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## **An Assessment Tool for Bank Industrialisation - Challenges and Opportunities for Business Process Management**

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### **Abstract**

*This paper presents an assessment tool for bank industrialisation and highlights the results of an actual European Retail Banking Market Survey. Basis for bank industrialisation is a professional business process management. Due to the implementation of industrialisation methods banks expect an increase in efficiency and organisational performance. Results from an European Banking Survey shows that one of the banks' greatest weaknesses is the low maturity level of the internal business process management. From the banks perspective the main challenges are the high effort for process modelling as well as the evaluation of the industrialisation maturity and the missing experience in using industrialisation methods and instruments. Therefore, the assessment tool enables banks to evaluate their organisational readiness for industrialisation and gives recommendations for the use of suitable industrialisation methods. The tool support banks to identify potentials due to industrialisation and help to increase organisational performance.*

### **Keywords**

Alignment, Assessment Tool, Business Process Management, Industrialisation, European Banking Market, Process Management Maturity

### **Introduction**

In the financial service sector, and especially in the area of retail banks, there is a high competition between banks and a high pressure to improve organisational effectiveness, efficiency and customer orientation (Spath et al. 2007). The aspect of effectiveness is analysed by the strategic fit of the business processes and the management of business processes is an option to improve the organisational efficiency and performance (Robson 2004). The optimization of the organisational structure enables banks to reengineer their complete value chain, linked with the chance to refocus on core competencies. Results from several research projects shows that process management is an important issue for a majority of European organisations (Pritchard & Armistead 1999). Many banks recognise business process management as a suitable approach to improve the organisational performance. Although business process management is not a new concept (Green & Rosemann 2000), the implementation within the banking business is actually quite weak.

In order to reach the goal of improving the organisational performance, banks also discover the production industry as a guide to increased efficiency and effectiveness. From the banks' point of view, industrialisation methods and instruments are a reasonable possibility to achieve the targets of improved effectiveness and efficiency. In general, the term "industrialisation" describes the development of an economy from an agricultural to an industrial structure. Central developments in production focus on the change from handcraft to machine work and mass production of physical goods, including the necessary organisational changes (Bullinger, Ganz & Thombeil 2005). Experiences from the industrial sector illustrate that companies improve organisational efficiency by implementing integrated processes and reducing the depth of the internal value chain, i.e. by managing cooperation's with external business partners. Furthermore, "industrialisation" describes the development from a functional, product-oriented organisation to a service and customer focused organisation. Based on the experiences and concepts from the production industry and the information technology (IT)-management sector, banks aim to adapt the business concepts and methods from the industrial sectors. To implement these concepts, the banks' organisation and business processes have to be adapted to the new management concept.

### **Bank Industrialisation**

In this paper, the term "bank industrialisation" describes the transfer of technological concepts and management processes from the industrial sector to the financial service sector. Industrialisation focuses on the capability of a bank, to optimize the complete value chain by managing the vertical and horizontal integration of business partners as well as implementing a mature business process management within the organisation. In this context,

bank industrialisation also refers to a banks' capability to provide a defined service with high efficiency and an assured quality. To achieve these goals, the implementation of a professional business process management is a key success factor. Due to the business process management banks have a detailed knowledge about their business processes and the process performance, which is the basis for business agility and flexibility. Therefore, business process management is the enabler for the realisation of bank industrialisation.

An important barrier according to industrialisation is the missing experience in dealing with industrialisation methods and tools (Spath et al. 2007). In some cases, there are experiences with the transformation from industrial concepts to the demand of service organisations, by example for Service Engineering (Bullinger & Scheer 2003). However, there are further areas, e.g. production planning and controlling, research and development, logistics etc. in which the transformation is not yet established and only minor experiences are present how to transform these concepts to the financial service sector. The related challenge consists in the mapping of concepts from the industrial sector to the situation of service organisations. Furthermore, banks often have no detailed and structured information about their process maturity level with respect to industrialisation.

From a research point of view, there is a gap according to the provision of a suitable method and information system (IS) tool, which supports organisations in identifying strengths and weaknesses according to the industrialisation maturity as well as in providing assistance for choosing suitable methods for improving the organisational level of industrialisation. Regarding to this situation, central research aspects are important for bank industrialisation. A great challenge is how organisations can assess the strategic alignment and the strategic fit of their implemented business processes in order to realise new, industrialised organisational concepts. In case of industrialisation, it is important to know how the industrialisation maturity of an organisation, especially a bank, can be evaluated. From a management point of view it is also of interest, what are suitable management methods and instruments to improve the organisational industrialisation maturity. A further challenge for research and practice is the combination and the implementation of these aspects in an IS solution.

To answer before mentioned questions, this paper presents in the first part an IS assessment tool, which enables banks to evaluate the strategic alignment fit for their business processes. Rogers & Bamford (2002) emphasise the importance of information that supports the strategic orientation of a bank. Additionally, this assessment tool supports banks in evaluating the actual and a targeted maturity level of their business processes management. Based on the results of the process evaluation, the assessment tool recommends suitable methods and instruments for the improvement of the quality and the performance of the banks' business processes. Comprehensive experiences of the author from several projects in the banking sector show that the quality of the organisational business process management in banks is low, despite intensive research in the field of business process management. Hence, there is a need for an integrated tool, which enables banks to evaluate their situation due to industrialisation.

To underline the relevance of the issues of industrialisation for the banking sector the second part of this paper highlights selected results from an actual European Retail Banking Market Survey. These results show that banks need to improve the process quality as well as the process efficiency. Furthermore, there are organisational barriers to realise end-to-processes and a lack of adequate tools and concepts, which helps banks to evaluate their situation about industrialisation.

## **Industrialisation Assessment Tool**

Based on the situation described above, the requirements for a tool, which helps bank to implement industrialisation methods, must address several aspects: On the strategic level, the assessment must consider the strategic goals of the bank as well as developments on the banking market and their relevance for the bank. The bank strategy defines the framework conditions for the business processes. On an operational level, a professional business process management is the basis for all industrialisation activities in the bank. Moreover, the assessment has to consider the relevance of the process for the bank. On a level of industrialisation methods, the assessment must show suitable methods and instruments, relevant for the individual situation of the banks' situation.

From a theoretical point of view the development of the assessment tool was based on a design-science paradigm to manage the challenges mentioned before (Hevner et al. 2004). According to Glass et al (2004) the research method is the development of an instrument to assess the situation of organisations regarding to industrialisation. Based on these theoretical IS research paradigms, the author developed an assessment tool, which helps banks to evaluate their status quo with regard to the strategic business process alignment and the business process maturity levels. The tool identifies gaps and advises suitable methods and instruments for improving the industrialisation maturity level. The assessment tool was developed based on literature review in the field of strategic management, business process management, industrial production methodologies and workshops as well as prototype tests including banks, IT-service providers and hardware suppliers, which are all partners in the applied research project "Banks and Future".

The goal of the Industrialisation Assessment Tool is to provide a solution for bank managers, which helps them to improve the effectiveness and efficiency within a bank. Due to the assessment tool, managers are able to identify gaps according to the strategic alignment of the business processes as well as to identify improvement potentials in the maturity of the process management.

## Structure

The assessment tool consists of four clusters and seven modules for analysing the bank organisation with respect to the industrialisation readiness. As illustrated in Figure 1, the first cluster focuses on banking market trends and developments. It enables banks to evaluate the external situation and the relevance for the bank. The second cluster focuses on the strategic aspect of the bank, and the third cluster analyses the internal structure of the bank. The fourth cluster concentrates on the selection and description of adequate industrialisation methods and instruments for the banks' situation. The seven modules are the operating parts for the assessment of the industrialisation tool. Due to space restrictions, only the main functions of the seven modules of the assessment tool are described in the following paragraphs.

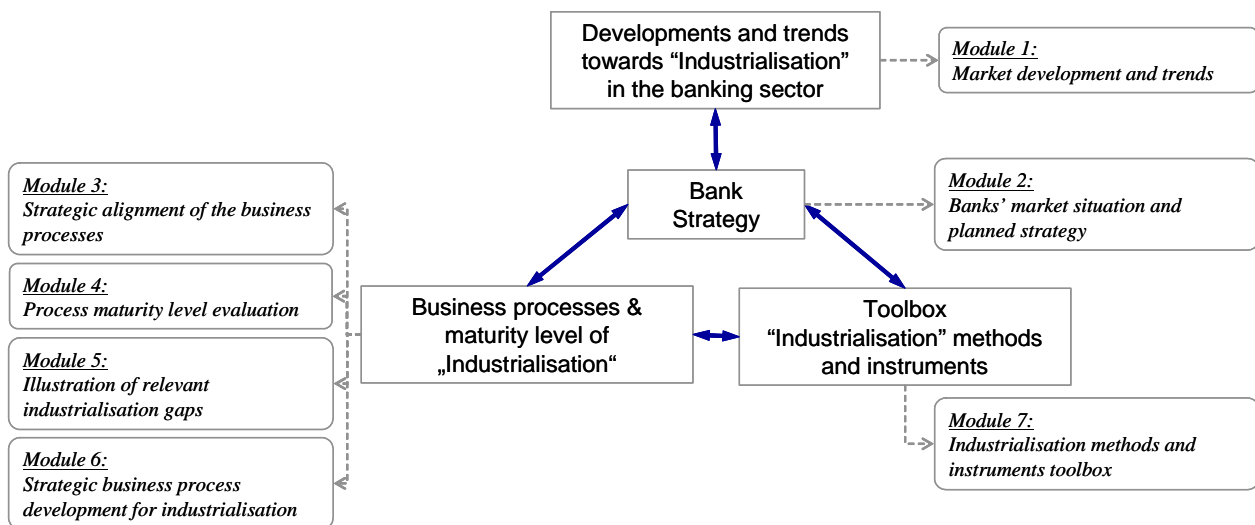


Figure 1: Structure of the Banking Industrialisation Assessment Tool

### Module 1: Market development and trends

The first assessment module focuses on the market developments and the competition in the banking sector. Actual developments and long-term market trends determine the competitive environment of banks. Consequently, these developments determine adequate bank strategies and performance measures for sustainable competitiveness. For this reason, the assessment tool enables the documentation of the important market developments. Users of the assessment tool can evaluate the different aspects of market development in case of relevance and importance of the issue and depending on their situation. The information due to the market trends can be updated with respect to either the annual market survey of the innovation forum "Bank & Future" or the results of the banks' own research department.

### Module 2: Banks' market situation and planned strategy

Banks need to align their strategy to the market developments. Therefore, the assessment tool supports the evaluation of the actual market situation as well as the further organisational development of the bank. This module aims to clarify the future strategic orientation of the banks. The result of this strategy evaluation gives an overview about the strategic alignment with possible future bank concepts. Managers should be sensitive which development of the bank possibly best fits with the strategy planned. It also helps to evaluate the strategic alignment of the business processes in the following module.

To evaluate the strategic orientation of the bank, the users have to answer 10 questions related to the banks' strategy from the management point of view. These questions are aligned with three strategic options for future banking models. In the bank organisation literature, there is no common agreement about suitable banking concepts for industrialised banks. One concept describes the change from universal banks to specialised banks which are focused on their core competencies and a limited number of services offered. In this concept, the organisational structures of the bank are aligned with the core competencies of a bank (Thomke 2003). Due to this concentration the structure of the banking market will be changed to a three-bank-model-structure (Flesch 2005; Thomke 2003). Derived from this development, a first industrialisation model focuses its concentration on sales competencies of the bank. The second model focuses on the management of banking products and services

with a concentration on the engineering process plan, built and control. The last model focuses on the bank as a portfolio manager for other banks, which manages risks and investments.

These first two modules of the assessment tool focuses on the strategic aspects of bank management. The following modules concentrate on internal structures, business process management and industrialisation methods.

### **Module 3: Strategic alignment of the business processes**

In this module, the user defines which processes will be analysed in the following assessment. In general, there are two options for the user of the assessment tool: In the first option, the user can document all business processes, which are implemented in the bank. In the second option, the user chooses a small number of business processes and sub-processes for the following evaluation according to the industrialisation maturity.

After determination of relevant processes and sub-processes, a first evaluation according to the strategic relevance and required capacity is to be conducted by the user. "Relevance" focuses on the strategic importance of the process from the users point of view. The relevance factor depends on the orientation on the aimed bank industrialisation model, which was determined in Module 2. Therefore, "relevance" depends on the future orientation of the bank. For this evaluation, a five-level scale, from "highly relevant" to "not relevant", is used in the assessment. The "required capacity" focuses on the internal and external resources, which are needed to perform the business processes. The resources include the use of human capital as well as physical goods, i.e. hardware, IT-resources, number of employees within the process, number of process tasks etc. For the evaluation of the "capacity", a five-level scale is implemented in the assessment tool, ranging from "very high capacity need" to "no capacity need".

At this point of the industrialisation assessment process, the bank manager has an impression about their strategic orientation of the bank in general and about the relevance and capacity requirements of the selected business processes in particular. These aspects are the basis for the following assessment step, the evaluation of the maturity levels of the business processes, which represents a key success factor for realising industrialisation structures in the bank.

### **Module 4: Process maturity level evaluation**

The next step in the industrialisation assessment is the identification of gaps between the actual and target status according to the business process maturity levels. Therefore, the process description, defined in Module 3 is automatically transferred to Module 4. A seven level maturity model is used to evaluate each process or sub-process. The author chooses this seven-level maturity model to support a detailed analysis of the process maturity. This maturity model is oriented on criteria of the European Foundation for Quality Management Model (EFQM-Model) and combines them with aspects of Business Process Management (Schmelzer & Sesselmann 2002). Due to these seven maturity levels bank managers gets a more detailed result of possible gaps according to the maturity of the process management. In this assessment tool, the maturity model is used for identifying the "as-is" situation in case of strength and weakness analysis as well as a prescriptive model enabling the development of a strategic roadmap for bank industrialisation.

The user evaluates the process with several indicators per maturity level. Overall, in the assessment concept of Module 4, there are 35 indicators used to evaluate the process maturity (see Figure 2). For each indicator, the user has to define the actual fulfilment (in percentage) and the targeted value for each criterion. According to the EFQM-Model, each maturity level is weighted with respect to the importance of the business process management.

Within the evaluation of the actual and target values, gaps are identified between the actual process maturity score and the targeted value. The tool highlights the gaps with different colour codes. If the difference between actual and target value is between 0-10%, the gap value is highlighted in green. If it is between 11% and 25%, the gap value is highlighted in yellow, and if it is more than 25%, the gap value is highlighted in red. The thresholds for the colour coding were defined in different expert workshops within the applied research project "Bank and Future" (Spath et al. 2007).

As a result of Module 4, bank gets an comprehensive overview about the actual and target maturity levels of the relevant business processes. At the same time, the tool highlights existing gaps in the maturity level for each process. For each of these processes or sub-processes, an overall score for the actual and target maturity value is computed.

### **Module 5: Illustration of relevant industrialisation gaps**

Module 5 graphically illustrates the existing gaps, which were identified in Module 4. For each process, three different values are depicted: first, the actual process maturity score, second the target maturity score, and, third, the weighted gap between actual and target score.

A chart illustrates all weighted gaps, to support bank managers prioritizing the different processes, which needs to be improved according to bank industrialisation. The tool shows a ranking of the processes with high priority and therefore includes the potential for realizing quick wins through industrialisation.

Due to the weighted gaps, banks are able to prioritize their actions to the related processes with the highest strategic relevance. An existing gap in a highly strategically process has a higher priority as a process with lower relevance. By means of the weighted gaps, the bank is able to rank and prioritize all activities to close the gap in the most important processes. As a result of this prioritisation, the banks are able to realize quick win as well as sustaining advantages according to their industrialisation activities.

Maturity Level		Market segmentation				
		ACTUAL Value		TARGET Value		Difference between target and actual score
Process definition	Total 15 Points	Evaluation result (in %)	Evaluation results (in points)	Evaluation result (in %)	Evaluation results (in points)	
1	Business Processes are identified and documented	20%	0,75	100%	3,75	80%
	1.1 Business processes are identified and documented	10%	0,38	20%	0,75	10%
	1.2 Existence of an process road map	25%	0,94	45%	1,69	20%
	1.3 Sub-processes are identified and documented	20%	0,75	100%	3,75	80%
	1.4 Input/ Output relations for each sub processes are documented					
2	There is a process manager for each BP including sub process	100%	3,75	100%	3,75	0%
	2.1 There is a process owner for each business process is defined	100%	3,75	100%	3,75	0%
	2.2 Process owner for each sub-business process is defined	0%	0,00	66%	2,48	66%
	2.3 Process owner has defined responsibilities and adequate competencies (personal, budget)	0%	0,00	66%	2,48	66%
	2.4 Process owner of the sub-process has defined responsibilities and adequate competencies (personal, budget)					
3	The process performance is continuously measured by performance indicators	0%	0,00	0%	0,00	0%
	3.1 Key performance indicators for each process are defined	0%	0,00	0%	0,00	0%
	3.2 Key performance indicators for each sub-process are defined	0%	0,00	0%	0,00	0%
	3.3 Key performance indicators are measured continuously	0%	0,00	0%	0,00	0%
	3.4 Results are analysed regularly	0%	0,00	0%	0,00	0%
	3.5 Existing measures for continuous improvement					
4	There is a systematic process for target value definition	40%	1,60	40%	2,00	0%
	4.1 Target values or each process are defined	50%	2,00	75%	3,75	25%
	4.2 Improvement and Optimisation potentials are identified	0%	0,00	24%	1,20	24%
	4.3 Barriers for efficiency improvement are analysed and evaluated	50%	2,00	65%	3,25	15%
	4.4 Existence of performance improvement program	0%	0,00	0%	0,00	0%
	4.5 Active realisation of efficiency potentials					
5	The reallocation of the target achievement is controlled and published	25%	0,71	75%	3,00	50%
	5.1 Existence of actual cockpit charts	5%	0,14	25%	1,00	20%
	5.2 Measures for target achievement are defined	5%	0,14	10%	0,40	5%
	5.3 Measures for target achievement are regularly evaluated	5%	0,14	10%	0,40	5%
	5.4 Identification of positive trend for achieving targeted values	5%	0,14	15%	0,60	10%
	5.5 Causes for deviation are identified	5%	0,14	10%	0,40	5%
	5.6 Existence of improvement measures are realised	5%	0,14	10%	0,40	5%
	5.7 Existence of actual overview about efficiency barriers					
6	There is a continuous Business process improvement	0%	0,00	5%	0,20	5%
	6.1 Existence of a process improvement team	0%	0,00	5%	0,20	5%
	6.2 In this teams more than 30% of the process members are involved	0%	0,00	5%	0,20	5%
	6.3 Process performance improvement teams are working regular	0%	0,00	0%	0,00	0%
	6.4 Process performance is regular evaluated (visualisation, review)	0%	0,00	0%	0,00	0%
	6.5 Documented process performance improvements					
7	The Management team regularly evaluates the process documentation and actively supports the process improvement.	20%	1,20	20%	1,20	0%
	7.1 The Management-Team meets regularly with all process owners	25%	1,50	25%	1,50	0%
	7.2 Cockpit-Charts are reviewed by the management team and improvement measures defined	0%	0,00	0%	0,00	0%
	7.3 Active support of process performance improvement by the management team	0%	0,00	0%	0,00	0%
	7.4 Management team forces the performance improvement	0%	0,00	0%	0,00	0%
	7.5 Visible improvements in the change to a process organisation					

Evaluation model for the Scores		ACTUAL Value		TARGET Value	
Maturity levels	Scores	Evaluation result (in %)	Achieved points	Target Value in %	Aspired Score
1	Process definition	19%	0,75	66%	3,75
2	Process responsibility	50%	7,50	83%	12,45
3	Measure process performance	0%	0,00	0%	0,00
4	Definition process targets	28%	5,80	51%	10,20
5	Target controlling	8%	1,57	31%	6,20
6	Process improvement	0%	0,00	3%	0,60
7	Management support	9%	2,70	9%	2,70
<b>Total score</b>			<b>18</b>		<b>36</b>
<b>Process performance level</b>			<b>13%</b>		<b>26%</b>

Figure 2: Example of a process maturity evaluation

After identifying existing gaps in the process maturity, the next step is to derive adequate strategies for the evaluated processes.

### Module 6: Strategic business process development for industrialisation

Module 6 illustrates each evaluated process in a portfolio chart. The dimensions of the portfolio are the actual process maturity score (x-axis) and the relevance factor of the process (y-axis). The bubbles represent the single processes in the portfolio chart. The size of each bubble represents the required capacity of the process, which was evaluated in Module 3. The portfolio includes all evaluated processes and sub-processes (see Figure 3).

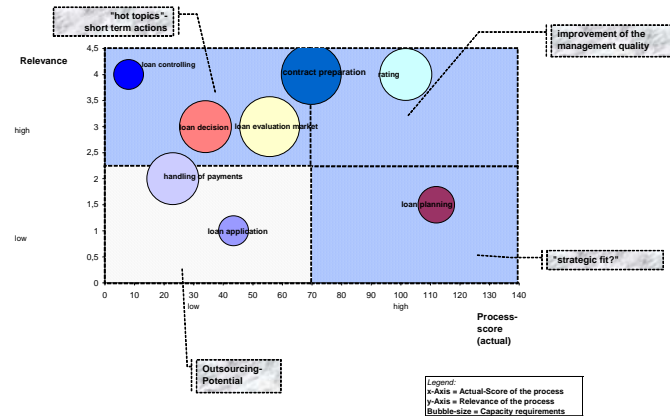


Figure 3: Process portfolio of a bank

The portfolio chart provides the basis for the development of strategic recommendations with respect to the future development of each business process. Depending on the position of the process in the portfolio, several strategies are possible. For example, if the “relevance” and the “process score” both are high for a resource intensive process, the management quality in the process can be increased. If the “relevance” as well as the “process score” is low, the management should discuss the outsourcing of this process because it wastes resources that can be used for other processes. As a conclusion for Module 6, it supports bank managers in finding a suitable strategy for each process. As a consequence of the evaluation bank managers also know how well the processes are aligned with the bank strategy and which processes are mature enough for industrialisation. Finally, based on the identified gaps in process maturity, the tool provides a recommendation for using different industrialisation methods and instruments to close the gap. This function is implemented in Module 7.

### Module 7: Industrialisation methods and instruments toolbox

The evaluation has identified and quantified gaps between the current industrialization maturity level and the target level, which enables the definition of adequate recommendations to the bank management. These recommendations include specifications of the methods and tools necessary to achieve the required process maturity.

In Module 7, recommendations about suitable industrialisation methods and instruments are suggested. These recommendations depend on the identified gaps in the evaluated process maturity. Therefore, several industrialisation methods and tools as well as possible failures for each maturity indicator are documented in an “industrialisation toolbox”-matrix. On the first dimension of the matrix, 45 different industrialisation methods and instruments are documented, i.e. ABC-Analysis, Balanced Score Card, Process Reengineering, Value Analysis, etc. In the context of the Industrialisation Assessment Tool a “method” is defined as an approach and technique who provides guidance to solve a problem (Hevner et al. 2004) and enables consistent process actions.

The other dimension of the matrix focuses on possible gaps for each of the maturity indicators illustrated in Figure 2. Within the matrix, a specific relation between possible gaps and suitable industrialisation methods is implemented so that the user will find adequate solutions for the identified gaps. Exemplarily, if the result of the process analysis yields that there are no performance indicators defined for the process, the method “Balanced Scorecard” is suggested for this gap because it is a suitable method for defining performance indicators according to the bank strategy. Thus, the user of the assessment tool receives specific recommendations, necessary to close the identified gaps and improve the industrialisation maturity of the processes and the entire organisation.

These methods and instruments are described by means of a uniform structure, namely “name”, “short description”, “goal” and “procedure”. Based on this documentation, the user gets a recommendation which industrialisation method or tool is adequate for the identified problems.

It can be concluded that the Industrialisation Assessment Tool is a management tool to analyse the status of the industrialisation maturity in banks, which also presents possibilities to manage the identified gaps in a clearly structured way.

## Discussion

Industrialisation assessment is a suitable and practically proofed tool, which enables banks to analyse the existing industrialisation potential and according gaps. It focuses on process-based and cross-functional productivity enhancements within the bank. Furthermore, the industrialisation assessment approach is adjusted with respect to banks' individual strategies and goals, as well as its unique market situation. The assessment tool enables banks to address their strategy with the internal resources (Munive-Hernandez et al. 2004) and support the efficient use of the bank resources. Furthermore, it enables a systematic analysis of implemented business processes and their management maturity level. This tool enables banks to identify strength and weaknesses in the strategic alignment of the processes as well as in the operational process management.

The primary target group for the tool are bank managers, in particular process owners and decision makers in the area of organization, processes and IT.

Specifically, the Industrialisation Assessment Tool supports banks in achieving the following goals:

- Identification of the processes with the highest potential for industrialization and added value (increasing efficiency)
- Focusing on business segments vital to improving competitiveness (focus on competitiveness)
- Alignment of the banks' entire activities in accordance with its strategy, and coordinating the necessary measures involved (strategic alignment)
- Focusing on set targets (securing target achievement)
- Systematic identification of appropriate methods and instruments for attaining added value through industrialization (value orientation)

The assessment tool enables the formulation of a sound concept to enhance the productivity of banks, and provides an adequate toolbox of methods and instruments, which helps to achieve the targets. The Industrialisation Assessment Tool does not only document the actual organisational situation according to industrialisation but it supports the bank managers in preparing a roadmap for improving the organisational effectiveness and performance. Furthermore, the Industrialisation Assessment Tool provides the adequate methods to achieve previously defined targets. Several major banks are currently using the tool to evaluate their industrialisation potentials and increase their organisational efficiency and business process performance.

As seen on the previous arguments, industrialization of the banking sector is not a short-term trend. A European Market Analysis gives an impression about the actual status of the banks according to industrialisation.

## Results of a European Banking Market Survey

The Fraunhofer Institute for Industrial Engineering (IAO) and the Institute for Human Engineering and Technology Management (IAT) of the University of Stuttgart (Germany) carried out an European Banking market survey in 2007. The survey aims to analyse actual trends and developments according to industrialisation, sales management and IT management in the banking market. Furthermore, the survey forms the basis for the development of new business models and innovative organisational structures for "industrialised" banks.

### Participants and Structure of the Survey

Seventy-nine banks participated in the survey, of which 56% are commercial banks, 13% are cooperative banks, 10% are savings banks, and 21% are other specialised banks. An analysis of the regional distribution shows that 24% of the banks are from Austria, 14% from Poland, 14% from Switzerland, 11% from Spain, and 10% from France. The rest of the banks are from Italy, Lithuania, Belgium, the Czech Republic, Estonia, Greece, Latvia and the Netherlands. The target group within banks are executives and managers from sales, organisation and IT departments in the banks. With respect to the job positions, 48% of the participants are executive board members, 26% are managers, and 6% are sales managers. 21% of the respondents did not specify their position.

The first part of the survey focused on the developments for industrialisation in banks, the second part investigated the developments in the area of information technology (IT). The third and final section focused on trends and future developments in bank organisation as well as banking services.



### **Selected Results of the Survey**

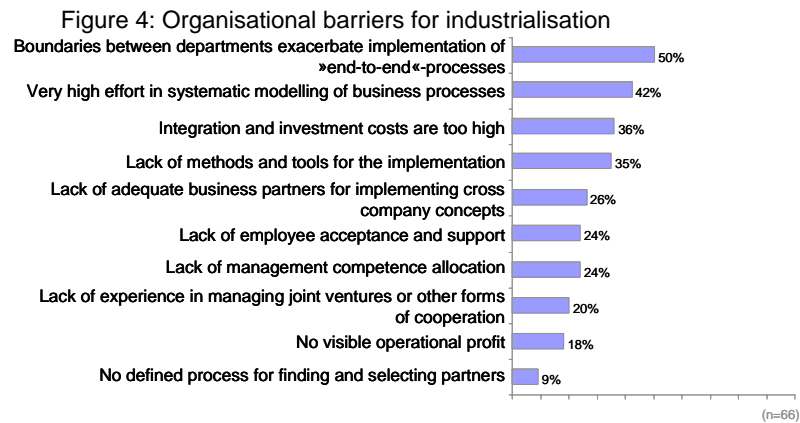
As described in the previous section, industrialisation is not a completely new development in the banking sector. Most of the participating banks have experiences in respect of industrialisation of their processes. In the actual survey, 46% of the banks achieved significant success as a result of implementation of industrialisation methods. Especially, banks from southern and western Europe reported significant business success because of their industrialisation actions. Forty-nine percent of the banks mentioned that they have achieved minor success by means of industrialisation, and only 5% of the participants have stated that they had no success in the area of industrialisation. Banks from Eastern Europe have evaluated their achievement only on a low level.

With regard to the expected industrialisation potential, 13% of the participants estimated a very high potential, and 57% of the participants estimated a high industrialisation potential in their banks. In this group of banks, especially banks from Eastern Europe expected a very high or a high industrialisation potential. 23% of the participating banks expected a medium industrialisation potential, and only 7% of the participants identified a low industrialisation potential.

In addition to the financial success resulting from the use of industrialisation methods, further improvements were expected by the participants: 83% of the participants expected an improvement of the business process quality through industrialisation, and 76% expected an increased efficiency in the processes, e.g., due to automation and the use of IT-Solutions. Especially, eastern European banks expect an increased efficiency in business processes. Moreover, a reduced time-to-market for new banking services is foreseen. 56% of the participants suppose a reduction of the time-to-market through industrialisation and especially the banks in southern Europe are optimistic for this aspect. 53% of the banks expect an increased efficiency of their employees and 46% will improve their business process flexibility and agility. For realising these issues, the banks must also manage further framework conditions. Due to the measures of industrialisation, the banks also expect a more focused, value-based management (41%) and a modified banking culture. Especially for the south European banks, the aspect of value-based management is important. An improved transparency in the corporate planning and controlling process is expected by 30% of the participants. 26% of the participants expect an improvement in their cooperation and partner management capabilities.

In the survey, the actual activities of the bank in the field of industrialisation were specifically investigated. Most of the participating banks (69%) are working on the standardisation and documentation of their processes. In addition, 56% of the banks are working on the automation of their business processes by IT-Support (especially Workflow-Systems). Fifty-two percent of the participants, mainly banks from western and southern European countries, are actually redesigning their business processes. Another 41% of the banks are currently implementing quality management systems and further 32% discuss the outsourcing of IT-Services. Outsourcing also seems to be a central activity of eastern European banks. Other activities focus on the establishment of value networks (22%), creation of shared services, implementation of business performance management systems (21%) and 4% are working on process simulation.

In the preceding section, it was shown that many activities are present with the aim to implement industrialisation methods in banks, and to try to improve the process as well as the business performance. For the participating bank managers, the organisational boundaries in the banks according to industrialisation are also an important issue. Based on the survey, the organisational boundaries between different departments prevent the implementation of end-to-end processes in the banks (see Figure 4). For 50% of the participants, this is the highest boundary followed by the enormous effort for systematic business process modelling (42%). This point is mentioned in a research analysis as one the most important barrier in introducing business process management in organisations (Nurcan et al. 2005). The high costs for integration and investments for implementation of industrialisation methods and tools is another boundary for 36% of the participants. The missing knowledge about industrialisation methods, the suitable competencies and capabilities for implementing industrialisation methods and tools are a mentionable boundary for 35% of the European banks.



In addition to the before mentioned obstacles, further handicaps for implementing industrialisation tools are identified: the lack of adequate business partners for realising inter-organisational business concepts (26%), a missing acceptance by the employees (24%) as well as the missing management competences for industrialisation (24%). Furthermore, missing experience in managing inter-organisational cooperation (20%) as well as the absence of a visible operational profit (18%) are barriers for banks in the field of industrialisation.

### Conclusions From the Market Survey

The market survey shows that the process quality, the professional management of the business processes and the use of industrialisation methods and instruments are important challenges for the participating banks. It was shown that there is a high potential for industrialisation in the European Banking market. It is accompanied by many challenges, which must be managed by the banks.

The overall target of a bank is to increase its efficiency and the performance of its business processes as well as the performance of its employees. Therefore, banks discover the industrial sector as a model to strengthen the efficiency and effectiveness for the internal organisation. However, the results also show that there is a lack of knowledge and competencies in banks on how to start and manage the industrialisation activities. The European survey with more than 70 European Banks and the German retail banking study with more than 460 German banks (Spath et al. 2007) show that industrialisation is an important issue for banks business process management. Because of the lack of knowledge and experiences with respect to industrialisation methods, there is a specific need for a practical tool that enables banks to evaluate their individual status quo of industrialisation in relation to their banking strategy.

### Conclusions and Need for Further Research

The paper shows that industrialisation is an important issue for the banks to improve their efficiency and organisational performance. This statement is supported by the results of a European Retail Banking Market survey. This market analysis highlights that banks are expecting advantages through industrialisation and that they focus on improvements in banks efficiency and business process maturity. Furthermore, the survey shows a lack in academic proofed and practical IS solutions to analyse and coordinate banks' industrialisation activities. Consequently, the author developed an Industrialisation Assessment Tool. This tool enables bank managers to analyse the actual situation of banks with respect to industrialisation. The tool consists of seven modules and supports managers by means of a structured analysis of the banks' strategy, its process alignment and its process management maturity. Additionally, the tool provides recommendations for the selection of suitable methods and tools that would support industrialisation activities in the bank.

From a theoretical point of view, the subjectiveness of the rating could be identified as a potential weakness of the tool. Moreover, the use of gaps between the actual and the targeted values in order to evaluate the quality of the process maturity could be identified as another potential weakness.

Nevertheless, the assessment tool was developed based on an applied research approach in cooperation with banking experts from the innovation forum "Bank and Future". Based on the authors' experiences and feedback from the project partners who already used the assessment tool in their banks showed indeed that the tool is practical for analysing the status quo of a bank with respect to industrialisation. It provides valuable input for the definition of a strategic road map for a bank. Advantages of the tool (as mentioned by the practitioners) are the clear structure of the assessment process and the quick creation of a first impression about the actual situation with regard to industrialisation. The tool supports the development of the improvement of internal competences to use the different industrialisation methods. In conclusion, the assessment tool can support a first step towards industrialisation within the bank. Compared to a life-cycle approach, the Industrialisation Assessment Tool supports banks and other service companies in initiating industrialisation projects in the organisation.

However, further research is needed in the increasing of the empirically basis of the Industrialisation Assessment Tool to find causes and effects in the relation between industrialisation readiness and organisational performance of banks. There is a further need in case of integration of business process patterns (Andersson et al. 2005), business process modelling and simulation applications as well as business performance management concepts. As a result of the increased use of the Industrialisation Assessment Tool it will be possible to built up a database and provide a benchmarking for bank processes and the organisational readiness of bank industrialisation for the different banking organisations and for different countries.

Moreover, the assessment must be embedded in an overall management process for industrialisation. Based on the results of the assessment, there is a need for integrating these results in a business performance management with the aim to realise and control the existing efficiency potentials with respect to industrialisation. The business performance management provides information about the quality of the alignment between the strategy level and the operational level of bank management. Further, the theoretical foundation for the relation between the identified gap in industrialisation maturity and the industrialisation methods must be improved. Finally, the industrialisation assessment must be expanded to other organisational issues. Therefore, the assessment has to consider human aspects, technological issues as well as cultural aspects, which are all relevant to a successful realisation of bank industrialisation.

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