

Perspectives on BPM

featuring Gartner research

Ultimus[®]

Adapting to Exceptions, Change and People – The Harder Part of BPM

By automating well-defined processes, Business Process Management (BPM) systems are delivering increased productivity, fewer errors, faster cycle times and reduced lag time. However, as BPM deployments grow in number and size, organizations are recognizing that process “automation” is only part of the story. The rest of the story is about “adaptation,” or the need of the application to adjust to changes in the business and the needs of the people. Importantly, since BPM technology is designed to improve the productivity of people, it must be properly socialized into the organization.

In this issue of “Perspectives on BPM,” we will consider the critical need for flexible BPM solutions and how adaptation, not automation, is “The Harder Part of BPM.” We show how deploying inflexible technology results in lost savings. Then, we present research from Gartner, authored by Michael Melenovsky, which discusses how deploying new technologies that deal with exceptions to standard operating procedures is a vital strategy. Finally, we’ll take a look at how the Ultimus BPM Suite is using adaptive technologies to handle exceptions and change, and to deliver the usability and collaboration that enables workers to get their work done in an intuitive and natural way.

Automation – The First Step of BPM

First, let’s take a look at the automation component of BPM. Much work must be done to discover and document existing workflows and to capture the inputs, outputs, and tasks that must be performed. Many key questions must be asked. Who does what, when and subject to what rules and conditions? Should the current process be automated “as is” or should it be optimized to achieve new performance goals? What forms will be used in the process and what data are needed? What systems and databases need to be integrated? Finally, how long will it take to develop and deploy the new system?

Automating business processes is not easy and many BPM applications require complex programming. However, several BPM suites provide “out-of-the-box” features that accelerate deployment by reducing the need to write code and providing automated integration agents. In fact, results show many BPM initiatives can be deployed in as little as 2 to 4 months and deliver immediate results. As shown in Figure 1, organizations are realizing savings because BPM drives increased efficiencies that reduce the cost of running a business.

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Figure 1

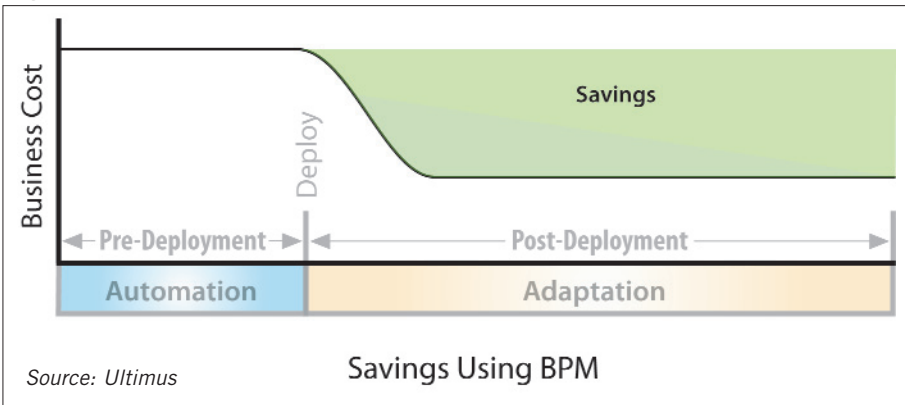
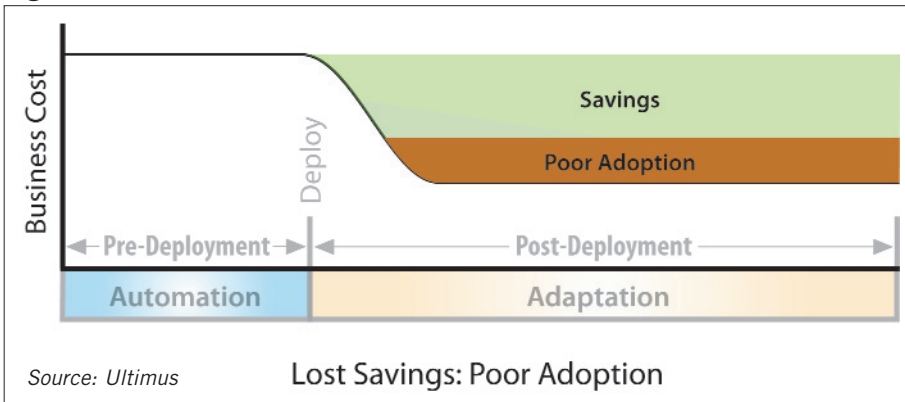


Figure 2



While automation is at the core of BPM, it is only one part. Automation represents the upfront investment made during the “Pre-deployment” phase where the processes are defined, automated and deployed. The company realizes savings in the “Post-deployment” phase. Considering that many BPM projects can be deployed in only 2 to 4 months, the post-deployment period clearly represents a more significant part of Lifecycle of the BPM. What happens in the post-deployment phase, after you go live?

Adaptation – The Harder Part of BPM

In theory, it might look like the work is done when the process is automated.

However, in the real world, neither people nor processes are static. People are not automatons mechanically performing the same task the same way time after time. Likewise, processes are not immutable procedures that are impervious to change. As a result, processes need to adapt to the people needs and business needs during the post-deployment phase.

Let’s consider the importance of people in BPM. How many businesses have processes that don’t involve people? Technology doesn’t live in the organization for its own sake; it is there to support people. People are

tired of conforming their behavior to the way the software wants them to think and act. Instead, they want the software to adapt to the natural way they work. Business process automation is ultimately about people, not technology. It is the people who perform the work, add information, and make decisions. When the technology works in a natural and intuitive way, people will adopt it. When technology fails to deliver on important usability needs, the level of adoption and results will suffer. As Figure 2 shows, poor adoption of a BPM system reduces anticipated savings.

Now, let’s take a look at why processes need to adjust and evolve to business needs. Business processes, by their very nature, are dynamic. Every day, people are counted on to handle exceptions to standard procedures. You want to treat a best customer in a different way by extending their payment terms or making a one-time exception to cover overnight shipping costs. Someone goes on vacation, gets promoted, or leaves the company, and a different person must approve a request. Changing market and competitive forces can drive the need to change or adapt an existing business process. A competitor takes a price action causing you to restructure your entire pricing and promotion program. A new company policy or governmental regulation impacts your business requiring new levels of approval and new documentation to ensure compliance.

Over the lifetime of a BPM system, an organization will deal with thousands of exceptions and changes that require an existing process to be adapted to fit the new reality. If the automated processes have poor adaptation – that

is to say they fail to adjust to the new needs of the business – people will be forced to go around the process to get their work done. By resorting to manual workarounds and reverting to the old way of doing business, a company loses its expected savings by returning to the inefficiencies of the pre-deployment world, as shown in Figure 3.

Creating software technologies that readily adapt to change is not at all easy; if it was, everyone would be doing it. This is especially true for BPM applications because there are many important process elements that need to be orchestrated. When any element changes, all the parts must continue to work together in precisely the

right manner. When we take a closer look at the elements of a BPM solution, as Figure 4 shows, the most volatile elements of BPM are the “human-centric” elements; the roles and rules. Roles change frequently as employees get new responsibilities, go on vacation, or a new hire is brought on board. Rules change based on new competitive, market, policy, or regulatory requirements. The components least likely to change are the “system-to-system” elements; integration with existing applications and databases.

There are two additional challenges to delivering on the promise of an adaptive BPM solution. First, understanding

and catering to the work habits of people is not easy. It requires insight into the subjective nature of how people prefer to accomplish their tasks and a recognition that people do not have the same preferences. While well intended software designers can try to address usability issues up front, there is no substitute for getting real feedback based on input from thousands of users who interact with the application in a live production environment over an extended period of time. Importantly, while many applications claim human-centric features, most take an EAI or “technology-centric” approach and do not have a systematic way of delivering on end user requirements. Second, making changes in a traditional “programming-centric” application can be very tedious and slow because, when it comes to delivering agility, every line of code that needs to be changed is a liability, not an asset.

In summary, BPM has proven to be an excellent investment because of its ability to automate complex processes and generate immediate savings. However, in order to drive sustainable, long-term business benefits, it is important to invest in BPM systems that use adaptive technologies that adjust to changes in the business and to the needs of the people who are the most important players in business processes. This is because, over time, people will eventually work around any IT system that fails to stay current or requires them to perform their work in an inefficient or unnatural manner.

Source: Ultimus

Figure 3

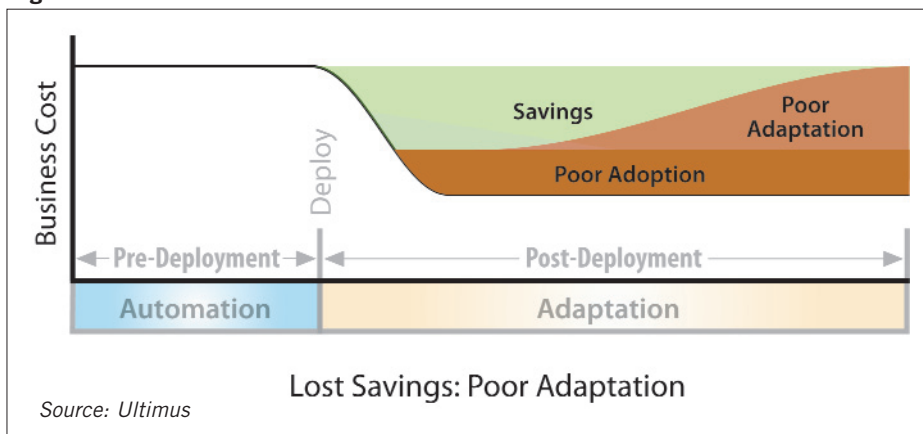
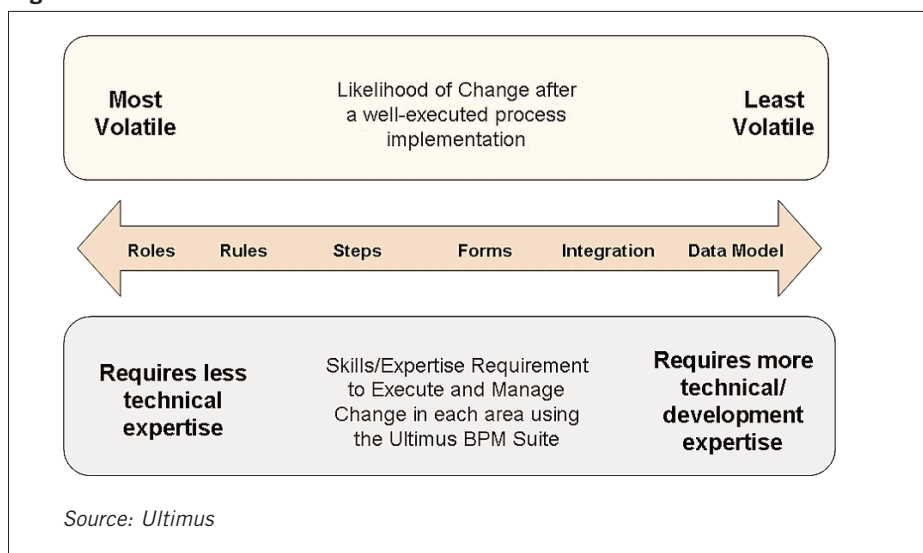


Figure 4



BPM is about developing management disciplines and deploying technologies so that dealing with exceptions to a standard procedure becomes the normal procedure. Exception management may become standard operating procedure, and businesses will enjoy greater flexibility in their day-to-day operations.

Business Process Management Offers a World Where Exceptions No Longer Exist

ANALYSIS

One of the misconceptions about business process management (BPM) is that process standardization is the way of the future. Although process standardization *can* be a strategy that some businesses pursue, BPM is much more about developing management disciplines and deploying technologies in such a way that dealing with exceptions to a standard procedure *becomes* the normal procedure.

Traditional application-centric thinking

Software applications (custom or packaged) have trained us to think in terms of "standard operating procedures" (that is, if you don't adhere to the way the application works, it's considered to be an exception). Because business conditions are constantly changing, organizations have made significant investments within their IT departments to assemble large application maintenance groups. One of the important services these groups deliver is acting on exceptions to or requests for different functionality. However, it's often the case that, just as the maintenance group delivers one request for functional changes, the business has a list of new ones.

Abstractions are a wonderful thing

As the IT industry has evolved, crafting ways to abstract certain functionality (and have it stand on its own) has enabled many advancements. For example, the abstraction of data models from the underlying applications launched a new era of more-sophisticated system design. The independence of relational databases delivers significant flexibility.

We're on the cusp of another new era of system design with the abstraction of business process flows from the underlying applications and infrastructure. This new process abstraction era presents some profound outcomes. For example, business professionals are now directly involved with executing priorities associated with how technology supports their business process flows, rather than relying on the IT department to schedule code changes.

The decomposition of applications

Another fascinating trend is the breakdown of the basic composition of software applications. It started with the introduction of the Web services concept, then strengthened via the service-oriented architecture initiative, and more recently gained momentum with the abstraction of business rules from the application. The software tools associated with BPM are now abstracting the process flows as well. The decomposition of software applications as we've traditionally known them is sending shock waves throughout the IT industry, which is structured around applications supporting business needs.

A new era of business and IT alignment

The new BPM software tools, such as the business process management suite (BPMS), and associated management disciplines that accompany BPM initiatives are placing the next generation of productivity tools into the hands of business professionals. The abstraction of business process flows begins with modeling. What's unique about BPM modeling over the business modeling of the past is that the models created in a BPMS are linked or integrated directly to established applications and databases. The business process flows displayed in the BPM model manipulate and orchestrate the underlying technology infrastructure (and people) involved in the process. Changing a process step sequence is as easy as drawing a line between two boxes, or modifying the natural language description of a decision point in one of the boxes. As soon as the integration points have been established by the IT department and approval procedures have been instituted, the business process owners can initiate process changes through their business process models. From a business perspective, removing the IT department as an impediment to addressing changes in business conditions translates to improved business and IT alignment.

What were once exceptions are now standards

An era in which business professionals can directly control and execute what IT once considered to be "exceptions" will deliver tremendous flexibility to the way businesses can operate. What was once considered to be a "normal" operating procedure for a process can quickly be altered to address enhancements or fine-tuning. For example, eliminating steps in a process may reduce costs, or adding sev-

eral steps may improve quality. Businesses are constantly experimenting with new ways to improve productivity, or to add capabilities to address new revenue opportunities. Under these conditions, then, what's a "standard operating procedure"?

The answer is simple: A standard operating procedure is whatever is described in the process model at any moment in time. This dynamic capability, for example, directly addresses the trend toward mass customization. The process model displays the interrelationships and dependencies between people and systems in an explicit manner. Therefore, everyone knows their role and responsibility at any point in time. Furthermore, the execution engine, which is part of the BPMS, essentially "scripts" what the people and systems need to do at any moment in time. The explicit nature of the process model and scripting that takes place make for a very clear understanding of who does what and when. If a change occurs, it may hardly be noticed by the majority of process participants.

Of course, procedures for approving process changes must exist, but the changes will no longer be referred to as "exceptions" because exceptions always denote a deviant or outlier. In the future world of BPM, what was once considered to be "exception management" may very well become "standard operating procedure."

Source: Gartner RAS Core Research Note G00134777, Michael James Melenovsky, 2 November 2005.

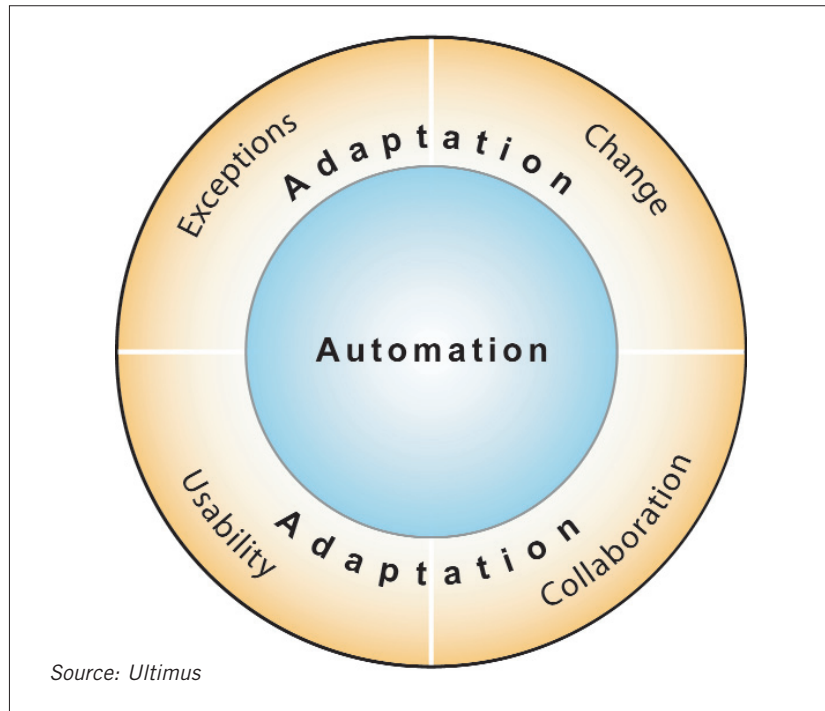
Adaptive Technologies in the Ultimus BPM Suite

We have seen that adapting to change is critical for two reasons: a) change is inevitable and b) making changes to IT systems is typically hard. Now, we will take a look at tangible examples of how the Ultimus BPM Suite is using adaptive technologies to deliver a more flexible, human-centric application. As we take a closer look at adaptive technologies, it is helpful to consider the model depicted in Figure 5 that shows “Automation” at the core of BPM surrounded by a circle of “Adaptation.”

At the top of the adaptation circle, *Business-centric* considerations drive the need to handle exceptions and change rules, roles or other parts of an existing process. On the bottom half of the circle, *People-centric* considerations drive the need to deliver collaboration and the usability needs that employees have in order to perform their work in a natural, intuitive manner. We will be addressing how adaptive technologies in the Ultimus BPM Suite enable organizations to adapt their BPM system in these four key areas: a) Exceptions, b) Change, c) Collaboration, and d) Usability.

In particular, we will look at a comprehensive feature set that Ultimus has developed to facilitate adaptation out-of-the-box. Next to the discussion on “Handling Exceptions,” we feature a side bar that explores Ultimus’ breakthrough Adaptive Discovery™ technology. Adaptive Discovery enables the Ultimus BPM Suite to detect the need for process change, readily incorporate new rules and evolve to keep pace with the business.

Figure 5



Ultimus BPM Suite Delivers Comprehensive Adaptation Feature Set

To support change throughout the entire BPM Lifecycle, Ultimus has developed a comprehensive set of technologies and features that are available to support adaptation “out-of-the-box.” Some of these technologies, such as Ultimus Flobots™ and Flostations™, are flexible integration agents that support rapid automation, integration and deployment of processes. In this discussion, we will focus on some of the features that support adaptation for exceptions, change, collaboration and usability. These features have been developed from more than 10 years of experience in automating processes for more than 1,600 customers worldwide.

“With a small staff, we needed a BPM solution that would work out of the box. Ultimus’ Web-based user interfaces gave us the flexibility needed to get processes automated and it enabled our remote workers to access the technology anywhere at anytime. The Ultimus BPM Suite paid for itself within a very short period of time,”

– Jodi Starkman-Mendelsohn, Director
West Park Healthcare Assessment Centre

Handling Exceptions

Employees, unlike machines, take vacations, get sick, get promoted, change jobs, take on new responsibilities and leave. How do you handle these exceptions when employees are unavailable to participate in an important process? With many BPM applications, this would be handled either by re-writing the code to change the process after deployment or by programming the exceptions in up front. That would mean identifying the need for the exception in advance, defining the conditions and alternate routing for the exception, and finally programming the exception into the process. This procedure can work but it is tedious, slow, and costly. And that's not the worst part. In reality, you can never anticipate and plan for every exception. Even if you take the time and energy to plan for exceptions, you will inevitably be faced with the need to make a change for an unexpected scenario.

Key Exception Handling Features

- Task Sharing
- Ad Hoc Routing
- Client View Sharing
- Assign/Assign Until
- Dynamic Recipients
- Escalations
- Skips and Jumps
- Process Rollbacks
- Conditional Resubmits
- Conditional Step Reassignment

It is far better to have robust exception handling built-in “out-of-the-box” so you can deploy faster and respond rapidly without requiring programming. For example, if you are traveling for two weeks, wouldn't it be nice to simply click a “Forward tasks until” button so that you could reroute your tasks to someone else until your return? What if you could also send a “special notification” to alert a manager if the work was not getting completed on time? Let's say a completely new situation arises and you need to change the process to get the work

Facilitating Exceptions and Change with Ultimus' Adaptive Discovery™ Technology

Driven by the need to accelerate change to business processes, Ultimus has developed an innovative, patented technology called Adaptive Discovery. Adaptive Discovery enables the Ultimus BPM system to learn and adjust in much the same way as people do. When a child gets burned by touching a hot iron, the child has sensors that detect the heat, memory that records the pain, and a brain that learns the consequences of touching the iron.

In much the same way, Adaptive Discovery senses when a new or unidentified scenario is sent through the process. If the required rules to handle the incident do not exist, Adaptive Discovery detects this undefined scenario, tags it as an “Unruly Event™,” and sends a proactive notification to the process owner. The process owner defines precisely how this situation should be handled and adds new rules which are permanently stored in the rules repository. Using Adaptive Discovery, the BPM system can sense the need for change and be updated with new business rules, essentially learning and evolving as the business needs change.

Importantly, making change is greatly accelerated because Ultimus has extracted the rules from the business process and placed them in a separate, easy-to-use rules environment called Ultimus Director. Using Ultimus Director, business users can handle exceptions and change rules in real-time using simple logic skills and “drag and drop” tools; and without doing any programming. With traditional “programming-centric” BPM applications, making a change would mean taking the process offline to make the necessary routing changes—causing delays in production and increased costs. Adaptive Discovery allows these hard-to-define details or new situations to be identified and changed in real time. Then, through the addition of dynamically applied compound rules, the process adjusts, enabling business to continue on track without delays.

“Keeping our customers happy is vital to our business, and we have to manage customer relationships in very competitive situations. By automating our customer service processes with these flexible tools, we will ensure that we have the flexibility to respond to any situation, not just those we've predefined – and we will also have a higher degree of control, management and visibility. With Ultimus and Adaptive Discovery, we can define and manage this process without losing the critical flexibility and quick competitive responsiveness our customers have come to expect.”

– Mike Brannon, Senior Manager of e-Commerce Technology
National Gypsum Company.

done. Being able to change the routing dynamically by using “ad hoc routing,” or to use “disown task,” or “skips and jumps,” or “escalations” addresses real needs that people encounter every day.

Supporting Change

When companies reorganize, change their business model, develop new policies, comply with regulations, or respond to market and competitive pressures, they need to update their processes or risk having the processes become ineffective or obsolete. Making these changes in an inflexible application is a daunting task requiring significant time and programming efforts. What organization wouldn't prefer to have an adaptive BPM sys-

tem with hundreds of built-in capabilities ready to deliver true agility and enhanced competitiveness without any programming?

This is why Ultimus offers features such as: “conditional recipients,” “relative routing,” “dynamic routing,” “heads-up/heads-down” users, “versioning,” and “dynamic directories” and more. Let's look at how “dynamic routing” handles change in a simple document approval process for a press release. Each press release is routed to the same recipients to gain internal approval, but requires varying approvals externally because the company frequently features a different customer for each new press release.

This situation is easily handled using “dynamic routing” with Ultimus. The person who initiates the process simply enters the email address for the external approver in a text box on an Ultimus form. The request is dynamically routed to the right approver for each process incident even though the recipient may change. While many BPM systems can support this type of change with custom programming, Ultimus has done the hard programming work up front to enable companies to support this type of change “out-of-the-box.”

Key Change Enabling Features

- Conditional Recipients
- Relative Routing
- Dynamic Routing
- Heads Up/Heads Down Users
- Versioning
- Dynamic Directories
- Adaptive Process Maps
- Drag & Drop Rules Creation
- Drag & Drop Reorganization
- Auto-detect Undefined Scenarios

Enabling Collaboration

Collaboration is necessary for organizational learning and team building in a knowledge economy. While human interaction is important for social reasons, it is even more important for making sound business decisions. Many decisions fall into grey areas where experience and judgment are required to render the best decision. As such, workers need to collaborate, confer, delegate, consult, and share responsibilities with colleagues when performing their work.

To support collaboration, Ultimus offers many capabilities including; “confer,” “delegate,” “task sharing,” “blind queues,” “selective queues,” and “memos & sticky notes.” Let’s look at the “memos & sticky notes” as an example of how sometimes the little things can turn out to be quite significant. For example, in a car, the engine is a big thing and a cup holder is a little thing. The funny thing is, if a new minivan had a nice big engine, and no cup holder, it probably wouldn’t sell very well. And, if it did sell, you can bet people would go to the auto parts store and buy a cup holder as an accessory.

Now, back to memos & sticky notes. In many workflow solutions, if an employee needs to collaborate with one or more co-workers before completing a task, the employee would need to exit the workflow tool and either pick up the phone, use email or IM to contact them. This is because most workflow only knows how to perform in one way; the way it was developed. If it wasn’t programmed to enable collaboration, that’s just too bad. This is not only inefficient; even worse, it trains workers to go around the system because the system can’t handle a simple requirement to ask someone else for their advice. One of the key tenets of a well designed workflow tool is that all the right information is presented to the right person at the right time. It makes one wonder if someday BPM systems will evolve like automobiles so that the convenience features like “memo” will become as important as the rules engine.

Key Collaboration Features

- Parallelism
- Task Sharing
- Blind Queues
- Selective Queues
- Memos & Sticky Notes
- Confer
- Delegate
- Disown
- Selective Task Sharing
- Data Security

Usability

We are all familiar with the importance of usability in frequently used applications, such as Microsoft Word and Outlook. It is hard to imagine that there was a time when Word didn’t have spell checking and Outlook didn’t automatically show you your next email when you deleted the last one. We take these capabilities for granted now and don’t even think of them as special. These are the types of features that have “socialized” Word and Outlook and have made them widely used by all types of people. Again, it’s sort of like the cup holder in the car. Features that used to be innovative are now background noise. And, so it will be with BPM. If BPM is going to be widely accepted in the organization, it must focus on a large number of small usability features that users need to adopt the technology.

While BPM is still a relatively new technology today, it will evolve to a point where the usability becomes more important than the technology itself. Why? Because almost every new invention starts off being about the

technology, but ends up being about how it adds value by making things better or easier or more efficient for people. Remember, BPM is ultimately about people, not technology. As such, it is inevitable that BPM systems understand the natural way people want to get work done and support a full set of human-centric capabilities that help improve productivity and promote wider acceptance of BPM.

To address the need for improved usability, Ultimus has over 100 people-centric features, such as “custom views” and “role based user interfaces,” that present different people with different information so each process participant sees only what they need to see and what they are supposed to see. Any of these features by themselves may seem insignificant, perhaps, like the cup holder in a car, until the user feels the pain or inconvenience of not having it.

One of these features is “send and get next.” When a worker completes the task they are working on and submits it, the “send and get next” feature automatically fetches the next task in the queue and presents it so the worker can continue their work. Doesn’t seem like a big deal, right? Well, just imagine what it would be like to have 100 emails in your inbox, and every time you completed work on the last email and sent or deleted it, you were forced to go back to your inbox where

you had to manually click on the next email to open it and begin work. It may not be debilitating, but it would certainly be annoying and a waste of time. These are just two examples that illustrate the natural and intuitive way Ultimus believes BPM systems should work and need to be designed. The good news is that many of these features are available today in the Ultimus BPM Suite.

In summary, we have seen how important it is for a BPM system to both automate the process and adapt to change. This is because failure to adapt to changing business or the needs of the people results in lost savings. We have also seen how Ultimus has incorporated adaptive technologies throughout the Ultimus BPM Suite including an innovative, breakthrough technology called Adaptive Discovery. Using this adaptive approach, Ultimus provides hundreds of “out-of-the-box” capabilities to deal with exceptions, change, collaboration, and usability.

To find out more about the Ultimus BPM Suite and how Ultimus’ adaptive technologies can help your organization automate processes, gain efficiencies, adapt to change and drive savings, visit www.ultimus.com and request a demo of the Ultimus BPM Suite, or call Ultimus at 919-678-0900.

Source: Ultimus

Key Usability Features

- Send and Get Next
- Custom Views
- Sorting
- Prioritizing
- Data Validation
- Role Based User Interfaces
- Alert & Notifications
- Online Help
- Localized Languages
- Proactive emails

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