BIZFLOW®
by HANDYSOFT

Business Process Management and its Value to the Enterprise

A HandySoft Global Corporation White Paper
October 2003

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Introduction

"How can I reduce my operating costs?"

"How can I reduce inefficiencies and leverage our human and physical capital investments?"

"How can I improve the quality of my corporate products, services, and information?"

"How can I be more flexible with today's changing business environment?"

"How can I enforce business process excellence across the enterprise?"

"How can I be more responsive to my partners, customers, and employees?"

Virtually all executives are facing challenges such as these within their organizations. By improving the management of their people, business processes, and IT systems, executives can make real progress in improving the way work gets done and achieving corporate goals.

Unfortunately, in most organizations, people, processes, and systems are divided and isolated. This environment of stove-pipe operations makes it difficult to change at all, much less as quickly as necessary in order to react to changing market conditions.

With the economy in a continuing state of flux...with headlines bringing greater concerns about corporate performance and accountability...it is more important than ever for executives to gain control of their operations and their resources, to gain a top-down view into their entire enterprise, and to be able to manage their activities in order to increase productivity and profitability. And as quality initiatives such as Six Sigma continue to grow in focus, it is especially crucial for companies to have the data they need to quantify their efforts at greater efficiency and performance.

So the question remains: how do business and IT executives manage such a broad range of activities across the enterprise, and between the enterprise and their customers and partners? Can they really hope to bring order to complex business processes that require the coordination of greater amounts of people, information, and transactions?

Today, there is a solution that can deliver the control and visibility that executives need to manage their organizations for success. That solution is *business process management*, or BPM — the aligning and coordinating of people, activities, and resources to achieve organizational goals.

This paper provides a basic overview of BPM, beginning with a look at some of the challenges that large organizations face in achieving their business objectives, especially the challenges of aligning information technology to support those objectives. Then it looks at BPM — its business value and some of the elements that comprise it. As an example of BPM today, the paper concludes with a review of BizFlow, the award-winning BPM platform offered by HandySoft Corp.

Challenges in Aligning Business Resources with Business Goals

"Cow Paths" and Other Roads to Isolation

Most business executives remember business-process reengineering efforts during the 1990s, the attempt to overhaul and automate processes by using information technology such as workflow software. In some cases productivity and efficiency were improved; but in many cases, companies just automated bad processes rather than really taking the time to plan out what they wanted to accomplish, and how best to use information technology to accomplish it. (The phrase "paving the cow paths" came into common usage, a reference to creating modern streets and highways out of the twisting, narrow trails once used to drive livestock to market.)

More recently, the Internet has fueled an explosion of collaborative technologies — integrating systems and applications, automating essential tasks, and connecting internal functions with those of customers and suppliers, enabling companies to more efficiently plan and manage their activities. But many of these initiatives have also begun to falter — either through substantive shortcomings in the technologies themselves, or in the business models of the vendors that created them.

Figure 1 shows the result — an environment in which departments and subsidiaries are divided from one another, which are themselves separated from customers and suppliers. In spite of efforts at automating work and integrating applications, today's enterprise often labors with islands of technology that work in isolation from one another, defeating collaboration and keeping employees from ready access to the information they need and the work they're supposed to do.

Figure 1: People and systems working in isolation.

Compounding this problem is the fact that so much new technology has been applied to problems without fully assessing the problems themselves. Even today, after the "cow paths" experience of the reengineering era, technology vendors continue to promote solutions that are proprietary or in other ways fail to accommodate the needs of an organization in transforming the way they work: "Major systems investments yield little return unless they are accompanied by equally major business change."[1]
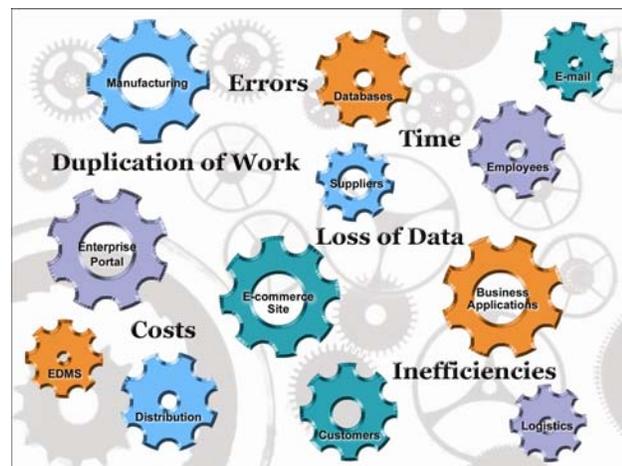
BPM: Making the Connection Among People, Process, and Technology

The solution for connecting these gears into a single, unified machine that supports productivity across the enterprise is *business process management*, or BPM. The practical and strategic value of business process management is captured in an observation by Gartner analysts Jim Sinur and Jess Thompson: "Business process management wins the 'triple crown' of saving money, saving time and adding value. It also spans the business and technological gap to create synergy, with proven results."[2]

BPM addresses the challenges that enterprises face by enabling them to organize and manage people, activities, and resources such as capital assets and information technology to more effectively reach their goals. In contrast with business process reengineering, BPM "provides a way to capture existing processes, test multiple variants, manage any mode of innovation or improvement the company sees fit to adopt, and readily deploy the result," according to BPM analysts Howard Smith and Peter Fingar.[3] BPM acts as a catalyst for transforming an organization and the way it works by *automating* and *simplifying* processes, *enforcing* best practices, *improving* quality and productivity, and *fostering* collaboration internally as well as with customers and partners.

> Business process management wins the 'triple crown' of saving money, saving time and adding value. It also spans the business and technological gap to create synergy, with proven results.
>
> Gartner Inc.

BPM eliminates the stovepipes in an organization — bridges the gaps among people and systems, allowing organizations to automate, deploy, and modify business processes across the enterprise, align people and resources to achieve organizational goals, and connect the enterprise with customers and partners. [Figure 2]

Some executives may hear the term "business process management" and think in terms of software and technology solutions. But the growing interest in BPM is driven by economics and business results rather than a compulsion to add another layer of software to an already-burdened IT environment. Michael Hammer, world-renowned author on quality and excellence in the organization, says this about BPM:

Figure 2: People and systems working in coordination.

Eventually, products standardize, competition intensifies, demand slides, customers become more exigent, and success becomes the province of those who can execute better than their adversaries. In short, the long-term winners will be those that master process. The payoff of process mastery can be breathtaking. Costs melt away, quality goes through the roof, and time spans shrink to a fraction of what they were.[4]

An article in a leading IT journal put it this way:

Shareholders expect companies to reach new heights in productivity, especially in the current down-turned, more fiercely competitive marketplace. Companies are under pressure to perform better and faster, to do more with less, and to be super-pleasing to customers. This means changing the way companies manage their business processes so they can innovate, collaborate with trading partners, and bring compelling new value to customers....

Shaped by today's intense competitive pressure, the company of the future will need to be the master of business process management. It will harness business process management systems to translate business vision into technological reality.[5]

The building momentum toward BPM is not limited to the commercial sector, either. An editorial in a government IT journal said:

If you manage core agency business processes, BPM could be one of your most critical IT initiatives. You'll become less occupied with keeping the ship afloat and more focused on exception processing and program improvement.   Most importantly, you'll gain a clearer picture of the status of each stage of business you manage—a powerful tool for improving customer service and responsiveness.[6]

As a result, executives at all levels of today's enterprises are putting BPM at the top of their agendas; in fact, a study by research group META found that 85 percent of companies will have BPM initiatives underway by the end of 2004.[7] These enterprises are awakening to the sobering reality summarized by one leading analyst: "Do not expect to bypass this innovation-rich capability. BPM is not avoidable in the long run....consider what could happen if your No. 1 competitor gets the BPM message before you do."[8]

The Evolution of Business Process Management

Business process management has evolved from roots in workflow, groupware, and enterprise application integration (EAI). Most business executives and IT managers have been around long enough to have lived through some early implementations of workflow software in the 1980s and 1990s as a part of a business-process reengineering effort, and are continuing to try to align their business processes with their business applications as part of an EAI strategy.

In that context, it may be helpful to consider how BPM has evolved from the basic workflow of the past into a fully developed solution today — and why BPM is such an exciting, radical advance over these past efforts.

From Workflow...

Step 1 → Step 2 → Step 3

Fig. 3: Workflow Automation: A linear sequence of events.

Early *workflow software* solutions were linear, routing electronic documents from person to person, perhaps allowing for some parallel work on a particular task, but in general, not a very sophisticated system. Most systems could perform only simple, repetitive work due to strictly defined work processes. And these systems were expensive and technologically cumbersome, requiring costly software on each desktop and no ability to scale across the enterprise.

...to enterprise application integration...
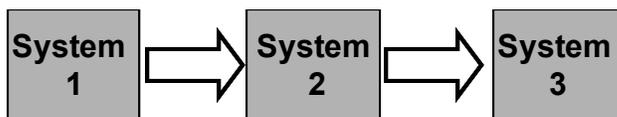
System 1 → System 2 → System 3

Fig. 4: EAI: Integration without the benefit of human interaction.

Just a few years ago, the magic bullet for efficiency and productivity was *enterprise application integration*, or EAI. As part of the e-business wave of the late 1990s, organizations made efforts to get their IT systems to work together, using business rules to govern the interaction among enterprise applications and other systems.

Unfortunately, these efforts often required compromises — businesses had to make their rules and models conform to the limits of their proprietary EAI platform. Further, EAI solutions didn't allow for the human factor; if a problem occurred and someone needed to make a judgment call on how to handle it, the systems weren't set up to accommodate human intervention.

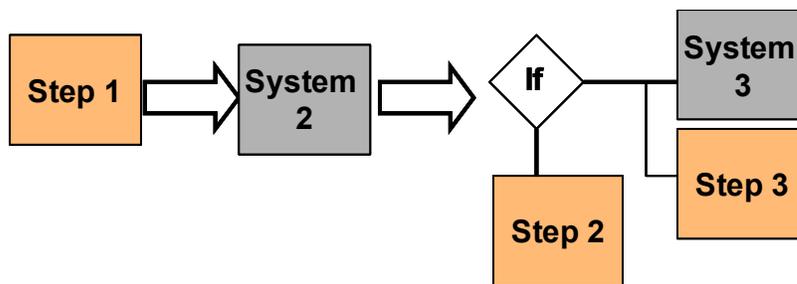## ...to business process management.

Fig. 5: BPM: People, processes, and technology aligned.

The optimal environment involves fully mature *business process management*, where the people and tasks in a business process are integrated with the IT systems that support business activities. BPM does this by separating the process logic from the applications that run them, managing relationships among process participants, integrating internal and external process resources, and monitoring process performance.[9]

In this ideal setting, when a worker, or a business system, or a customer at a Web site initiates a business process, it begins a sequence of coordinated activities that include the people, information, and supporting systems at each step. Just as important, the data or business application needed to complete the work is presented along with the work, so that the person doing the work doesn't have to guess at which tools or information are needed to complete the task. Wherever possible, these activities are automated according to the business rules of the process, to increase the efficiency of the process and to minimize errors such as sending a work item to the wrong person.

The Elements of Business Process Management

Figure 6 shows how a BPM platform such as HandySoft's BizFlow bridges the gaps in an enterprise so that the tasks of a business process can be organized and automated as a logical order of events.
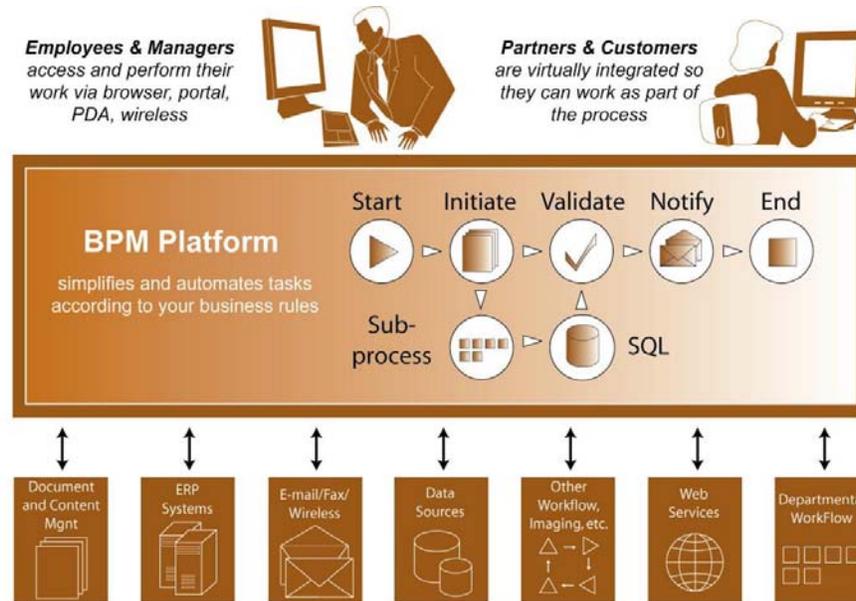

Figure 6: BPM makes the connection among people, processes, and technology.

In the center of the diagram is the platform itself, the switchboard that regulates the flow of activities at each step of the business process. This is where work is initiated, where alerts are generated and routed to signal the next participants in the flow, where responses back from participants are validated against the business rules governing the process in order to continue the sequence of events.

At the top of the diagram are *process participants* such as employees, partners, and customers; *process owners* such as executive management; and *IT personnel*, charged with ensuring that all systems are operating together within the BPM environment. Each of these players in the business process are able to access and act upon their work, provided in a customizable interface.

At the bottom of the diagram are the systems that provide input and receive output from the process — for example, information that may be needed to initiate a business process or fuel the flow of work through the process. These could include Web Services, incoming e-mails, submissions from an e-commerce Web site, documents from an electronic document management system, or

enterprise applications such as PeopleSoft or Siebel that contain data vital to the process. The platform should be able to update data sources in real time, issue alerts via fax, e-mail, PDAs, and other devices, and update enterprise applications based on the activities within the process.

By capturing and enforcing a business process in this way, the BPM platform allows process owners and decision-makers to model their processes, automate the tasks of the process, monitor and measure its performance, archive valuable information about each instance of the process, and then adapt the process as needed.

The Value of Business Process Management

Gartner analyst Jim Sinur has observed that "BPM is delivering benefits for implementing best-practice business process flows that reduce errors and time to delivery and enable workforce optimization. Evidence is pouring in that BPM is delivering cost benefits, while reducing error cycles, increasing value and enabling differentiation."[10] Specifically, a BPM enables enterprises to:

Reduce costs. BPM enables the execution of business processes with fewer human resources without impeding the quality of service. It lets enterprises leverage their existing IT resources so they don't have to invest in new technology in the course of improving the way they work.

Improve quality and reduce errors. A BPM system yields reports based on real-time and historical performance that help managers reduce errors at each step of the process, whether the errors are in the area of manufacturing, logistics, supply chain, customer support, and others. The use of electronic forms in an automated business process also reduces data-entry errors by using data imported from other applications.

Gain visibility into the enterprise. A BPM solution offers decision-makers a window into the process, so they can see the status of an activity, where and why it's been delayed, and what's being done to fix the problem. Reports on benchmarks, key performance indicators, and other criteria provide managers with the insights they need on how well their units are performing, in their own work and as part of a larger process.

Manage, measure, and improve processes. BPM gives enterprise executives more tools for managing, measuring, and improving their business processes. Especially in the era of Six Sigma and other quality initiatives, organizations need to have quantitative data in order to validate the decisions they've made in their process re-design.

Automate steps in the process. A fundamental benefit of BPM is the ability to automate steps in the process. By routing work according to business rules to the people and systems that have to act on them, BPM collapses the time it takes to move paperwork through a process or to handle complex transactions.

Balance workloads. A related benefit is balancing workloads and getting the right work to the right people. For example, if the process involves the processing of claim forms by a team of clerks, the system can sense which clerks are ready to take on new items in their electronic in-basket. It can also route a particular work item to specific personnel who are qualified to handle that kind of work.

Eliminate paper-based operations. A major advantage to an automated business process is the reduction or elimination of paperwork. By using online documents, an organization can eliminate much of the cost of creating, storing, managing, and routing paper documents.

Improve satisfaction. Customers, employees, partners, and others in a collaborative environment expect near-instantaneous handling of their orders, issues, and problems. BPM enables organizations to handle transactions faster and with fewer errors, and to take action when problems do arise.

The benefits of business process management are more than just theory. In his survey of thousands of organizations, Michael Hammer discovered that business process management had:

- Reduced order fulfillment cycle times by 60 to 90 percent.
- Slashed the cost of procurement transactions by more than 80 percent, while shrinking procurement times by 90 percent.
- Boosted the percentage of successful product launches by 30 to 50 percent, while cutting the time needed to bring new products to market by 50 to 75 percent.[11]

Examples from specific industries include:

- **Manufacturing.** A HandySoft customer, a Fortune 50 pharmaceutical manufacturer striving for Six Sigma perfection, reduced capital appropriations from up to six weeks to as little as one day. This company can also generate an additional $3.7 million in sales just by completing the approval process faster. Automotive parts maker Continental Teves expects to continuously improve processes with BizFlow to increase quality and data integrity and reduce overall cycle time, with an annual cost savings of $1.3 million.

- **Finance and Financial Services.** LOGS Financial Services, a HandySoft customer in mortgage banking, is increasing productivity by as much as 70% for some of its foreclosure processes. Stolt-Nielsen Transportation Group, a global leader in chemicals shipping, projects the BizFlow Accelerator for AP will reduce cycle times on 900,000 annual invoices from 20 to three days, eliminate the re-keying of data into their ERP system, and provide managers with complete visibility of the status of any invoice at any time.

- **Public Sector.** A federal agency using a HandySoft solution is automating the processing of 220 forms that were once paper-based; work that used to take days can now be completed within hours. And the Department of Oceans and Fisheries Canada expects to see a 40 percent reduction in cycle time and workload as well as increased visibility into the status and history of correspondence with their BizFlow-based correspondence-tracking application.

A Look at the BizFlow Platform

Figure 7 shows the components of a business process management platform, using BizFlow, the award-winning BPM platform from HandySoft, as an example.
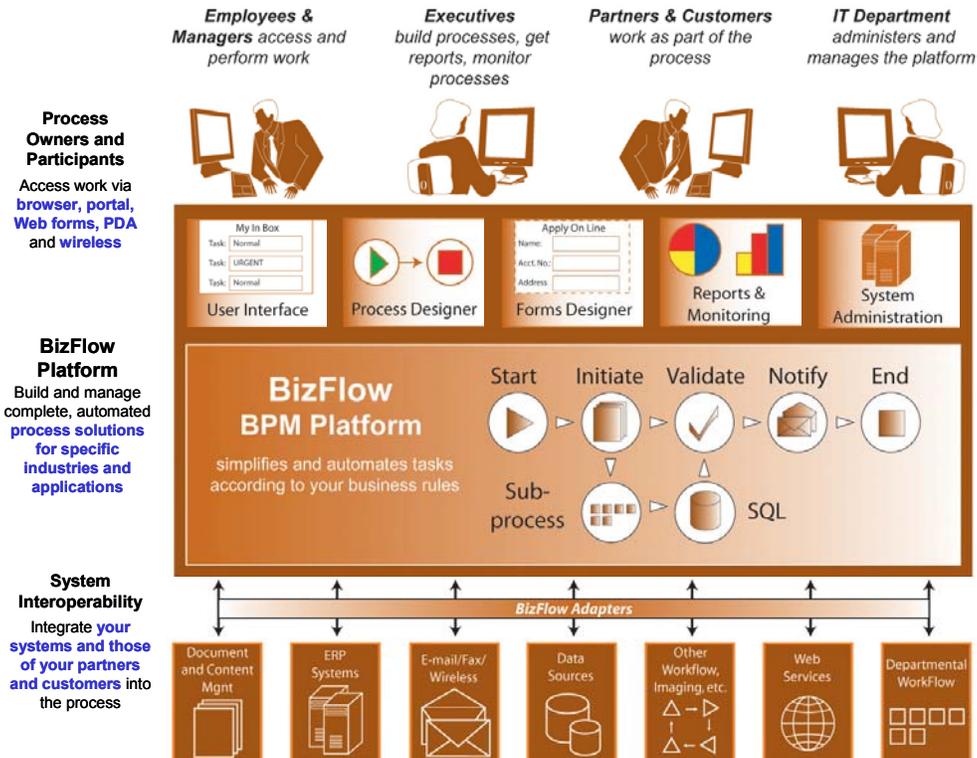

Figure 7: A business process management platform showing process and forms designer, administration tools, user interface for managers and employees, as well as integration adaptors that accommodate the current IT environment.

The foundation of a BPM solution is an organization's existing business systems. Most enterprises have invested a great deal of time and money in their IT infrastructure; they may also have begun deploying Web Services and other systems that use Web standards like LDAP. The purpose of those standards is to enable organizations to leverage and re-purpose their existing business systems.

With that in mind, the BizFlow platform integrates easily and gracefully with current IT environments, providing a complete suite of all the tools needed to build, configure, and deploy a solution for business process management, collaboration, and automated workflow. While most

BPM and EAI platforms are proprietary or in some other way restrict options and flexibility, BizFlow is "technology-agnostic" and can thus rapidly blend in with an organization's current business and IT environment, as well as with those of customers and partners.

The core of BizFlow is a world-class *process engine* that routes, monitors, escalates, and audits the flow of work and information that are part of the automated process, according to business rules that the organization establishes. Complementing the workflow engine are five components that create the complete BPM solution:

- A *configurable user interface* that lets each process participant organize their workspace according to their requirements;

- A *process design module* that lets managers create and modify complex processes using point-and-click icons, without having to do any programming;

- A *forms design module* to create intelligent electronic forms that are used in automated business processes;

- *Reporting and monitoring capabilities* that let executives keep track of the performance of their processes in real time.

- *Administration tools* that make tasks like adding users or data sources easier, even for non-technical personnel.

BizFlow also includes *adaptors* that connect business processes directly to existing enterprise applications, legacy databases, and other existing IT systems so they can support the business processes built and managed with BizFlow.

Features of the BizFlow Platform

While most BPM platforms offer similar features, BizFlow offers several unique capabilities that make it a truly complete environment for enabling comprehensive, business-focused process solutions. For example, according to research from the Delphi Group,[12] the three leading capabilities business and IT executives hope for when deploying a BPM platform are:

- The automation of repetitive tasks for the purpose of accelerating process cycle times;

- Managing and monitoring the performance of processes and related tasks and personnel;

- The ability for business (non-technical) personnel to change the business rules and logic of enterprise software.

BizFlow support these and other capabilities through such features as:

Process design. One of the most powerful aspects of BizFlow is its process modeling tool. This Visio-like application lets even non-technical personnel create complex business processes by dragging and dropping icons onto a palette. With BizFlow, personnel aren't just drawing a picture of the process; they are actually programming the process itself, with no programming skills required, by using an intuitive property editor to assign rules and roles and connect the enterprise applications and other systems needed to support the process at each stage.
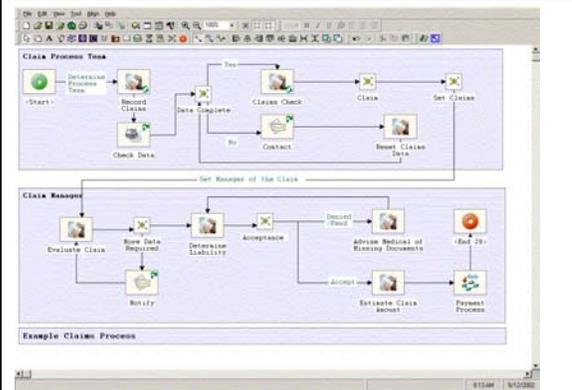
Ad-hoc routing and exception-handling. Although an important benefit of BPM is automating routine tasks to accelerate cycle times, it's just as important to allow for human intervention and interaction when necessary. BizFlow does this with ad-hoc routing that enables workers to dynamically select one or more recipients for a work item from a given list, including users, departments, groups, and roles. BizFlow also provides exception-handling to automatically intervene when a problem with a transaction occurs and the process requires human review and decision-making in order to continue.
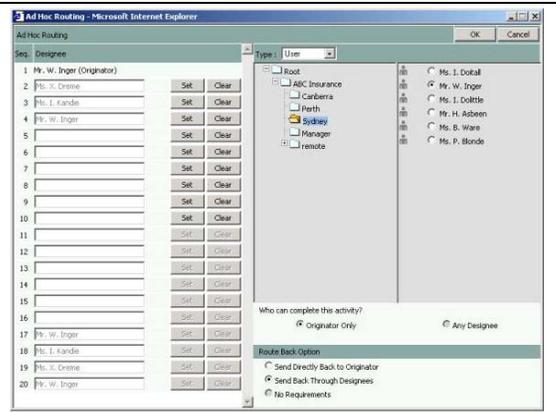
Reporting. BizFlow provides customized, real-time views of the essentials of business processes based on a variety of parameters. These reports can be easily configured to provide details on current activities and historical performance. Process owners can get reports on an entire process or drill down to specific activities within a process, within specific time periods, automatically displaying significant findings in clear, easy-to-understand tables and graphs. These reports provide valuable insights into productivity and provide the metrics necessary for continuing process improvement.
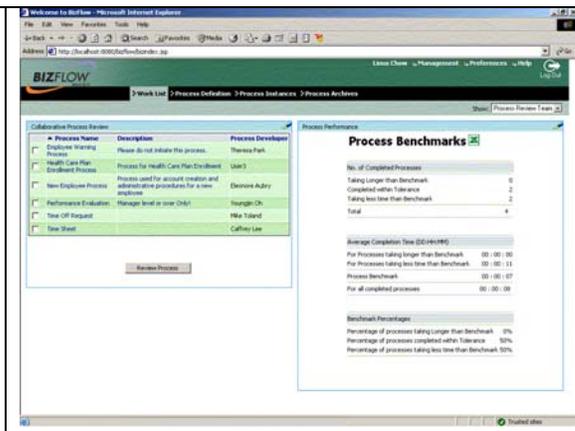
Monitoring. BizFlow offers real-time monitoring and audit trails so process owners can see the status of a process, which steps have been completed, where it's going next, who's currently responsible for it, and details on exceptions or other problems with the normal flow of work. Managers can drill down into sub-processes to check the status of transactions at the department level, or get a broad look at enterprise-wide activities. This tactical visibility helps executives manage their work and ensures better customer service and greater productivity.
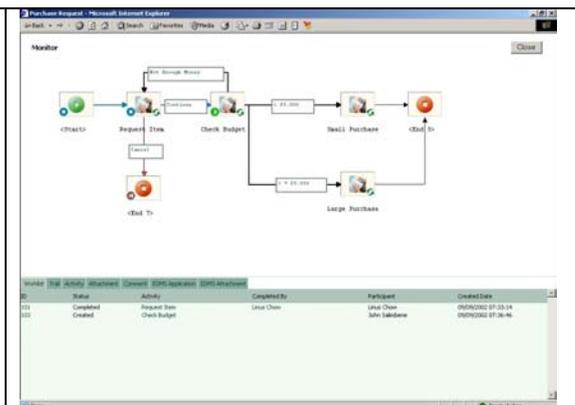
User Interface. BizFlow features a configurable user interface that gives process participants a great deal of flexibility in design and appearance. The interface can be easily configured to display work organized as participants need to see it, according to requirements of particular departments and roles. Each work item indicates whether it is completed or not, where it stands in the workflow, and other criteria about its status. Managers, too, can get customizable reports with views that provide vital data on the status of the processes they manage. Organizations can also modify the design of the interface to reflect their corporate standards, including logos, color scheme, taglines, and other elements.
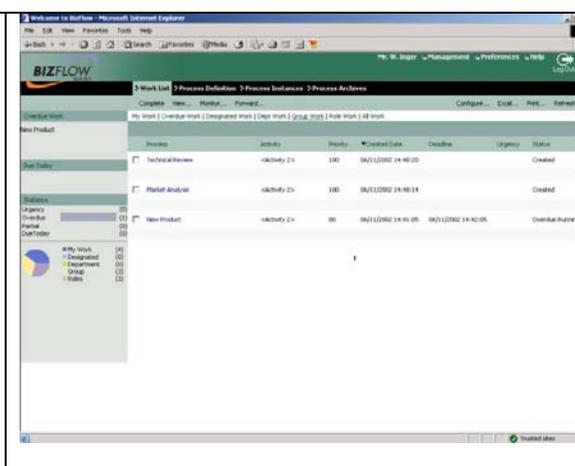
Forms Design. BizFlow comes with a forms-creation application that lets nearly anyone create attractive, clear, easy-to-follow electronic forms that can be used in an automated business process. These forms can import and export data from other applications, validate that a field has been filled out properly, and calculate data within the tables. These forms also support digital signatures, and provide protection so that only authorized personnel can alter them.

Benefits of BizFlow: Unique Capabilities for Complete BPM

The unique capabilities of BizFlow yield benefits for organizations that want to deploy business process management at the department level, across an enterprise, or between the enterprise and its customers and partners.

Improved Efficiency. It has been estimated that 90 percent of the time it takes to complete a typical business process is dead time — time waiting for a form to move from one desk to the next, time waiting for a manager's approval, time waiting for a form with a problem to get routed back to the right person and fixed. BizFlow extracts dead time from the process by automatically routing work, alerting participants when they receive the next work item, alerting them that they need to take an action, and by automatically accessing the databases and applications needed in order to complete a task. And BizFlow offers ad-hoc routing of work to give workers flexibility in handling tasks, and exception-handling to ensure that work continues even when a problem transaction arises.

Improved Quality. BizFlow's intelligent electronic forms enforce data-entry rules and pre-populate data from various systems to reduce errors and re-keying. Also, BizFlow delivers visibility and reporting straight to the desktops of decision makers so they can gain rapid insight into where processes are working and where they need improving. In formal quality initiatives such as Six Sigma and Statistical Process Control, BizFlow gives detailed monitoring and control of activities such as deadlines, audit trails, escalation, and exceptions.

Greater Satisfaction. BizFlow makes it easier for customers and partners to work with an enterprise, and easier for employees and managers to work *for* an enterprise. With BizFlow, there are fewer errors in transactions, faster responses to inquiries and orders with straight-through processing,

back-end systems that support the process at each step, monitoring and archived processes that allow personnel to track the status of an order in an instant, and exception-handling that keeps processes moving. And BizFlow improves morale among process participants with easy-to-use interfaces that users can customize for their needs, guidance through work items so that customers and employees aren't guessing at what they're supposed to do.

Lower Operating Costs. A primary concern among businesses about BPM is, "What's the ROI? Can I be sure this investment will pay for itself as well as yield measurable financial benefits?" BizFlow can reduce operating costs by easily automating processes that reduce the cost of creating and managing paper forms; enterprises don't have to print the documents or bear the cost of distributing and storing them. BizFlow also enables organizations to utilize their existing headcount more efficiently, so they don't need to hire more personnel as work expands, and they can re-assign current personnel to other tasks.

Lower IT Costs. One of the most powerful advantages of BizFlow is that it enables non-technical personnel such as MBAs, Six Sigma black belts, and business process experts to model, maintain, and monitor business processes without drawing on IT resources for coding and programming. But when IT staff does need to get involved, BizFlow lets them make modifications to the existing environment a lot more easily. For example, BizFlow's out-of-the-box adaptors lets IT integrate their enterprise applications, document management systems, databases, and other legacy systems without a huge expense. And by supporting the most common operating systems and development environments, BizFlow reduces the cost of training and maintenance.

Conclusion

Business and IT executives who have followed the difficult road from "cow paths" to modern business process management are discovering that BPM offers the promise of improved performance, greater efficiency, lower costs, and greater competitiveness. Because, unlike workflow and EAI solutions, today's BPM solutions are *business*-centric, supporting the needs of the enterprise in achieving organizational goals rather than hindering the achievement of goals due to limitations of the technology.

"Business process management is itself a process that ensures continued improvement in an organization's performance," observes BPM expert Roger Burlton, but "as with any process, business process management requires leadership and guidance."[13] For successful results, BPM requires the commitment of executives whose vision for process excellence is matched by a willingness to take on that leadership role; fortunately for them, feature-rich BPM solutions such as BizFlow make that effort more rewarding for business and IT decision-makers alike.

Notes

[1] Michael Hammer, "How to Sell Change," *Optimize* Magazine, December 2001

[2] Jim Sinur and Jess Thompson, "The Business Process Management Scenario," Gartner Inc., June 2, 2003

[3] Howard Smith and Peter Fingar, *Business Process Management: The Third Wave* (Tampa: Meghan-Kiffer Press, 2002), p. 123.

[4] Michael Hammer, *The Agenda: What Every Business Must Do to Dominate the Decade* (New York: Crown Business, 2001), p. 58-59.

[5] Howard Smith and Peter Fingar, "Environmental Policy: A New Software Category Powers a New Way of Competing," *Internet World*, May 1, 2002

[6] Neal Bonner, "Business Process Management Can Boost E-Gov," *Government Computer News,* October 8, 2001

[7] Demir Barlas, "BPM: Getting Bigger," Line56, August 20, 2003

[8] David W. McCoy, "Business Process Management: Are You Experienced?" Gartner Inc., November 20, 2001

[9] Barry Murphy, "Business Process Management 2002: Market Milestone Report," The Delphi Group, April 2002, p. 1

[10] Jim Sinur, "Agile Process Integration is Emerging in BPM," Gartner Inc., December 5, 2002

[11] Michael Hammer, *The Agenda,* 59

[12] Murphy, "Business Process Management 2002: Market Milestone Report," 3.

[13] Roger T. Burlton, *Business Process Management: Profiting from Process* (Indianapolis: Sams Publishing, 2001), 73.

About HandySoft

Founded in 1992, HandySoft Global Corp. is an international provider of software solutions for managing people, processes, and technology in support of achieving business goals. There are more than 380 customer installations of HandySoft solutions worldwide, including Conseco, Kenneth Cole, Continental Teves, the Defense Finance and Accounting Service, the State of Illinois, the U.S. Department of Transportation, and others.

HandySoft is the developer of BizFlow, the award-winning platform for business process management, automated workflow, and collaboration enablement. BizFlow offers complete capabilities for developing and managing automated business processes, including tools for designing processes, creating intelligent e-forms, presenting and accessing work, and administering the platform itself. You can quickly integrate your existing IT systems with BizFlow, and BizFlow is also easily extensible among departments, across the enterprise, and to customers and partners thanks to Web Services and web-based standards such as LDAP.

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