

# Process Harmonization Phase Model in Post Merger Integration

Irene Schönreiter

Technical University Dresden, Germany

Irene@schoenreiter.de

**Abstract.** Post merger integration (PMI) has received much attention in recent years due to an increasing number of merger and acquisitions (M&As). Process harmonization plays an important role during the PMI. The objective of this article is to define the milestones of process harmonization and develop a phase model. Nine approaches are illuminated and concluded to a process harmonization phase model. BPM implementation or optimization literature has been scanned for suitable approaches. Further expert interviews have been conducted and evaluated with qualitative content analysis. A combination of the different approaches is regarded as the optimum. This article provides two central results: First, process harmonization phases are divided into management system level and process level. Second, process harmonization phases exist of analysis phase, conception phase, realization phase and verification phase. A general overview of suitable methods for each phase is provided.

**Keywords:** process harmonization · post merger integration · phase model

## 1 Introduction

*“The integration process is the key to making acquisitions work“* [1]. Due to the fact that Business Process Management (BPM) plays a vital role in organizational changes [2, 3], a key element in post merger integration (PMI) is the process harmonization (PMI). The relevance of BPM for practioners is stagnantly growing [4]. Especially when symbiosis or absorption is the company’s chosen integration approach, two worlds of business processes and management systems have to be harmonized efficiently.

This article intends to suggest an approach for the phases of process harmonization in the PMI phase. Process harmonization typically comes along with process optimization and process redesign. Process redesign is frequently a way for improving process performance dramatically [5]. An essential prerequisite for a systematic design and optimization of results, processes and resources are standardized processes and a unified process framework as a basis for mastered processes [2]. So why not to use the chance of improving processes when they are redesigned by harmonisation anyway? The way from separate companies to efficiently harmonized and optimised processes includes some milestones and is divided in several phases.

This article aims to find an answer for the following research question: Which phases can be used for process harmonization in post merger integration phase?

The paper is structured as follows. After this introduction, the theoretical background is explained followed by the identification of relevant literature which is added by expert interviews. Chapter 4 presents the results that are discussed in chapter 5. A summary, limitations and ideas for future research close this article.

## **2 Theoretical Background**

Fernandez & Bhat define process harmonization as *“process of designing and implementing business process standardization across different regions or units so as to facilitate achievement of the targeted business benefits arising out of standardization whilst ensuring a harmonious acceptance of the new processes by different stakeholders”* [6]. Process harmonization aligns the differences of standardized processes and defines the degree of their variation [7, 8] *“by capturing*

*their commonality and variability in a consolidating and efficient manner, without attempting to make different processes identical” [8].*

Aside from post merger IT integration there is no identified methodology to harmonize processes in the post merger situation [9]. Post-merger integration refers to the integration of a company after the signing of a M&A in which the integration planning and implementation takes place in order to realize the desired appreciation successful [10]. According to the need for organizational autonomy and need for strategic interdependence, different types of integration approaches exist: absorption, symbiosis, preservation and holding [1, 11, 12].

- Absorption: the acquired company is absorbed by acquirer and assimilated into its culture, the management usually comes from the acquirer [13],
- Symbiosis: evolution from existing [14], learn from each other and share qualities [12], most complex managerial challenge [1]
- Preservation: acquired company retains independence, modest degree of integration by acquired company [13], no novelty [14]
- Holding: integration is not intended [1]; the acquired company usually exists as a separate legal entity [15].

For process harmonization are especially absorption and symbiosis of relevance.

### **3 Phases for Process Harmonization**

#### **3.1 Identification of Relevant Literature**

To discover the optimal phases for process harmonization there are various starting points.

Changes coming along with process harmonization can generally be proceeded evolutionary or revolutionary. The evolutionary change corresponds to the process of continuous improvement and is a gradual, targeted and continuous approach, in which the corporate structure and strategy is maintained [16]. Total Quality Management (TQM) and Six Sigma can be associated with the evolutionary approach [17]. The evolutionary approach equates to the engineering of processes and consists of as-is analysis, as-is modeling, target modeling and process optimization [18]. The advantage persists of a low risk of not revisable wrong decisions in the rather complex issue [15]. If there are already processes with a high level maturity in a company, it is disadvantageous, destroying them by the radical approach, rather than develop [19]. The radical approach means Business Process Reengineering (BPR). BPR defined in short means "start from scratch" [20] and thus corresponds in its pure form the "green field" approach [19]. BPR or shortly Business Reengineering (BR) is a method for process optimization done solely top-down and requires the absolute backing of top management [21]. This involves the complete redesign of processes and procedures in the company with the target to increase in performance in terms of cost, quality, service and speed [22]. BPR proceeding is following: 1. Why is something done?, 2. What needs to be done for?, 3. Clarification of strategic specifications and target framework, 4. Elimination of old processes and structures, 5. Distinguish process and new design of today's sight, 6. Consideration of BPR principals, 7. Radical new designed process (to-be concept and implementation plan), 8. Vernier adjustment and stabilisation [22].

Another starting point for the harmonization of integrated management systems introduces Karapetrovič that might be adaptable in the post merger integration for two different existing management systems. Ba-

sed on the system-oriented approach, the harmonization is achieved by the following steps: 1. Integration of the documentation in a common manual and otherwise separated process, 2. unification of the main processes, objectives and resources , 3. "All-in-one-system" as a universal system for all sub-systems - complemented by the development of a common audit system [23]. A study of Sampaio et al. examined the question of whether integration or supplementation of the additional management systems to an Integrated Management System. The investigation showed following levels of integration: Integration of documentation, management tool integration, definition of common quality policy and objectives, common organizational structure [24]. Ntungu developed the "Pursuit of Excellence Quality Management System (PEQMS)" with following steps and ISO 9001 as frame requirement: 1. Development of the quality policy 2. Understanding quality of assessment and taxation services 3. Developing quality objectives 4. Identifying and understanding business processes 5. Developing and implementing quality standards 6. Using quality data for continuous improvement 7. Sustaining the quality management effort 8. Option to register with the ISO 9001 standard [25].

Han et al. propose a two-stages business process analysis model for increasing the efficiency and effectiveness of business processes: the macro process analysis specifies at the business performance with the highest influence and defines a to-be standard. The second stage – micro analysis – uses process simulation and consists of a review of the as-is-process and designs a to-be process [26].

Another approach to harmonize management systems might be the adaption of a new implementation project. Schmelzer & Sesselmann define following phases for the introduction of BPM: Positioning, Identification, implementation, optimisation. [27].

Seven approaches with various phases have been identified in literature. In the next section experts are interviewed about process harmonization phases in practice.

### **3.2 Qualitative Analysis**

A qualitative analysis is used to identify the procedure of process harmonization in practice. Therefore twelve experts composed of CEOs/COOs (33%) and quality managers (67%) of different service sector companies have been interviewed and asked about their experience in process harmonization. A qualitative semi-structured interview has been conducted with experienced experts in process harmonization after M&A. The evaluation was performed by qualitative content analysis according to Mayring [28, 29]. Interviewing experts is aligned by specific problems and demand of a questionnaire and offers the interviewee an extended space for the answer [30], so the orientation is more subjective and interpretative [31].

The experts have been requested to describe the procedure of process harmonization in their company after an M&A. They specified their individual situation, good and bad experiences with the described procedure and – most important – their satisfaction.

Appendix 1 presents the procedure of choosing the relevant cases for harmonization phases in practice. In this article two cases out of the twelve are regarded: both cases have a satisfactory result and the interviewed expert would apply the same procedure again; some of the experts are quite dissatisfied, so for identifying process harmonization phases best practices are needed; the used integration approach was symbiosis or absorption; both cases are finished and long-term experience is available.

Expert 1 recommends following strategy: 1. As-is analysis, 2. Development of strategy (strategic objectives, strategic potentials, definition of KPIs), 3. Strategic action plan, measurable picture of intended market position, 4. Definition of structural organisation and process-oriented organisation (structure, organisation chart, business processes, process map), 5. Start with operational implementation.

Expert 2 advises following procedure to include all merged companies in a common certification: 1. Definition of cramp processes for certification (coverage of minimum norm requirements), 2. Integration of common quality culture (regulations, dynamic, reporting, ...), 3. Definition of responsibilities and interfaces (work groups existing of quality management and single departments), 4. as-is record of processes with swimlane diagram, 5. Step-by-step unification of processes with room for individual processes, 6. Unification of IT systems, e.g. ERP system, common documentation database, 7. Implementation, 8. Verification by internal audits.

### 3.3 Analysis and Interpretation

Table 1 summarises the various proceedings presented in the literature review in chapter 3.1 and qualitative analysis in chapter 3.2. Number 1-7 present the approaches identified in the literature review and number 8+9 show two cases of the expert interviews, so each row describes one approach. The title gives a short description of the approach, detailed information are described in Appendix 2.

**Table 1.** Overview of Approaches

N°	Author	Title	N°	Author	Title	N°	Author	Title
1	[27]	Introduction of BPM	4	[25]	PEQMS	7	[24]	Integration levels of integrated management

								systems
2	[22]	Business Process Reengineering	5	[26]	Two-stage business process analysis model	8	Expert 1	Process harmonization
3	[23]	Harmonization integrated management systems	6	[18]	Process engineering	9	Expert 2	Common certification

These nine harmonization approaches express a quite different picture at first sight. They differ in number of steps as well as in a clear starting and end point. The proceedings of Schmelzer & Sesselmann and the recommendation of expert 2 demonstrate the steps of a whole process lifecycle defined by Scheer & Hoffmann. The BPM lifecycle is divided into following phases connected in a cycle: Process Strategy, Process Design, Process Implementation, Process Controlling [32]. Karapetrovic, Ntungo, Gaitanides, Sampaio et al., Jochem & Geers and expert 1 concentrate on the development of a management system, whereas Han et al. is focused on the analysis phase.

## 4 Results

### 4.1 Analysis Phase

Concepts 6, 8, 9 suggest directly an as-is analysis, partly combined with an as-is modelling of the processes. Further concepts let conclude to an analysis phase as well. N° 1 (identification), 2 (requesting why is something done and what needs to be done for) and understanding the processes of concept 4 are also part of an analysis phase. Hence in conclusion for understanding the processes of both merged companies, an “analysis phase” is identified as first phase.

The approach of micro and macro analysis of Han et al. (2009) will be taken over and adapted to process harmonization. As there is needed the consideration of the whole management system towards overall



regulation and control and the compliance with company objectives and strategy, a macro perspective is necessary for process harmonization. On the other hand a micro perspective on the single process level is required. Each single process has to be regarded for the unification of both, the available same process of the merged company part and on the compliance with the macro level, means management system. Hence each phase of process harmonization is regarded on management system level and on process level. Regarding the steps of the nine approaches, they jump between management system and process level, too.

It is imperative to observe the maturity of business processes, before any re-designing or optimisations to a higher level are started [5]. So on management system level a maturity assessment is constituted for an overall analysis, whereas on process level a systematic process analysis is advised.

## **4.2 Conception Phase**

Next the “conception phase” is identified. All concepts except N° 5 have conceptual steps. Process optimisation, changed process design, to-be modelling, definition of processes, the definition of responsibilities and process interfaces and the unification of IT systems are part of the concept phase on process level.

The development of new quality standards, policy and objectives, strategic specifications, the development of a new structure, the integration of a new quality culture are all contents of conceptual work on an overall management system basis – in compliance with the organisations’ strategy. As already identified in the analysis phase, the conception phase is also divided into a management system level and pro-

cess level. As strategic alignment is often identified as critical success factor in business process management [4, 33] and even defined as one of six core elements of BPM by vom Brocke & Rosemann [34], the strategic alignment shall be a first important key element for the management system that needs to be compliant with the organizations strategy.

On process level Wirtz presents depending on the congruence and efficiency of processes following possibilities for harmonization, which differ in the level of integration intensity: standardization of processes, adaption and optimization of processes, redesign of processes [15]. If processes differ significantly, but possess high efficiency, the standardization/unification of the processes is advisable. Similar processes can be applied of the more efficient corporate part. If process standards are low, the processes should be redesigned [35]. If processes are largely congruent and efficiency high, the process can be taken over and tuned if necessary. A subtle balance between integration and differentiation must be found in the harmonization [16]. A too rigid integration can restrict the flexibility of employees and block on specific requirements. To avoid useless “overstandardization” Schäfermeyer & Rosenkranz recommend manager to differ carefully between routine processes with a low complexity and nonroutine processes with a high complexity to identify standardable processes and save time investments for non-standardable processes [36]. Romero et al. come to a similar result: companies that have less complex processes have more harmonized processes and also more standardized processes [8, 37]. To support the management in prioritization and selection of suitable business processes for standardization, Zellner & Laumann developed a decision tool influenced by various process characteristics [38].

### **4.3 Realization Phase**

After the development of a harmonization concept, things have to get run and implemented. Although some of the considered approaches stop with the development of the concept, the implementation is a vital step in process harmonization. So the “implementation phase” is identified as third phase. In respect to supposed shared responsibilities on management system level and process owners this phase is again divided into management system level and process level.

The chronological introduction of the adapted processes and management system has to be decided. A step-by-step implementation with a gradually iterative introduction in one department after another takes longer, but reduces the risk and complexity of the project. In contrary implementing the new concept into force on "Day X" (Big-bang) means the simultaneous introduction in the entire company with the advantage of high speed integration, but with the risk of a high failure rate. A pilot-operated launch in one department is time-intensive and causes additional administrative expenses through parallel worlds, but failures are not repeated [39].

### **4.4 Verification Phase**

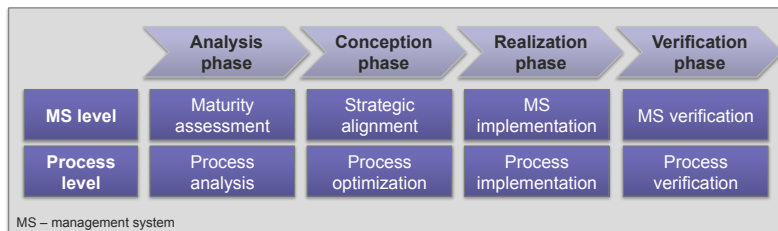
The last phase is the “verification phase”. Approach N° 4 focuses on quality management sustainability and continuous improvement, N° 9 verifies the implemented processes with internal audits, so the verification is regarded as an effective closure of process harmonization. The success of the harmonized processes and of the management system can be judged in this phase.

Expert 2 suggests the verification of process harmonization through internal audits. A combination of system audit and process audits

measure the success of both levels, management system and the single processes. With the combination of process controlling in internally defined process KPIs and performance measurement of the process output the verification can be measured effectively.

Process management maturity assessments shall be repeated periodically to get an overview of the development of continuous improvement. With the maturity of a process and of the management system compared with the origin maturity result during the analysis phase, the verification is achievable as well. Using the same maturity model allows a direct comparison. A better maturity result for the same process or the management system as in the analysis phase evidences a successful conception and implementation.

**Fig. 1.** shows the process harmonization phases in an overview, divided in management system (MS) level and process level.



**Fig. 2.** Process Harmonization Phase Model

## 5 Discussion

Given the situation of a symbiosis or absorption, the organisation is interested in assessing its current business processes and management system situation. For the analysis phase maturity models are required for both, the double existing management system and each double existing single process of the merged organizations. Maturity of processes and management system might be quite different.

None of the experts mentioned the maturity assessment during the analysis phase explicitly. Most of them presumed the comparability of the double existing processes and management systems as self-evident. One expert described the procedure as the use of “horse-sense”. Hence the experts used no defined and well-known methodology for comparing and analysing the business processes. As a defined methodology conveys neutrality and professionalism to an often tense situation with divided interests, the application of a maturity model is strongly recommended. One merged company part might hold a very mature and stable management system, but single processes are superior in the other part. To differentiate between management system level and considering the maturity of each process as well, leads to an enhanced result. The premise of course is the sufficient consideration in the conception phase. Results are more accurate if different levels for the assessment are involved. Middle and low management tend to be more critical than top management and operational staff [40]. Hammer (2007) encourages assessments with different staff level as well to illustrate possibly existing homogeneity in understanding of processes and assessment criteria [5]. A 360-degree-feedback with involvement of customers and suppliers is conceivable [40].

In context with the implementation phase the integration speed is a controversial issue. On the one hand, a high integration speed ensures competitiveness due to a relatively short state of excitement; on the other hand, blockers within the organization might take the time to act [42]. 25% of the experts state in their best practices they prefer a longer period of time to get to know each other, and thus a slower integration speed. This affects also the implementation strategy. As shown in chapter 5.3 the big-bang implementation is the quickest variant compared with step-by-step or pilot introduction. The variant to be pre-

ferred has be defined individually in the merged companies and aligned to the general PMI strategy.

Process harmonization is a complex project. The more significance has the continuous strategic view on the whole project on a management system basis. A harmonized process past on the defined strategy and non-conform with the overall management system is not expected to perform as a whole. So the combined consideration of process level and management system level as well as strategic alignment is essential. This does not mean that individual variations in business processes are not allowed. In contrary, the experts agree upon the necessity of reasonable process variations, e.g. for the fulfilment of a special customer requirement necessary at one department only. Process harmonization does not try to make standards uniform, it looks how standards fit together [7]. In the conception phase the trade-off between process standardization and process variants has to considered carefully, although with the number of variants the process harmonization is measurable [41].

A third of the experts state a good satisfaction with the process harmonization results, although most of them would apply a different procedure next time. So the long-term results can consequence in a positive satisfaction with the process harmonization procedure after a series of corrective actions. The main part of the interviewees shared lessons learned initiated by difficulties during the harmonization project. It might be assumed that companies need more than one M&A before they proceed post merger integration successfully. The milestones identified in the process harmonization phase model at hand are a key prerequisite for executing a successful post merger process harmonization.

## **6 Summary, Conclusion and Limitations**

The objective of this article is the definition of a phase model for process harmonization in the post merger integration phase. Various approaches of the literature have been scanned and complemented with a qualitative research to obtain the milestones of a process harmonization. As a central result can be concluded that there is no special methodology with defined phases for process harmonization in literature available, so a combination of the different approaches is regarded as the optimum for process harmonization. This article provides two central results: First, process harmonization phases are divided into management system level and process level. Second, process harmonization phases exist of analysis phase, conception phase, realization phase and verification phase. Further this article presents a general overview of possible methods for each single phase.

The author would like to indicate to a limitation concerning the expert interviews. Other experts might have different best practices. However both are typical examples of the executed qualitative analysis, so the cases are regarded as sufficient. Next the mentioned methods are not evaluated empirically. The purpose of this article was the definition of the phases and not the definition of methods within the phases. So as a next research step proper methods for the defined phases should be evaluated empirically.

## **7 References**

1. Haspeslagh, P.C., Jemison, D.B.: Managing acquisitions: creating value through corporate renewal. The Free Press, New York (1991).
2. Rohloff, M.: Advances in business process management implementation based on a maturity assessment and best practice exchange. *Inf. Syst. E-bus. Manag.* 9, 383–403 (2011).

3. Jochem, R., Geers, D., Heinze, P.: Maturity measurement of knowledge-intensive business processes. *TQM J.* 23, 377–387 (2011).
4. Skrinjar, R., Trkman, P.: Increasing process orientation with business process management: Critical practices'. *Int. J. Inf. Manage.* 33, 48–60 (2013).
5. Hammer, M.: The Process Audit. *Harv. Bus. Rev.* April, 1–15 (2007).
6. Fernandez, J., Bhat, J.: Addressing the complexities of global process harmonization. In: *Handbook of Research on Complex Dynamic Process Management: Techniques for Adaptability in Turbulent Environments: Techniques for Adaptability in Turbulent Environments*. pp. 368–385. IGI Global (2010).
7. Ricken, A., Steinhorst, A.: Standardization or Harmonization? You need Both. *BPTrends*. 1–5 (2005).
8. Romero, H.L., Dijkman, R.M., Grefena, P.W.P.J., van Weele, A.J., de Jong, A.: Measures of process harmonization. *Inf. Softw. Technol.* 63, 31–43 (2015).
9. Schönreiter, I.: Bedarfe zur Prozessharmonisierung in fusionierten Dienstleistungsunternehmen im Zeitalter Quality 4.0. In: Winzer, P. (ed.) *Herausforderungen der Digitalisierung*. pp. 35–49. Shaker, Aachen (2016).
10. Müller-Stewens, G.: *Mergers & Acquisitions Analysen, Trends und Best Practices*. Schäffer-Poeschel, Stuttgart (2010).
11. Jansen, S.A.: *Mergers & Acquisitions Unternehmensakquisitionen und -kooperationen; eine strategische, organisatorische und kapitalmarkttheoretische Einführung*. Gabler, Wiesbaden (2008).
12. Marchand, M.: When the south takes over the north: Dynamics Of up-market integrations by emerging multinationals. *M@n@gement*. 18, 31–53 (2015).
13. Marks, M.L., Mirvis, P.H., Brajkovich, L.F.: Making Mergers and Acquisitions Work: Strategic and Psychological Preparation [and Executive Commentary]. *Acad. Manag. Exec.* 15, 80–94 (2001).
14. Vieru, D., Rivard, S.: The Dilemma of Integration Versus Autonomy: Knowledge Sharing in Post-Merger IS Development. In: *Twenty Ninth International Conference on Information Systems*. pp. 1–11. , Paris (2008).
15. Wirtz, B.W.: *Mergers & Acquisitions Management*. Springer Gabler, Wiesbaden (2014).
16. Jones, G.R.: *Organizational theory, design, and change*. Pearson, Boston, Mass. ; Upper Saddle River, NJ ; Munich [u.a.] (2012).
17. Jurisch, M., Palka, W.: Which capabilities matter for successful business process change? *Bus. Process ....* 20, 47–67 (2014).
18. Gaitanides, M.: Prozessmanagement zwischen Engineering und Reengineering? *Zeitschrift Führung + Organ. ZfO.* 6, 305–306 (2006).
19. Pohland, S.: *Flexibilisierung von Geschäftsprozessen Konzepte und Praxisbeispiele*. OLDENBOURG WISSENSCHAFTSVERLAG, München (2009).
20. Hammer, M., Champy, J.: *Business reengineering die Radikalkur für das Unternehmen*. Campus-Verl., Frankfurt u.a. (1994).
21. Hammer, M., Stanton, S.A.: *Die Reengineering-Revolution Handbuch für die Praxis*. Campus-Verl., Frankfurt [u.a.] (1995).
22. Jochem, R., Geers, D.: Prozessgestaltung mit Business Process Reengineering. In: *Prozessmanagement: Strategien, Methoden, Umsetzung*. pp. 77–99. Symposium Publ., Düsseldorf (2010).
23. Karapetrovic, S.: Strategies for the integration of management systems and standards. *TQM Mag.* 14, 61–67 (2002).



24. Sampaio, P., Saraiva, P., Domingues, P.: Management systems: integration or addition? *Int. J. Qual. Reliab. Manag.* 29, 402–424 (2012).
25. Ntungo, C.: Quality Culture in Government: The Pursuit of a Quality Management Model. *Total Qual. Manag. Bus. Excell.* 18, 135–145 (2007).
26. Han, K.H., Kang, J.G., Song, M.: Two-stage process analysis using the process-based performance measurement framework and business process simulation. *Expert Syst. Appl.* 36, 7080–7086 (2009).
27. Schmelzer, H.J., Sesselmann, W.: *Geschäftsprozessmanagement in der Praxis Kunden zufrieden stellen ; Produktivität steigern ; Wert erhöhen.* Hanser, München (2010).
28. Mayring, P.: *Qualitative Inhaltsanalyse: Grundlagen und Techniken* Grundlagen und Techniken. Beltz, Weinheim [u.a.] (2015).
29. Mayring, P.: *Qualitative Content Analysis: Theoretical Foundation, Basic Procedures and Software Solution.* www.beltz.de, Klagenfurt (2014).
30. Friedrichs, J.: *Methoden empirischer Sozialforschung.* Westdt. Verl., Opladen (1990).
31. Borchardt, A., Göthlich, S.E.: Erkenntnisgewinnung durch Fallstudien. In: Albers, S., Klapper, D., Konradt, U., Walter, A., and Wolf, J. (eds.) *Methodik der empirischen Forschung.* pp. 37–54. Dt. Univ.-Verl., Wiesbaden (2006).
32. Scheer, A.-W., Hoffmann, M.: The Process of Business Process Management. In: vom Brocke, J. and Rosemann, M. (eds.) *Handbook on Business Process Management 2.* pp. 351–380. Springer Berlin Heidelberg, Berlin Heidelberg (2015).
33. Bai, C., Sarkis, J.: A grey-based DEMATEL model for evaluating business process management critical success factors. *Int. J. Prod. Econ.* 146, 281–292 (2013).
34. vom Brocke, J., Rosemann, M.: *Handbook on Business Process Management 1.* Springer Berlin Heidelberg, Berlin Heidelberg (2010).
35. Vogel, D.H.: *M & A Ideal und Wirklichkeit.* Gabler Verlag, Wiesbaden (2002).
36. Schäfermeyer, M., Rosenkranz, C.: “To standardize or not to standardize?”- Understanding the effect of business process complexity on business process standardization. In: *ECIS 2011 proceedings* (2011).
37. Romero, H.L., Dijkman, R.M., Grefen, P.W.P.J., van Weele, A.J.: Factors that Determine the Extent of Business Process Standardization and the Subsequent Effect on Business Performance. *Bus. Inf. Syst. Eng.* 57, 261–270 (2015).
38. Zellner, P., Laumann, M.: Evaluation of Business Processes for Business Process Standardization. In: *PACIS 2013 Proceedings.* p. Paper 248 (2013).
39. Hansmann, H., Laske, M., Redmer, L.: Einführung der Prozesse - Prozess-Roll-out. In: Becker, J., Kugeler, M., and Rosemann, M. (eds.) *Prozessmanagement: ein Leitfaden zur prozessorientierten Organisationsgestaltung.* pp. 269–298. Springer, Berlin [u.a.] (2005).
40. van Looy, A.: An Experiment for Measuring Business Process Maturity with Different Maturity Models. In: *ECIS 2015 Proceedings.* p. Paper 192 (2015).
41. Romero, H., Dijkman, R., Grefen, P., van Weele, A.: Harmonization of Business Process Models. *Lect. Notes Bus. Inf. Process.* 66, 13–24 (2011).
42. Maire, S., Colletette, P.: International post-merger integration: Lessons from an integration project in the private banking sector. *Int. J. Proj. Manag.* 29, 279–294 (2011).

## Appendix 1

**Table: Results Expert Interviews**

Question in interview guideline	Variable	Variable characteristic	Result	Relevance for process phases
How did you approach the process harmonization?	Integration approach	Symbiosis, absorption, preservation, stand-alone	Absorption: 27% Symbiosis: 20% Stand-alone: 7% Preservation: 46%	Relevance: included in case study in chapter 3.3 with symbiosis or absorption approach only
Please explain how the process harmonization was expired.	Procedure	Description of interviewee (open answer)	individual description for each case	Identification of main phases on general level
How was the harmonization carried out on the process level, in the individual process?	Procedure process	Description of interviewee (open answer)	individual description for each case	Identification of main phases on single process level
How satisfied are you with the result of the process harmonization?	Satisfaction	Very satisfied, satisfied, undecided, unsatisfied, very unsatisfied, not stated	Very satisfied: 3 Satisfied: 1 Undecided: 4 Unsatisfied: 1 Very unsatisfied: 1 Not stated: 2	Relevance: included in case study in chapter 3.3 only with good or very good satisfaction
What would you do differently if you start the project again?	Lessons Learned	Exactly the same, different procedure, not stated	Not stated: 5 Exactly the same: 2 Different procedure: 5	Relevance: included in case study in chapter 3.3 only if expert would proceed in the same way again

The first column shows the questions asked to the experts. All questions are open questions, so the answers of the experts are quite diffe-

rent in content and length. Each question has been coded according to column "variable" with the possible content described in column "variable characteristic". Column "result" shows the result after encryption. The two questions for describing the process harmonization was evaluated individually, the answers could not be coded unified. All other answers have been summarized according to the variable characteristic. The last column "relevance for process phases" describes the importance of each row for the following selection of the case studies. Only the combination of absorption or symbiosis approach with a satisfactory result and the statement of an expert he/she would proceed in exactly the same way again, qualifies the case to be regarded in chapter 3.3.

## Appendix 2

**Table:** Summary of Approaches

N°	Author	Title	Steps			
1	[27]	Introduction of BPM	1. Positioning	2. Identification	3. Implementation	4. Optimisation
2	[22]	Business Process Reengineering	1. Why is something done?	2. What needs to be done for?	3. Clarification of strategic specifications and target framework	4. Elimination of old processes and structures
			5. Distinguish process and new design of today's sight	6. Consideration of BPR principals	7. Radical new designed process	8. Vernier adjustment and stabilisation
3	[23]	Harmonization integrated management systems	1. Integration of documentation in common manual, otherwise separated processes	2. Unification of main processes, objectives, resources	3. "All-in-one-system"	
4	[25]	PEQMS	1. Development quality policy	2. Understanding quality of assessment and taxation services	3. Developing quality objectives	4. Identifying and understanding business processes
			5. Developing and implementing quality standards	6. Using quality data for continuous improvement	7. Sustaining the quality management effort	8. Option to register with the ISO 9001 standard
5	[26]	Two-stage business process analysis model	1. Macro process analysis	2. Micro analysis		
6	[18]	Process engineering	1. As-is analysis	2. As-is modelling	3. To-be modelling	4. Process optimisation
7	[24]	Integration levels of Integrated management system	1. integration of documentation	2. integration of management tools	3. common quality policy and quality objectives	4. Common organisational structure
8	Interview expert 1	Process harmonization	1. As-is-analysis	2. Development strategy	3. strategic action plan	4. Definition structure, organisation, processes, process map
			5. Start implementation			
9	Interview expert 2	Common certification	1. Definition of common cramp processes	2. Integration of common quality culture	3. Definition of responsibilities and interfaces	4. As-is record of processes
			5. Step-by-step unification of processes	6. Unification of IT systems	7. Implementation	8. Verification by internal audits

The nine approaches contain certain phases, described as steps in the fourth column.