Economic Research-Ekonomska Istraživanja

ISSN: 1331-677X (Print) 1848-9664 (Online) Journal homepage: https://www.tandfonline.com/loi/rero20

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To cite this article: Brina Buh, Andrej Kovačič & Mojca Indihar Štemberger (2015) Critical success factors for different stages of business process management adoption – a case study, Economic Research-Ekonomska Istraživanja, 28:1, 243-258, DOI: 10.1080/1331677X.2015.1041776

To link to this article: https://doi.org/10.1080/1331677X.2015.1041776

Economic Research-Ekonomska Istraživanja, 2015
Vol. 28, No. 1, 243–258, http://dx.doi.org/10.1080/1331677X.2015.1041776

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Critical success factors for different stages of business process management adoption – a case study

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(*Received 21 November 2013; accepted 6 February 2015*)

Many organisations fail in their attempt to adopt business process management (BPM). Although general critical success factors (CSFs) are well understood, we argue that CSFs are not the same for all stages of BPM adoption. The purpose of this article is to identify the CSFs in different stages of BPM adoption. A case study approach was used to analyse a successful BPM adoption in a public company. The article provides empirical insights about CSFs in individual stages of BPM adoption. We find that the guidance of external consultants was very important, although this factor is not commonly recognised in the literature. The article shows that the identification of well-known CSFs of BPM adoption gives only a limited view since the factors change between stages. Organisations need to carefully identify the stage and prepare a roadmap for their BPM adoption.

Keywords: business process management (BPM); stage of BPM; critical success factors (CSFs); Slovenian public company; case study

JEL classifications: L2, L20, D73

1. Introduction

For many organisations, Business Process Management (BPM) is one of the most important topics. It is a concept that can, if successfully adopted, bring significant benefits to the organisation, such as a better understanding of its business processes, more control and better business performance (Indihar Štemberger, Bosilj-Vukšić, & Jaklič, 2009; Škrinjar, Bosilj-Vukšić, & Indihar Štemberger, 2008). However, the adoption of BPM is a very complex and time-consuming process that requires much effort, time, resources and discipline. Bandara, Alibabaei, and Aghdasi (2009) found that many organisations have tried to change their business in compliance with a process orientation, yet only a few have managed to completely integrate their business functions into end-to-end processes. Consequently, many BPM projects are unsuccessful in practice (Trkman, 2009) and there are problems with adoption and justifying the benefits to business (Grisdale & Seymour, 2011).

Since BPM is a multidisciplinary concept, its success depends on different factors (Bandara et al., 2009). Many research studies aiming to find and explore the success and failure factors of BPM adoption have already been conducted and the area remains an interesting research topic (Alibabaei, Aghdasi, Zarei, & Stewart, 2010). Whereas most papers focus on identifying and explaining the CSFs of entire BPM adoption, the

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purpose of this article is to discuss the different stages of adopting BPM and to find which CSFs are important at each stage of BPM adoption. A case study approach was used to analyse how the Slovenian public company Snaga managed to successfully adopt BPM and to allocate the CSFs to different stages of BPM adoption.

The structure of the article is as follows: next section provides the theoretical background, defining BPM and BPM adoption for the purpose of this article and identifies the CSFs of BPM adoption found in the literature. The third section describes the methodology and the fourth section presents the case study. An analysis of the case study is provided in Section 5, together with implications, limitations and directions for future research. Section 6 concludes the article.

2. Theoretical background

2.1. Business process management

BPM has been around for more than 20 years; yet understanding of the BPM concept amongst academics and practitioners still varies (Reiter, Stewart, Bruce, Bandara, & Rosemann, 2010). There are many definitions of BPM and therefore the term 'BPM' is used in many different ways (Wolf & Harmon, 2012).

De Bruin and Doebeli (2010) find three common interpretations of BPM, namely:

- BPM as a software solution to automate and manage processes;
- BPM as a lifecycle approach to managing and improving processes; and
- BPM as an approach to managing an organisation that takes a process view.

Since BPM means different things to different people (Wolf & Harmon, 2012), it is very important to clearly define how BPM is understood in this article. In our understanding of BPM we combine the second and third view of BPM as found by de Bruin and Doebeli (2010). We understand BPM as a management approach that takes a process view (de Bruin & Doebeli, 2010) and is dependent on strategic and operational elements, the use of modern tools and techniques, the involvement of people and focuses on effectively satisfying customer requirements (Zairi, 1997). It is 'the achievement of an organisation's objectives through the improvement, management and control of essential business processes' (Jeston & Nelis, 2006) and a holistic management discipline that requires considering a series of aspects for its successful adoption (Rosemann & vom Brocke, 2010). Taking a process approach means adopting the customer's point of view (Davenport, 1994) and it is a way in which organisations are managed (Pritchard & Armistead, 1999).

2.2. BPM adoption

The term 'BPM adoption' has not yet been clearly defined in the literature; therefore, it can be understood in different ways. For the purpose of this article, BPM adoption is defined as the use and deployment of any BPM concepts in organisations (Reijers, van Wijk, Mutschler, & Leurs, 2010).

Organisation-wide BPM adoption tends to go through multiple stages (see Figure 1), starting with *awareness and understanding of BPM* (Rosemann, 2010). It is important that an organisation recognises the value of BPM and believes in the benefits the concept can bring. This can be achieved through training and educating the employees.

Figure 1. Typical Stages of BPM Adoption.
Source: Adopted from Rosemann (2010).

Then a business driver (a sense of urgency) and a champion (an individual with a passion for the idea of BPM) are required to trigger the *desire to adopt BPM*, which is the second stage of BPM adoption (Rosemann, 2010). Business driver(s) and champion(s) must be important enough and need to have sufficient influence within the organisation to convince the executives and key employees in the organisation to accept the idea of adopting BPM. Good communication is imperative for this.

A major driver for adopting BPM is the need to reduce costs by making processes more efficient (Scheer & Brabander, 2010; Wolf & Harmon, 2012). A few of the other triggers for BPM adoption within an organisation are the need to improve management coordination or organisational responsiveness, the need to improve customer satisfaction to remain competitive, implementing information technology (IT) systems and business applications, establishing quality management systems for ISO certification, adopting legislation-based compliance management approaches that focus on business processes, along with high growth, mergers and acquisitions, reorganisation, a change in strategy and the need for business agility (Jeston & Nelis, 2006; Scheer & Brabander, 2010; Wolf & Harmon, 2012).

The third stage of BPM adoption is the setting up, executing and monitoring of individual *BPM projects* to build up BPM capabilities and credibility in the organisation (Rosemann, 2010). These projects may comprise process modelling and an improvement of individual business processes, together with BPM education and training. If BPM projects are successful, the organisation can then move to the fourth stage – converting BPM projects into a *BPM programme* where an overall BPM methodology needs to be designed, along with the BPM strategy and a roadmap for its execution (Rosemann, 2010).

In the final stage of BPM adoption a centralised BPM Centre of Excellence (CoE), usually run by a Chief Process Officer (CPO), is established. The CoE is responsible for ensuring that all BPM-related activities are consistently delivered in a cost-effective way. Moreover, the BPM-related services offered by the BPM CoE should be consciously identified – the *productisation of BPM* to realise the overall benefits of adopting BPM (Rosemann, 2010). BPM-related services include defining and modelling existing business processes, analysing and optimising the processes, training and educating employees in order to encourage process thinking, process performance measurement, introducing process ownership, etc. A process owner is an individual with ultimate authority and responsibility over process operations, and needs to be well acquainted with the process and occupy a relatively high position in the company (Žabjek, Kovačič, & Indihar Štemberger, 2008).

2.3. Critical success factors of BPM adoption

When searching for critical success factors (CSFs) the 'success' of BPM adoption must be clearly defined (Trkman, 2009). Since BPM adoption can be initiated for a

variety of different reasons and can be understood in different ways, Trkman (2009) proposes a very general definition of success: 'BPM is successful if it continuously meets pre-determined goals, both within a single project scope and over a longer period of time'. Similarly, Bandara et al. (2009) define success in the context of their study as 'the resulting status of when the intended goals of the BPM initiative are met to a satisfactory level' and success factors as 'those key areas where "things must go right" in order for the BPM initiative to proceed efficiently and be completed successfully'.

The success of BPM adoption can be measured by BPM maturity models, which describe the development of BPM in organisations. This approach has been used in several previous studies (Škrinjar & Trkman, 2013). A review of 10 different BPM maturity models is provided by Röglinger, Pöppelbuß, and Becker (2012). Even software tools are available for selecting the appropriate BPM maturity models, for example freely available BPMM Smart-Selector tool, developed by van Looy, De Backer, and Poels (2012).

Our literature review aims to provide brief insights into the most frequently identified CSFs for BPM adoption. For this purpose, we checked Emerald, ProQuest, JSTOR, Wiley Online Library, ScienceDirect, SpringerLink, and Web of Science databases and focused on peer-reviewed articles in journal and conference publications. We searched for keywords 'success' and 'business process management' or 'BPM' in the title of the articles and due to the narrow search all together received 18 hits. After reviewing the abstracts of all 18 articles we eliminated nine articles, which were not relevant for our research. Article was considered relevant, if it specifically covered CSFs in BPM. From the nine remaining articles we identified the most important success factors and gathered them into Table 1. All CSFs, which were identified by at least two different sources, were included in the table.

Top management support is often considered the most important as it must initiate and support BPM efforts (Trkman, 2009) and has to be actively involved in the BPM adoption. A BPM project must have clearly defined objectives, purpose and plan and should be aligned with the organisation's strategy (Ohtonen & Lainema, 2011; Ravesteyn & Batenburg, 2010). The organisation should focus on realising benefits from its business processes and ensure that all participants in the project are motivated, cooperative and empowered to sufficiently contribute to achievement of the desired results (Jeston & Nelis, 2006). Employees involved in process management should be trained to develop their knowledge and skills (Rohloff, 2009).

Employees should understand the objectives, content, roles and responsibilities of process management and be informed about its progress. Communication within the company is extremely important because it creates awareness of the need for processes management and supports its adoption (Rohloff, 2009). Communication plays a key role in the project's success throughout its duration (Ravesteyn & Batenburg, 2010).

It is important that people in the organisation are ready and willing to change (Burlton, 2011; Rohloff, 2009), which is directly linked to the culture in the organisation. The organisational culture has a significant impact on the success of BPM adoption (Bandara et al., 2009) and has to be compatible with the culture that is built in the BPM, otherwise implementation of the concept is unlikely to be successful (Alibabaei et al., 2010; vom Brocke & Schmiedel, 2011). Managers, leaders and other employees have to understand the concept of BPM and transform their way of thinking from a

Table 1. Critical success factors of BPM adoption.

Critical success factor	Research
Top management support, management involvement	Ohtonen & Lainema, 2011; Ravesteyn & Batenburg, 2010; Ravesteyn, 2007; Trkman, 2009
Strategic alignment (linkage to organisation strategy, alignment of process to organisational goals)	Ariyachandra & Frolick, 2008; Bandara et al., 2009; Ohtonen & Lainema, 2011; Ravesteyn, 2007; Ravesteyn & Batenburg, 2010; Thompson, Seymour, & O'Donovan, 2009; Trkman, 2009
People (capable and motivated employees, training and empowerment of employees, personnel commitment)	Bandara et al., 2009; Ohtonen & Lainema, 2011; Ravesteyn, 2007; Ravesteyn & Batenburg, 2010; Ringim, Razalli, & Hasnan, 2012; Thompson et al., 2009; Trkman, 2009
Methods, methodology	Bandara et al., 2009; Ravesteyn & Batenburg, 2010; Thompson et al., 2009
Communication	Ariyachandra & Frolick, 2008; Bandara et al., 2009; Ohtonen & Lainema, 2011; Ravesteyn & Batenburg, 2010; Thompson et al., 2009; Trkman, 2009
Information technology, technology support, level of IT investments	Bandara et al., 2009; Ohtonen & Lainema, 2011; Ringim et al., 2012; Thompson et al., 2009; Trkman, 2009
Culture, organisational culture (culture of change, culture of collaboration)	Bandara et al., 2009; Ohtonen & Lainema, 2011; Ruževičius, Klimas, & Veleckaite, 2012; Thompson et al., 2009
Project management, change management, project champion (clearly defined objectives, purpose and plan of BPM project; defined roles and responsibilities)	Ariyachandra & Frolick, 2008; Bandara et al., 2009; Ohtonen & Lainema, 2011; Ravesteyn, 2007; Trkman, 2009
Performance measurement (measurable results)	Bandara et al., 2009; Ravesteyn, 2007; Ravesteyn & Batenburg, 2010; Trkman, 2009
Governance	Ravesteyn & Batenburg, 2010; Thompson et al., 2009
Understanding the BPM concept, understanding the process	Ravesteyn, 2007; Thompson et al., 2009
Continuous improvement, continuous optimisation	Ravesteyn, 2007; Thompson et al., 2009; Trkman, 2009;
Clearly defined process owners	Thompson et al., 2009; Trkman, 2009

Source: Created by the authors based on the literature review.

traditional functional style to a new model based on business processes (Alibabaei et al., 2010). A common understanding and shared values supporting the process organisation and an awareness of how culture affects BPM adoption are essential for BPM adoption success (vom Brocke & Sinnl, 2011).

Trkman (2009) finds that the main reason for the unsuccessfulness of BPM projects may lie in the failure to consider one or more linkages between the success factors. Organisations should consider different CSFs and not just focus on some of them. However, CSFs of BPM adoption are not the same during different stages of BPM adoption, but only a few papers distinguish in CSFs among stages of BPM adoption (e.g. Ravesteyn & Batenburg, 2010; Ravesteyn & Versendaal, 2007). The rest of the article discusses CSFs of adopting BPM in different stages.

3. Research methodology

Because studies of CSFs in different stages of BPM adoptions are scarce, our approach strategy was to study one case in depth. Single case studies are well-accepted in the BPM literature (e.g. da Silva, Martins Damian, & Dallavalle de Pa′dua, 2012; Grisdale & Seymour, 2011; Rohloff, 2009), because they allow researchers to develop a deep understanding of BPM related concepts that are still being intensively developed. In conducting our case study, we followed established guidelines for interpretive case study research (Yin, 1994), which is particularly suited to research questions which require detailed understanding of social or organisational processes because of the rich data collected in context (Hartley, 2004, p. 323).

3.1. Case selection

The company Snaga was chosen because it is one of the rare cases, where BPM was successfully adopted. In addition, the company's CEO, CPO and other employees were willing to share the information on Snaga's BPM adoption and have enabled us to access the confidential material and project documentation.

3.2. Data collection

Both qualitative and quantitative data were collected. Our primary sources for the data collection were in-depth interviews, existing project documentation, direct observation, and quantitative data from a questionnaire. The collected data included general information about the company, details of the projects conducted during the BPM adoption, and the success factors considered most important for adopting BPM. A BPM adoption framework and a set of CSFs (described in the previous section) were synthesised from the literature and provided a structure for presenting and analysing the case study. An interview guideline was developed, with questions related to the BPM adoption. All interviews followed the same structure and were conducted in Slovene.

We examined the available documentation (e.g. project reports, process models, process documentation) and conducted several semi-structured in-depth interviews with the CPO who had been involved in all stages of the BPM adoption, and interviews with CEO, two process owners and two external consultants, who worked on the project. The interviews took place in October 2012 and April 2013. Each interview lasted from 45 to 120 minutes, depending on the availability of each interviewee. The questions covered the process of BPM adoption, reasons for adopting BPM and outcomes of BPM adoption, stages the company went through, problems they encountered and the CSFs at different stages of BPM adoption. Notes were made during the interviews and transcribed afterwards.

In addition, direct observation of process management system was made and quantitative data on BPM success were collected using two questionnaires for assessing BPM maturity: Process Performance Index (PPI) by Rummler-Brache Group (2004) and Business Process Orientation (BPO) maturity model by McCormack and Johnson (2001). Both were completed by the CPO of the company.

3.3. Data analysis

Data from the interviews and from project documentation were coded manually, using Word and Excel spreadsheets as a data management tool. We followed the two-step

coding process beginning with basic coding in order to distinguish overall themes, followed by a more in depth, interpretive coding, in which more specific trends and patterns were interpreted (Hay, 2005). In the first step we identified the stages of BPM adoption in Snaga and in the second step we assigned the CSFs to individual stages of BPM adoption. Two follow-up interviews were carried out with the CPO to clarify ambiguities and to confirm the results of our analysis.

4. Case study description

4.1. Presentation of the company

Snaga is a Slovenian public company that provides a series of services for citizens of the Municipality of Ljubljana and suburban municipalities, including the collection, removal and disposal of municipal waste, cleaning of public areas, management of restrooms, placarding and overhaul. It is part of Public Holding Ljubljana which provides services to ensure efficient, economical and user-oriented mandatory public utility services in the capital. Snaga employs 500 workers and collects more than 150,000 tonnes of waste per year, of which 42% is processed and the rest is disposed of. In 2001, the company obtained a certificate for the ISO 9001:1994 quality management system; in 2004 it switched to ISO 9001:2000, and in 2010 it obtained ISO 9001:2008.

4.2. Reasons and objectives for adopting BPM

Prior to the BPM adoption and implementation of a new information system, the company had obsolete and non-integrated IT solutions that did not support the business operations sufficiently. Data acquisition for the employees in different departments was time-consuming and many business transaction records and other data were led manually in Microsoft Excel and Word. The existing business processes were not properly organised, resulting in the unnecessary duplication of work and excessive delays.

In addition, the company faced new challenges in waste management and new legislation which dictated the development of waste-processing technologies. In the future, Snaga will have to process as much waste as possible into secondary raw material, and burn only the residues without disposing it. For this purpose, the company was granted resources from the EU Cohesion Fund for the project of a regional centre for processing waste (the RCERO project), which started in 2003 with project planning and will finish by the end of 2014.

The company's executives were aware that the current way of doing business was inadequate and changes were necessary for the company to improve its business operations and maintain its competitive advantage. Thus, they decided to completely redesign the existing business processes and also to adopt other BPM practices.

Snaga's main objectives of adopting BPM were to improve the effectiveness and efficiency of its business operations, reducing the costs and time spent providing the services, raising the productivity, making the transition from functional to process organisation and increasing the service quality. In addition, the company's executives anticipated that adopting BPM and optimising the business processes would enable them to select and implement the appropriate Enterprise Resource Planning (ERP) solution and business intelligence (BI) system to support business processes in the company. Moreover, the BPM adoption would also enable the implementation of customer relationship management (CRM), supply chain management (SCM) and human resource management (HRM) and to maintain the quality certificates (ISO standards).

4.3. BPM adoption stages in Snaga

The company Snaga comprehensively renewed its business operations and adopted BPM by conducting several consecutive and interdependent projects. Snaga's adoption of BPM is discussed using Rosemann's framework (see Figure 1). The BPM adoption process in Snaga is presented in Figure 2 and shows how Snaga's adoption of BPM coincides with the framework. The company adopted BPM following the BII methodology (Indihar Štemberger & Jaklič, 2007) and with professional guidance of external consultants. Thus, the stages of BPM adoption in Snaga are very similar to those suggested by the literature.

The first step towards Snaga's adoption of BPM was the awareness that there were problems with processes in the organisation and that there were opportunities to improve them. Snaga's executives were aware of the future challenges and the need to change their business operations. They decided to adopt BPM because, as CEO said, 'they believed that BPM would bring Snaga greater competitiveness, better management of business processes and long-term success'. A precondition of this decision, which represents the second stage of Snaga's BPM adoption, was therefore the awareness and understanding of BPM which led to the desire to adopt BPM.

The initiator of the BPM adoption was the company's Chief Information Officer (CIO) who worked closely with external consultants and also ensured the sufficient support of top management. External consultants were hired to supervise the implementation of the projects and advise the company when there were discrepancies from the main objectives of the BPM adoption.

At the beginning of the third stage of BPM adoption, the project team was appointed by the CEO. It included employees who had the knowledge and experience to contribute to the successful adoption of BPM, including the company executives, heads of departments and key users. The first project they conducted was business process modelling, analysis and redesign. External consultants modelled and analysed several existing business processes. This was done according to a verified methodology on the basis of interviews with employees involved in the process, and the available documentation. Even during the modelling and describing of the processes many uncertainties were resolved and the employees acquired a better understanding of BPM and business process orientation.

After that several improvements of processes were proposed by the consultants and also by Snaga's managers and other employees. The proposed changes were process optimisation, introduction of process ownership and setting up a BPM office. During the project a number of workshops were conducted in order to encourage the process way of thinking in the company. The biggest challenge in redesigning the company's existing processes was to change the mentality (way of thinking) of the people in the processes. At the end of this stage Snaga introduced some of the important concepts of process orientation, like process ownership for core end-to-end processes.

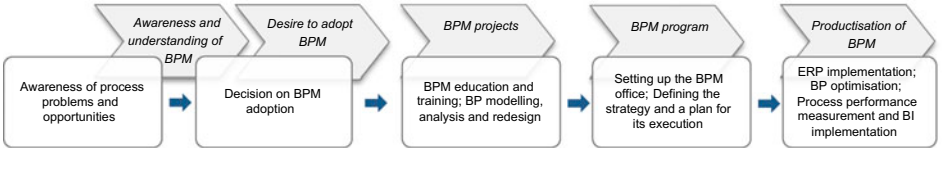

Figure 2. Stages of BPM adoption.
Source: Created by authors.

The fourth stage of the BPM adoption in Snaga involved the establishment of the BPM office, which is managed by the former CIO, who became the CPO. The company's executives and BPM office redefined the company's development strategy, including the vision, mission, and strategic objectives and identified strategic projects to achieve them – they developed a strategy and a roadmap for BPM adoption (a BPM programme). As the CPO said, 'the company paid a lot of attention to ensure proper communication, both vertically (top to bottom and vice versa) and horizontally (within the business processes) among the various sectors and departments'. By encouraging communication they wanted to ensure that the objectives of the BPM adoption were understood by all employees in the company and that a suitable organisational culture was emerging.

According to the BPM programme, in the last stage of the BPM adoption Snaga implemented a new ERP solution to support the redesigned business processes. Other projects conducted in this stage by several project teams and also with some help from external consultants included implementation of a system of Balanced Scorecard (BSC) and the implementation of standards and criteria for measuring the effectiveness and efficiency of the business processes. Snaga developed Key Performance Indicators (KPIs) for every core business process. In addition, the company also implemented a BI solution which allows it to measure efficiency and performance across all core business processes. KPIs are monitored on a daily basis by the process owners with support of the new BI solution. Within the latter project, Snaga also re-certified the ISO 9001:2008 quality system through which it manages and improves its business operations.

The CEO was actively involved in the projects by proposing improvements, encouraging employees to accept changes and by taking appropriate measures. The CPO and other members of the BPM office cooperate with the process owners and suggest further improvements of business processes to them. The BPM office is responsible for maintaining the process models and informing employees about ongoing events via the intranet. The CPO also writes ongoing news about the BPM adoption, which is published in the in-house newsletter Snagec, which is accessible to all employees.

4.4. Outcomes of the BPM adoption in Snaga

To determine the success of Snaga's BPM adoption we chose two out of 10 BPM maturity models identified by Röglinger et al. (2012): PPI by Rummler-Brache Group (2004) and BPO maturity model by McCormack and Johnson (2001). These two models were selected on the basis of several criteria. Both models have been empirically validated, are generic (i.e. used for business processes in general), produce quantitative data (can be easily statistically analysed and compared, independent of the assessors' interpretations), and take into account all business processes in the involved organisations. In addition, the assessment does not take a lot of time, and the assessment questions and corresponding level calculation are fully known and publicly available free of charge. In the selection process we made use of the freely available BPMM Smart-Selector tool, developed by van Looy et al. (2012).

Snaga's PPI index is 47, which means the company is in the third stage of process management maturity, called Process Management Mastery. For organisations in this final stage of process maturity, BPM is a way of life and process management is fully integrated into the organisation's planning and overall performance evaluation (Rummler-Brache Group, 2004). According to BPO maturity questionnaire, Snaga scores 4.6 and has the highest level of BPO maturity, defined as Integrated. This level

is characterised by process-based organisational structures and jobs. Process measures and management systems are deeply imbedded in the organisation (McCormack & Johnson, 2001).

Adopting BPM has brought considerable benefits to the company. A key change brought by the BPM adoption was the transition from a functional to a more process-oriented organisation with an increased customer focus. The company introduced process ownership, established a BPM office and introduced KPIs to measure the performance and efficiency of processes and business operations. In addition to process owners, they introduced administrators of business processes whose job is to actively connect core and support business processes and search for opportunities for a continuous improvement of business processes in cooperation with the process owners.

The BPM office plays an important role in the company and is, according to its jurisdiction, at the executive level. It is responsible for assigning tasks to the process owners and other employees in the company, as well as motivating and training them to work in accordance with the new (process) ways of working. The process owners are responsible for ensuring the adequacy of business processes that are clearly determined and have well-defined CSFs and KPIs. Business processes are managed with support of Snaga's BI system, where each process owner monitors the key success indicators for their own process and can also measure the efficiency and effectiveness of processes on the company level.

A process-oriented culture in Snaga was established by educating the employees and encouraging the process way of thinking and is maintained by continuous employee training, presentations and analyses of results of business operations and by taking appropriate actions. Every year, the CPO in cooperation with the process owners, process administrators and key users reviews the CSFs, objectives, measures and indicators for each process, including the suitability of process models and descriptions of process activities. To ensure realisation of the company's strategy, they consider three critical factors for the company's efficiency and success – human resources, processes and technology.

The adoption of BPM has yielded significant positive results for the company and its business operations. The company gained a good overview of its business processes, the deficiencies of the processes were exposed and eliminated, which contributed to an increase in customer and employee satisfaction, a 50% reduction of complaints, price competitiveness and improving the business value of the company.

5. Case study analysis and discussion

5.1. CSFs at different stages of BPM adoption in Snaga

Based on the interviews with Snaga's CEO, CPO, process owners and external consultants the most important CSFs of Snaga's BPM adoption have been identified for each stage of the adoption process. Table 2 shows which CSFs were most important at different stages of Snaga's BPM adoption.

The most important CSF in the first stage of Snaga's BPM adoption was the empowerment of employees due to the increased customer focus in the company. Since the company put their customers on the first place, top management became aware of process problems and the need for their improvement. Another important factor identified was openness to changes, which was critical for advancing to the second stage of BPM adoption.

Table 2. Critical success factors at different stages of the BPM adoption in Snaga.

BPM adoption stage	Critical success factors
Awareness and understanding of BPM	• empowerment of employees • customer focus • openness to changes
Desire to adopt BPM	• involvement and full support of top management • project champion • business drivers (a sense of urgency)
BPM projects	• well-communicated and clearly defined objectives, purpose and plan of the BPM project • professional guidance of external consultants • people who are willing and motivated to change
BPM programme	• involvement and full support of top management • professional guidance of external consultants • communication
Productisation of BPM	• involvement and full support of top management • professional guidance of external consultants • identified key performance indicators and persons responsible for their achievement • educated, trained and motivated employees

Source: Created by the authors based on the case study analysis.

In the second stage top management support and project champion were the most important success factors, together with business drivers. In order to trigger the desire to adopt BPM, business drivers (a sense of urgency) and champions are required (Rosemann, 2010). The business drivers for the BPM adoption in Snaga can be summarised in the following points: (1) new challenges in waste management and the new legislation which dictates the development of waste-processing technologies (waste disposal without processing will no longer be possible in the future); (2) the need to replace outdated and inadequate IT solutions and systems; and (3) the need to establish technical and quality control over business operations in order to enhance customer satisfaction through the faster and cheaper provision of services. In Snaga, the project champion was the CPO of the company who was responsible for building support among the company's executives and other employees by actively promoting the BPM projects and providing information on their progress. It is necessary to pay special attention to promoting the BPM adoption to create a positive atmosphere in an organisation.

In the third stage of BPM adoption, well-communicated and clearly defined objectives, purpose and plan of the BPM project were essential. For a successful business process modelling, analysis and redesign project an organisation has to clearly define the project objectives and its purpose, and communicate them to all participants in the project before it starts (Indihar Štemberger & Jaklič, 2007). The project in Snaga was led by the CPO of the company, who is an expert in project management and paid a lot of attention to the well-communicated and clearly defined objectives, purpose and plan of the project, which enabled the participants to recognise the expected benefits of the

project. Besides that, as CEO and also other employees from Snaga claimed, the help of external consultants who provided appropriate methodology and professional assistance significantly contributed to the success of the project. In this way the organisation can avoid many problems during the project, such as inadequately described and evaluated existing business processes, employee resistance, and an unwillingness to participate in the project because of a fear of redundancies and changes that would degrade their position.

Since the success of any project largely depends on people in the organisation and their willingness and desire to change, communication among all employees in the organisation is extremely important. According to the experience of two consultants who participated in our case study, all participants in the project have to fully cooperate and understand the purpose of adopting BPM. Employees must be appropriately educated, trained and motivated to understand and adopt the necessary changes in the company. In Snaga, the communication among employees was ensured through the intranet, meetings and interviews, and the education by several workshops.

The CSFs important in the fourth stage of BPM adoption were the top management support (especially support and involvement of CPO and CEO), professional guidance of external consultants and good communication skills. As the consultants said, 'it is essential that top management not only provides support, but is also actively involved'. The strategy, objectives and implementation plan should be specified, and the organisational culture has to be open to changes.

In the last stage the most important success factors were again the people (top management support, guidance of external consultants and knowledgeable employees) and identifying KPIs and persons responsible for their achievement. CEO set the objectives at the company level and the employees set the indicators for achieving these objectives at the process level.

5.2. Implications, limitations and future research

In this article, we examine scholarly literature on CSFs in BPM and conduct a case study to identify CSFs for different stages of BPM adoption. Although general CSFs are well understood, we argue that not all CSFs are 'critical' for all stages of BPM adoption. Recently published study by (Ram & Corkindale, 2014) delivers a similar message when reviewing the criticalness of CSFs in an ERP context. Authors find that only a limited number of CSFs have been empirically investigated for their role in and effect on ERP project success. Many CSFs in literature lack empirical validation and should thus be carefully used (Ram & Corkindale, 2014).

With this case study we showed that CSFs are not the same in different stages of BPM adoption. We also identified which CSFs were the most important in individual stages of BPM adoption in Snaga. Most CSFs that were identified in this case study are not new; however, some of them are usually not recognised to be very important in the literature. For example, we find that the professional guidance of external consultants proved to be an extremely important CSF in the case of Snaga, even though this factor is not commonly recognised in the literature. The reason external consultants were so important for the success of the BPM adoption in Snaga is the fact that the company lacked the knowledge and capabilities to adopt BPM on its own and the presence of the external consultants also created a sense of urgency, which in turn led to the employees approaching the BPM adoption more seriously.

The results of the study also have practical implications. Organisations need to be particularly cautious to identify the stage and prepare a roadmap for their BPM adoption, which includes also CSFs for each stage of BPM adoption. CSFs identified in this case study are probably similar for other organisations. The results of the study can also provide direction and guidance for managers on which CSFs are important in each phase of a BPM project. Managers can then focus on a particular set of CSFs and direct their efforts to managing them to assist in BPM adoption success.

While this work is one of the first attempts to categorise the CSFs to different stages of BPM adoption, the authors acknowledge the limitations of the findings presented herein. First, this research was based on a single case study. This limits the ability to make an empirical generalisation. The CSFs may differ from case to case according to varying project specifics and organisation characteristics. Second, the methodology can be improved by using statistical analysis methods, for example a multi-factor regression, to reconfirm the critical status of the success factors identified by the authors. Third, the number of analysed studies is small (only nine articles dealing with CSFs of BPM); it is possible that some papers, in particular conference papers, could be excluded from the sample and from the analysis. Finally, the concept of BPM is evaluated differently in some research, thus making it difficult to assess the influence of CSFs on BPM in a consistent way.

Further research includes finding a more rigorous approach for the identification and evaluation of CSFs that are essential at each stage of BPM adoption, so that they become more specific and could be applied to a various companies, projects, industries, etc. A set of criteria for the identification of both the stage in which a company currently is and the factors that are important in that stage is needed. In addition, it is desirable that the assessments of the outcomes and the successfulness of BPM adoption are provided quantitatively and qualitatively considering defined KPIs in connection to the CSFs and stages of BPM adoption. A multi-factor regression could be applied to investigate the influence of CSFs, as independent variables, over BPM as the dependent variable. A multi-factor econometric model can be created for each stage of BPM adoption, which would reconfirm the critical status of the success factors identified by the authors.

Future research could also investigate the relationships and interactions between CSFs, depending on the stage of BPM adoption. To prove the practical value of the research, it is necessary to compare the number of successful BPM projects using the CSFs at every stage to the ones without implementing such a concept. The authors also propose that more case studies focusing on CSFs in different stages of BPM adoption are needed to investigate how to manage the identified CSFs at different stages of BPM adoption and thus help managers in developing appropriate action plans.

6. Conclusion

In spite of high amount of research on the topic of BPM success factors, only a few papers distinguish in CSFs among stages of BPM implementation (e.g. Ravesteyn & Batenburg, 2010; Ravesteyn & Versendaal, 2007) and most past studies are limited to identifying and reporting only on CSFs for the entire process of BPM adoption, and do not distinguish between different stages of BPM adoption. In this article we presented and analysed a successful BPM adoption in a Slovenian public company and identified the critical factors that contributed to its success in different stages of the BPM adoption. In each stage of BPM adoption we identified three or four success factors that are

critical for achieving success in the particular stage of BPM adoption. We showed that the identification of well-known critical factors of BPM gives only a limited view since the factors may change between stages. We hope that the results of the article may serve as a starting point for future research on CSFs in different stages of BPM adoption. On the practice side, the findings can help managers to focus their attention, priorities and resources on managing the success factors that have been established as critical for a specific stage of BPM adoption.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The authors acknowledge the financial support from the Slovenian Research Agency (project No. P2-0037).

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