Colorado Software Summit

John Soyring
Vice President, IBM Solutions and Software

October 22, 2007
Predicting the Future

CEO Report
Business Model Innovation
May 2008

CFO Report
Performance Management
October 24, 2007

Industry Reports
Best Practices
Available now
Healthcare is in crisis. But there are ways to succeed in the changing environment.

http://www-03.ibm.com/industries/healthcare/doc/content/landing/2955767105.html
Global Innovation Outlook

IBM’s Global Innovation Outlook: a worldwide conversation about innovation that matters

IBM’s Global Technology Outlook

Behavioral Sciences

Chemistry

Computer Science

Electrical Engineering

Materials Science

Mathematical Sciences

Physics

Service Science, Management & Engineering

Colorado Software Summit: October 21 – 26, 2007
Socio-economic trends

First U.S. baby boomer applies for Social Security

The multi-generational economic phenomenon

- Aging Baby Boomers: Retiring workforce
- Declining birth rates in Generation X & Y
- Less people entering the workforce than those departing

Oct. 15, 2007
WASHINGTON (Reuters) - Retired school teacher Kathleen Casey-Kirschling on Monday became the first ripple in a "silver tsunami" of retiring baby boomers.

http://www.reuters.com/article/topNews/idUSN1538350920071015
India firms warn on IT skills gap

http://news.bbc.co.uk/2/hi/south_asia/6124872.stm

Increasing labor rates in India & China

- Retention and skills gap are key issues
- Importing skills to address skills shortage
- But ...
- Educating young people in sciences & engineering at much higher rates
Socio-economic trends
Challenges & opportunities

Supply & Demand of key commodities

- Demand outpacing supply
- Increases need for solutions that make effective & efficient use of natural resources
- Sustainability of resources becomes key design point

NEW YORK October 19, 2007, 6:38 p.m. ET · Oil futures fell Friday, retreating from an earlier foray to a new record above $90, as investors sold to lock in profits. from The Associated Press
Disruptive socio-economic events

Challenges & opportunities

The global reach of terrorism
Socio-economic trends

Challenges & opportunities

Delivery constraints in the supply chain

- Flattening world and globalization have strained the supply chain
- Global container traffic fuelled by eastern Asia growth
- Port congestion causing delays in delivery to vendors

Vancouver choked by trade with China
Shippers divert cargo to Halifax, despite longer voyage and 35% cost increase  

Asia trade strains port
San Francisco Chronicle, Oct 18, 2006
Socio-economic trends

Challenges & opportunities

The internet continues to grow in importance

- 80+% of U.S. adults use the internet, 44+% everyday
- The *influential youth* log on more often – *social networking*
- The wired *Gen X/Boomer* use the internet for major decisions
- Privacy and security are key issues
- Emerging trends can positively impact peoples lives e.g. Electronic personal health records
Climate – “An Inconvenient Truth”

AfricanClimate@Home

http://www.worldcommunitygrid.org/projects_showcase/ach/viewAchMain.do
Power Consumption

- Low power multicores replacing single high-power cores
CEO’s cite Innovation as top priority for business

Business Model Innovation delivers the greatest returns

Results of 765 CEO interviews worldwide:

- Out-Performers place 2X emphasis on Business Model innovation than under-performers
  - CEOs under intense pressure to innovate
  - Corporate culture is critical to sustained innovation
  - Business model innovation is the new strategic differentiator
- 65% will make fundamental changes to their business over next 2 years
- Over half have found it difficult to manage change in the past

Innovation Type for Out & Under Performers (Operating Margin CAGR)

% respondents selecting each innovation path

Operations
Products / Markets / Services
Business Model

Source: IBM 2006 Global CEO Study

“The business model we choose will determine the success or failure of our strategy.”

John Soyring — Conference Opening Keynote Presentation
The business knows what it needs to do to achieve its goals... but there are inhibitors to progress

**Businesses Need:**
- A way to *change* their operational processes quickly...
- To *deploy* automated processes fast...
- A real time view of operations and be able to *intervene*...
- To see results and *value* fast...

**But they can’t because:**
- Poor documentation of processes
- Cannot pin-point differentiating process
- Hard to find a place to start
Entry points to business model innovation occur in different areas, depending upon specific industry market pressures and individual organizational needs

- **Front Office Innovation**
  - New collaborative solutions across partners, customers and suppliers

- **Core Business Process Innovation and Transformation**
  - Better customer service and more efficient use of resources through new and innovative approaches to internal business processes

- **Back Office Innovation**
  - New levels of cost efficiency and best-of-breed solution delivery through global services assembly lines
SOA improves how you design, manage, and optimize your business processes by enabling:

- Solution Building Efficiency
- Reuse of existing assets
- Flexibility in change

SOA at the core of BPM:

- Business Processes
- Services (Application & Information)
- Operational Systems (Application & Information Assets)
- External
- Content
- Data
- Registry
Surgery With a Warranty

The New York Times

May 17, 2007

What if medical care came with a 90-day warranty?

Today’s payment operations are fragmented, complex, inflexible and costly

- Duplication of:
  - Customer facing applications
  - Processes and functions
  - Data warehouses
  - OFAC, credit, fraud, other checks and control points
  - Settlements, statements, advices, customer inquiries, history, adjustments

- Many-to-many connections
- Proliferation of support requirements
- Manual bridges
- Existing embedded systems

- Innovation is road-blocked
- Incremental changes are difficult
- Maintenance is costly

“Banks with a clearly focused payments organization can increase revenue by up to 10%”

The Boston Consulting Group
SOA components are choreographed among various ‘value chain’ participants

- Investment/Trust Client
- Payment Systems
- Account Management
- Anti-Money Laundering Services
- Outsourced
Why SOA Governance Matters

Realize business benefits of SOA
- Business process flexibility
- Improved time to market

"Firms with above average IT governance... had more than 20 percent higher profits than firms with poor governance following the same strategy"

Mitigate business risk and regain control
- Maintaining quality of service
- Ensuring consistency of service

"Effective IT Governance is the single most important predictor of value an organization generates from IT."
Source: Peter Weill, MIT Sloan School of Management’s Center for Information Systems Research

Improved team effectiveness
- Measuring the right things
- Communicating clearly between business and IT

Professional investors are willing to pay premiums of 18-26% for stock in firms with high corporate governance.
Source: McKinsey Quarterly
Virtualization?

Many examples and levels of virtualization across the IT infrastructure

- Workload / Service Virtualization
  - Coordinate, schedule and manage services / apps across a grid

- Server Virtualization
  - Partitioning / Hypervisors

- Virtual Memory

- Network Virtualization
  - Virtual LANs (VLANs)
  - Virtual Private Networks (VPNs)

- Microprocessor Virtualization
  - Multi / Hyper Threading
  - Hardware assisted virtualization (Intel, AMD)

- Information Virtualization
  - Content / Format Virt.
  - Location Virtualization

- File Virtualization
  - Distributed File Systems

- Storage Virtualization
Growing adoption Sensor & Actuator Solutions
Enabling Business Process optimization from new operational insights

**Business Challenges:**
- Compliance with regulations: *e.g.* FDA mandates for safe & secure drug supply chain
- Supply Chain: end to end inventory visibility
- Asset Tracking: High cost of lost assets
- Asset Monitoring: state & utilization of assets

Networked Devices deliver new data & act upon insights

**Sensors**
- Power meters,
- SCADA, pressure,
- volume, RFID
- readers, Motion
- detectors...

**Actuators**
- Tag printers,
- status lights
- Load generation,
- HVAC & lighting,
- valves, switches,
- pumps...

**Controllers**
- HVAC & Lighting
- controllers, PoS
- Controllers,
- SCADA INGs...

Insights enable Business Process optimization and new business capabilities
The evolving Web platform

Web 1.0 was about connecting computers and making technology more efficient for computers.

Web 2.0 is about connecting people, and making technology efficient for people.

Web 2.0 changes the way in which businesses interact with its customers.

Web 2.0:

- Is about communities and social networks
- Builds contextual relationships and facilitates knowledge sharing
- Is about people and the way they collaborate
- It is not a technology, not an industry, not a standard
Many entities have been labeled as WEB 2.0, all with different functionality, utility, and business impact.

- Social networks
  Technology that allows users to leverage personal connections.

- RSS
  An XML standard that lets users collect and read content feeds.

- Open source software
  Publicly available software that can be copied or modified without payment.

- Blogs
  Online diaries of text, photos, or other media.

- Search engines
  Services that find Web content based on user-specified criteria.

- User review portals
  Web portals that allow users to search for peer reviews on a product or service.

- Linked in
  Facebook
  Orkut
  Myspace
  Friendster

- FeedBurner
  Newsgator
  Pluck

- Apache Software Foundation
  Linux
  My SQL

- P2P file sharing
  Sharing media files over a network powered by users who act as both client and server.

- C2C eCommerce
  Buying and selling among consumers via the Net.

- Comparison shopping sites
  Sites that allow consumers to compare products or services.

- Podcasts
  Online audio or video that users can download to a device.

- Wikis/Collaboration software
  Shared publishing software or site that allows users to edit content.

- Tagging
  Metadata assigned to items like photos or Web pages to facilitate searching and sharing.
Reshaping of Enterprise Software

Web 2.0 requires & enables an architecture of open services that empowers users to **CREATE, COMBINE & COLLABORATE** around content within a rich user **EXPERIENCE**...

...that will require additional resiliency to existing enterprise infrastructure through a robust **Services Oriented Architecture**

The Merging of SOA and Web 2.0
eWeek article by Darryl K. Taft, July 15, 2007
Outside-in Software Development
A Practical Approach to Building Successful Stakeholder-based Products

Forword by Tom Poppendieck

Carl Kessler and John Switzer

http://search.barnesandnoble.com/booksearch/isbnInquiry.asp?z=y&EAN=9780131575516&itm=1
World Community Grid

776,623 Devices
October 21, 2007
www.ibm.com/soa

The Smart SOA Widget
Download it NOW!
ibm.com/soa/widget.html

Save the date!
April 6 – 11, 2008
Las Vegas, Nevada – MGM Grand
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