

BUSINESS PROCESS MANAGEMENT

EDUCAUSE Evolving Technologies Committee
John W. McGuthry, Armstrong Atlantic State University

October, 2008

Introduction

A business process is usually a set of complicated or uncomplicated business oriented tasks which are used to accomplish a specific business outcome. A business process typically begins with a specific need and then ends with a completed product or service. Some examples of common business processes in higher education are hiring of faculty and staff, enrolling a student for the first time, and processing and managing grants.

In many organizations, both within higher education and in more traditional for profit organizations, these business processes are sometimes developed by accident. In these instances, there was very little or no real thought in how those processes were developed. In some instances many of those processes were developed prior to significant changes in policy, technology, and general market trends.

Whether the processes were developed either by intention or by accident, almost all processes at some point in time will need improvement. These processes usually do not improve on their own and unless someone or some organization makes a strategic decision to improve those processes, they will not change or improve.

Business Process Improvement or BPI is a systematic strategic approach to improving an organization's business processes. These processes many times include or require input from different departments inside the organization or outside of that particular organization, input from customers or suppliers, requirements of specific technology, input from partner or competitive organizations, and potentially many other components associated with starting and completing a business process. BPI looks at those processes and identifies new processes or an alternative process to make the desired output faster, less costly, or even improve the quality or quantity.

Business Process Management Solution

A BPM solution (or in some instances a process modeling solution) is a solution that models business process. It provides key insights into the inputs of the process, all of the associated steps during the process, and the outputs in the process. It can measure key statistics associated with the process such as time and cost measures. It can help measure and make key decisions about required or even forecasted human resource requirements.

Most importantly, it can provide all of the key reports and measures necessary to determine when a process needs improvement.

A BPM software solution is software that helps organizations improve business processes. These software solutions can help organizations determine which process should be automated. They can help identify when business rules are not being followed. In many instances, they can help identify waste in processes. These software solutions often are configured to model business processes. In many instances, they are configured to extract data out of or insert data into enterprise applications. BPM software can be thought of as an integration layer for the processes for the enterprise applications associated with the business process.

Most large organizations use multiple enterprise applications for a variety of functions. Often users must use multiple applications to complete a single task. Even though much of the data may be shared, business processes may require individuals to interface with different applications or different components inside of a specific application depending on the circumstances. BPM software can be used as the glue to tie the process together to eliminate the need to switch applications or to switch between major modules in enterprise applications. The individual user can now focus on following the process rather than trying to remember the steps required to follow the process depending on the circumstances.

How is BPM different from Service Oriented Architecture?

Service Oriented Architecture (SOA) is often referred to as a method or a standard of providing access to data typically in enterprise applications. This method or architecture enables applications to share data in a common environment. This common environment typically enables business processes to be more efficient. SOA separates functions into distinct units or services, which are made accessible in order that they can be combined and reused in the business process. These services communicate with each other by passing data from one application to another, or by coordinating multiple services.

BPM software uses SOA to include data from those enterprise applications. This data can then become part of the business process to be analyzed. Typically SOA provides the method to access the data. BPM software is the tool used to analyze the data or even to build new processes using those enterprise applications.

Making the Decision on a BPM Solution

The time associated with implementing these solutions can take as little as six months to greater than a year. Business Process Management implementations can cost as low as \$100,000 or greater than \$1,000,000. Often these implementations can produce results with an ROI of 50 to 400 percent. However, these projects require the IT organization to learn and dedicate a significant amount of time mapping and documenting processes that are internal and external to typical IT organizations. The implementation of these

solutions must first focus on the process, and then the attention can be placed on the technology.

Depending on the size of your organization, the implementation of BPM solutions may be a significant cost. When deploying these solutions, you should first look at the scale and the potential return on a particular process or a set of potential processes. If the process generates costs resulting in millions or hundreds of thousands of dollars, then those could be good candidates for initial BPM solutions. If the process generates costs resulting in only tens of thousands of dollars then that process may not be a good candidate for an initial BPM solution. However, there are processes that may only generate minimal costs but that could have significant multi-million dollar costs on the organization. Those solutions could also be good candidates for BPM solutions.

However it is decided, IT organizations should begin with the process in mind and adapt the technology to fit the process. Too often, IT organizations focus on the reverse and develop or implement what is most convenient or most understood rather than the solution that meets the process.

Higher Education Example

Although, the vast majority of the examples provided in the market place today are not highly focused in the higher education market, there is an ever growing trend in higher education to begin improving operational environments. The demand to retain and attract students, the demand to retain and attract highly qualified faculty, the demand to reduce operational expenses and eliminate and reduce error in operations, and many other demands will continue to be a focus in education environments and thus drive more process improvement initiatives.

Suppose a human resources department used two enterprise applications to enter new employee data. All of the benefits and personnel data was entered into one application. After the data entry process was complete, employee information and other data was entered into another application. This is very common in higher education. After this information was entered into those applications, another organization would enter information into an ID card system. Then another organization would issue a parking permit and thus enter additional information into a different system and so on. In many instances, the new employee process in higher education only happens correctly by chance.

One example of a BPM solution would be rather than having the human resources department or one of the other departments enter information directly into the enterprise application, all departments would use a BPM solution. This solution would have the ability to track the progress of the employee through the various systems. Each organization would be identified with their specific tasks based on where they were with the process. The BPM solution would identify when tasks were complete and by whom. It could notify down stream individuals when tasks are completed and track the entire process until all components are finished.

By implementing this solution, potential confusion in the process might be identified as well as finding new and innovative ways of completing the process. BPM solutions could provide accountability into those business processes by allowing business owners to track when processes were started and completed, when processes were assigned to different people and departments or organizations, and track key metrics needed to understand how the business process as a whole is delivered.

Who should be involved in your BPM activities?

It is very important to remember that although BPM activities may center around software it is not an information technology activity. It is very important that the true business owner take the lead for the activity that requires analysis. If the true business owner is not involved, then the activity most likely will not be successful.

It is also very important as with all business process improvement activities to have input and buy in from all levels of the organization, from executive to line management. Those that are performing the day to day tasks should have as much input into the changes as those that oversee those activities.

The individuals that are leading your process improvement activities should be formally trained with some type of process improvement methodology. If you do not have trained individuals in your organization, look into programs that train employees or look for a consultant to assist with your initial projects.

Business Process Management Tools

There are many Business Process Management software solutions on the market. Since the market is young, buyers should be wary of the almost certain change in the market for these solutions. There will be some consolidation as well as additional new market entrants and market exits. A few of the Business Process Management applications are:

- Pegasys System
- Savvion
- Lombardi
- Oracle
- IBM
- Appian
- Software AG

This is by no means an exhaustive list. There are many more commonly used systems and buyers should perform an extensive search to find the solution that meets the organization's long term needs and the company's long term direction.

There are a few existing standards for BPM solutions. Some of the standards used are Business Process Execution Language (BPEL), XML Process Definition Language

(XPDL), Web Services Description Language (WSDL), and Java Message Service (JMS). You should be sure that your organization is prepared to support the standard that is used by the solution you choose. Similar to the company list above, this is not an exhaustive list. The buyer should also perform the proper due diligence to determine which solution best suits the buyer's organization.

Conclusion

Business Process Management solutions can apply a reinforcing technical solution to Business Process Improvement activities. It can help identify gaps in existing processes. It can also help reinforce and assist in the development of new processes and the improvement of existing processes. Whether you are working on improving an employee process, a student recruitment process, or a procurement process, BPM solutions can be a key component in helping to change and reinforce your business processes.

References

Burton, Tim, Business Process Management: Profiting from Process, Sams Publishing, 2001

Stephen A. White, Introduction to BPMN, IBM Corporation

ABC: An Introduction to Service-oriented Architecture (SOA), CIO.com

Katz, Richard, Examining the Future of Business Process Performance, IT Investment and Business Process Performance, EDUCAUSE, ECAR Research Study 4, 2005

Cooper, Mark and Patterson, Paul, ABC: An Introduction to Business Process Management (BPM), CIO.com April 2007

Smith, Howard and Fingar, Peter, Business Process Management (BPM): The Third Wave, Mega Kiffer Press, 2003

Internet Resources

Business Process Management Initiative (www.bpmi.org)

Object Management Group/ Business Process Management Initiative (www.bpmn.org)

Association of Business Process Management Professionals (www.abpmp.org)