

MITSloan Management Review

Osvald M. Bjelland and Robert Chapman Wood

An Inside View of IBM's 'Innovation Jam'

An Inside View of IBM's 'Innovation Jam'

IBM brought 150,000 employees and stakeholders together to help move its latest technologies to market. Both the difficulties it faced and the successes it achieved provide important lessons.

Osvald M. Bjelland and Robert Chapman Wood

IBM Research is the world's largest corporate research organization, with eight labs and 3,200 researchers in six countries. Every year Sam Palmisano, IBM Corp.'s chairman, visits its headquarters in Yorktown Heights, New York, to review progress.

When Palmisano toured the labs in early 2006, enthusiastic scientists showed him all manner of newly developed capabilities. One technology promised to forecast the weather so precisely that school districts could tell whether their town would get an inch or two more snow than their neighbors and therefore have to close school. Another project would enable the building of an Internet where shoppers could visit 3-D stores and see realistic 3-D demonstrations of products. Yet another new software program would perform real-time translation of speech so that the words on China Central Television or the Middle East's Al Jazeera news network could appear in English underneath the speakers without human intervention.

After the demos, IBM's Paul Horn, chief scientist, and Cathy Lasser, research chief information officer, met with Palmisano. "He was clearly very excited," says Horn. But he was also already thinking about the next challenge — how to commercialize the breakthroughs successfully, a challenge IBM hadn't always efficiently met. "He said, 'Let's come up with some novel way to get this stuff to the market more quickly. Let's think out of the box.'" Palmisano felt that with 346,000 capable employees, there had to be faster ways to move products based on new technology to market.

The executives conceived the idea of a "Jam" to promote innovation. "Jam" was IBM's term for a "massively parallel conference" online. IBM had developed its first in 2001 as a way to unite the organization. More and more employees were working at home or at client sites, rarely coming to IBM offices. The idea was that a Jam — a group of interlinked bulletin boards and related Web pages on IBM's intranet, with systems for centrally managing everything and seeking substantive answers to important questions in three days or so — would give people a sense of participation and of being listened to, as well as generate valuable new ideas. From the beginning, the Jam process showed it could engage tens of thousands of people at a time. There were 52,000 posts in the 2001 Jam, addressing questions like "How do you work in an increasingly mobile organization?" and "How do we get IBM Consulting into the C-suite?" Subsequent Jams helped clarify IBM's values and produced good ideas for improving IBM's operations. A carefully designed system for reviewing huge numbers of posts enabled the company to initiate important courses of action.

But a Jam to accelerate the launch of new technologies was something different. IBM had only the vaguest of ideas how it would make money from most of the technologies

Osvald M. Bjelland is chairman and founder of Xyntéo Ltd. Robert Chapman Wood is a professor of strategic management at San José State University. Comment on this article or contact the authors through smrfeedback@mit.edu.

that scientists had demonstrated. The challenges in creating new businesses substantial enough to benefit a company the size of IBM were radical. So in looking for ways to turn technology into profit, IBM was demanding more from the Jam system than it had before and seeking results more central to the company's future. And if the proposed Jam involved as many people as Palmisano wanted, it would certainly be the largest-ever online effort to advance technological innovation.

The "Innovation Jam" took place in two three-day phases in 2006. We tracked the projects that received \$100 million in funding based on the Jam's results — the data shows that the Jam was successful to a considerable degree. It uncovered and solved problems in and mobilized support for substantial new ways of using IBM technology. It involved 150,000 IBM employees, family members, business partners, clients (from 67 companies) and university researchers. Participants Jammed from 104 countries, and conversations continued 24 hours a day.

But the Innovation Jam experience is important for the difficulties it demonstrated (and for how IBM struggled to overcome them) as much as for its successes. Ideas didn't bubble up and get refined through continual, respectful dialogue. In fact, few contributors built constructively on each

other's postings. The Innovation Jam was organized to capture a huge number of ideas from IBM's network, and it was purposely designed not to guide conversation artificially toward a quick focus on a few thoughts. But without organizers pushing toward an artificial consensus, conversations did not move toward consensus by themselves.

Rather than emerging during the online conversations, new visions emerged afterward. IBM had developed a carefully thought-out process that it used after each phase of the Jam to harvest ideas. Senior executives and others spent weeks sifting through tens of thousands of postings — gigabytes of often aimless Jam conversation. Working through the static enabled leaders to extract ideas they thought were key, put them together into coherent business concepts and link them with people who could make them work.

The Innovation Jam's important lessons are thus highly paradoxical: On one hand, it showed how many people throughout an organizational network may have important strategic ideas. It demonstrated that online conversations and sophisticated technology can bring those ideas to bear on important societal problems and make them worth millions to a company. But the Innovation Jam also revealed limitations in how most people

recognize and build on others' ideas online. The result of these limitations is that analysts and managers near the top of the corporation were essential — together with sophisticated software for combing through vast amounts of verbiage — to making the rank and file's ideas useful. Leaders found themselves taking a different role than in the past. Their new role was about identifying and nurturing a good idea as it was built on by the organization. But they were still the drivers of progress.

This article explores this innovation effort, unique in size and unusual in the amount of management resources invested in it. The article is based on participant observation in the Jam itself, review of Jam Web pages and postings after its completion, online use of some of the emerging technologies and more than 20 interviews with Jam organizers, participants, idea sponsors, senior scientists, senior executives and others.

Worldwide Brainstorming

IBM's intellectual capital portfolio is immense. IBM holds more patents than any other company in the world and each year extends its lead. Yet only a few radically new IBM technologies have moved smoothly from lab to customer and produced substantial new revenues. Like many companies, IBM often lacks clear mechanisms for fitting innovations into its already complex product portfolio. One executive expressed a common frustration within the company by saying, "At IBM, new products aren't launched, they escape." Innovations in services and software have kept IBM highly profitable. But its sales have grown more slowly than that of other technology businesses, and in 2007 IBM lost its position as the world's largest technology company to Hewlett-Packard (which had acquired Compaq Computer

IBM's 2006 Innovation Jam Process

- 1. Identify Goal.** The goal was to brainstorm to develop ideas better and more quickly commercialize them.
- 2. Determine Categories and Subjects for Discussion.** Focus on tech innovations by providing enough information to trigger discussion and inspire new ideas. (See table below showing 25 clusters of technologies, divided into six broad groupings.)

Emerging Technologies Reviewed in the Innovation Jam

<p>Embedded Intelligence</p> <ul style="list-style-type: none"> • Biometric authentication • Location sensing services • Biometric identity protection • Mobile device security • Wireless connections for home electronics • Real-time tracking (of physical objects' locations) 	<p>Extracting Insight</p> <ul style="list-style-type: none"> • Company relationship analysis • Disease outbreak simulation • Real-time search and translation • Context-based search • Smart security surveillance • Business impact assessment (simulating the value of new business processes before adoption)
<p>Global Collaboration for Individuals</p> <ul style="list-style-type: none"> • Real-time language translation • Social bookmarking • Application creation/sharing (tools for creating personal applications) 	<p>Global Collaboration for Companies</p> <ul style="list-style-type: none"> • Communication pattern analysis • Automatic skills and job matching
<p>Practical Supercomputing</p> <ul style="list-style-type: none"> • Supersimulations • Supercomputing power on a chip • Supercomputing for everyone (giving access to supercomputing resources for short periods) 	<p>Intelligent Information Technology Systems</p> <ul style="list-style-type: none"> • Detailed infrastructure mapping • Real-time Java (enabling Java to function well when time is of the essence) • Business IT test-driving • IT resource mapping • Universal data standards

- 3. Build Web Sites.** Web sites provide data on technologies and places to discuss them.

Authors' Note: All Web sites were developed internally and were extremely professional. But could external media professionals have made them more provocative? Web sites are structured so it is very easy to post a completely new idea; there is no clear way to learn what the most popular ideas are at any given time. Technology for "promoting" new ideas (like Salesforce Ideas and Digg) could have promoted more coherent dialogue, but with the danger that many good ideas might be lost. It is also worth asking whether a systematic process could be developed to encourage people to respond more to existing posts and whether moderators could be trained in that process.

- 4. Jam Phase One.** Phase One runs for 72 hours. People brainstorm a vast number of ideas (using Web site forums and wikis) for innovating around the 25 clusters of technologies on the Web site.
- 5. Post-Jam Phase One.** Review "Big Ideas." Fifty senior executives and professionals meet at IBM Research's Yorktown Heights,

and had been more successful than IBM in big — though not necessarily highly profitable — consumer markets).

Speeding products to market is a priority, and to make it happen, Jam organizers sought to lay out key emerging IBM technologies for participants. Web pages described 25 clusters of technologies in six broad groupings. (See “IBM’s 2006 Innovation Jam Process,” Step 2.) The Web sites included digitally recorded minilectures from IBM experts on some technologies and demonstrations in Adobe Flash or others. Experts from the Research Division and other IBM units participated in online discussions as moderators to help participants understand the technologies and address customer needs.

Each IBM Jam has included new experimental elements. In the Innovation Jam, several of the experiments sought to help emerging ideas evolve into something more complete. The

Innovation Jam was the first Jam organized in two phases: one in July, when the company posted information on key technologies and participants brainstormed new ways to use them, and a second in September, in which participants refined ideas from the first phase. In Phase Two, participants were able to click to a separate site where they could work on business plans for key ideas using wikis.

Not everything worked ideally. Many of the participants logged on just to look around. But participants posted more than 46,000 ideas. They enthusiastically offered many potential money-making suggestions. This, from a participant in India, is fairly typical:

We go places and capture lots of pictures with digital cameras and camcorders, but there is a limitation in storage

New York, headquarters to review (1) the clustered postings; (2) the postings highlighted by the volunteers; and (3) the raw postings. The groups are divided into nine subgroups of five to eight people; each subgroup works on a related group of ideas (health care, environmental and so on). The groups develop a first-cut set of Big Ideas, shown in the table below.

Innovation Jam 2006 Big Ideas

<p>Going Places</p> <ul style="list-style-type: none"> • Digital entertainment supply chains • Digital memory saver • Advance traffic insight • Biometric intelligent passport • Advanced safe cars • Real markets for virtual worlds 	<ul style="list-style-type: none"> • Managed personal content storage • Rail travel for the 21st century • Integrated mass transit information service • The truly mobile office 	<p>Staying Healthy</p> <ul style="list-style-type: none"> • Real-time emergency translation • Health record banks • Smart hospitals • Smart health care payment systems 	<ul style="list-style-type: none"> • Remote health link • Retail health care solutions • Sustainable health care in emerging economies
<p>A Better Planet</p> <ul style="list-style-type: none"> • Water filtration using carbon nanotubes • “Big green” services • Advanced energy modeling and discovery • Intelligent utility grids 	<ul style="list-style-type: none"> • Predictive water management • Practical solar power systems • Cool blue data centers 	<p>Finance and Commerce</p> <ul style="list-style-type: none"> • Branchless banking for the masses • Small-business building blocks • Cellular wallets • Smart-eyes, smart-insights 	<ul style="list-style-type: none"> • Bite-sized services for globalizing small and medium-sized businesses • Business-in-a-box • E-ceipts

6. Jam Phase Two. Participants Jam to refine ideas that came out of Phase One. There is a perceived difficulty in getting people to focus on the suggested Big Ideas rather than brainstorming their own ideas.

Authors’ Note: It is possible more refining could have been achieved if the organizers had prepared wikis more thoroughly so they would not crash when large numbers of people accessed them at once. For the 2008 Jam, IBM will create live real-time chat sites to refine some ideas, with a limited number of people allowed to participate.

7. Phase Two Review. A similar process to the review in Phase One, using e-clustering and human review to identify the ideas that fit IBM’s product portfolio and needs.

8. Proposing New Businesses. Sam Palmisano announces \$100 million in funding for 10 new business units. (See “Businesses Created from the Innovation Jam,” p. 36.)

Authors’ Note: Units with critical mass were sought, as this increased the likelihood that units would fit into IBM’s overall structure. But funding some smaller initiatives might have moved smaller ideas forward as well.

Businesses Created from the Innovation Jam

Smart Health Care Payment Systems:

Overhauling health care payment and management systems through the use of small personal devices (such as smart cards) that will automatically trigger financial transactions, the processing of insurance claims and the updating of electronic health records.

This business has “graduated” from the incubator stage, and its products are now part of the IBM Healthcare Industry Solutions product offering.

Simplified Business Engines: Developing and bringing to market an intuitive, easy-to-use, prepackaged set of Web 2.0 services and blade server offerings that allow small and mid-size businesses easily to tap applications customized to their own specific business needs.

This business has graduated and is now a business platform offering in IBM’s software and systems business units.

Real-Time Translation Services: Offering advanced, real-time translation capabilities across major languages as a service for high-potential applications, industries and environments, such as health care, government, and travel and transportation.

This project is ongoing in IBM’s Research Division, with funding to explore the viability of a variety of business models with clients.

Intelligent Utility Networks: Increasing the reliability and manageability of the world’s power grids by building in “intelligence” in the form of real-time monitoring, control, analysis, simulation and optimization. Pilot projects have been developed and are in use by utilities. **The technology has become a core product of IBM’s public utility business.**

3-D Internet: Partnering with others to take the best of virtual worlds and gaming environments to build a seamless, standards-based 3-D Internet — the next platform for global commerce and day-to-day business operations.

The new business unit is focusing on building tools that others can use to design easy-to-use 3-D Internet systems. Ongoing work is under way building prototype engagements and exploring new business models.

“Digital Me”: Creating a secure, user-friendly service that simplifies storage, management and long-term access to the deluge of personal content that people accumulate (digital photos, videos, music, health and financial records, personal identification documents, files).

This unit has been split into two promising projects. One targets managed services for analyzing multimedia content, and the other focuses on a user-centric approach to managing personal information. Both have been transferred to the Research Division for further exploration.

Branchless Banking for the Masses:

Enabling existing and new financial institutions to provide basic banking services profitably (checking, savings, payments and microlending) to often remote, inaccessible populations in fast-growing emerging markets.

This unit continues to work with major banks on establishing viable hubs for microfinance in target emerging markets.

Integrated Mass Transit Information System:

Establishing on-demand systems for integrating, managing and

disseminating real-time data for all of a municipality’s or region’s transit systems, optimizing buses, rail, highways, waterways and airlines.

The new business unit has received important orders from England, Singapore, Dubai and Australia. Name changed to Intelligent Transportation Systems.

Electronic Health Record System:

Creating a standards-based infrastructure to support automatic updating of, and pervasive access to, personal health care records and the integrating of patient data with global payer/provider transaction systems.

IBM has decided to shelve this project because executives concluded that key decision makers are not ready to invest in electronic health record systems.

“Big Green” Innovations: Launching a new IBM business unit that will focus on applying the company’s advanced expertise and technologies to emerging environmental opportunities, such as advanced water modeling, water filtration via nanotechnology and efficient solar power systems.

The business unit successfully sold and carried out initial pilot projects. As this was going on, senior IBM executives drew on the unit’s work and other initiatives to launch the largest single initiative in IBM history: a billion-dollar program to change radically how IBM and its customers use energy and other resources for computing. Currently conducting dozens of pilots around data integration, modeling and management; infrastructure asset management; advanced meter management; and weather event management.

when it comes to video. There should be some way to upload videos to a Web site and there should be a device embedded in the camcorder which transfers and stores data to a remote server.

An IBM press release described the Innovation Jam as “the largest online brainstorming session ever,” and even with 150,000 participants the Jam managed to take advantage of many of the strengths of brainstorming sessions. People could raise their ideas freely, and the management of the Jam was based on the concept that “every idea counts.” However, the

Jam also shared many of the difficulties common to large brainstorming sessions, as well as having serious difficulties peculiar to its online format. (See “A Powerful [but Ponderous?] Way to Innovate,” p. 38.)

Naturally, the brainstorming approach produced many ideas that were completely impractical or irrelevant to IBM’s businesses: a solar-powered toilet and vending machines selling flaxseed, for example. Monitors, however, found that guiding the conversations was even more difficult than in traditional brainstorming sessions. A senior scientist spent considerable time explaining why it would be impractical to import water from

comets in outer space for consumption on Earth, and still failed to engage the advocates of the idea in discussions of ideas that could advance IBM's business.

Mark Dean, a vice president at IBM's Almaden Research Center, served as a moderator. He noted that the freedom of the Jam made it difficult to exert influence. In Phase Two, Dean was assigned to moderate a group of discussions gathered under the heading "Going Places" — ideas related to travel and to virtual communities. He said:

I was assigned to moderate "Going Places" because I was good at moving ideas forward in groups, had experience with my own blog, I was willing and they knew I liked cars. ... In a face-to-face meeting you'd have an easel where you could write down ideas both to disassociate people from the ideas and as reminders for the specific topic. That wasn't available here and it was difficult keeping people on track.

Many of the skills that made Dean successful face-to-face weren't applicable: "When typing, you need to be able to write crisp responses. The body language skills you need in front of groups don't apply." Moreover, he inevitably had to leave the conversation for long periods. "You came back after eight hours of sleep and couldn't tell where ideas had come from," he said.

These problems were particularly notable in Phase Two, devoted to "refining" ideas from the first phase. Groups of managers and professionals had carefully sifted through the posts from Phase One and come up with 31 "Big Ideas." (See "IBM's 2006 Innovation Jam Process," Step 5, p. 34.) Phase Two participants were asked to indicate which ideas they thought were best and to propose and discuss refinements. Yet even with wikis provided for work on rough-draft business plans, it was rare to find suggestions that built on previously posted ideas.

On the other hand, executives found that none of the major ideas from the Jam were completely original. People who had really important ideas had already spoken of them to some IBM managers.

The Jam's value, however, was in bringing many ideas together. It helped IBM listen both to big ideas that had already been mentioned (but that no one quite knew what to do with) and to smaller ideas that in many cases complemented the big ones or helped executives think about how innovations already under development could succeed.

Capturing the Ideas

The brainstorming created a vast pool of thoughts from which related concepts could later be plucked and combined. The methodology that IBM utilized to find and make use of the most valuable comments started with sophisticated text mining software

that the company first developed in the late 1990s. It also demanded a great deal of management time.

Text mining software examines the words in ordinary sentences and then classifies items into categories. Though it requires powerful computers, the process is fundamentally simple. Classifier software looks for items that contain the same or synonymous words and puts them together. When the classifier reviewed Jam postings, it noted that many contained the word "health" or synonyms such as "wellness" together with "billing" or "invoice" or "payment." It could then create a category with all "health payment"-related postings. Executives interested in health care finance could later review all these postings at once.

However, the computer creates many spurious categories. It might find a large number of postings with the word "meeting" in them, for instance, and create a category. But "meeting" could be incidental to the authors' meanings. Because of the errors, humans have to review the clusters and discard many. (IBM has explored using artificial intelligence techniques to reduce these errors, but they did not improve accuracy.) Human and machine

together can effectively cluster many related postings, and they did that for each phase of the Innovation Jam. In addition, volunteers read each posting after each phase of the Jam and highlighted some that seemed of special interest. Only after both computer and human processing could senior executives review the Jam's output to seek its important ideas.

Some 50 senior executives and professionals spent a week reviewing the output of Phase One to synthesize the 31 "Big Ideas," and then an overlapping group of 50 reviewed the output of Phase Two to consider which ideas could become worthwhile businesses and how they should move ahead. For each phase, the reviewers worked in nine subgroups of five to eight people, with each subgroup focusing on a related group of ideas (health care, environmental, Internet related, and so forth). Participants came to Yorktown Heights, New York, from as far away as India for the reviews.

The Jam helped IBM listen to big ideas that had already been mentioned (but that no one quite knew what to do with) and to smaller ideas that, in many cases, complemented the big ones.

A Powerful (but Ponderous?) Way to Innovate

The successes so far show that the IBM Jam process has helped IBM to innovate. It is not the only way to manage a massive online conversation, and it may not turn out to be the best for every large group. But no matter what kind of large organization or network you want to get innovating, an understanding of the Innovation Jam is essential; the Jam experience demonstrates the tremendous complexity of a large online conversation and shows one way to deal with that complexity successfully.

The IBM Jam system takes every comment seriously and is capable of aggregating many not-so-big ideas to create businesses large enough to matter at a \$99 billion-a-year corporation. However, there are trade-offs. Where online conversations and live brainstorming sessions can be exhilarating, a Jam is fundamentally a piling up of ideas that will later be evaluated slowly. People enjoy it, but it rarely generates the rapid answers and thrill that some online experiences can produce. If IBM's goal had been rapid innovation, rather than the careful assembly of businesses that could make a difference in its portfolio over the long term, it might have benefited from a different approach.

Compare the IBM Jam with smaller online innovation discussions created at other companies. Other systems typically lack the capability to do justice to vast collections of ideas, but they create more excitement and quicker results. And some of the reasons for the contrast illuminate the nature of the problems that huge, innovative processes entail.

In 2007, Salesforce.com Inc., the leading producer of sales lead manage-

ment systems, introduced Salesforce Ideas, a system for managing suggestions from customers, employees and others. The system is used by Salesforce itself and by Dell (for professional customers) and Starbucks (for everybody). (The Starbucks conversation, open to everyone, is accessible at www.mystarbucksidea.com.)

The Salesforce, Dell and Starbucks systems have one striking feature that distinguishes them dramatically from IBM Jams. Borrowing from such Web sites as Digg.com, where visitors vote on what news items are most important and leading vote getters are immediately displayed at the top of the site, systems based on Salesforce Ideas allow visitors to vote interesting new postings to immediate prominence on its pages. Site visitors are encouraged to comment on the proposals at the top of the page, and discussions sometimes evolve quickly about how proposed ideas can be put into practice. Salesforce, Dell and Starbucks have implemented significant numbers of ideas discussed on the sites. (One example is the creation of Dell's first server with Linux preinstalled.)

A Salesforce executive said in an interview that its system can be expanded indefinitely. Thus, a large group of linked Web pages like that created for the IBM Jam could be created using Salesforce Ideas. However, it's important to note what Salesforce's approach gives up. The posting that gets the most "promote" votes may not be what's best in any scientific or business sense. The top vote-getting news items on Digg.com are often sensational

trivia. If two posts appear at the same time and one is a bit better written, it may get so many more votes that it is immediately promoted to the top of the site while the other is ignored — the next people to sign on are channeled into reading and perhaps replying to the post that got the most votes, and the Web site may never get anyone's views on questions that may be of greater long-run significance.

This danger suggests that no one organizing a big online conversation can escape trade-offs. For IBM and some others, the broad, time-consuming Jam approach seems best. Paul Horn, now retired from IBM and serving as a scientist in residence at New York University, summarizes:

Jamming is a form of brainstorming. And the first thing you have to learn in brainstorming is: Take in all the ideas. Even if the ideas are crazy, take 'em all in. That means you're going to get a lot of garbage. But it forces you to think out of the box. You do it on this scale, you come out, and you're just completely saturated with stuff and you have to come up with some way to winnow those things down.

The process seems to work not only for IBM but also for others: In 2007, IBM launched a service that runs Jams for other organizations. The first was an Automotive Supplier Jam, which brought together auto component makers and their auto manufacturer customers under the auspices of the Original Equipment Suppliers Association.

After Phase Two, the senior management groups were ready to propose substantial new businesses IBM could enter. IBM professionals had already been advocating some of these — a business to support the creation of a "3-D Internet," for example. Other new businesses were aggregations of related ideas discussed during the Jam — businesses that could never have emerged so quickly without it. One example was a unit called "Big Green," aimed at creating environmentally oriented businesses and bringing technology to bear on management of water resources. By November, Palmisano could announce appropriation of \$100 million for launch of 10 new businesses. (See "Businesses Created from the Innovation Jam," p. 36.)

Two Kinds of Progress

The Jam had achieved at least two positive results. First, it had enabled people with big ideas to articulate them to a wider audience, including skeptics, to hear others' complementary ideas and to win funding. Second, and probably more important, it had allowed people whose ideas weren't quite so big and who hadn't been able to find the place for their ideas within IBM to present them in ways that senior people could understand. Related ideas could then be combined in major new initiatives. The 3-D Internet and Big Green businesses represent these types of achievement.

3-D Internet The 3-D Internet business unit was based on the ideas of a self-organized group of revolutionaries. Many IBM staff had long believed that emerging technologies could transform the Internet, allowing people to experience shared, simulated worlds in three dimensions. They thought these new simulated worlds would create enormous opportunities for commerce. Many virtual-world supporters had come together on a virtual “island” a few weeks before the Jam in the online virtual world Second Life (a simulated universe with many of the features that innovators want to bring to the mainstream, but a universe whose features are difficult to use). Cartoon-like avatars of IBMers from all over the world, meeting in Second Life, created the IBM Virtual Universe Community, and even Palmisano joined the conversations. (You could recognize his avatar right away: While most avatars are funky or outrageous, Palmisano’s was a cartoon man wearing a conservative blue suit, the kind for which IBM salesmen were once famous.)

Yet it was still not clear how IBM could make money through the 3-D Internet. During the Jam, virtual reality fans at IBM held conversations among their avatars within Second Life in what they called “the world’s first 3-D Jam.” There they discussed the “Big Idea” — “Real Markets for Virtual Worlds.” They also contributed their ideas to the conversation on the regular Jam site.

These Jammers contributed many ideas about how IBM could make money. After the Jam, IBM launched a business unit to provide tools for companies seeking to build the 3-D Internet. Executives and 3-D Internet evangelists agreed on the goal: to sell technology that would provide “faster response time for real-world-like interactions.”

Big Green While supporters of the 3-D Internet were well organized, most people with ideas were not. Most did not know how to fit their ideas into any IBM business, and none could promise their ideas would create the volume of business necessary to justify an entirely new IBM business unit.

But intelligently combined, many of these ideas could promise great things. A considerable number of ideas concerned human beings’ interactions with the natural environment. Senior managers reviewing the postings noted this after the Jam’s first phase and grouped seven “Big Ideas” for Phase Two under the heading “A Better Planet.” One of these “Big Ideas” was “Predictive Water Management.” It combined smaller ideas, including accurate weather forecasting for public utilities, sensing devices to help utilities know exactly how much water they have (and where), long-term climate forecasting and simulations of the impact of specific weather events on water supplies. No one in IBM had previously discussed water management as a potentially large IBM business, yet the Jam was revealing that the company could make a major contribution.

Jam participants pointed out that the water industry, though facing crises of supply, was failing to use important technology. “It is very archaic,” says Gary Rancourt, a member of the executive team that reviewed energy- and water-related postings. “It is perhaps the least IT-enabled asset of importance in the world.” After Phase Two, senior executives organized the business unit called Big Green Innovations to address predictive water management and other environmental opportunities. The team also found enough good ideas to support creation of a new business unit that would promote “green” data centers.

In addition to providing ideas for these new businesses, the Jam provided many of the people. The team for the Big Green business unit came largely from those who articulated environmentally related ideas during the Jam.

A Global Exchange on Ideas Being Born

The Jam created whole new businesses and allowed people from all over the world to give input on ideas that management was already working on.

Joseph Jasinski, program director for Healthcare and Life Sciences Research at the IBM Thomas J. Watson Research

Center, served in subgroups that reviewed health care-related postings. He found the power of the ideas was in how they could complement each other and complement existing schemes. He “didn’t see anything that just blew [his] mind” among the postings, but said that many were “good augmentation” to ideas already being considered. For example, IBM had long wanted to help improve health care management. Many postings offered suggestions.

IBM leaders had hoped to create standardized personal health records that would comprehensively describe a patient’s health, to be accessed securely by each health care provider that the individual visited. The personal health records would give each provider complete background on each patient from the first encounter. IBM’s biometric authentication and data standards technologies could be central to such a system. However, technology was not

Cartoon-like avatars of IBMers from all over the world, meeting in Second Life, created the IBM Virtual Universe Community, and even Palmisano joined the conversations.

enough. A health record business would need to appeal to an enormous range of stakeholders.

Like almost everyone in the world, IBM employees and customers are major stakeholders in health care systems. The Jam gave them a chance to articulate ideas. IBM management had been wondering whether a personal health record should be controlled by medical professionals who would have training in what should be entered into it, or if it should be open for viewing and change by the person whose medical history was chronicled. From countries all over the world, Jammers indicated that they and their friends would want to see and be able to change their own records.

On the other hand, some ideas about how a personal health care record should work varied dramatically by country. Americans wanted a health record system to reduce medical inefficiency. The Chinese and Indians wanted it to fix flaws in their own medical systems that kept people from getting adequate care. But the Chinese and Indians also differed between themselves: The Chinese cared about tracking traditional Chinese medicine, while Indians cared about tracking nutrition.

“In the Innovation Jam, we took some ideas that we were sort of messing around with, used the Jam to get others’ thoughts and then used the post-Jam process to launch pilots,” Jasinski says. IBM launched both a personal health records business and a business to provide smart health care payment systems. Other health care ideas were reviewed and rejected because Jam postings did not indicate they could add up to real businesses. For instance, participants suggested using technology to keep track of elderly people in their homes using such devices as heart monitors and TV cameras. But the suggestions did not indicate how the project would build enough revenue to justify it. “It was hard to see how we could build a business case,” says Jasinski.

All 10 businesses funded as a result of the Jam began functioning — assembling their product offerings and test-marketing them — in early 2007. The evidence indicates that at least some will be substantial successes. The Big Green unit has developed a comprehensive approach to water management for utilities and is piloting it. Success of other green initiatives led to expansion of Big Green into the “broadest initiative ever undertaken by IBM,” according to its Web site announcing the initiative, reallocating a billion dollars a year to help IBM and its customers address environmental challenges.

A unit aimed at building “intelligence” into electric utility systems made enough progress that its products “graduated” from test-marketing and became a major offering of IBM’s public-utility information systems salespeople. The Integrated Mass Transit Information System unit won contracts in London, Singapore, Dubai and Queensland, Australia.

There have been setbacks, too. After a year or so of effort, IBM decided not to market its electronic health records yet, concluding that the market was not ready to accept them.

Extracting and using the good ideas of tens of thousands of people is not simple, but it is potentially powerful. On the whole, the units produced by the Jam seem to be achieving enough success to have made the effort worthwhile.

The Jam represents a way for leaders to fulfill their role in managing innovation. “Idea generation is in some ways the ‘easy’ part — and darling star child — of innovation, whereas advancing, refining and building support for those ideas is the really tough part,” says Edward Bevan, who played a key role in running the Jam as vice president for communications at IBM Research and is now IBM vice president for technology and innovation programs. “The online portion of the Jam is the rather large tip of an iceberg.”

When questioned about whether any of the difficulties from the first Jam had provided lessons that would apply to the next, Bevan jokingly responded, “Lessons? The first one was perfect!” And it clearly did generate huge numbers of ideas, enable leaders to choose from and combine them, and bring selected ideas to market with deliberate speed. Bevan’s unit is organizing a new Innovation Jam for October 2008, and the approaches being used for the 2008 Jam show that IBM sees it as a product that will always require further innovation. Like each previous one, the 2008 Jam will involve new, experimental approaches. The limited degree to which Phase Two participants in the 2006 Jam focused on refining existing ideas has led to the return to a single 72-hour online conversation. Instead of building from IBM’s technology this time, IBM will start with customer needs. The Web pages from which people build ideas will be created based on IBM’s latest Global CEO Study, a report based on a survey of more than 1,000 chief executives and other leaders worldwide.

It is important, particularly for an organization trying to adopt lessons from the Jam, to think of these changes as part of the purposely built iterative process of the Jam and of innovation itself. Exactly how far these changes and the Innovation Jam can drive IBM (and others) and how thoroughly it can put underexploited technologies to use is just beginning to be seen. But given the energy and resources it takes to put on an event of this magnitude, it is safe to say that IBM finds significant value in the endeavor.

ACKNOWLEDGMENTS

The contributions to this article by David Hover, a lecturer at San José State University in the College of Business, are deeply appreciated.

Reprint 50101.

Copyright © Massachusetts Institute of Technology, 2008. All rights reserved.

MIT Sloan

Management Review

PDFs ■ Reprints ■ Permission to Copy ■ Back Issues

Articles published in MIT Sloan Management Review are copyrighted by the Massachusetts Institute of Technology unless otherwise specified at the end of an article.

Electronic copies of MIT Sloan Management Review articles as well as traditional reprints and back issues can be purchased on our Web site: sloanreview.mit.edu or you may order through our Business Service Center (9 a.m.-5 p.m. ET) at the phone numbers listed below.

To reproduce or transmit one or more MIT Sloan Management Review articles by electronic or mechanical means (including photocopying or archiving in any information storage or retrieval system) **requires written permission**. To request permission, use our Web site (sloanreview.mit.edu), call or e-mail:

Toll-free in U.S. and Canada: 877-727-7170

International: 617-253-7170

Fax: 617-258-9739

e-mail: smrpermissions@mit.edu

Posting of full-text SMR articles on publicly accessible Internet sites is prohibited. To obtain permission to post articles on secure and/or password-protected intranet sites, e-mail your request to smrpermissions@mit.edu.

Hyperlinking to SMR content: SMR posts abstracts of articles and selected free content at www.sloanreview.mit.edu. Hyperlinking to article abstracts or free content does not require written permission.

MIT Sloan Management Review
77 Massachusetts Ave., E60-100
Cambridge, MA 02139-4307
e-mail: smrorders@mit.edu