White Paper

Core Principles Behind Successful Business Process Management

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He participated in the development of one of the first BPMN modeling utilities - a package of plugins for Visio, which were introduced in 2004 and is the main author of the first BPMN poster.

In 2008, he was one of the first authors who published an article dedicated to the experiences and practical use of BPMN. The article was published in "BPM and Workflow Handbook" in association with the Workflow Management Coalition (WfMC).

He is currently researching BPMN from different technological and user aspects.

Business Process Management (BPM) is a systematic and structured approach for analyzing, improving, controlling, and managing processes with the aim of improving the quality of products and services [1]. In simple words, BPM takes care of processes in order to assure business success. BPM allows organizations to become more efficient, more effective, and more capable of change when compared to the traditional functionally-focused and hierarchical management approaches.

BPM consists of a sequence of phases or activities which are organized into a cycle. A cycle indicates that BPM is a continuous process, which never ends. Gartner's BPM Lifecycle consists of the following phases: define, design or model, simulate, deploy or implement, execute, monitor, analyze and optimize. These phases have the following meaning:

- **Define.** This phase is related to the identification and definition of companies business processes. Processes can be identified according to process results (products or services), process-related documentation or interviews of employees which take part in processes.
- **Model.** Business process modeling is the activity of representing processes of an enterprise, so that the current process may be analyzed and improved. Creating valid models represents a critical step in BPM lifecycle, since models represents inputs for several other BPM lifecycle phases, such as: simulation, implementation and analysis.

- **Simulate.** Simulation is the imitation of the operation of a real-world process. Simulating processes prior to actual process execution is reasonable, because simulating is: faster, cheaper and more flexible (e.g. different process scenarios can be investigated).
- **Implement.** Process implementation phase prepares processes (process models) for process execution. When processes are implemented and deployed in their respective environment, they are ready for being executed.
- **Execute.** Process execution means that process instances are performed and that actual work is carried out. The term process instance represents one specific case of a process that is currently executing.
- **Monitor.** Monitoring encompasses the tracking of individual processes, so that information on their state can be easily seen and statistics on the performance of one or more processes can be provided.
- **Analyze.** Process analysis includes retrieving process performance information from modeling, simulation or the monitoring phase. Based on this information, an analysis can be performed to identify potential strengths, weaknesses, opportunities and threats of executed business processes.
- **Optimize.** Process optimization is the discipline of adjusting a process in order to optimize some specified set of parameters without violating constraints. The most common goals are minimizing cost, maximizing throughput, improving resource allocation and removing bottlenecks. In overall, process optimization creates greater business value.

Since BPM is a complex approach, it is related with several threats, which can minimize the success of BPM and the corresponding business. In order to minimize the threats, BPM defines four basic principles, which need to be followed, in order to successfully “take care of processes” [1]. These principles are presented in the following sections.

1st Principle: Processes are Assets

The term “asset” represents any item of economic value owned by an individual or corporation, especially that which could be converted into money. The first BPM principle states that “Business processes are organizational assets that are central to creating value for customers”. The first BPM principle gives business processes a central role within organizational assets - business processes are important because they deliver value for customers by connecting other organizational assets into a flow of activities (*Figure 1*).

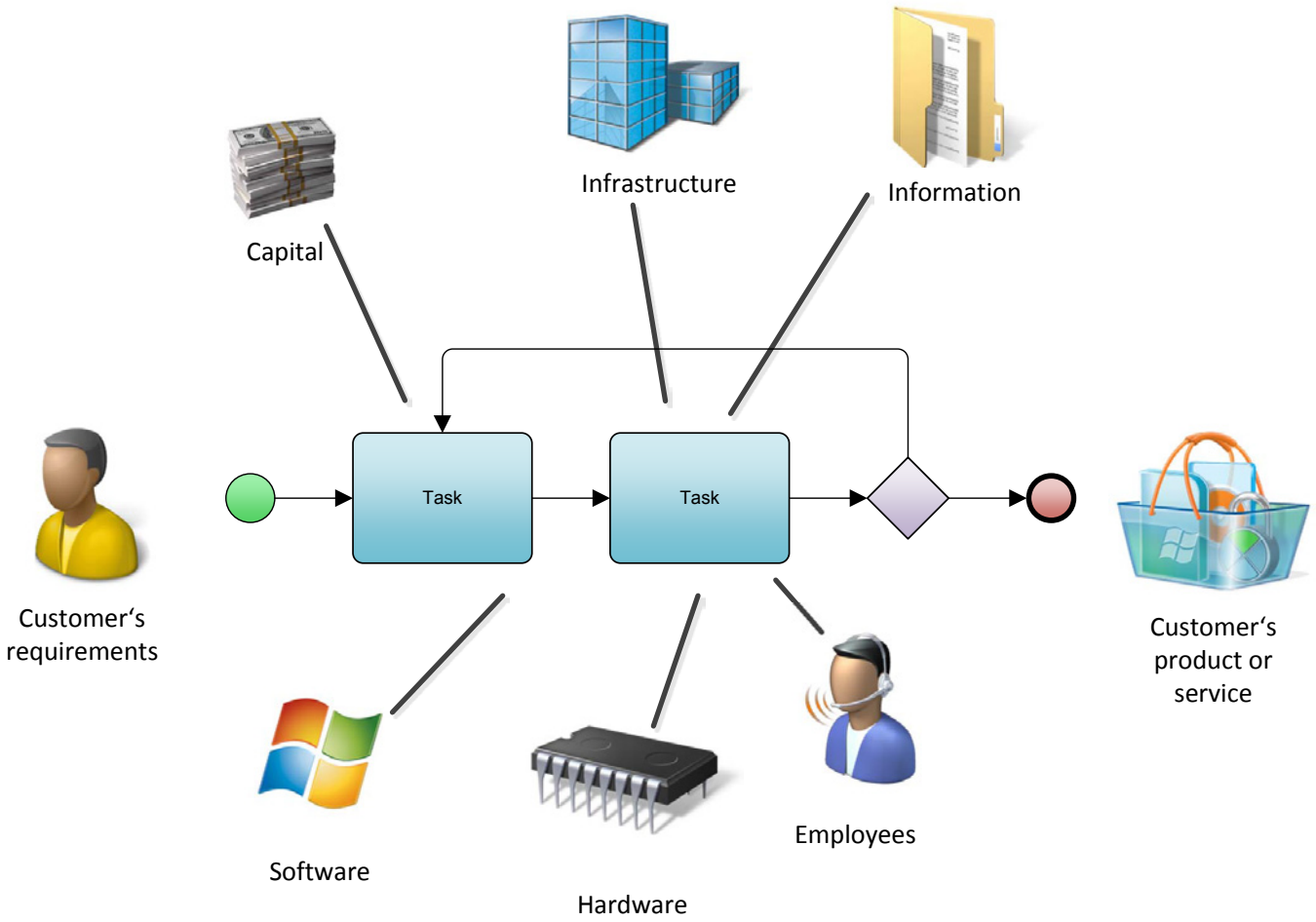

Figure 1: Business Process as the Focal Organizational Asset

Resources and Capabilities

Assets are basically divided into two categories: resources and capabilities, where business processes belong to organizational capabilities. A resource is a generic term that includes IT infrastructure, people, money or anything else that could help to produce (deliver) a service. On the other hand, capabilities represent an ability of an organization, person, process, application, configuration item or IT service to carry out an activity. Capabilities are intangible assets of an organization. People, as the most valuable organizational asset, are at the same time a resource (in the sense that people are frequently instrumental in delivering an IT Service) and a capability (people carry out Activities). The productive capacity of a service provider depends on how capabilities use and manage resources. In simple words, capabilities take time to build up whereas resources are relatively easy to acquire. So, capabilities are generally harder to copy by competition (and help service providers gain competitive advantage. Business processes are organizational capabilities. This means that processes cannot be easily acquired. Instead they have to be established and evolved within an organization.

2nd Principle: Processes Should Be Managed

Since processes are organizational assets, core processes and processes that generate the most value to customers should be carefully managed. Managed processes produce consistent value to customers and have the foundation for process improvement. The second BPM principle states that a company can deliver consistent value to customers by measuring, monitoring, controlling, and analyzing business process [1]:

- Measuring of business processes provides information regarding business processes, which allows organizations to predict, recognize, and diagnose process deficiencies, and it suggests directions for future improvements.
- Monitoring enables the detection of variances (i.e. problems) in process instances. Once a process instance displays high variability, there should be a mechanism allowing the process instance to be controlled. Process controlling can be done by adding more resources (people, machinery, etc.), shutting down the process if the situation is critical, or activating an alternative process.
- Analyzing process information is an essential step to identifying what parts of a process needs improvement, and which improvements are most likely to increase process consistency, effectiveness and efficiency.

A common concept related to business process management is a KPI (Key Performance Indicator). KPIs are a process's metrics, typically derived from higher level business goals, and can comprise generic metrics that are applicable to any process (e.g. process duration), or process-specific measures, that are typically based on the properties of process-relevant business objects (e.g. time of product delivery). KPIs can be calculated for a single process instance (e.g. individual delivery time) or may be aggregated over several ones (e.g. average delivery time).

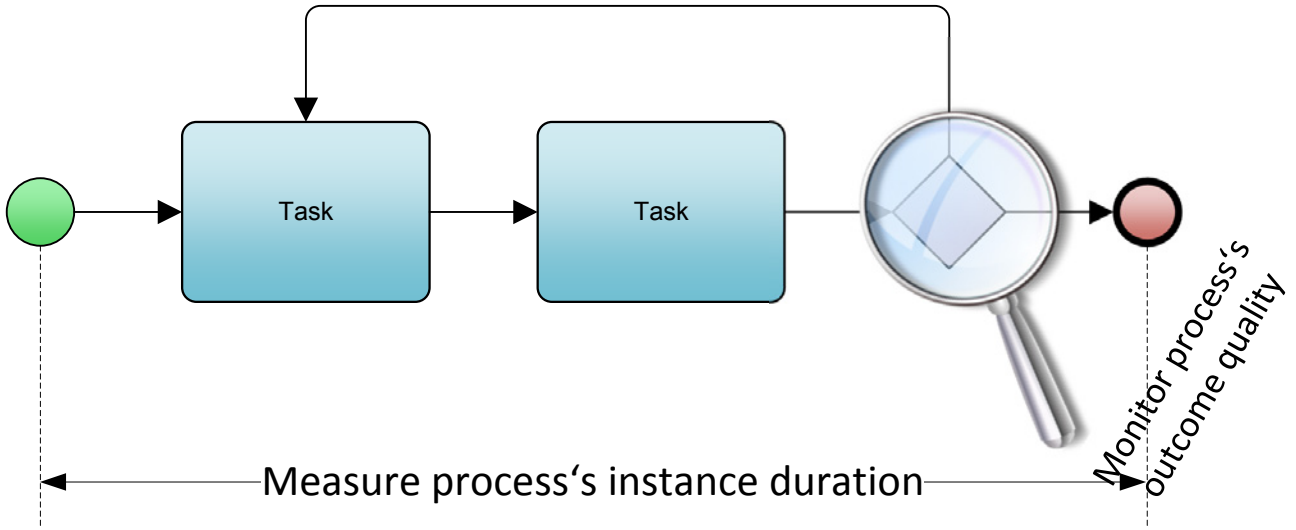

Figure 2: Processes Need to be Managed

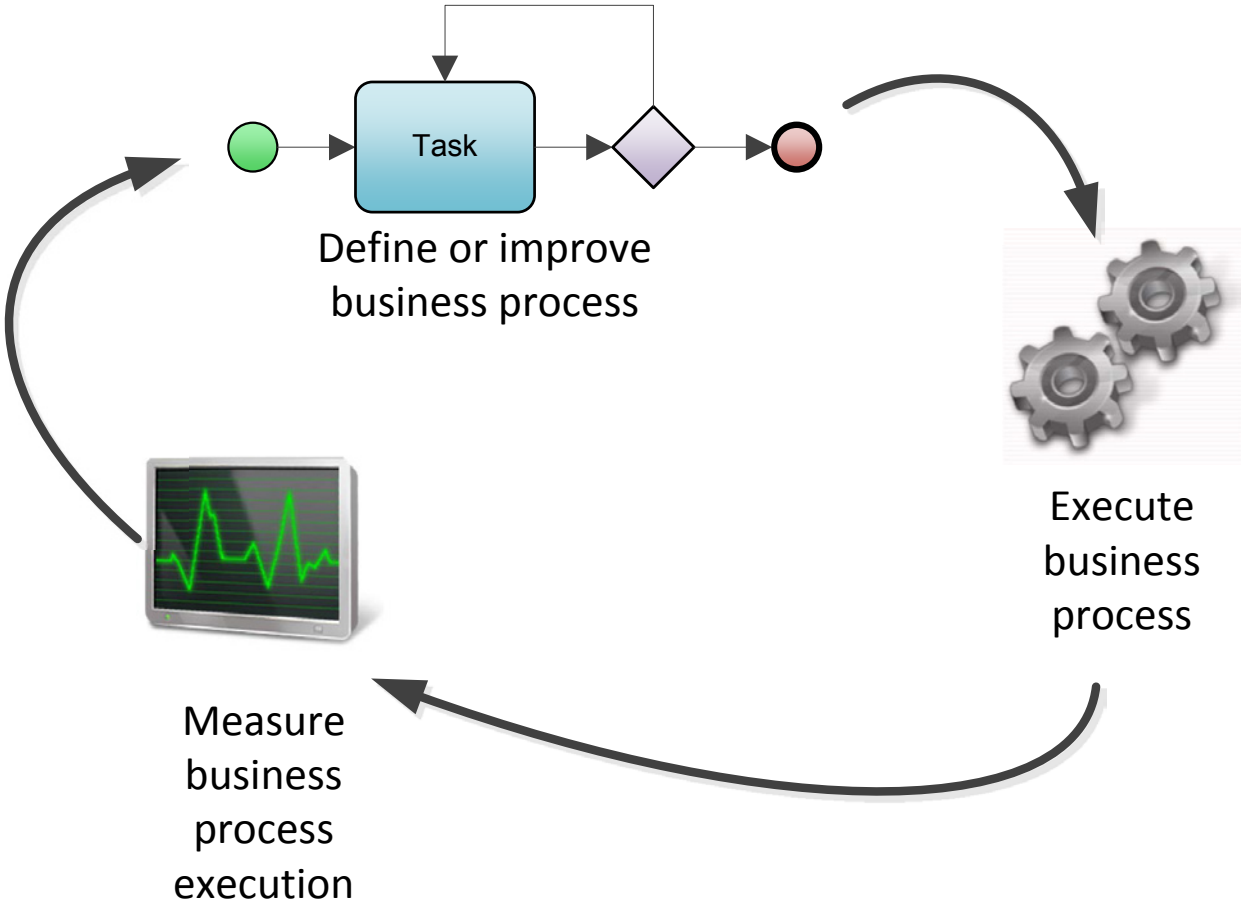

Figure 3: Continuous Process Improvement

3rd Principle: Processes Should Continuously Improve

Since processes are organizational capabilities, they have to evolve permanently. Processes commonly evolve in order to improve their effectiveness and efficiency. With a focus on continuous process improvement, an organization is better prepared to face change, which is present in the current customer-oriented economy. This helps to develop a corporate culture that is process-oriented and ready to adapt to changes.

The continual process improvement is also incorporated into the BPM lifecycle – it is represented with a cycle of BPM phases. However, establishing an acceptable continuous process improvement is anything but easy. The main threat to successful continuous process improvement is the fact that an improvement requires a change where several BPM phases need to be addressed in case of process improvement. For example, if a process needs to be improved, it has to be changed where process change affects most of the business process management (BPM) phases:

- **Modeling.** A new process diagram has to be defined in order to assure the consistency between the model and the changed process.
- **Simulation.** A new process model should be simulated in order to assure that process's changes actually bring some benefits.
- **Implementation.** The improved process needs to be implemented in an organization. For example, the supporting IT solution has to be upgraded and process participants properly trained.
- **Execution.** The process instances are executed according to new process definition.
- Process monitoring and analysis is performed in order to check if the process changes and yields any improvement.

To summarize, an acceptable continuous process improvement requires simple, flexible and responsive management of processes.

4th Principle: Processes Should be IT Supported

Information Technology (IT) plays a focal role in modern business, however its role is commonly misunderstood. A common misconception is that IT has a direct influence on business value. Instead, the business processes are those that have direct impact on creating business value (see the first BPM principle), where IT just supports or automates those business processes (*Figure 4*).

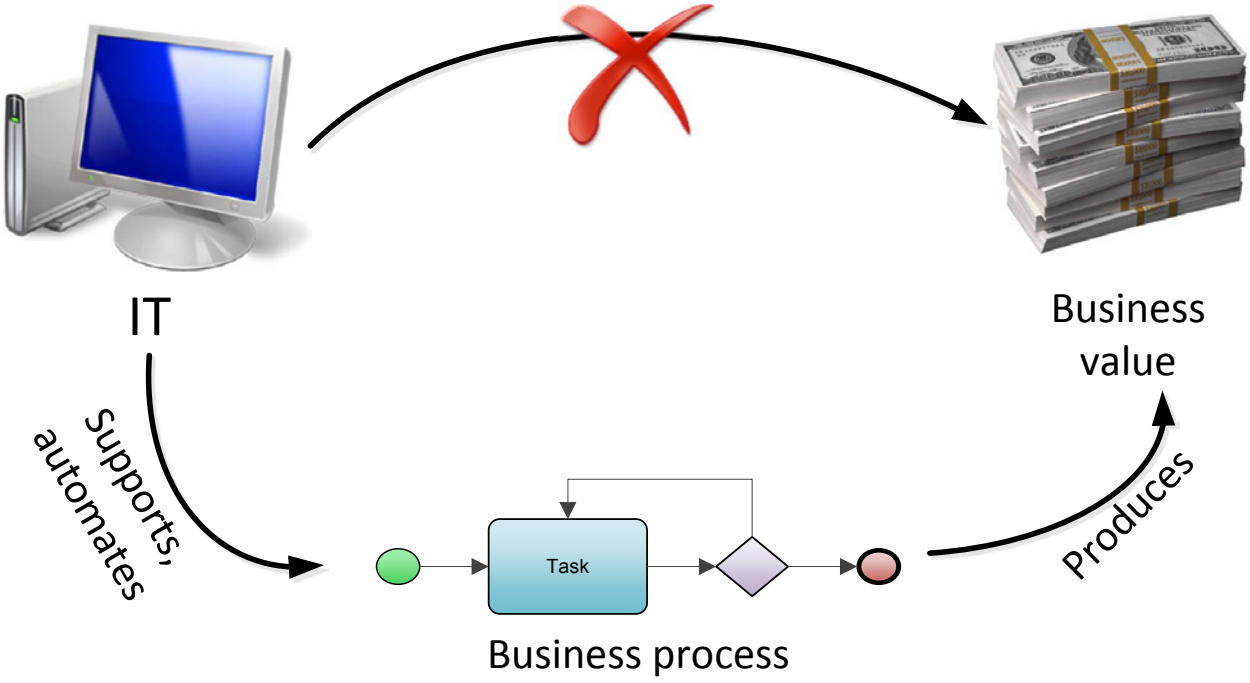

Figure 4: The role of IT and Business Processes in a Company

IT can support individual BPM phases or the complete BPM lifecycle. Support for BPM lifecycle is commonly implemented with BPM Suites, a set of IT tools which offer complete BPM support:

- **Modeling.** Business process modeling is the most commonly IT supported BPM phase. Business process modeling tools improve the efficiency of modeling activities (faster modeling, collaborative work, reuse), and effectiveness of the resulting models (validation of models, import and export of models, publishing of models).
- **Simulation.** Simulation tools enable analysis of the behavior of business processes prior to their actual execution.
- **Execution.** The automation of business processes improves the efficiency of processes (faster execution of processes) as well their consistency (process instances are performed consistently). One of the ways to automate processes is use an application that executes the required steps of the process. Another approach is to use a combination of software and human intervention. The third approach is to use dedicated software that enables the full business process being executed by the computer. Compared to either of the previous approaches, directly executing a process can be more straightforward and therefore easier to improve. However, automating a process requires flexible and comprehensive software and hardware infrastructure, which typically rules out implementing these systems in a legacy IT environment.
- **Monitoring.** This type of tools enable real-time monitoring of performed process instances in order to identify and address potential incidents.
- **Analysis.** IT support for process analysis enables systematic process improvement through data mining of process-related information.

The Role of BPMN in Supporting Core BPM Principles

Business Process Modeling Notation (BPMN) has a central role in modern BPM as well as in supporting the core BPM principles. BPMN enables visual representations of business processes in a standardized way. It also enables process modelers to represent and interrelate different types of organizational assets into a flow of activities, which fulfill a common objective – usually a product or a service for a customer. Besides, a lot of BPM tools offer support for BPMN in different phases (e.g. modeling, simulation and execution). BPMN has also positive impacts on continuous process improvement. The “continuous process improvement” principle requires simple and quick changes to processes in order to be accepted. BPMN can interrelate different BPM phases, thus making them quicker and more flexible. For example BPMN models can be used in process simulation tools as well, directly executed by BPMN process engines.

Conclusions

In this white paper, the four basic BPM principles which leverage the success of BPM were presented. The first principle states that business processes are organizational assets that are central for creating value for customers. Since processes are organizational assets, they have to be managed as any other organizational asset. The second BPM principle states that by measuring, monitoring, controlling, and analyzing business processes, a company can deliver consistent value to customers and has the basis for process improvement. The third principle states that while business processes are central to an organization's value creation, a company needs to continuously improve its processes. The fourth principle states that by using IT BPM improves its efficiency and effectiveness so IT can be treated as an essential BPM enabler. The role of BPMN in supporting the core BPM principles is essential. BPMN enables process modelers to visually represent processes, it simplifies IT support for BPM and accelerates the continual process improvement through the interrelation of different BPM phases based on process models.

References

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