Business Process Management
An Emerging Trend

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Business Process Management (BPM) is an emerging trend in the area of business process automation and system design. BPM can help organizations formalize specifications of business processes and enable their analysis, monitoring and execution. This article introduces this topic and gives a brief overview of the developments in this space.
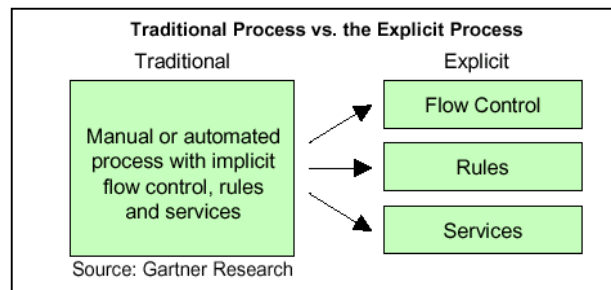
The core concern

Business is in reality the underlying business process and successful business implies efficient underlying processes. Everything else that constitutes a business is losing its uniqueness and becoming a commodity. It is no wonder then that efficient organization of processes is becoming the boardroom agenda the world over. Automating business processes, integrating independent application silos to execute a seamless business process, keeping the business processes open for collaboration with partners and building in agility into their business processes are becoming their prime concerns.

Extant IS development paradigms are insufficient in addressing these needs. Business-IT divide is undeniably inherent in them. With them business concerns i.e. process management is only a derivative and not the driving force. Further, any modifications made to the business processes cannot be easily and quickly reflected in the software as processes are embedded into the applications.

Business Process Management

Business Process Management (BPM) is an emerging trend, which hopes to address these deficiencies in the current IS development paradigms. Business Process Management aims to make explicit the processes that are embedded in applications.

Traditional Process vs. the Explicit Process

Traditional — Manual or automated process with implicit flow control, rules and services

Explicit — Flow Control, Rules, Services

Source: Gartner Research

- Enterprises are moving towards explicit process management to enable rapid reaction to process changes
- Enterprise architecture in the future will have a process layer (the fourth-tier) separating the process flow from the application logic

To implement BPM, business processes, like data, will have to reside in their own

management systems where they can be analyzed to determine the best way to conduct business. They can then be passed along to business partners in a common language describing how a particular process should be performed.

Though BPM has matured as a concept and firms at the innovation frontier are already considering BPM as an alternative to bespoke architecture, there are still many issues that need to be addressed before the concept becomes widely adopted. Business Process Management Initiative or BPMI in short, is an

According to a September 2000 report by Forrester Research, process description language efforts like the BPMI will finally be ratified as standards by the year 2004. By then eBusiness contracts will include machine-readable process descriptions, which will make it possible for firms to automatically propose and confirm custom business processes.

independent collective of over a hundred IT organizations formed last year, which seeks to address them. It is working on developing open specifications, such as Business Process Modeling Language (BPML) and Business Process Query Language (BPQL), to manage e-business processes across multiple applications, corporate departments and business partners, behind the firewall and over the Internet.

Business Process Modeling Language

BPML is a meta-language for modeling business processes, just as XML is a meta-language for modeling business data. More specific process modeling languages can be defined from BPML. BPML itself uses XML technologies.

BPML enables the explicit definition of the processes involved. It ensures the consistency in definition of a business process throughout its lifecycle. Thus, BPML allows business unit leaders, process analysts and technical staff to share

ownership of the design, deployment and improvement of business process. Similarly, collaboration between partners can be improved when there is a common understanding of the processes between them. Integration of acquired companies too will be easier if processes are explicitly defined in a common language. An unambiguous understanding can also give a fillip to business process outsourcing.

BPML has been designed so that it can be used to integrate a wide variety of modeling techniques. The set of executable rules that are captured in BPML can be used by a Process Engine to coordinate business transactions.
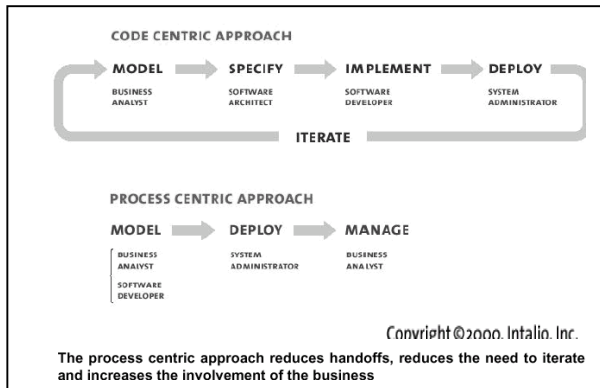
Implementing BPM

A Process Engine will let businesses define and deploy processes to achieve its strategic business objectives.
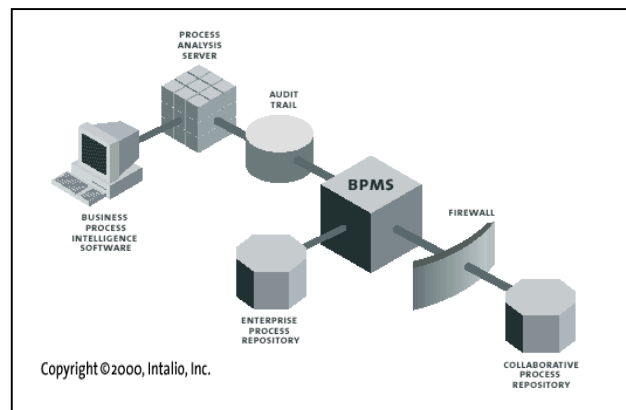
On a day-to-day basis BPM can be achieved by creating a process repository. Business managers can refer to this repository and use visual tools to examine process, make changes, deploy and monitor them during execution. Changes to business processes can be implemented directly and the ongoing need to align business and IT would be much reduced since this can be achieved through the process engine.

Indeed, BPM enables the implementation of adaptive processes. For example, metrics associated with process activities can be

calculated in real time and the results of these calculations can be used to decide on alternate flows for processes. Thus, BPM enables continuous business process improvement.

The process centric approach reduces handoffs, reduces the need to iterate and increases the involvement of the business

BPM in the Web Services context

Software as services model and the concept of Web Services have taken root firmly. Web Services can be used to create the virtual enterprise i.e. a temporary, flexible and dynamically changing network of enterprises, working together to accomplish a common business goal. An evident pre-requisite for implementing Web Services is BPM. BPML can be used as the means to choreograph all the Web Services offered by different systems in order to achieve the required business process.

Recent initiatives of Microsoft and IBM seem to acknowledge the potential of Business Process Management. Microsoft has come up with XLANG, a language for defining the semantics of business processes and binding process activities to software implementations. Its BizTalk Orchestration (BTO) facilitates the visual modeling of processes by business analysts and the deployment of processes by developers, to be executed by a run time engine. IBM is working on Web Services Description Language (WSDL) and Web Services Flow Language (WSFL). WSFL provides a way to describe how a series of services can be choreographed to achieve a business need.

Adoption of BPM

Vendors like Intalio, BusinessThreads and Fugeotech have developed concepts and technology that represent business processes as directly executable code or interpretable instructions.

BPM represents the next generation in the evolution of Information Systems. It has the potential to create an impact that can overshadow the impact created by the advent of Database Management Systems. A new industry is expected to grow around process management similar to what happened with data management.

> *According to an April 2001 report by Gartner Research, at least 90 percent of large enterprises will have BPM in their Enterprise Nervous System by the year 2005 (0.9 probability). According to Gartner, enterprises that continue to hard-code all flow control, or insist on manual process steps and do not incorporate BPM's benefits, will lose out to competitors that adopt BPM.*

Additional information on BPM can be obtained at http://www.bpmi.org/