Conclusion

<div style="text-align: right">15</div>

15.1 Continuous Round-Trip Engineering in Real Time

As shown in the previous chapters, continuous socio-technical system development is based on models. In case of appropriate support through modeling and implementation technology, stakeholders (i.e., all actors involved in business operations) may adjust the implementation of business process models according to their individual needs without additional development costs. This can be achieved if process descriptions are directly executable, and so enable a seamless alignment between modeling and execution.

Based on the direct implementation, not only the quality of processes but also the associated information systems can be assessed in terms of their organizational "fitness". When appropriate, a further modeling step and a subsequent additional execution step could be required. In this way, an organization can be transformed from existing (as-is) work structures to envisioned (to-be) ones. To support this, workflow management systems provide information technology tools for automated implementation of processes.

Business processes and thus, the comprehensive modeling of processes not only enable reflection and explication of knowledge about organizations and human labor but also even more so promote the communication of the respective information. Organizationally compliant process models facilitate the proper handling of economic and environmental quality requirements. Projects should not fail because participants work with unrealistic assumptions and/or develop unattainable requirements, mainly relating to the capability of an organization for change or the ability of employees to adapt. Unrealistic assumptions or requirements arise mainly from failure to reflect on developments or from delayed collection of information and its context.

In order to acquire skills in process modeling and to learn to "think in processes", the understanding and involvement of the stakeholders, both managers and work performers, for the modeling of business proceedings by means of structures such as processes, communication flows, and information flows, needs to be achieved.

In doing so, the focus is on the mapping of perceived facts on concrete or abstract elements of corporate structures and/or behavior. Process orientation can only be achieved by knowing existing structures in organizations and overcoming function-specific structures and procedures (Lehner et al. 2007, pp. 248 ff.).

As already mentioned, process information is represented in models, which provide the input to support systems for execution, in particular workflow management systems. Ideally, the latter can process models without further adjustment or refinement. Processes become effective via information technology in this way and form the basis of change processes in organizations with feedback loops.

Round-trip engineering in S-BPM is characterized by feedback of organizational developments becoming an integrated part of continuous (re-) design. In this context, disrupting interaction with actors and/or tools should be avoided, as a practitioner reports in http://www.wikipedia.org: "When business process modeling is performed, i.e., graphical task chains are created with a modeling tool, there is still the challenge to transfer these models to a process or workflow engine for execution. In general, a variety of technical information needs to be added by IT professionals, such as the technical invocation of an application, what parameters should be passed, what will happen in case of an error, etc. In general, the engines have restrictions, so that the model needs to be adjusted. In addition, the organizational point of view is often either insufficiently or too extensively represented in detail. In the latter case, several activities become a single one, as the rest of the tasks are executed in the invoked application.

Once the process initially designed from the perspective of the organization has been enriched technologically and is in production, execution data is logged. This is analyzed using tools from the field of business intelligence. Then, it comes to optimization, i.e., the adaptation of the processes. And hereby, the next challenge. If the technical modeling has been carried out with the tool of the process engine, there are now two models, and thus, the challenge of dual model maintenance. In case the organizational model has been created with the tool of the process engine, mainly the organization developer will be surprised about the difference to the original model.

We have tackled exactly this issue with our endeavor: subject-oriented BPM (S-BPM) minimizes the risk of reduction or the disruption of model and media, as it actively contributes to the consistency of representations and their implementation. S-BPM guides modeling from the very beginning to describe and specify processes in terms of executable entities, thereby avoiding the maintenance of multiple, possibly different models on the same issue. Each generated model can be executed without further transformation (Schatten et al. 2007). Therefore, S-BPM users do not need to rely on other developments, such as version 2.0 of the modeling language Business Process Model & Notation (BPMN—http://www.bpmn.org), which should simplify round-trip engineering. Rather, all stakeholders involved in organizational development are able to participate in integrated round-trip engineering.

15.2   **Stakeholders as Key Enablers**

S-BPM provides an enhancement to traditional process management in the direction of stakeholder orientation. S-BPM does not require a specific process execution language to ensure interoperability between the different tools of modeling, simulation, and execution (Sinur et al. 2005). Additionally, it does not require a BPDM (Business Process Definition Meta-model) and its associated workflow engines in order to design seamless round-trip engineering. This resolves the often uttered complaint of having to continuously switch between modeling an organizational vision, and the enrichment of data by the IT system, to run business processes [see http://www.saperionblog.com from the perspective of practitioners (Weidlich et al. 2009) from an academic point of view]. Rather, S-BPM allows the self-directed development of organizations. It enables all stakeholders to initiate development processes and to actively engage themselves.

Even the consultants of Gartner formulate in their "Seven Major Guidelines for a Successful Business Process Management Project" (http://www.gartner.com): "7. Business user engagement. If you get the people who do the actual work in a process, this can be particularly helpful."

In addition to real-time requirements for the flexible design of business processes (and thus to round-trip engineering), the stakeholder orientation is one of the biggest challenges of successful BPM (see Gartner's Trip Report of BPM2010 at http://www.gartner.com). Only a reflected approach avoids the "trivialization of dealing with processes" and lays ground for the acceptance of S-BPM [Liappas in Scheer et al. (2006)], as the stakeholders involved may become interested hereby in an effective penetration of the organization with processes.

Consequently, a language and an instrument needed to be developed enabling all stakeholders to articulate in real time their inputs toward a dynamic development of the organization, without being disturbed by modeling constructs or technology.

Subject-oriented BPM aims to provide participants and responsible actors with a methodological tool that should increase not only the acceptance but also the coherence and integrity of models of the perceived or anticipated organizational reality. Traditional surveys of work processes by means of interviews and specifications by third parties are likely to lead to incomplete representations, which become manifest later in insufficient implementations when processes are executed by means of IT (Rosenkranz and Geschäftsprozesse 2006). Hence, a stakeholder-driven, continuous round-trip, working without intermediate steps, e.g., executing process models immediately, is the primary development target.

When supported in seamless way, stakeholders are empowered to design work processes more directly, especially knowledge-based processes. The process of explication becomes more accurate due to S-BPM's intuitive usability of the modeling language. This is required when organizations implement adaptive case management, since the majority of their business processes are unpredictable. Thus, new knowledge is constantly being generated as the solution to a particular problem at hand. Finally, on the basis of such newly generated knowledge stakeholders drive

the process by themselves, ad-hoc and tailored to the situation, without the otherwise often required external intervention.

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