Barriers and strategies of process knowledge sharing in public sector organizations

Norbert Ahrend

Humboldt-Universität zu Berlin, 10178 Berlin, Germany, E-Mail: norbert.ahrend@wiwi.hu-berlin.de

Fabian Pittke

WU Vienna, Welthandelsplatz 1, 1020 Vienna, Austria, E-Mail: fabian.pittke@wu.ac.at

Henrik Leopold

Humboldt-Universität zu Berlin, 10178 Berlin, Germany, E-Mail: henrik.leopold@wiwi.hu-berlin.de

Abstract

Nowadays business process management (BPM) is integral part of many organizations in the private sector. Considering the implementation and maturity of BPM in public authorities, this does not hold true to the same degree. In particular, the willingness to share knowledge about business processes is very limited. This represents a severe problem since authorities have huge overlaps with regard to the services they provide. Hence, the exchange of process knowledge could efficiently support authorities with lower maturity in identifying optimization opportunities. This research paper investigates the circumstances as well as drivers and inhibitors of process knowledge sharing in public organizations. We conduct 15 interviews and use the Grounded Theory method in order to derive a conceptual framework that provides important insights into how process knowledge sharing can be improved in public organizations.

1 Introduction

Nowadays business process management (BPM) is integral part of many organizations in the private sector. In this context, it is typically understood as a holistic management approach which aims at aligning business processes with the goals of the organization [7]. However, if we consider the implementation and maturity of BPM in public authorities, this does not hold true to the same degree. Although continuous budget cuts and rising demands concerning flexibility and modernization also raise the interest for BPM in the public sector, the actual implementation of BPM is still in its early stages [9]. In addition, organizational idiosyncrasies such as the federalist structure impede a straightforward introduction of BPM into public sector organizations.

One of the biggest challenges in public organizations is the exchange of process knowledge that has been collected and documented in the individual authorities [10],[24]. The importance of this knowledge transfer can be, for instance, illustrated by the German municipalities and the services they provide: German municipalities typically maintain more than thousand interconnected and

interdependent service processes [9]. Although these services are offered by different authorities, there are considerable overlaps with regard to how these services are provided. In such a setting, an effective sharing of process knowledge has the potential of significantly supporting authorities with lower maturity in identifying optimization opportunities. The exchange of artifacts such as process models or process maps enables other authorities to gain detailed insights into the operations. However, process analysis and optimization is currently conducted on a municipal level. Often, municipalities simply do not recognize the benefits of sharing process knowledge, or they are afraid of disclosing weaknesses of their processes.

In prior work, the problem of knowledge sharing in public organizations has been studied from different perspectives (e.g. [23],[19],[24]). Nevertheless, there is no research paper that directly addresses the specifics of sharing process knowledge so far. As pointed out, process knowledge allows the recipient to gain rich insights about processes and work procedures. It may, however, also disclose weaknesses and poor solutions. Hence, process knowledge must be considered as particularly critical and sensitive. Recognizing the importance of sharing process knowledge in public authorities, this paper investigates this phenomenon in detail. In particular, we conduct a qualitative study in order to investigate how process knowledge sharing is perceived and implemented in public authorities. Our study is based on a set of interviews with employees from different positions from German authorities. Our contribution is a conceptual framework that reveals key factors driving and inhibiting the successful sharing of process knowledge in public organizations.

The rest of the paper is structured as follows. Section 2 introduces the background of our research. Section 3 gives an overview of our research methodology and explains the data collection procedure. Section 4 presents the results of the study and explains the derived framework in detail. Section 5 discusses the implications of our work before Section 6 concludes the paper.

2 Background

This section discusses the background of our research. First, we introduce the concept of business process management. Afterwards, we present the findings from prior research on knowledge sharing. Third, we elaborate on the specificity of process knowledge.

2.1 Business process management

A business process is typically defined as a sequence of activities that is conducted to transform an input into some business-related output [1],[2]. Business process management is then understood as the set of all activities that are related to the management of business processes. These activities are often organized in the context of a life cycle including the phases analysis, design, implementation, monitoring, and evaluation [3]. The artifact of a business process model plays an important role in this context. Thus, process models are used for documenting the as-is processes and form the basis for redesign and evaluation endeavors.

Often, companies do not only use process models for analyzing single processes, but they systematically document large parts of their organization. Such process model initiatives may result in a hundred or a thousand process models [21]. The resulting process model repositories are not only valuable for the organization itself, but may, in case of similar structures, also support other organizations in improving their operations. Particularly in the public sector, where many authorities offer similar services, process models and the associated process knowledge represent highly valuable artifacts [9].

2.2 Knowledge sharing

The sharing of knowledge has often been emphasized as important factor for increasing organizational performance and efficiency [12],[23],[25],[8]. Consequently, factors influencing the effective sharing of knowledge have widely been investigated from different angles (e.g. [8],[12],[14]). Many works also exclusively focus on the public sector [11],[20]. The results of these studies suggest that the following factors are most influencing:

- **Trust**: Many researchers have demonstrated that people are sharing knowledge when the interpersonal relationships are strong and a high sense of community exists within the organization [10],[16]. The trust in the people that receive and benefit from the shared knowledge has shown to be particularly important in this context. While trust represents one of the most important drivers for facilitating knowledge sharing, studies have also shown that it is the hardest to overcome [20].
- **Decision structures**: Centralization has proven to be rather ineffective for knowledge sharing [19],[22]. Due to the lack of autonomy in the hierarchy, people cannot flexibly react to new demands which are concerned with potentially sensitive data. As a result, organizations with more autonomy have turned out to achieve a better performance [26].
- **Incentives**: Incentives can be discussed on the individual and the organizational level. A study from Bock et. al. [10] shows that monetary incentives may have a negative effect on knowledge sharing behavior. Organizational culture that values knowledge sharing behavior turned out to be much more successful in this regard [11],[17],[18].
- **IT utilization**: The use of IT has a significant influence on knowledge sharing behavior [14]. When the IT landscape is old, employees may lack the means and also the general skills of how to effectively share their knowledge. Hence, IT maturity plays an important role in this context.

Although many authors emphasize the differences between public and private sector organizations, such as deviating legal and political conditions [29], the majority of these factors apply to both private and public organizations. However, the introduced findings relate to a general type of knowledge that does not necessarily allow the recipient to gain deep insights into the organization. Hence, in the next section, we point out the differences between general knowledge and process knowledge. Moreover, we highlight why the sharing of process knowledge requires further investigation.

2.3 The specificity of process knowledge

In general, knowledge is typically subdivided into tacit and explicit knowledge [18],[14],[24]. Explicit knowledge is understood as something that can be documented in a written form and does not require explanations on a deeper level. By contrast, tacit knowledge is hard to formalize as it is connected with the individual experience of a particular person.

Investigating the nature of process knowledge in more detail, it becomes obvious that it includes both facets. Many BPM initiatives result in a process models that formalize the operations of the respective organization. These process models can be considered as explicit knowledge. However, process knowledge may also include best-practices of how BPM can be introduced into an organization or how employees must be trained. Such aspects are typically much harder to formalize as they require a careful consideration of the present circumstances. Thus, the encapsulation of tacit and explicit knowledge represents the a basic characteristic of process knowledge which also highlights its value.

The most important characteristic that sets process knowledge apart from other types of knowledge is its criticality. As process models represent organizational procedures, they may reveal considerable weaknesses of the organization. While this exposure could lead to an eventual improvement, there is a

huge trade-off between the opportunity to improve and to reveal that processes are implemented in a non-optimal or even poor manner. Hence, the sharing of process knowledge has the potential to greatly improve the organization, but is connected with a high degree of self-exposure and risk. To investigate how this hurdle can be overcome is the main goal of this paper.

3 Research methodology

Since there is only little research and understanding on sharing process knowledge across public authorities, we apply a qualitative research approach. In particular, we choose the *Grounded Theory* method. Grounded Theory was first introduced by Glaser and Strauss and supports the inductive discovery of an underlying theory that is grounded in data [4]. As stated, the method is beneficial for phenomena for which little research has been conducted. In our study, we employed the "Straussian" guideline of Grounded Theory [5] because it encourages the systematic analysis of data from interviews and the identification of essential relationships contributing to our phenomenon. In the following sections, we discuss how we acquired the interview data (Section 3.1) and how we analyzed this data in order to derive the final theoretical framework (Section 3.2).

3.1 Data collection

For our study, we chose 15 German authorities with varying BPM experience and conducted semi-structured and in-depth interviews with participants from different administrational levels. In preparation for the interviews, we developed an interview guideline covering the topics *BPM context*, *motivation*, *risks*, *consequences*, and *risk mitigation*. Each interview had an average length of 40 minutes and was transcribed afterwards. To maximize our outcome with respect to the observed phenomenon, we chose participants from different job positions (employee vs. management), different functional units (organization vs. IT), size and hierarchical level of agency (local vs. state vs. federal), which is inline with the theoretical sampling approach of qualitative research methods [5]. For a full overview of the participants, we refer to Table 1.

ID	Age	Job Position	Functional Unit	Size of Authority (Employee 2012)	Authority Level	BPM Exp. in Years
1	40-49	Lower Management	Organization	845	Local	5
2	50-59	Lower Management	Organization	1300	State	10
3	40-49	Lower Management	Organization	422	Local	1
4	30-39	Lower Management	Organization	8000	State	5
5	40-49	Lower Management	Organization	670	State	8
6	30-39	Employee	Organization	1500	Federal	2
7	40-49	Middle Management	Organization, IT	309	Local	-
8	40-49	Employee	IT	514	Local	11
9	40-49	Middle Management	Organization	2656	Local	9
10	40-49	Lower Management	Organization	346	Local	14
11	40-49	Middle Management	Organization	16420	Local	-
12	30-39	Employee	Organization	2253	Local	1
13	40-49	Employee	Organization	1600	Federal	-
14	40-49	Employee	IT	2600	Federal	3
15	30-39	Employee	Organization	186	Local	-

Table 1: Interview participants

3.2 Data analysis

For the data analysis, we employed the Grounded Theory approach of Strauss and Corbin [5]. This procedure consists of three separate and interactive steps, i.e., open coding, axial coding, and selective coding. In the following paragraphs, we explain the steps in more detail and discuss how we applied these steps on the interview material.

Open coding: The Open coding phase is an analysis procedure with the goal of identifying concepts and categories in the data. In this context, the concepts form the building blocks of the resulting theory. Thus, concepts describe thoughts, events, happenings, and actions that are related to the phenomenon and are associated with the text for further analysis. Typically, concepts are grouped together to abstract categories. A category can subsume several concepts and is closely related to the investigated phenomenon. Accordingly, categories encompass concepts that are related in nature or related in meanings. Based on the methodological framework, we analyzed the interviews by going through each of them and assigning a concept to sentences and paragraphs that represented content and the underlying meaning. To keep track of concepts and categories, we employed the software tool ATLAS.ti, which is commonly used for this type of analysis. For consistency reasons, we iteratively evaluated the concepts and systematically sorted out redundant or unfitting concepts. For the derivation of categories, we went through the concepts and refined them to those categories that are found to pertain to the investigated phenomenon.

Axial coding: Axial coding is used to identify connections between the categories accordingly organizing them in a new way. In order to accomplish this, we used the general coding paradigm of Strauss. It identifies four main groups of categories, i.e., context, causal and intervening conditions, strategies and actions, and consequences. As we are interested in specific conditions driving or inhibiting the investigated phenomenon, we adapt the coding paradigm and explicitly interpret causal and intervening conditions as drivers (conditions with a positive effect) and inhibitors (conditions with a negative effect). Afterwards, we assigned each category to one of the main groups by deciding on the role of this category with respect to the phenomenon.

Selective coding: Selective Coding describes the process of selecting and focusing on specific core categories. Thus, a core category describes a central concept of the phenomenon around which all other categories are subsumed. It aims at the refinement of the previously defined categories to a set of relevant categories. In this step, we went through the interview material in several iterations and derived relevant categories that are related to the phenomenon. Finally, we derived the theoretical framework from the material that explains the phenomenon of process knowledge sharing in public administration.

4 Research findings

As a result from the application of the Grounded Theory method, we derived a conceptual framework that identifies factors influencing the sharing of process knowledge**.** Figure 1 illustrates the derived framework.

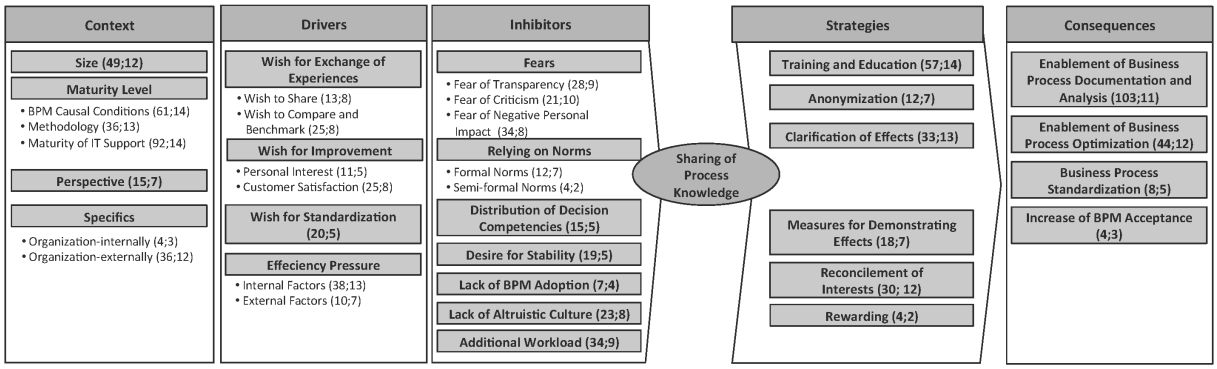

Figure 1: Framework for sharing of process knowledge

It includes the main categories, namely, context conditions, drivers, inhibitors, the phenomenon itself, the relevant strategies to improve the willingness to share, and, finally, the consequences resulting from process knowledge sharing. The values in the brackets next to each aspect denote the total number of mentions in the interviews as well as the total number of occurrences of one specific concept among all interviews. In the following subsections, we explain the contents of the framework by using insights from our interviews.

4.1 Context

The context of process model sharing describes a set of circumstantial properties that relate to the different authorities. The context of process knowledge sharing is classified into four main categories:

- **Size of the organization**: Most of our interviewees explicitly emphasized the role of size and maturity and their influence to share process knowledge: “There are seven or eight people involved in Cologne. In Siegburg maybe only two.” Depending on the size of the organization, the opportunities for process management are more evolved. Therefore, the necessity to prioritize the processes, which are to be documented, is much higher in smaller organizations due to a lack of resources: “Well, currently we just randomly pick processes to document them (…)”.
- **Maturity level of BPM in the organization**: The methodological possibilities depend on the maturity level of the organization or the BPM initiative: “Then it may be, however, that you do one thing manually, and the other one with software support (...)“ Likewise, the technical support options in the organization are also dependent on the maturity level and therefore differ in every organization. 14 out of 15 interviewees emphasized this correlation in their answers: “We just finished an IT architecture project which aimed at … determining where we have to change our IT architecture, where to adapt it, and … which business functions we have, and how we are supporting them.”
- **Perspective of processes**: To a large degree, the result of a process initiative depends on the organizational perspective on BPM. For instance, this is reflected by the acquisition of certain BPM tools for specific, individual or mutual purposes: “Nothing changed (introduction of BPM, author’s note). We installed ARIS, but no one worked with it.” At the same time, the different perspectives lead to different requirements and also results: “That we sometimes have different views on a perfect or optimized process than the user departments …”.
- **Organizational specificities:** The inclusion across organizations was much more important to our interviewees for the specificity of the BPM than the intra-organizational specificities. When introducing BPM into a multilevel authority, external factors influence the process management

within the organization: „ ... that you say: Yes, our dishes are completely different, we have our departmental competence" / "... we're [finally] a state authority."

To summarize, we identified particularly effective requirements for the sharing of process knowledge: the size of the organization (49 mentions), the maturity of the organization and in particular the IT support (92 mentions) as well as the involvement of the organization and thus the external influences on the organization (36 mentions).

4.2 Drivers

Based on the interviews, we identified different drivers that positively influence the process of sharing knowledge. According to the number of mentions in the interviews, the interviewees evaluate them as being equally important. However, there are specific aspects of each driver that are discussed as follows:

- **Desire to share experiences**: Contrarily to [22], it is surprising that more than half of our interviewees addressed the sharing of experiences: "Well, I do think ... from a central point of view, we must succeed that these same processes are not only known by project people and remain hidden, but are made available to a large number of people of the authority." In particular, the comparison or benchmarking (25 mentions) was named as a strong motivation: "… concerning the comparability or the exchange with others …that such transparency is always a good starting point, that you get a hint why don't you do it this way …".
- **Desire to improve**: Authorities still have a self-image as administrative intervention and administrative enforcement. Therefore, it is surprising that the interviewees emphasized the importance of customer satisfaction (25 mentions): "…improving customer service - of course, we are customer oriented …".
- **Desire to push standardization**: The desire for standardization is based upon the idea to handle processes and procedures in a consistent manner: "... basically, I would say, the process seen from a legal perspective, to issue a building permission, is actually the same everywhere." The process of knowledge exchange with other institutions represents an essential requirement to achieve standardization. Nevertheless, our interviewees pointed out that the possibilities to preserve the individuality of an institution should not be ignored: "And somewhere there are also opportunities to say, okay, that may of course also be supported by supplementary documents, where there is no predefined format."
- **Demand for efficiency**: The demand for efficiency has built up in recent years, particularly pushed by external factors such as the brake on debt [32] and the elimination of the payment in the context of the Solidarity Pact [33]. Surprisingly, internal pressure for efficiency was mentioned 38 times: „And clearly, the comparability creates a certain competition."

4.3 Inhibitors

In addition to the drivers to share process knowledge, the analysis of the interviews revealed factors, which negatively influence the willingness to share process knowledge. We identified seven categories of inhibitors. The following list represents those inhibitors, which significantly differ from the inhibitors described in literature:

- **Fear:** Concerning the fear of transparency and criticism, our results are similar to [24]: "The moment I publish something, I make myself vulnerable." Surprisingly, more than half of the

interviewees fear personal consequences (34 mentions): “It’s always about saving resources.” These fears lead us to the conclusion that deeper cultural and socialization problem exist.

- **Hiding behind formalities:** Generally, this inhibitor was to be expected [6], but relatively few interviewees (four interviews, twelve mentions) referred to formal or semiformal norms: “… they are hiding behind any laws. / We, as the authority, are referring to that, to say, that we are working based on legal requirements [...] that we must fulfill.”
- **Allocation of competences and the lack thereof**: Both the analysis of processes as well as the employment of the inherent identification of problems is hampered by insufficient competence regulations [22]. “There are official instructions and at the end the rest is executed by the responsible manager.” And “The hierarchy level above does not want to deal with these problems.” Nevertheless, this is not a major inhibitor (15 mentions, five interviews).
- **Conservative behavior pattern or search for stability**: As stated above, the sharing of process knowledge is accompanied by the fear of criticism and change. This fear results in a conservative pattern of behavior that is clearly connected with the need for stability, "So in my experience, people working in the public administration are often people who are looking for stability." The strong desire for stability was mentioned as another inhibitor influencing the exchange of process knowledge (19 mentions in 5 interviews).
- **Inadequate adaptation of the BPM approach to public authority**: This inhibitor is not surprising due to the generally low BPM maturity level of public authority [30],[34]: "So we do not have a standardized procedure (…)". However, only four interviewees mentioned this inhibitor seven times.
- **Cultural defects**: Regardless of the domain, selfless behavior is an optimal condition for knowledge sharing [20],[18],[11],[17]. In more than half of the interviews, a lack of these cultural conditions was identified (23 mentions). One example stated by our interviewees is the arbitrary delegation of conflicts („which in turn leads to the delegation of conflicts“). The delegation shows that the employees of an authority are not willing to constructively deal with change and knowledge sharing. Furthermore, the interviewees stated that employees of authorities deliberately held back changes in order to consolidate their own position within the organization: „ ... a department likes to skip changes or improvements ... in the sense of protecting vested rights or in the sense of safeguarding interests“.
- **Knowledge sharing causes additional effort**: This inhibitor was identified most frequently (in nine interviews with 34 mentions). Given the relative lack of economic thought and action, the importance of this inhibitor to the interviewees was unexpected: "This has proved to be too complicated, because we simply could not provide the resources permanently.”

In summary, the fear of personal consequences, along with cultural deficits and the expected additional effort by sharing knowledge represented the most significant inhibitors.

4.4 Strategies

To improve the process of knowledge sharing in the public sector, we identified several approaches:

- **Education and training**: As expected, education and targeted training on BPM represent an important approach to reduce the identified inhibitors of knowledge sharing and improve the effect of the driver. In almost all interviews (14 out of 15) and 57 mentions, education and training constitutes the best approach to improve the sharing of knowledge: “Yes, training is self-evident for us.”

- **Anonymization of shared knowledge**: Another common measure arises from to the anonymization of the shared knowledge. The anonymization impedes the identification of the author. Therefore, the author is not exposed to criticism: "We have the reference processes anonymized so that there are no more names for example." In addition, the German Data Protection Act requires the anonymization: "Of course, no personal data should be included. That is even a legal requirement.“
- **Transparency about the consequences of knowledge sharing**: If the consequences of sharing knowledge become more transparent, it increases the participants' willingness to share knowledge: “Transparency is one thing. It works if you manage to integrate the employees. That means to let them participate in the process as well, explaining what we were doing, how we do it, and where you want to go. "
- **Piloting**: Two measures have been proven effective to encourage process knowledge sharing: providing information and piloting. In so-called pilot projects, a new concept is first tentatively placed in one or more departments. This way, positive experiences can subsequently be communicated: “We are now in the implementation phase again. There is a pilot project, which is running successfully in some departments.” In this context, it is important to highlight the positive achievements and benefits of knowledge sharing in order to create a wide acceptance within the authority.
- **Reconcilement of interests**: It must be clear to the participants what happens to the knowledge they are sharing and what to expect in return. This cost benefit analysis was mentioned 30 times in twelve interviews.
- **Incentive schemes**: The identification of incentive schemes as a strategy to improve knowledge sharing was quite unexpected [10],[18],[11]. However, this strategy was mentioned only four times in two interviews. [31] confirms that this strategy is unusual for the public authority.

Overall, it should be noted that the training of the employees significantly increases the acceptance of the phenomenon. At this point, it is important to discuss the advantages and disadvantages of process of knowledge sharing with supporters and opponents alike.

4.5 Consequences

The sharing of process knowledge is not an end in itself. Therefore, the expected consequences of the sharing are interesting. Starting with the weakest effects, we will consider these consequences in more detail below:

- **Improved acceptance**: The process of knowledge sharing also certainly leads to an improved acceptance of BPM in the public authority, especially when the consequences listed below will actually occur. However, only three interviewees mentioned the improved acceptance of BPM (four mentions).
- **Standardization:** Another implication of process knowledge sharing is a rising interest in business process standardization. Business process standardization mainly involves the unification of processes aiming at the creation of a transparent and efficient process landscape. Surprisingly, standardization was mentioned eight times in five interviews and does therefore not constitute the main expectation.
- **Documentation and analysis of processes and optimization**: The improved fundamentals and skills for documentation and analysis (103, 11) as well as the optimization of processes (44, 12) provide the strongest implications for the process of knowledge sharing. These implications also

provide the basis for further standardization of processes. Finally, these implications correspond to the current maturity of the BPM in the public authority, where the focus is on initial documentation of processes and their optimization.

5 Implications

Our study provides new findings concerning the factors influencing the sharing of process knowledge and highlights the need for further research. We first discuss scientific implications before we highlight the implications for practice.

With regard to *scientific implications*, we can state that our study demonstrates the influence of the factors trust, decision structures, incentives, and IT utilization as reported in previous studies [23],[24],[11],[20]. However, it also emphasizes the specifics of sharing process knowledge. Our study shows that the revelation of weaknesses and the associated fear of criticism represent a particular obstacle. In order to reduce this fear, cultural changes as well as measures facilitating individual development are necessary. Hence, the allocation of responsibilities will significantly influence the willingness to share process knowledge. [22],[19] found out that the centralization of responsibilities negatively influence this willingness. Authorities increasingly set up BPM competence centers [31] despite the heterogeneity of authorities in terms of size and despite the low degree of BPM maturity. This conflict should be more thoroughly examined in future research.

With respect to *practical implications*, we found out that the willingness and ability to share process knowledge largely depends on the size and maturity of the organization. While the size of public organizations can only be partially influenced, the maturity can be influenced by means of the strategies identified in this paper, especially by means of trainings. For a successful BPM (based on a exchange platform), investments in training and education are required.

The driver "desire to share experiences" should be given more attention in the practical work. As argued by [15], the necessary confidence can be achieved by increased connectivity in closed communities. Therefore, it is necessary to continue to create a regulatory framework, to further delineate adequate benchmarks in order to increase the willingness to share process knowledge, as started by [28]. A first practical implementation is already available: the regulatory framework of ‘Nationale Prozessbibliothek’.

The identified inhibitor „fears of personal consequences“ can only be reduced medium term by breaking down cultural deficits. Moreover, the feared „additional effort“ through the knowledge sharing (provision) can only be reduced by continually working out and communicating the mutual benefits of knowledge sharing. The driver customer orientation was quite unexpected and should be investigated in future research.

6 Conclusion

In the paper, we addressed the problem of process knowledge sharing in public organizations. We conducted 15 interviews with representatives of various German authorities and analyzed the interview data using the qualitative research method Grounded Theory. As a result, we derived a conceptual framework showing relevant conditions, inhibitors, and drivers for process knowledge sharing. The results demonstrate that the revelation of weaknesses and the associated fear of criticism represent the most important obstacles. In order to reduce this fear, the implementation of cultural changes is one of the most important aspects to be addressed.

In future research, we plan a quantitative study to evaluate the findings and to identify the most influencing factors of process knowledge sharing in and between organizations.

7 References

Books

[1] Becker, J.; Kugeler, M; Rosemann, M. (2003): Process management: a guide for the design of business processes, Springer.

[2] Davenport, T. (1993): Process innovation: reengineering work through information technology, Harvard Business Press.

[3] Dumas, M. et al. (2013): Fundamentals of Business Process Management, Springer.

[4] Glaser, B.; Strauss, A. (1976): The Discovery of Grounded Theory: Strategies for Qualitative Research, Aldine Publishing Company.

[5] Strauss, A.; Corbin, J. (1998): Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory, Sage Publications.

[6] Weber, M. (2009): The theory of social and economic organization, SimonandSchuster.com.

[7] Weske, M. (2012): Business process management: concepts, languages, architectures, Springer.

Journals

[8] Alavi, M.; Leidner, D. (2001): Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. MIS Quarterly, 25(1): p. 107-136.

[9] Becker, J.; Algermissen, L.; Niehaves, B. (2006): A procedure model for process oriented e-government projects. Business Process Management Journal, 12(1): p. 61-75.

[10] Bock, G.-W. et al. (2005): Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate. MIS Quarterly, 29(1): p. 87-111.

[11] Currie, G.; Suhomlinova, O. (2006): The impact of institutional forces upon knowledge sharing in the UK NHS: the triumph of professional power and the inconsistency of policy. Public Administration, 84(1): p. 1-30.

[12] Davenport, T.H., W. David, and M.C. Beers, Successful knowledge management projects. Sloan management review, 1998. 39(2): p. 43-57.

[13] Hansen, M. (1999): The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. Administrative Science Quarterly, 44(1): p. 82-111.

[14] Kim, S.; Lee, H. (2006): The Impact of Organizational Context and Information Technology on Employee Knowledge−Sharing Capabilities. Public Administration Review, 66(3): p. 370-385.

[15] Koschmider, A.; Song, M.; Reijers, H. (2010): Social software for business process modeling. Journal of Information Technology, 25(3): p. 308-322.

[16] Levin, D.; Cross, R. (2004): The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. Management Science, 50(11): p. 1477-1490.

[17] Marks, P. et al. (2008): Sharing knowledge. Communications of the ACM, 51(2): p. 60-65.

[18] Nonaka, I. (1994): A dynamic theory of organizational knowledge creation. Organization Science, 5(1): p. 14-37.

[19] Pardo, T.; Tayi, G. (2007): Interorganizational information integration: A key enabler for digital government. Government Information Quarterly, 24(4): p. 691-715.

[20] Pardo, T. et al. (2006): Knowledge sharing in cross-boundary Information Systems Development. Journal of Information Technology and Management, 7(4): p. 293-313.

[21] Rosemann, M. (2006): Potential pitfalls of process modeling: part A. Business Process Management Journal, 12(2): p. 249-254.

[22] Tsai, W. (2002): Social structure of "coopetition" within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. Organization Science, 13(2): p. 179-190.

[23] Willem, A.; Buelens, M. (2007): Knowledge sharing in public sector organizations: The effect of organizational characteristics on interdepartmental knowledge sharing. Journal of Public Administration Research and Theory, 17(4): p. 581-606.

[24] Yang, T.-M.; Maxwell, T. (2011): Information-sharing in public organizations: A literature review of interpersonal, intra-organizational and inter-organizational success factors. Government Information Quarterly, 28(2): p. 164-175.

[25] Yang, H.-L.; Lai, C.-Y. (2011): Understanding knowledge-sharing behaviour in Wikipedia. Behaviour & Information Technology, 30(1): p. 131-142.

[26] Zhang, J.; Dawes, S. (2006): Expectations and perceptions of benefits, barriers, and success in public sector knowledge networks. Public Performance & Management Review, 29(4): p. 433-466.

Conference Papers

[27] Ahrend, N.; Walser, K.; Leopold, H. (2013): Case Study of the Implementation of Business Process Management in Public Administration in Germany, Switzerland and Austria. In: PoEM.

[28] Eid-Sabbagh, R.; Ahrend, N. (2013): Eine Prozessplattform für die deutsche Verwaltung. In: Informatik.

[29] Palkovits, S.; Rapp, A. (2004): Comprehensive Process Management in Public Administrations– A Case Study. In: Electronic Government.

[30] Rosemann, M.; de Bruin, T. (2005): Towards a Business Process Management Maturity Model. In: ECIS.

[31] Santana, A.F.L. et al. (2011): BPM Governance: An Exploratory Study in Public Organizations, in Enterprise. In: Business-Process and Information Systems Modeling.

Online

[32] Bundesfinanzministerium (2013): Schuldenbremse, cited 04.07.2013, Available from: http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Oeffentliche_Finanzen/Schuldenbremse/2012-06-14-kompendium-zur-verschuldensregel.html

[33] Bundesinnenministerium (2013): Solidarpakt, cited 04.07.2013, Available from: http://www.bmi.bund.de/SharedDocs/Standardartikel/BODL/soliII.html?nn=790654

[34] Rosemann, M.; de Bruin, T. (2005): Application of a holistic model for determining BPM maturity. BP Trends.