrastructure. But competition and technical innovations required fast changes on an operational level. The growing complexity was no longer manageable through the existing structures.

Therefore, ME Telco started a strategic transformation program with the goal of improving its competitive advantage, customer satisfaction, and internal efficiency. This strategic program included several initiatives that were managed as separate projects, each of which had a high level of management attention with a dedicated sponsor from the executive board. The management of processes was identified as one topic, with the general idea of supporting the overall objectives of customer satisfaction and internal efficiency through the establishment of a BPM. However, there had been no clear evaluation of the existing situation with respect to BPM. Therefore, as a first step, a high-level analysis—called *BPM diagnostics*—was performed to identify problems and define the high-level project focus and detailed solutions.

The results of the BPM diagnostics helped to clarify the situation the company faced. Therefore, their results are anticipated in this section, even though they are an outcome of project phase 1 (cf. Sect. 3). Processes were managed largely in a silo-oriented manner, so different departments had their own way of managing their processes. The responsibility for processes was only defined on an operational level. A cross-functional transparency and awareness of processes was not established. Hence, processes were not aligned with corporate targets, and their improvement was not followed-up from an overall perspective. The exemplary analysis of the incident management process showed those problems on an operational level (cf. Fig. 1): activities between departments were not aligned. A major effort of the incident management process was searching for the responsible person. A high number of reassignments and long lead times were the result. With respect to the overall strategic objectives, both customer satisfaction and internal efficiency were impacted negatively.

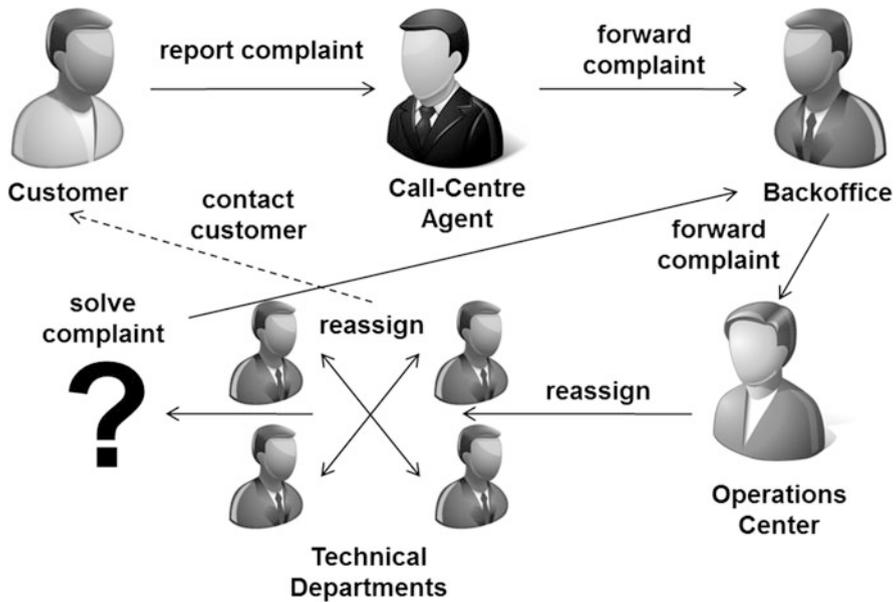


Fig. 1 Exemplary illustration of the incident management process (as-is)

3 Action Taken

This section describes the actions taken based on observations during the project and documented deliverables. The artifacts explained are related to design decisions based on specific, practical requirements and the consensus of the executives and team members involved. Therefore, the structure and terminology might differ from those of general BPM references. In order to facilitate a common understanding, the BPM lifecycle (Dumas et al. 2013) and the six core BPM elements (Rosemann and vom Brocke 2010) are mapped ex post to the project (cf. Fig. 2). The case is also reflected based on these references in the lessons learned section.

The project began with the vague objective of improving how business processes are managed and executed. At this early stage, the concrete scope and objectives were not defined yet. As a first step, the project’s organization was defined as consisting of a steering committee, a project management team, a core team, and dedicated functional experts. The project management team and the project core team consisted of both internal employees and external experts. The project management team reported to the steering committee that was staffed with board members and selected senior executives. The core team ensured involvement of ME Telco employees, and additional external experts were involved for selected topics.

The project was structured into three phases (cf. Fig. 3). The first phase was a high-level diagnostics study of the current situation with respect to BPM. The

Project Case		General BPM References	
		BPM Lifecycle (Dumas et al. 2013)	Six BPM Core Elements (Rosemann and vom Brocke 2010)
Phase 1: BPM Diagnostics		process identification; process discovery; process analysis (high- level)	strategic alignment
Phase 2: Design, Implementation and Improvement	A: Process Framework & BPM	process identification; process discovery; methodical basis for the whole lifecycle	strategic alignment, methods, governance
	B: Process Analysis & Design	process analysis, process redesign	methods, information technology, people
	C: Process Implementation	process implementation	methods, information technology, people
	D: Project Management & Communication	not applicable	governance, people, culture
Phase 3: Monitoring and Hand-over		process monitoring and controlling	strategic alignment, governance, methods, information technology

Fig. 2 Mapping between project case and BPM references

objective was to identify and prioritize pain points and respective countermeasures. The scope of phases 2 and 3 was defined based on the findings from phase 1. The second phase covered the detailed design and implementation of the defined countermeasures, which were the core parts of the project and are the focus of this case study. The third phase was the monitoring of results and transition to the line organization—that is, the shift from project execution to daily operations. The monitoring results are described in the next section.

The BPM diagnostics of phase 1 served as a preliminary assessment with a focus on the evaluation of the existing situation based on general maturity criteria. A structured evaluation sheet related to the dimensions of design, performers, owner, infrastructure, and metrics was used (Hammer 2007). The analysis covered the organizational responsibilities of BPM, methods and tools used for BPM, the existing process framework, and a deep dive for selected processes. The work on this analysis took 4 weeks. The detailed analysis findings were prioritized according to the required effort and expected impact. In summary, the findings were mainly related to process ownership, alignment with strategic targets, and planning as well as realization of improvement measures. Based on these findings, the focus of phase 2 was on three

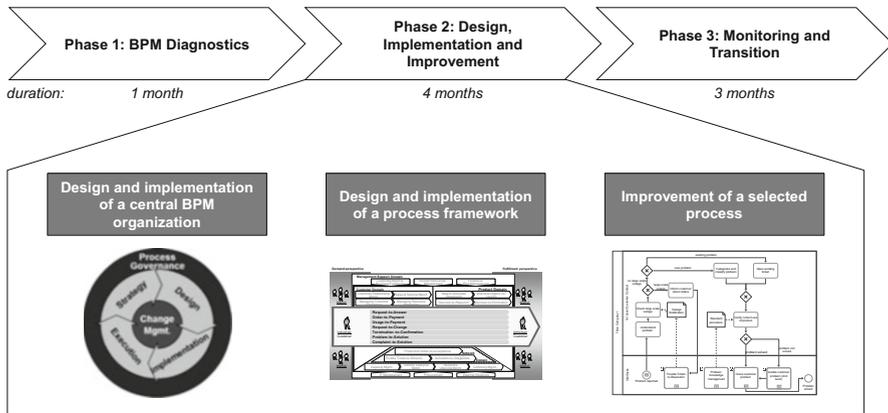


Fig. 3 Project overview

topics (cf. Fig. 3), including the implementation of detailed countermeasures for each topic:

1. *Development and implementation of a central BPM department:* The goal was to establish an organizational entity that is responsible for the management and methodical governance of business processes. Its activities are comparable with the BPM lifecycle (Dumas et al. 2013). The development covered defining an organizational structure for this BPM department, defining roles and responsibilities, developing policies and templates, and selecting the required tools. The implementation included staffing the required job positions, nominating people for additional roles in the organization (e.g., process owners), and conducting training based on the developed policies, templates, and tools.
2. *Development and implementation of a company-wide process framework:* The process framework was based on the industry-specific reference process model eTOM which was customized according to ME Telco’s specific requirements. The framework followed a hierarchical process structure that was detailed to level 2 process descriptions for the whole company. A major part of the development was identifying and involving appropriate organizational entities and their formal acceptance. The implementation included final approval by the executive board, communication to all employees, changing affected documents, and detailed employee training.
3. *Improvement of a selected process:* As a proof of concept, a process was improved based on the newly introduced concepts (e.g., process framework, BPM department). The incident management process was selected for this part of the project. After a process analysis was performed on an operational level, the target process was designed based on the reference process model eTOM. Then the target process was implemented through training and changes of existing applications.

Six primary tasks were defined for the new BPM department:

- (a) Assure processes' compliance with industry-specific reference models (e.g., eTOM).
- (b) Manage the detailed design of process flows in all functional areas.
- (c) Define and monitor process performance indicators and their respective performance targets.
- (d) Manage process implementation initiatives.
- (e) Develop and conduct process-related trainings and communications.
- (f) Continuously improve processes based on performance figures.

A major challenge was distinguishing between the central governance of processes from a methodical perspective and the responsibility for the design and execution of individual processes. Therefore, a detailed ownership model was developed in order to ensure that the responsible persons from the line organization were involved (cf. Fig. 5). The ownership model followed a top-down approach

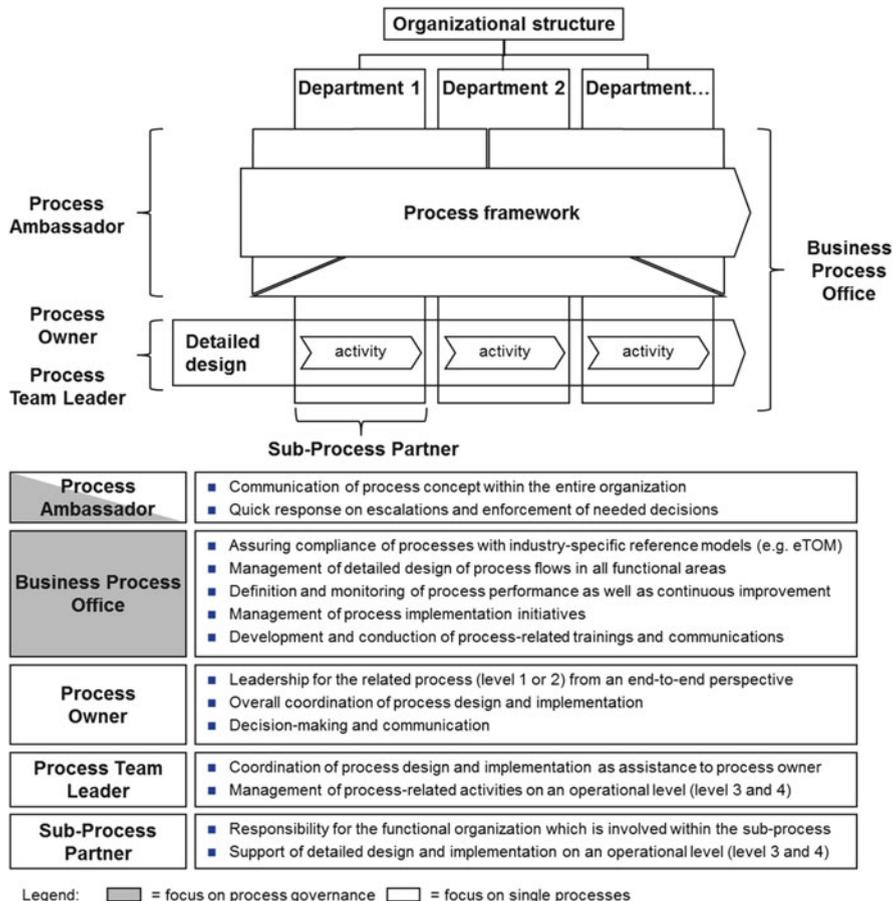


Fig. 5 Ownership model

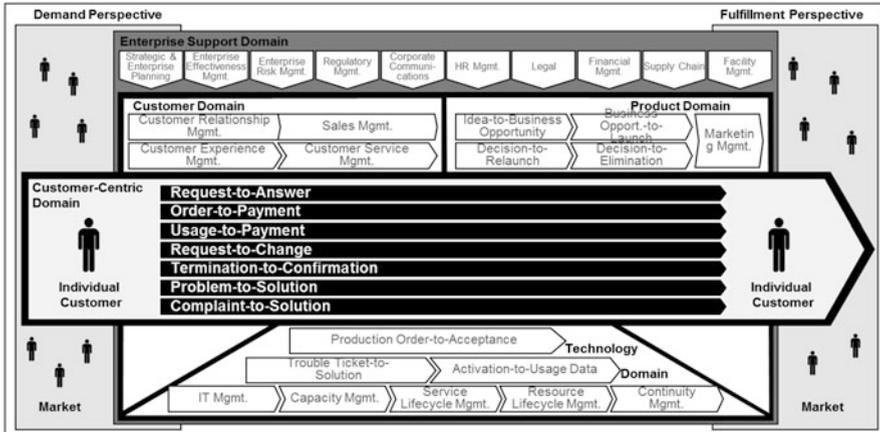


Fig. 6 Process framework

based on the organizational hierarchies. On the top-management level, *process ambassadors* were responsible for communication and required escalations. The *process owners* were senior managers who had functional responsibility for processes from an end-to-end perspective; for example, the Call Center Director was the process owner for the request-to-answer process. For each of these processes, a team consisting of a *process team leader* and several *sub-process partners* was defined. This team was responsible for the detailed design and implementation on an operational level. The central BPM department, the *business process office*, was responsible for the overall governance.

As second step (in phase 2), a cross-functional process framework was developed that forms the bridge between the central BPM department and the operational processes. The process framework provides a high-level definition of all processes (cf. Fig. 6) based on the reference process model eTOM (Kelly 2003). Five process domains were used as a high-level structure (Czarnecki et al. 2013):

- *The customer-centric domain* contains all primary activities, such as sales and customer service. These processes were defined from an end-to-end perspective, always starting and ending with the customer.
- *The technology domain* covers the roll-out, extension, operations, and maintenance of the network infrastructure, as well as the development and realization of telecommunications services.
- *The product domain* contains the development and launch of telecommunications products based on the services provided by the technology domain.
- *The customer domain* focuses on marketing activities, such as market research and campaigns. Unlike the customer-centric domain, the customer domain's processes support customer-related activities like preparing successful sales through marketing campaigns.
- *The support domain* contains all general support activities, such as finance and human resource management.

Each process domain was detailed through end-to-end process flows. For example, the customer-centric domain contains, in addition to others, the *order-to-payment* process flow (Czarnecki et al. 2013). This process framework, which was defined up to level 2 process descriptions for all of ME Telco's processes, provided the topical view that was required to implement the central BPM department's methodical elements. For example, the process domain was used as a structure for defining process ambassadors.

As third step (in phase 2), the incident management process was designed, improved, and implemented on an operational level. This task was performed using the general concepts of the new BPM department. As a starting point, the *problem-to-solution* reference process flow of the process framework was mapped to the as-is situation. According to eTOM, the process starts with the customer contact management that allows the reporting of incidents through various contact channels (e.g., call center, shops) (Czarnecki et al. 2013). Then the incident is analyzed and resolved. Based on the type of incident, these activities are divided between the contact channels, a specialized back office, and technical experts. Providing clear responsibilities and routing the incident to the right person are typically key challenges in this process. After the incident resolution, the billing process might be involved, if, for example, a credit note for a service downtime is issued. The as-is situation for these process steps was analyzed, considering both the existing process documents and the real-life process execution (Hammer 2010). The findings of the as-is analysis were documented. However, detailed as-is process models were not designed. The detailed design of the target process was based on eTOM with consideration given to the capabilities of the existing application systems (e.g., the trouble ticket system). Top management excluded the possibility of replacing the current systems completely from the beginning, so changes in the existing application systems were analyzed and considered in designing the target process.

A major part of phase 2 was the reuse and customization of reference models, which required a great amount of design decisions. From a general perspective, a gap between the reference model and the current situation might require either deviating from the reference or changing the current situation. Since the goal of the implementation is execution of the target models by the line organization, evaluating the specific requirements and involving the line organization should be managed from the beginning (Schermann et al. 2008). All activities and responsibilities, from identification of the relevant stakeholders to formal acceptance of the target models, were clearly defined. The following step-wise approach was officially agreed by the steering committee and communicated as binding for the whole project:

1. *Identify and nominate relevant stakeholders in ME Telco*: The reference models were mapped to the existing organizational structure in order to identify the relevant stakeholders. They were responsible for the provisioning of specific requirements, the formal acceptance of the target design, and the subsequent implementation. These stakeholders were officially nominated by the steering committee.

2. *Nominated stakeholders provide the specific requirements:* The specific requirements were identified through interviews and existing documents. It was carefully distinguished between the currently executed situation, existing but not implemented concepts, and new ideas for further improvements (Hammer 2010). All of these specific requirements were evaluated with respect to their strategic fit, required implementation effort, and improvement potential.
3. *Design first-draft target models:* The required target models were grouped according to their topical focus and assigned to external subject matter experts; for example, the call center part of the incident management process was designed by a dedicated expert in this topic. Starting point for the target models were the relevant reference models, which were customized based on the specific requirements, and their evaluation.
4. *Hold feedback workshops with nominated stakeholders:* The first-draft target models were presented and discussed in workshops (Schermann et al. 2008). Important objective of these workshops was to collect all additional requirements and change requests. The feedback was documented and agreed upon by all participants.
5. *Finalize and formally accept target models:* The collected feedback was incorporated in the target models. Afterwards, the formal acceptance by the nominated stakeholders and the steering committee was achieved.

The entire project was accompanied by continuous communication and training. Achieved results and planned activities were regularly communicated in a newsletter to all employees. The project's progress and required decisions were reported biweekly to the steering committee. Executive meetings with the top management were also held throughout the project. A multitude of presentations and training sessions were offered to all employees, which provided a general introduction to BPM as well as an overview of the BPM concepts that were customized for ME Telco. More detailed training sessions were conducted for those who had specific roles in the processes, such as the process owners, who received intensive one day training. Activities related to implementing the BPM department included staffing it, and detailed training for these new employees in BPM. A new BPM section was also launched on ME Telco's intranet for communicating the BPM methods, policies, and templates. The process framework and target process models, designed in Business Process Model and Notation (BPMN), were also published there as well as being stored in a central repository. An interface between the process-modeling tool and the intranet page was realized. Implementation of the target incident management process also included training the employees who executed the process on an operational level.

4 Results Achieved

Because of the project's broad scope, the results achieved are related to a variety of qualitative and quantitative criteria (Dumas et al. 2013). The establishment of a central BPM department and a company-wide process framework are related to the overall governance and cultural change, which can be described qualitatively, while

improvements of the incident management process are directly related to quantitative criteria (e.g., resolution time).

From a *qualitative perspective* three primary results were achieved:

1. *A central BPM department was established:* The detailed design of the new BPM department included the organizational structure, roles and responsibilities, policies, and templates. All new positions were staffed, and detailed training sessions were conducted. All nominations of personnel were based on the process ownership model, and regular reports and committees (e.g., process owner meetings) were initiated. The executive board confirmed and communicated all results. At the end of the project, the new central BPM department has been started its daily operations.
2. *A company-wide process framework was established:* The new process framework was customized and detailed for all processes up to level 2, and ownership was defined for all of these processes. All results were accepted by the responsible process owners. Understanding of the new process framework was ensured through a broad variety of communication measures (e.g., website, training, official announcement). At the end of the project, the process framework has been implemented throughout the company.
3. *The incident management process was improved:* The detailed design of the incident management process was conducted according to the newly introduced structures of the BPM department, resulting in confirmation of these concepts in a pilot implementation. All responsible stakeholders accepted the operational changes. Implementation in the organization was realized through communications and training. The IT implementation was realized through changes in existing application systems. At the end of the project, the improved incident management process has been started its operation.

The involvement of employees, communication, and training was a core part of the project. The respective results are related to the people dimension (Rosemann and vom Brocke 2010). The following figures provide an indication of the achieved results:

- 18 stakeholder groups were identified and were involved in design workshops during the customization of the process framework.
- 170 employees received training on the new BPM department and process framework.
- 30 interviews and site visits were conducted during the as-is analysis of the incident management process.
- 120 employees received an operational training on the improved incident management process.
- 8 employees in the new BPM department received a detailed off-site BPM training.

The improvement of the incident management process resulted in measurable *quantitative* improvements in efficiency and effectiveness. Four indicators were used to measure performance:

- *Resolution time* is the total lead time (in days) from when a customer reports an incident to its closure. The indicator was calculated automatically by the ticketing system.
- *Reassignment rate* is the percentage of incident tickets that are assigned to different technical experts for their resolution, i.e., the assignment between call center and back office as well as back office and focal point is not counted as a reassignment. The number of reassignments was automatically counted by the ticketing system.
- *Working time* (in hours) of the employees who are working in this process during a defined period (e.g., per week). Working time was documented using the timekeeping system. Most employees worked full-time in incident management (e.g., incident group in the call center), so their working time was directly derived from the system. Work distribution was estimated for employees who worked part-time in the process (e.g., technical experts).
- *Number of incidents* is the total number of incidents reported in a defined period (e.g., per day). The number was counted automatically by the ticketing system.

These four indicators had been reported and documented before the process-improvement began. Figure 7 summarizes the effects of the improved incident management process. All figures are averages that were calculated based on performance for 2 months before and 2 months after implementation. For example, the resolution time averaged 13.0 days during the 2 months before implementation and 3.6 days during the 2 months after implementation. Because of the unclear responsibilities for incident tickets, the pre-implementation reassignment rate was 85% (i.e., 85% of incidents were reassigned after initial assignment). This high reassignment rate is related to the 13.0 days resolution time and 2976 working hours per week. The improved incident management process defined clear responsibilities through focal points for specific incident categories. The reassignment rate was reduced to 20%. This improvement of the reassignment rate resulted in a significant decrease of the resolution time (3.6 days) and working hours (1815 hours per week). In addition, the number of incidents declined by 23%, perhaps because of the elimination of the repeated reports of incidents that is typically related to long resolution times. However, this interrelation was not analyzed in detail. Although a positive effect of those performance improvements on customer churn can be assumed, a measurement of customer churn was not performed during the case study.

From a cost perspective, the project implementation can be structured into personnel expenses for the employees, costs for the external experts, and costs of adapting IT systems. The observed improvements were measured 6 months after the start of phase 2, during which time the internal project management team and core team were dedicated to the project full time. The employees from the line

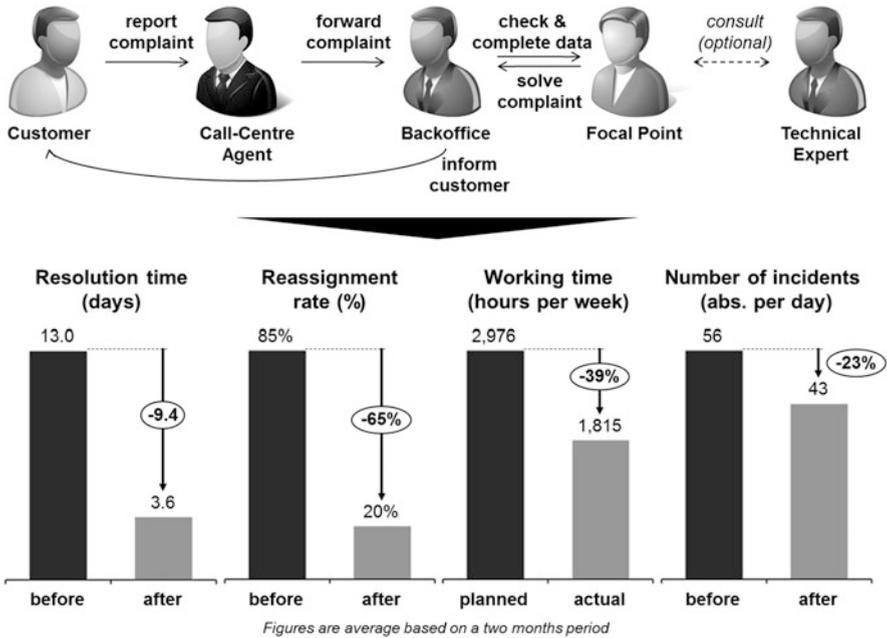


Fig. 7 Results of the improved incident management process

organization (e.g., process owners) supported the project with 30–40% of their working time. In addition, a team of eight external experts was involved. All process optimizations were realized through minor changes of existing IT systems, which was one of the initial project requirements.

The qualitative and quantitative results illustrated in Fig. 7 are based on the project scope described in Sect. 3. The project’s objective was the overall enhancement of the process governance in order to improve customer satisfaction and operational efficiency. Both of these goals were shown by quantitative improvements on an operational level related to the pilot implementation of the incident management process. However, gaining the full benefits of the project would require application and extension to other processes. At the end of the project, this result was not finally evaluated. Four insights provide indications for future efforts:

- *Detailed implementation tasks were only partially finished.* A monitoring of all planned implementation tasks showed that 45% were realized during the project duration. The implementation of further 38% was started. And 17% were not started yet.
- *Planned changes of application systems were only partially finished.* 40% of these changes were realized during the project, while 60% require additional budget and decisions.

- *Continuous changes in organizational positions required ongoing re-nominations and additional training.* The results achieved in the implementation of process ownership and training of relevant stakeholders were jeopardized by parallel reorganization initiatives.
- *Alignment with future initiatives was not completely ensured.* Other transformational initiatives were launched during the project that were not completely aligned with the project. For example, a reorganization of the call center was started, which might influence the incident management process.

5 Lessons Learned

The case described here is an example of the establishment of a central BPM organization combined with a company-wide process framework, as well as the improvement of a selected process on an operational level. Figure 8 provides a classification of the project context based on criteria proposed by vom Brocke et al. (2015). In this section, the actions taken and results achieved are discussed ex post based on general BPM concepts and literature.

According to the BPM lifecycle model proposed by Dumas et al. (2013), the case describes one complete execution of this lifecycle. The process framework provided a high-level architecture for the identification and discovery steps. The

Contextual Factors	Case Characteristics
<i>Goal dimension</i>	
Focus	Exploitation (Improvement, Compliance)
<i>Process dimension</i>	
Value contribution	Core processes
Repetitiveness	Repetitive
Knowledge intensity	Medium knowledge intensity
Creativity	Medium creativity
Interdependence	High interdependence
Variability	Medium variability
<i>Organizational dimension</i>	
Scope	Intra-organizational process
Industry	Service industry
Size	Large organization
Culture	Culture medium supportive of BPM
Resources	Medium organizational resources
<i>Environmental dimension</i>	
Competitiveness	High competitive environment
Uncertainty	Medium environmental uncertainty

Fig. 8 Contextual factors of the project case

incident management process was selected for a detailed as-is-analysis, redesign, and implementation on the operational level. The results were monitored, and quantitative performance improvements were identified.

The case illustrates concrete artifacts of the BPM dimensions (Rosemann and vom Brocke 2010). The diagnostics study provided strategic alignment through the identification of gaps and planning of improvements measures, both of which were aligned with the overall strategic objectives. From the governance perspective, process-related standards, roles, responsibilities, and management decisions were centralized in a new BPM department. Methods for design, implementation, monitoring, and improvement were also defined and supported by information technology, for example, through a central repository for process models.

The people dimension was addressed through continuous involvement of all stakeholders and various communication and training measures. A prerequisite of the project was identification of relevant stakeholders and their informational needs. Both were supported by the process ownership model and the specific process framework. Consideration of the organizational hierarchies and a fact-based allocation of responsibilities were important aspects of the project. Especially during the process design, a balance between the incorporation of specific requirements and standardization according to reference models was essential. Therefore, a transparent procedure for decision-making was defined and communicated at the beginning of the project. The incident management process was improved by executing the developed process governance and methods.

On an operational level, the process implementation was supported by changes in application systems. Monitoring the performance improvements provided a link between the strategic improvement planning and the process execution on an operational level.

In summary, from the general BPM perspective, five primary lessons learned are derived from the case:

1. *Process content is an important success factor in a BPM implementation.* A major part of the project was the establishment of general BPM governance and methods. Even in an early stage of the project the knowledge of specific processes—related in this case to the telecommunications industry—was important. This process content was provided by the industry-specific reference process model eTOM. The process framework based on eTOM combined the general methods with the specific situation. For example, the nomination of process owners for the detailed design required an understanding of the specific processes. During the BPM diagnostics, eTOM was also used in evaluating the existing situation.
2. *Process ownership requires consideration of the various BPM elements.* The mapping between the processes and the organizational structure was an important result of the project. This mapping should support the analysis, design, implementation, and execution. It should provide a balance between a cross-functional view and operational details. Furthermore, the general governance should be differentiated from the topical responsibility for specific processes.

The case provides an example of a process ownership model that defines detailed roles and responsibilities. The process ownership model was mapped to the concrete organizational positions using the specific process framework.

3. *Early involvement of stakeholders from top management to the operational level is essential for successful implementation.* The successful implementation resulted in various changes in the current situation. For example, changes in governance were related to the overall corporate management, while operational improvements impacted the daily work that was supported by application systems. Already during the planning and design, the involvement of relevant stakeholders was essential. Consensus and acceptance were in most cases a prerequisite for an implementation. Early communication and the opportunity to give feedback helped to avoid resistance to the planned changes.
4. *Customization of reference models requires a transparent approach to decision making.* The detailed design included various decisions about specific requirements that differed from the reference model. However, a benefit of reusing a reference model is standardization according to general recommendations. A balance between deviation and standardization was important. Therefore, a clear approach to fact-based decision making was defined, where responsibilities were based on the process ownership model. The official agreement and communication of this approach before the start of the detailed design was also important.
5. *General BPM governance and methods are important for an operational process improvement.* The improvement of the incident management process resulted in proven, documented performance enhancements. This improvement was a pilot implementation of the general governance structures and methods defined in the central BPM department. Hence, this case provides an example for operational improvements that were strongly supported by prior establishment of BPM. Furthermore, this case illustrates the interrelation between BPM and operational improvements.

The transformational needs of the telecommunications industry are intensively discussed by researchers and practitioners (e.g., Grover and Saeed 2003; Picot 2006; Czarnecki et al. 2010; Bub et al. 2011). In this context, the case provides an example of transforming the processes of a historically grown operator to address the typical requirements of more customer orientation and cross-functional alignment (e.g., Bruce et al. 2008). An example of the reuse and customization of the well-recognized reference process model eTOM (Kelly 2003; Czarnecki et al. 2013) is also provided. Hence, the case can be used as a reference for planning transformational projects in the telecommunications industry.

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