Innovation Trends and Levers
Eindhoven, September 2006

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Agenda

- Introduction
- Innovation trends
- Innovation levers
- Service innovation
- Summary
The Global CEO Study 2006 of IBM explores the role of innovation plays on CEOs’ agendas

- Innovation refers to newness, market relevance and change.
  - “…The creation of impact, value and differentiation in novel and unique ways, utilizing the many capabilities available to businesses today.”
  - “…Innovation occurs at the intersection of invention and insight. It’s about application of inventions to solve problems.“
  - Innovation can be about Products, Services, Markets; Operations; Business models
- 765 CEOs* across the globe were interviewed
  - 84 in banking
  - 35 in insurance

Business model innovation matters
External collaboration is indispensable
Innovation must be orchestrated from the top

* References to “CEOs” include CEO, Business Executives and Public Sector Leaders
Global groups set strategic focus on accelerating the pace of change and innovation

1. Innovation budgets grow
2. Innovation teams appointed
3. New practices established
4. Innovation goals set
   - Expand channels
   - Grow developing markets
   - Innovate delivery models
   - Set innovation standards
   - Create incubation structures

“Innovation Intentions exist but the know-how is missing…”
Societal, economic & technological advances have been changing the very nature of innovation.

**Society changes**: globalization, the rise of the individual, changing values & environmentalism

**Economic changes**: incorporation of developing economies in the global market, and the rise of services and intangible assets

**Technology changes**: maturing platforms provide communication everywhere, access to knowledge, collaboration, integration

**Societal, economic and technological maturity creates stable platforms for innovation.**

Historical precedents such as steam power and electricity show that the scope and pace of innovation grows dramatically as platforms stabilize.
New trends expand the way we innovate

1. Open collaborative innovation
2. The primacy of the individual
3. Focus on Intellectual Capital (IC)
4. Integration of existing technologies
5. Growing non-product innovation
Open collaborative innovation extends decades of evolution from corporate innovation to networks of innovation.

**Closed Innovation**
- Scarce technical skills
- Nurtured internal skills in Computer Science and Engineering
- Utilized Information and Communication Technologies
- Focused on internal processes and funding
- Optimized for tailor-made innovations of proprietary technology and pre-defined business models.

**Open Innovation**
- Science and Engineering skills and external funding mechanisms are abundant
- Innovations are valuable mostly as components on standard platforms used by many players.
- Knowledge is shared with business partners

**Ecosystem centric, cross-organizational innovation**
- Matches global innovation demand with a worldwide supply of talent and ideas
- Combines internal innovation sources with many external players, in particular customers, external innovators, integrators, financiers and IP Brokers into a fluid market ecosystem.
- Open source

Sources: Chesbrough 2003, Forrester 2004, von Hippel 2005
As individuals become more autonomous, they influence values, bottom up contributions, and emerging innovations.

**Trends increase the autonomy of the individual in businesses & employment**

- Businesses become market-based organizations
- **Project-based temporary employment** allows individuals to take their own work and career
- Communication cost reductions create decentralized decision loose hierarchies, internal quasi-markets and elements democratization.

**The individual is the ultimate source of new ideas**

- Management practices including internal motivation enhance the likelihood of innovation
- Individuals and team autonomy fosters creativity when there exists a sense of ownership and control over their day-to-day efforts and ideas
- Challenging work, sufficient resources, and organizational encouragement further promote innovation

**The user of the products or services influences how they are created and utilized**

Intellectual Capital (IC) is created, managed, aligned with demand, exchanged, and shared across the ecosystem.

**Intellectual Capital (IC) has become one of the most important resources**

- 75% of publicly traded US companies value come from intangible assets, twice that in 1980.

**The markets for IC are growing rapidly**

- Global technology licensing revenue is estimated as $100B annually. New forms of IP trade are emerging - new IP trading networks, commercialization of internal IC, acquisition of external IC.
- The structure of the IC market is changing.

**Changing business needs drive creation of IC which in turns encourages innovation**

- The importance of IC will keep growing with the increased visibility and availability, these are amplified by the emerging approaches to leveraging IP.

Integration of existing technologies to provide new products and services, integrating the components in new ways

- **Integrative multidisciplinary innovations leverage existing Information and Communication platforms to create new services, new processes and new business models.**
  - The pervasiveness of the internet allows easy connectivity between customers and suppliers, enabling innovators to focus on new ways to create value, without the need to create the technology.
  - The maturity of Information and Communication Technology allows combination of existing technological components in new ways. Many of the recent internet-related innovations, like eBay, Google, iTunes, and Skype, utilize and integrate existing technological components and focus on innovative processes and business models.

- **Many of these integrative innovations create a network effect surrounding their new service, process or business model.**
  - They create a positive business cycle that increases the value of the innovation as more customers join. With a valuable business innovation at its core, the pervasive and stable ICT platform accelerates the emergence of the business.

Non-product innovation is where most growth is occurring, although product innovation dominates managerial thinking.

- **Product innovation** continues to succeed and dominate managerial thinking. However, in most industries, differentiating new-product breakthroughs are increasingly rare and new products are more rapidly copied and commoditized.

- **Innovative business models** or operations are created to exploit new markets.

- **Business Process Innovation** where processes are reinvented to increase efficiency, reduce costs and support new business models both within the corporation and the ecosystem.

- **Management and Culture of Innovation** creates a culture in a corporation, ecosystem, and markets that facilitates innovation through autonomous contributors, loose controls, and key metrics.

- **Services Innovation** or enhancements to existing services such as outsourcing, self-service, personalization, and real-time analytics are created and packaged with other products and services.

- **Innovation Policy and society** creates long term business opportunities and maintains freedom in the areas of human capital, business partnerships, governments, community relationships.

Businesses create and improve their capability to innovate systematically in a broad range of innovation domains across all types of products and services, industries, and ways of doing business.

Innovation levers enable businesses to leverage the current trends to enhance their innovation in new ways.

We have identified key innovation levers with significant impact:

- Strategy
- Customers, Users
- HR and Culture
- Metrics
- Collaboration
- R&D
- Outsourcing, M&A
- IT and Communication Technologies (ICT)

These levers focus on those messages related to utilizing the new trends in innovation.
Working with customers we utilize a generalized framework ensuring the completeness of the approach to innovation.

1. Innovation Agenda
   - Leveraging Insight to set the strategic innovation agenda
   - Leading and managing the innovation mix

2. Types of Innovation
   - Broad set of innovation types that require different capabilities, processes and measurements to succeed

3. Sustaining Enablers
   - Building the underlying capabilities that support innovation across all innovation types
The culture is a leading lever for innovation and should encourage creativity, learning, collaboration and relevance.

**Creativity can be leveraged differently along the phases of the innovation system**

- **Ideation**
  - Foster creativity for generating new ideas, for enriching concepts and for solving problems during development, delivery, service encounters and support
  - Create an environment that is characterized by multiple interactions, teamwork, role changes, networking, taking initiatives and accountability

- **Concept**
  - Develop the ability to innovate by building entrepreneurial skills, good (sometimes sustained) judgment, continuous mechanisms for learning, professional preparation and readiness for change
  - Embrace methodologies for systematic creativity, i.e. structured brainstorming, technology roadmapping and outlook, guided IP generation, TRIZ and role playing

- **Demo**
  - Strive to impact at multiple levels, i.e. the corporation, group, communities
  - Encourage bottom up and top down interactions to enhance relevancy

- **Develop**
  - Allow for flexibility to support dynamic adaptations of innovation

- **Deliver**
  - Balance long term horizon with mid term plans and short term deliverables

- **Support**
  - Foster creativity for generating new ideas, for enriching concepts and for solving problems during development, delivery, service encounters and support
  - Create an environment that is characterized by multiple interactions, teamwork, role changes, networking, taking initiatives and accountability

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**Learning**

- Train people in multiple fields, empower them and laterally enrich their careers
- Develop organizational learning
- Educate people on the creation and importance of intellectual capital and encourage wide involvement
- Constructive environment

**Collaboration**

- Collaborate on many levels — between organizations, between groups, between individuals that are part of multiple communities
- Encourage interactions, discussions and negotiations
- Fully utilize the maturing ICT for open and wide collaboration, i.e. “world jam” and “ThinkPlace”

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**Sources:** Amabile, Neely, Altshuller, Edward de Bono.
Customers become central to innovation from ideation to delivery

**Effectively meet customer needs as the most important innovation goal**

- Consumer-focused innovation expands the role that consumers play in the development and execution of new products and processes
- A strong “consumer feedback loop” rewards participation

**Place the customer at the center of your strategy**

- Define customer bonding as a primary objective
- Establish constructive and enduring relationship based on mutual trust, collaboration and joint benefits

**Work with lead users to develop break-through innovations**

- Lead users face the needs that will be in the general market place
- They increase the probability of successful products
- Positioned to benefit significantly by obtaining a solution to those needs

**Establish open and collaborative innovation with your customers**

- Use networks and various communities to identify and engage the suitable lead users
- Leverage open source, extreme programming and extreme project management methodologies for customer collaboration, addressing vague and changing requirements

Sources: Forrester, Arthur D. Little, Hax
Services are different from product manufacturing due to key service characteristics

“Services are activities that take place most often in interface with the customer”

- Services are basically **intangible**, even if they may include tangible actions. Customer satisfaction in services is also influenced by intangible aspects during the service performance.

- **Heterogeneity** creates a challenge for quality management in services. Quality in service requires taking into account service diversity of customers while the service delivery is taking place, the behavior and expectations of the customer being served and to customize the service delivery accordingly.

- **Simultaneity** means that most services are produced and consumed in the same time. That makes it difficult to monitor all services delivered, while service can not be inspected before its consumption.

- Services are often characterized by the existence of **human contact**.

- Services are **perishable** as there are no inventories and opportunities are lost with idle capacity.
Services management schemes come from marketing and operations while innovation thinking comes from R&D.

**Operations**
- Capital intensity – people/equipment
- Production process
- Customer involvement
- Customer contact - communication time, intimacy, information richness
- Employee/provider discretion

**Marketing**
- Tangibility
- Differentiation
- Object of service – people/goods
- Type of customer - individual or institutional
- Level of customer commitment

**R&D**
- Ideation
- Concept
- Demo
- Develop
- Deliver
- Support
There is a need for development of new innovation models, as the traditional funnel model is not sufficient for services.

- The funnel is “one directional” and therefore does not explicitly address the need to build communities that practice innovation on a regular basis.
- The model does not facilitate ongoing interactions with the ecosystem, stable ownership and other motivational aspects that are critical to innovation.
IBM is promoting a new academic discipline – Services Science, Management and Engineering (SSME)

1. Services companies have multiple centers of innovation, no one locus of innovation
2. Customers need to experiment with new services
3. Even substantial innovations tend to be incremental
4. The balance and learning through the service encounter are opportunities for innovation
It appears that organizational patterns of service innovation are complex and involve many organizational functions.

- There is no one locus of innovation, multiple organizational functions take part in innovation.
- There is aggregation of more functions as the innovation process progresses.
  - Top executives participated frequently in creation.
  - Marketing and Customer Contact roles are not frequent creators.
  - Customers, and Business Partners take part in creating innovations but less so in developing and deploying them.
- Innovation patterns may depend on sector, innovation type and impact.
As customer interaction is crucial for service innovation, businesses are developing experimentation strategies.

- Experimentation is a key success factor in the development of new products and services.
- Services are more difficult to isolate in a lab context since they are intangible and typically exist only when delivered to customers.
- The fact that services are usually highly customized makes it difficult to generalize from a small number of experiments on subsets of customers.

Bank of America has been developing an experimentation strategy:

- Innovate & Develop (I&D) corporate team; Dedicated branches; Design for learning
- 1. Evaluate Ideas; 2. Plan and Design; 3. Implement; 4. Test; 5. Recommend

**Bank of America - the test phase**

- Manage the market
- Monitor performance → Report results → Improve process

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<thead>
<tr>
<th>Desired outcome</th>
<th>Create a stable operating environment for testing new concepts and ideas</th>
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<tbody>
<tr>
<td>Success Factors</td>
<td>Fast feedback, meeting test and market goals</td>
</tr>
<tr>
<td>Key measures</td>
<td>Test cycle of no less than 90 days. Operating results</td>
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The service encounter creates specific service challenges but also opens opportunities for innovation.

- The balance of the service encounter is critical for success.
- There are many learning opportunity through the service encounter and once it’s finished.
- The service encounter open new opportunities for innovation.

![Diagram of service organization with relationships between Service Organization, Contact Personnel, Customer, Efficiency versus autonomy, Efficiency versus satisfaction, Effectiveness versus Efficiency]
Innovation practices in IBM demonstrate fairly distributed innovation principles

At IBM we believe in innovation that matters to our company and our clients.

“Innovation is a societal -- not a technological -- phenomenon, that arises from the intersection of invention and insight.” Sam Palmisano

There are many Innovation activities and initiatives at IBM

- **FOAK**: First-of-a-Kind projects; “Proof of Concept” with clients involving IBM Research & Sales
- **GIO** and **GTO** – Global Innovation/Technology Outlook involving Communication or Research
- **On Demand Innovation Services (ODIS)**: IBM Research works with GBS in client projects
- **EBOs** – Emerging Business Opportunities: Long term innovation at the corporate level
- **Think Place** - a cross-organizational platform for sharing ideas and promoting them
- **Innovation workshops, Industry Solution Labs/Centers (ISL/C)**: discuss future technologies
- **IBV** – the **Institute for Business Value** of GBS develops innovative thought leadership with clients
- **GTU** – **Global Technology Unit** – Connecting technology (startup) companies to IBM’s business
- **Services Science, Engineering and Management (SSME)** – a new academic discipline
Innovation is about change, are you ready?

1. Do you have a **strategy** for innovation and is it aligned to your overall business strategy?

2. Is there a management system to identify and collaborate with **customers** and **lead users**?

3. Does your **culture** promote creativity, learning, collaboration and relevance to the marketplace?

4. Do you have **metrics** for innovation, incubation and long term impact?

5. Do you have an **organizational and technological infrastructure for collaboration** within the company and with the ecosystem players?

6. Is your **R&D organization** capable of innovating within an open ecosystem?

7. Do you systematically explore **outsourcing**, **M&A** and other non organic growth opportunities?

8. Are you exploiting pervasive **IT** and **Communication Technology platforms** for new products, services and processes?
THE END