



# Technology-based Business Transformation

ESD.57 – Fall 2007

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Society

Business

Technology

## Class Project

- *Clearly articulate the overall vision. What is the essence of the disruptive innovation? How will project change the landscape in its industry over time?*
- *Spend bulk of the time working out overall implementation of first phase(s) of the project, including development, sales channels, and marketing plan.*
- *Convince us that you both have a compelling strategy and that you have the ability to execute your first phase in a timely manner.*
- *Write short paper – no more than five pages, - summarizing overall strategy and execution plan. e-mail paper to me and Sung Joo Bae by Tuesday, November 27.*
- *Final class presentation and discussion – 30 minutes each – on November 29 and December 6. We will pick presentation order at random in next class.*
  - By October 18 – Submit 1 -2 page
  - Analysis
  - Creativity
  - Design
  - Development
  - Holistic thinking
  - . . .

# Class Overview

- Technology-based innovation and business survival
- Formulating a market strategy around a new, disruptive, complex technology
- Executing a multi-faceted strategy in the marketplace
- Organizational and cultural Issues
- Class project presentation and discussion

# e-business = Web + IT

## Industrial Strength

Database Transactions  
Scalability Systems Mgmt  
Availability  
Security

IT

Web



## Standards

SET  
TCP/IP HTML SSL  
HTTP Browsers Java  
Web Servers GUIs

# Executing IBM's Internet strategy in the marketplace

## *Key Organizational Factors*

- **Balance between proprietary and open**
  - Did not participate in “browser wars”, looked at browser as “basic dial tone”
  - Embraced open source Apache web server vs “http” internal effort
  - Focused internal efforts on proprietary enterprise quality software: WebSphere built on Apache and other open source components
- **Build in-house vs partnerships and acquisitions**
  - Made a number of key acquisitions to build up software and services business: Lotus, Tivoli, . . .
  - Partnered extensively, including with major competitors: Java with Sun
- **Market offerings – key focus and segments**
  - Focused on key areas where IBM had skills and enterprise had needs: hosting, security, back end integration, web application servers, . . .
  - Organized offerings around Content, Collaboration and Commerce
- **Financial and Market measurements**
  - Tracked directly a number of key, “pure” Internet projects
  - Focused primarily on larger Internet impact on overall revenues, key client engagements, and market impact
  - Reviewed progress closely with CEO and top senior management

# Executing IBM's e-business strategy in the marketplace

## *Key Market Factors*

- Time to Market – Early “Killer Apps”
  - Web-IT integration; Customer self-service; Simple e-commerce
  
- Early visible prototypes
  - 1996 Olympics web site; Grammys;
  - Many customer prototypes; focus on customer references
  
- Key market messages
  - Key message: leverage Internet for business value
  - Major e-business marketing campaign
  
- Communicate extensively through to a variety of constituents through various channels
  - Many press articles, interviews, IT and financial analysts, customer events, etc

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# Leadership and Organizational Change

Text removed due to copyright restrictions.

Quote from book below, positing that firms that can implement discontinuous organizational change rapidly have a competitive advantage, since this indicates a better adaptability than companies that only utilize inertia or incremental change.

*Beyond the Charismatic Leader . . .*  
*David Nadler and Michael Tushman*

# Organization Change and Re-organization

- Two dimensions of change
  - Strategic: organization wide vs  
Incremental: only affects selected units
  - Reactive: response to events vs  
Anticipatory: change to gain competitive advantage
- Types of organization changes
  - Incremental and Reactive → Adaptation
  - Incremental and Anticipatory → Tuning
  - Strategic and Reactive → Re-creation
  - Strategic and Anticipatory → Re-orientation

# Strategic organization changes are necessary

- Various factors drive the organization to make system-wide changes .
- While strategic organization change does not guarantee success, those organizations that fail to change, generally fail to survive.
- Re-creations are riskier because they are initiated under crisis conditions, under short time constraints, and almost always involve a change in core values.
- Re-orientations are associated more with success, and have the luxury of time to shape the change, build coalitions, and empower individuals to be effective in the new organization.

*What kind of leadership appears to be most critical during times of strategic organizational change?*

## *The Charismatic Leader: Types of behavior*

- **Envisioning**
  - Articulating a compelling vision
  - Setting high expectations
  - Modeling consistent behaviors
  
- **Energizing**
  - Demonstrating personal excitement
  - Expressing personal confidence
  - Seeking, finding and using success
  
- **Enabling**
  - Expressing personal support
  - Emphathizing
  - Expressing confidence in people

# Are there inherent limitations to the effectiveness of charismatic leaders?

- Unrealistic expectations
- Dependency and counter dependency
- Reluctance to disagree with the leader
- Need for continuing magic
- Potential feelings of betrayal
- Disenfranchisement of next levels of management
- Limitations or range of the individual leader

*What kind of leadership appears to be most critical during times of strategic organizational change?*

## *The Instrumental Leader: Types of behavior*

- **Structuring**
  - Building teams that have the required competence to execute
  - Setting goals, establishing roles and responsibilities
  - Detailed planning about what people need to do
  
- **Controlling**
  - Systems and processes to measure, monitor, and assess both behavior and results
  - Administer corrective actions
  
- **Rewarding**
  - Administer rewards and punishments

# *Institutionalizing the Leadership of Change*

- **Leverage the senior team**
  - Visible empowerment of the team
  - Individual development of team members
  - Composition of senior team
  - Inducement of strategic anticipation
  - Enhance senior team's ability to learn over time
  
- **Broadening senior management**
  - Empower individuals one or two levels down from the executive team
  - Make them feel like senior management signed up for the change
  - Motivate and enable them to work as an extension of the senior team
  
- **Developing leadership in the organization**
  - Define management competence
  - Recruit leaders or potential leaders
  - Socialization
  - Management education
  - Career management
  - Seeding talent across the organization

# Good Management is the Key to Innovation

Text removed due to copyright restrictions.

Quote from book below, praising the ability of managers of pharmaceutical companies to foster the specialized knowledge necessary in their field without causing the information to become embedded, unable to change and adapt.

*Managing Innovation in the Information Age*  
*Rebecca Henderson*

# Management Matters - *Managing Innovation . . . Henderson*

- Management plays a crucial role in the innovation process beyond hiring the best possible people and giving them funds to be successful.
- Research efforts of the most successful pharmaceutical companies can be as much as 40% more productive than their rivals
- The best managers are constantly challenging the company's conventional wisdom and stimulate the dynamic exchange of ideas.
- Successful companies must keep abreast of the changes within particular scientific disciplines and successfully integrate this knowledge within and across company boundaries, often in new and unexpected ways.

# Characteristics of the Most Successful (Pharmaceutical) Companies

- They keep abreast of the changes in their field through close connections with the scientific community at large
  - Encourage – not just tolerate – eminence in the scientific community
  - Balance acquisition of new scientific knowledge with ability to link knowledge to useful company goals
- They allocate resources across a wide range of areas, ending up with the most advantageous mix of projects
  - Diverse project portfolios - very difficult to pick “winners”
  - Encourage lively debate and stimulate rapid transfer of information across the company
- They actively manage the tension in organizational design
  - By Function: ensures that the in-depth specialized knowledge fundamental to long-term innovation is preserved and enhanced
  - By Product: focuses on the customers and markets and encourages communications across functions

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# IBM's e-business Strategy: Organizational and Cultural Issues

- Build a company-wide virtual organization
- Include as much of the company as possible in the initiative
- Sell the strategy “outside-in”
- Spend considerable efforts in internal communications and education
- Nurture core supporters, e.g., technical community, marketing, . . .

# IBM's e-business Strategy: Organizational and Cultural Issues

- Build a company-wide virtual organization
  - For transformative, company-wide initiatives, it is best to have a relatively small full time core team coordinating activities across the different functions in the organization
  - After the initiative has taken hold in the company, the virtual team should dissipate and its functions integrated back into the overall organization
- Be inclusive of as much of organization as possible
  - Other parts of the organization will likely not support the new disruptive initiatives at first, especially if they are not involved and feel excluded
  - The more everybody feels part of the new initiative, the more they will support it and help it succeed

# IBM's e-business Strategy: Organizational and Cultural Issues

- Sell the strategy “outside-in”
  - People will believe what they read in newspaper , magazine articles and other external sources more than internal communications
  - Make sure external marketing and communication activities receive wide internal visibility
  
- Internal communications and education
  - Don't underestimate the need to explain new initiatives, educate people on what it is all about, their role in it - over and over and over
  
- Nurture core supporters
  - Leverage the passion and commitment of strong core supporters and “evangelists” in convincing others about the value of strategy
  - Often, strongest supporters will be those with strongest external connections – technical community, research, . . .



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