BPTrends
BUSINESS PROCESS TRENDS

Spotlight

Volume 5, Number 4 July 17, 2012

The Business Process Design / IT Interface

Some process work involves changes that do not involve Information Technology. Most, however, involve process changes that are subsequently captured in, supported by, and/or implemented in, software systems. This Spotlight focuses on some of the Articles and Columns that BPTrends has published regarding the handoff between process analysis and design, and IT development and implementation.

For some process practitioners this isn't an issue. If process work in your organization is handled by a group within the IT department, they may think of all process work as simply a preparation for software development or the installation of another ERP application.

At the opposite extreme, if your process practitioners are primarily relying on Six Sigma or come from a Human Performance Technology group, then your process people may be totally focused on rearranging the flow of activities people perform, and consider automation something separate that IT worries about.

For most process practitioners, however, a process change project involves a mixture of changes in the way the tasks are performed by people, changes in the software available to help people perform the tasks, and changes in the software that performs the entire process. In at least two of these possibilities, someone has to develop some kind of documentation to communicate to IT developers whatever changes the process team has decided should be made to improve the process that is being redesigned.

Defining Software Requirements

There are many ways to define software requirements for a business process improvement project. Some are very informal and some are very precise. A lot depends on who is doing the process redesign. Business analysts, for example, tend to have well defined ways of defining software requirements. Others are often happy to simply write a few paragraphs defining what they expect the software system to do. In most cases business people should not get involved in telling IT how to design software. Instead, they should focus on telling IT what information they will want to enter and what information they will want to retrieve, in what circumstances.

they will want to enter and what information they will want to retrieve, in what circumstances. In most cases, once the software development effort is initiated, the software analysts will develop their own specifications.

In BPTrends classes, we rely on a kind of simplified Use Case specification. We link BPMN diagrams to use cases, as pictured in Figure 1, below. We provide worksheets for process analysts to use in defining the use case and for defining specific interface screens. It's not very formal, but it does stress that business needs to hand off information and, needs to be able to access information.

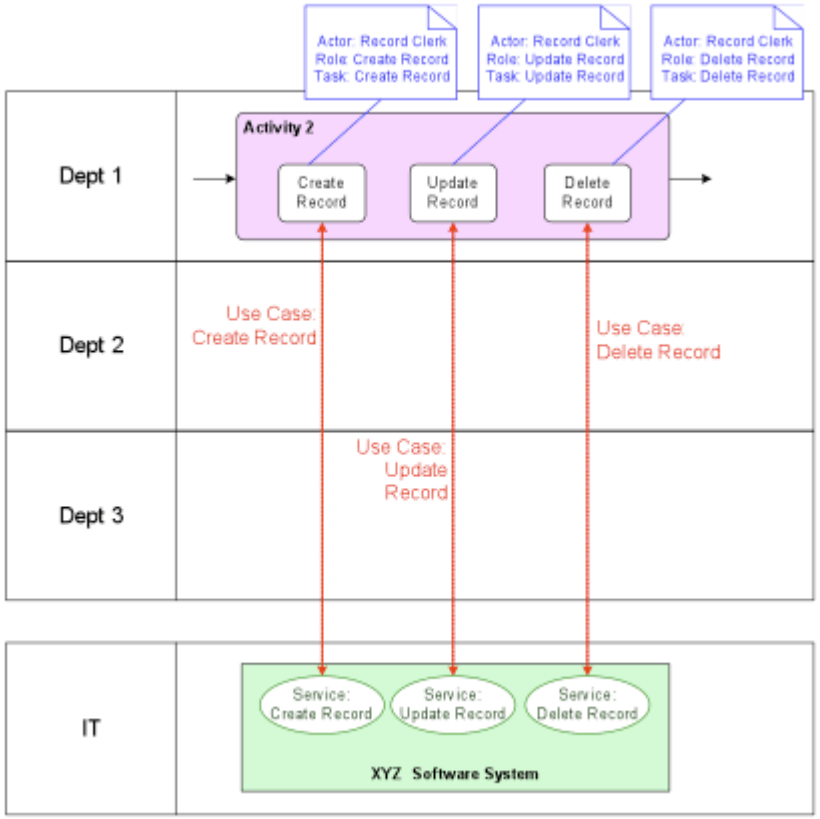


Figure 1. Uses cases in BPMN.

BPMS Development

There is a sense in which the current surge of interest in BPM during the last decade was driven, in large part, by an interest in using software applications to help manage the execution of business processes. As a consequence, BPTrends has published more Articles on the relationship of process redesign and the development of BPMS applications than on developing software requirements.

software requirements.

If your company has elected to use a BPMS application, then, in effect, your manager is using a software system to structure the entire execution of the process, whether it is performed by people or by software applications. Let's be clear about this distinction. Figure 2 shows a simple sales process.

We assume that field work is done by salespeople - that those same people work with PCs and a server based application to keep track of their sales tasks, etc. At some point, when an actual proposal is generated, a mainframe application takes input data and then generates the costs. That information is combined with other information to create a proposal which the salespeople then present to a client. So, some tasks are performed by people, some by people working with computers, and one by a computer working alone. Imagine that a redesign team analyzes the sales process shown in Figure 2. They might complain that the PC interface to the server is hard for the sales people to use and ask that it be redesigned. They might ask that salespeople be given iPads so that they can enter data or retrieve quotes while still in the prospect's office. Or, they might request changes in the way the mainframe application generates its cost proposals. All of these are common requests that require the process team to communicate with the IT software development team.

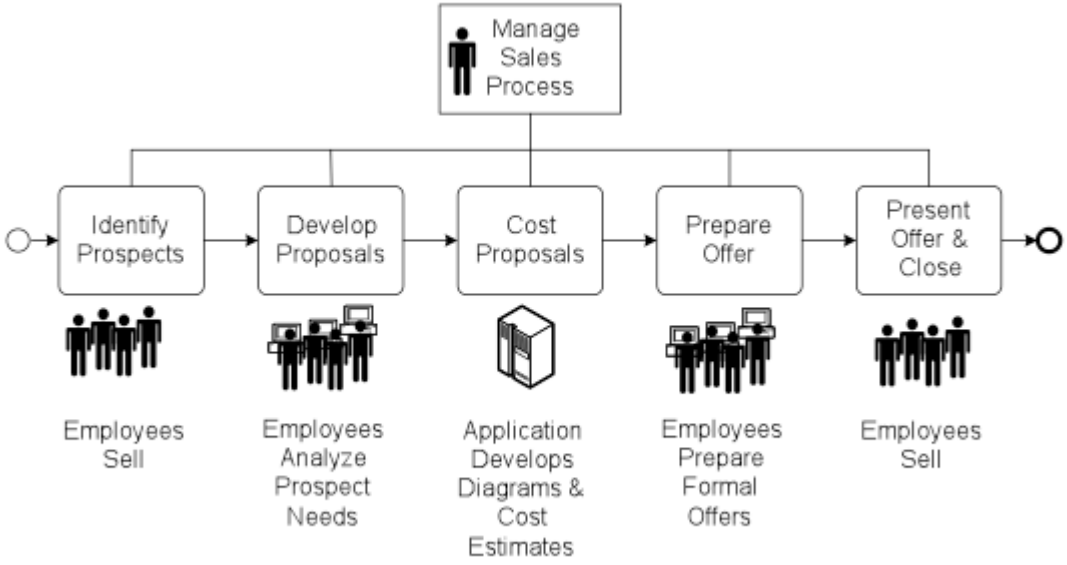
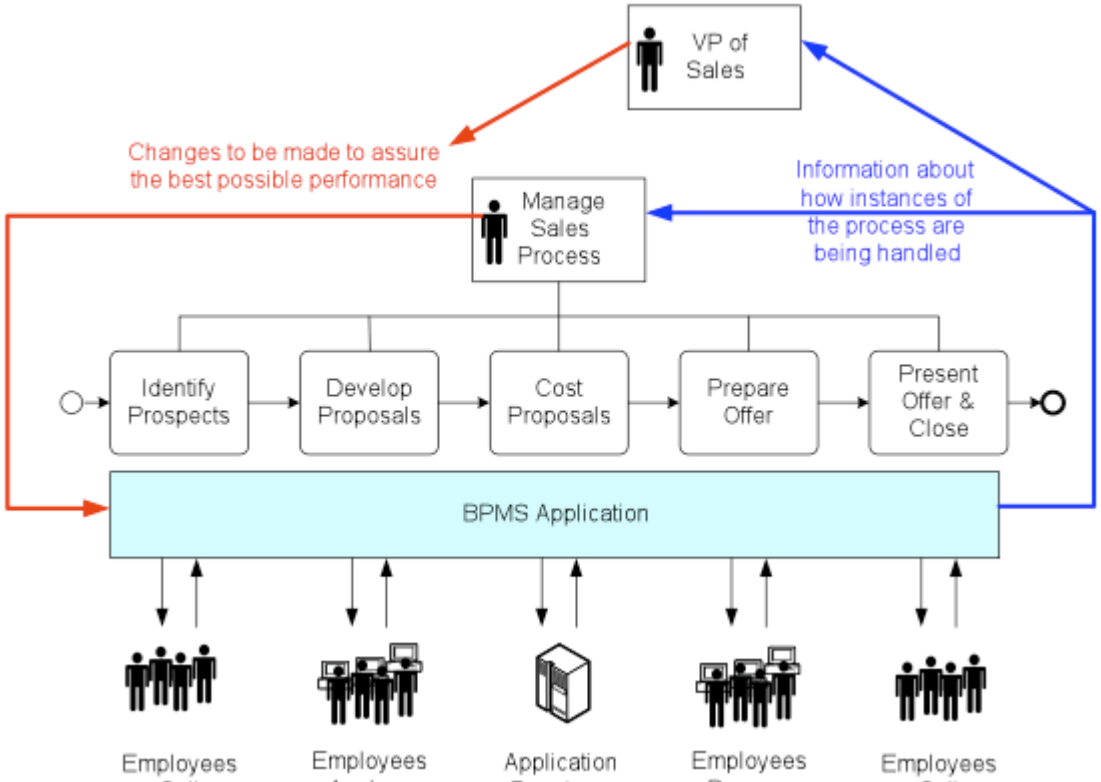


Figure 2. A process implemented by a mix of people, people and computers, and by a software application

Now, imagine a different situation: To improve the organization's ability to manage its processes, the process team decides to suggest that a BPMS application be installed (See Figure 3). The process does not change. The tasks performed by employees, by PCs and by the

Figure 3). The process does not change. The tasks performed by employees, by PCs and by the mainframe application do not change. What changes is how the information is moved from one group to another. In essence, the BPMS application is installed “on top” of the existing activities and captures information and transfers information from one group to the next, while tracking what is done. To make this work as illustrated, you have to assume the employees in the field have some way to provide information that can be captured by the BPMS application, so assume we have equipped them with iPads and they now enter data from client sites.

There is a lot of confusion in the BPMS market. Many IT organizations have bought BPMS tools simply to create new software applications, or to modify existing ERP applications to make them more flexible. Indeed, perhaps trying to get out of the rigidities imposed by ERP applications has probably been the major use of BPMS applications to date. There’s nothing wrong with this – if BPMS tools are easier to program in, then IT developers are smart to use them – but it isn’t exactly the function that Smith and Fingar imagined that BPMS would perform when they wrote *Business Process Management: The Third Wave* in 2003. They hoped that BPMS would provide a major boost in an organization’s ability to manage its processes at runtime. It isn’t that one wouldn’t use the BPMS environment, as time passed, to modify and change underlying software, or the tasks assigned to employees for that matter. Its primary advantage, however, was as a way for managers to track how processes were actually working and to make interventions when appropriate to control and improve the flow of the work being done.



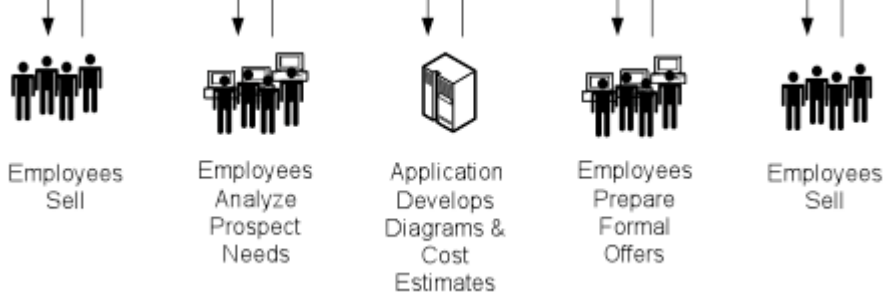


Figure 3. A process managed by a BPMS application.

I belabor this distinction to point out that process teams have two rather different concerns that involve IT. They may decide to change how computers and software are used to support a given process, independent of any BPMS management layer. This is the traditional case which requires the process team to provide specifications to the software development team.

On the other hand, the process team may decide that the best way to improve a given process is to install a BPMS application that will let managers control the process in a more effective, real-time manner. Either will require that the process team understand what changes and outcomes it desires and both will require some kind of interface and software requirements specification. Much has been made of one's ability to diagram a process in a BPMS tool and then generate code for the BPMS application. This has not been achieved in most cases, although some of the BPMS tools can manage it for small scale processes or for specific tasks. In most cases, the process team needs to provide information to the software developers about what the BPMS system will do. To be fair, it is much more likely that a process team deciding to use a BPMS tool will be a process team located in IT and will therefore be involved in both process redesign and in software development.

My own experience with large scale projects, however, suggests that the business team should redesign the process, independent of any BPMS considerations, and then consider what the BPMS application might do to help with implementation. This is not to suggest that a BPMS person shouldn't be on the redesign team, if you think the process redesign will likely move towards a BPMS solution, or that one shouldn't use a BPMS tool to model processes and capture proposed changes. It simply reflects our experience that solving the business problem should take precedence, and developing specifications to implement the solution ought to be secondary. That, of course, is our own suggestion. Others, with perhaps more experience in using BPMS tools, have written Articles for BPTrends, suggesting alternative approaches.

However you approach BPMS, the fact remains that most process redesign efforts will involve some changes in, or the development of, new software. In some cases, the changes will involve the interface that users access when they seek to use the software. We always suggest that business teams design the interface screens. Business people may not always appreciate the constraints that different software systems impose on software developers, but ultimately it is the business people who use the software and a defective screen design can cost the organization huge amounts of money in lost time and in mistaken entries.

In any case, whether you do a redesign, and then develop software requirements to communicate a need for software development, or whether you use a BPMS tool and seek to move smoothly from process redesign to software code, there is always the need to communicate some information between the process team and the software developers.

We have selected a few of the Articles that BPTrends has published that provide insight into these and related problems.

Performance Programs Ed Gibson - July 03, 2012
Ed Gibson, co-founder of MetaPower, identifies a prevalent problem in business process improvement projects - how do we work on improving individual processes so that they work together to improve the overall performance of the enterprise. We have operated on the principle that improving the parts will improve the whole, however, this has proven not to be true. Ed proposes a solution to this dilemma and cites examples of successful implementations that have achieved this important objective.

BPM in a Data Driven Eco System Austin Rosenfeld - June 05, 2012
Austin Rosenfeld states that BPM systems are for managing processes, not data. But processes need data, and while major BPM suites support a "Write to ERP" node, surfacing that data is a difficult challenge. Austin suggests that the solution to the “data dilemma” is for BPM suites to evolve and he calls on BPM tool providers to meet the challenge.

MDA Journal: Radical Simplification - In-Memory Databases Challenge Assumptions in Enterprise IT David Frankel - May 01, 2012
In light of the new in-memory database technology, David Frankel considers its potential impact on current practices in data-warehousing, business processes, the design of operational applications and multi-tiered systems. IT professionals will want to read David’s astute observations and words of wisdom when approaching this new technology and its possibilities for use in their organizations.

A Lightweight Approach for Designing Enterprise Architectures Using BPMN Oscar Barros - February 07, 2012
In this Article, Oscar Barros, Ricardo Seguel and Alejandro Quezada present an integrated and lightweight design approach for Enterprise Architecture using a generic architecture and patterns expressed in BPMN. The approach facilitates the modeling between the four different levels involved in EA - process architecture, business design, process logic, and IT process support. This approach has been applied in hospitals where it has successfully reduced the complexity of the modeling process and the time required for implementation.

BPM Software Tools and BPEL Paul Harmon - June 26, 2012
Much of the original energy driving the current interest in process derived from an interest in new software tools to support the management and execution of business processes. In this Advisor we take a look at what has occurred in the BPMS market during the last few years.

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Best BPM Application that Demonstrates the Use of Standards: European Union's GENESIS Project Harald Kuehn - April 07, 2009
GENESIS was an EU-co-funded project where cross-organizational / cross-country B2B and B2G processes were implemented using UBL, BPMN, BPEL, and CCTS. Besides BOC (Austria), the implementation partners were from SAP (Germany), Insiel (Italy), Singular (Greece), and Logo (Turkey). User partners – mainly from governmental institutions – were based in Eastern European countries such as Romania, Bulgaria, and Lithuania.

Business Process Driven SOA Using BPMN and BPEL by Matjaz B. Juric and Kapil Pant. Paul Harmon - December 02, 2008
Paul Harmon reviews a new book that offers to provide readers with a step-by-step path from business process modeling through implementation.

Workflow Resource Patterns as a Rule to Support BPEL4 People Standardization Efforts Wil van der Aalst - March 04, 2008
Nick Russell and Wil van der Aalst propose that workflow resource patterns serve as a means of evaluating BPEL4People and WS-Human Task standardization proposals currently under consideration. Read their Article to learn their take on the strengths and weaknesses of these proposals and what opportunities exist for further improvement.

Business Rules Solutions: Why Rulebook Management? Ron Ross - February 01, 2011
Perhaps you've asked the same question that Ron Ross poses in his Column this month. Ron contends that, contrary to what you may think, the problem that rulebook management addresses is a relatively simple one, as is the solution. A major step in understanding rulebook management is to grasp the distinction between software requirements and business rules. Ron provides a well-articulated clarification of the differences as well as five best practices in rulebook management. Read his Column to gain a better perspective on this critical topic.

Business Rule Solutions: Agility Based on Business Rules—Just Common Sense Ron Ross November 02, 2010
Ron Ross asserts that today's business systems aren't agile. To create agility, he exhorts business process practitioners to stop thinking of business rules as simply another form of software requirement. Software requirements go away once a project is completed. For business rules, in contrast, a project's end is just the beginning. Read his expert advice on how to create agility based on business rules.

Down Under: From Cool Toys to Effective Tools John Jeston - September 06, 2011
In his Column this month, John Jeston focuses on the usefulness of mobile technology devices in the Small to Medium Enterprise (SME) market place and how they have the potential to make a significant difference in your business. Read John's Column to learn how an SME, confronted by a significant issue involving one of its critical business processes, overcame the challenge by deploying a mobile based browser Interface to the Sales Director's iPhone.

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Best BPM Application that Demonstrates the Best Return on Investment: US Military Entrance Command (USMEPCOM) Tony Maravola - April 07, 2009
The genesis of the USMEPCOM BPM and SOA project was a business requirement to make the exchange of data real time and more efficient. The original project, named by the functional proponent as Data Exchange/Top Of System Interface Process (DE/TOSIP), was intended to address the Interface with the Armed Services. The Office of the CIO saw an opportunity to expand beyond the Armed Services and to address all of the data Interface requirements of the command. BPM and SOA were seen as a way to provide an agile and flexible architecture to meet this growing requirement, increase data quality, and reduce the cost and risk of adding new capabilities

BPM and SOA: What Kind of Service Does a Business Process Need? Mike Rosen - July 11, 2006
The relationship between BPM and SOA continues to attract a lot of attention. In his last Column, Mike Rosen defined a Business Service as the Interface between BPM and SOA. This month, he goes on to describe the kinds of services a BPM system really needs.

MDA Journal: Scaling the Business Process Platform Up: The Challenges Dave Frankel - December 06, 2005
In July, Dave Frankel discussed the emerging Business Process Platform. This month he considers exactly how such a platform would Interface with services or components and considers some of the scaling problems such a platform would have to deal with.

Till next time,

Paul Harmon

BPTrends Linkedin Discussion Group
We created a BPTrends Discussion Group on Linkedin to allow our members, readers and friends to freely exchange ideas on a wide variety of BPM related topics. We encourage you to initiate a new discussion on this publication, or on other BPM related topics of interest to you, or to contribute to existing discussions. Go to Linkedin and join the BPTrends Discussion Group.