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TOWARDS A CONCEPTUALISATION OF BPM CULTURE: RESULTS FROM A LITERATURE REVIEW

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Abstract

Culture has been identified as an important success factor in BPM initiatives. Despite its relevance, little research systematically addresses culture as a distinct phenomenon in BPM. Recently, first key elements have been identified, conceptualising culture in BPM research. As a core element, the concept of a BPM culture has been distinguished as a set of values directly supportive of achieving BPM objectives. While there is some evidence for the construct as such, it has not been examined which exact cultural elements make up a BPM culture. Therefore, the purpose of this paper is to examine the concept of a BPM culture. At this stage, we do this through a structured literature review. We systematically derive a set of BPM values that serves as a starting point for future research.

Keywords: business process management, culture, BPM culture.

1 INTRODUCTION

In recent years, there has been a growing awareness that BPM requires a holistic organisational perspective (Hammer 2010; Jeston and Nelis 2008). BPM concerns the continuous improvement and the fundamental innovation of business processes to increase an organisation's efficiency and effectiveness (Smith and Fingar 2004; DeToro and McCabe 1997). Thus, BPM is increasingly contemplated as an integrated management approach that includes factors such as strategic alignment, governance, methods, IT, people, and culture (Rosemann and de Bruin 2005). In particular, culture is often referred to as a key driver of BPM initiatives (Rosemann and vom Brocke 2010; Harmon 2010; Spanyi 2003), representing both a source of failure and success in BPM initiatives (Melenovsky and Sinur 2006; Bandara et al. 2009; Ravesteyn and Versendaal 2007; Majchrzak and Wang 1996).

Despite its relevance, little research can be found that systematically addresses culture as a factor in BPM (Jayaganesh and Shanks 2009; Zairi 1997). Mostly, culture is superficially covered in the literature as one aspect out of several relevant in BPM research. Nevertheless, some key constructs of the culture phenomenon are present in BPM research though only very generally defined, lacking a deeper examination. These constructs include BPM culture, the cultural context or the cultural fit (Armistead and Machin 1997; Armistead et al. 1999; vom Brocke and Sinnl 2011). Since BPM is perceived as a management approach that requires a BPM culture (Jesus et al. 2010; Zairi 1997), BPM culture seems to be a core concept with respect to the emerging research area. It refers to a certain set of values directly supportive of BPM objectives (vom Brocke and Sinnl 2011). While this general understanding of the concept has been identified in the literature, it has not been examined which exact cultural elements make up a BPM culture. Therefore, the purpose of this research paper is to examine the BPM culture concept. To set the stage for future research, we do this through a review of the literature.

As a theoretical framework we use the so called BPM-Culture-Model (vom Brocke and Sinnl 2011). Based on the insights the model provides on the BPM culture concept, we derive its shortcomings regarding the conceptualisation of the BPM culture construct. Furthermore, we present the methodological approach chosen to address this research gap. We then explore the concept of BPM culture, examining key contributions referring to the concept and extending an existing literature review to gain a deeper understanding of the BPM culture concept. We discuss the results of our exploration, determining their impact on research and practice, pointing out limitations of our approach and deriving areas for future research. We conclude with a summary and outlook.

2 RESEARCH BACKGROUND

2.1 The BPM-Culture-Model

The BPM-Culture-Model serves as a framework identifying essential constructs relating to culture's role in BPM (vom Brocke and Sinnl 2011). Existing research on the topic suggests that organisational BPM initiatives are both influenced by surrounding cultures (cultural context) and influencing them at the same time (Pritchard and Armistead 1999; Bandara et al. 2009; Jayaganesh and Shanks 2009). Against this background, the framework provides an overview of the interrelation of culture concepts such as BPM culture, the cultural context and the cultural fit (see Figure 1). The model builds around the BPM culture concept as a culture decisive to BPM success (Jesus et al. 2010; Armistead et al. 1999; Zairi 1997). It is assumed that an organisation's BPM initiative faces a given cultural context, consisting of various group cultures like the organisational culture, work group cultures and national cultures involved (Baba et al. 1996; Leidner and Kayworth 2006). Based on this, the model suggests that a cultural fit, i.e. a basic congruence, between the cultural context and the BPM culture is necessary for a BPM initiative to be successful (vom Brocke and Sinnl 2011; Armistead and Machin

1997; Armistead et al. 1999). Recent studies also report on the application and evaluation of the framework in empirical settings (vom Brocke and Sinnl 2010a).

Going into details regarding those parts of the BPM-Culture-Model that are crucial for the research paper at hand, we, first of all, like to point out the understanding of the general culture concept that underlies the model in terms of the so-called (a) culture triad. This provides a basis for the description of the (b) BPM culture concept as it has been introduced in the literature. We do not elaborate on the concepts of the cultural context and the cultural fit in this paper since we solely aim at a detailed conceptualisation of the BPM culture concept in the research at hand. As already identified in previous research (vom Brocke and Sinnl 2011), the examination of the BPM culture concept represents a necessary step to be able to analyse the notion of a cultural fit between a BPM culture and its cultural context in a second step. Thus, there is already evidence in extant literature that the BPM culture concept needs further consideration in research as to which cultural elements determine a BPM culture.

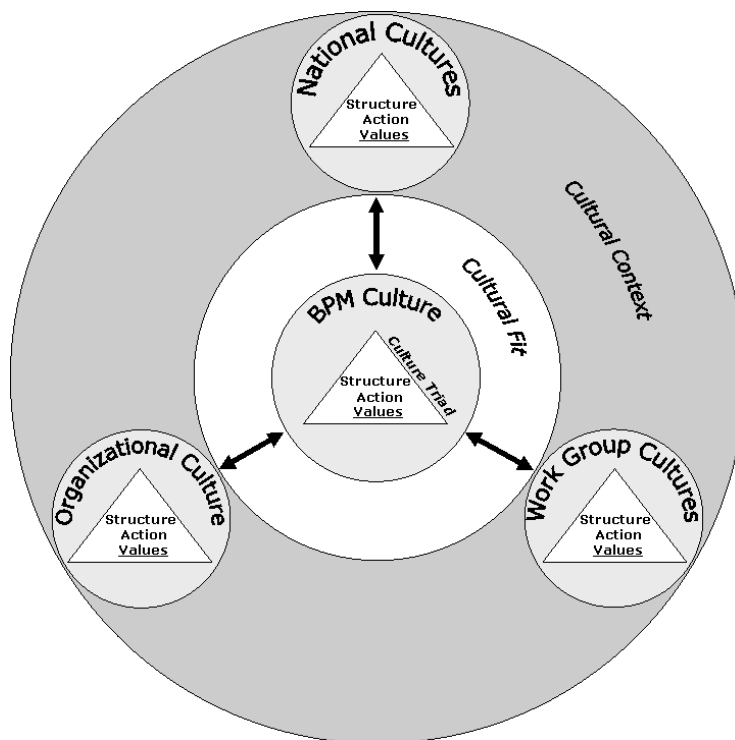


Figure 1. BPM-Culture-Model (vom Brocke and Sinnl 2011)

(a) The culture triad

Consisting of the three elements values, actions, and structures, the culture triad serves as a basis to explain cultural phenomena with regard to BPM (vom Brocke and Sinnl 2011). Following Schein's (2004) generic understanding of culture, the culture triad differentiates levels of visibility respectively ways of manifestations of culture and, thus, serves as a pattern for the internal differentiation of culture. Even though values are initially invisible, they represent the decisive element of culture since this subconscious part of culture accounts for a mental map on fundamental aspects of life, such as the nature of time and space, the role of social hierarchies, or the relative importance of work, family, and self-development. These values provide day-to-day operating principles for members of a cultural group and manifest themselves in visible actions and structures. These visible elements help develop or maintain respective values in that actions constantly re-create the essence of culture and structures additionally visualise and manifest it. Actions that reveal lived cultural values include manners, observable rituals/ceremonies, and visible behaviour. Structures as another visible element

representing cultural values include the physical environment, technology and products, descriptions, and organisation charts. Thus, in the context of the BPM-Culture-Model, culture basically consists of invisible value orientations that manifest themselves in visible actions and structures.

(b) BPM culture

A review of the literature shows that BPM is perceived as a management approach that requires a BPM culture (vom Brocke and Sinnl 2011). Zairi (1997), for example, emphasises the importance of a BPM culture, arguing that it is not enough to simply have “good systems and the right structure in place” (Zairi 1997, p.65). According to him, organisational change towards effective BPM additionally requires “an effective process-based culture” (Zairi 1997, p.66). BPM culture refers to a certain set of values considered directly supportive of achieving BPM objectives (vom Brocke and Sinnl 2011). As such, it is a facet of organisational culture and is, in most cases, only *ex post* being integrated in an existing organisational culture. It is important to notice that the values identified as part of BPM culture may not exclusively be representative of a BPM culture, yet in different contexts they may also be part of further specific organisational cultures, supportive of other management approaches as well. While there seem to be no explicit references to specific BPM values in the literature, some exemplary BPM values were identified in former research (vom Brocke and Sinnl 2011): consistency, quality, continuous improvement, customer orientation, process orientation, and responsiveness to change. These values provide a first idea on what may constitute a BPM culture, however, they have not been systematically derived from the literature.

Even though the systematic approach behind the BPM-Culture-Model provides a general definition and exemplary values with regard to the BPM culture concept, a major limitation lies in the lack of a more detailed literature analysis as to which cultural elements make up a BPM culture, i.e. there is a lack of insights on which cultural values, represented in which actions and structures, make up a culture supportive of achieving BPM objectives. Therefore, we already concluded in former research that particularly the analysis of BPM values does need further consideration since values are at the core of the culture concept, providing a general inner orientation for everyone involved (vom Brocke and Sinnl 2011). Focussing on the core element of the BPM-Culture-Model, we tie in with these research findings and aim at exploring what characterises the BPM culture concept to provide initial insights from the literature. In the following, our methodological approach will be introduced.

2.2 Methodological Approach

Our approach towards a deeper understanding of the BPM culture concepts consists of three phases. (1) First of all, we analyse literature on the BPM culture concept that has been identified through an extensive literature review in our former research (vom Brocke and Sinnl 2011). In this review, we had explored journal and conference databases covering major sources of the business and IS discipline, namely EBSCO BSP, ABI Inform, Emerald, and AIS Electronic Library. Based on a search for the terms “business process management”/“bpm” in title/abstract and “cultur*” in the full text of papers, we had identified three author groups referring to the concept of BPM culture: Zairi, Armistead/Pritchard/Machin and de Bruin/Rosemann. Their contributions serve as a basis for our examination of the BPM culture concept in the research at hand. (2) Second, we extend the analysis through an additional structured literature review to provide further insights into the concept of BPM culture. With regard to the literature search, we chose to examine how far the concepts “BPM culture” and “process culture” (as a term used interchangeably) are discussed in the recently published Handbook on Business Process Management (vom Brocke and Rosemann 2010). We chose to examine this medium as it contains several papers on recent findings regarding the culture factor in BPM research. Furthermore, we decided to consult the databases mentioned above, searching for the concepts “BPM culture” and “process culture” in the title/abstract of papers because we assume that research which elaborates on a specific concept refers to it in the title or abstract of the paper. Since this literal approach seemed to be too restrictive with regard to exploring the BPM culture concept, we extended our literature search by the notion of “process orientation” as a value assumed representative

for a BPM culture. (3) Third, we synthesise our findings and derive a more detailed understanding of the concept. Regarding the latter, we build on the culture triad as a means to structure the results of the literature analysis. Subsequently, we discuss our findings and derive areas of future research.

3 EXPLORING THE BPM CULTURE CONCEPT

3.1 Analysing Literature on the BPM Culture Concept

In a first step, we take a closer look at the few research contributions that we had identified in an extensive literature review as papers referring to the BPM culture concept (vom Brocke and Sinnl 2011). More precisely, we look at Zairi (1997) and Armistead et al. (1999) who explicitly refer to the BPM culture concept and at de Bruin and Rosemann (2007) who provide additional insights on the concept. Examining their reference to BPM culture in detail, we start with a closer look at Zairi (1997) who describes “a set of rules which can assist in the development of a BPM culture:

- BPM is the way in which key activities are managed and *continuously improved* to ensure *consistent* ability to deliver high *quality* standards of products and services.
- Business processes are the critical and *all-encompassing activities* of design, manufacture, marketing, innovation, sales and others which deliver *quality* to the end *customers*.
- Process management also refers to the way companies *constantly* strive for *excellence* and how they stimulate *innovation and creativity* for process *improvement and optimization*.
- BPM also includes activities which refer to supplier *quality* management issues.
- The management of processes is conducted through performance measurement for setting targets for *improvement* and also for measuring product/service capability, process capability, supplier capability and *efficiency/effectiveness* aspects in terms of cycle time, quality standards, costs, etc.
- BPM, through *continuous measurement and improvement* will determine *effectiveness* of process design for *streamlining and simplification*. It ensures the introduction of *best practice* through benchmarking information and is based on valuable inputs from *customers*.
- Process management challenges practices (i.e. the dynamic aspects of each process and its behaviour) as much as the performance of each process (its output/metrics). Further, process management seeks to *continuously* strengthen all activities through the introduction of *best practice*, to ensure that internal standards of performance are *competitively* acceptable.
- BPM relies on a *systematic* methodology supported by a *problem-solving* methodology to strengthen newly-designed processes, to reinforce the *linkages between various functions* and to ensure that *optimum performance* can be achieved.” (Zairi 1997, p.79, emphasis added).

Zairi’s set of rules towards the development of a BPM culture includes a range of values that seem to be decisive to a BPM culture. Coding the various references that we identified in Zairi’s text (see emphasis), we derive the following BPM values:

- a) **Cross-functional orientation** – is the focus on processes rather than functional departments. It refers to the all-encompassing perception of various organisational functions along the core business process. This value could also be called process orientation in the narrow sense of the word. Yet, in the broader sense of the word, we perceive process orientation as the core BPM value that represents all other values.
- b) **Customer orientation** – is the focus on customers as the driver and goal of business processes. In fact, customers are referred to as playing a crucial role both at the beginning and at the end of a business process, providing valuable input for the business process and assessing the quality of the output. Therefore, we perceive customer orientation as BPM value that accounts for the effectiveness of business processes.
- c) **Quality** – refers to the focus on excellence and optimum performance. We also include the notions of best practice and competitively acceptable performance in the quality value, while it is also arguable to include these in the continuous improvement value, for example.

- d) **Leanness** – references the focus on the efficiency of business processes. This value refers to BPM as a systematic approach that constitutes the streamlining and simplification of business processes. Realising leanness as a value accounts for efficient processes in order to achieve high quality standards with as little temporal and monetary resources as possible.
- e) **Continuous improvement** – refers to the focus on the constant revision of extant conditions and processes to eliminate possible shortcomings. Several text passages refer to continuous improvement of processes or the constant or consistent care for outstanding products and services. We conceive all of these references as notions of the value continuous improvement, thus, we do not separately list, for example, the value of consistency as has been suggested in previous research.
- f) **Innovation** – refers to the focus on creative changes that fundamentally renew business processes and/or their outcomes. While continuous improvement rather refers to incremental changes, innovation implies more fundamental shifts with regard to business processes. We perceive creativity as a precondition for innovation and therefore as part of the innovation value.

Against the background of the values that could be derived from Zairi (1997), we take a closer look at further research that refers to the BPM culture concept. Armistead et al. (1999) generally underline the importance of a BPM culture for an organisation with a BPM approach, yet they do not provide insights on the BPM culture concept that could serve as a basis for deriving BPM values. De Bruin and Rosemann (2007) provide additional insights on the concept even though they do not explicitly refer to the concept of BPM culture. The operationalisation of the culture factor in their BPM maturity model includes five capability areas, namely responsiveness to process change, process values and beliefs, process attitudes and behaviour, leadership attention to process, and process management social networks. From our perspective the first capability area is closely linked to the identified BPM values. In fact, responsiveness to change can be translated into a BPM value, yet, we perceive the “overall receptiveness of the organisation to process change” (Rosemann and vom Brocke 2010, p.121) as a precondition of both the continuous improvement and the innovation value. Thus, the ability of an organisation’s employees to continuously embrace changes is perceived as a requirement for the improvement of business processes which ultimately leads to enhanced products and services.

On the basis of formerly identified papers elaborating on the BPM culture concept, we were able to systematically derive a set of BPM values. Our analysis revealed several values that seem decisive of a BPM culture. Due to the little amount of papers the analysis builds on, we conducted an additional review of the literature on the notion of a BPM culture. The results will be provided in the following section.

3.2 Extending the Review of Literature on the BPM Culture Concept

Beyond research contributions that were identified in former research (vom Brocke and Sinnl 2011), we reviewed articles recently published in the Business Process Management Handbook (vom Brocke and Rosemann 2010) that are referring to a BPM culture. It is interesting to notice that while a comparatively large number of articles of the Handbook explicitly mentions the terms “BPM culture” (Kokkonen 2010; Rosemann and vom Brocke 2010; Jesus et al. 2010) or “process culture” (Brenner and Coners 2010; Scheer and Brabänder 2010; Novotny and Rohmann 2010; Baumöl 2010; Jesus et al. 2010), only few articles elaborate on the concept, providing insights on the cultural values inherent in it (Hammer 2010; Kemsley 2010; Jesus et al. 2010):

According to Hammer (2010), “[p]rocess demands that people at all levels of the organisation put the customer first, be comfortable working in teams, accept personal responsibility for outcomes, and be willing to accept change.” (p.10). We can see that the values derived before already cover most of the ones implied here. Teamwork can be perceived necessary for cross-functional collaboration. Willingness to accept change can be seen as a requirement for the continuous improvement or the innovation value as stated before. One new element that has not been considered before is the responsibility of each employee for the process success. Kemsley (2010) furthermore emphasises the

importance of participation in BPM: “Instead of being passive consumers of business processes designed by management and codified in enterprise software, they [employees] are expected to help design their own business processes, configure their working environment to fit their own needs, and collaborate with others in order to achieve business goals.” (p.576). Finally, Jesus et al. (2010) state that “BPM should be thought of as the organisational engine to continuous change and performance improvement through a collaborative, empowered and sustainable way.” (p.285). From our perspective, Hammer, Kemsley and Jesus et al. emphasise an additional common aspect of the BPM culture concept. Against this background, we extend our list of BPM values by the following value:

- g) **Responsibility** – is the focus on commitment, inner engagement and duty. This value refers to the proactive participation of employees in the processes they are involved. Responsibility as a value also implies that people are empowered to act responsible and towards solving problems.

An additional review of journal and conference databases covered major sources of the business and IS discipline. Yet, our search for the “BPM culture” concept in title or abstract of publications in the before mentioned databases revealed no hits and thus provides additional evidence that the concept seems to have not been extensively considered in existing research.

A search for “process culture” as a keyword that can be used interchangeably with “BPM culture” reveals a couple of hits out of which only one paper actually focuses on the notion of a process culture. Lillrank and Kostama (2001) discuss sub-cultures of an airline company that are called Product/Process Cultures (PPC). These cultures have been identified on the basis of the product and the process of the organisational work group cultures. The authors’ understanding of a process culture differs from the notion of a BPM culture as described by Zairi (1997), for example. While Lillrank and Kostama’s approach can be summarised as “every organisational process may have its own culture”, Zairi can be understood as “an organisation with a BPM approach needs a BPM culture”.

Based on the little insights that can be gained when reviewing the terms “BPM culture” and “process culture”, the concept of “process orientation” as the core value of a BPM culture is additionally examined. A search for the concept in the before mentioned databases reveals over one hundred hits. Taking a closer look at them, it is interesting to notice that the meaning of the concept “process orientation” seems to have changed fundamentally over time. In the 1980s, process orientation had a negative association and was discussed as an opposition to product orientation (Rindler 1984; Azzaretto 1985; Sargent 1986). Process orientation was understood as the focus on the chain of tasks conducted by an organisation’s functions (input), whereas product orientation emphasised a focus on the product as the actual output of these tasks. Papers based on this understanding of process orientation have not been included in the review. In fact, the literature review at hand only considers papers focussing on and refining the concept of process orientation with a BPM connotation. Thus, an analysis of the abstracts reveals twelve relevant papers. In the following, the refinements of the concept “process orientation” will be presented in chronological order of the research contributions:

McCormack and Johnson (2001) and McCormack (2001) suggest the following key defining elements of business process orientation: process management and measurement (“measures that include aspects of the process such as output quality, cycle time, process cost and variability compared to the traditional accounting measures”), process jobs (“jobs that focus on process, not functions, and are cross-functional in responsibility”), and process view (“the cross-functional horizontal picture of a business involving elements of structure, focus, measurement, ownership, and customers”). The authors developed a survey instrument based on the identified defining elements of process orientation to pinpoint the degree of process orientation in an organisation.

Sussan and Johnson (2003) extend the key elements of process orientation identified by McCormack and Johnson to the following components: process view, process structures, process jobs, process management and measurement systems, and process values and beliefs.

Reijers (2006) develops a checklist to determine the level of process orientation in an organisation. The checklist includes the following elements: organisational structure, use of process language, level

of process documentation, utilisation of process documentation, information systems architecture, level of process performance measurement, existence of process managers, and understanding of customer requirements.

Sever (2007) reports that process orientation becomes visible through language changes, continuous improvement programs, low stress level, process-focused communication, interdepartmental initiatives from employees, asking the right questions, and change measurement.

Gemmel, Vandaele and Tabeur (2008) develop and evaluate a measurement tool for hospital process orientation. The authors mainly build their tool on the one developed by McCormack and Johnson, extending and adapting it to fit the healthcare context. Thus, the authors use the distinction of process view, process jobs, and process management and measurement as a basis for their development of a tool on hospital process orientation.

Hellström and Eriksson (2008) find that "process orientation can be classified into three various applications – process view, process mapping, and process management" (Hellström & Eriksson 2008, p.166). Typical elements of process management are said to be process owners, measurement systems, or improvement opportunities. Process mapping refers to the identification and illustration of organisational processes. Finally, process view is perceived as an element of process orientation, expressed in talking and thinking.

Skrinjar, Bosilj-Vuksic and Indihar-Stemberger (2008) apply McCormack and Johnson's survey instrument in transition economies. Thus, their refinement of process orientation builds on McCormack and Johnson's distinction of process view, process jobs, and process management and measurement.

Chen, Tian and Daugherty (2009) develop a measurement scale for process orientation. The authors refine process orientation through six items which refer to different perspectives on process orientation, namely employee's understanding of processes, resource allocation based on processes, process performance goals, process outcome measurements, process owner designation, and employee rewards based on process performance.

Kohlbacher (2009) develops a model for measuring an organisation's degree of process orientation. He identifies the following factors measuring a certain dimension of process orientation: process performance measurement, process owner, design and documentation of business processes, management commitment, process-oriented culture, process-oriented organisational structure, methodologies, and IT supporting the process idea.

Kohlbacher (2010) derives several dimensions of process orientation from existing literature, namely process design and documentation, management support of process program, process owners, process performance measurement, enterprise culture, information technology, organisational structure, process knowledge, process-oriented organisation, formal instance coordinating process projects.

Kumar, Movahedi, Lavassani and Kumar (2010) identify seven factors, based on a literature review, to measure the level of process orientation in organisations. These refer to documentation, design, and communication of processes; decision making processes; measurement systems; support and training of ES implementations; design of workplace to facilitate processes; process automation; and simultaneous process execution.

A closer look at the literature focussing on process orientation shows that the concept has been refined in several way. Yet, most papers reference McCormack and Johnson's distinction of process management and measurement, process jobs, and process views. Based on the literature review, a large number of elements characterising process orientation can be identified. All of these elements can be understood as being part of an organisational culture supportive to BPM. With regard to the BPM culture triad, it becomes obvious that these characteristics do not provide further insights regarding the BPM values as identified above. Yet, they mostly represent the institutionalisation of

BPM values and thus the visible part of BPM culture. Regarding these visible elements, the following structures and actions can be derived:

- **Structures:** processes-supporting IT, process performance measurements (KPIs), process owners, process documentation, design of the workplace to facilitate process, employee rewards based on process performance, resource allocation based on processes, and continuous improvement programs
- **Actions:** process-focused communication, interdepartmental initiatives from employees, realisation of customer requirements, and process automation

Further elements mentioned in the reviewed literature included the concepts process knowledge and management support. On the one hand, process knowledge can be perceived as a precondition for process-focused communication, which represents visible action. On the other hand, documented process knowledge is represented in visible structures. Against this background, the concept process knowledge was not included as a separate element in the culture triad. With regard to management support, we argue that this kind of commitment is a precondition for interdepartmental initiatives, for example. It was, thus, also not listed as a separate element in the culture triad.

Concluding, the review of the concepts "BPM culture" and "process culture" provides insights in that an additional value was identified in the literature. The review of "process orientation" as the core value of a BPM culture informs the visible part of BPM culture. In the following, we will have a closer look at how the learnings from our literature review can be incorporated into a deeper understanding of the BPM culture concept.

3.3 Towards a Deeper Understanding of the BPM Culture Concept

Reflecting our literature review, it represents a structured approach towards a deeper understanding of the BPM culture concept. Building on the general understanding of the BPM culture concept in extant literature, we examined those research contributions that had been identified as papers explicitly referring to the concept of BPM culture (vom Brocke and Sinnl 2011). Additional research contributions were identified informing the definition of BPM culture values. Overall, we identified seven values as elements of a BPM culture, namely cross-functional orientation, customer orientation, quality, leanness, continuous improvement, innovation, and responsibility. These values may at least partially seem very broad and well applicable to other management approaches. Yet their combination seems to be at the core of the unique organisational culture that is directly supportive of achieving BPM objectives.

Our structured review of the literature provides additional insights on the visible elements of BPM culture represented through both actions and structures. Though several of these are on a very high abstract level that needs specification based on an organisation's industry, for example, they give a first overview on what kind of actions and structures are relevant elements of a BPM culture. Figure 2 illustrates the identified BPM culture triad. Please note that some of the cultural elements displayed under "structures" in the graphic are referred to in a shortened way, e.g. not every kind of IT, KPI or documentation is meant to be supportive of a BPM approach. We are aware that the elements of BPM culture are not limited to the ones identified. Yet, their identification represents a first step towards an understanding of what constitutes a BPM culture.

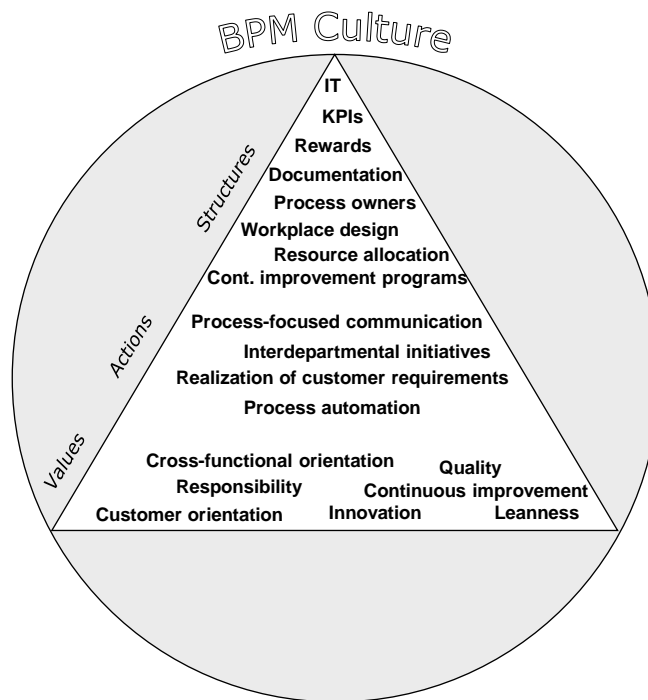


Figure 2. *BPM Culture Triad*

Taking a closer look at the elements of the BPM culture triad, it becomes obvious how actions and structures mutually depend on each other and are in turn based on the BPM values. For example, an interdepartmental initiative from employees is an action which turns into a structure once the initiative results, for example, in an improved workplace design that eases the process flow. In this example, action determines structure and both the initiative and resulting structure would represent the continuous improvement and responsibility values, for example. With regard to structure determining actions, existing structures supporting business processes, like certain IT, KPIs, process owners or documentation can lead to increased process-focused communication, which in turn can increase the awareness for values like cross-functional orientation. Against this background, it becomes obvious that BPM values are inherent in the visible elements consisting of actions and structures. Yet, details on the mutual dependencies of the specific culture elements that have been identified in this research are subject to future analysis.

4 DISCUSSION

4.1 Impact

The specification of the BPM culture concept targets an impact for both science and practice. Regarding the scientific contribution, the examination of the BPM culture concept represents a first step towards the operationalisation of the concept. Identifying the elements that BPM culture consists of helps to derive an instrument that can measure BPM culture. Such an instrument can be used, for example, to analyse how far a BPM culture is actually lived in an organisation, i.e. how far an organisation's culture is supportive of realising efficient and effective business processes. This would serve as a basis for identifying measures towards achieving such a culture as a necessary, yet not sufficient means to obtain BPM success. The conceptualisation of BPM culture may also inform practice in that the specification of the concepts provides insights on which structures may be supportive towards generating actions that are based on BPM values. To this point in time, the practical contribution is still very abstract and thus limited. However, this literature review provides the basis for the specification of measures to achieve an organisational culture supportive of BPM

objectives. Though our findings need empirical validation and additional levels of detail, they represent a starting point for a deeper understanding of the BPM culture concept.

4.2 Limitations

Our approach regarding the examination of the BPM culture concept contains limitations. Due to the little amount of research that can be identified elaborating on the concept of BPM culture, our specification of the concept is based on few sources that allow for only limited generalisation and call for further research. In addition, a general shortcoming of the structured literature review approach lies in the limitation of the results based on the selected databases and search strategy. There may be further insights on the BPM culture concept in extant research that have not been covered by the search terms BPM culture, process culture and process orientation. Regarding the specific approach chosen in the context of this study, we tried to cover a broad range of potentially relevant literature in that no restrictions on specific journals or conferences are made. This allows for a coverage of research regardless of the disciplinary perspective. Despite the general shortcomings of this approach, we chose to conduct a structured literature review since it provides a clear and transparent way to examine our topic. With regard to the codification of values, actions and structures, we are aware that the identification of respective concepts is subject to the individual interpretation of existing literature. We, thus, intend to triangulate our research results through additional empirical studies involving independent coders.

4.3 Future Research

Against the background of the little amount of research that could be found to derive our findings, we strongly call for future research additionally examining the BPM culture concept. An empirical approach towards the definition of a BPM culture may serve as a means to validate the findings of this paper. In this regard, a Delphi study may provide useful insights on the BPM culture concept. The expertise of both academics and practitioners could lead to a valuable definition of which values and which visible elements constitute a BPM culture. Comparing the findings with the conceptual outcome of the research at hand would contribute to a comprehensive understanding of the BPM culture concept.

5 CONCLUSION

The purpose of this paper was to examine the concept of a BPM culture through a literature review. We first explored the concept on the basis of literature that had been identified in previous research. An additional review of the literature then helped to gain a deeper understanding of the BPM culture concept. In fact, we were able to derive seven BPM values: cross-functional orientation, customer orientation, quality, leanness, continuous improvement, innovation, and responsibility. In addition to these values, we were able to identify several actions and structures as visible institutionalisations of these values. Still, our findings are based on the literature only and we deem further research necessary exploring the concept of BPM culture. We do hope, however, that these results may serve as a starting point for future research providing a first list of specific values, actions and structures to be further analysed in BPM research.

References

- Armistead, C. and Machin, S. (1997). Implications of business process management for operations management. *International Journal of Operations & Production Management*, 17 (9), 886–898.
- Armistead, C., Pritchard, J.-P. and Machin, S. (1999). Strategic business process management for organisational effectiveness. *Long Range Planning*, 32 (1), 96–106.
- Azzaretto, J. F. (1985). The shift in OD from process to product. *Group & Organization Studies*, 10 (3), 229.
- Baba, M.L., Falkenburg, D.R. and Hill, D.H. (1996). Technology management and American culture. Implications for business process redesign. *Research Technology Management*, 39 (6), 44–55.
- Bandara, W., Alibabaei, A. and Aghdasi, M. (2009). Means of achieving business process management success factors. *MCIS 2009 Proceedings. 4th Mediterranean Conference on Information Systems*, 25-27 Sep 2009, Athens, Greece.
- Baumöl, U. (2010). Cultural change in process management. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 485–512, Springer, Berlin.
- Brenner, M. and Coners, A. (2010). Process capital as strategic success factor. The Lufthansa Example. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 55–70, Springer, Berlin.
- Chen, H., Tian, Y. and Daugherty, P. J. (2009). Measuring process orientation. *The International Journal of Logistics Management*, 20 (2), 213–227.
- de Bruin, T. and Rosemann, M. (2007). Using the delphi technique to identify BPM capability areas. *ACIS 2007 Proceedings. 18th Australasian Conference on Information Systems*, 5-7 Dec 2007, Toowoomba, Australia.
- DeToro, I. and McCabe, T. (1997). How to stay flexible and elude fads. *Quality Progress*, 30 (3), 55-60.
- Gemmel, P., Vandaele, D. and Tambreur, W. (2008). Hospital process orientation (HPO). The development of a measurement tool. *Total Quality Management*, 19 (12), 1207-1217.
- Hammer, M. (2010). What is business process management? In: *Handbook on business process management. Introduction, methods and information systems* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 1, p. 3–16, Springer, Berlin.
- Harmon, P. (2010). The scope and evolution of business process management. In: *Handbook on business process management. Introduction, methods and information systems* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 1, p. 37–81, Springer, Berlin.
- Hellström, A., and Eriksson, H. (2008). Are you viewing, mapping or managing your processes? *The TQM Journal*, 20 (2), 166-174.
- Jayaganesh, M. and Shanks, G. (2009). A cultural analysis of ERP-enabled business process management strategy and governance in Indian organizations. *ACIS 2009 Proceedings. 20th Australasian Conference on Information Systems*, 2-4 Dec 2009, Melbourne, Australia.
- Jeston, J. and Nelis, J. (2008). *Business process management. Practical guidelines to successful implementations*, Elsevier, Oxford.
- Jesus, L., Macieira, A., Karrer, D., and Caulliriaux, H. (2010). BPM center of excellence. The case of a Brazilian company. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 283–303, Springer, Berlin.
- Kemsley, S. (2010). Enterprise 2.0 meets business process management. In: *Handbook on business process management. Introduction, methods and information systems* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 1, p. 567–576, Springer, Berlin.
- Kohlbacher, M. (2009). A model for measuring a firm's degree of process orientation. *Proceedings of the Academy of Strategic Management*, 8 (1), 31-37, Allied Academies International Conference, 2009, New Orleans, USA.

- Kohlbacher, M. (2010). The effects of process orientation: A literature review. *Business Process Management Journal*, 16 (1), 135-152.
- Kokkonen, A., Bandara, W. and Rosemann, M. (2010). Expertise in business process management. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 399–420, Springer, Berlin.
- Kumar, V., Movahedi, B., Lavassani, K. M. and Kumar, U. (2010). Unleashing process orientation: A comparative study of enterprise system implementation in Canadian and US firms. *Business Process Management Journal*, 16 (2), 315-332.
- Leidner, D. E. and Kayworth, T. (2006). A review of culture in information systems research: Toward a theory of information technology culture conflict. *Management Information Systems Quarterly*, 30 (2), 357–399.
- Lillrank, P. and Kostama, H. (2001). Product/process culture and change management in complex organizations. *International Journal of Technology Management*, 22 (1-3), 73-82.
- Majchrzak, A. and Wang, Qianwei (1996). Breaking the functional mind-set in process organizations. *Harvard Business Review*, September - October 1996.
- McCormack, K. (2001). Business process orientation: Do you have it? *Quality Progress*, 34(1), 51-58.
- McCormack, K. and Johnson, B. (2001). Business process orientation, supply chain management, and the e-corporation. *IIE Solutions*, October, 33-37.
- Melenovsky, M.J. and Sinur, J. (2006). BPM maturity model identifies six phases for successful BPM adoption. *Gartner Research*, ID No: G00142643 18 October.
- Novotny, S. and Rohmann, N. (2010). Toward a global process management system: The ThyssenKrupp Presta case. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 353–366, Springer, Berlin.
- Pritchard, J. P. and Armistead, C. (1999). Business process management - lessons from European business. *Business Process Management Journal*, 5(1), 10–35.
- Ravesteyn, P. and Versendaal, J. (2007). Success factors of business process management systems implementation. *ACIS 2007 Proceedings. 18th Australasian Conference on Information Systems*, 5-7 Dec 2007, Toowoomba, Australia.
- Reijers, H. A. (2006). Implementing BPM systems. The role of process orientation. *Business Process Management Journal*, 12 (4), 389-409.
- Rindler, M. E. (1984). Back to the patients: Process vs. outcome for hospital managers. *Hospital & Health Services Administration*, 29 (1), 15.
- Rosemann, M. and de Bruin, T. (2005). Towards a business process management maturity model. *ECIS 2005 Proceedings. 13th European Conference on Information Systems*, 26-28 May 2005, Regensburg, Germany.
- Rosemann, M. and vom Brocke, J. (2010). The six core elements of business process management. In: *Handbook on business process management. Introduction, methods and information systems* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 1, p. 109–124, Springer, Berlin.
- Sargent, T. R. (1986). The quality leadership scale: A tool for change. *Quality Progress*, 19 (7), 26.
- Scheer, A.-W. and Brabänder, E. (2010). The process of business process management. In: *Handbook on business process management. Strategic alignment, governance, people and culture* (vom Brocke, J. and Rosemann, M., Eds.), Vol. 2, p. 237–264, Springer, Berlin.
- Schein, E.H. (2004). *Organizational culture and leadership*, Jossey-Bass, San Francisco.
- Sever, K. (2007). The power of process orientation. *Quality Progress*, 40 (1), 46-52.
- Skrinjar, R., Bosilj-Vuksic, V. and Indihar-Stemberger, M. (2008). The impact of business process orientation on financial and non-financial performance. *Business Process Management Journal*, 14 (5), 738–754.
- Smith, H. and Fingar, P. (2004). Process management maturity models. *BPTrends*, (July 2004), 1–5.
- Spanyi, A. (2003). *Business process management is a team sport: Play it to win!* Anclote Press, Tampa, Florida.

- Sussan, A. P. and Johnson, W. C. (2003). Strategic capabilities of business process: Looking for competitive advantage. *Competitiveness Review*, 13 (2), 46-52.
- vom Brocke, J. and Rosemann, M. (Eds.) (2010). *Handbook on Business Process Management: Introduction, Methods and Information Systems. International Handbooks on Information Systems*, Vol. 1. Springer, Berlin.
- vom Brocke, J. and Rosemann, M. (Eds.) (2010). *Handbook on Business Process Management: Strategic Alignment, Governance, People and Culture. International Handbooks on Information Systems*, Vol. 2. Springer, Berlin.
- vom Brocke, J. and Sinnl, T. (2011). Culture in business process management: a literature review. *Business Process Management Journal*, 17 (2), 357-377.
- vom Brocke, J. and Sinnl, T. (2010a). Applying the BPM-Culture-Model: The Hilti case. *ACIS 2010 Proceedings. 21st Australasian Conference on Information Systems*, 1-3 Dec 2010, Brisbane, Australia.
- Zairi, M. (1997). Business process management. A boundaryless approach to modern competitiveness. *Business Process Management Journal*, 3 (1), 64–80.