

# enterprise integrity



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## BPMS Concepts, Part 2

Some vendors, analysts, and members of the press still equate Business Process Management Systems (BPMSes) with workflow management systems. Though many business process ideas have a heritage in workflow, there are reasons not to equate them. (For more on that, see my article in the March 2000 issue of *eAI Journal*.)

Because the BPMS market and technology are still immature and workflow management systems have evolved in various ways, it's useful to compare and contrast an ideal BPMS and classical workflow management, thereby avoiding an indictment of existing products of either type. As we shall see, the BPMS market must not be viewed simply as an evolution of the market for classical workflow. Although overlapping in technological function, the ultimate goals and benefits of BPMS and workflow technologies are quite distinct.

Three key tasks are usually performed in classical workflow:

- Management and monitoring of the actual flow of the work
- Assignment of the work to be done, typically by people, at each step of the flow
- Enablement of the assigned work via timely delivery of any necessary materials or information.

These tasks imply the following defining characteristics for classical workflow:

- The management focus is on tactical optimization (timely completion and efficient activities assignment).
- The monitoring focus is on timing of activities and flows and identification of staffing involved.
- Flow instances modeled as forward activity sequences preserve product or service integrity (parallelism is an operational efficiency) and exception flows are to be eliminated.
- Flow definitions are not incomprehensible and are infrequently changed.
- The entities flowing through a workflow are generally homogeneous across and within instances.
- Activities are mediated primarily by people and are associated with human timescales.
- An activity's final state is largely independent of the activity's internal details. (A started activity either completes or fails, with failure leading to simple restart or termination of the workflow instance.)


Four key tasks are associated with a BPMS:

- Specification of business processes
- Timely management and monitoring of a target set of business processes, resulting in business metrics

- Mutual scheduling of business functions and the resources required to execute them at each step of an instance of the process
- Dynamic modification of business processes and instances of those processes based on analysis of business metrics to evolve the business.

These considerations and the tasks listed above imply the following defining characteristics for the ideal BPMS:

- Management focus is on strategic optimization of business process in response to business opportunities (requiring process instance alteration, and risk analysis and management).
- The implementation and timely completion of business processes, and efficient assignment of resources to business functions is a tactical, secondary goal.
- The monitoring focus is on evaluating business process effectiveness in meeting strategic business goals (requiring information about when and by whom, how, how well, and at what cost).
- Result quality and cost (including time and resources used) of a business function result may have a greater impact on process decisions (branches) than the mere fact of completion.
- Business process integrity usually precludes implementation, as forward sequences of business functions and exception sub-processes are an integral, defining business intellectual property.
- Business process definitions, and their implementations, may be extremely complex, difficult to comprehend, and frequently changed (concurrent business functions, asynchronous business events, complex joins and branches, and reverse flows often have critical semantic value).
- Business functions can be manual, automated, and hybrid, with time requirements ranging from micro-seconds to years.
- The paths allowed a process instance often depend on the internal logical process of a business function and its final state, with control flow and data flow separation sometimes an optimization.

A BPMS is intended to help manage and improve the strategic efficiency of a dynamic set of processes to the extent that these represent the operations and purpose of the business itself. This is the essence of "business management." So, again, BPMS is a significant departure from workflow — and a BPMS can have an enormous impact on enterprise integrity and business success. 

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