A FRAMEWORK FOR ASSESSING BPM SUCCESS

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Abstract

Business Process Management is intensively used by organizations with varying objectives. Most adopt this approach in order to achieve continuous process improvement, such as better performance and conformance of their processes. Many studies have been done on BPM methodologies that companies follow in practice when adopting BPM, which resulted in the identification of various success factors. However, these prior works hardly consider the variety of configurations in terms of diverging objectives and actions how companies approach BPM. In this paper, we emphasize this point by addressing the challenge of developing a theoretical framework in which individual cases of success and failure can be studied. We propose a BPM implementation framework which comprises ten elements that are interlinked with each other. We conducted in-depth interviews with two companies and used the BPM implementation framework to assess the success of both BPM initiatives. We were able to reach conclusions such as that for particular goals a company has there is a minimum set of BPM-related actions this company has to conduct in order to come to the desired outcome.

Keywords: BPM adoption, BPM lifecycle, BPM framework, BPM success.

1 Introduction

Business Process Management (BPM) is increasingly utilized by companies to achieve better conformance and performance of their processes. While there is consensus that BPM can provide substantial benefits to an organization (Reijers and Liman Mansar 2005), there are also reports of companies that do not achieve the expected results (Trkman 2010). The study of success and failure cases has led to the identification of different BPM success factors (Trkman 2010). However, neither the interplay of various factors has been understood to the full extent nor is there a generally accepted theoretical framework for BPM adoption available.

The major reason why the dynamics of BPM adoption have only been partially uncovered so far can be attributed to the complexity of the BPM concept itself. First, BPM can refer to a diverging set of scenarios including the documentation and redesign of processes, the implementation of information systems or the alignment of systems with the strategy of the company (Davenport 1993, Hammer and Champy 1993, Kettinger et al. 1997, Dumas et al. 2013). Second, BPM can be pursued in order to increase performance, to achieve conformance, to facilitate understanding, or to stimulate innovation of processes. Third, BPM covers a complex set of interrelated activities, often described as a lifecycle, such as identification, discovery, analysis, redesign, implementation and monitoring (Weske 2012, Dumas et al. 2013). Fourth, BPM is embedded in the strategy, governance, methods, systems, people,

and culture of a company (Rosemann and vom Brocke 2010). Any kind of failure of BPM might be caused by an inappropriate combination of these elements or a failure in any of the sub-activities.

In this paper, we address the challenge of developing a theoretical framework in which individual cases of success and failure can be studied. Our contribution is a BPM success assessment framework with its operationalization. In order to test its applicability we conducted in-depth interviews with two companies in order to be able to compare BPM practices. For these companies the framework appears to provide a good basis for identifying omissions in BPM adoption, which explain why certain goals have not been achieved. In this way, we inform research and practice by giving a detailed account of how BPM can be adopted and what can be considered to be BPM adoption success or failure.

The remainder of this paper is structured as follows. In Section 2 we discuss the general concepts of BPM. Section 3 describes the research design, including data collection technique and methods used. Section 4 summarizes the results. Section 5 highlights implications for research and practice, together with limitations of the study. Section 6 concludes the paper.

2 Background

In this section, we discuss the background of our research. We first focus on BPM in general. Next, we give insights into the elements that comprise a BPM project.

2.1 Business Process Management

BPM has been around for more than 20 years; yet the perception of BPM amongst academics and practitioners still varies (Reiter et al. 2010). In this paper, we regard BPM as a management approach that primarily focuses on analysing and continuously improving business processes (Rosemann and de Bruin 2005, Reijers et al. 2010, Dumas et al. 2013). However, to be able to sustain continuous process improvement, besides focusing on the processes, organizations should also be aware of all factors that could facilitate or hinder process improvement. Thus, a BPM initiative should be approached from a holistic perspective, including elements such as strategic alignment, governance, methods, information technology, people, and culture (Rosemann and vom Brocke 2010). Each of these elements comprises a set of activities that need to be considered during a BPM implementation.

It is known that BPM can bring significant benefits to organizations (Bandara et al. 2009), for example process transparency, process standardization, employee communication, among many others (Jeston and Nelis 2008). Thus, organizations typically adopt the BPM approach for all or a set of these reasons (Trkman 2010). Reijers et al. (2010) categorize the objectives of BPM into two groups. They distinguish between *business objectives*, such as improving business performance, and *technical objectives*, such as an ERP implementation. However, regardless of which group of goals an organization pursues, both should be aligned with the organization's strategy (Rosemann and vom Brocke 2010, Hung 2006, Lee and Dale 1998). Accordingly, depending on the strategic direction, the steps undertaken for the consequent BPM implementation should lead to accomplishing the initially set goals. For example, organizations that follow the strategy of operational excellence might have goals like increasing control over the company's business operations, reducing time or cutting costs. On the other hand, those who strive for customer intimacy would set their BPM goals to meeting demands of the customers, or product leadership will most likely include improving process quality, ability to respond to emerging opportunities, etc. Therefore, depending on the goals, organizations need to conduct activities from all or part of the elements that comprise a BPM project.

2.2 BPM Lifecycle

The *BPM lifecycle* describes the different phases of managing business processes in an idealized and circular way. A number of such BPM lifecycle models have been proposed.

For the purpose of this study, we closely examine seven of the lifecycle models developed by Dumas et al. (2013), Becker et al. (2011), Jeston and Nelis (2008), Kettinger et al. (1997), Harrington and Harrington (1995), Rosemann and vom Brocke (2010) and Davenport (1993). All these models are comprehensive and distinguish between several phases that a BPM initiative can go through. Each phase of the BPM lifecycle consists of multiple actions that need to be done to progress to the next phase. Although all seven models we examine serve the same purpose, that is to allow for continuous process improvement, the phases they consist of are partially different in terms of detail. In addition, we found that the number of actions within each phase is slightly heterogeneous. While some lifecycles include more specific actions (e.g. (Jeston and Nelis 2008)), others tend to stick on a more abstract level (Kettinger et al. 1997). There are also differences in emphasis of particular phases. For example, Davenport (1993) highlights the importance of culture, which is considered more as a "soft" factor, whereas Jeston and Nelis (2008) and Becker et al. (2011) focus more on strategy and governance. Actions concerning the governance are also pointed out in Harrington and Harrington (1995) and Kettinger et al. (1997). Despite certain differences, all of these lifecycles are fundamentally similar and see business process as the object that is continuously improved (Reijers et al. 2010).

Furthermore, all of the examined BPM lifecycles include actions that are intertwined with the six core elements of BPM as defined by Rosemann and vom Brocke (2010). However, beyond the BPM lifecycle these elements show an even broader picture of BPM adoption. They point to all that should be considered when starting a BPM initiative. In order to systematically organize the various elements that play a role during a BPM implementation, in this paper we differentiate between the operational part of BPM which is the BPM lifecycle consisting of six phases and the remaining BPM elements, which have a more strategic influence on the overall BPM initiative.

The operational part of BPM relates to the execution the BPM lifecycle phases. It focuses on processes and is where all changes are happening (Dumas et al. 2013). The first phase of *process identification* is concerned with setting up the BPM initiative and establishing its infrastructure and mission. The major outcome of this phase is a process landscape. This landscape identifies the major processes of the company, describes their relationships, and criteria for prioritizing them. Entering the cycle shifts the focus from the overall portfolio of processes towards a singular process. The *process discovery* phase is concerned with the precise description of a business process in its current state. The result is a so-called As-Is process model. *Process analysis* applies analytical techniques in order to determine weaknesses of the As-Is process and their impact. *Process redesign* addresses these weaknesses and comes up with a reworked blueprint of process. The result is a so-called To-Be process model. This model is then considered for *process implementation*, which can involve information system implementation as much as measures to facilitate organizational change. Once the redesigned process is up and running, *process monitoring and controlling* phase continuously collects and analyses execution for performance and conformance to regulations. Such insight, as much as changes in the business environment and the goals of the company, can trigger a new iteration of the BPM lifecycle. In practice, the phases are hardly executed in a purely sequential way. Also, the circle is not always closed, e.g. when a company decides only to document its processes without considering redesign.

2.3 Initial BPM elements

Since BPM adoption is a complex process that requires much effort, time, resources and discipline, beyond the phases of the BPM lifecycle, organizations that strive for BPM success need to understand BPM from a holistic perspective. Thus, an organization, prior to commencing the phases of the BPM

lifecycle, needs to consider all factors that could influence the BPM implementation and its subsequent success, such as governance, people, culture, etc. They have mainly been discussed in research on the success and failure factors of BPM (e.g. (Trkman 2010, M. Rosemann 2006, Michael Rosemann 2006, Ohtonen and Lainema , Burlton 2011)). We found that the main influencing factors when implementing BPM in an organization have been addressed in the six core elements of BPM as proposed by Rosemann and vom Brocke (2010). Thus, we consider these as vital for each BPM initiative to consider, along with the BPM lifecycle. Two of the core elements by Rosemann and vom Brocke (2010) (methods and information technology) are already incorporated in all phases of the BPM lifecycle. Hence, we focus only on the remaining four elements (strategy alignment, governance, people and culture) as these are complementary to the BPM lifecycle.

Strategy alignment indicates that the BPM initiative should be tightly linked with the organizational strategy. This means that processes have to be designed, executed, managed, and measured according to the company's defined strategy (Rosemann and vom Brocke 2010). To increase the likelihood of successful BPM adoption, organizations need a strategy-driven process improvement plan, enterprise process architecture, clear and shared understanding of process outputs and related KPIs (key performance indicators), and have to evaluate the actual priorities of key customers and other stakeholders (Rosemann and vom Brocke 2010). *Governance* concerns establishing transparency by clearly defining and consistently executing the decision-making processes. The actions conducted by this element are to clearly specify the process roles and responsibilities, collect the required process metrics and link them to performance criteria, define and document process management standards, and maintain the quality and currency of process management principles with process management controls (Rosemann and vom Brocke 2010).

People are a core part of every organization. For BPM adoption to be successful, people need to understand the concept of BPM and transform the way of their thinking about practices from a traditional functional style to a new process model (Spanyi 2003). People in processes need to have sufficient process skills, expertise and process management knowledge (Rosemann and vom Brocke 2010). Organizations should facilitate process education and learning, process collaboration and communication, and ensure there are process management leaders (Rosemann and vom Brocke 2010). *Culture* is composed of values, beliefs, attitudes and behaviours (Hofstede 1993, Schein 2010) and provides unwritten and often unspoken guidelines for how to get along in an organization (Cameron and Quinn 2006). It is about creating a facilitating environment that complements the various BPM initiatives (Rosemann and vom Brocke 2010). Important dimensions of culture favourable for BPM adoption are accepting change and readiness for change, process values and beliefs (including the broad process thinking and valuing of processes), process attitudes and behaviour, leadership attention and commitment to process management, and process management social networks, such as the existence of BPM communities (Rosemann and vom Brocke 2010, Rosemann and de Bruin 2005). Figure 1 illustrates the BPM implementation framework, which comprises of the BPM lifecycle with its six phases and the four initial BPM elements.

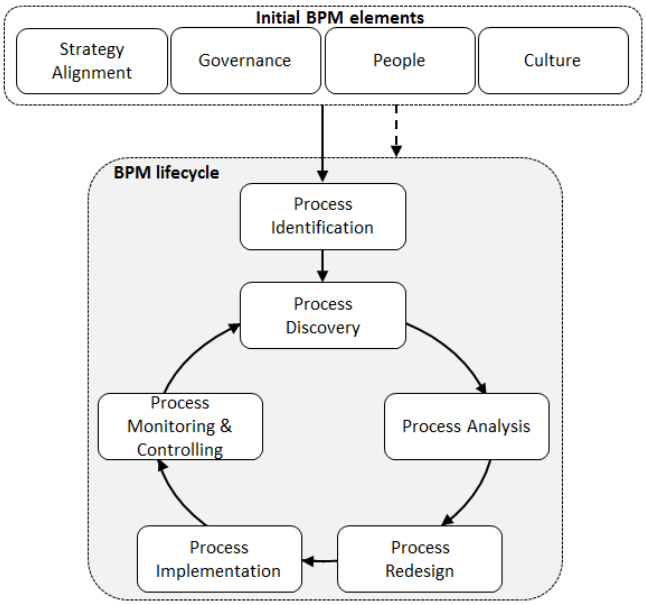
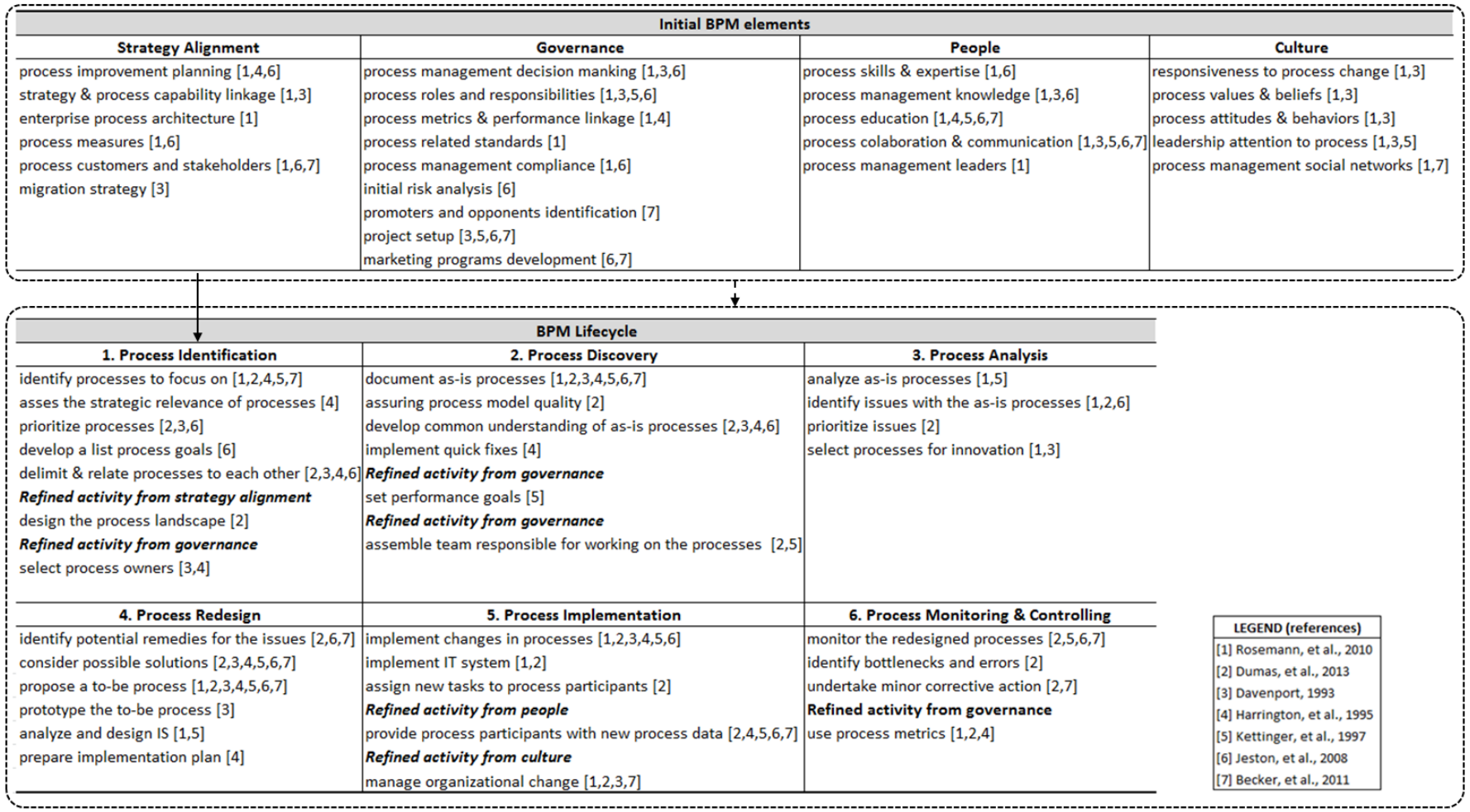


Figure 1. BPM implementation framework.

2.4 Operationalization of the BPM implementation framework

In order to be able to assess BPM success or failure of adopting organizations, we first need to be aware of all potential actions related to each of the ten elements from the BPM framework. Thus, we further detail the BPM framework from Figure 1 in order to summarize the actions to be conducted in relation to each element. To develop an extensive list of actions, we refer to the seven studies (Davenport 1993, Harrington and Harrington 1995, Kettinger et al. 1997, Jeston and Nelis 2008, Becker et al. 2011, Rosemann and vom Brocke 2010, Dumas et al. 2013). We focus on these studies because the BPM methodology that some of these studies suggest are considered as integral and state of the art (e.g. Davenport 1993, Kettinger et al. 1997), while the methodology proposed by the rest is mostly based on experience from practice (e.g. Jeston and Nelis 2008, Rosemann and vom Brocke 2010). In addition, they all take a holistic BPM approach. As basis for the BPM lifecycle we take the six phases as described by (Dumas et al. 2013), as this is one of the most recent and consolidated works. We had to make sure that the actions proposed by Dumas et al. (2013) are exhaustive. For this, we analysed the actions proposed by the other studies. So, whenever we found an action in any of the six additional studies that is not already included in the actions stated by Dumas et al. (2013), we included it accordingly in the respective phase. We did this for all six phases of the BPM lifecycle. Similarly we derived a list of actions for the four additional core BPM elements. We take as basis the actions as defined by Rosemann and vom Brocke (2010). In the case that actions proposed by other sources are not already included in the base list, we added them accordingly. As a result, we derived Figure 2 which illustrates the list of actions done within each element. The numbers next to each action represent the source that also considers this as an action.



Initial BPM elements

Strategy Alignment	Governance	People	Culture
process improvement planning [1,4,6]	process management decision manking [1,3,6]	process skills & expertise [1,6]	responsiveness to process change [1,3]
strategy & process capability linkage [1,3]	process roles and responsibilities [1,3,5,6]	process management knowledge [1,3,6]	process values & beliefs [1,3]
enterprise process architecture [1]	process metrics & performance linkage [1,4]	process education [1,4,5,6,7]	process attitudes & behaviors [1,3]
process measures [1,6]	process related standards [1]	process colaboration & communication [1,3,5,6,7]	leadership attention to process [1,3,5]
process customers and stakeholders [1,6,7]	process management compliance [1,6]	process management leaders [1]	process management social networks [1,7]
migration strategy [3]	initial risk analysis [6]		
	promoters and opponents identification [7]		
	project setup [3,5,6,7]		
	marketing programs development [6,7]		

BPM Lifecycle

1. Process Identification	2. Process Discovery	3. Process Analysis
identify processes to focus on [1,2,4,5,7]	document as-is processes [1,2,3,4,5,6,7]	analyze as-is processes [1,5]
asses the strategic relevance of processes [4]	assuring process model quality [2]	identify issues with the as-is processes [1,2,6]
prioritize processes [2,3,6]	develop common understanding of as-is processes [2,3,4,6]	prioritize issues [2]
develop a list process goals [6]	implement quick fixes [4]	select processes for innovation [1,3]
delimit & relate processes to each other [2,3,4,6]	***Refined activity from governance***	
Refined activity from strategy alignment	set performance goals [5]	
design the process landscape [2]	***Refined activity from governance***	
Refined activity from governance	assemble team responsible for working on the processes [2,5]	
select process owners [3,4]		

4. Process Redesign	5. Process Implementation	6. Process Monitoring & Controlling
identify potential remedies for the issues [2,6,7]	implement changes in processes [1,2,3,4,5,6]	monitor the redesigned processes [2,5,6,7]
consider possible solutions [2,3,4,5,6,7]	implement IT system [1,2]	identify bottlenecks and errors [2]
propose a to-be process [1,2,3,4,5,6,7]	assign new tasks to process participants [2]	undertake minor corrective action [2,7]
prototype the to-be process [3]	***Refined activity from people***	**Refined activity from governance**
analyze and design IS [1,5]	provide process participants with new process data [2,4,5,6,7]	use process metrics [1,2,4]
prepare implementation plan [4]	***Refined activity from culture***	
	manage organizational change [1,2,3,7]	

LEGEND (references)

[1] Rosemann, et al., 2010
[2] Dumas, et al., 2013
[3] Davenport, 1993
[4] Harrington, et al., 1995
[5] Kettinger, et al., 1997
[6] Jeston, et al., 2008
[7] Becker, et al., 2011

Figure 2. Operationalized BPM implementation framework

2.5 Relation between the BPM elements

Prior literature points to a holistic BPM framework that involves two main components consisting of ten elements. The first component is the BPM lifecycle, which is considered as the more operational part of BPM where focus is placed on processes. The second component involves the additional four elements (strategy alignment, governance, people, and culture). These play an important role for the underlying BPM success. Based on our careful examination of the seven sources and their proposed BPM frameworks, we find that the two components are linked to each other. In particular, we can see two underlying relations (Figure 1 and 2). First, the relation from the four initial BPM elements to the *process identification* phase indicates that the lifecycle can only start after the actions of all initial BPM elements have been conducted and defined, hence the term *initial*. Second, the relation from the initial elements pointing to the BPM lifecycle as a whole indicates that all that is done during the lifecycle should comply with the "rules" defined by the four initial BPM elements. Thus, the initial BPM elements are conditions that need to be considered prior to the BPM lifecycle and they also guard the performance of the BPM lifecycle. For example, a process that undergoes redesign should comply with the company's strategy that has already been defined by an action in *strategy alignment*.

Concerning the actions done by all ten elements, we find that besides each unique action, four of the lifecycle phases (process identification, process discovery, process implementation, and process monitoring & controlling) also include refined activities. These activities are refined, because they are already done by the initial BPM elements. However, for the purpose of the particular phase, only a portion of what has already been defined is needed. For example, the refined activity *design the process landscape* from the *process identification* phase is a partial activity from the BPM element *strategy alignment*, namely the action *enterprise process architecture*. It is partial because, in this context, the enterprise process architecture is designed to provide an overview of all processes of an organization and the relations between them (Rosemann and vom Brocke 2010). Whereas the process landscape includes only those processes that have been identified in the first phase and will be the focus in all subsequent phases of the lifecycle (Dumas et al. 2013). Interestingly, we can also observe that those "intellectual" lifecycle phases where all could be done solely among the members of the BPM group (process analysis and process redesign), hence without necessarily interacting with the external stakeholders, are phases that do not include any refined activities from any of the initial BPM elements. While the remaining four phases where it is important to make decisions based on external factors, such as those defined by the four initial elements, are the phases that include refined activities (process identification, process discovery, process implementation, process monitoring & controlling).

However, whereas a lot of research has already stressed the importance of these elements that comprise a BPM implementation framework, hardly any focus has been placed on particular guidelines in terms of the minimum required elements organizations needs to consider for implementing BPM in order to reach a pre-defined set of goals. Accordingly, this is the gap we address in this paper. For this, we incorporate the framework from Figure 2 into the BPM success assessment framework we developed in order to test the success of BPM in the case of two companies.

3 Research Design

The aim of this study is to develop a framework for assessing the success or failure of BPM in organizations. Following, we describe the methods for data collection and analysis we employ to develop the framework.

3.1 Research Methods

Since companies have specific reasons and goals for adopting BPM, we assume here that a company has a successful BPM initiative if they were able to reach all these initially specified goals. Because there are various different types of goals, a company needs to carefully select the appropriate actions that will lead to their accomplishment. This means, before assessing the success of BPM within organizations, we first need to identify the underlying goals of companies for adopting BPM, the actions they conducted to achieve them, and whether they were able to reach the desired effects. Next, in order to find out whether the companies conducted the appropriate actions, we need to define a standard of the minimum required BPM elements needed in order to achieve a particular goal.

To be able to identify the discrete factors of causes, actions and effects we employed steps from the Straussian Grounded Theory (GT) approach (Corbin and Strauss 2008). We chose the Straussian GT approach as it systematically analyses data in order to unveil essential relationships. We analysed our data employing the first two coding steps of the Straussian GT approach, open and axial coding, while leaving out the selective coding. This is because we do not aim to develop a theory from scratch. Instead, we focus on the relationship between our BPM framework and the identified goals of the companies, the actions they carried out during their BPM initiative and the subsequent consequences. During the open coding phase we identify concepts and categories in our interview material, where a concept is a basic unit of analysis in the GT method, while a category clusters several concepts together (Corbin and Strauss 2008). In the axial coding phase we identify connections between the categories (Corbin and Strauss 2008). Thus, we started coding our interview material and focused on those portions of the data that explained the specific goals each company set to accomplish through their BPM adoption, and also the respective actions and consequences. As a result of the open coding we derived a list of concepts. For the axial coding we utilized three categories of the coding paradigm as proposed by Corbin and Strauss (2008), namely the Causal Conditions, Actions & Strategies, and Consequences. Accordingly, we assigned each concept we derived from the open coding phase to the three before-mentioned categories. Causal conditions are the goals companies have for adopting BPM, the actions & strategies encompass all actions each company conducted in order to achieve the goals, and consequences are the subsequent outcomes the companies experienced as result of BPM. The categories are related to each other as follows (Corbin and Strauss 2008): goals lead to selecting certain actions, and the conducted actions lead to facing certain consequences. In addition, we also kept track of the actions done for each specific goal. To be able to organize the derived concepts and categories, we used the specialized qualitative analysis software *ATLAS.ti*.

Next to this coding, we investigated the BPM adoption related activities that would be expected to show up. We ran through a procedure towards reaching a consensus about the minimal set of actions required for achieving the identified goals (see Figure 2), and resolved different perceptions in a discussion among the three researchers in order to achieve inter-rater reliability. As a first step, two researchers accessed the list of goals each company had for BPM, and the exhaustive list of actions each element of the BPM implementation framework has. Two of the researchers, individually, selected a list of actions they believe an organization needs to consider in order to reach each of their initially set goals. For example, if company A sets the goal of optimizing their processes with the help of BPM, then they at least have to utilize actions that belong to the last three phases of the BPM lifecycle (process redesign, process implementation, and process monitoring and controlling), as well as all four initial BPM elements. This is because process redesign is operationalized specifically in these three phases. However, process redesign should also be done in accordance with the company's strategy (strategy alignment), the roles need to be set for the new process in order for it to be implemented (governance), people should be able to understand what has been changed (people), and finally the employees should be willing to accept the new process changes (culture). Next, both researchers compared their lists of proposed actions for each goal. The small list of disagreements was

then discussed with the third researcher, after which a consensus was reached over the minimum required actions organizations need to consider in order to reach each of their goals.

3.2 Data Collection

We gathered data on goals, actions and consequences by conducting in-depth interviews with two companies, A and B. Company A is based in Austria, it has approximately 3000 employees and is involved with customer service for community real estate. Company B is based in Slovenia, it has approximately 500 employees and comes from the waste management industry. We selected these two companies, first of all because they both adopted the BPM approach for better conformance and performance of their processes. Secondly, they both come from the public sector, and since public sector organizations typically share common characteristics (e.g. have higher social obligations, legislative, and public accountability (Kumar et al. 2002)), they are easily comparable. Also, public sector companies are particularly suitable for our study, because their characteristics typically fit classic business process redesign methodologies (Indihar Stemberger and Jaklic 2007). Thirdly, both companies focus on customers. Our aim is to compare their BPM initiatives and test whether certain actions one conducted and the other not could have been a reason for some end-effect.

Both companies have an assigned BPM team. Our interviewees from Company A were two BPM experts (employees that make decisions about each step of the initiative and model most processes) and their external BPM consultant. In addition, the CEO (Chief Executive Officer) was present during the first 20 minutes of the interview. The interview took place in September 2012, was conducted in German and lasted 80 minutes. For Company B, our interviewees were the CEO, CPO (Chief Process Officer) and two external BPM consultants. The interview took place in April 2013, was conducted in Slovene and lasted 120 minutes. We transcribed both interviews and used the interview transcripts for the subsequent data analysis. In preparation for the interviews we designed an interview guideline which we used for both interviews. The interview guideline contained specific questions concerning their BPM initiative, such as the reasons that triggered BPM adoption, what they did in order to accomplish each specific goal, and what they experienced as a consequence.

4 Findings

In this section we discuss the findings of our study. Here we present the framework for assessing BPM success or failure. This framework illustrates both, the ten BPM elements, the goals Company A and B had for adopting BPM, the actions they carried out for its implementation, and the consequent outcomes. Next, we show the results from the assessment and the evaluation of our findings.

4.1 BPM success assessment framework

In order be able to assess the BPM success in both companies, we developed an assessment framework which incorporates both, the ten BPM elements, as well as the goals, actions and outcomes we identified for companies A and B (Figure 3). The middle ten columns in Figure 3 depict the four initial BPM elements and the six BPM lifecycle phases, while the columns *goal firm* and *out. firm*, stand for the two companies we interviewed and use as cases. Therefore, each indicated '*a'* or '*b'* in the light grey cells represents a goal or outcome the respective company had or achieved due to BPM. The remaining columns depict the categories *goals* and *outcome* we derived as result of coding of our interview material. From Figure 3 we can see that each goal has its mapped outcome which entails the same semantics. Nevertheless, a goal is something a company desires to achieve, while the outcome is the goal the company achieved. Hence, there is a symmetric mapping of each goal to its respective outcome. On the other hand, the actions are accordingly distributed in the four initial BPM elements and the six phases of the BPM lifecycle. First of all, each dark grey cell means that actions from that

			Goal Firm		BPM elements				BPM lifecycle phases						Out. Firm				
GOALS			**A**	**B**	**P**	**C**	**S**	**G**	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**A**	**B**	**OUTCOME**		
Performance	***process***	identify & understand weaknesses	a	b				a	ab	ab	ab				a	b	weaknesses identified & understood	***process***	**Performance**
		optimize processes	a	b			b	ab				b	b	b		b	processes optimized		
	customer service	increase satisfaction	a					a								b	satisfaction increased	***customer service***	
		increase quality		b			b				b	b	b	b			quality increased		
		reduce costs		b			b				b	b	b	b			costs reduced		
		reduce time		b			b				b	b	b	b			time reduces		
		assure continious improvement	a											b		b	improvement sustained		
	employees	raise productivity		b	b			b			b	b	b	b		b	productivity raised	***employees***	
Understanding	***employees***	increase process awareness	a	b	b	b		a								b	process awareness increased	***employees***	**Understanding**
		facilitate employee communication		b	b	b										b	employee communication facilitaed		
		increase BPM knowledge		b	b			b								b	BPM knowledge increased		
Control	***process***	consolidate process inputs	a						a	a	a				a		process inputs consolidated	***process***	**Control**
		increase transparency	a	b	b	b		a		b				b	a	b	transparency increased		
		standardize	a					a	a	a	a				a		standardized		
		manage risk	a					a		a	a						risk managed		
		measure	a	b				a						b	a	b	measured		
	customer service	achieve proactivity	a						a	a	a					b	proactivity achieved	***customer service***	
	quality	comply to standards	a	b				ab	a	ab	a			b	a	b	standards complied	***quality***	
		adapt to external changes		b	b	b	b	b			b	b	b	b		b	external changes adapted		
Implementation		support information system	a	b				a			ab		b			b	supported Information Systems		**Implementation**
Innovation		identify new processes		b	b	b	b										new processes identified		**Innovation**
		introduce new products		b	b	b	b										new products introduced		

LEGEND **A:** Company A (Austrian) | **B:** Company B (Slovenian) | **P:** People | **C:** Culture | **S:** Strategy alignment | **G:** Governance
P1: Process identification | **P2:** Process discovery | **P3:** Process analysis | **P4:** Process redesign | **P5:** Process implementation | **P6:** Process monitoring & controlling

Figure 3. BPM success assessment framework

particular BPM element need to be conducted '*ab'* represents the actions from the respective element companies A and/or B carried out in order to get to the corresponding outcome. Figure 4 illustrates how the BPM success assessment framework can be read.

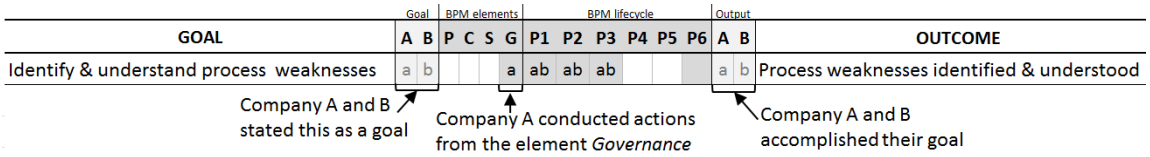


Figure 4. Excerpt from the BPM success assessment framework

We identified 22 goals that triggered the organizations to adopt BPM. We classified the goals into five categories. Accordingly, there are 22 outcomes classified into five categories the companies should reach due to BPM. These can be seen in Figure 3. Each category contains goals/outcomes that serve a similar purpose. The categories are concerned with (1) performance of processes, customer service, and employees, (2) understanding for employees, (3) control of processes, customer service, and quality, (4) implementation and (5) innovation. The indicated *"a"* or *"b"* in columns *goal firm* and *out. firm* depict whether firm A and/or firm B had this particular goal for adopting BPM, and also achieved this as an outcome due to their BPM implementation, respectively. We found that both firms have seven goals in common (Performance: identify & understand process weaknesses, optimize processes, etc.). On the other hand, they also have similar goals that could potentially lead to the same outcome. For example, the goal firm A has that concerns increasing the customer service satisfaction encompasses all three singular goals of firm B that concern the quality, costs and time of customer service.

Concerning the accomplishment of the indicated goals, the results are somewhat different. We can observe that both firms have three outcomes in common, compared to the initial seven shared goals. This is mainly because of the choice of actions by both firms, which led either to accomplishing the goal, or not being able to do so. For instance, we can see that both firms adopted BPM in order to be able to optimize their processes. Apparently only firm B reached the goal and was able to optimize their processes due to BPM, while firm A did not yet optimize their processes. However, when in addition we consider the actions each firm chose in order to reach this goal, we can see that firm B dominates in the respective row, while firm A only utilized the actions from the element *governance*. Same applies to the goal of increasing process awareness in order to facilitate employee understanding over the firm's processes. Whereas both firms stated this as a goal, only firm B managed to experience increased process awareness as result of BPM. Here again firm B dominates the dark grey cells for the respective goal. When looking at both firms separately, we can clearly see that firm A did not reach as many goals as firm B. While firm A was able to reach less than half of what they intended (6 out of 13), firm B reached more than half of their initial goals (11 out of 16). On the other hand, there are outcomes firm B experienced without even stating this as a goal (satisfaction increased, improvement sustained, and proactivity achieved). No actions are indicated for these outcomes, since they were unanticipated. Thus, our interview material did not show actions firm B did specifically to reach these three particular outcomes.

4.2 Evaluation of BPM success

Here, we conceptualize BPM success as the fit between the BPM implementation framework and the actions applied by the companies to reach their initial goals. Thus, not being able to map a goal to its respective outcome means that some or all necessary actions would have been neglected. Our findings point to a number of interesting patterns. First of all, the fact that firm B experienced more outcomes than firm A infers that firm B has a more successful BPM initiative than firm A. This can also be traced back to the number of actions each of the firms conducted for each goal they stated. We can

clearly see in the BPM success assessment framework (Figure 3) that firm B dominates with the number of conducted actions for each goal. This indicates that, in order to attain a particular effect, a company is indeed required to apply a certain number of actions, rather than omitting steps that are necessary for the accomplishment of goals. Secondly, the framework in Figure 3 also points to the fact that while some companies set quite specific goals for BPM, such as *reduce costs*, *reduce time*, and *increase quality*, others focus on broader objectives, such as *increase satisfaction*, when indeed both lead to the similar outcome i.e. improve the performance of customer service. In particular, the three specific goals build up to the broader goal, that is increasing satisfaction. Interestingly, firm A that had stated as goal to increase customer service performance by increasing satisfaction did not yet experience this as an outcome. However, firm B who set the three specific goals, claimed to have increased customer satisfaction, but was not able to confirm whether the three specific goals have been individually accomplished. Consequently, we could argue that aiming towards smaller goals leads to choosing the appropriate steps, subsequently succeeding in reaching the desired outcome.

Furthermore, there are two goals firm B stated regarding innovation. Nevertheless, up until now innovation, in such a large scope of introducing new products and processes due to BPM, has not yet been considered in almost any of the phases of the BPM lifecycle. Perhaps actions from phase 6 (process monitoring & controlling) might have some influence on the identification of new processes and the introduction of new products in a company. Whereas innovation within partial processes could be addressed by the redesign phase, concerning the introduction of completely new processes and products at this stage could mainly be realized by the four initial BPM elements. Although firm B did their share in involving three of the elements, they were not yet able to reach these goals due to BPM. This might be as result of the *governance* not being involved, as the actions stated by this dimension are the ones that make all big decisions, especially decisions such as product and process innovation. Another point we could emphasize from the framework is the underlying reason of firm A not being able to attain most of their initial goals. A clear pattern we can observe here is the fact that firm A included hardly any of the four initial BPM elements during their BPM implementation. The only element that has been included as action for achieving most goals is *governance*. Although leadership is important, leadership without consideration of the people, neither culture nor the strategy of the company is of hardly any particular value.

Apparently these observations suggest a certain degree of causality between the goals companies set to reach and the choice of appropriate actions for their accomplishment. However, we also have to consider that there might be some contingent factors that influence the success or failure of BPM in organizations. Accordingly, we might wonder about the reasons behind the apparent BPM success of firm B and the somewhat failed initiative of firm A. Obviously, actions firm A conducted are mostly dispersed amongst the first three phases of the BPM lifecycle and the BPM element *governance*, where it is well known that the remaining non-involved elements are indeed those where all changes occur. Thus, firm A seems to still be stuck with documentation of processes, even though they have adopted this approach at the beginning of 2011. One potential factor for this is indeed the fact that employees of firm A are not fully aware that a BPM initiative exists. Thus, all BPM-related actions conducted in firm A have been done internally, among the members of the BPM group and the CEO. Excluding the employees, which are actually those that are directly involved with the processes, in fact leads to not being able to implement the changes caused by BPM. Likewise, a factor that could have influenced the BPM success in firm B could be the necessity to comply with all new laws and regulations defined by the state at the time of adoption. This in fact pushed firm B to implement a novel approach such as BPM, to be able to maintain their competitiveness in the market.

5 Implications and Limitations

The results of this paper have implications for research and practice. A good set of studies have investigated the success factors of BPM and how success can be achieved. However, only few

explicitly test whether the way how BPM is adopted helps to achieve the desired effects. Also, there is limited understanding in prior research on how all BPM-related elements and activities have to be combined to achieve success. Against this background, our study provides novel perspective on how this research problem can be approached. We provide first evidence that studying BPM success at the more fine-granular level of distinct goals can help to better trace causes and effects. The two companies we interviewed reveal diverging levels of goal achievement, which can be at least partially traced back to the actions they conducted. These findings provide a basis to study BPM success on a more detailed level in future research, with an explicit reference to goals and BPM-related scenarios. The research presented in this paper also informs practice. Once BPM professionals have precisely defined the goals they aim to achieve with their BPM initiative, they can use the BPM success assessment framework (Figure 3) together with the set of actions summarized in the BPM implementation framework (Figure 2) in order to check for potential omissions and consistency with their goals. Thus, the BPM assessment framework can be used as a post hoc analysis tool to rationalize why the planned outcomes were not realised and why BPM failed to deliver success (Lyytinen and Newman 2008). Beyond that, the framework can also be used as a guide for newly started BPM initiatives. It can help companies in focusing on those parts which will lead to attain their goals and enact organizational change most effectively (Lyytinen and Newman 2008).

The research reported in this paper is subject to limitations. The argument brought forth in this paper builds on conceptual analysis of prior research in BPM adoption with a corresponding qualitative investigation of two companies. The first limitation in this context relates to the fact that the empirical basis for supporting our BPM success assessment framework is limited, though being conclusive. Future research should focus on studying BPM adoption from a predefined subset of goals such that it can be argued for theoretical saturation given a large number of cases. The second limitation relates to the presumed causal relationship between goals, actions and consequences. Future studies need to investigate on a broader basis of companies in how far factors are causal or contingent. Third, we investigated companies that are publicly owned. In this research, this allowed us to eliminate the business sector as a potential factor. However, such company-related parameters eventually have to be taken into account and investigated for their effect on BPM adoption.

6 Conclusion

In this paper we develop a framework for assessing the success or failure of BPM initiatives. We first provide a BPM implementation framework which encompasses a holistic BPM approach. This framework enlists all actions done in all stages of the BPM implementation. We conducted in-depth interviews with two organizations from Austria and Slovenia. We used this data to test whether the actions both companies carried out for their BPM initiative were in line with their goals for adopting BPM, and whether these actions led to experiencing the corresponding benefits from BPM. Due to our findings, we were able to observe certain causality between the actions each company chose and the consequent outcome. We found that a number of elements from the BPM framework need to be considered and the actions they contain are necessary to be implemented in order for specific goals to be attained. We also observed that the initial elements of BPM, such as the involvement of people, the consideration of the organizational culture, and the alignment of the BPM initiative with the company's strategy, play a big role in the underlying BPM success.

In future research we aim to conduct further case studies with a specific focus on the set of goals these companies define, which kind of actions they perform, and which kind of outcomes they achieve. We are specifically interested in potential differences that might show up in terms of organizational culture and the effect it might have on BPM success.

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