

# The Consideration of Organizational, Human and Corporate Cultural Factors in the Implementation of Business Process Management Projects

## *Social Factors to Prevent Failure of BPM Projects*

Rebecca Bulander and Matthias Dietel

*Pforzheim University of Applied Sciences, Tiefenbronner Str. 65, 75175 Pforzheim, Germany*

**Keywords:** Business Process Management, Business Process Management Projects, Social Factors, Human Factors, Organizational Structure, Organizational Culture, Organizational Behaviour, Socio-Technical Design, Change Management.

**Abstract:** The implementation of Business Process Management technology in terms of software solutions is one of the major business efforts in the corporate world over the last decade. The related technology enables co-operations to streamline, automate and control their business processes. Even when the technology has considerably evolved and the implementation methodologies have improved over time, there is still a high rate of failed projects. These projects mainly fail because the correlated organizational and human factors are not considered in sufficient detail and appropriate thoughtfulness. The objectives of the research of this paper are to review the organizational and the human factors which are of relevance in BPM projects. The research is based on a literature review. The result of the paper is a research proposal for further research. Based on the results of this further research recommendations for project managers and consultants towards a successful BPM implementation can be formulated.

## 1 INTRODUCTION

In today's competitive environment innovation is one key concept of differentiation and thus the basis of competitive advantage aspired by companies. Business processes – the procedural articulation of various activities of a company – are the core enablers of innovative capacity and an innovation culture in the company. Business processes have twin dimensions: the technical and the social architectures (Pralhad and Krishnan, 2008). **B**usiness **P**rocess **M**anagement (BPM) is a management discipline which provides governance for a process-oriented organization. It aims at the goal of agility and operational performance. Therefore it uses methods, policies, metrics, management practices, and software tools to manage and continuously improve an organization's business processes (Franz and Kirchmer, 2012).

In correspondence with this definition the term BPM in this paper is defined as the combination of management theory and technology.

BPM can have profound implications on a

business organization, its culture and the way of how employees perform their tasks. It has implications on how power is established and how control is executed. These implications are closely related to three fundamental principles of organizations. They provide the justification of why human factors are of significant importance in the context of Business Process Management Projects:

1. An organization is a social arrangement which pursues collective goals, which controls its own performance, and which has a boundary separating it from its environment.
2. The culture within such an organization is defined and lived by its people.
3. Tasks within the organization are performed and ultimately controlled by people.

Today the execution of the majority of the processes within an organization requires a combination of people and technologies (Weske, 2012).

Employees working within the processes have the most important role in business processes (Schmelzer and Sesselmann, 2008).

However BPM projects mainly fail because the

respective human factors are not considered in sufficient detail (Jeston & Nelis, 2008). This statement refers to the implementation of BPM projects. This means that human factors have to be considered as important as the technology, the implementation methodology and the functional scope of a BPM project. The challenging aspect in the nature of BPM projects is founded in the fact that these projects have multiple implications on an organization. The introduction of BPM usually impacts the operational and organizational structure as well as the way employees execute their daily tasks at the same time. This paper analyses the importance of the organizational and human aspects of Business Process Management Projects primarily based on a literature review. In literature there are rarely references on how to consider and address the relevant organizational and human factors in the course of the implementation of BPM. However there is a lot of literature concerned with the management concept of BPM and BPM technology. Also process modeling, process design and optimization as well as the implementation methodologies are covered extensively by literature. The selection criteria of literature for this paper focuses on literature addressing primarily the human and organizational aspects.

The objectives of the research of this paper are to review the organizational and the human factors which are of relevance in BPM projects. It also provides recommendations to improve the awareness and understanding of the organizational and human factors which are correlated to a BPM implementation.

This section provides an introduction and an overview of business process management. The main section of the paper comprises a literature review where the relevant factors are identified and discussed. An overview about the identified factors is provided in a research summary section. The paper concludes with a proposal for further research. The objective of the proposal is to gain an insight and understanding about the extent of awareness and the comprehension of the identified factors among the population of BPM project managers and consultants.

## **2 BPM EVOLUION IN CONTEXT OF THE RESEARCH**

The literature research is focusing on what literature says about the aspects in the context of the intro-

duction of a BPM solution and the implications on the organization and the people within this organization caused by the related change. There is a lot of literature addressing single or a set of non-technical aspects related to business process management. However there are rarely sources which are analysing the interconnection and correlations of the different factors in the context of the implementation of BPM.

The effort for process improvement has a long heritage. Since the beginning of industrialization in the late 18th century managers were intensively focused on the efficient organization of manufacturing and later administrative processes. During the succeeding decades of industrial development until today numerous stories of entrepreneurs who changed processes and revolutionized an industry are well known.

In this early phase Frederick Winslow Taylor (1911) published his "Principles of Scientific Management". In his work Taylor sought to capture some of the key ideas of process improvement. The development of new technologies has often led to new business processes. Since the decade of the 1950s computers and software systems have provided a major source of new efficiencies. The introduction and implementation of these new technologies was always related to change on how companies organized their business and the way employees processed their tasks.

Two contemporary developments in management theory are fundamental for today's business process management concept. One is the consideration of the organization as a system. The other is the concept of the value chain formulated by Michael Porter.

The link between the technical systems and the human side is addressed by the principles of the Socio-technical system theory. Socio-technical design recognizes the interaction of technical and human need's in effective job design, combining the needs for the personnel with the organization's need for technical efficiency (Daft, 2013). Pava (1983) sees in this approach the emphasis on the humanistic principles of participation, learning and empowerment. The organization is viewed as made up of people (the social system) using tools, techniques and knowledge (the technical system) to produce products or services. In the context of this paper the term Business Process Management System refers to the technical system. Kochan & Gershenfeld (2000) state in their paper that the design of work systems requires the integration of technical process requirements, complex social interactions and the various political dynamics that arise in any organizational

context.

The symbiosis of BPM and information technology leads to a strong position of the IT department. The authors of the paper reviewed the relevant standard literature related to the organizational and human factors in conjunction with BPM. A detailed overview of the result of the literature review is provided in table 1.

### 3 EXPLANATION OF THE RESEARCH FACTORS

The following section explores the different organizational and human factors mentioned in literature in the context of BPM projects (see also table 1). The identified factors build the foundational elements of the further research proposal provided later in this paper. Therefore these factors will be referenced as “research factors”.

#### 3.1 Organizational Factors

##### 3.1.1 Organizational Structure

To gain an understanding of what the implications of the introduction of BPM on an organizational structure might be it is necessary to have a basic understanding about the formal and the informal organizational structure as well as common structure concepts.

##### Formal Structure and Concepts

Every organization has a formal and an informal organizational structure (Tichy et al., 1979); (Barney, 1985). The formal organizational structure determines the prescribed lines of reporting and the levels of hierarchy as well as the span of control of managers and supervisors (Daft, 2013). This formal system of task and authority relationships includes mechanisms of control in order to manage how employees coordinate their actions and use resources to achieve organizational objectives (Jones, 2010). Within this structure it is defined how the work within the company is organized (Hammer and Champy, 1993). The structure of an organization also defines the design of systems to ensure effective communication, coordination and integration of efforts across departments (Daft, 2013). The most common organizational structures are the functional structure, the divisional structure and the matrix structure.

##### Functional Structure

In the traditional functional structure the basic unit is

the functional department. Organizations can be differentiated how these departments are arranged (Hammer and Champy, 1993). In the functional organization activities are grouped together by common function from bottom to the top of the organization. The functional structure has a tendency of centralization of decision making because if forces decisions all the way to the top before a problem affecting several functions can be solved (Daft, 2013).

##### Divisional Structure

Within the divisional structure the organizational units are grouped according to individual products, services, product groups, major projects or programs, divisions, businesses, or profit centres. The functional structure has a tendency of decentralization of decision making because the lines of authority converge at a lower level of in the hierarchy.

##### Matrix Structure

The structure of a matrix organization is appropriate when the organization's structure requires equal emphasis on the functional and the divisional structure at the same time. Typically the functional organization represents the vertical basis dimension of the structure. The divisional unites (e.g. product, service or geography) are horizontally layered on top on the vertical basis. Within matrix organizations there is a tendency towards decision decentralization because the business decisions are assigned to the respective functional and divisional decision authority of the structure (Krueger, 1994).

##### Process Organization

In a business process centric organization the structure is ideally horizontal. That means that employees are organized along the core processes. The horizontal collaboration of all members along the process chain is a key element of a process focused mind-set (Becker and Kahn, 2002).

The desired business improvements are accomplished by taking in account an entire process that cut across organizational boundaries (Hammer and Champy, 1993).

The shift towards a horizontal structure happens typically in a procedure called reengineering or business process reengineering. In this procedure the vertical organization is redesigned along its horizontal workflows and processes.

Table 1: Literature matrix with research factors.

Author, Title, Year	Subject of research	Factors						
		Organizational structure	Corporate culture	Skills	Empowerment & responsibility	Impact on social interaction	Non-human control	Change management
<b>van der Aalst, W., Desel, J., Oberweis, A.,</b> Business Process Management, 2000	Covers models, techniques and empirical studies on business process management. The study of Peter Krug comprised in this volume specifically examines the effects of workflow systems on organizations.	X			X	X	X	
<b>Becker, J., Kugeler, M. Rosemann, M.,</b> in engl. Process Management), 2001	Guidelines for process oriented organizational design	X		X	X	X		X
<b>vom Brocke, J., Rosemann, M.,</b> Handbook on Business Process Management , 1 & 2, 2010	Provides guidance for the integration of BPM into corporate methodologies and information systems.	X	X	X	X	X	X	X
<b>Davenport, T. H.,</b> Process Innovation, 1993	Study about the strategic and operational dimensions of business process design and management in the context of the utilisation of IT as enabling technology for business process innovation	X	X	X	X		X	X
<b>Daft, R. L.,</b> Organization Theory and Design, 2013	Provides a deep insight into organizational theories and also the connection to BPM.	X	X	X	X	X	X	X
<b>Jones, G.,</b> Organizational Theory Design and Change, 2010	Compendium discussing and highlighting all aspects related to organizational design, culture and organizational change. Especially managing conflict power and politics is comprised in this book.	X		X	X	X		X
<b>Hammer, H., Champy, J.,</b> Reengineering the Corporation, 1993	A thought leading plea for the establishment of enterprise wide process orientation, business process re-design and re-structuring addressing the accompanying re-design of organizational structures. IT is perceived as cornerstone in the enablement of process re-design.	X	X	X	X	X		X
<b>Harmon, P.,</b> Business Process Change, 2007	Provides an insight to BPM tools and the recognizing of the fundamental management changes that underpin them.	X	X	X	X			X
<b>Nelis, J.,</b> Business Process Management, 2008	Provision of practical guidelines for business process management implementations.	X	X	X		X		X
<b>Lundgren, E.F.</b> Organizational Management Systems and Processes, 1974	Compendium about organizational management. It provides an overview of management practice covering decision making and control systems, organizational structures and behaviour. It also covers issues related to organizational change.	X	X	X	X	X	X	
<b>Ritzer, G.,</b> The McDonaldization of Society, 2008	Study of the characteristics and principles of the socially structured form of the fast food restaurant as an organizational force. The benefits for the companies as well as the impact on the employees in such systems are discussed. In addition the expansion of these principles in other industries is addressed as well.	X	X	X	X	X	X	
<b>Schmelzer, H., Sesselmann, W.,</b> in engl. Business Process Management, 2008	Introduction of an integrated concept of business process management comprising the organisation, controlling and optimization of business processes	X	X	X	X	X		X
<b>Hugos, M. H.,</b> Business Agility: Sustainable Prosperity in Relentless Competitive World, 2009	Introduces principles, strategies and technology with the objective to improve organisational responsiveness on market demands in order to achieve sustainable competitive advantage.	X	X					

In practise many companies are in a transitional stage where they already have transformed parts of their organizational structure into a horizontal process oriented structure. The remaining organization continues to work according to the traditional structures. Often they establish the horizontal structure in a subsidiary or a particular business unit or division. The main objective is to transform the whole organization in a step by step procedure into a horizontal process oriented organization. Shifting to a horizontal structure is complicated and time consuming because it requires significant changes in culture, job design, management philosophy, and information and reward systems (Daft, 2013)

As described above the implementation of Business Process Management has an impact on different aspects of the organization and the people related. This means that the theories, principles and methodologies of organizational theory, design and change have to be considered when implementing a BPM software solution. Today organizational change is mostly driven by BPM (Oesterle, 1995). Depending on the scope of the BPM implementation the organizational structure of a company can be affected profoundly.

In a process oriented company the authority to make decisions and the related responsibility shifts from the top of the vertical axis to the horizontal axis shifts.

Daft (2013) notes that the transformation in a process oriented structure requires a change in the mind-set and the way managers and employees think about how work is done.

### **Informal Structure**

The informal structure of an organization represents the compound of personal and social relationships among the members of an organization. For Fajardo (1997) the formation of informal groups within an organization is a natural process.

Informal structures can make organizations more efficient (Lundgren, 1974). Within the informal structures a faster way of communication is established. Communication flows direct between the peers of the informal group in contrast to the communication flow within the formal structure, where communication flows along defined channels.

In large organizations informal structures can also accelerate the processes of the formal organization by establishing short cuts or circumventions of the formal processes and procedures. Members of informal organizations can control the work performance of their groups by means of their collective support, or cooperation with management policies. Contrariwise they can also ignore or oppose de-

isions, rules, systems, or procedures imposed by the representatives of the formal decision authority (Fajardo, 1997).

The leaders of the informal organization act often as "grey eminence" and influence formal decision makers. This means that these structures can be supportive or inhibiting for the management. Therefore wise management will recognize informal organizations in their considerations and decisions.

In consideration of the implementation of BPM this is of major importance. Depending on the way how the members of the informal organization were addressed in the course of such a project this can decide over success or failure of the project.

### **3.1.2 Communication in Organizations**

Managers have a key role in the communication processes within companies. They create information linkages to facilitate communication and coordination among organizational elements.

#### **Vertical Linkage within Organizations**

Vertical linkages refer to the communication and coordination of activities between the top and the bottom layer of an organization. Their primary purpose is to enable control of the organization.

In case of repetitive or routine tasks, rules and procedures provide a standard information source enabling employees to be coordinated without actually communicating about every task.

#### **Horizontal Linkages within Organizations**

Horizontal linkages are established horizontally across organizational departments or functional units on the same organizational level. These linkages enable employees to coordinate tasks, share information, solve problems and resolve conflicts (Guffey et al., 2006). Horizontal communication is less formal and structured than communication in the vertical structure (Daft, 2010).

### **3.1.3 Corporate Culture**

Jones (2010) defines corporate culture as the set of shared values and norms, which control organizational members' interactions with each other and with suppliers, customers, and other people outside the organization. Corporate culture can be utilised to increase organizational effectiveness because culture controls the way members make decisions, the way they interpret and manage the organizational environment, what they do with information, and how they behave. Thus culture affects the performance of an organization and competitive position. Strong organizational cultures can have a profound impact on

a company, which can be either positive or negative for the organization.

Daft (2013) notes that the design of an organization represents a strong reflection of its culture.

In the context of BPM Ulrike Baumöl (2010) states “BPM is at the centre of change initiatives as the main lever for implementing change through process engineering. Yet, especially the cultural aspects of organizational change have not been systematically integrated into the principles of BPM”.

Existing methods are usually focused on specific topics of change, for example, either strategy or processes or culture which leads to a disregard of the relevant topics and with this, the complexity of organizational change.

The corporate culture and the emotional configuration of an organization represent an important basis for the responsiveness to change. „It is only when managers try to implement new strategies or programs that go against basic cultural norms and values that they come to face with the power of culture.“(Daft, 2010)

The most common culture types are the adaptability culture, the mission culture, the clan culture and the bureaucratic culture. Each of these types has its characteristic philosophy and value system.

## 3.2 Human Factors

### 3.2.1 Skills

Today skills and qualification are key for the success of a company and its ability to innovate (Carlson & William, 2006). Jones (2010) differentiates functional and organizational skills. Functional skills are the skills possessed by the functional personnel within an organization. In “McDonaldization of Society” Ritzer (2008) notes that post-Fordist systems require a higher level of qualification of the employees. The core principles of Fordism are based on the operational organization which is characterized by high degree of specialization and automatization. It is optimized for mass production of homogeneous products produced with inflexible systems with standardized work routines.

In contrast a post-Fordist organization is characterized by the production of highly customized and specialized products, shorter production runs, flexible production and more capable personnel. The employees need more diverse skills and adequate training to handle the more demanding, more sophisticated technologies like BPM systems. In addition to high-quality functional skills Jones (2010) formu-

lates the requirement of so called core competences which qualify functional personnel as a source of competitive advantage. Daft (2013) perceives an area of special attention. He remarks that employees have to be trained to work effectively in a team environment. The horizontal structure can limit in-depth knowledge and skill development because of the cross-functional nature of work. In order to avoid negative implications regarding these aspects measures have to be taken to give employees opportunities to maintain and build expertise. He perceives the demand for skill development rather as an aspect of keeping an adequate level of in-depth knowledge than of skill diversification. Hammer and Champy (1993) differentiate training and education.

Training increases the skills and competences regarding the “how” of a job. Education covers the “why” by increasing the employee’s insight and understanding of the business context of their work.

### 3.2.2 Empowerment & Responsibility

Daft (2010) defines empowerment as power sharing. It is the intentional delegation of power or authority to subordinates in an organization. Hammer and Champy (1993) note that employees who work in a reengineered process are, on necessity empowered. Effective empowerment is characterized by three elements: of enablement: information, knowledge and power. Thus employees have the power to make substantive decisions. Ritzer (2008) confirms this perspective. New technologies like BPM systems require employees who can handle more responsibility and operate with greater autonomy. In this context Harmon (2010) emphasis the relation of automation and employee empowerment, which will continue to evolve together and each needs the attention of anyone seeking to change processes within an organization.

Contemporary IT technology like BPM systems provide employees with more of the information and knowledge they need to perform their roles effectively (Jones, 2010).

In contrast to the increased requirements of qualification, empowerment and responsibility technologies like BPM systems are implemented to replace employees who perform routine work and highly standardized tasks (Ritzer, 2008). The perspective of increased requirements of qualification and the potential loss of employment is one of the major reasons of open or hidden resistance regarding the implementation of the new technology.

### 3.2.3 Impact on Social Interaction

According to Lundgren (1974) every formal position has a technical, sociotechnical, and social dimension. Out of the technical and the sociotechnical dimensions, social interactions occur and informal groups form. Davenport (1993) confirms this perception by noting that human beings prefer jobs which provide the possibility for social interaction. The aspect of socialization can be of particular advantage when the primary content of the work is informational. Hammer and Champy (1993) supplement that the employees in a process oriented organization unit will perceive a tendency of intensified social interaction. Already during the implementation phase of BPM this is expected as the co-workers exchange their experience about the new working environment. But also in the long run the level of social interaction will remain high because the members of the process team share joint responsibility with their team for performing the whole process not just a small piece of it.

However depending on the process design Davenport (1993) recognizes the risk of isolation. He states that the most efficient process designs can chain employees to their workstations. With the absence of a team structure to foster social interaction the employees performing these tasks can become alienated. In the long term there is a risk of negative impact on the motivation and performance of these employees.

### 3.2.4 Non-human Control

The introduction of a BPM system comes along with the introduction of control by a non-human instance. Ritzer (2008) describes this complex as increased control of humans through the utilization of non-human technology. According to Ritzer people represent the source of uncertainty and unpredictability, and inefficiency in any rationalizing system. Efficiency and quality driven organizations strive to reduce these factors with the support of technology for like BPM systems. Ritzer has a very extensive definition of technology in this context. In addition to machines and tools technology includes in this understanding also skills, knowledge, rules, regulations, procedures, and techniques. Thus technology also encompasses bureaucratic rules, and manuals prescribing procedures and techniques. According to zur Mühlen and Shapiro (2010) BPM systems feature a broad range of control mechanisms and the control of key performance indicators defined by the management of a company. Today it is common practice that even management functions are subject

of control by non-human technology. With the extension of business process monitoring and business intelligence components computer systems take away the need for managers to make judgements and decisions they used to be responsible for (Ritzer, 2008).

In most European countries however the data protection regulations limit the control on an individual basis (BDSG, 2010). These aspects are also under close observation of the authorities of the works council. Many companies have established the role of the data protection officer who is the responsible subject matter expert

Most individuals feel uncomfortable when their performance is monitored and tracked by a computer system. On the positive side this kind of control provides objective information about the workload and performance of individuals (Daft, 2013). This might help the management to take actions. For example rebalance the work load, recognize and appreciate top performance or to investigate the reasons for low performance of employees. For the management of a company the main reasons to implement a BPM system is increased productivity, greater quality, control and lower cost.

### 3.2.5 Change Management

Harmon (2010) is convinced that change and business processes are two sides of the same coin. In the view of Schmelzer and Sesselmann (2008) BPM represents a specific kind of continuous business reorganization. It changes soft factors like leadership style, roles, behaviour and collaboration as well as hard factors like structure and processes. It contributes to a sustainable improvement of the competitive ability (Kotter, 1995).

This means that change and the management of change processes are a core theme of BPM and of vital importance for the success of BPM initiatives and implementations. In the context of change emotions are highly relevant, as they can either fuel and energize or derail and obstruct change processes. In the case when employees already have been subject to substantial change and are operating in an perceived uncertain environment they might rapidly reach their limits of their individual capacity to absorb and cope with additional change. Therefore they may resist and thus threaten the ultimate success of the implementation of a change programme (O'Connor and Fiol, 2006).

Jetson and Nelis (2008) specifically address people change management as a separate discipline. Processes are executed either by people, or by people supported by technology. It is people who will

make or break the implementation of a BPM project, and unless they have committed their “buy-in” and supporting the project, the chances of failure are high. The people aspects of every process change and activity need to be assessed and acted upon in an understanding and sympathetic manner. There is a growing belief that the personnel aspects of a BPM project have not always been addressed in sufficient detail.

### 3.3 Summary of Research Factors

This section provides a summary of the research factors. In the course of the literature review the following organizational and human factors in the context of BPM implementations were revealed as relevant (see figure 1).

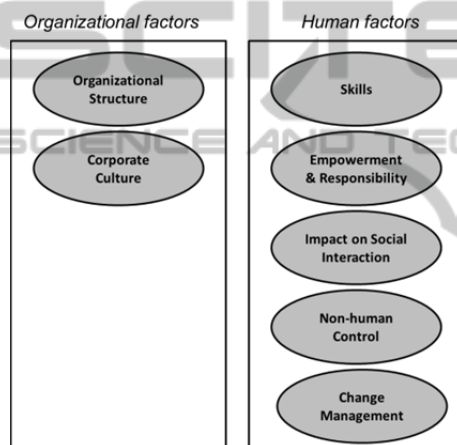


Figure 1: Research factors.

The category of the *Organizational factors* includes the two items organizational structure and corporate culture. As discussed in the literature review both factors are of major relevance for a successful BPM implementation since the organizational structure and the corporate culture are determining dimensions of the organizational sphere of an enterprise in which the processes are executed.

In the category of the *Human factors* five factors have been revealed in the course of the literature review. These factors focus on the consequences and the impact the implementation of BPM will have on the work environment, the control and management of the people working along the processes, the way things are done within an organization and how the social interaction between these employees will be changed.

## 4 FURTHER RESEARCH

The literature review turned out that we can find some literature which mentions several aspects of the organizational and human factors in the context of BPM implementations. The following discussion of the factors revealed substantial evidence for the relevance of the two categories and the factors included for BPM projects.

Consequently the research question for the further research is: “Are BPM project managers and consultants aware of and do they comprehend the organizational and human factors in the context of BPM and how do they consider these factors in the implementation of BPM?”

So the main objective of the further research is to explore the extent of awareness and the understanding of the factors by the BPM project managers and consultants. Furthermore how do they address these in the implementation process of BPM projects. This is dependent on the knowledge and experience of each individual. Therefore the researcher has to understand the people involved and what they say and what they do in the context of the factors. This implies qualitative research as the appropriate methodology.

Hence the further research design will be based on semi-structured interviews which combine structure and flexibility. This approach allows the structured exploration of the areas of interest as well as the coverage of important insights as they arise during the course of the conversation with the respondent (Myers, 2009). The objective of the further research will be focused on the population of BPM project managers and consultants. Therefore purposive sampling is applied.

The research will follow an inductive approach by relating the results of the field work with the findings of the literature review in order to detect confirmations and deviances. Patterns and regularities will be identified and described in inductively generated categories.

The findings of the qualitative research can be basis for a guide for BPM project managers and consultants providing helpful recommendations and guidelines about how these factors have to be considered and addressed appropriately in a BPM project. They can be integrated in an enablement programme for these professionals as well.

## 5 CONCLUSIONS

In the course of the research of this paper seven



major organizational and human factors were identified. For each factor the correlations between the implementation of the technology and the BPM concept with their potential effects on the organization and the employees affected by the change are discussed.

Based on the results of this review and the proof of the relevance of the identified factors the authors provide a proposal for further research.

The proposal comprises a qualitative research approach with the objective to explore the extent of awareness and the understanding of the factors by the BPM project managers and consultants how they address these in their work.

## REFERENCES

- Barney, J. B. (1985): *Dimensions of international social network structure: Toward a contingency Theory of informal Relations in Organizations*. In: Doreian, P.; Snijders, T. (ed.): *Social Networks*, Vol. 7, Issue 1 (March 1985), pp. 1-46.
- Baumöl, U. (2010): *Cultural Changes in Process Management*. In: *Handbook on Business Process Management Volume 2*. International Handbooks on Information Systems, Springer, New York, pp. 487-514.
- BDSG - Bundesdatenschutzgesetz (in engl.: Federal Law of Data of Germany, 2010): Privacy Protection. German Federal, Germany.
- Becker, J.; Kahn, D. (2002): *Der Prozess im Fokus (in engl.: The Process in Focus)*. In: Becker, J.; Hügele, M.; Rosemann, M. (ed.): *Prozessmanagement (in engl.: Process Management)*. Springer, Berlin, pp. 3-16.
- Carlson, C. R.; Wilmot, W. W. (2006): *Innovation – The five Disciplines for creating what Customers want*. Crown Business, New York.
- O'Connor, E. J.; Fiol, M. C. (2006): *Handling Emotional Reactions to Change*. *Physician Executive*, Nov/Dec 2006, Vol. 32, Issue 6, pp. 78-80.
- Daft, R. L. (2010): *Organization Theory and Design*. Tenth Edition, South-Western Cengage Learning, Mason.
- Daft, R. L. (2013): *Organization Theory and Design*. Eleventh Edition, South-Western Cengage Learning, Mason.
- Davenport, T. H. (1993): *Process Innovation – Reengineering Work through Information Technology*. Harvard Business Press, Boston, Massachusetts.
- Fajardo, F. (1997): *Management*. Rex Book Store Inc., Manila.
- Franz, P., Kirchner, M. (2012): *Value Driven Business Process Management*. McGraw Hill, New York
- Guffey, M. E.; Rhodes, K.; Rogin, P. (2006): *Business Communication – Process and Product*. Fifth Edition, Nelson Education, Toronto.
- Hammer, M. and Champy, J. A.: (1993) *Reengineering the Corporation: A Manifesto for Business Revolution*, Harper Business Books, New York, 1993.
- Harmon, P. (2010): *The Scope and Evolution of Business Process Management*. *Handbook on Business Process Management Volume 1*. International Handbooks on Information Systems, Springer, New York, pp. 37-80.
- Jeston, J.; Nelis, J. (2008): *Business Process Management – Practical Guidelines to Successful Implementations*. Second Edition, Butterworth-Heinemann, Oxford.
- Jones, G. (2010): *Organizational Theory, Design and Change*. Pearson, Global Edition, Sixth Edition, Boston.
- Kirchner, M. (2009): *High Performance through Process Excellence – From strategic to operations*. Springer, Berlin.
- Kochan, T.; Gershenfeld, C. (2000): *Integrating Social and Technical Systems*. Lessons from the Auto Industry. (URL (25.01.2011) [http://ocw.mit.edu/courses/engineering-systems-division/esd-932-technology-policy-organizations-derail-spring2005/readings/Integration\\_Social\\_and-Tech\\_Sys.pdf](http://ocw.mit.edu/courses/engineering-systems-division/esd-932-technology-policy-organizations-derail-spring2005/readings/Integration_Social_and-Tech_Sys.pdf)).
- Kotter, J. P. (1995): *Why Transformation Efforts Fail*. *Harvard Business Review*, March/April 1995, pp. 59-67.
- Krueger, W. (1994): *Organisation der Unternehmung (in engl. The Organization of an Enterprise)*. Third edition, Kohlhammer Press, Stuttgart.
- Lundgren, E. F. (1974): *Organizational Management – Systems and Process*. Canfield Press, San Francisco.
- zur Mühlen, M.; Shapiro, R. (2010): *Business Analytics*. In: *Handbook on Business Process Management Volume 2*. International Handbooks on Information Systems, Springer, New York, pp. 137-157.
- Myers, M., D. (2009): *Qualitative research in business and management*. Sage Publication Inc., London.
- Oesterle, H. (1995): *Business Engineering Prozess und Systementwicklung*. Springer, Berlin etc.
- Prahalad, C. K.; Krishnan, M. S. (2008): *The next age of innovation*. MC Graw Nill publishing. New York.
- Pava, C. (1983): *Managing New Office Technology*. Free Press, New York, NY.
- Ritzer, G. (2008): *The McDonaldization of Society 5*. Pine Forge Press, Los Angeles.
- Schmelzer H. J., Sesselmann W. (2008): *Geschäftsprozessmanagement in der Praxis*. (in engl. Business Process Management). Hanser, München.
- Tichy, N. M.; Tushman, M. L.; Fombrun, C. (1979): *Social Network Analysis for Organizations*. In: *The Academy of Management Review*, Vol. 4, Issue 4 (Oct. 1979), pp. 507-519.
- Weske, M. (2012): *Business Process Management: Concepts, Languages, Architectures*. Second Edition, Springer, Heidelberg.