Business Process Redesign: Taming the Information Explosion

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We live in a complex, volatile world
you are here
digital explosion
2009: 800,000 petabytes
2020: 35 zettabytes
global connections,
global complexity
So What is IT’s Mission?

“IT-led teams have consistently found new ways to streamline enterprise business processes, vastly improving operating efficiency and reducing costs.

Corporate leaders, however, are raising the bar: they expect IT’s core mission to expand from cost-cutting to enabling revenue generation within a short period of time.”

– EIU, December 2006
“According to recent CIO polls from research firm Gartner Inc., 50% of CIOs surveyed said they now have duties outside of core technology, such as helping to craft corporate strategy.”

Wall Street Journal, 20 February 2007
Three Stories

- Secretary of US Agency to CIO: Fix my BlackBerry.
- What is the proper role of the CIO?
- Are we just fixing computers?

- CEO of major computer hardware firm to CIO: CIO means « career is over », didn’t you know?
- Is the CIO part of the team or just overhead?

- CIO of a large Defense IT consulting firm, complaining about CIO-focused events: « why is every discussion about business alignment? »
- Do other departments have trouble aligning?
Observation:

Colgate-Palmolive no longer has an “electricity” department

Google doesn’t have an “IT” department

Are you the electricity department?
IT Knows the Enterprise

• Nobody knows the whole company like the CIO (André Mendes, Special Olympics)

• Precise descriptions of business processes are a prerequisite to understanding those processes.

• We understand business process optimization: streamlining processes, leaning processes, greening processes
IT IS the Enterprise

« Business » should be doing enterprise architecture, but they won’t do it – so we have to do it for them.

John Zachman
Opportunities, Challenges, Expectations – Oh My!

1. Integrated, world-class services
2. Accelerated implementation of the new
3. Expanded roles & responsibilities
4. Global platform
5. Culture change
6. Transform business processes
7. Reduce complexity
8. Increase agility
9. Repeatable, sustainable
Big Trends: Globalization
Big Trends: Connectedness
Big Trends: Digital Value Chains
Big Trends: Continuous Innovation
Big Trends: Continuous Change

"If you don't like change, you're going to like irrelevance even less."

- General Eric Shinseki, Chief of Staff, US Army.
Big Trends: Big Problems

Complexity
The CIO Mission

That Embraces:

Create an Environment for:

And Manages:
The CIO’s Dilemma

Cut Costs ↔ Be More Responsive
Be More Efficient ↔ Customize
Standardize ↔ Be Open
Be Secure ↔ Make Business Agile
Make IT Predictable ↔ Think Strategically
Execute Flawlessly ↔ Business Unit Goals
Enterprise Goals ↔ Build New Capabilities

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“Being highly responsive to our business partners’ and customers’ needs and creating standardized processes and technology platforms can seem like conflicting goals, but doing BOTH is key to maximizing value.”

Stuart McGuigan, CIO, CVS Caremark
57% of executives say innovation and cost reduction are equally important to their company’s ability to achieve future growth.

IT savvy firms are 20% more profitable than their competitors

-MIT Center for Information Systems Research
How does IT matter?
Room for Improvement

85% information is a key strategic asset

36% well positioned to use information for growth

Source: “Unlocking the Value of the Information Economy,” a global survey of 1,375 executives conducted by Harvard Business Review Analytic Services and sponsored by Symantec

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Performance Gap

Please rate how important each of the following information strategies is to your organization’s growth over the next 1–3 years. Please rate how well your organization is currently doing each.

- Leveraging customer information to improve service and increase loyalty: 18% performing very well (8-10), 61% very important task (8-10)
- Leveraging customer information to grow sales with existing customers: 19% performing very well (8-10), 58% very important task (8-10)
- Improving your ability to collaborate effectively within your organization: 21% performing very well (8-10), 55% very important task (8-10)
- Improving your ability to collaborate effectively with your strategic partners and/or...: 20% performing very well (8-10), 53% very important task (8-10)
- Using BI/ analytics to respond quickly to business opportunities: 16% performing very well (8-10), 48% very important task (8-10)
- Building intelligence into your products: 7% performing very well (8-10), 17% very important task (8-10)

Source: “Unlocking the Value of the Information Economy,” a global survey of 1,375 executives conducted by Harvard Business Review Analytic Services and sponsored by Symantec ©2011 Lundberg Media
Closing the Performance Gap

What are the three most important things your organization can do to close the gap from where you are today and where you want to be to make better use of information? (Select up to three)

- Improve our business processes that relate to the flow of information (62%)
- Take better advantage of the technology we already have (48%)
- Align business needs and technology priorities (46%)
- Place a greater organizational priority on closing the gap (42%)
- Improve technology (IT) management capabilities (32%)
- Demonstrate the value of investment in this area (16%)
- Acquire better technology (16%)
- Identify qualified suppliers/vendors (10%)
- Other (2%)

Source: “Unlocking the Value of the Information Economy,” a global survey of 1,375 executives conducted by Harvard Business Review Analytic Services and sponsored by Symantec ©2011 Lundberg Media
Barriers to Leveraging Information

Which of the following are barriers to your organization's ability to use information to grow your business? (Select all that apply)

- Lack of data integration (e.g., data from many different sources, lack of unified view of data)
- Organizational structure (e.g., too many silos)
- Lack of skills
- Technology infrastructure (e.g., old, overly complex, unable to scale)
- Poor data quality, reliability
- Lack of investment in information technology
- The need to comply with regulatory requirements
- Data security requirements (need for secure data hampers ability to share/leverage it)
- Other

Source: “Unlocking the Value of the Information Economy,” a global survey of 1,375 executives conducted by Harvard Business Review Analytic Services and sponsored by Symantec
limited resources
“We can do anything you want; we just can’t do everything you want.”

-Healthcare CIO
IT and business view the world through different lenses, speak different languages
Standards are important:
Example: Great Baltimore Fire
Integration is Hard

Executive decisions, mergers & acquisitions have a way of surprising us...
One Standard?

And the cost of adaptation must be low.

Never let the engineers bring out solution N+1
OMG’s Mission

• Develop an architecture, using appropriate technology, for modeling & distributed application integration, guaranteeing:
  – reusability of components
  – interoperability & portability
  – basis in commercially available software

• Specifications *freely available*

• Implementations exist

• Member-controlled not-for-profit
Who Are OMG?

Adaptive  FICO  Microsoft  OIS
Atego  Firestar Software  MITRE  Oracle
Boeing  Fujitsu  National Archives  PrismTech
BP Trends  HCL  NEC  Real-Time Innov.
CA Technologies  Hewlett Packard  NIST  SAP
Citigroup  Hitachi  No Magic  TCS
Cognizant  HSBC  Nokia  Tether’s End
CSC  IBM  NTT DoCoMo  THALES
EADS  Japan Biological  Northrop Grumman  Unisys
Energistics  Lockheed Martin  OASIS  W3C
OMG’s Focus

• Three key “infrastructure” standards foci:
  – Modeling (including Business Modeling)
  – Middleware
  – Real-time & other specialized systems

• More than 20 “vertical market” foci:
  – Healthcare
  – Financial services
  – Robotics
  – Etc.

• Focused working groups
  – Business Architecture
  – Cloud Computing
OMG & Modeling

- Best known for key standards in modeling languages:
  - UML (broad software & systems)
  - SysML (systems engineering)
  - SoaML (service-oriented architectures)
  - BPMN (business processes)
  - CWM (data warehouses)
  - MOF (modeling languages)
  - UPDM (enterprise architectures)
1. Receive the order
2. If accepted, fill the order
3. Ship it and send the invoice
4. Close out the order
Why is that Important?

• A permanent specification for the business process, whether it’s taking an order or digging ore
• A process specification that can be moved from person to person, unit to unit, company to company and outsourced if necessary
• A process that can be metered, evaluated, tuned and updated (a “learning organization”)
• A process that can be reused within the company, or sold as an outsourced service (think Amazon Web Services) – an opportunity for new revenue
• A process can be redesigned as necessary to meet new needs, adding value throughout the company
NASA’s Inventory Process: BPM in Use
Measuring BPM Maturity: BPMM

- **Level 1: Initial**
  - performed in inconsistent sometimes ad hoc ways

- **Level 2: Managed**
  - stabilizes the work within local work units in a repeatable way

- **Level 3: Standardized**
  - common, standard processes are synthesized

- **Level 4: Predictable**
  - capabilities enabled by standard processes, performance is managed statistically

- **Level 5: Innovating**
  - proactive and opportunistic improvement actions seek innovations; between the organization’s current capability and the capability required to achieve its business objectives
OMG’s Breadth of Standards

• Besides key modeling, distributed computing & realtime/embedded standards, OMG develops standards in

Healthcare	Financial Services	Telecommunications
Government	Military Logistics	Manufacturing
Robotics	Systems Engineering	Military Comms
Smart Grid	Automotive/Consumer Device Safety

…these are shared, industry-specific standard business processes!
Some Examples

• Cloud computing
  – Cofounded cloudstandards.org; focused on portable deployment to support many business models

• Enterprise Architecture
  – DoDAF/MODAF architecture frameworks
  – Languages for interoperability

• Military systems
  – Both communications and C4I command/control

• Civil Government
  – Electronic records management
  – Skills management

• Telecommunications, Robotics, Healthcare, Manufacturing, etc.

• Software Quality
OMG is....

• 23+ years of adopted, implemented, worldwide standards with strong liaisons to ISO and other standards organizations

• Vertical-market focus in government, military comms, healthcare, finance, manufacturing, life sciences, ...

• Community of cloud computing adopters willing to share experiences

• Software quality, model-driven integration, certification, support for training, books...
Standards and BPM

• That’s just two of a dozen standards for mapping, understanding, and redesigning business processes

• The result is measurable, repeatable, transferable, and reusable processes

• The hard part is figuring out the “as-is” and the “to-be” worlds – that’s *process mining*

• But we understanding mining don’t we?
More Steps for Companies

• Recognize the value of understanding, capturing, defining and measuring your processes
• Understand which certifications are critical to your needs re enterprise architecture and BPM
• Consider corporate ability to take advantage of BPM innovation (BPMM maturity model)
• Why are so many Hitachi engineers certified in the OCUP certification?
• What are so many IDS Scheer employees certified with OCEB?
information
simplicity
speed
convergence

BPM is the key to agility
BPM knowledge is the key
Following Up

responsive, sustainable, secure
BPM is the key to agility

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