Upside Research

Choosing the Right BPM Solution
for Your Organization

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Executive Summary

Today's organizations have plenty of options when it comes to managing business processes, from informal or manual methods to software-based collaboration and workflow solutions. The real challenge for IT and business managers is knowing what to use when, and how to find a business process management solution that will provide the most long-term agility and best business value without requiring huge investments of time, money, human capital or other resources.

This need for better process management is one reason why so many organizations have invested in collaboration and workflow solutions including Microsoft SharePoint Server 2010, and business process management (BPM) solutions such as Process Director from BP Logix. Yet, as any seasoned business and IT professional will admit, purchasing a new technology solution doesn't guarantee success for process management. Creating nimble business processes requires an understanding of which technology solution—or *solutions*—are best able to address the current business problems. Some business processes lend themselves better to certain solutions; making this distinction upfront can save on development costs, lost productivity, and the negative impact on a business that can result from choosing the wrong technology.

This paper provides organizations with a functional distinction between workflows and processes, and information on the best practices for determining the right type of solution for a specific business challenge. It also explores why organizations so often, and so rapidly, encounter the limitations of SharePoint's workflow features, and arrive at the conclusion that it is not well suited for creating complex and agile business processes. In addition, the paper provides insights into the tools that are needed for customizing Microsoft-centric workflows within SharePoint, and how they compare to the tools and capabilities provided by BP Logix Process Director. Our goal is to inform our readers so that they can make the best decisions regarding their specific needs prior to embarking on the road to automating business processes.

Underestimating Your Workflow or Process Requirements

Most businesses underestimate the complexity of their existing processes. Translating a business process–such as onboarding a new employee–from a paper-based, manual process to a forms-driven, software-based process can be challenging. The translation effort requires organizations to document and diagram the process; clarify roles, responsibilities, logic and decision points; and then equate these steps and processes to capabilities provided by the software tools at hand. Translating the manual, human-based process of "bugging Mary in HR to approve a change" into a technology-based process that involves emails, reminders and escalations is challenging.

As a result, most organizations interested in leveraging SharePoint workflows for more complex real-world workflows immediately find themselves stymied by the limitations of the out-of-the-box SharePoint workflows. At this point, organizations need to look at developing the more complex workflows. Microsoft offers its Designer product line (SharePoint Designer 2007 for use with SharePoint 2007 products and SharePoint Designer 2010 for use with SharePoint 2010 products) which provides a range of tools that claim to provide "no code" solutions. More often than not, however, these solutions do require developers (and code) and the solutions themselves are considerably more complex to create and maintain than one might hope. As recommended in this paper, BP Logix offers a powerful set of tools that organizations should consider when faced with the challenge of moving from existing manual business processes to computer- based processes.

PROCESS MANAGEMENT AND MICROSOFT SHAREPOINT

Processes drive business. Given the speed of change, the quality of a company's business processes in many ways dictates how well the company will survive in today's competitive environment. That's why putting an effective business process management (BPM) strategy in place can be one of the most strategic decisions a company makes.

It's also why we've seen rapid growth over the past ten years in a variety of business process management technologies, from basic workflow-oriented products like SharePoint to full-fledged BPM solutions like BP Logix's Process Director. Now, the challenge for many organizations is to decide when (and how) to use each tool to its best advantage. Some solutions are better for general collaboration and sharing, while others are optimized for managing and monitoring more complex process tasks.

Let's take a closer look at Microsoft SharePoint Server 2010 (SharePoint), Microsoft's current offering. SharePoint is designed to provide business users with the ability to aggregate their content and data, share it throughout the organization, and institute basic workflow capabilities through the user interface (UI), limiting the need for IT involvement. SharePoint has been effective at helping organizations create intranets, build business portals, manage content, and enhance collaboration. It also provides a powerful alternative to file shares for storing documents and to using email to distribute documents for collaboration purposes. In many cases, however, as business users become entrenched in SharePoint, they realize that the portals, content, and collaboration are all components of larger business processes -- and the challenge becomes one of pushing SharePoint to tackle process management.

 While SharePoint includes some workflow capabilities out-of-the-box, and other Microsoft products can be used to extend these capabilities (including SharePoint Designer and Visual Studio), it *isn't* specifically a business process management solution. Since SharePoint is, however, an integral

> **Workflow vs.
> Business Process Management**
>
> Workflow solutions automate the simple routing of items from one point or person to another. Business Process Management (BPM) solutions orchestrate simple or complex processes (tasks, activities, or data sharing) across people and systems and contain more variables and logic.

part of the Microsoft family of products, and integrates seamlessly with Active Directory (AD), Microsoft Exchange, and Office products such as Outlook, Word and Excel, it has become a fundamental part of many organizations' IT fabric. Thus, it behooves both IT and business leaders to better understand when to use a solution like SharePoint to manage business processes and when to augment, extend, or bypass it and use a dedicated BPM solution. In the next few sections, we take a closer look at those choices.

SharePoint Workflow Capabilities

SharePoint is a collaboration, document management, and web publishing software platform for business users that can also be used to help increase productivity around common workflow activities. Organizations use the SharePoint tools to create collaborative working environments, whether it is at the project, departmental or site-wide level. The tools are sophisticated enough that a percentage of companies have chosen to use SharePoint for conducting commerce and providing information about their companies via the Internet.

When it comes to workflows, SharePoint also provides a number of tools that can be used for simple workflows. These tools are simple enough to be used by end, or so-called "power," users. The most basic example of these workflow tools are "alerts," which can be created in any SharePoint list (which stores rows of data) or libraries (which store documents). SharePoint alerts send an email to a subscriber to alert that subscriber when a certain event happens (such as when a document or row of data is added/modified or deleted.)

Another example of SharePoint workflow functionality is approval workflows. SharePoint document libraries can be configured to require approval before a document can be "published" and viewed by anyone other than the person trying to publish it or by site administrators. In addition, workflows of several different "flavors" can be created by end users with sufficient permissions (typically power users) that are more customizable. The out-of-the-box workflows available by default in SharePoint 2010 are:

- Disposition Approval
- Approval
- Collect Feedback
- Collect Signatures
- Three-State Workflow

It is worth noting that these workflows are simple (serial or parallel) workflows that, when started, request an action from one or more individuals involved in the workflow, and change data attached to the item such as approval status. While useful, they are very limited and not customizable using the out-of-the-box user interface beyond basic settings shown in *Figure 1*, below. Note also that there are limited variables in this workflow example, and no "if/then" style logic. Nor is there any way in the SharePoint user interface to control the form itself, so users are stuck with the look-and-feel, fields, and options provided.

Figure 1: SharePoint Workflow user interface

MEETING SHAREPOINT LIMITATIONS WITH SHAREPOINT DESIGNER AND INFOPATH

From the author's experience with many clients of different sizes and across different industries – from government to non-profit, for-profit organizations, sub-one hundred users to tens of thousands of users – a general truism has emerged: most businesses *underestimate* the complexity of their processes. Many business process discussions have expanded into multiple meetings, Visio diagrams, and whiteboards full of data. Furthermore, translating a business process – such as invoice or expense report approval – from a paper-based, manual process to a forms-driven, software-based process forces an organization to change the process, since computerized tools by nature differ from manual ones. The practice of translating the manual, human-based process of "begging IT to approve a new laptop and access to Active Directory" to a technology-based process that involves emails, reminders and escalations is challenging.

Thus most organizations interested in leveraging SharePoint workflows for more complex real-world workflows immediately find themselves stymied by the limitations of the out-of-the-box SharePoint workflows. At this point, clients need to look at *developing* the more complex workflows. Microsoft offers its "Designer" product line (SharePoint Designer 2007 for use with SharePoint 2007 products and SharePoint Designer 2010 for use with SharePoint 2010 products) which provides a range of tools that claim to provide "no code" solutions enterprising developers or "power users" can leverage.

In reality, however, mastery of the SharePoint Designer products requires training and/or extensive experimentation – and the end result may still fall short of organizational requirements. When this happens, the next step is to employ experienced developers to use Visual Studio tools, as most power users do not have the experience or time needed to learn

how to use that product. (That is a separate discussion altogether. The learning curve for Visual Studio is on the order of months to years -- and is generally overwhelming for non-developers.)

Figure 2 provides an example of the interface that a power user needs to work with when using SharePoint Designer 2010 to edit a workflow to be used on a SharePoint site. While the interface looks quite friendly, as the workflow grows in complexity to meet more complex business process needs, the user needs to be very experienced with the toolset to get the desired results *and* must be *very familiar* with SharePoint terminology and features. The icons on the Workflow tab of the menu give insight into the variety of tools the user needs to be trained on. Certain icons seem self-explanatory, such as "Conditions," "Actions," and "Step" but others aren't immediately obvious, such as "Initiation Form Parameters," "Local Variables," and "Association Columns."

To continue beyond this point the user must also understand what Document Sets are (a new folder-like feature in SharePoint 2010); what a List is in SharePoint (it can actually be a list or a library); what Tasks are (SharePoint Designer specific tasks); and—most significantly— be comfortable enough with development to handle the Utility Actions such as working with strings and substrings.

Figure 2: Interface for SharePoint Designer 2010
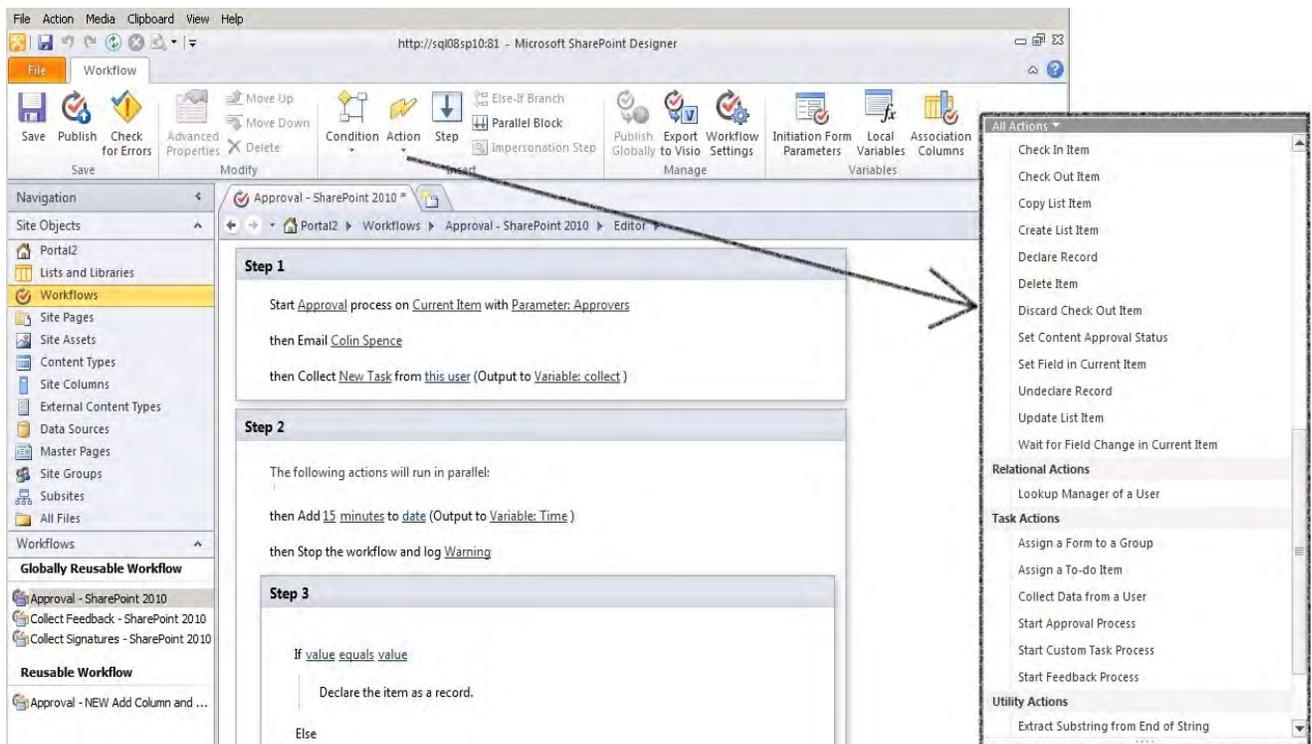
Forms are also associated with the workflows that prompt users for input, and are thus critical to the overall user experience and need to be edited with InfoPath 2010. Similar to SharePoint Designer 2010, InfoPath 2010 is a very powerful tool, but it requires training in order for the developer or power user to use it effectively. *Figure 3* shows the user interface with the Data

tab active. Once again, the user needs to be trained on SharePoint specific terms and in programming concepts such as connecting to different data sources, including Web Services, SharePoint Lists or Servers, and other sources (databases or XML files) or data connections. Then locations for the data end-point need to be defined, including email, SharePoint Library, Other Locations (Web Service, SharePoint Server Connection), and other behaviors need to be configured. These can include rules created in InfoPath. So there is much more involved with creating InfoPath forms than simply placing fields on the page and making it "look nice."
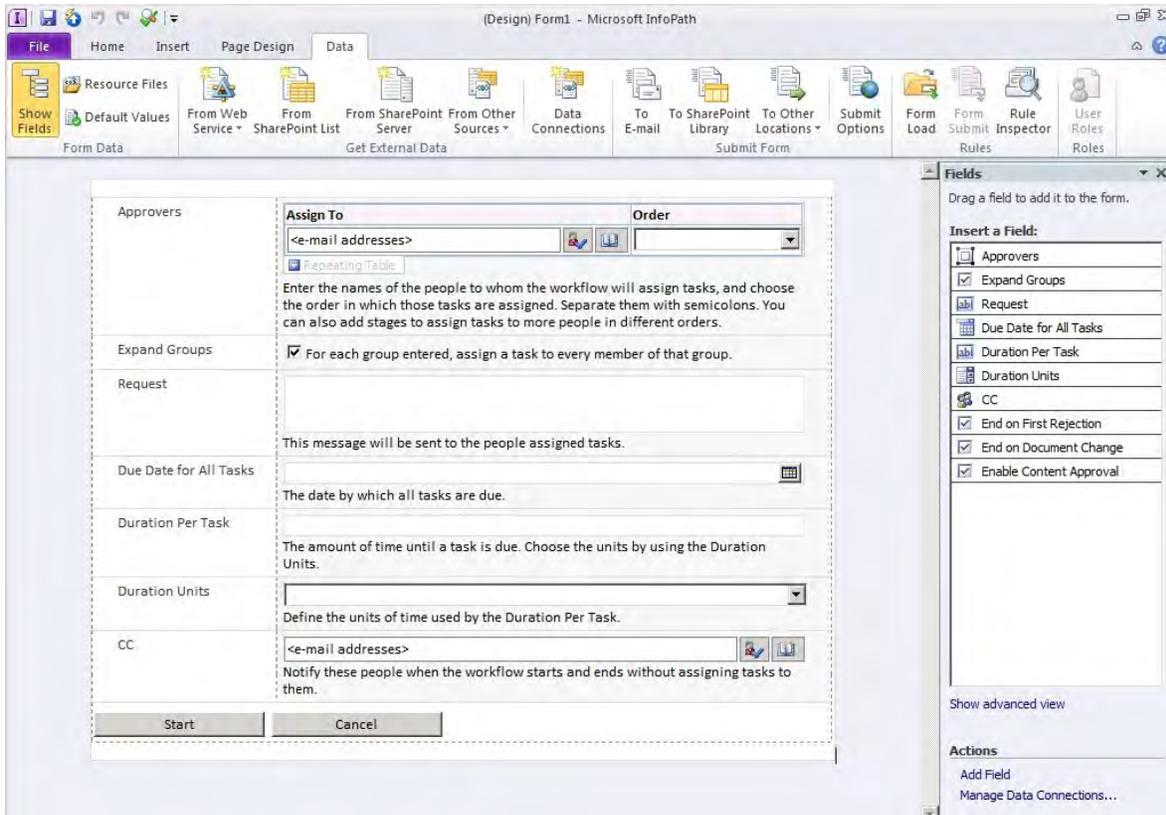

Figure 3: InfoPath user interface

More complex processes, process customization and process modification typically all require skilled SharePoint developers intimately familiar with the SharePoint "world" and moving parts, as well as tools such as SharePoint Designer and InfoPath. Likewise, future modifications of customized processes will require involvement of these same developers.

BEST PRACTICES FOR SHAREPOINT

Experts recommend that, to get the most out of SharePoint, there are a number of best practices organizations "should" adopt to ensure success. Here are several of the most important ones relative to the theme of this paper:

- o **Manage SharePoint "Feature Overload."** SharePoint has evolved over the last decade to include hundreds of features that few people in the world can claim to fully understand. For the average user, concerned primarily with simply getting his

or her job done, a "fully loaded" SharePoint environment can be overwhelming and require extensive training to master (up to multiple weeks). Experienced SharePoint implementers and consultants therefore seek to understand the business goals that drive the use of SharePoint along with IT's ability to support the tools implemented, and the users' levels of sophistication to use the tools provided. This "right sizing" process directly translates to the success of the SharePoint implementation.

o **Distinguishing Workflow from Process.** SharePoint is ideally suited to simple workflows that exist within a company, such as moving an expense form through a linear and straightforward approval process. It typically involves using email to alert participants that they need to take action, and changing the data attached to a document at the end of the workflow, while also auditing "Who did what when?" in SharePoint lists. At the point where a simple workflow becomes a "business process," modifying the handful of out-of-the-box workflows requires a combination of SharePoint Designer, InfoPath and for more complex processes, Visual Studio. SharePoint Designer and InfoPath each require multiple weeks of training and hands-on experience for a power user, and typically only professional developers tackle Visual Studio.

o **Understanding SharePoint limitations in the area of business process management.** A business process typically involves several workflows that combine to create the overall process. These workflows may be occurring in parallel or sequentially and often involve integration with back-end systems, other workflows and contain more variables and business "if/then" logic. SharePoint does not provide an interface that makes it easy for business users to define these business processes[1] or convert a manual process into a computer-based process. As mentioned above, this conversion process generally requires a combination of SharePoint Designer, InfoPath and Visual Studio. Therefore, it is important for business users to understand whether they want to create a workflow or a business process and use SharePoint for the workflow or seek other tools better suited for the business process itself.

o **SharePoint development can limit the organization's agility.** SharePoint relies on many components to function properly: the operating system (Windows Server 2008), Internet Information Server (IIS), .NET Framework, SharePoint Foundation Server 2010 and SharePoint Server 2010. Any custom development, whether through SharePoint Designer 2010 or Visual Studio 2010, can break if any of these components change, are upgraded, updated or patched. Testing is required prior to any changes in the environment. Many organizations find themselves "stuck" on an

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[1] Visio 2010 Premium does allow business users to create flow charts that represent more complex business processes, but these need to be imported into SharePoint Designer 2010, tested, tuned, and then deployed by developers or power users.

older combination of versions of these products simply because they are afraid to upgrade or testing showed their applications do in fact break if an upgrade occurs.

SHAREPOINT SUMMARY

SharePoint provides many obvious benefits to an organization, and its adoption rate has made it one of Microsoft's fastest-growing products. It is a powerful tool for creating sites that contain intranet content or for collaboration on documents or other structured data. It offers powerful search capabilities, social networking tools and more advanced tools for business intelligence applications. Some of the SharePoint tools available to end and power users lend themselves to the creation of the most basic types of business workflows, as discussed previously. If users need more than "the basics," some will have to be trained to use SharePoint Designer and InfoPath, and even Visual Studio. Ultimately, this may not suit the organization's requirements in the area of business processes as that typically needs to be managed and modified by business users – and business users often lack the (large) amount of dedicated time needed to master complex development skills. Finally, the development of applications, such as complex workflows, on the SharePoint platform can limit the agility of the overall platform. Smart organizations will seek to limit the complexity and level of customization required to use the SharePoint environment and look for other solutions for business process management.

THE BPM/PROCESS DIRECTOR APPROACH TO PROCESS MANAGEMENT

While Microsoft SharePoint includes some basic workflow functionality out-of-the-box, as well as separate tools for developing more advanced workflows, it's not the only solution available to manage, monitor and optimize workflows and business processes. In fact, while organizations may have chosen SharePoint for its collaboration, file sharing, and publishing capabilities, many are now turning to BPM solutions, rather than SharePoint Workflow, when it comes to automating and monitoring anything beyond the most basic workflow scenarios. A good example of a BPM product that complements Microsoft SharePoint is BP Logix Process Director.

Process Director is a web-based BPM solution that helps organizations define, automate, manage, and analyze business processes. Process Director contains many of the building blocks found in enterprise BPM solutions, along with some unique components that distinguish it from other BPM products and make it well-suited for use with SharePoint. *Table 2* highlights the main components of Process Director.

BP Logix Process Director Components	
Component	**Function**
Workflow Definitions	One type of process, created using code-free, visual tools. Workflow definitions provide a traditional, flowchart-based interface for business analysts and process owners.
Process Timelines	Another, unique type of process, created using code-free, visual tools. Process timelines introduce a range of features not available using more traditional process models, such as Predictive BPM (pBPM™), discussed further below.
Business Rules Engine	Enables creation of independent, reusable business rules that govern processes.
eForms	Dynamic electronic forms driving processes usually created within Microsoft Word.
Reporting	Enables business users to build dashboards and reports and perform analysis of business process data.
Application and Data Integration	Integrates with existing applications and data systems in the IT environment.

Table 2: BP Logix Process Director components

Process Director embraces a zero-coding approach and offers business users graphical interfaces for creating and managing processes. Process Director can also integrate with existing data stores (including databases, ERP and CRM systems) and productivity applications like email and spreadsheets.

PROCESS MANAGEMENT USING PROCESS DIRECTOR

Like SharePoint, Process Director can be used to automate basic workflow tasks. Unlike SharePoint, however, Process Director has been designed to automate, manage, and optimize a variety of complex business processes across organizations. With built-in SharePoint integration points, Process Director can also be used to provide workflow and process automation on top of existing SharePoint deployments.

Because it is a BPM platform, Process Director provides enterprise-strength BPM capabilities. The business rules engine enables business users to define and govern their processes with logic that is independent from the workflow, which provides greater flexibility and faster change when needed. In addition, the integration capabilities provide the ability to extend a complex business process across departments, and out to partners, customers, and other valued affiliates.

Figure 4 shows an example of the Process Timeline™ builder which provides an intuitive interface for designing complex business processes. The interface differs dramatically from SharePoint 2010 tools, as well as from the SharePoint Designer 2010 products. Furthermore it appeals to the less technical user.
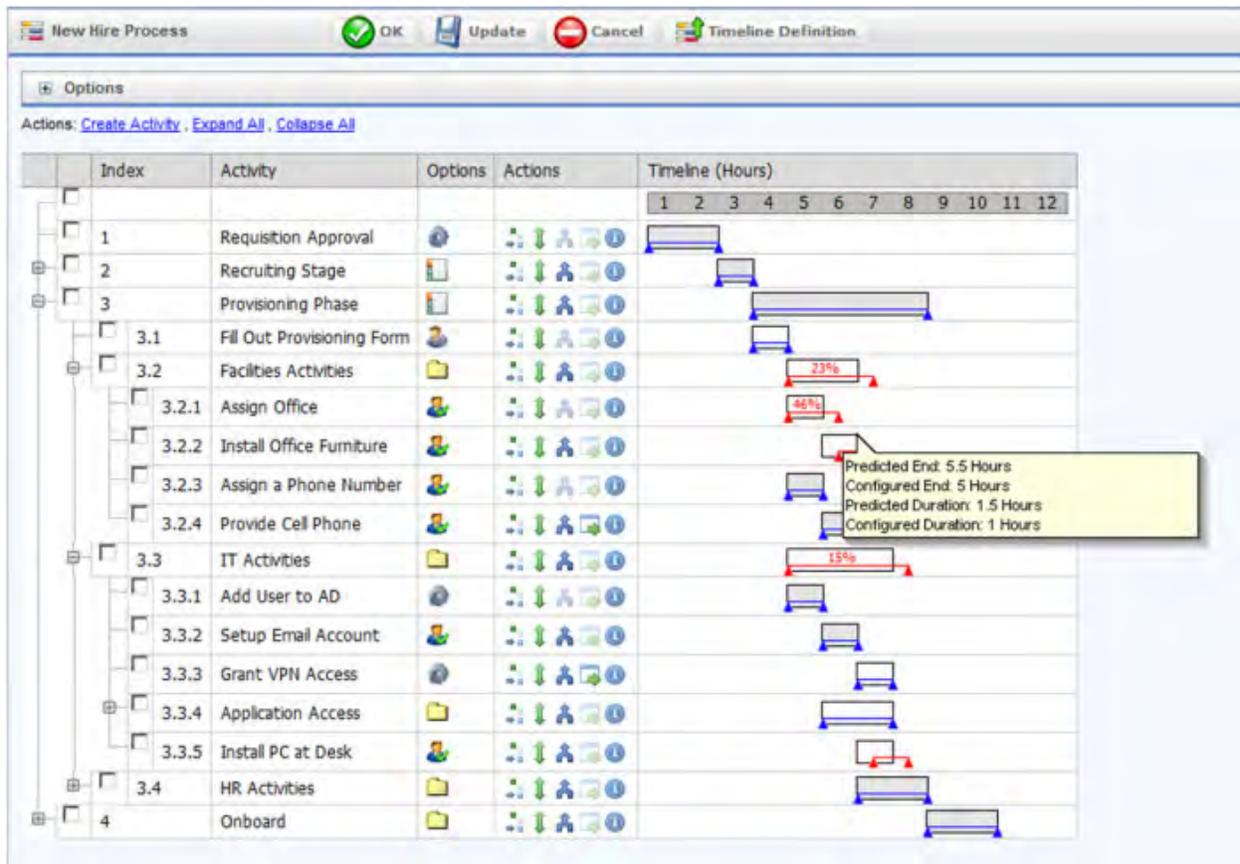
Figure 4: BP Logix Process Timeline Builder

With a minimal amount of training, business users can create timelines by entering activities and defining the components of those activities. The timeline is then immediately available for use. As shown in *Figure 5* the key components for each activity include:
- Activity
- Participants
- Start When Rules
- Completed When Rules
- Needed When Rules
- Due Date Escalation Options
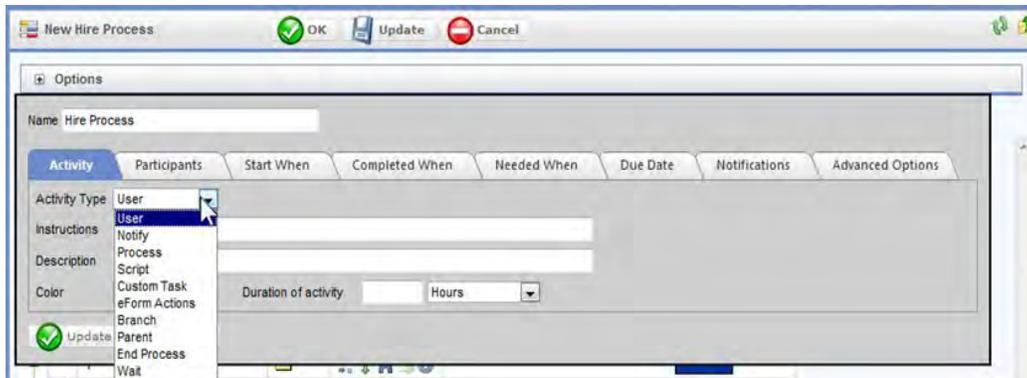- Notifications
- Advanced Options

Figure 5: Key Components for each activity

BENEFITS OF PROCESS DIRECTOR

Process Director has several important features that distinguish it from other BPM solutions and provide unique benefits to organizations. One of them is the understanding that different types of processes need different modeling approaches to optimize and manage them. BP Logix offers process owners a choice of models: the traditional, flowchart-style workflow definition model (see *Figure 6*), and the Project Timeline model, unique to Process Director. Each has its own benefits and both can be employed within a business process as well. Traditional workflows are well suited to simple, sequential processes, such as approval cycles. Process Timelines are appropriate for more complex, cross-departmental, or time-sensitive processes requiring advanced predictive and historical analytics. Commonly, both models are used together, with the Process Timeline providing a structure supporting a series of user-centric activities, machine-centric activities, and traditional workflows.

Process Director Engine

Process Director is built around a process management engine (workflow engine) designed from the ground up to support BPM, not adapted to an existing architecture such as the workflow engine used by SharePoint 2010. Process Director contains patent-pending technology around the Process Timeline and the workflow state machine. The internal state machine provides fast, efficient, and robust control of all processes. All workflow functions are tightly integrated with Business Rules, eForms, Knowledge View reports, metadata, and content.
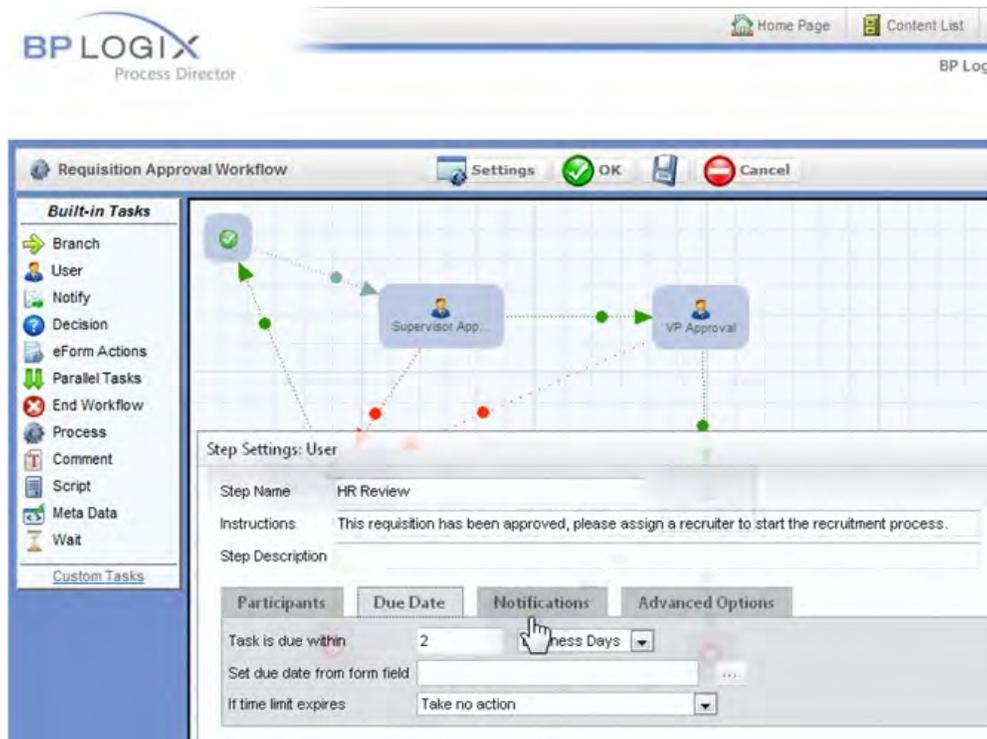

Figure 6: Process Director

Another benefit of Process Director is its no coding capabilities. Business users can take Process Director out-of-box and begin automating business processes immediately. The graphical tools the product provides, along with the rules-based process management, make it straightforward for business users to model and deploy their most pressing business processes. Electronic forms are built within Microsoft Word, while processes and rules are defined and managed through a web-based graphical interface. This includes processes that involve the timeline-based approach, and go beyond simple, linear workflows.

Process Director has introduced Predictive PBM (pBPM™), which provides business users the ability to track processes and see when each process—and each activity within each process—is likely to complete. Through a graphical interface, process owners are able to monitor processes and sub-processes and take preemptive actions based on current conditions. This puts the value of the business process in the hands of the business users, and enables them to modify processes or rules to respond, effectively, to business conditions. *Figure 7* shows an example of this interface, where designers can modify the expected completion time of a task (for example if someone is on vacation) and see the impact on the other tasks in the process. Data can also be viewed pertaining to the individual steps, as shown in *Figure 8* such as Predicted Start Date, Predicted Completion Date, Configured Start Date and Configured Due Date.
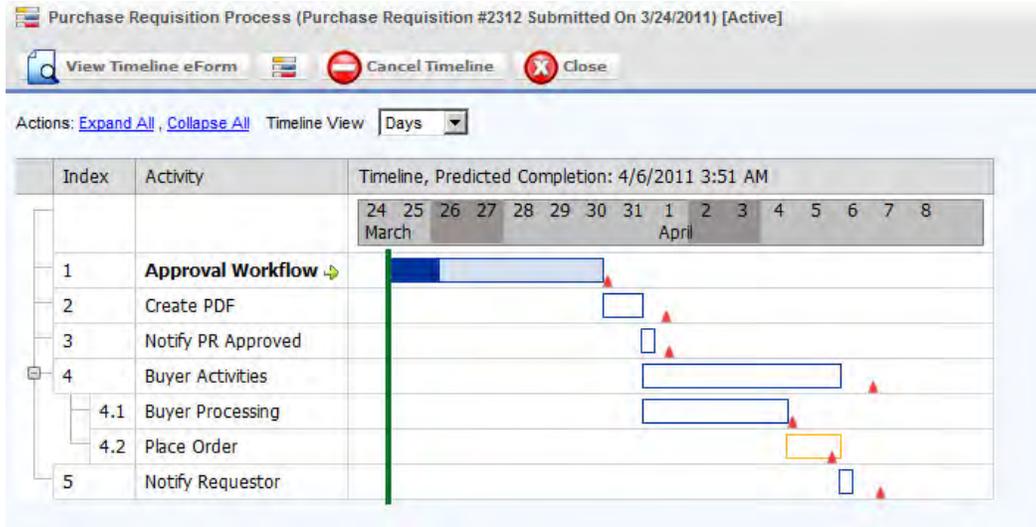
Figure 7: Process Director Predictive BPM™ interface

Figure 8: Step-level view of Predictive BPM™ interface

Process Director's Knowledge View reporting tools, shown in *Figure 9* provide a wealth of statistics to inform administrators of key information such as Active vs. Completed Workflows, Average Run Time per Workflow Type, Workflows Submitted by Week and Running Processes. This level of data allows administrators (who can be the workflow designers themselves) to monitor workflows and processes as they are occurring, as well as spot trends in usage and workflow completion times.
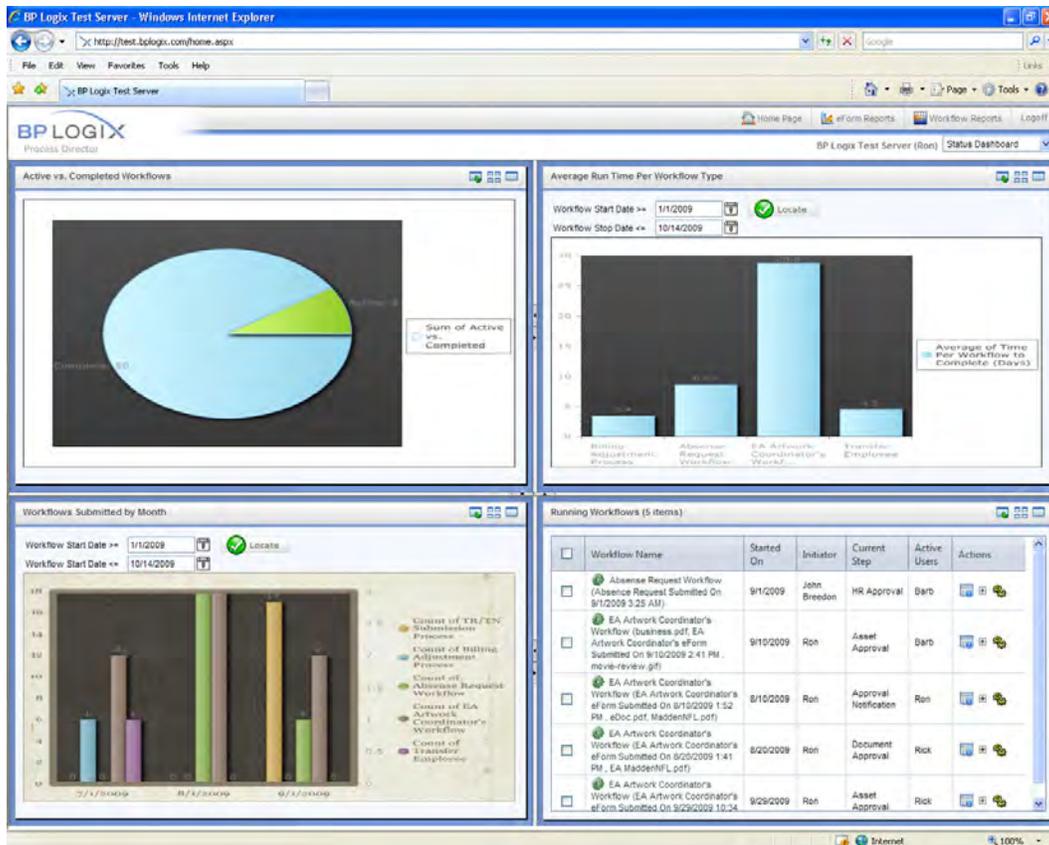
Figure 9: Process Director's Knowledge View reporting tools

PROCESS DIRECTOR DEPLOYMENT SCENARIOS

To help provide insight into when and where organizations might deploy a BPM solution like Process Director, it can be helpful to examine several different deployment scenarios.

- **Example I:** A company wants to manage its new employee recruitment process, from the personnel request activity, through interviews, capital expenditures, and onboarding. Many of these activities are interdependent and not all are linear in nature. In addition, the approvals and processes cross departments and are time-sensitive. Process Director can be used to optimize the entire recruitment process.

- **Example II:** A company that wants to capture and track the status of all workflows related to Purchase Order approvals, integrating this with its ERP and financial systems. That company needs a BPM solution that provides business users with the tools to create their processes for automation, but also has to integrate with the existing IT environment, with minimal coding and IT involvement. Process Director can be used here.

- **Example III:** A company has installed SharePoint and begun creating sites and site collections, using the content management and collaboration capabilities of SharePoint. That company now wants more robust business process management, but wants to be

able to extend SharePoint, rather than replace it. This is an optimal scenario for Process Director. Process Director is well-suited as a BPM solution that works with SharePoint to provide the optimal BPM and Collaborative environment.

HOW TO SELECT THE OPTIMAL WORKFLOW AND PROCESS MANAGEMENT SOLUTION

When it comes to using SharePoint for workflow or business process management situations, there are a number of issues that organizations should consider. *Table 3* lists some of them.

Consideration	Microsoft SharePoint	BP Logix Process Director
Developers/coders required for customization	Coding Required	No Coding Required
Create new custom process (level of effort)	Moderate to Significant Effort	Low to Moderate Effort
Create new custom process (resources)	IT / developers	Business Users
Modify/support/adapt existing processes (resources)	IT / developers	Business Users
Modify/support/adapt existing processes (cost)	High Cost	Low to Moderate Cost
Flexibility of solution (how easy is it to change)	Low to Moderate Flexibility	High Flexibility
Time required to create customized processes	Moderate	Low to Moderate
Agility of solution (how fast can it be changed)	Moderate Agility	High Agility

Table 3: Considerations for SharePoint and BPM use

Optimizing business processes requires using the right tools for the right jobs. To help organizations identify when a solution like BP Logix Process Director is a good fit, we have created the following list of decision points. If the answer to any of the following questions is "yes," we believe it's worth considering a BPM solution like BP Logix Process Director, either as a standalone process management solution, or in conjunction with a SharePoint deployment.

- Do you want to be able to quickly define and alter processes?
- Are future updates/modifications expected frequently?
- Do you want the ability to empower business units with direct control over their business rules and processes?
- Are you modeling processes that cross departmental and application boundaries?
- Do you have processes (or steps) that require more complex exception handling and logic?
- Are your IT resources limited?
- Is custom integration needed/helpful?
- Do you expect advanced reporting capabilities and easy customization of reports?

If you answered "yes" to any of the above questions, investigating a BPM-focused solution like BP Logix Process Director is a natural fit for your needs—even if you're already using SharePoint for its rich set of collaboration, document management, business intelligence, or other capabilities.

USING PROCESS DIRECTOR WITH SHAREPOINT

If an organization is interested in extending its SharePoint applications into the realm of true business process management, Process Director offers several features that make the effort seamless. Workflows developed in SharePoint can start, control, post, and provide data to Process Director. Process Director's eForm interface will support the document picker for SharePoint, enabling users to easily add SharePoint documents to an eForm and to browse and select documents from the SharePoint library to use with Process Director.

Process Director's Custom Task library has also been extended to support SharePoint functions, enabling a workflow to automatically interact with and store content in the SharePoint library. Users are able to select documents and start a workflow process running in Process Director from within the SharePoint document library interface.

SHAREPOINT AND BP LOGIX PROCESS DIRECTOR:
THE RIGHT TOOLS FOR THE JOB

Both SharePoint and Process Director have important roles in furthering the adoption of workflow and process automation throughout organizations. SharePoint's wide adoption has placed new attention on the capabilities of using rich technology and workflow to enhance collaboration, file sharing, and web publishing. And, as business users start to work with SharePoint, they are discovering the possibilities of business process automation. They are also realizing the potential limits of SharePoint in enabling BPM. As a BPM solution Process Director is a logical choice to extend the capabilities of SharePoint relative to workflow, process automation and process management. Process Director provides both the tools and underlying technology to develop and enable simple workflows as well as complex, multi-workflow business processes. Together, SharePoint and Process Director can help organizations to more effectively and successfully address their workflow and process management requirements.

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