



BEA White Paper

## The Productivity Paradigm-Shift

Enabling the Next Wave of Business Efficiency through  
Collaborative Business Process Management



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## Contents

<b>INTRODUCTION .....</b>	<b>4</b>
<b>THE COLLABORATIVE BUSINESS PROCESS .....</b>	<b>5</b>
CHARACTERISTICS OF COLLABORATIVE PROCESSES APPLICATIONS .....	5
AN EXAMPLE: PEOPLE, PROCESS AND KNOWLEDGE.....	6
<b>BEA’S AQUALOGIC BPM COLLABORATION EDITION.....</b>	<b>8</b>
THE SECRET SAUCE: AQUALOGIC BPM WORKSPACE EXTENSIONS.....	10
THE BENEFITS OF OPTIMIZING COLLABORATIVE WORK.....	12
<b>LOOKING AHEAD: EMERGENT COLLABORATIVE PROCESSES .....</b>	<b>13</b>
<b>SUMMARY .....</b>	<b>14</b>
<b>WHAT TO DO NEXT?.....</b>	<b>14</b>

## Introduction

If you were to describe what makes the most successful companies in an industry stand-out, you would most likely be describing a specific business process – a set of coordinated activities supported by technology and people - that sets them apart from their competitors. Maybe they are first to market with innovative new products. Or maybe the time they take to fulfill an order, process an invoice, or resolve a customer issue is much shorter than other companies. Increasingly, competitive advantage in business depends on the ability to excel in key business processes.

Business Process Management (BPM) technologies represent a significant step forward in optimizing business performance. BPM software suites (BPMS) provide an integrated set of tools to model, design, simulate and deploy processes and process applications, delivering greater degrees of process management maturity and delivery. BPMS provide a “closed loop” system for achieving business performance improvement, providing integrated tools that unite all participants in the process lifecycle. BPM technologies support both human-centric processes (claims processing, accounts payable and customer servicing) and system-intensive processes (trade reconciliations, inventory distribution and management). Modern BPMS emerged to focus on processes that encompass both system and human activities, and are especially adept at orchestrating human workflow and process steps within high-value process applications.

Modern BPM recognizes that the most critical processes a business thrives on don't function solely as bits and bytes that can be automated by computer software. They require people: making decisions, collaborating on ideas, handling strange and complex exceptions, inventing the shortest and most cost-effective path between points A and B. Modern BPM highlights the singular importance of the role people play in mission-critical processes, and recognizes that the efficiency of a single company is predicated on the efficiency of its employees. Thus, optimizing the collaborative work people do, in the context of a more structured sequence of steps, can help every company transcend the debilitating limits of status quo, and propel them to new heights of greatness.

## **The collaborative business process**

As technology advances have automated routine activities - the form-pushing, carbon-copy humdrum of yesteryear – workers have seen a tremendous increase in the complexity of their day to day responsibilities. Helping today's employees harness their true potential is the key to a new phase of enterprise productivity, and technology, as it has in the past, plays an enabling role. Leading businesses are focusing on removing the guesswork from the critical activities most workers manage today, using technology not only to optimize the system performance that processes depend on, but the human performance within those processes as well.

Collaborative business processes are a unique type of human-centric business process, because they not only depend on people, but depend on people to work *collaboratively* on specific activities to achieve an outcome. Where a human-centric process might simply require a participant to approve a specific request, like an expense report submission, a collaborative process would require multiple participants to review, discuss, and iterate on that submission before it's approved and advanced towards an outcome. Thus, collaborative processes are only as efficient as the collaborative work that lies at their heart.

Supporting collaborative business processes is not easy. Collaborative process challenges need a different approach than typical human-centric or system-centric processes, and require a unique blend of technology to deliver applications that effectively support collaborative process work. This new approach is made possible by the cohesion of several technologies – portal, collaboration, search, workflow and business process management – all interacting with each other fluidly, and assembled dynamically into experiences that support a diverse range of business challenges and participants.

### ***Characteristics of collaborative processes applications***

Applications supporting collaborative business process management possess a set of characteristics that distinguish them from other applications. These include:

- **Process-based:** the parameters of the business process and the business challenge, not the data model or technology, define the scope of the application;
- **User-centric:** the application is designed to support human interaction and activities -- to close a sale, process a new hire or collect on an outstanding invoice -- rather than perform the kind of low-level, system-to-system integration required to clear a stock trade or update a product inventory system;
- **Collaborative and content-rich:** where traditional applications have presented structured data in a series of forms that are primarily designed for clerks, composite application allow users to work with the type of information that is most office workers' stock and trade: documents, e-mail and Web content, instant messaging and discussion;
- **Context-driven:** the application delivers different information and services to different users at different times, as appropriate for what each user needs from the application;
- **Dynamic and adaptable:** the functionality of most applications is driven by a single data model; changing any function thus has the potential to affect the entire application and requires developer expertise, when it is the business person who understands the change required. Moreover, the components of a traditional application typically run on one application server, so a change to any one component can destabilize all the others. Because this type of change involves such cost and risk, traditional applications based on one data model and one application server are less dynamic than applications that support collaborative business processes.

### ***An example: people, process and knowledge***

Hiring is a process that is common to all businesses, and one that bridges many systems and groups, and involves a high-degree of careful consideration by hiring managers, recruiters and other staff, often working together to formulate an outcome. The process begins with a hiring manager creating a hiring requisition.

This typically involves not only the department that needs to hire a new resource but also the budgeting department and HR. The position must be published internally and externally. This likely involves HR and the communications department (who typically own the Web site on which the position will be advertised). Each successive step in the process involves more participants – scheduling interviews across multiple teams, applicant testing through an external agency, team decision-making on the best applicant, legal and finance again when the offer is made, then the training department and systems administration team (to provide the new hire with equipment and access to work-related systems) when the new hire is officially brought on board. Each of these groups, individuals, and steps in the process, must be coordinated in order to optimize the entire sequence of events, and help the business as a whole perform better.

This is a good example of where a typical process application might not go far enough. BPM might be applied to much of the “structural” aspects of this process – creating the hiring requisition, approving the requisition, approving the selection of a specific candidate – but ignore many of the ad hoc, collaborative activities that lie within – reviewing resumes, discussing impressions of a candidate post-interview, iterating on the description of the role and salary. A collaborative process application would help streamline and manage both the overarching structure, and the individual, collaborative activities within that structure that move the process forward.

Supporting the hiring process through a collaborative process application requires the intersection of business process management, portal and collaboration technologies. The process overall can be modeled within the business process system, outlining both the system and human activities involved in certain steps. For human activities that are collaborative in nature, or require people to iterate on producing or reviewing documents, like resumes, the model can weave in services from the collaboration system, providing free-form workspaces and online utilities each participant in the process uses with *point-in-time* accuracy. A portal framework assembles the graphical interfaces and human activities into a seamless experience for participants. The portal also provides a service-oriented framework for constructing the right interfaces to the

right systems at the right time for all of the participants in the process. Each participant in the process is provided a user experience designed around the specific role they play in the process. Information, forms, task lists, process flows, collaborative services – all combined to help them complete their individual and group activities, keep the process moving forward and provide their individual services as part of the new hire process as a whole. This is the power of collaborative business process management: interoperability, coordination, efficiency.

## **BEA's AquaLogic BPM Collaboration Edition**

BEA is a current leader in the Business Process Management market through its award-winning AquaLogic BPM Suite. BEA is currently expanding the scope of traditional BPM technology, by creating an organic, integrated system that focuses on the more complex and dynamic needs of people within business processes. AquaLogic BPM Collaboration Edition combines market-leading portal, search, collaboration and business process management technologies into a single, integrated system, providing businesses a rich environment for coordinating the dynamic and interactive activities of human-driven, collaborative processes. BEA delivers an integrated architecture for collaborative business process management through the following major solution components:

- **Business Process Management Suite:** AquaLogic BPM Suite is a complete business process management platform, delivering rich process modeling, development, integration, automation and measurement capabilities for optimizing processes that span systems and people. At the heart of the suite, the AquaLogic BPM Enterprise Server provides a cross-platform process execution and integration engine for interoperating easily with the heterogeneous systems processes move across. The suite also provides tools used by all participants in the process lifecycle: a tool process owners and business participants use to model and simulate processes; an integrated development environment developers and IT participants use to implement the modeled processes; a Web-based management console for administrators and process owners to configure and manipulate processes; and Web-based dashboards multiple

participants use to monitor the performance of processes and process activities.

- **Portal and User Experience Framework:** AquaLogic Interaction is the industry's best-known portal and user experience framework, adopted by more than half of the Fortune 100. AquaLogic Interaction provides the foundation services for delivering a volume and variety of applications and user experiences: authentication and provisioning, data and content integration, assembly, personalization and presentation. AquaLogic Interaction provides key capabilities around the assembly and presentation of information and services at critical interaction points, delivering a seamless, intuitive experience that simplifies the day-to-day demands on normal business workers.
- **Collaboration System:** AquaLogic Interaction Collaboration is a full-featured asynchronous collaboration system, delivering online tools to help users work better together. The system allows users to share and manage documents and project information, engage in online discussions, and coordinate activities through notifications, task management and synchronized calendars. AquaLogic Interaction Collaboration delivers individual and team process automation capabilities and empowers users to better coordinate their individual activities (authoring or reviewing documents, coordinating schedules and tasks) with their team-oriented collaborative process (project milestones, dependencies, joint work-product production). The system enables collaboration across geographically diverse teams and beyond the natural boundaries of the business.
- **Search infrastructure:** AquaLogic Interaction Search provides the backbone for indexing, organizing and discovering information related to processes and applications deployed through AquaLogic BPM Collaboration Edition. The search engine automatically indexes information accessed or managed by the system, including documents, pages, content, integration components (portlets), services, projects, users and applications. AquaLogic Interaction Search also provides the

infrastructure for assembling information from other sources, like Documentum, FileNet or Microsoft SharePoint, that can be associated with process instances by process participants.

AquaLogic BPM Collaboration Edition naturally leverages the full features of each individual product – portal, BPM, collaboration, and search – but delivers an integrated combination that yields a result greater than the sum of its parts.

### ***The secret sauce: AquaLogic BPM Workspace Extensions***

AquaLogic BPM Collaboration Edition offers a unique blend of the technologies needed to support collaborative business processes, within a single, integrated solution. BEA has integrated these technologies into a unified system through AquaLogic BPM Workspace Extensions, a set of integration components that allows AquaLogic BPM Collaboration Edition to deliver a broad range of unique capabilities:

- **Automatic process application deployment:** once a process is modeled and designed within AquaLogic BPM Suite it can be deployed automatically to a Web experience or Web application managed through AquaLogic Interaction.
- **One-click process instance launch:** Within a Web application, users can initiate process instances from a single click and the process launch capability is easily configurable by administrators and even line-of-business managers. For example, within a self-service HR application or portal HR community, a user could trigger a salary review process, which may launch a simple Web form to complete, invoke a function in an underlying system, kick-off a human-oriented workflow, or more likely, all of the above.
- **Dynamic activity and worklist management:** AquaLogic Interaction features a rich set of AJAX-enabled portlets and interface components that surface activities for individual users automatically to individual, team or process-centric workspaces. The portlets assemble individual user activities, coordinating the specific steps a particular user or team of users must follow to move the process forward.

- **Coaching:** allows process designers to include on-line instructions for process participants in the context of the process itself. Instructions can be iterative, and collaborative, so participants can “discuss” activities related to the process. This is especially important for processes that involve people at key decision points.
- **Evidence locker:** AquaLogic Interaction Collaboration provides a secure repository to manage documents and artifacts related to key business processes, like the financial documents required for compliance with the Sarbanes-Oxley Act, or resumes circulated for a candidate recruitment process. The system can control and audit changes made on individual documents, archive documents and report on the activities around document usage throughout their lifecycle.
- **Document collaboration within process instances:** because a full collaboration system can underpin each business process, users can naturally link the two together. A user can create collaborative workspaces to organize and automate activities and attach objects from those workspaces – threaded discussions, documents, and tasks – to process instances. As an example, HR might create a recruiting workspace to organize candidate resumes. A user initiating the candidate recruitment process can attach to the process instance a link to the desired candidate’s resume, which will be then routed through the appropriate workflow. The other collaborative artifacts associated with the resume – a recorded discussion on the candidate’s qualifications, for example – would also be easily referenced from within the candidate recruitment process instance.
- **Mapping processes to collaborative workspaces:** individual processes can be mapped to individual collaborative workspaces and invoked directly from within the workspace. Continuing the example above, there may be a specific set of processes that are mapped directly to the HR workspace – candidate recruiting, compensation review, new hire on-boarding. A user from within the HR workspace can launch a given

process, and associate the process with specific artifacts within the workspace, like the candidate's resume.

- **Process-enabled, enterprise knowledge integration:** AquaLogic Interaction's Knowledge Directory provides seamless, organized access to information across unstructured and structured enterprise source systems, including Documentum, Microsoft SharePoint, Windows and Novell file systems, the Web and more. Information from within this directory can be discovered directly by users, displayed in Web applications, and associated directly with individual process instances.

### ***The benefits of optimizing collaborative work***

Because a business is only as efficient as the processes that support it, optimizing collaborative business processes, like other human-centric and system-centric processes, yields a series of transformative benefits that increase business agility and improve the business' bottom line. Key benefits of using AquaLogic BPM Collaboration Edition to optimize collaborative processes include:

- **Maximizing individual and group productivity:** coordinating the collaborative activities key processes depend on reduces the confusion and frustration typically felt by employees feeling their way blindly through ad hoc work. Situations that require high degrees of collaborative interactions abound in the enterprise – from event planning to on-boarding a new employee to resolving a customer support incident. AquaLogic BPM Collaboration Edition unifies the tools and interactive experiences that support this style of work, coordinating the tools around a specific sequence of activities.
- **Improving decision-making:** assembling all the information related to a process, and delivering that information contextually to process participants, improves the accuracy and speed of decision-making. Because most key processes require exceptions that only people, often working together, can handle, this is especially important. AquaLogic BPM Collaboration Edition assembles all content related to a specific process,

from both structured data sources like ERP and CRM systems, and unstructured repositories like Documentum, SharePoint, file systems and email servers. No other solution offers the breadth of content assembly and access in the context of process work.

- Increasing the predictability of key metrics: delivering greater visibility across key processes and activities improves the predictability of key business metrics, and allows the business to adjust faster to change. AquaLogic BPM Collaboration Edition assembles process-related information into a broad series of coordinated user experiences, where the activities performed by participants can be tracked and audited.
- Lowering the cost innovation: investing in a single system that supports the myriad collaborative processes within the business lowers the total cost of ownership for each solution deployed. AquaLogic BPM Collaboration Edition provides a unified platform for all types of business processes, both inside and outside the company, and helps IT achieve greater economies of scale as the system is extended to encompass more of a business' key challenges

## **Looking ahead: emergent collaborative processes**

This paper has focused on collaborative processes where the types of activities, and the tools used to support them, are largely predictable. But what about processes where the activities are completely ad hoc, where the path to an outcome is different each and every time, where handling exceptions is nearly always an experiment? BEA is looking ahead to these types of processes, and introducing new technologies and capabilities to address them:

- Collaborative process application building: BEA is focused on extending the power of Web application creation to as many users as possible, providing a tool for process participants to optimize collaborative processes by building the applications that support their work. BEA's Project Builder will enable business users and other non-developers to collaborate on the creation of interactive workspaces, group pages and portal communities, populated through an extensible library of reusable

page components, data connectors, and workflows. This type of participation, as evidenced by the consumer Web with participation-driven experiences like Wikipedia and del.icio.us, is self-fulfilling, and enough to supercharge the enterprise in a way never seen before.

- Social content discovery: information aids decision-making and speeds the outcome of collaborative processes. BEA is focused on improving the accuracy of information discovery by tapping the implicit knowledge that exists naturally within an organization. BEA's Project Graffiti expands upon the ideas behind the "Wisdom of the Crowd" and Web 2.0 applications like Flickr and del.icio.us, and delivers a knowledge system to better support information discovery needs within collaborative processes. Graffiti augments traditional search and indexing by providing an alternative path to richer collections of content, based on explicit activity and the implicit connections that exist between information and the people that create and use it.

## Summary

BEA helps companies of all shapes and sizes innovate through business process management and optimization, with special emphasis on human-centric and collaborative business processes. The ability to continuously design, deploy, and change business processes flexibly creates a huge business advantage and helps ensure you stay ahead of your competition and the changing dynamics of your market. BEA's AquaLogic BPM Collaboration Edition delivers your competitive advantage out-of-the-box, through an integrated, best-of-breed system for supporting the highest value collaborative processes in your business.

## What to do next?

BEA offers a wide variety of information and resources at its BPM Resource Center. To learn more, visit [www.bea.com/bpm](http://www.bea.com/bpm).



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