

Business Process Management (BPM)

BPM is a holistic management approach focused on aligning all aspects of an organization with the wants and needs of clients. It promotes business effectiveness and efficiency while striving for innovation, flexibility, and integration with technology. BPM attempts to improve processes continuously. It can therefore be described as a "process optimization process." It is argued that BPM enables organizations to be more efficient, more effective and more capable of change than a functionally focused, traditional hierarchical management approach.

Overview

A business process comprises a "series or network of value-added activities, performed by their relevant roles or collaborators, to purposefully achieve the common business goal." These processes are critical to any organization, as they can generate revenue and often represent a significant proportion of costs. As a managerial approach, BPM considers processes to be strategic assets of an organization that must be understood, managed, and improved to deliver value added products and services to clients.

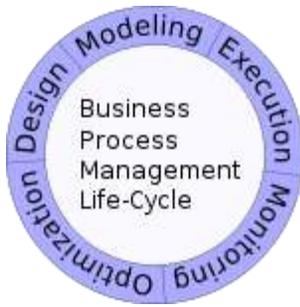
This foundation is very similar to other **Total Quality Management** or **Continuous Improvement Process** methodologies or approaches. BPM goes a step further by stating that this approach can be supported, or enabled, through technology to ensure the viability of the managerial approach in times of stress and change. In fact, BPM is an approach to integrate an organizational "change capability" that is both human and technological. As such, many BPM articles and pundits often discuss BPM from one of two viewpoints: people and/or technology.

BPM or Business Process Management is often referred to as 'Management by Business Processes'. The term business can be confusing as it is often linked with a hierarchical view (by function) of the company. It is therefore preferable to define BPM as 'Corporate Management through Processes'. By adding BPM the second meaning of 'Business Performance Management' can therefore be defined as 'Company Performance Management through Processes'. And it's this resolutely performance oriented definition which is chosen here. Managing Performance through Business Processes defines BPM as a management through processes method which helps to improve the company's performance in a more and more complex and ever-changing environment. Management through processes is a management method based on two logical levels: process governance and process management:

- Process governance is all of the company's governance activities which, by way of allocating on the processes, work towards reaching its objectives, which are both operational and progress related.
- Process management is all the management activities of a given process which work towards reaching the objectives allocated for this process.

Roughly speaking, the idea of business process is as traditional as concepts of tasks, department, production, outputs and the current management and improvement approach, with formal definitions and technical modeling, has been around since the early 1990s.

In the **IT** community, the term 'business process' is often used as synonymous of management of middleware processes; or integrating application software tasks. This viewpoint may be overly restrictive, so keep in mind when reading software engineering papers that refer to "business processes" or to "business process modeling".



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Although the initial focus of BPM was on the automation of business processes with the use of information technology, it has since been extended to integrate human-driven processes in which human interaction takes place in series or parallel with the use of technology. For example (in **workflow** systems), when individual steps in the business process require human intuition or judgment to be performed, these steps are assigned to appropriate members within the organization.

More advanced forms such as **human interaction management** are in the complex interaction between human workers in performing a workgroup task. In this case, many people and systems interact in structured, ad-hoc, and sometimes completely dynamic ways to complete one too many transactions.

BPM can be used to understand organizations through expanded views that would not otherwise be available to organize and present, such as relationships between processes. When included in a process model, these relationships provide for advanced reporting and analysis. BPM is regarded by some as the backbone of **enterprise content management**.

BPM allows organizations to abstract business process from technology infrastructure; it goes far beyond automating business processes (software) or solving business problems (suite). BPM enables business to respond to changing consumer, market, and regulatory demands faster than competitors' creating competitive advantages.

As of 2010 technology has allowed the coupling of BPM to other methodologies, such as **Six Sigma**. BPM tools allow users to:

- Vision - strategize functions and processes
- Define - baseline the process or the process improvement
- Model - simulate the change to the process.
- Analyze - compare the various simulations to determine an optimal improvement
- Improve - select and implement the improvement
- Control - deploy this implementation and by use of User defined dashboards monitor the improvement in real time and feed the performance information back into the simulation model in preparation for the next improvement iteration.
- Re-engineer - revamp the processes from scratch for better results

This brings with it the benefit of being able to simulate changes to business processes based on real-life data (not assumed knowledge). Also, the coupling of BPM to industry methodologies allows users to continually streamline and optimize the process to ensure that it is tuned to its market need.

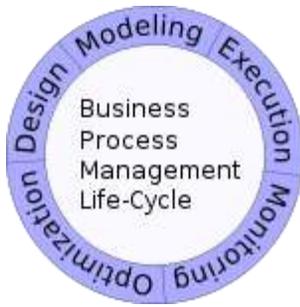
BPM Life-cycle

Business process management activities can be grouped into six categories: vision, design, modeling, execution, monitoring, and optimization.

Functions are designed around the strategic vision and goals of an organization. Each function is attached with a list of processes. Each functional head in an organization is responsible for certain sets of processes made up of tasks which are to be executed and reported as planned. Multiple processes are aggregated to function accomplishments and multiple functions are aggregated to achieve organizational goals.

Design

Process Design encompasses both the identification of existing processes and the design of "to-be" processes. Areas of focus include representation of the process flow, the actors within it, alerts &



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notifications, escalations, Standard Operating Procedures, Service Level Agreements, and task hand-over mechanisms.

Good design reduces the number of problems over the lifetime of the process. Whether or not existing processes are considered, the aim of this step is to ensure that a correct and efficient theoretical design is prepared.

The proposed improvement could be in human-to-human, human-to-system, and system-to-system workflows, and might target regulatory, market, or competitive challenges faced by the businesses.

Modeling

Modeling takes the theoretical design and introduces combinations of variables (e.g., changes in rent or materials costs, which determine how the process might operate under different circumstances).

It also involves running "what-if analysis" on the processes: "*What if I have 75% of resources to do the same task?*" "*What if I want to do the same job for 80% of the current cost?*"

Execution

One of the ways to automate processes is to develop or purchase an [application](#) that executes the required steps of the process; however, in practice, these applications rarely execute all the steps of the process accurately or completely. Another approach is to use a combination of software and human intervention; however this approach is more complex, making the documentation process difficult.

As a response to these problems, software has been developed that enables the full business process (as developed in the process design activity) to be defined in a [computer language](#) which can be directly executed by the computer. The system will either use services in connected applications to perform business operations (e.g. calculating a repayment plan for a loan) or, when a step is too complex to automate, will ask for human input. Compared to either of the previous approaches, directly executing a process definition can be more straightforward and therefore easier to improve.

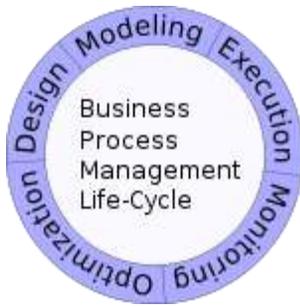
However, automating a process definition requires flexible and comprehensive infrastructure, which typically rules out implementing these systems in a legacy IT environment. [Business rules](#) have been used by systems to provide definitions for governing behavior, and a business rule engine can be used to drive process execution and resolution.

Monitoring

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. An example of the tracking is being able to determine the state of a customer order (e.g. order arrived, awaiting delivery, invoice paid) so that problems in its operation can be identified and corrected.

In addition, this information can be used to work with customers and suppliers to improve their connected processes. Examples of the statistics are the generation of measures on how quickly a customer order is processed or how many orders were processed in the last month. These measures tend to fit into three categories: cycle time, defect rate and productivity.

The degree of monitoring depends on what information the business wants to evaluate and analyze and how business wants it to be monitored, in real-time, near real-time or ad-hoc. Here, **business activity monitoring** (BAM) extends and expands the monitoring tools generally provided by BPMS.



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Process mining is a collection of methods and tools related to process monitoring. The aim of process mining is to analyze event logs extracted through process monitoring and to compare them with an **a priori** process model. Process mining allows process analysts to detect discrepancies between the actual process execution and the *a priori* model as well as to analyze bottlenecks.

Optimization

Process optimization includes retrieving process performance information from modeling or monitoring phase; identifying the potential or actual **bottlenecks** and the potential opportunities for cost savings or other improvements; and then, applying those enhancements in the design of the process. Overall, this creates greater business value.

Re-engineering

When the process becomes too noisy and optimization is not fetching the desired output, it is recommended to re-engineer the entire process cycle. BPR has become an integral part of organizations to achieve efficiency and productivity at work.