MyBPM: Social Networking for Business Process Management

Dr. Setrag Khoshafian, Pegasystems Inc.

INTRODUCTION

Social Networking is booming on the Internet via sites such as MySpace and, more recently, Facebook and YouTube. Demographically, the users of these sites tend to be a younger generation—especially the 17-25 age group.[1] The number of members and visitors to these sites is in the tens of millions. Social networking is exhibiting double- and, sometimes triple-, digit participant growth. The popularity and the frequency of visits to personalized social networking sites is any marketer's envy. This has not gone unnoticed by businesses.

The ease of set-up, ad-hoc exchanges, and the freedom of the experience through posting and commenting on text, photos, and video is creating a new web phenomenon—often characterized as Web 2.0. There are several definitions for Web 2.0. The "2.0" indicates the second generation of the World Wide Web. The first generation of the Web focused on relatively static websites and web presence. The new generation of the web provides a much richer experience and, more importantly, focuses on communities. There is not one single tool that captures the essence of networking on the Web, but wikis and blogs are perhaps the most popular social networking applications. Blogs allow the author to share ideas or comments on specific issues, while wikis provide a mechanism for collaborative authoring. And there are other applications, including discussion threads, surveys / voting, instant messaging (IM), shared whiteboards, shared bulletin boards and collaborative editing.[2] So Web 2.0 is about connecting people, inventing communities, and encouraging collaborative development on the Web. Web 2.0 permeates every aspect of human-computer interaction. However, as we shall see, the greatest benefit of Web 2.0 will be realized through the BPM Suite context of collaboration within the enterprise, between trading partners, and across the Internet.

The combination of rich Internet interaction with personalization and networking is proving to be extremely effective. The Web is, in fact, becoming the new *social* computing network. Publishing on the Web and having a "Web" site is now augmented and sometimes replaced with publishing on social networks. New editorial paradigms such as blogs are replacing traditional editorial articles.[3] You are what you blog. Technological advances combined with social networking are spurring sometimes unexpected innovation in social computing. For instance, virtual worlds such as Second Life are becoming a rich milieu of social interaction. These worlds are an extension of popular 3D video game models over the Web. Businesses have taken notice of this new medium and are starting to present their products and services in virtual worlds. Just as we had to have a web

---

[1] Interestingly, more recently, the fastest growing demography is the 25+ group.

[2] In fact, sharing documents with editing through check-in/checkout and even workflow are collaborative tools – and important ones at that. Here we are focusing on the more recent Internet-based social networking tools (Web 2.0).

[3] About 120,000 new blogs are created each day

presence towards the end of the 20th century, we now have to have a presence on social networks, and even in virtual worlds.

In fact, Web 2.0 reflects the fast-paced, focused, result-oriented, brief, frequently updated, personalized, and customized socio-technical trends of the 21st century. The penetration of social networking in schools and universities throughout the world is phenomenal. IM, blogs, wikis, discussions, and commenting on media—sometimes with extreme openness—are the norm. This means a new generation of entrepreneurs will be entering the job market, expecting the same type of openness, exchange, and rich experience that they were accustomed to while at college. They will continue the social networking via the popular portals, but, inevitably, social networking will be brought to the workplace and accepted as the cultural norm. As noted above, this represents the second generation of the web. Thomas Friedman called it "the Steroids" of the flattened world, and he is right on the mark![4]

SOCIAL NETWORKING IN THE ENTERPRISE

So what about the current trends in adopting social networking in business? Professor Andrew McAfee of the Harvard Business School provides an excellent definition of Enterprise 2.0 as "the emerging use of Web 2.0 technologies like blogs and wikis (both perfect examples of network IT) within the Intranet."[5] He goes on to elaborate on the Web 2.0 social networking phenomenon of Enterprise 2.0.

There are conflicting messages and studies on the adoption of Web 2.0 within enterprises. Initially, some enterprises and IT departments saw social networking as a distraction from productive work. The resistance to Web 2.0 tools within the enterprise reminds me of the reservations some managers had when e-mail was introduced in the workplace a couple of decades ago. E-mail had a flattening effect. Suddenly, the higher-level executives were accessible and only an e-mail away from any of the employees, even those several levels below in the organizational hierarchy. There were even incidents where e-mail was "uninstalled" due to management fears or security concerns. But e-mail survived and flourished. It became an essential tool for networking, communication, marketing and conducting business.

It is interesting to note that a considerable portion of e-mail traffic today is *spam*. The ubiquitous e-mail has opened other undesirable doors, and this is the price one has to pay for any tool or platform that encourages openness. We need e-mail, and we cannot function effectively without it. The same will happen and is happening with Web 2.0 tools. It is relatively easy, for instance, to abuse IM within the enterprise or create blogs and wikis with questionable quality or value. Nevertheless, IM and other social networking tools are becoming essential in the enterprise. These tools are appearing as key components in enterprise portals. Every enterprise has an Intranet portal, and increasingly these portals are utilizing social networking aspects within the organization. Portals are becoming the milieu where employees can interact via discussion threads, express their opinions in blogs, and collaborate on creating wikis pertinent to the business. The enterprise is encouraging and stimulating communication, as well as innovation, via social networking within the firewall.

---

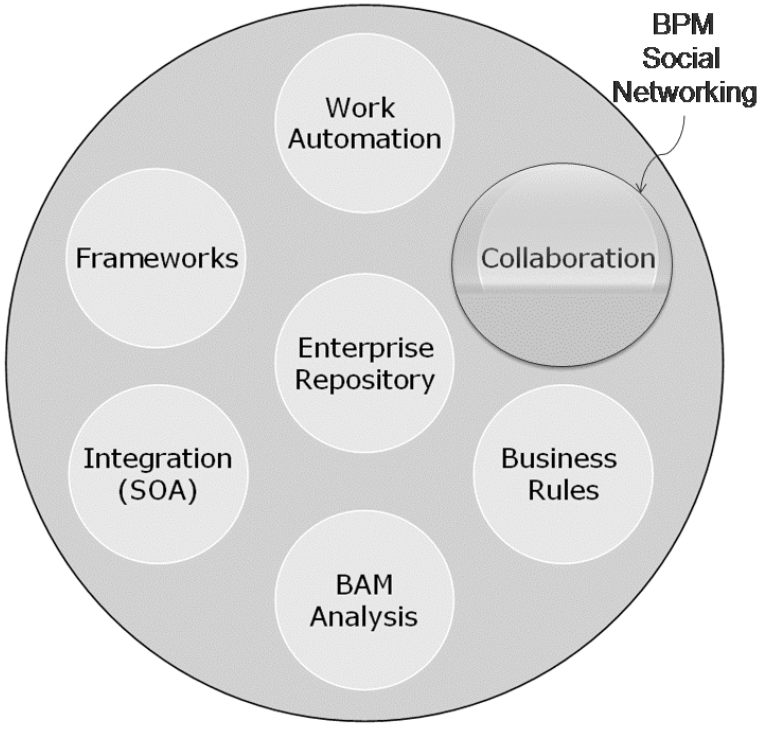
[4] http://www.thomaslfriedman.com/worldisflat.htm

[5] http://blog.hbs.edu/faculty/amcafee/index.php/faculty_amcafee_v3/the_three_trends_underlying_enterprise_20/

But what about business process management applications? BPM suites represent the fastest-growing discipline in enterprise software. In 2006, the segment showed more than 25 percent growth. This trend is expected to continue over the next five years. Enterprise applications are increasingly becoming BPM applications (vs. point solutions or ad-hoc applications developed in-house). So what is the synergy between the ever popular social networking tools and the most popular enterprise software paradigm: BPM? This is what we will focus on for the rest of this article.

BPM AND SOCIAL NETWORKING

Before we delve into social networking for BPM, it is important to briefly clarify exactly what we mean by a BPM Suite. The various dimensions and features of BPM Suites are illustrated below: human workflow, service integration, business rules, solution templates or frameworks, and business activity monitoring. BPM Suites also support collaboration, which is where BPM and social networking intersect. Collaboration is an essential feature in a BPM Suite. As we shall see, there are different dimensions of collaboration in social networking, especially within a BPM context.



SYNCHRONOUS AND ASYNCHRONOUS NETWORKING

In Groupware and Work Group computing, you have two dimensions for collaboration: Time and Place. For Time, you have *Same Time (Synchronous)* or *Different Times (Asynchronous)*. For space, you have *Same Place* or *Different Places.* These two dimensions create four quadrants as illustrated here:

	Same Place	**Different Places**
Synchronous Networking and Collaboration (same time)	• Computer-enabled Meeting Rooms • Virtual Meeting Rooms • (e.g. Second Life)	• Chat and/or Instant Messaging • Electronic Meetings: Videoconferencing, Web Meetings • Shared White boards • Shared Applications
Asynchronous Networking and Collaboration	• Walls (e.g. on Facebooks) • Discussion Threads • Virtual Rooms • Kiosks • Electronic Bulletin Boards • Blogs and Wikis	• E-Mail • Workflow • Task Lists • Collaborative Document Authoring • Shared Calendaring • Surveys and Voting

There are a number of popular synchronous communication and collaboration tools that are becoming essential within enterprises. At the low-end, enterprises are deploying IM tools for immediate ad-hoc communication. IM is less disruptive than, say, a phone call. You can communicate while interacting with multiple applications. And IM is ad-hoc: You can check if the party or parties are on-line or available to chat[6].

The more semi-formal approach, especially within enterprises, is to schedule a synchronous meeting such as an electronic live conference meeting that potentially involves voice, presentations, whiteboards, and even video. These meetings are now leveraging more advanced synchronous collaboration tools. Web conferencing and meeting platforms such as Live Meeting and WebEx are examples of sophisticated collaboration tools. These and similar tools allow you to share a presentation, an application, or a desktop. Some tools allow you to synchronously author shared documents or other artifacts.

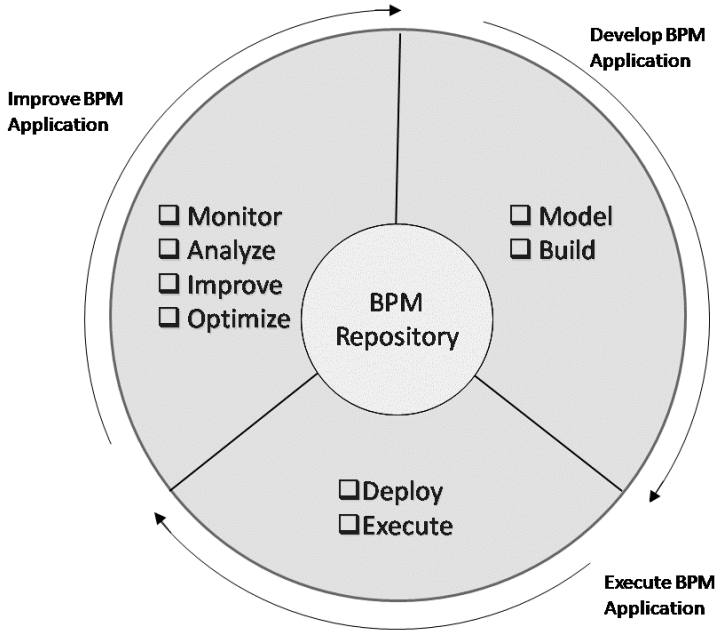
Synchronous—or the temporal dimension—is quite clear: you are either collaborating at the same time, or you are not. Place, however, is more nebulous. Place can mean a "physical place" with a geographical location, or a "virtual place." It could also mean the same collaborative application that is used by all the participants. You could consider, for instance, a live meeting application a virtual place or you could alternatively consider two different personalizations of the live meeting interface as different places. Typically collaborating in different places involves different tools. Thus a Facebook Wall is more of a same place than, say, collaborating on a document with different tools. In first generation groupware, the "same place" was typically a computer assisted meeting room that was equipped with monitors and shared screens. It required physical attendance. Today, we can use various tools or even utilize computer assisted equipment (e.g. computer enabled white boards) in conjunction with electronic meetings or conferencing for geographically remote participants. More recently, with the emergence of virtual worlds such as Second Life, we can have exchanges and collaboration within a

[6] The concept of electronic synchronous chat is more than 30 years old. I used to do chat on mainframes and minicomputers while at college in the early 1980s! It was on text terminals, but the concept was the same.

virtual world—including same "virtual" place meetings. For BPM, we will primarily focus on the temporal (synchronous or asynchronous) dimension.

COLLABORATION DIMENSIONS FOR BPM

The BPM continuous improvement lifecycle involves modeling process applications, deploying the application, executing, and analyzing process performance. Monitoring, analysis and optimizations are used to realize continuous performance improvements. The following illustrates the three phases in BPM.



These three phases can be summarized as follows:

- *Model Driven Development:* The business use cases and requirements are directly captured in business process and business rule models. There are other models, such as information, integration, collaboration, and user interface. Modern BPM Suites include a complete set of process design constructs that are organized in multi-dimensional repositories.
- *Deployment and Execution:* Within a single unified BPM Suite, the models are deployed for execution. A process model that is deployed can be instantiated to assign tasks to participants, invoke external applications, or execute straight-through processing through business rules.
- *Business Performance:* The activation of process models during execution creates process instances. Each process instance will have its own copy of the process data—stored in relational databases. Business activity monitoring interfaces then allow managers to view and control the performance of their processes. Continuous improvement methodologies such as Lean or Six Sigma can be used to introduce change or improvements to the processes. The changes are then deployed and the improvement cycle continuous.[7]

[7] There are many phases and aspects of business performance management with BPM Suites. For a more detailed discussion, see "Active Business Process Intelligence" by the author: http://www.alignjournal.com/index.cfm?section=article&aid=477

How about the "society" of the BPM social network within an extended enterprise? There are at least three categories of BPM societies.

- *BPM Projects Within The Enterprise*: This is perhaps the most obvious application area for social networking. When building, executing, or analyzing the performance of BPM applications, you can have social interactions between the different participants of each phase. In fact, for mid-sized and large organizations, the BPM project can span across internal value chains or across lines of businesses or functions. For instance, a sales process or a customer service process is specific to a functional unit or department. Manufacturing a product, on the other hand, crosses multiple business units: marketing, engineering, sales, and distribution. The fundamental difference is the reporting structure. A process within a function or unit has participants in the process all reporting to the same manager. Processes across functional units or departments imply a matrix organization. Collaboration and social networking between functional units is more challenging than collaboration within a unit.
- *BPM Across Trading-Partner Value Chain*: Enterprises typically interact and exchange with suppliers and consumers. The supply/value chain of processes spans multiple organizations. This is similar to processes that cross departmental boundaries, but now at a larger inter-enterprise level. So this next level of BPM collaboration can potentially involve enterprise participant roles across a supply chain. Here, business-to-business communities can engage in social networking, and the extended enterprise process spans the partner ecosystem.
- *BPM Communities*: Then you have the BPM "community" at large. These communities could network on BPM standards, best practices, methodologies, and templates. There are several ad-hoc discussion and research communities on BPM, as well as BPM bloggers. However, the greater value is achieved when the community is focused on a particular vertical domain (e.g. manufacturing, telecommunication, financial services, insurance, healthcare, transportation, education, government, and others).

BPM CONTEXT

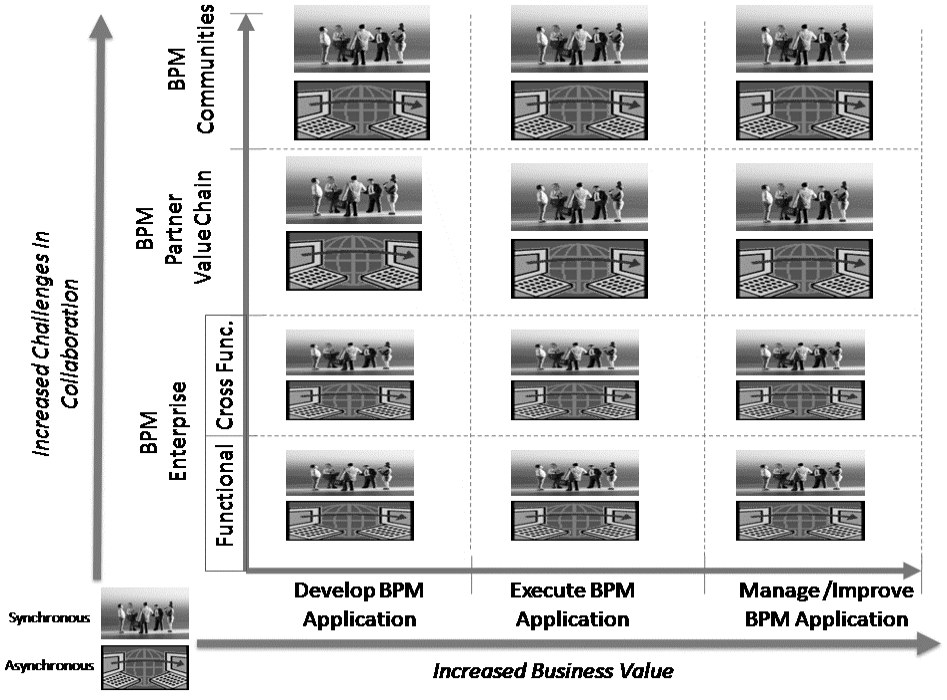
Social networking is typically ad hoc. However, almost everything in an organization takes place in the context of a process. A business is an aggregation of policies and procedures. A process involves both policies and procedures. This does not mean, however, that all the procedures or policies are modeled and automated. Most are not. Nevertheless, it is essential to remember that each collaboration—whether for innovating, developing, marketing, selling, analyzing performance, negotiating, procuring, building partnerships, or handling customer requests—is to support a business policy or procedure: in other words, a "business process."

There is a powerful synergy between BPM Suites and social networking:

> *Business processes provide the context of collaboration, and social networking supports and augments the various phases of the BPM continuous improvement lifecycle.*

Without the BPM context, it will be difficult to establish the relationships between the collaboration and the "process." On the other hand, BPM tasks in innovating, modeling, executing, or optimizing processes can leverage synchronous or asynchronous collaboration.

The following illustrates the entire taxonomy of BPM communities and their activities in BPM applications:



As you go to the right on the X-axis, collaboration provides added business value. For instance, discovering opportunities to improve BPM applications through collaborative innovation could provide tremendous business value in either increased revenue or reduced process execution costs.

As you go up the Y-axis, you will have increased challenges in collaboration. It is much easier to collaborate within an enterprise and even then, easier within a functional unit than cross functionally. In the upper right hand corner, you have core BPM and, perhaps more importantly, vertical communities to come up with the best practices and improvement strategies for continuous change and automation through BPM suites.

EXAMPLES

Any of the social networking tools can be used in conjunction with processes. Here are several collaboration examples of the BPM taxonomy:

- *Blogs and Wikis for Complex Compliance Applications:* One of the most difficult and costly projects both within Finance and IT is regulatory compliance. Control objectives are often complex. For example, Control OBjectives for Information and related Technology (COBIT) has an extensive list of controls, organized in a hierarchy of control objectives. COBIT controls are organized in various domains such as "Plan and Organize," "Acquire and Implement," "Deliver and Support" and "Monitor and Evaluate." BPM automation can capture all the control objectives as well as procedural flows of compliance and keep them under the close scrutiny of real-time activity monitoring. Examples of automated processes include risk assessment management, control test automation, exception management,

changing management, and escalation management. However, compliance controls could be difficult to interpret. Furthermore, they get updated periodically. So collaborative social networking tools could be used to explain and discuss the general best practices for compliance. For instance, Wikipedia has an entry for COBIT and COSO.[8] However, the BPM solutions for compliance could have their own application and deployment-specific discussion threads, blogs, and wikis—explaining and discussing the specific flows, rules, screens, methodologies, optimizations, and practices that automate the compliance processes and rules. These wikis and blogs could reference the public wikis and blogs. However, they will be specific to the process automation solutions that manage financial or IT compliance within an enterprise.

- *Synchronous Collaboration within Process Execution:* As an example, consider a process for contract negotiations. At some point within the process, you would like to have an electronic meeting and, potentially, end with a vote—all in the context of a process instance. The invitation to the meeting, the acceptances, the recorded meeting session, as well as the artifacts (in this case the contract) all pertains to the process instance. So in this example you have:
  - *Scheduling Collaboration Session*: This could be accomplished in the context of a process flow. As with most BPM activities, the participant or scheduler can be a human participant. Alternatively, a rule within the application can determine if a collaboration session is needed. Here, the integration of the BPM engine is with the calendaring server.
  - *Synchronous Collaboration Session*: The session itself could be conducted within the context of a BPM application. The simplest way to view this is a step or activity within the process. Thus you have process activities that schedule the meeting, send notices, reserve the meeting on calendars, send invitations, and then a process step that holds the synchronous meeting—using an electronic meeting tool.
  - *The Session*: The session itself could be recorded and become a part of the process instance. This is important. In addition to process data such as the contract date, the type of the contract, the customer, the negotiator, and attachments containing the documentation, you will also be able to store and access the recorded session itself—as part of the process instance data.
- *Discussion threads, surveys, and blogs when building a BPM application:* One of the most important aspects of BPM context is the association of collaboration with process application. For example, in a procurement application, there are several BPM Suite elements:
  - The flows involving the management, finance, and procurement office.
  - The business rules that decide the number of approvals that are needed based on the amount, urgency, or type of the item(s) being procured.
  - The suppliers and supply chain for procurement: from the distribution warehouse, to the shipment, to the procurer receiving the merchandise.

[8] http://en.wikipedia.org/wiki/COBIT and http://en.wikipedia.org/wiki/COSO

Various departments are involved in procurement: the requester's department, the finance department, the procurer, and, depending upon the type of procurement, the suppliers. Thus you can have discussions on the various activities of the flows. Surveys can decide the service level that is required for each category or type of item being procured. Employees in an organization can submit procurement requests through activating the procurement process (or creating a procurement process instance). In large organizations—especially with more complex procurement processes—a collaborative wiki for procurement could be created to help explain and hyperlink the applications explanations to various rules, flows, items, and suppliers.

CONCLUSION AND SUMMARY

This paper discussed emerging trends in social networking, especially the BPM context of collaboration. We provided several practical examples of the collaborative BPM taxonomy. This taxonomy had two dimensions: the continuous improvement lifecycle and BPM communities. Web 2.0 tools such as blogs and wikis capture the essence of social networking. While sites such as MySpace and Facebook are ever popular with the younger generation, businesses have started using these social networking concepts, techniques, and tools to promote their products, solutions, and services. Businesses are aggregations of policies and procedures. Business Process Management Suites model, automate, and execute the business policies and procedures. There is, therefore, a powerful synergy between BPM and social networking. Social networking and collaboration can be organized along both time (synchronous vs. asynchronous) and place dimensions. BPM continuous improvement has different phases: model development, execution, and performance monitoring. The BPM user community spans functional units, cross departmental value chains, trading partners, and general BPM communities. Each cell of the BPM taxonomy can leverage synchronous or asynchronous social networking. So while business processes provide the context of the collaboration, social networking supports and augments the various activities of the BPM applications' continuous improvement lifecycle.