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## White Paper Series

# Business Process Fusion

Date: August 01, 2006  
Rev 2.0

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## **Introduction**

We have survived a global dot com meltdown, and a recession deepened by the events of September 11, 2001. The economy is showing signs of recovery. But, things are not as they were. Businesses are being asked to be more responsible, and laws such as the Sarbanes-Oxley Act are requiring it. This renewed focus on “the business as business” signals a return to the process as the means of getting business done.

As we gather our footing during this recovery, we realize that the next generation of business is upon us. It is not as foot-loose and fancy-free as the dot com days, but rather more conservative, bringing back into play sound business acumen. There is a renewed focus on “how” business is transacted, not just to insure compliance, but as a competitive advantage. The importance of the processes that make our businesses run has re-emerged as the number one issue facing companies today. The challenge for IT today is defined not so much as by what is in place already, as by what may be missing. We have spent the majority of the last twenty years building islands of automation with packaged software. The legacy left by these solutions is an integration problem that consumes much of IT’s time and budget. Forced to contend with these new challenges in the face of IT dollars being increasingly consumed by integration and maintenance costs, it is of no surprise that Business Process Management (BPM) has seen such a rapid rise in interest over the past year.

Analysts, such as Gartner, are watching this new focus on process, and have coined a term for what they believe is a major shift in business IT focus – Business Process Fusion (BPF). Simply put, business process fusion is the combination of people, processes, integration, and data to make business activities more efficient. Many companies have been able to create business process fusion by a sheer act of will – and millions of dollars and uncounted resource hours. They have discovered that the real value of BPF is not simply that of a cheaper means for integration, but rather as a resource to channel existing automation into orchestrated business processes. Ingenuus would like companies to know that they can make business process fusion happen in their organizations with much less effort, and much less cost, than those early pioneers.

It is the purpose of this White Paper to help readers understand how they can enable business process fusion for their department, company, virtual company, or supply chain.

## **Defining Business Process Fusion**

There is a new buzzword in town – Business Process Fusion (BPF). Research firm Gartner coined this phrase in October 2003 at the annual Gartner IT Summit. Simply put, Business Process Fusion (BPF) is Business Process Management (BPM), Enterprise Content Management (ECM), and Enterprise Application Integration (EAI) integrated. To understand BPF, we must first understand its components.

## **Business Process Management/Automation**

In a recent survey, researchers from the Delphi Group found that a majority of respondents defined BPM as, “an emerging software layer for building process based applications.<sup>1</sup>”

GIGA analysts define BPM as “the designing, executing, and optimizing of cross-functional business processes that incorporate systems, processes and people.<sup>2</sup>”

Perhaps this definition, from an article entitled, “The 10 Pillars of Business Process Management” written by Tyler McDaniel and published in the November 2001 issue of EAI journal, says it best, “Business processes align resources to achieve goals. Whether delivering goods to customers, collaborating with partners, or coordinating employee efforts, business processes are unifying threads that bind together the fabric of an enterprise’s products, brand, and value. Business processes are the heart of an enterprise’s identity.” We could not have said it better.

All these definitions underscore the fact that BPM has moved beyond the old notions of workflow, and is striving to become something new, something different. Vendors that provide process automation capabilities with integration are called “pure play” BPM vendors to distinguish them from larger players offering the same functionality as part of a bigger solution set, such as Enterprise Resource Planning (ERP).

## **Enterprise Application Integration**

The ability to share data across an enterprise means sharing data across several software systems often running on different hardware platforms. EAI solutions were developed to help make sense of data, even when it resides in different back-end enterprise systems.

As useful as integration is, it remains expensive. Many companies have spent the money to integrate to a system to extract data that they later discovered they did not need real time access to. This happens frequently after a merger or acquisition.

But data without context is almost useless. Eventually, EAI vendors began to buy up workflow companies and providing integrated workflow as part of the EAI solution. Although this was a step in the right direction, it still maintained a data centric, rather than a process centric, view of information use and access.

## **Enterprise Content Management**

During the 1980s managing documents was exciting new technology. Emerging from the image management industry, electronic data management (EDM) was an early form of ECM. The idea was to combine workflow with file storage. The result was the ability to create, review, approve, and then release a document in a single system.

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<sup>1</sup> BPM 2003, Market Milestone Report, Delphi Group

<sup>2</sup> RPA-022004-00001 - Market Overview: Business Process Management, 2004 Giga Research

Early product data management (PDM) systems were the next step in the marriage of workflow with documents, only this time, PDM vendors wanted to be able to manage “empty” files, required for bills of materials. The notion of a file “folder” was born.

As time went on and the Internet began to change the way we thought about documents, EDM fell out of favor and PDM was consolidating. To revive the EDM industry, vendors and analysts created a new generation of document management called Enterprise Content Management (ECM). Initially geared to managing the files of a web site, ECM quickly moved to managing files all over the organization using the website as a “portal”, a sort of virtual library of documents. Early adopters were able to tout amazing savings in printing and distribution of paper document and manuals. To revive the PDM industry, merging CAD and PDM into Product Lifecycle Management (PLM) created another industry.

## **Merging the Solutions**

These various acronyms are constructs of the analysts, and rarely help in understanding technology, but rather provide a convenient way to categorize technology. It is helpful to think of BPF a little like putting pieces of pipe together to form a conduit through which information can flow. This is a good analogy because it focuses on the flow of information to a specific place for a specific reason rather than how to make the flow happen. More on this later.

## **Business Process Fusion**

Business process fusion aims for transformational change in business capabilities by exploiting coherent IT support for dynamic, time-sensitive, end-to-end business processes. Three key capabilities are required from IT systems to achieve business process fusion:

- Systems integration achieves the requisite scope for end-to-end processes
- Application mutability provides flexibility to accommodate process changes
- Information unification supports all types of decision making within a single framework

The goal of BPF is – *the designing, executing and optimizing of cross-functional business processes that incorporate systems, processes and people*. BPF combines integration and content management with process automation in order to achieve relevant data in the context of a process.

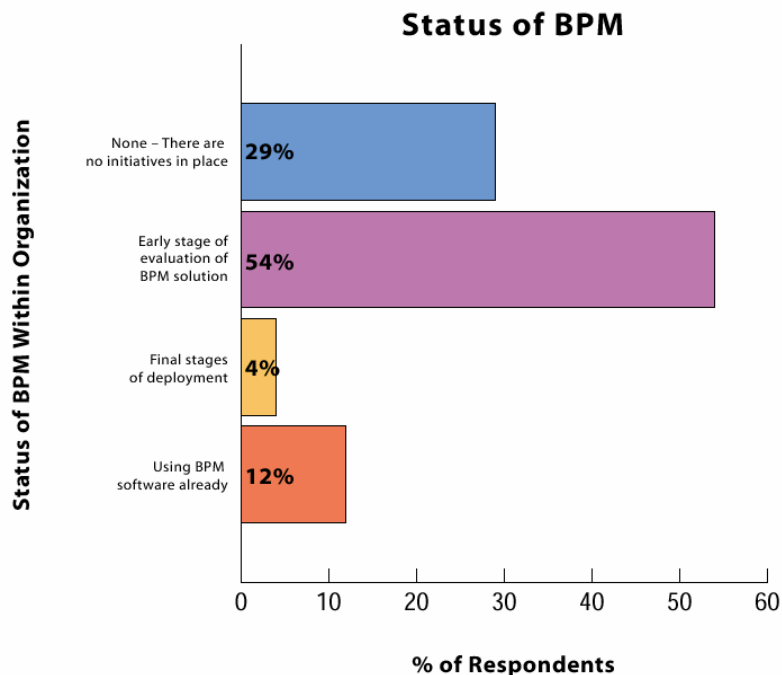
Because process fusion is the automation of a business process, content management and integration with backend systems, it will require solutions that can provide several capabilities.

- Business processes are not linear, but cyclical. So, process fusion solutions must be able to **model existing processes** and yet be flexible enough to change when the demands of business require it. They must also present this information appropriately, and be able to examine life-cycle activity so it can be improved.
- Some sort of **workflow** support for the development, manufacture, distribution and maintenance of products is required. Different players' roles as well as the stages of development must be flexibly defined for different participants and classes of products – especially supplier and partner participants.
- In addition to workflow, there must be some form of **task management**. Tasks need to be managed and data needs to be pushed through the process while maintaining control. The best solution would fuse workflow and task management.
- When multiple products and requirements documents are being prepared, managing the resources against these tasks can become a significant challenge. Tracking these efforts and allocating assets against them in the right priority is critical. Although workflow can be useful in managing tasks, **Project and resource management** capabilities are also required to coordinate tasks between various projects, departments, and even companies.
- Every business process embodies a **life cycle**. Often referred to as “upstream” and “downstream” the notion of a life cycle is embodied in the idea that a cycle requires input and output. Unlike a linear flow so often associated with workflow, life cycle embodies the entire inbound and outbound flow of information.
- Access to intellectual capital stored in various enterprise **knowledge management** solutions is critical to supporting process fusion. This also implies the ability to publish information and documents back to these various solutions and generally require some middleware or integration capability.
- Where there are transactions, processes, and the exchange of data there are bound to be questions, suggestions, changes and complaints, and very occasionally, some gratuitous praise. Integration to existing **customer service** solutions to organize and coordinate the handling of these communications is important.
- True collaboration comes from interactions in the larger **community** of people who directly or tangentially participate in the process. These interactions must be able to exert influence on the process in such a way as to stimulate the greatest benefit.
- **Publishing (or content management)** tools organize presentation of information and "look-and-feel" of an automated process.
- **Personalization** can vastly improve c-collaboration solution's effectiveness for users.
- **Permissions** are essential to making sure the right people see the right things at the right time. In order to correctly deploy permissions, the old approach that tries to determine the various permission requirements of each document, “dynamic” permissions controlled by workflow will be required for c-commerce applications.
- **Analytic tools** can mine behavioral, process, and product data for value-added information that ultimately can be used to drive product, process, or product enhancements.

Finally, a set of "engine-room" capabilities are required to present all of this information appropriately, and to examine the activity in a process so it can be improved.

## Real Obstacles to BPF

This move to BPF began in earnest with a noticeable move to BPM right after the Y2K scare. In a survey conducted by Delphi Group in 2001, only 12% of the respondents said they had implemented BPM. But a staggering 54% were in the early stages of evaluating BPM solutions. The downturn in the economy, coupled with the events of September 11, 2001, has put most of these projects on hold – until now. The renewed interest in BPM, and BPF, is actually a pent up demand that has been put on the back burner due to a lack of funding.



Source: Delphi Group, 2001

There is a wide range of deployment challenges facing any company wishing to create BPF using today's BPM solutions. Some of the most common are:

- BPM applications are often considered to be too difficult to use, and are not often available to the actual process owners
- Instead of providing specific solutions, most products provide a generic set of capabilities but fail to provide users with a good context for deployment, resulting in a mismatch between the tools and the deployed environment
- A lack of labor saving tools, templates, and techniques lead to costly and time-consuming customization
- Most BPM tools focus on automating process steps rather than the business objectives of a process, most often defined as tasks

In most cases, when a BPM project fails it is not the technology, but rather a lack of adequate planning for deployment, and a clear mapping to business tasks and objectives.

## **Solving The Problem**

Ingenuus has finally overcome the obstacles inherent in many BPM solutions today. Our Process Orchestrator Platform makes BPF a reality, at a fraction of the cost and time required by other solutions.

## **Easy to Use Tools**

We believe that process owners need to own the process, and have the ability to create, modify, and manage those processes. Rich, graphical tools allow for process modeling, testing, and release. Graphical monitoring tools allow process owners to monitor their processes and keep things moving. Process revision control helps maintain coherent process deployment, and strict conformity to ISO and other standards.

## **Specific Solutions**

Ingenuus provides solutions specific to problems faced by organizations. Our Task Flows are designed to work together, and we bundle particular Task Flows that work together to create “application” suites.

## **Templates**

If the last few decades of computer and software use have taught us anything at all, it has shown us that platforms, frameworks, and environments are only enablers for real solutions. Like the stage and props that support the actors in a play, collaborative environments are a support and backdrop to real fusion solutions.

Are Templates Right for You?

Doculabs, a leading IT consultancy, suggests these questions for determining if process templates are right for you:

- Does your company operate in an environment that exhibits characteristics that aren't specific to its industry?
- Do your company's business processes involve recurring sets of actions (i.e., tasks) or steps that are consistent across different business settings?

If the answers to these questions indicate that your company faces a series of recurring deployment challenges, and has a tendency to fine-tune solutions, it may be time to investigate systems with process templates designed to optimize deployment.

## **Automating Tasks And Steps**

Using a fairly common description of robust BPM, we have created a checklist of BPF capabilities provided by the Ingenuus Process Orchestrator focusing on a process as the management of tasks to complete a process, hence the term, Task Flow.

***1. A Task Flow consists of a bunch of tasks.***

One task alone performed by one person we call a “discrete task”. Generally, a discrete task is not a business process (but it can be). A task that may require more than one person to complete we call a “process task”. With Process Orchestrator, simply modeling the process tasks can help you identify some tasks that can be eliminated or automated to produce dramatic improvements.

***2. A business process is “structured and semi-structured.” This means that there is some logic or rules that dictate the sequence or routing of the tasks to be performed.***

Business rules are a must in a BPF solution. Whenever there is clearly defined logic, automation can be used to eliminate errors and make decisions on routing. But, when ad hoc routing is required, a BPF solution should be able support a certain amount of flexibility. The Process Orchestrator allows for both structured business rules and semi-structured ad hoc routing.

***3. The tasks can be performed in “series or in parallel.”***

Many tasks follow a sequential or series of steps from beginning to end. These types of tasks are reasonably simple to automate and track. However, highly iterative processes that involve people (such as project processes and tasks) are hard to automate because existing systems do not automate tasks in parallel where two or more actions are being performed at the same exact time. Parallel routing (often called “nested workflows”) is important because it can result in significant reductions in cycle time. But nested processes are large and cumbersome. Process Orchestrator not only makes parallel routing easier, but you can also always be aware of where a particular process is in its lifecycle — knowing who is working on it now (or should be working on it) and where it will go next.

***4. Process “packets” make certain that vital documents and information are available for each participant at each step of the process.***

As information flows from person to person, the opportunity to lose something, make an error, or simply interpret it incorrectly grows. By automating steps and tasks as well as capturing information electronically, the likelihood of such errors decreases significantly. In addition, if applications are going to be involved somewhere in the process, having the information already in an electronic format simplifies integration. Audits are also easier when a process can be reviewed as a database of information, not just bits and pieces of data. Process Orchestrator builds a Task Flow packet that is available during the life of the process and after it is archived.

***5. The sequence of tasks must have the purpose of reaching a common goal or outcome and must be able to stretch across a virtual organization.***

This highlights the fact that business processes are geared towards producing results and that with standard BPM solutions, creating and maintaining end-to-end business

processes is difficult. By applying Process Orchestrator, you can focus on the desired results and measure your execution against that standard. If you are not meeting your goals, optimization can be used to improve performance.

## **Summary**

Process fusion will free your organization from over analyzing your situation and move to rapid deployment. A good BPM product, such as Ingenuus' Process Orchestrator, is not afraid of post implementation process changes. Implementers can deploy templates quickly, and fine tune as they go along.

## Revision History

Date	Version	Author	Comment
November 29 <sup>th</sup> , 2004	0.5	Vivek Prasad	Draft for initial review
December 6 <sup>th</sup> , 2004	1.0	Vivek Prasad, Christopher Williams	Final Review
August 1 <sup>st</sup> , 2006	2.0	Christopher Williams	Update for new verbage