Enabling "People-Ready Processes" through Business Process Management (BPM)

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Abstract

In today's global and hyper-competitive economy, the business results of any organization rely upon its people and their ability to drive business change through innovation in business processes. The ability of a company's people to rapidly and continuously design, develop, and adapt their business processes in an agile fashion is a huge business advantage – what Microsoft calls "People-Ready Processes". This paper discusses the key tools and services of Microsoft's Business Process Management (BPM) products and solutions, and how those components can be used to supports organizations in their goal of enhancing day to day and strategic business process efficiencies, reducing costs and promoting organizational agility and growth.

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Introduction

Businesses don't garner insights or make decisions. Businesses don't close deals, invent new products, or find new efficiencies. People do. Strategies, organization, motivation, and leadership all set the stage for business success. But to see results, you also have to give your people the right tools, information, and opportunities—because success ultimately comes down to your people. We call businesses that foster a winning environment a "people-ready business."

One of the key ways that people drive business change is through impacting their organization's business processes. The ability to rapidly and continuously design, develop, and adapt your business processes in an agile fashion is a huge business advantage. Depending on the industry, specific process areas may be particularly critical to the well-being of the organization, especially given a climate of intense competition and commoditization of products or services. Nevertheless, all organizations, irrespective of industry, share a need to improve processes in a number of key areas, including:

- Customer satisfaction and retention
- Faster time to delivery, whether of a product or service
- Improving employee productivity by automating human collaborative processes
- Process documentation for regulatory compliance
- Trading partner interactions, especially if outsourcing is an important aspect of doing business
- Administrative efficiencies and costs, especially in financial areas such as expense reporting
- Flexibility, adaptability and streamlining of the disparate technologies that support business activities

In the past, many of these challenges were addressed on an ad-hoc basis, usually with specialized solutions or technologies that were limited to functional areas of the business. For example, early Business Process Re-engineering (BPR) efforts often focused exclusively on streamlining forms and document centric processes (e.g. human workflow, document and image routing) but did not address the numerous types of processes that were automated inside business applications. Later solutions began to address back-end system and application processes, but still required a significant amount of complex development effort to automate even simple processes. While somewhat successful in the Global 1000 enterprises, these technologies were nevertheless still overly complex and required proprietary skills in specialized development tools, resulting in narrow adoption by the industry.

We're now entering the third generation of process solutions, something Microsoft calls "People-Ready Processes". A People-Ready Process approach encompass both the human and system centric process types of prior generations, but are now available on a broad scale due to radical simplifications in ease of use and also broad reach (by being accessible thru Microsoft Office productivity tools, which are broadly available). Instead of requiring highly specialized skills and training, anyone that is familiar with using the Microsoft Office System can interact with and engage processes easily and intuitively.

This paper will outline how Microsoft delivers People-Ready Processes through our key Business Process Management (BPM) products and solutions, and how those components can be used to

supports organizations in their goal of enhancing day to day and strategic business process efficiencies, reducing costs and promoting organizational agility and growth.

What are People-Ready Processes?

People-Ready Processes represent the next wave of solutions that enable employees to improve and optimize their day-to-day business processes. Derived from earlier initiatives such as total quality management and business process reengineering, People-Ready Processes go beyond these earlier attempts by dramatically simplifying the tools and skills required.

People-Ready Processes build upon an industry discipline known as Business Process Management (BPM). BPM combines a process-centric and cross-functional approach for improving how organizations achieve their business goals. A BPM strategy focuses on making business processes explicit, and enables greater organizational agility thru enabling the efforts of people to drive process change and rapid innovation. As such, BPM strategies support the alignment of IT and business activities both within the organization and with business partners and suppliers.

People-Ready Processes move beyond traditional automation techniques by providing some more structured process capabilities that empower business users to control and incrementally modify and optimize critical workflow processes. In this respect, the People-Ready Process approach fundamentally differs from prior process management approaches: It does not regard humans as variables to be factored out through automation, but instead recognizes them as key players in driving the improvements and innovation that lead to organizational success.

So in summary, People-Ready Processes leverage the use of technology to gain greater visibility into business processes and to improve the ability for end-users to engage and improve processes through the tools (like Microsoft Office) with which they already are familiar. This ultimately results in the ability to respond to market changes faster—to innovate faster— and adds up to faster, more effective customer responsiveness. And that adds up to considerable competitive advantage.

Example: Putting People-Ready Processes to Work

WholeLife Healthcare, a two hospital, seven clinics medical system, is seeking to deliver more effective healthcare to its patients. Key to their efforts are strategies to improve operational efficiencies, to increase the satisfaction and effectiveness of their medical professionals, and to lower costs.

Elsa Thomas is a business analyst with WholeLife Healthcare. In accordance with a mandate from organizational executives, including the chief medical officer who serves as liaison between medical staff and hospital administration, Elsa has been charged to lead up a cross-disciplinary business process management initiative. Elsa begins her work by meeting with key stakeholders throughout the organization to determine the issues with the greatest impact on patient healthcare service delivery. Her team agrees that two critical areas require further investigation:

> ➢ Inefficiencies in the way patient data is created, stored and shared across the organization

> ➢ High costs and inefficiencies associated with equipment and pharmaceutical procurement

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The Spectrum of Business Processes

Business processes can be formally defined as a set of linked steps or activities that, taken together, result in a specific business outcome. Less formally, everything that gets done in an organization—everything that supports day to day and long-term organizational functioning—is a business process.

While business processes can be loosely understood as everything done in the workplace, it is thought that the very few processes are well understood, and even fewer processes are automated, in part because business rules are both complex and fluid, and it is inherently difficult to rapidly code such business rules into applications.

As a first step in defining business processes, it is helpful to clarify and delimit the full spectrum of kinds of business processes. This will help to ground the discussion in terms of requirements.
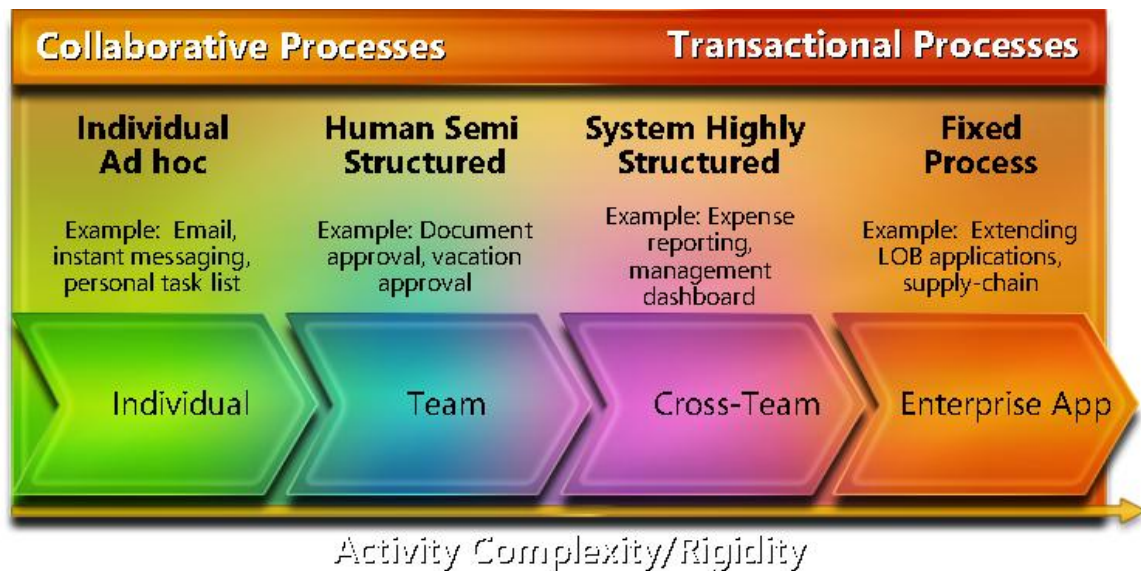
Figure 1. The Business Process Spectrum

- **Individual / Ad-hoc processes**. The activities of individual workers are seldom formally specified, yet they are critical to organizational agility. Traditionally, individual and ad-hoc processes have been supported by personal productivity software, including communication tools such as email, instant messaging and personal task lists. Often crossing functional boundaries (and often becoming necessary when more structured processes go awry), automating many ad-hoc or unstructured processes can enhance an organization's ability to effectively and rapidly respond to a customer need or market situation..

- **Individual semi-structured**. Key business processes such as document routing or vacation approval are often addressed by team or workgroup collaboration software These activities are human-based and semi-structured, and are beginning to be formally modeled and specified; at the same time, it is critical non-technical users retain their ability to readily modify the process.

- **System highly structured**. A number of processes may require input from both people and systems. Expense reporting, for example, may require an individual's input in a form, routing of the form to a manager for approval, and finally updating of the back-end financial application. These

types of processes tend to be more structured and transactional in nature, and can be formally specified, usually with the assistance of IT.

- **Fixed process**. Core financial or supply-chain management require a high degree of process control. Because these activities must broadly scale across the enterprise (in a highly controlled, consistent, and auditable fashion), these types of processes tend to be automated within enterprise applications (like ERP). Such applications usually come with pre-configured, out of the box processes for a variety of business functions.

In most organizations, typical business processes will often span multiple types – if not all four – across the entire spectrum. In fact, it's hard to find a business process that "only" consists of a single type of activity. Therefore, it's imperative that your technology enablers for a People-Ready Process be able to support and enable this full range of process complexity.

Organizing a Business Process Initiative

Many companies promote business analysts to head up their BPM initiative. A number of progressive companies have introduced new roles within their organization, such as chief process officer or process architect, to oversee the BPM initiative and keep it on track. Many have also created BPM learning centers within their organization to help focus company efforts on the initiative.

What this means is that while integrating, automating and optimizing business processes is a collaborative activity between business analysts and IT staff, ultimately BPM initiatives must originate from and be driven by business professionals, not IT staff. The reason for this is simple: effective organizational change requires alignment of human and system efforts with business goals; to this end, technologies play a supporting—not a leading—role in BPM initiatives.

Using this collaborative approach, a growing body of customer evidence indicates that users of BPM technology are achieving dramatic development efficiencies, accelerated returns on investment, and most importantly, reduced resource requirements. In a Gartner 2004 survey[1] of over 150 BPM initiatives, for example, 95% of the organizations felt their BPM projects were a success, as measured by rate of return and time to execution.

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[1] Results presented at the Gartner Business Process Management Summit, March 2006.

Example: Putting People-Ready Processes to Work

Elsa and her team agree that their current technological investments and the ways in which they are used do not support the goal of dramatically improving the quality of healthcare service delivery. WholeLife Healthcare's existing system of patient information collection, for example, is manual and paper-based, and does not effectively support rapid intake and efficient treatment in either its emergency facilities or its clinics. Moreover, medical staff are increasingly frustrated that they spend too much time filling out forms and tracking down information, and not enough time with patients.

When Elsa and her team work with WholeLife's IT department to map out the steps in the patient service delivery process, it is obvious that they also need to find a way to integrate between various supporting databases and systems that currently do not communicate with one another. Once they have integrated both databases and communications systems (including email), they will be able to streamline and automate the process for creating and sharing patient and clinical data among healthcare staff.

WholeLife Healthcare's CIO, Mike Delano, works with Elsa to evaluate a number of business process management solutions. They are looking for a solution that will allow them to build on, rather than jettison, existing IT investments. They defined requirements for an integrated solution that addressed the full range of processes that their business engages in, ranging from very unstructured and collaborative processes (like patient care delivery) through highly structured and transactional processes (like sharing electronic health records across lab and patient systems).

WholeLife decided upon using Microsoft business process management products and technologies to address their end-to-end BPM needs. They knew that Microsoft provided a solution that addressed the complete spectrum of their business process requirements, was intuitive and easy to use, and built easily and readily upon their existing technology investments.

Enabling the BPM Lifecycle

Business process management is a logical process designed to optimize the practice of managing change. The BPM lifecycle is iterative: for each business process examined, incremental improvements are gained with each pass through the cycle. Before beginning the BPM cycle, organizations should prepare the company for the initiative.

Organizations would be unwise to embark on any initiative that proposes to change current business practices—however incrementally—without first generating buy-in and support, and BPM is no different in that regard. With executive support in place, initial efforts should begin with determining those processes that might be good candidates for success.

Which business processes are strong candidates for an initial BPM project? A good place to start is with those processes that have substantial impact on the organization's ability to achieve its customer goals. Whittle down those processes to those few that offer the greatest return on investment. Making a final choice among them might simply be a matter of going with the project with the greatest interest and support for the BPM initiative.

Once preliminary planning is complete, the iterative stage of the BPM lifecycle can begin (see Figure 2 below). This starts with formally modeling the business process and beginning the design work to support a more optimal solution.
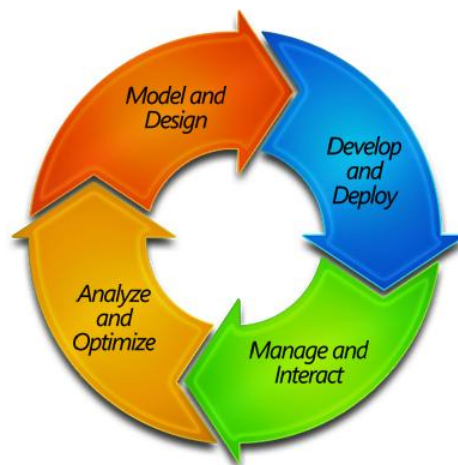
Figure 2. The BPM Lifecycle.

Model & Design

The business analyst oversees the model and design process. During the modeling phase, the analyst works first with process owners and end users to formally define and document the target business process. The modeling stage requires that each step in a business process is clearly and explicitly laid out, even where those steps cross people, systems, functional or even organizational boundaries. It is this detailed mapping that enables informed process improvement. (Such detailed documentation also supports other goals, including effective outsourcing and regulatory compliance.)

More than simply mapping a process, modeling also makes explicit the business rules that underlie the various steps that arise from, relate to, or constrain the process.

Having defined and documented the business process, the analyst next works on designing improvements into the process—places where integration, automation or workflow redesign[2] might be able to improve efficiency or flexibility. In the past this stage of an improvement process usually meant using whiteboards and other static means of information capture to document the changing process. With BPM technologies, these design changes can be captured dynamically, and the resultant model is both readily updatable and easily understood by the IT team to whom it will be handed off.   Lastly, the business analyst defines the milestones and output which will be tracked, as well as the means by which end users can interpret the process outputs (such as through bar graphs).

An important success factor for the model and design phase is end-user adoption of the tools and their personal productivity. Simply providing business analysts with tools suitable for developers will not enable them to readily perform their modeling and design tasks – instead, you need to enable the users by providing them supporting tools that they find intuitive and familiar. Given that the majority of business analysts are already familiar with use of tools like Visio, Word, and Excel, integration with Microsoft Office technologies is a key requirement.

Develop & Deploy

It is the goal of the IT developer to use the detailed model of a business process and its underlying business rules to determine the linkages to appropriate technologies, including line of business applications (which support highly structured workflows) and messaging systems (which support unstructured workflows).

Using BPM tools to uncouple business rules from their underlying technologies, the IT developer abstracts these rules to a layer independent of the systems and applications, then joins the logical components (such as business rules, process steps, and data sources) into a "composite application" that combines the functionality of underlying systems.

Not only can this composite application be rapidly assembled and reassembled because development does not have to start from the ground up, but it provides outputs that individual systems alone cannot (such as real-time metrics across the entire business process). The composite application approach enables a much more rapid, responsive and cost-effective solution than traditional methods of application development.

Much of the IT developer's job during this stage is to ensure that the solution incorporates the functionality, performance metrics, and user interface to meet business user needs. Because the business analyst and business users can look at the model (at a less granular level of resolution) as it is developed, they can help ensure that gaps or errors are avoided, as well as being able to collaborate on process innovation.

Once the logical component of the solution is complete, the IT staff work to deploy the application onto the actual physical hardware and network systems. Once the solution is tested and deployed, business users and IT alike begin the "manage and interact" stage of the BPM lifecycle.

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[2] In some cases, organizations may decide that the solution to a highly inefficient and costly process is to outsource it, and to focus efforts on processes that support what the organization is really good at.

Manage & Interact

With the solution to automate a specific business process in place, the process is now ready to be executed. At "run-time", a number of different types of end users interact with the process as it runs though its steps. The method that they interact with the process depends upon the role they play in the process. Example roles include:

- Business users – While automation of processes is usually desired, most processes require some level of end-user involvement to complete their lifecycle. This could include things like review or approval of key decisions, or managing exceptions that fall outside the common structured policies. Typical business users prefer to interact with the process using familiar tools like email, Microsoft Office applications, or forms automation solutions.

- Managers / Supervisors – A different class of users ensure that the work being completed is managed efficiently and appropriately. A team supervisor or manager may review work processes to ensure that tasks are appropriately distributed across resources, or may be responsible for certain higher approval thresholds that cannot be acted upon by their team. Typical managers want summary level access to information, relying upon reports or dashboards, and are looking for key bottlenecks or potentially disruptive events that could impact the efficient running of the process.

- IT Professionals - In the background, IT staff manage the entire automated process to ensure that the running process continues to various meet capacity and availability standards. IT staff can also use these monitoring capabilities to ensure that an organization's service level agreements (SLAs) are met, or, should the conditions causing bottlenecks arise, IT staff can perform root cause analysis to help ensure that SLAs are not violated.

A key success factor of the manage and interaction phase is to enable each type of user to interact with the business process using the experience that is best suited for their job function and preferred work style. Process automation initiatives have a much higher level of adoption rate when you can engage the end user using familiar and intuitive tools that allow them to quickly become productive.

Analyze & Optimize

The BPM solution provides a number of different means through which the business analyst or manager can continuously monitor and measure improvements holistically, both within single and across multiple business processes. These include business activity monitoring solutions, accessible through dashboards or scorecards that map multiple perspectives onto organizational benchmarks.

Benchmarks are established using SLAs and key performance indicators (KPIs), and can be set to track objectives and targets across multiple departments and the organization as a whole. Information derived from performance metrics is critical in driving the iterative process of optimizing the business practices and policies that support organizational goals.

The most effective BPM systems enable IT staff or non-technical business users to optimize decision points in real-time, rather than extrapolating from after the fact reporting. Optimizing in real time is an iterative process that enables rule change, versioning and simple process execution. Because business rules are abstracted from underlying processes, business users can change the rules without changing the underlying flow or sequence of events (assuming those sequences are already optimized).

Example: Putting People-Ready Processes to Work

Having selected Microsoft as the foundation for implementing and managing their new business processes, Elsa and her team begin to complete the BPM lifecycle for each key process.

1) Model and Design: WholeLife's business analysts began by documenting their process requirements using familiar Microsoft Office System tools. This included visual design of the electronic forms and web user interfaces (for capturing patient records) using "no-coding" environments like InfoPath and SharePoint Designer. These rich, collaborative design tools enable rapid design of the most common, ad-hoc or semi-structured processes such as for document lifecycle automation. For more complex and structured processes (especially ones that spanned across WholeLife's back-end systems and external business partners), Elsa and team used Visio to diagram the current and "to-be" processes – including dependencies upon systems and desired key performance metrics.

2) Develop and Deploy: Once the initial requirements were captured by the business, WholeLife's IT staff further evolved the design by connected the high-level process to underlying applications (e.g. patient records systems or lab automation applications). Using the powerful Microsoft development tools (including Visual Studio and BizTalk Server), their development staff were able to quickly use web services technologies to leverage existing application logic and data and expose this into the new business processes as desired. This enabled IT to develop the new business applications defined by the WholeLife business analysts, without requiring dramatic "rip and replace" of their existing IT systems.

3) Manage and Interact: Once a new business process was deployed, multiple end-users at WholeLife engaged with the running business processes. First, nursing staff and doctors were now able to access key patient records and perform their administrative tasks from within their familiar Microsoft Office tools. They collaborated across office locations easily through real-time collaboration technologies, such as SharePoint and Live Communication Server, and can even respond to key tasks while out of the office (receiving new updates on patient conditions via their mobile phone). WholeLife nursing managers can effectively manage work load across their nurses and easily reprioritize tasks or patient visits as needed to respond to the daily schedule. And finally, the WholeLife IT administrator takes care of managing the healthy operations of the process, by proactively ensuring that system capacity and uptime stays within acceptable levels.

4) Analyze and Optimize: WholeLife's office manager is accountable for monitoring the performance of their end-to-end business, as measured by key metrics such as the average wait time for a patient or number of patients cared for per week. The office manager relies upon an integrated set of Office-based reporting and dashboard tools, which provide real-time views of the key business indicators about the end-to-end processes. The office manager has access to more than just historical data – they also combine with this metrics about the running business process (sometimes per instance, but often in aggregate). This ability for WholeLife managers to get access to the information they need to drive better business decisions empowers them to optimize WholeLife's process as well as policies, ultimately resulting in improved patient care and lowered cost of delivery services.

The Microsoft Business Process Management System

Business process management technologies represent a major shift in the methodologies of process development and deployment, not only with its process-centric and cross-functional focus, but also in terms of the underlying architecture designed to produce flexible, reusable and agile "people-ready" process solutions.

As outlined previously, typical business processes cross a wide spectrum of process types – from unstructured and collaborative through highly structured and transactional. Microsoft delivers a vision for an integrated Business Process Management System (BPMS) architecture that supports the full range of process types through the following major solution components.
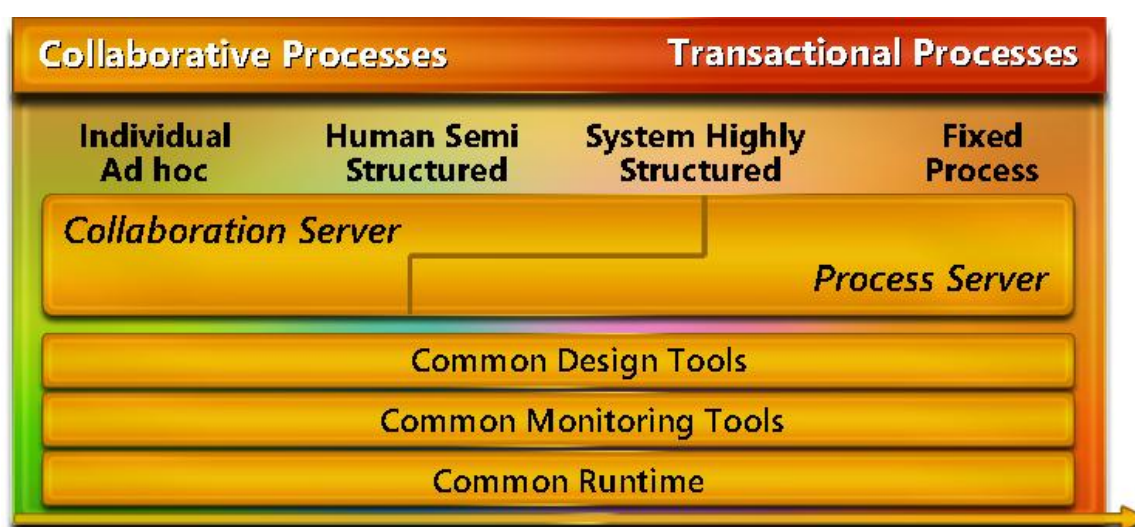
Figure 3. The Microsoft BPMS Conceptual Architecture

- Collaboration Server - A collaboration server (such as Microsoft Office SharePoint Server) provides individual/team process automation capabilities and empowers users to automate both their personal tasks (whether this be authoring or reviewing documents, composing email or communications, etc) as well as team-oriented collaborative processes. The collaboration server provides the rich environment that supports collaboration across geographically diverse teams and enables sharing of information using rich document lifecycle automation and content management.

- Process Server – A process server (such as Microsoft BizTalk Server) provides rich process automation and monitoring capabilities as you move to automate cross-team processes, typically involving integration with systems and trading partners. The process server provides the ability to interoperate easily with a heterogeneous system environment using LOB or technology adapters, and provides the ability to measure business performance against KPIs using real-time BI (often called Business Activity Monitoring).

- Both of these middle-tier server technologies are built upon a vision of an integrated programming model (based upon Microsoft .NET and common frameworks, as well as common tools for development and monitoring of business processes.

The Microsoft BPMS software platform delivers a robust solution supporting integrated, automated and optimized business processes. It complements and leverages the work that IT organizations have made in their existing investments, while also providing a powerful foundation for new service oriented architectures based on XML[3] and Web Services[4]. Service oriented architecture helps solve traditional problems associated with application development, including lengthy development cycles, poorly translated business specifications, and solution inflexibility when business needs change. Microsoft's commitment to implementing these enabling technologies throughout its products helps businesses realize the advantages of business process solutions that are extendible and reusable, as well as highly visible and well documented.

Because the solution architecture is based on an integrated and consistent platform, it ultimately delivers a set of end to end solution capabilities:

1. User capabilities - a rich set of end-user functionality to enable users to interact with business processes, in a way that is familiar and productive

2. SOA and process capabilities – middle-tier services that enable businesses to more easily change the rules and policies that run their business

3. Data and business intelligence capabilities – capabilities for managing the data about the business process in a way that is scalable and secure, as well as rich business intelligence

4. Development capabilities – tools for both the business analyst and developer which enables simpler construction and reuse of business processes

Enabling Components of the Microsoft BPMS Architecture

Supporting the BPMS architecture vision outlined in the prior section, Microsoft delivers a set of enabling products and technologies to deliver a comprehensive business process solution. These products and technologies are identified in the following figure, aligned by each of the major capabilities that are delivered:

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[3] Extensible markup language, a readily understood language particularly suited to information exchange.

[4] Software used to communicate among web applications for the purpose of exchanging data. Based on XML.
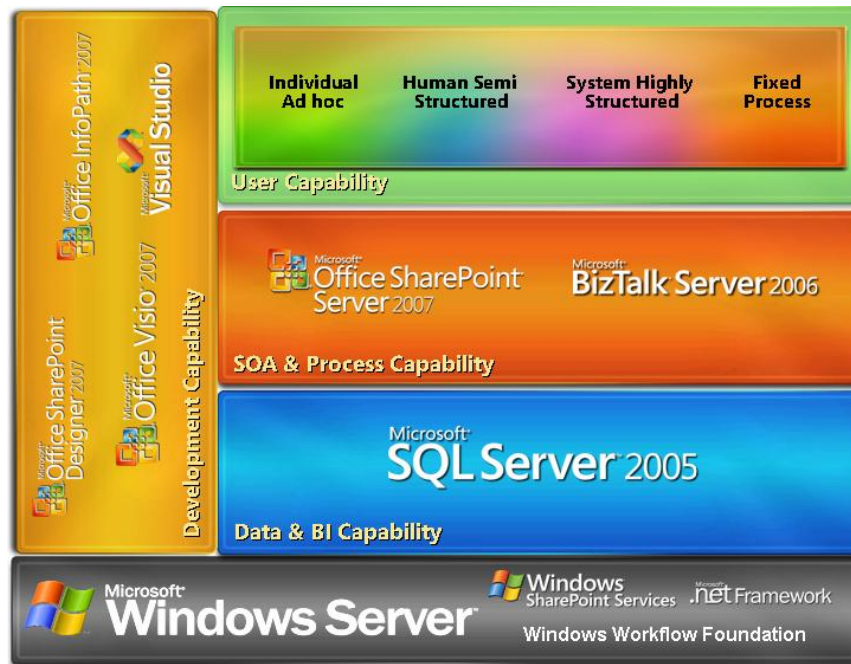
Figure 4. Microsoft Business Process Management System Components

User Capabilities - End-user interaction with running business processes is delivered through seamless integration to the Microsoft Office System applications. The Microsoft BPMS allows users to interact with the business processes through the tools they already know – Word, Excel, InfoPath – instead of having to learn new or proprietary tools. Tasks requiring human attention are seamlessly presented to the user inside their documents via the "ribbon bar" and enable processes to be acted upon within the context of their work. Additional document and process meta data can be accessed and managed via the document Information panel further providing insights and data to the process involving the current document.

SOA and Process Capabilities – The automation and management of processes in a distributed environment is performed by two key Microsoft BPMS middle-tier servers:

- Office SharePoint Server 2007 provides a collaboration and information sharing system that enables businesses to communicate more effectively and work more efficiently. Microsoft Office SharePoint® Server 2007 enables enterprises to develop an intelligent portal that seamlessly connects people, teams, and knowledge.

- BizTalk Server 2006. BizTalk is Microsoft's central platform for business process improvement both within and between organizations. Embodying the integration and automation capabilities of XML and Web Services technologies, BizTalk Server serves both as a hub for messaging and document transformations between disparate systems, as well as providing the reliable and scalable process server for executing end-to-end business processes.

Data and BI Capabilities – Leveraging SQL Server 2005, the Microsoft BPMS provides an enterprise-class database and business intelligence server capable of running the most demanding applications, analyzing data about running business processes and reporting results so that businesses can obtain a

faster return on information. SQL Server is tightly integrated with both Office SharePoint Server 2007 and BizTalk Server and functions as its real-time data store for end-to-end process tracking.

Development Capabilities – Development tasks within the Microsoft BPMS are enabled through a rich set of role-specific tools:

- Office Visio 2007 provides a rich diagramming environment designed to help users think through, organize and better understand complex ideas, processes, and systems. Visio specifically supports process design efforts by enabling users to create diagrams of a business process—including the arranging, ordering, labeling, and linking various symbols that represent activities, events, decisions, flow, and transactions.

- Office SharePoint® Designer 2007 provides a no-code environment for rapidly designing and developing custom workflows. This enables non-technical users to build collaborative, tracking, reporting, and data management applications quickly and easily.

- Office InfoPath 2007 provides a rich WYSIWYG environment for creating electronic form solutions, which validate data, integrate into business systems, and guide users through an easy form completion experience. Built on industry standards like XML Schema, XSLT, and others, InfoPath provides an easy way to standardize data collection processes across your entire organization.

- Visual Studio 2005 provides the premier development tool for cost-effectively and efficiently building solutions using the Microsoft application platform. Through integration with BizTalk Server, developers can rapidly and graphically model and assemble business processes are executed in BizTalk Server.

Platform Technologies - Each of these integrated BPMS capabilities is built on top of a common robust and scalable platform. At the foundation is Microsoft Windows Server, which provides the most productive infrastructure platform for powering connected applications, networks, and Web services from the workgroup to the data center. This also provides Microsoft .NET, which delivers a comprehensive and productive development framework for building a new generation of connected applications and Web services. With the release of Microsoft .NET 3.0, this platform also now includes Windows Workflow Foundation, which provides a next-generation set of frameworks, reusable components, and tools for developing workflow-enabled applications.

Within the Microsoft BPMS, the SOA and Process middle-tier servers play a key role in enabling the full "people-ready process" capabilities. Each of these server solutions are briefly detailed in the following sections.

Office SharePoint Server 2007

Office SharePoint Server 2007 is the core collaboration server component of the BPMS solution architecture. Office SharePoint Server 2007 is an integrated suite of server applications that improves organizational effectiveness by providing comprehensive control over electronic content; accelerating shared business processes; and facilitating better-informed decisions and information-sharing across boundaries.

Automate Collaborative Business Processes

Office SharePoint Server 2007 makes human-centric business process initiation, participation, tracking, and reporting easy and flexible by providing a simple, consistent user experience through familiar client applications. This empowers users to optimize the way people, content, and processes interact within and across organizations.

Users can take advantage of workflows to automate and gain more visibility into common business activities like document review and approval, issue tracking, and signature collection. Integration with familiar client applications, e-mail, and Web browsers simplifies the user experience. End users can easily define and model their own processes using familiar Microsoft tools.

Office SharePoint Server 2007 also enhances your relationships with customers, partners, and suppliers by making forms-based business processes easily accessible to them, even if they haven't installed client software. Built-in validation rules and integration with Microsoft information rights management (IRM) help to ensure that critical business information can be collected with enhanced security and accuracy.

Information gathered using electronic forms can be integrated easily into line-of-business (LOB) systems, stored in document libraries, used to start workflow processes, or submitted to Web services. This helps users avoid duplicate efforts and costly errors from manual data entry, and it helps ensure they have access to accurate, real-time data.

Make Better-Informed Decisions

Office SharePoint Server 2007 provides a single, integrated location where employees can efficiently find organizational resources, access corporate knowledge, and leverage business insight in order to make better-informed decisions. Business-critical information is presented in one central location.

Live, interactive business intelligence (BI) portals can be presented that assemble and display business information from disparate sources, using integrated BI capabilities such as dashboards, Web Parts, key performance indicators (KPIs), and business data connectivity technologies. Centralized Report Center sites give users a single place to find the latest reports, spreadsheets, or KPIs.

SharePoint Enterprise Search incorporates business data and information about people with documents and Web pages to provide more comprehensive results. Tools for query hit highlighting, duplicate collapsing, "did you mean" spelling correction, and alerts help users locate what they want within search results.

Employees can use new knowledge management tools to get the most from their powerful unstructured business networks, both inside and outside their organizations, by connecting with people more quickly

and efficiently. By exploring these undocumented business relationships and finding subject matter experts, individuals can make better decisions more quickly.

Single, Integrated Platform for Intranet, Extranet, and Internet Processes

Office SharePoint Server 2007 provides a scalable enterprise platform for engaging users in your business processes, whether they be inside or outside your organization. Your deployment of processes can grow with your business without the need for costly add-ons. IT staff can spend more time on the strategic tasks only they can perform and help drive enhanced business value and positive change throughout your organization.

Make use of powerful web development tools and an open, scalable architecture with support for Web services and interoperability standards, including XML and Simple Object Access Protocol (SOAP), to build and extend applications that incorporate business system information and integrated workflow. Use OOB site-starter templates for common Web sites, with Area and Page Layout templates and preconfigured navigation. Configure content deployment paths between different computers or the same computer. Schedule processes that define the scope of content and the frequency of recurring deployments.

Office SharePoint Server 2007 provides the tools you need to ease deployment, management, and system administration of your collaborative applications. This includes robust system-monitoring and usage-tracking tools help to isolate and solve problems faster, and improve the operational efficiency of the system infrastructure.

Effectively Manage and Repurpose Your Information Assets

Office SharePoint Server 2007 enables you to get more value from your content by providing comprehensive control over the storage, security, distribution, reuse, and management of documents and other electronic content such as Web pages, PDF files, and e-mail messages.

Employees can control documents through detailed, extensible policy management, including defining customized document management policies to control item-level access rights, retention period, expiration actions, and document-auditing settings. Policy integration with familiar client applications makes compliance transparent and easy for employees. Extensible design helps organizations to modify product behavior to suit their unique business needs.

Organizations can store and organize all business documents and content in one central location, and users have a consistent mechanism to navigate and find relevant information. Default repository settings can be modified to add workflow, define retention policies, and add new templates and content types.

Office SharePoint Server 2007 simplifies content reuse and information repurposing. Employees can submit work from collaborative sites to portals using tools that simplify content reuse and publishing. Simplify management of multilingual content through document library templates designed to maintain a relationship between original and translated versions of documents. Use slide libraries as an easy way to share and reuse Microsoft Office PowerPoint® 2007 slides.

BizTalk Server 2006

BizTalk Server technology is the core business process server component of the BPMS solution architecture. BizTalk Server 2006 supports creating effective processes that support organization-wide business goals. BizTalk Server 2006 enables organizations to connect diverse systems and applications, graphically create and modify business processes, and support business users in monitoring processes, interacting with trading partners, and performing other business-oriented tasks.

Connecting Systems

Automating business processes requires connecting diverse systems both within and across organizations. Once integration and automation is achieved, visibility into business processes is possible.

BizTalk Server connects legacy and line of business applications that reside on different platforms. In order to connect and effectively communicate with applications that support functions such as purchase ordering, invoicing and a number of other critical business practices, BizTalk supports a wide variety of different communication languages (including both standards based protocols and industry or application specific formats) through the use of powerful integration adapters.

In addition to ensuring accurate and complete communication between applications, BizTalk serves to route messages to the correct destination based on user-defined conditions (such as the type of application, or if a message meets a certain threshold requirement, as may be appropriate with financial messaging). BizTalk Server 2006 implements "publish and subscribe" messaging to loosely couple source and destination systems.

Defining Business Processes

Accurate translation and routing of messages to the appropriate application is only the first step in defining and executing business processes based on those applications. BizTalk Server supports the graphical creation of business processes, rather than using the slower, inflexible and less intuitive approach of using a programming language.

Business process modeling in BizTalk supports the visualization of the steps in the process; the analysis of bottlenecks, gaps and weak links; collaboration across cross-functional workgroups to come to a common understanding of process issues; and rolling out process changes and improvements.

Business users can achieve these goals by creating business process maps (say of the flow of invoicing documents across the organization) in Visio and then handing these off to developers for implementation using tools exposed through Visual Studio.

Once a business process is defined and the steps automated in a composite application, BizTalk provides business users with the tools to change the business rules that underlie the process. Such tools enable users to both optimize processes and to respond rapidly and agilely as business needs change.

Process Management and Monitoring

BizTalk Server 2006 provides the tools that enable administrators to readily deploy, configure and debug the new business process applications that support daily business practices. In addition, BizTalk

Server helps simplify the problem of checking security credentials for processes that span multiple applications on different platforms.

Information Worker Technologies

Once business process applications are created, the business user must be able to monitor business processes and use the business processes to get further work done.

The business activity monitoring (BAM) framework within BizTalk provides the user with a set of tools and services that enable transaction monitoring in aggregate or real-time, and provide visibility into the key performance indicators of a running business process. Information can be monitored through Microsoft Excel, through a BAM portal that facilitates the examination and configuration of monitoring data, and through notification services provided by SQL Server.

In addition to monitoring business activities, business users may want to do a number of other things with business processes, such as create or update a trading partner relationship, or enable a supplier to modify a joint business process. BizTalk supports activities with a service that unites common business tools—including SharePoint, Excel and InfoPath—through a common and familiar interface.

Microsoft BPMS Roadmap

Microsoft is delivering the BPMS capabilities through a series of phased "waves" of product releases. The following roadmap outlines a few of the key releases – this is not meant to include every product or component, but rather just a few of the new areas of innovation.

- **Phase 1** of this roadmap was rolled out in March 2006 with the release of BizTalk Server 2006, Microsoft's 4th generation business process server. BizTalk Server 2006 added:

  - o Easy linking between collaborative and transaction processes through integration with SharePoint Portal 2003, which allowed sharing information easily between people, systems, and trading partners without any custom code;

  - o A broad suite of adapters to major LOB systems (such as SAP, JDEdwards, Peoplesoft, or Siebel) and heterogeneous technology platforms (Oracle DBMS, IBM mainframe, AS/400, Tibco Rendezvous, etc). This allows exposing processes contained within your existing applications and enhance them powerfully using BizTalk's process composition tools; and

  - o Enhancements to Business Activity Monitoring, which enabled business users "out of the box" access to key real-time process metrics through a pre-configured BAM Portal and the ability to configure alerts and notifications on key process metrics.

- **Phase 2** of this roadmap will be rolled out in early 2007 with the releases of Office System 2007, .NET Framework 3.0 (as part of Windows Vista), and BizTalk Server 2006 R2.

  - o In Office System 2007, rich workflow capabilities will be delivered as part of SharePoint & accessible across Office System. SharePoint's workflow capabilities will include customized workflow activities and pre-built common workflow solutions out of the box. These workflows are customizable through SharePoint Designer, which will provide an intuitive way to easily configure and modify SharePoint workflow rules.

  - o With the release of .NET Framework 3.0, Microsoft will deliver Windows Workflow Foundation as a common run-time technology for workflow automation, which can be used by ISVs and corporate IT developers to build workflow inside custom .NET applications.

  - o With BizTalk Server 2006 R2, Microsoft is delivering end-to-end process integration capabilities through support for supply-chain processes (with native support for EDI, AS2, and RFID technologies) as well as enhanced integration with Office SharePoint Server 2007. In addition, interoperability will be provided between BizTalk and .NET 3.0 applications, which allows any mainframe system or LOB application to now be exposed as a WCF service.

- **Phase 3** further builds upon the BPMS solution architecture by delivering a next wave of products (post 2007) that embrace a set of key technology innovation themes:

  - o "Unified process architecture" – this theme is about delivering a shared process architecture built on Windows Workflow Foundation – all Microsoft technologies (e.g. BizTalk Server, SharePoint Server, etc.) will be built upon this common foundation in order to enable visibility end to end across all of our BPMS solutions and applications.

  - o "Processes exposed through Office" - this theme is about continuing to enhance how people-centric processes get exposed holistically through Office, as the preferred environment for how information workers want to interact with data and process.

  - o "Radical gains in productivity" – this theme is about adopting model driven development and management techniques, which avoid procedural code and implement visual, declarative ways of specifying the business process. This theme incorporates things like rich business process modeling and simulation for the business analyst.

  - o "Continued commoditization of low-level integration" – this theme is about continuing to abstract away the complexities of low-level development, by making sure that the Microsoft BPMS products are integrated by design and that we're able to interoperate ubiquitously with any and all platforms using web services and intelligent adapters to have broad process reach.

Summary

Microsoft enables companies of all sizes to realize the benefits of People-Ready Processes, which empower people to drive business change through impacting their organization's business processes. The ability to rapidly and continuously design, develop, and adapt your business processes in an agile fashion is a huge business advantage. Microsoft delivers a Business Process Management System (BPMS) built on an architectural framework that supports the goals of business flexibility and agility, and offers the tools and technologies to align business users and IT in the process of increasing organizational competitiveness through better and more responsive customer solutions.

Related Links

See the following resources for further information:

- BPMS Server Solutions

  - Microsoft Office SharePoint Server 2007 preview at
    http://www.microsoft.com/office/preview/servers/sharepointserver/highlights.mspx

  - BizTalk Server home page at http://www.microsoft.com/biztalk/default.mspx

- BPMS Design and Development tools

  - Microsoft Office Visio 2007 preview at
    http://www.microsoft.com/office/preview/programs/visio/highlights.mspx

  - Microsoft Office SharePoint Designer 2007 preview at
    http://www.microsoft.com/office/preview/programs/designer/highlights.mspx

  - Microsoft Office InfoPath 2007 preview at
    http://www.microsoft.com/office/preview/programs/infopath/highlights.mspx

For the latest information about Windows Server System, see the Windows Server System Web site at
http://www.microsoft.com/windowsserversystem

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