

ThinkPlace™ case for IBM/MIT Lecture Series

Doug McDavid and Tim Kostyk: IBM Global Business Services

Lilian Wu: IBM University Relations and Innovation

Discussion paper: draft Version 1.29 (Oct 24, 2006). Please do not distribute without sending e-mail to wulil@us.ibm.com.

In the early 2000's the primary driving forces in technology included the new generation of Web 2.0 internet based services such as social networking sites, Wikis and Folksonomies along with a great deal of work in the open-source area. Open innovation was gaining importance and a new generation of college graduates who expected more collaboration and involvement at work joined our workforce.

The Challenge

IBM was exploring ways to open up the innovation process: to demonstrate that every IBMer can be an innovator, to find ways to foster collaboration, peer review, and facilitate active participation by IBMers from idea to implementation by involving communities and peers to help. Internally, a series of jams and teams collaborating on new ideas helped to ignite a new movement within the company towards idea generation at the grass roots level. This movement ignited a ground swell of interest in innovation from non-traditional sources such as our customer facing services and sales force that led to a pilot system called the Ideas and Needs Exchange which ultimately became ThinkPlace.

An Accelerating Change Together (ACT) sessionⁱ was used to explore assembling a technology enabled enterprise level global home for innovation. Coming out of the ACT session two clearly articulated goals were identified they were: 1) To build a world-class idea generation and review system that underscores IBM's commitment to innovation and collaboration, 2) To engage the entire IBM population in idea generation that facilitates peer-to-peer collaboration, and rewards innovation with visible and meaningful awards and recognition. The result of the team's effort was a collaborative innovation environment named ThinkPlace. The main business objectives were to focus on revenue, productivity, process improvement, culture change, and cost saving opportunities. The primary emphasis was to focus on non-traditional sources of innovation, such as ideas driven by immediate customer need and opportunities in white-space or involved integration across-business unit.

It soon became apparent that the effort would entail more than just technology. A whole series of new roles, processes and procedures would need to be created, requiring new social networks that were organizational, governance and cultural in nature.

Architecting a Solution and Bilingualism

Architecting ThinkPlace involved a complex set of activities which culminated in a rudimentary business architecture composed of documents and diagrams derived from examining the directed intent of the key stakeholders. These stakeholders included four main groups of people namely: 1) those that would use the system to propose or collaborate on new ideas (Idea Submitters /Collaborators) 2) parties which would be impacted by the generation of those ideas either directly or indirectly such as (Legal, Finance, HR etc.) 3) the potential process support groups who would have to enable and support the processes and procedures such as (idea reviewers, catalysts and who those who help shepherd ideas) and finally 4) the technology support group which would have to build, implement and maintain the technical infrastructure behind the new system.

The types of documents and diagrams compiled that composed the business architecture were primarily process, role definition and a combination of both process and role. Processes and initially roles were defined and expressed within a series of patent documents and accompanying graphics which depicted the basic processes that would be the subject of the self governance systems for managing innovation within a business. These initial process /role documents illustrated processes and to some degree roles from a functional and goal perspective. From that point a focused team further matured, identified and defined roles from a responsibility to function perspective that also related the interrelational and organizational aspects of the roles. These role definitions were represented textually as a series of slides within a PowerPoint presentation. The combination of these two efforts was then further matured into and combined into a series of swim lane documents which related process to role definition.

Closer examination of these groups exposed alignment of these stakeholders by role and responsibility through social networks which were either organizational, governance or cultural in scope.

Key to the ultimate success of ThinkPad was the realization early on of how vitally important it was to understand these Social networks and how they would have to interact with the ultimate solution. Rarely are these structures explored in-depth in technology driven projects and it became very apparent on why this neglect could lead to failure in this project as well as other complex projects involving multiple organizational layers across multiple silos which are typically present in large organizations. This had a very valuable side effect for the team. By understanding these structures the team was better able to determine a successful implementation strategy designed to test out both process and technology within the modeled environment

Another critical factor that led to ThinkPlace's success was the team lead's ability to foster and nurture a bilingual environment within the community of individuals assembled to undertake the project (*for definition of bilingualism and a discussion on the importance of bilingual business and technology architectures see Bilingual Enterprise and Solution Architecture.*). The team lead possessed strong bilingual capabilities, speaking both the languages of business and technology at a level that helped him

assemble and lead a bilingual team whose responsibilities were to develop the initiative's business architecture built from key pieces of information vital to the project, specifically business intent and concrete goals for the project, the organizational, governance and cultural structures and the mappings to possible technologies solutions (technological bridge). This bilingual quality of the team kept the effort focused on the business intent of the project while making sure that any potential process/technology solution did more than meet a complex set of technical requirements; it made sure that the process/technology solution options were able to be used in a manner to produce business value and be used by the social networking structures it was designed to enable.

The assembled bilingual team understood some of the benefits that non-traditional sources of innovation could bring to IBM. One was that customer interactions can often lead to the development of needed new products or the improvement of existing ones that can improve customer satisfaction. Another was that the innovation of IBM's internal processes especially those involving multiple business units required an all hands approach. Additionally the team had a grasp of the possible technology solutions that were available at IBM.

This was a project which looked at the effort bilingually from an end to end perspective instead of two projects; one business and one technology. Another equally important aspect is the team created a business architecture which was an explicit and clear representation of the agreed to business intent and social structures. The business architecture compiled was a set of diagrams and documents. It included the specific projects agreed to and its goals, several versions of process models (including from the users perspective and from a workflow perspective), and a clear description of the roles and responsibilities. This approach provided a very important function: a description of the key elements and structure from both a business and social perspective and from a technological perspective.

Another document is the patent filed regarding intellectual property developed from ThinkPlace which describes the application of technology and process to foster innovation.

Patent Excerpt

SUMMARY OF THE INVENTION

It is therefore an object of the present invention to provide a system and method for adapting the management structures of the enterprise to better leverage the ideas for innovations and process improvements generated by the members of the enterprise.

A further object of the invention is to provide a system and method for tracking and adapting to the varied incentives (sometimes referred to hereinafter as motivational drivers) which drive those contributing ideas for innovations and process improvements of value to the enterprise.

Another object of the invention is to provide a system and method of innovation management that is responsive to the particular contribution profiles of those participating.

A yet further object of the invention is to provide an innovation tracking and management system with plenary capabilities for not only optimally tracking, managing and documenting innovation development from inception to deployment but also optimizing both incentives toward contributions to all innovation being tracked and direction of efforts of innovative personnel to optimize their participation and the added value each individual participant brings to each innovation project...

Another piece of research (Bentley's PhD dissertation) looked at factors that motivated potential user communities to use this type of innovation system. This work contributed to better design.

Together these documents show an understanding of both business and technology concepts and issues which were instrumental to a bilingual architectural approach

What made the acquisition and application of business intent unusual in the ThinkPlace initiative was the manner in which business intent and the social structures were examined. Typically technology solution projects are conducted by determining complex detailed business requirements which are then designed into technological solutions and implemented. Extracting these requirements is rarely the work of a cross section of both the potential user community and the collaterally impacted groups of other powerful stakeholders; namely organizational, governance and cultural groups resulting in incomplete, inconsistent or even conflicting requirements to other existing systems or processes.

During the ThinkPlace initiative the core team understood immediately the need to do two fundamental tasks: 1) determine the social networking structures that would be impacted by the initiative (present and future) including the organization, governance and culture structures 2) have those groups define the business intent of the project that would become requirements and eventually process and technology solution requirements. This is clearly evidenced through some meeting artifacts of the core and extended team; namely the participation list and the action items undertaken during these team meetings along with their eventual work products of work flows and process models.

Within the participation list of the ACT meetings, a set of participants were identified which would become the eventual users, support organizations and interested stakeholders of the final solution. These included organizational, governance and culture groups from a cross section of the business's global community which were comprised of executive sponsors, HR, research, technical, sales, education, legal, innovation, finance, communications and others. This list of participants represented the most important stakeholders of the future solution. Together the core team and extended teams were then broken into action teams which identified the initiative's business intent, purpose,

requirements and the needed processes, new supporting organizations and the ultimate technology solution sets that could be deployed.

This approach managed to involve the key stakeholders and enablers of the initiative and was the reason that the project went from concept to deployment within 18 months; something virtually unheard of for a globally deployed enterprise system.

Technology Deployed

The deployment of technology was undertaken utilizing proven existing technologies, specifically portal, data filtering and cleansing, instant messaging, e-mail and rules based logic. The resulting technology tool was developed to enable ideas submission and collaboration by:

- Automating the filtering of inappropriate idea submissions
- Upon submission, use search technology to match idea to existing ideas
- Leverage user profile from BluePages (IBM's integrated personnel directory and expertise location application); as system is used affinities are dynamically built based on usage
- Use of various automatic classifier technology to ease navigation
- Rule-based business logic to insure proper business process flow

The Results

- Bringing together experience from a 2 year pilot developed with Research called the Ideas and Needs Exchange and IBM's 80+ year old Ideas Program, ThinkPlace was deployed very quickly; something rarely seen when dealing with Enterprise applications. ThinkPlace from concept to launch including application and process development and underlying formation of supporting organizational units and user groups was achieved in less than 18 months.
- ThinkPlace has spurred innovation in a new way; it is more collaborative with active participation by the innovators in a transparent process going from idea to pilot or deployment. It has also spawned the development of a new type of all hands innovation social network which is expanding daily. To date some 8000 plus ideas have been submitted with over 100 currently being implemented. 200 thousand plus employees have participated and 40% more than once. Over time, employees are submitting fewer but better ideas because they are learning what is a good idea and how to develop the idea to move it forward.
- ThinkPlace is a good place to explore and surface roadblocks to ideas that cross multiple business units.
- ThinkPlace is a good place to explore and surface roadblocks to white-space ideas.
- ThinkPlace is a good place to explore and surface ideas that cross geographic boundaries, and an good vehicle for integrating parts of the company that often feel "remote" with the rest of the main stream activities of the corporation.

- Additionally the supporting technology utilized within ThinkPlace utilized simple commodity based reusable technologies which greatly accelerated deployment and lessen support requirements.
- Other side benefits include connections to IBM programs that further develop and test new ideas such as TAP (Technology Adoption Programs), AlphaWorks™, Extreme Blue®, and BizTech. And client interest in the ThinkPlace process has led to productization of ThinkPlace marketed to outside customers.

Lessons Learned

- Expressed as documents and diagrams a bilingual enterprise and solution architecture provides two important benefits: 1) it helps lead and keep initiatives on track and 2) serves as a valuable set of assets for future endeavors while building an emerging business architectural view of an organization starting with a single initiative.
- The matching of business intent and social structure are probably one of the most fundamental indicators of success that a project can have because they enable a true mapping and understanding of what are the needs driving the project to any potential roadblocks and problem areas of implementation and adoption.

More specifically:

- It takes a bilingual approach to accurately identify and understand ~~the~~ three basic elements in building an enterprise solution; *Business Intent*, the *Social /Organization and Governance Structures* and finally the enabling *Technology Solution*.
- Although it is extremely hard to depict these structures in terms of architectural precepts the pay-back is immeasurable since the views produced greatly aid in matching the business needs or intent of a project to the actual environment that it will operate in.
- To relate those structures to processes and eventually technologies requires a new way of thinking and articulating that is social-technical in nature. This means a method that articulates the relationships in a bilingual Rosetta stone approach which can be understood by multiple audiences both technical and non-technical.
- Business intent, roles, expectations, and technology evolve over time. There is a trade-off between rigorous understanding and adherence to original business intent, and the forces of evolution that inevitably occur within the history of the application and changes and the use of technology in the enterprise. This means it is all the more essential to have ***bilingual people or teams*** who can clearly connect the evolving ***Bilingual Enterprise and Solution Architecture***. Specifically, ***Business Intent*** \Leftrightarrow ***Human aspects: i.e., Organizational/Governance or Cultural*** \Leftrightarrow ***Technological Bridge*** \Leftrightarrow ***Technology/IT Architecture***
- Although the project team did compile some very useful documents regarding business process and role identification there was no complete set of business architectural diagrams or documents which showed the linkage from business problem or need, through social networks to technological solution. So it is hard to understand the entire story as to why a particular solution was deployed and how that solution was related to the business intent. The documents that were produced provided guidance and direction for the initiative but did not produce a bilingual

enterprise and solution architecture that could serve as valuable and complete asset for future use in similar or related projects

- Finally having a bilingual evangelist (Alfred Bentley) was critical to the creation and success of ThinkPlace.

Acknowledgements: The authors wish to thank Alfred Bentley, Paul Baffes, Kapil Gupta, Tim Montgomery.

®Extreme Blue is a registered trademark of IBM in the United States, other countries, or both.

™ ThinkPlace and AlphaWorks are trademarks of IBM in the United States, other countries, or both.

Other company, product or service names may be trademarks or service marks of others.

© Copyright IBM Corp. 2006

ⁱ Explain ACT sessions