

## **I. EXECUTIVE SUMMARY**

The Innovation Centers for E-Business is a subdivision of IBM's Global Services arm focusing on website integration and design services. The centers serve two purposes: (1) to complete Global Services' line of internet offerings with front-end solutions and (2) to showcase a start-up culture within IBM attracting creative talent and impressing clients. For the purposes of this project, we have focused our analysis on the workplace environment of the Boston Center for Innovation. We hope this analysis will show where (1) the Center's organizational structures, recruiting policies and physical environment attempt to cater to creative needs while also pointing out where (2) the workplace environment falls short of providing an environment for true innovation.

The Centers are treated as cost centers, meaning that Global Services sources work to them, thus nullifying any need for marketing, finance or sales departments. The Boston Center is geared for maximum productivity with approximately twenty-five line employees supported by three administrators and one executive. The staff is subdivided into four "Communities": Creative, Project Management, Technical and Business Consulting. Cross-functional teams are formed around projects and then dissolved upon completion.

L L, Center Executive, has been charged with a difficult task: creating a highly collaborative and creative division which fits well within the outbound consultancy of IBM's Global Services organization. This is even more challenging as the division struggles to achieve payback. These conflicting goals have yielded interesting results:

- 1) IBM's virtually infinite resources "free up" employees from concerns about market volatility and company survival allowing them to focus efforts on producing quality work and collaborative teaming
- 2) L's focus on quality of staff has paid off – employees are professional, experienced and appear to work well together
- 3) IBM's corporate "cushion" brings with it a sense of complacency; there is no sense of urgency pushing the staff towards greater innovation, as in *E-ink*.
- 4) The office is too focused on hitting target utilization rates if it is to fulfill on its mandate to innovate
- 5) The physical environment with its randomly-placed playful objects and gaudy design is contrived and ultimately distracting to cross-functional innovation

## **II. DATA COLLECTION METHOD**

The team first met with L L, and conducted an in-depth two-hour interview which was recorded and then transcribed [Exhibit 4]. We then sought analyze the workplace using the KEYS assessment tool and compiled a list of questions suited to this purpose [Exhibit 5]. Four interviews were conducted with key employees in one evening, with notes taken to document responses [Exhibit 6]. Additional information and guidance was provided on an informal basis by A A, Designer, who also assisted in scheduling meetings. Five interviews were conducted in total:

- 1) L L, Division Executive
- 2) J M, Operations Manager
- 3) A A, Designer
- 4) D D, Business Consultant
- 5) J B, Information Architect
- 6) H H, Creative Lead

## **III. BACKGROUND**

In the past 10 years, IBM, the largest company of the IT industry in the world, has transformed itself in two ways – first, from overly relying on hardware business, which has gradually become commodity business, to trying to become a technology and service provider; and second, from traditional data processing to networking computing and e-business.

Inline with these strategic changes, IBM has continuously invested heavily in R&D (\$5.2 billion in 1999) to maintain its technology leadership. In 1999 alone, IBM pumped \$2.5 billion R&D budget into internet-related areas. The focus of R&D has also been shifted from pure research to quick implementation.

IBM's global service division has become increasingly instrumental in bringing these new technologies to the market. Originally, service business was only part of the offering to facilitate hardware business. In 1992, half of the service business was maintenance business. Over time, service business has become a major source of IBM's revenue and experienced rapid growth. IBM's service business grew significantly from \$14 billion in 1992 (23% of

total revenue) to \$32 billion (37% of total revenue) in 1999. IBM global service now has about 130,000 consultants and is involved in a wide range of businesses (as shown exhibit 7).

Part of IBM global service, e-service business alone had \$3 billion revenue in 1999. During the 3-year period from 1997 to 1999, IBM had De 18,000 internet/e-business projects for its customers, from shaping an Internet strategy to Web page design to hosting entire online storefront. In the same period, IBM Global services had De 3 times more Net work than the \$1.9 billion combined revenues of Anderson, EDS and Computer Sciences, according to IT Service Advisory LLC.

Its competitive landscape has also changed as the result of this shift in strategy. Today, IBM is not only competing with traditional hardware manufactures such as Compaq, Sun and HP or professional service firms such as EDS, Anderson Consulting, but also upstarts Scient, Razorfish, etc.

IBM has an unmatched customer list with the biggest names in industry – from Charles Schwab to DHL, from Disney to Ford Motor and from NYSE to Prudential Insurance. Its strong knowledge of the brick-and-mortar world is a big plus for its knowledge of the Internet business. IBM is helping these Fortune 500 and other big companies in four major areas of e-commerce.

- 1) Convert the old, off-line system to new online system: link the old database to the Internet, etc.
- 2) Build new e-business infrastructure: everything from web-design to firewall implementation to enterprise-wide IT infrastructure construction.
- 3) Improve supply-chain management through online procurement system
- 4) e-outsourcing

In the new competitive environment, IBM is strong in terms of technology expertise, breath of services and global coverage. Usually with flatter organization and highly motivated employees, IBM's smaller competitors are flexible, faster but with narrower focus on service offerings. In response to the new competition, IBM's strategy is to leverage its strength in technology and scale and create a nimble interface with its customers. The fruit of this strategy is the centers for IBM e-business innovation.

The centers are focused on, but not exclusively, web integration business. This is a combination of management and IT consulting, technology implementation and artistic design. The centers have two purposes, the first of which is to fulfill the business needs of front-end web integration business. The traditional IBM e-service model is the so-called “out-bound” where consultants and technical people work at the client’s office on projects. That is necessary for back-end infrastructure and technology implementation type of projects but not good for the front-end web design projects for a number of reasons. First, front-end web integration projects usually involve heavy artistic design. The environment at the client’s office is not good for creative design work. Second, front-end web integration projects usually involve multi-function team including designers, business consultants, engineers, etc. Unless team members know each other well, it is hard to coordinate them at client’s site. The outbound model can hardly provide both venue and time for people from different functions to develop relationship before they are assigned to a client project. Third, front-end web integration projects tend to be smaller but with frequent updates and changes, e.g. a client may want to change his web page for a new season or new product. With the outbound model, the original project team members may have already been assigned to other projects. The centers are created as the “inbound” model with talents from different functions co-locate in one office to solve the three issues mentioned above. The office is specially designed to have a stimulating environment for the designers, to facilitate teamwork and communication among different functions and to best utilize resources to serve the customers.

The second purpose is to create a “startup” culture within IBM. This again has two purposes. One is to show the nimble side of IBM to customers; the other is to attract the cool, younger people in the Internet business. The overall idea is to facilitate the centers with flat organization, cool, fascinating physical environment and relaxed, dress-down and friendly atmosphere. Global Service has a standard template (see Exhibit 2) to guide the creation of each new center. However, the head of each center has been given flexibility to implement their own thoughts. E.g. L, the head of the Boston center, points out that although his organizational chart looks similar to that of the template, there’s subtle differences, such as that community leaders in the Boston center do not “manage” the resource in the communities; rather, they “coordinate.” L is in effect, reduced one layer from the organization.

The centers are not alone. They are a network of themselves and an integrated part of global services. The centers are linked to each other and to other parts of IBM not only by high-speed Internet and intranet, but also by high-tech tools such as global video conferencing systems. Centers together can share big projects to serve big customers that require coordinated effort for global implementation. Centers also can tap into other parts of IBM when they need expertise in specific business or technology areas.

The sales force of IBM Global Service is responsible to bring in customers and projects for the e-business innovation centers. The client team of IBM Global Service does all contracts and paper work. Centers simply concentrate on project fulfillment. Customers of the centers not only include traditional Fortune 500, but also VCs, startups, and small/medium sized local businesses.

The success of service business depends on people. It is more so for the e-business centers. A lot of emphases were given to teamwork and top-notch people. To attract top talents, especially designers, e-business centers are usually located in major metropolitan areas. Teamwork skills and experience are critical elements of the hiring criteria. People working in the centers are from both within IBM and outside. The first center was formed five years ago in Atlanta. Today, there are 17 centers worldwide. The Boston center was founded in April 2000.

### **Competitive Landscape of E-Business Solutions Providers**

Competition in the Internet professional services industry is intense. A firm in this sector would be likely to encounter competition from companies that offer strategic consulting, website design, information technology and e-commerce services as well as the in-house development efforts of many companies. Current competitors include the following:

- pure play web consulting firms and on-line agencies, such as Agency.com, Diamond Technology Partners, iXL Enterprises, Mainspring, , March First, Proxicom, Razorfish, Scient and US Interactive
- general management consulting firms, such as Bain & Company, Booz Allen & Hamilton, Boston Consulting Group and McKinsey & Company
- advertising and direct marketing agencies, such as Ogilvy One and Wunderman Cato Johnson

- systems integrators that primarily engage in fixed-time/fixed-fee contracts, such as Cambridge Technology Partners, Sapient and Viant
- large systems integrators, such as Accenture, (formerly Anderson Consulting) and the consulting arms of the "Big Five" accounting firms
- the professional services groups of computer equipment companies, such as HP and IBM Global Services
- outsourcing firms, such as Computer Sciences Corporation, Electronic Data Systems and
- internal information technology departments of current and potential clients

Additionally, the industry has relatively low barriers to entry meaning that new entrants are likely to emerge. The market for Internet professional services is evolving rapidly and competition will continue to intensify and increase in the future, particularly if large information technology consulting firms, such as IBM Global Services, focus more resources on Internet solution opportunities. The principal competitive factors in this industry are:

- quality of services
- technical and strategic expertise
- ability to provide end-to-end solutions
- speed of development and implementation of Internet solutions
- value of the services provided compared to the price of such services
- reputation and experience of professionals delivering the service
- project management capabilities
- brand recognition and size of the firm and
- effectiveness of sales and marketing efforts

### **Bubble Bursts**

The pure play web consulting firms have gone through a rapid maturation process. Starting primarily as website design shops in 1995, these companies were characterized by very young and fun cultures, tempered by long hours and "sweat equity." Initially a highly fragmented industry, several lightning rounds of M&A resulted in a handful of strongest players which are now composed of anywhere from five to fifty smaller companies. With the tumble in equity values of the pure play web consulting firms in March 2000, internet professional services firms were

especially hard hit. Today the pure play firms are trading at 20% of revenues FY 2001, or 5-10% off their high's. It is likely that several of these larger players will now serve as acquisition targets of their blue chip competitors. In this latest market shake-out, the upstart firms are pressed with key employee retention, new business development, integration of acquisitions and competition from recent blue-chip entrants. Many e-business workers have sought refuge in the established practices of IBM Global Services and its Innovation Centers. There is little downside: the Centers provide the secure employment and personnel packages of a blue-chip with the playful environment and decentralized structure of a start-up.

### **III. INNOVATION CENTERS**

#### **Physical Environment**

The center occupies the top floor (9/F) in the "old Lotus building" at Central Square, having a magnificent view of Mass General Hospital across the Charles River. The center is divided into two sides of design and development across from the building's elevator bank. Individuals who need to communicate across the sections could use one of the many scooters scattered about the office. This practice of keeping creative objects in the office can have the effect of changing preconceptions both for employees and clients, in the same manner explained by *Doug Hall*. L cited that the center itself convinces clients of the Boston Center's ability to be creative without need for verbal promotion. They need only take a look inside to believe. The playful Innovation Center is in marked contrast to the mundane context of the old Lotus Building and the stodgy image of "big blue." L, Chief Executive of the Boston Innovation Center, states that "there is a perception of IBM being slow, cumbersome and into [itself]...and [not] as business or marketing savvy. So, these centers are one way we can change much of that. Here, we encourage our clients to come in almost at a moment's notice. So, I challenge our clients' perception that we are only a technology company. I want them to walk away with the sense of design and business."

The open office layout is designed to facilitate communication and interaction. According to L, this contradicts the traditional notion of efficiency however it stimulates creativity and also fosters the structures of rapid teaming and deployment. Collaboration is central to the design of the Center and was the primary reasons for breaking with Global Services' traditional outbound consultancy model where employees work on site with the client. The inbound model was employed to:

- 1) allow creative consultants to share time and space to know each other, to form supporting communities
- 2) boost utilization rates by leveraging consultants' work more than once for different clients
- 3) enable clients to drop in to check-in with the team, especially helpful in deepening client relationships

### **Staff creativity commitment**

A colorful environment does not mean that life is easy. Expectation is high, as well as peer pressure. L is especially selective in recruiting the Community Leads. Most of the people in the center have much prior experience; many have owned a business prior to joining the center. All people from the creative community are hired from outside IBM. Rather than extending an arm from the original Atlanta office, L built an entirely new staff base in an attempt to create a new culture. Fit is an important criteria, and it is indeed hard to find creative talents who are both team players and excellent designers. L sought out individuals without "big egos" and who would work well in team environment.

### **New Business Development**

As a subdivision of the IBM global service organization, The Innovation Centers have the leverage of the resource, technology, size and global coverage of IBM. The Innovation Centers are brought in to supply website development services by what are known as "Industry Principals" who manage large subsections of Global Services. Then, the Principal, along with an Innovation Center team work together to pitch the business. After a win, the team approach and early/direct client interaction help the Center gain the speed and flexibility to directly compete with upstart companies. Their local presence also brings them mid-market companies and start-ups. As a means of breaking down IBM's complexity and boundless services for clients, L wants his team to make specific recommendations in simple and easy-to-understand language, leaving the implementation of complex technical details to themselves.

**Project team structure**

Having broken with the functional silos of Global Services, cross-functional groups work in semi-open spaces. The project team is formed in the very early stages of the project cycle to ensure continuity in development and maximum efficiency. At the conclusion of each project, the team is dissolved and resources are re-allocated to new projects.

Creative work requires in-depth understanding in both the method of production and in the problem itself. In creating consultant solutions for a highly volatile market as well as for the complex work scope expected of a system integrator, both problem and solution are continuously evolving and need constant attention. Hence the ability to collaborate, as well as the ability to create, are the two most important criteria that L and H H, Creative Lead, mentioned in regard to the people that they want.

**Organizational Structure (community leaders, reporting structure)**

The hierarchy is largely gone. Under the center manager, there are virtual pools or communities of professionals in different functional area, such as the producer community, the technical community, the consulting community, etc. Community leaders are not people managers, not resource managers, not even “gurus,” but facilitators. Resource management and personnel managers are separate functions within IBM and outside the Innovation Center’s communities. The Personnel Development Manager (PDM) watches over the health of the people from an attitude perspective and works with them on career plans and objectives. This scheme was intended to assist highly-skilled functional managers who may have less experience in a counseling and mentoring role.

**HR: Performance Measurement, recruiting policies, compensation structure**

The performance measurement system is customized to fit the new organization structure. The PDM will continuously solicit input from those who have a good view of the performance of each individual (project managers, peers, clients, etc.). The compensation system is a variable pay system that considers factors such as center performance, individual performance and overall IBM performance.

#### **IV. ANALYTICAL FRAMEWORK**

In assessing the workplace environment factors which impact the creativity of the Innovation Centers, we have chosen to use the KEYS quick assessment framework to analyze the unit. The Innovation Centers are still in their infancy and we have not applied KEYS measures quantitatively; instead it is our intention to examine the stimulants and obstacles to creativity in order to determine the Centers' ongoing potential in fostering innovation. In this nascent phase, we assert that the KEYS framework provides a more relevant indicator of the center's creative potential than its sparse body of work.

#### **Work Environment Features**

The Boston Center is still in a period of organizational development and self-definition. One clear example of this, is the current construction of half the office space while more manpower is required to fulfill work demands. Additionally, the center itself and its members have not yet passed through a performance evaluation cycle. Divergent projections for the creative output of the company going forward are possible. At either end of the scale are:

- 1) that the Centers will drive innovation through a self-styled and collaborative sense of purpose and teamwork, as was depicted in Oticon or
- 2) that these new organizationally structured division spend their initial few years in the creative cocoon of start-up mode and then gradually grow to resemble its parent – a slow, risk-averse and bureaucracy-ridden organization, as described in Bill Nussey's testimonial on his experience at iXL.

In order to determine the factors which affect these creative factors, five formal interviews were conducted [Exhibit 6] where we probed subjects on the stimulants and obstacles described in the note, "Managing for Creativity" and in the handout, "KEYS in Your Pocket: A Quick Assessment of the Work Environment for Creativity." Following is an analysis of the Boston Innovation Center according to the "KEYS Quick Assessment" tool.

**Freedom**

The Innovation Centers provide a certain amount of what can be considered tempered and organizational freedom whereby:

- (1) Top management of each Innovation Center has designed the structure for their respective offices according to their individual needs and judgment. L had received a template from IBM Global Service for setting up the Innovation Center [Exhibit 2], including suggested organizational charts, job descriptions and policies – all with the understanding that he could modify the structure as he saw fit.
  
- (2) Employees and managers alike have contributed to the highly eclectic physical environment of the office. As in Oticon, where employees built their new office from scratch, hence jump-starting their sense of ownership and their entrepreneurialism in the new offices, the Boston Innovation Center has cultivated an atmosphere where Each individual has freedom to design his or her own time, mode of dress and workspace. Employees cite the ability to start and finish the day when they like, dress as they please - just as they might in a dotcom start-up. According to L, this environment is conducive to the “bolt-on” of creative and branding skills the Innovation Centers needed to complement Global Services in website interface design and development. Additionally, D D, Business Consultant, states that “new objects are stimulating,” much in the same way that Doug Hall employs the “use of stimulus to spark the mind.” This is especially important since website development work requires a high level of innovation; the industry is only five years old and each year leaps in technological change force development teams to find innovative solutions to increasingly complex business problems. It is equally important to note, however, that this environment may be somewhat “forced.” According to the Boston Center’s Operations Manager, J M, a large part of the justification for the “fun” atmosphere is to please clients and that the environment is non-productive and ad hoc.
  
- (3) As a cost center of Global Services, the Innovation Center does not have functions of sales, marketing and finance. Therefore, employees are free to concentrate all their efforts on developing quality and innovative e-business solutions without concerns of workload and profit. However, this has the dual effect of setting the stage for complacency.

- (4) There is lack of freedom in team members' ability to select the work they wish to engage in, in who they work with and in their primary business activity. If *Sun Hydraulics* can be considered the extreme of business freedom, where employees regularly transition into different positions as they become needed, the Innovation Centers maintain very distinct roles and responsibilities, e.g. the Project Manager is ultimately responsible for making decisions related to budget and schedule, etc.

### **Challenging Work**

While there is abundant evidence to support the idea that work at the Boston Innovation Center is highly challenging, both from technical, marketing and creative perspectives, it is not clear that this work is internalized as important or meaningful to employees.

- 1) *Challenging nature of work.* The complexity of the problems development teams tackle every day is large, as evidenced by the indicative case studies. ([www.ibm.com/services/innovation/experience.html](http://www.ibm.com/services/innovation/experience.html)). Project teams develop solutions for Fortune 100 companies relating to developing site architecture, design interface and technical solutions which satisfy both the client's technical, branding and workflow needs as well as the end-user's experiential desires. Adding to the complexity is the ability to hit a moving target – technological, organizational and competitor changes affect any job at hand. Additionally, the initiative of starting-up a new Innovation Center is highly challenging – management is responsible for creating a new organization essentially from scratch and then recoup the costs of establishment.
  
- 2) *Meaningful work.* According to the take-home lessons in *Organizing Genius*, great groups have (a) a “clear, collective purpose [making] everything they do seem meaningful and valuable (b) a sense of being “winning underdogs” and (c) an enemy. While the Boston Innovation Center employees are patently aware of the many differences between the Innovation Centers and the rest of IBM, this is no “David and Goliath” story. As a cost center to IBM Global Services, the innovation required to create, execute and deliver on business models as portrayed in *E-ink* is neither needed nor encouraged. For L, there no doubt exists a strong sense of purpose, but it would appear extrinsically motivated since he is an IBM “career man.” Additional evidence for this is

suggested by employees' answers to the question, "What motivated your move to the Innovation Center," and responses were essentially "location," "great people" and "interesting work" which do not indicate commitment to a larger purpose or cause.

### **Sufficient Resources**

People working at the Boston center have the abundant access to resources, including funds, materials, facilities and information provided by IBM Global Services. Overall, the center is very positive in providing sufficient resources to its employees.

- 1) *Funds.* The center is backed by the deep pocket of IBM . This is probably one of the biggest differences between the center and startups. All people we interviewed reported that they haven't had any difficulty in obtaining intellectual or physical assets with appropriate justification. A resource manager centrally controls resources. This allows dynamic distribution and better resource utilization.
- 2) *Materials and facilities.* The center is equipped with the latest Quality Assurance tools and ample office supplies. The office has wide, open space with custom-made furniture. Everybody has their own semi-open workspace which they can decorate whatever way they want. There are 2 kitchens in the center with free coffee/soft drinks and candy/cookie. Located on the top floor of the old Lotus building, they even have a big open terrace where people can have lunch and enjoy the gorgeous view of the Charles River and downtown Boston.
- 3) *Information.* As part of the IBM Global Service organization, people in the e-business center have access to all relevant internal and external online knowledge bases – technical, marketing, industry, etc. IBM also has thousands of online courses that the e-business center employees can take over the intranet. The center can also tap into other parts of IBM for technical or business expertise.

### **Supervisory Encouragement**

IBM and the Boston Innovation Centers provide for great deal of supervisory encouragement with both functional and personal development structures. This, in turn, supports the project team environment enabling a greater degree of innovation as they are encouraged to work through complex issues on their own, as in the style of *Sun Hydraulics*. At the project level, teams are self-regulated with a Project Manager leading each effort and making final decisions. Team members may look to their Community leaders for help in solving complex client problems, however D states that working through these issues with the team is more productive. Accordingly, recognition is meted out on a team basis, per D and L. The project and client-based nature of the work necessitates a decentralized structure, unlike, for example, a creative effort such as *Snow White* where in order to realize his precise vision, Walt Disney was the ultimate guide and arbiter in determining every aspect of the creative work.

At the same time, this highly independent model is complemented with a structured review process as well as the Personal Development Manager. The PDM provides personal supervisory encouragement in a manner that is not possible within the team by individually working with employees to highlight strengths and weaknesses, realized goals and shortfalls as well as help chart a path for the individual's career development within IBM.

### **Work Group Supports**

Work group supports exist in both the project team and functional communities. However, the majority of workgroup structures appear to support individual projects, and not the team; the absence of a strong sense of team or functional group unity may inhibit greater innovation. At core, employees of the Innovation Centers appear to act as individual consultants. The random seating arrangement reinforces this sense. Following is an analysis of work group supports:

- 1) *Project work group*. The work group supports are primarily in place via the cross-functional team structure consisting of representatives of each functional group: a project manager, consultant, technologist and creative director. According to L, one of the primary reasons for the centers is to “[bring] together cross-functional teams...which enables the staff to be more collaborative and hence...more innovative.” This model of teaming provides a forum for the airing out of diverging functional viewpoints. However, the casualness associated with

the rapid deployment model perhaps does not allow teams to develop the deep trust which would encourage mentoring between senior and junior team members. Also lacking is the kind of intense commitment which spurred the creative leaps depicted at *Arnold Communications* by competing teams. Instead, as each project concludes, the project team is dissolved. L, however, explicitly seeks out individuals who communicate well, and are team players enhancing productivity. In effect the “rapidly dissolving teams” model supports maximum utilization, ensuring minimum of downtime.

- 2) *Functional work group.* There appears to be a lack of functional group support in some areas. Our interviews displayed a complete absence of functional peer reviews, such as design shows (typical of creative boutiques) or for example, strategists’ passion for the emerging industry. The Community Leaders are act as facilitators, in the background and primarily concerned with resources management. While the purpose of creating teams was an attempt to break down the functional silos and leverage human resources better, it can serve to disadvantage employees – they do not have a strong leader to emulate in excellence in work or drive innovation. L has made an effort to instill a sense of community among functional groups [compare Exhibits 3 and 4], by organizationally assigning a Community Lead, etc. However, apart from the creative team which meets regularly to critique each other’s work, these groups do not appear to have developed close enough ties to make an impact.
  
- 3) *Recruiting for team-players.* During the interview process, L and the other managers constantly address that they are looking for ‘team player’ not the ‘creative genius’. In terms of the service organization, it is a reasonable criterion to hire people. However, as we’ve seen some great group cases, it isn’t always true that breakthrough innovation originate from team. In many cases, a brilliant idea comes from an individual who is not necessarily a good team player. After the idea is generated, a great team takes it over by various reasons and develops to a great product or service. Emphasizing the importance of team player spirit can be reasonable for the actual development process, but can’t always be true for idea generation.

### **Organizational Encouragement**

While it is clear that there are organizational processes for dealing with innovations and suggestions, it is not clear that either IBM or the Innovation Center fosters new ideas generation. Where there is encouragement of innovative ideas, it is subtle and in order to boost productivity.

- 1) *Organizational Structures.* M states that IBM maintains a process for suggestions whereby employees will be rewarded monetarily for process which create efficiencies. For the Innovation Center, M states that the process is in place, but less formal – new ideas are evaluated on the basis of benefit to the innovation center, rather than cost. On the other hand, when D was asked when was the last time he had made such a suggestion, he could not remember. Alternately A avidly recounted how he had made suggestions regarding modifications to the physical environment and saw these take place.
  
- 2) *Recognition / Shared Vision.* It is further not clear that creative work is recognized – L states that he is not a “creative” and community leaders tend not to take on this kind of role. Successful project implementation is measured by client satisfaction as well as schedule, budget and quality control results (for projects lasting longer than six months). However, teams are recognized for excellent work. Individual employees are motivated to participate in the establishment of a new office and in doing so share a vision for the purpose of the Innovation Center. M states this as one of her primary reasons for joining the Boston Center’s team.

### **Organizational Impediments**

The underlying purpose of the Innovation Centers coupled with L’s commitment to providing an open and collaborative environment for his employees has removed many of the organizational impediments to creativity which appear to exist within IBM Global Services. However, the confused physical environment has elicited mixed reviews from the staff; additionally, the organization of the Innovation Centers is inherently risk-averse.

- 1) *Physical Environment.* All aspects of the physical environment are focused on the designers. Flexible office layout, scooters, unregulated decorations and highly visible fixtures (such as a full-sized cardboard cutout of *The Wizard of Oz*) are intended to encourage the creative staff and impress clients. However, members of the

engineering and administrative groups have disapproved, finding the environment too distracting. The office serves a dual role as a showroom; it is symbolic of IBM's commitment to creativity. And in order to better serve this purpose, the center has purchased a multitude of high-tech gadgets, many of which are not related to their work.

- 2) *Risk Aversion.* Moreover, the center in IBM has basic limitations for compensation. All members agreed that there is little downside risk to working in the organization. After all, big blue IBM represents a strong firewall as well as deep pockets. The Center has little to fear from the burst of the startup boom or economic volatility. However, on the contrary, the employees of the center can't share in the upside potential that other startups do. Basically all of the applicants who want to get their job in the center recognize this fact. Therefore, the Center's employees self-select into this risk-averse culture and structure.
  
- 3) *Aversion to Experimentation / Non-billable hours.* With its strong emphasis on utilization, everything is on the plan, positively speaking to minimize downside, but negatively risk averse. All task in the office are highly planned and are given under schedule. During the short visit to the center, we did not witness anyone staying after hours to experiment with new technologies. In spite of a flexible office hours policy, there were few people in the office after 5:00PM, and especially curious in a website development environment: no one was playing computer games! It is completely different than other small startup companies. We have seen many startup cases where off-hour personal projects implemented with company equipment later became a major source of revenue, as was the case with my Yahoo! Clearly the Innovation Centers places an enormous emphasis meeting its stated business objectives and draws a solid line between one's business and personal life. While this is good business sense, it also limits some potential for innovation.

**Workload Pressure**

We did not find there to be evidence of excessive workload pressure for most employees:

- 1) *Time pressure.* Workload pressure does not appear to be an issue at the Boston Center. The employees we interviewed cited working between 40 and 60 hours per week. (J B, the Information Architect, stated that she had worked 80 one week but that this was an extraordinary occurrence and that it did not pose a problem.) At the upper range, M stated that 60 hours was too much and that the imminent addition of a PDM would significantly lighten her load.
  
- 2) *Unrealistic expectations for productivity.* Target utilization rates are part of employee reviews, however, according to A, Creative Director, these are not strictly followed. He states that approximately 80-85% of his time is spent on billable work, though he is not judged on this basis. On the other hand, D, Business Consultant, is well aware of his utilization targets and manages his time to maintain a high utilization rate. However, he is uncertain as to what the target rate is – management still has this under discussion.
  
- 3) *Distractions from creative work.* With the exception of the physical environment and some concerns over utilization, the Boston Center is remarkably free from office politics, excessive bureaucracy and morale problems. This contributes to providing the pleasant atmosphere that employees referred to in interviews. However, this is likely a function of the Center's novelty and small size. The challenge for the Boston Center will be how to maintain this atmosphere throughout growth and formalization. It is unlikely that a *Sun Hydraulics*-like structure can function in the Center on-goingly, given the nature of the work which requires high client interaction as well as its tight integration with IBM departments.

**V. RECOMMENDATIONS**

It is clear that the Boston Center for Innovation has made a concerted effort to accommodate the creative “bolt-on” required for effective e-business solutions development. L has experimented with organizational structures, the physical environment, rapid teaming and hierarchy. Following are recommendations for increasing the innovative and creative output for the long term. Currently, the Center is in its start-up phase and its primary goal would appear

to be achieve some payback as a business unit. As a growing entity, however, whose mandate is to innovate, it is crucial that management address issues brought out in our analysis if it is to lead IBM into the realm of e-business solutions services.

1) *Physical environment.* there is in fact a basic problem underlying: the lack of an overall design. Usually space generates a strong character by the passage of time and by continuous human adaptation. Since this is not the case here, a strong design is required. We can see that various intentions of design stop at the objects: high tech screens, Herman Miller chairs, interesting light fixtures... but these things alone cannot “create” an environment. In thinking about the physical environment, designers cannot just import “cool stuff.” Instead, the office needs to be re-thought from a very basic level: what properties are required for the space, how are the spaces transitioned from one to the other (including psychological preparedness for the specific activity), what kinds of materials are available and suitable for the situation, where should light enter and how, etc. To smooth out the transitions we recommend that the space be re-designed to:

- a. Create a more homogenous background light throughout the office.
- b. Clear up unnecessary color and pattern changes when adding new furniture. Rapid transitions increase stress.
- c. Reduce unwanted noise by spacing out employee by project team, or by re-thinking the design of cubicles or walls.
- d. Soften the glare from glassy materials, especially in the small meeting rooms.
- e. Reduce the arbitrarily placed objects in passageways (e.g. scooters, large plastic balls).
- f. Divide the showcase client area away from the daily operational area in the long term since these fulfill fundamentally different needs.

2) *Community Leads.* The office lacks a clear leader or visionary. While L is commendable for his collaborative and accommodating managerial style he does not appear to provide the office with strong impetus to innovate. This may be very appropriate as he provides an interface to the fledgling center’s corporate parent. Yet, L could empower Community Leads to take on greater leadership roles within the office. Leadership activities could include:

- a. Proactively seeking out business for strategic reasons (e.g. to learn about a specific area of technology, or develop a purely creative showpiece)
  - b. Involve the office in industry and community events via speaking engagements, creating special interest groups in the local new media “scene” positioning themselves as thought leaders in the business as well as develop relationships with potential new recruits
  - c. Develop deeper relationships with R&D departments within IBM in order spur ideas for new approaches to problems, much like Hakuta’s use of “weak links.”
- 3) *Incentives to innovate.* In order to create an atmosphere of greater challenge and urgency to innovate, we recommend that L implement the following measures:
- a. Greater recognition via simple awards for the teams which develops the most innovative solution to a client problem as well as for specific awards within each functional community.
  - b. Performance reviews with a qualitative evaluation of innovation / creative contribution to teams and community
  - c. Provide an R&D time budget to all employees of the Innovation Centers. L could create a stated goal of 10-15% which would provide employees with a bright line of how much time to allocate to purely innovative tasks. Most importantly, this will make it clear that innovation is a priority.
- 4) *Develop static functional teams.* Following with Global Service’s focus on segmentation by industry, the Innovation Centers should also look to develop concentrated vertical expertise in preparation for becoming a profit center. With thought leadership, a reputation for excellence in innovation and creativity as well as the power house of IBM behind it, the Innovation Centers should look to become profit centers, attracting new business to the firm on its own merit and bringing in Global Services to support it. In order to make this kind of shift L will need to move slowly and with the support of other centers and obviously services, possibly planning for this move two years in the future.
- 5) *Create an enemy.* Creating an enemy will help to instill passion in the staff, and help give the effort of launching the new office greater significance than simply “starting-up something new.” This enemy could be

one of the Center's new rivals (e.g. Accenture) or the upstarts where many of the Creative staff worked previously. This would also serve the purpose of helping the office to develop stronger identity through self-differentiation.

It is our belief that the Innovation Centers at this juncture are currently designed for "status quo" creativity. The level of creativity and innovation suits the purposes of providing a quick turnaround work and integrating well with IBM Global Services. However, we do not think this Center is poised to excel in creative development or to pioneer new developments and business models in e-business solutions as did the upstart companies. The use of the term, "Innovation Center," we believe is a marketing implement for clients and recruits and not an accurate description of the kind of work that takes place. Yet, the existing structures do serve as excellent groundwork for encouraging creativity and at this juncture, and by taking some of the measures discussed above, we believe that the Centers can drive innovation at IBM.