



IMPROVE EVERY PROCESS

Business Process Management

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"Improve constantly and forever every process for planning, production, and service. Search continually for problems in order to improve every activity in the company, to improve quality and productivity, and thus to constantly decrease costs. Institute innovation and constant improvement of product, service, and process. It is management's job to work continually on the system (design, incoming materials, maintenance, improvement of machines, supervision, training, retraining)."

Dr. W. Edwards Deming

Overview

The benefits to the business world derived from process monitoring and management are hardly a revelation. It has been a known fact, for over the past 50 years, that optimizing business processes yield tangible results and measurable benefits to the affected corporation. In the 1950's, Dr. W. Edwards Deming, a mathematician and statistician, proved that improvements in managing business processes lead to improvements in the overall business as well as a significant competitive advantage will be realized.

Throughout the teachings of Dr. Deming, it has been stated that variation is created in every step within a production process, and the resulting variations have the potential to cause defects within the final product. Therefore, the causes of variation need to be identified and reduced significantly. Furthermore, companies need to practice continuous product and process improvements to directly enhance quality and productivity while decreasing operational costs.

It was Dr. Deming's proposal that a company should develop and install a continuous feedback and measurement loop to reduce defects to their processes, thus improving overall product quality and productivity. To achieve this outcome, a continuous process improvement methodology had to be adopted and enthusiastically practiced throughout the entire company. Several management disciplines have been the result of this Deming philosophy, such as the "Balanced Scorecard", TQM, and Six Sigma.

Business process monitoring and management are the prerequisites for a successful continuous process improvement methodology. Providing real-time visibility into business processes through effective process monitoring is the primary element toward a successful business process improvement system. In order for companies to improve their processes, problems and bottlenecks to the processes need to be identified as well as classified for their impact and severity.

All levels of the organization must have visibility as well as control into the business processes; this would include, but not limited to, IT management, financial processes, business operations, and business management. Business process monitoring and management are becoming prerequisites for companies seeking to optimize business processes, reduce operational costs, gain

real-time visibility into key performance indicators, and ultimately achieve the final goal – competitive advantage.

What is Business Process Management (BPM)?

Businesses are operating in markets that are more competitive than ever. Their business agility or responsiveness to change in these markets has become critical to success. The ability to respond rapidly to competitive moves, to ever-changing customer needs as well as expectations, and to new regulations remain critical factors in achieving revenue growth and competitive advantage. In order to be responsive and align their organizational capabilities, businesses need to coordinate their actions and utilize all relevant information in context.

Business Process Management (BPM) can deliver these needed capabilities by allowing access to all information within the business process context as well as analyzing the information and enabling action to be taken based on insights gained. BPM applications are software systems that streamline business processes by automating manual tasks and integrating them with existing systems. They provide visual process modeling tools to define the process workflow, and integration tools to connect to the existing infrastructure. Thus, the **BPM** acronym has evolved in standing for real-time visibility monitoring into the processes and reporting on end-to-end business processes; this may include process simulation for optimizing processes.

There are a number of other acronyms that are relevant in order to optimize business processes, reduce operational costs, and gain real-time visibility into key performance indicators; each has been included and should be considered:

- **Business Process Integration (BPI)** – refers to integrating business processes that cross applications, but may not actually provide management dashboards.
- **Business Process Automation (BPA)** – refers to automating a process that crosses different back-end applications, such as synchronizing data updates in multiple applications.
- **Business Activity Monitoring (BAM)** – refers to providing just alerts at the operational level, but will eventually be merged with business intelligence to provide the information to make better decisions.
- **Business Impact Analysis (BIA)** – another term for business process management. Other related terms are predictive business and complex event processing. This is management-level visibility and intelligence into business processes that correlates events and processes across the organization and relates them to key performance indicators, such as profitability.

- **Web Service Orchestration (WSO)** – the ability to create a composition application to support a business process from a set of loosely-coupled Web services. WSO generally does not provide the management capabilities of BPM. However, BPM can be used to orchestrate Web services and integrate them with other applications that are not Web services, so if an organization has already invested in a BPM solution, it may not also need a WSO solution.
- **Workflow Automation (WFA)** – generally focuses on manual business processes, and managing the hand-offs between people or business groups. Workflow capabilities may also be part of a BPM solution.
- **Enterprise Content Management (ECM)** – relevant because most of the ECM tools provide workflow and process management capabilities and some are being sold as BPM tools.
- **Collaboration or Groupware** – relevant because these tools provide facilities to monitor and manage the collaborative work process. Collaboration solutions provide facilities to optimize collaborative processes, allowing disparate team members to communicate, coordinate, and manage the process, as well as collaborating on documents, models, and other project deliverables. They are generally network-based solutions, and may integrate with enterprise content management solutions and desktop tools.

In the paper *'Simply Smart' BPM Gets Smarter*, by Beth Gold-Bernstein, VP Strategic Products and Services – ebizQ stated the following:

"The new business mantra is business agility. Agility requires both speed (time to market; time to recognize trends; time to recognize bottlenecks; time to respond to customer demands and requests), and it requires adaptability to change. Businesses need to adapt to consistent and rapid change in order to maintain competitiveness.

"Change is constant, and much more rapid today than it ever was before. Companies are looking to improve operational efficiency and reduce costs while adapting to continuous change and delivering new business solutions faster and cheaper. This is a pretty tall order.

"That's the value that BPM brings to an organization today. It provides real-time visibility into end-to-end business processes that cross applications, platform, and organizational barriers. It enables rapid business change because it gives business management visibility into the business processes, to recognize bottlenecks as they are happening, and to respond to them quickly. BPM also provides a mechanism for recording and monitoring critical business metrics, to understand what is happening in the business."

It is clear that almost every company needs some type of business process management, and that almost all integration should include business process management of some varying type and/or degree.

Concept

The concept that BPM utilizes is an integrated management approach that includes Web-based analytical applications (to gather and analyze data), business plans (to achieve desired metrics), and the necessary reporting and forecasting mechanism to ensure performance goals. Further, it is a methodology that removes the obstacles blocking the execution of management intentions.

In the paper *The Three Faces of BPM*, by Bill Welty, CEO – Action Technologies stated the following:

“It makes sense to think of BPM as the approach to, rather than an application for, managing work. In this conceptual framework, business process management systems codify the sequence of activities needed to:

- *Move data between applications to change status in “systems of records”*
- *Present documents to clerical workers along with a predetermined set of rules to assure completeness and accuracy before taking actions*
- *Facilitate interactions between knowledge workers as they use their expertise and judgment to decide upon actions in uncertain situations.”*

For each of these, a separate BPM software package has been developed to encompass its specific requirements and characteristics:

- System-to-System
- Person-to-System
- Person-to-Person

Mr. Welty provides the following comparison of each software package:

*“The **system-to-system** packages allow disparate software and hardware devices to integrate with each other without human involvement or intervention. All information must be relayed to a variety of departments within the company, including accounting, shipping, and inventory, as well as outside parties such as UPS, that all rely on different technology infrastructures. Without a good system-to-system BPM tool to manage these interactions, it would be almost impossible for the company to function effectively.*

***Person-to-system** packages make up the second category of BPM. In essence, these are designed to improve the productivity of clerical workers or people involved in repetitive tasks. These packages tend to use a “checklist” approach, in which a*

defined set of information must be collected before a rules based decision can be made.

*More than half of the U.S. workforce is now comprised of knowledge workers – people whose knowledge, experience, judgment, and innovation are critical to organizational success. Enhancing the productivity of these employees is the single most important opportunity organizations have to reduce their costs and increase profitability, and **person-to-person** BPM provides the framework for this approach. The fundamental distinguishing characteristic of this approach is that knowledge workers, rather than rules and processes, drive decisions.*

*Both **system-to-system** and **person-to-system** BPM software work well in environments where data and information can be hierarchically managed based on repetitive, pre-defined rules and sequences that have very little flexibility. They can benefit organizations only as far as they allow the simplification and automation of basic decisions and interactions, but what they cannot do is facilitate the work of people whose jobs require them to invent, decide, and collaborate to accomplish complicated multi-faceted work. In blunt terms, the inherent inability of **system-to-system** and **person-to-system** software to support negotiated commitments makes them ineffective tools to manage knowledge work, and a BPM system that cannot make the distinction between a simple work item and a complicated process is just not going to create real value in today's business climate."*

In order to utilize the BPM tool effectively, there has to be a knowledge-base as to:

- What customers want for a service level?
- What the effects of real-time market conditions will be on customer demand?
- What assurance that processes and infrastructure will be able to support the demands?

With this understood, it becomes critical to create a model of the process in order for the business managers to have a clear and concise understanding of the process structure; stimulating the process provides an understanding of the behavioral makeup of the process. Through this, business managers will be able to see where bottlenecks occur and determine costs and processing times without ever deploying the process. Modeling technologies enable "what if" scenarios to be performed in order to compare and contrast the structural choices as well as different resource allocations for materials and manpower. With the utilization of modeling and simulation, consistency and predictability can be accomplished for any process.

With the installation of a BPM tool, the operational processes can be monitored; thus, providing real-time visibility into the performance of selected processes against pre-determined strategic and operational objectives and metrics. Business and IT sectors can be monitored within the content of these same objectives. The capability of "drilling down" - analyzing the details of each

process's activities, can provide a deeper understanding of the cause and effect interactions within each process. Bottlenecks and inefficiencies within the each process can be identified and corrected on a real-time basis. By having the reporting capability of a BPM tool, key data can be obtained, displayed, and discussed not only with the employees of the workplace, but also with the business managers concerning the following issues:

- **Measures** – process execution, key performance indicators, balance scorecards
- **Alerts** – performance violations, material outages, quality concerns, resource shortages
- **Financial Data** - for different user communities

Providing real-time visibility into business processes through effective process monitoring is the primary element toward a successful business process improvement system. Corrective action plans can be developed and implemented, such as the redesign of a portion of the process or the reallocation of a resource or skill. Through the actions of a successful business process improvement system, business processes will be optimized; operational costs will be reduced, and the ultimate goal will be achieved – competitive advantage.

Methods of Implementation

Whether companies start at the top and work down, or from the bottom and work up, they can use BPM tools to rapidly grow their process capabilities. In order for the initial implementation of a BPM tool to be successful, companies may need to identify a business domain where managing the total process has been plagued with problems and bottlenecks. With a total commitment from senior management that process enhancements are the methodology to affect business changes, and armed with BPM capabilities, companies are free to concentrate on these issues to develop the process-managed enterprise.

In the paper *The BPM Greenhouse*, Peter Fingar and Howard Smith have stated the following hypothesis for implementation:

"A company's first BPM implementation should kick-start the virtuous cycle by delighting business managers, inspiring them to think of new opportunities and equipping implementers with a set of useful new tools and skills. The ideal inaugural project will be highly visible, address an issue of real importance to the business, hit exactly the right level of risk for the business culture, and provide a convincing demonstration that BPM can achieve what other technologies could not.

The two key parameters in developing such a project are the phase of process management to be undertaken and the scope of the process to be managed.

Companies have to decide whether to attack the discovery and design of a process before moving on to manage it, or whether to integrate systems in order to implement, execute, and refine a process live in situation, eradicating IT roadblocks. A company can opt to focus on an internal process that is well within its zone of control, or it can deliberately select a cross-business process that will be key to the future of the enterprise. There is no right answer – the choice depends entirely on the business context and the availability of resources.

Companies should build support on a process-by-process basis, and each 'project' must show meaningful return on process investment. The second process will then be easier to justify than the first, and companies will be able to accumulate evidence of success. They will build out BPM starting from one department, division, or workgroup. This bottom-up approach of business case design recognizes that executives are unlikely to accept a justification based on the practices of other firms or on industry benchmarks. Too many reengineering and ERP investment decisions were made on the basis of anecdotal benefits that are no longer credible, especially in the light of questionable accounting practices uncovered at the very companies that provided many of the benchmarking numbers for e-business and ERP."

Critical Factors that Dictate Success

Through the findings obtained from numerous studies of BPM implementations, it has been revealed that the following factors have been found to be not only critical, but also vital to the success of a BPM system implementation. Within the following, each will be discussed.

- **Business users and IT professionals must work together as a team** - Business users own the process; know what the process is intended to do and how it should flow; and make decisions and adjust the process to meet their needs. IT professionals own the technology infrastructure that is used when these processes are automated; they understand the need to manage data, integration, and systems operations.
- **Visualization of the business process** – determination of the end-to-end process with the data exchanges as well as the numerous and complex relationships surrounding the company's internal and external policies.
- **Define the business requirements through a structured workflow or process map** – the task can be overwhelming due to the depth of understanding that is required for each business process.
 - What conditions dictate the flow of work from step to step;
 - Who should complete each step; and
 - How to deal with exceptions that change the flow of work.

- **Accurately documenting the business infrastructure** – documenting the internal control and statutory required procedures with the manual activities needed to accomplish all this while utilizing information from specific data sources – people, systems, and data formats.
 - Capturing data requirements;
 - Identifying all possible tasks that could be completed during process execution;
 - Determine which existing systems to leverage (to get information from, send information to, or use to automate entire steps); and
 - Choosing how to present and collect information from users in electronic forms / user interfaces.

With these factors accomplished, it becomes critical to add intelligence to the business process management with clearly defined business rules which will:

- Enhance the technology in accurately structuring the business requirements as well as the complexity of real world business problems;
- Prevent mistakes from being built into the business logic* of the process;
- Improve efficiency, and ensure that the final product truly meets the business needs.

In addition, IT will be able to convert the stated requirements into executable compute code as well as consolidate and integrate legacy systems throughout the improved business process.

*** NOTE: Business logic** is the bridge between policy and execution. It is the set of business policies and procedures that execute a corporation's value proposition to their customers and provides real differentiation against competitors. Finally, it is comprised of both business rules and workflows and provides business accountability for strategy, from concept to execution.

Benefits to be Realized

In his paper *The Challenge of BPM Adoption*, by Steven Minsky, CEO and Founder – LogicManager, Inc. states following concerning the benefits to the corporation:

“Companies in a broad range of industries are reporting measurable payback from this technology. Ninety-eight percent of those who have implemented workflow improvement tools say the solution meets or exceeds their expectations, according to Gartner Group. In industry assessments and other printed reports, improvements cited include:

- *30 – 45% reduction in process operating costs*
- *50 – 75% reduction in end-to-end process completion time*
- *60 – 90% reduction in time to change business requirements*
- *75 – 90% reduction in manual operation errors*

“Still, with only two to five percent of businesses using business process management technology, adoption has been much slower than many analysts predicted. Why the gap? Most experts believe the CIO’s and other senior managers recognize the benefits of BPM, but the perceived risks and known investment of time and resources required are holding them back. People like the benefits, but they simply don’t have the time or expertise required to tackle such a huge undertaking.”

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