Business Process Redesign:
Taming the Information Explosion

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We live in a complex, volatile world

you are here

digital explosion

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2009: 800,000 petabytes
2020: 35 zettabytes

global connections,
global complexity

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untethered
empowered

So What is IT's Mission?

What is the most important measure of return on investment in IT at your company today?
(% respondents)

Legend:
- Global
- N. America
- Europe
- Asia-Pacific

Contribution to the revenue growth of the business
- 21
- 20
- 21
- 23

Contribution to the firm's ability to adapt to a changing environment
- 18
- 19
- 19
- 19

Contribution to the firm's ability to innovate and collaborate
- 14
- 12
- 13
- 18

Contribution to the firm's ability to get close to its customers
- 14
- 16
- 15
- 8

Contribution to the firm's ability to control or cut costs
- 10
- 12
- 13
- 1
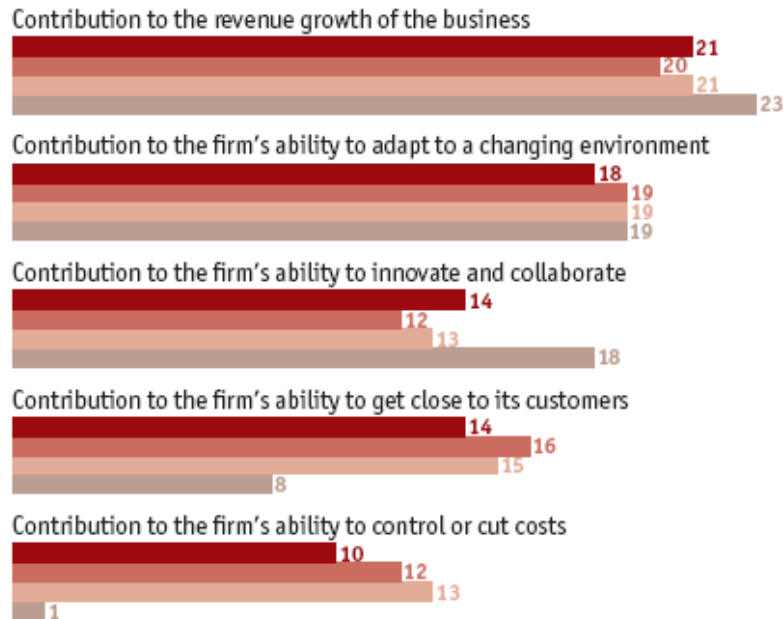
Source: Economist Intelligence Unit, Global Technology Forum survey, December 2006.

"**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
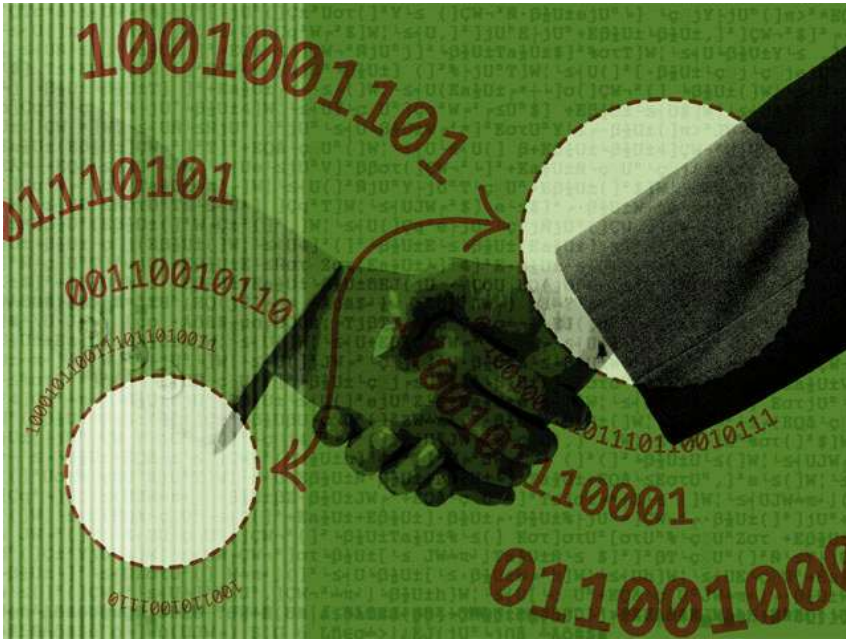
Big Trends: Continuous Innovation

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

Create an Environment for:

 + + +

That Embraces: **And Manages:**

The CIO's Dilemma

Cut Costs ⟷ Build New Capabilities

Be More Efficient ⟷ Be More Responsive

Standardize ⟷ Customize

Be Secure ⟷ Be Open

Make IT Predictable ⟷ Make Business Agile

Execute Flawlessly ⟷ Think Strategically

Enterprise Goals ⟷ Business Unit Goals
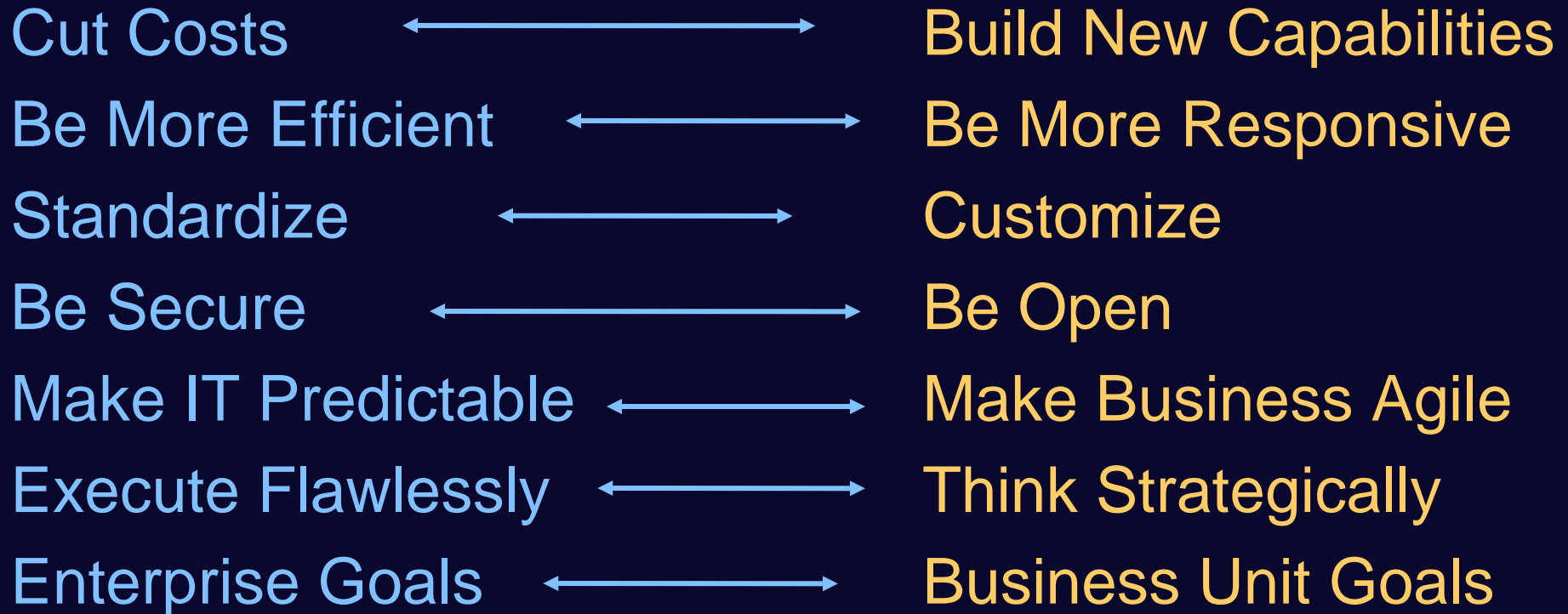
"Being highly responsive to our business partners' and customers' needs and creating standardized processes and technology platforms can seem like conflicting goals, but doing BOTH is key to maximizing value."

Stuart McGuigan, CIO, CVS Caremark

Innovation & Cost Reduction Both Key To Future Growth

57% of executives say innovation and cost reduction are equally important to their company's ability to achieve future growth

Cost Reduction 11%

Innovation 32%

Both 57%

Source: Accenture survey of 630 U.S. and U.K. executives, Nov. 2009
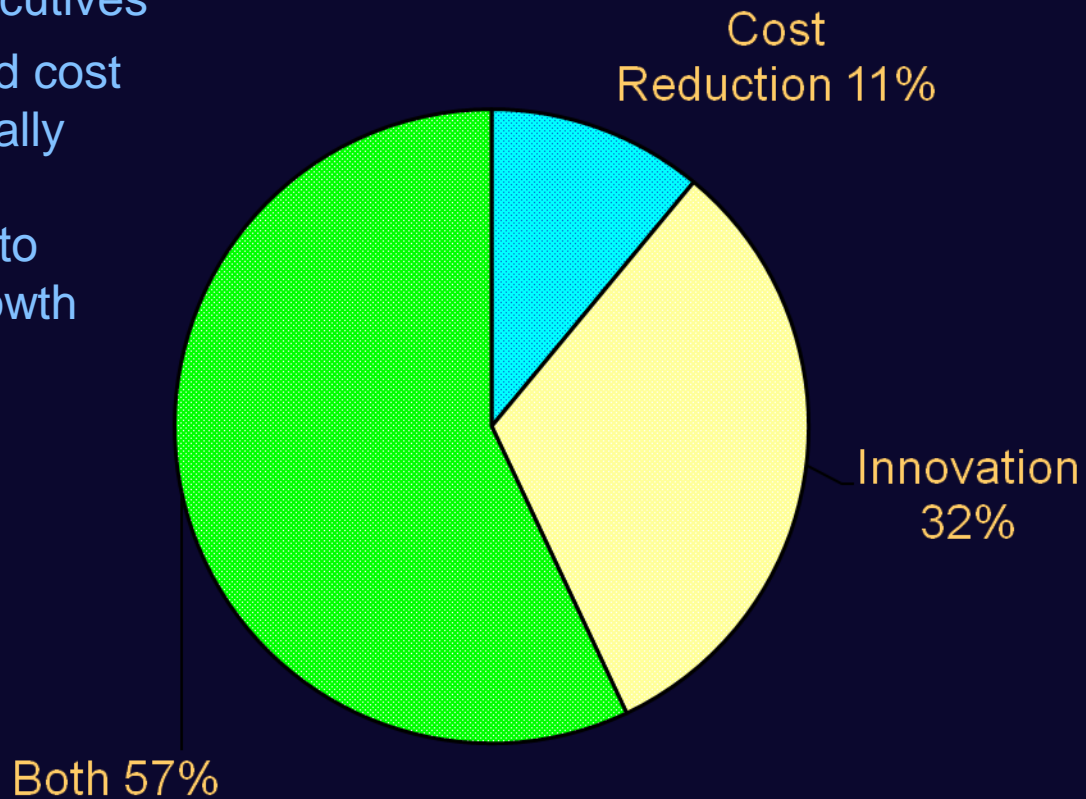
IT savvy firms are 20% more profitable than their competitors

-MIT Center for Information Systems Research

How does IT matter?

information

Room for Improvement

85%

information is a
key strategic asset

36%

well positioned to use
information for growth

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.
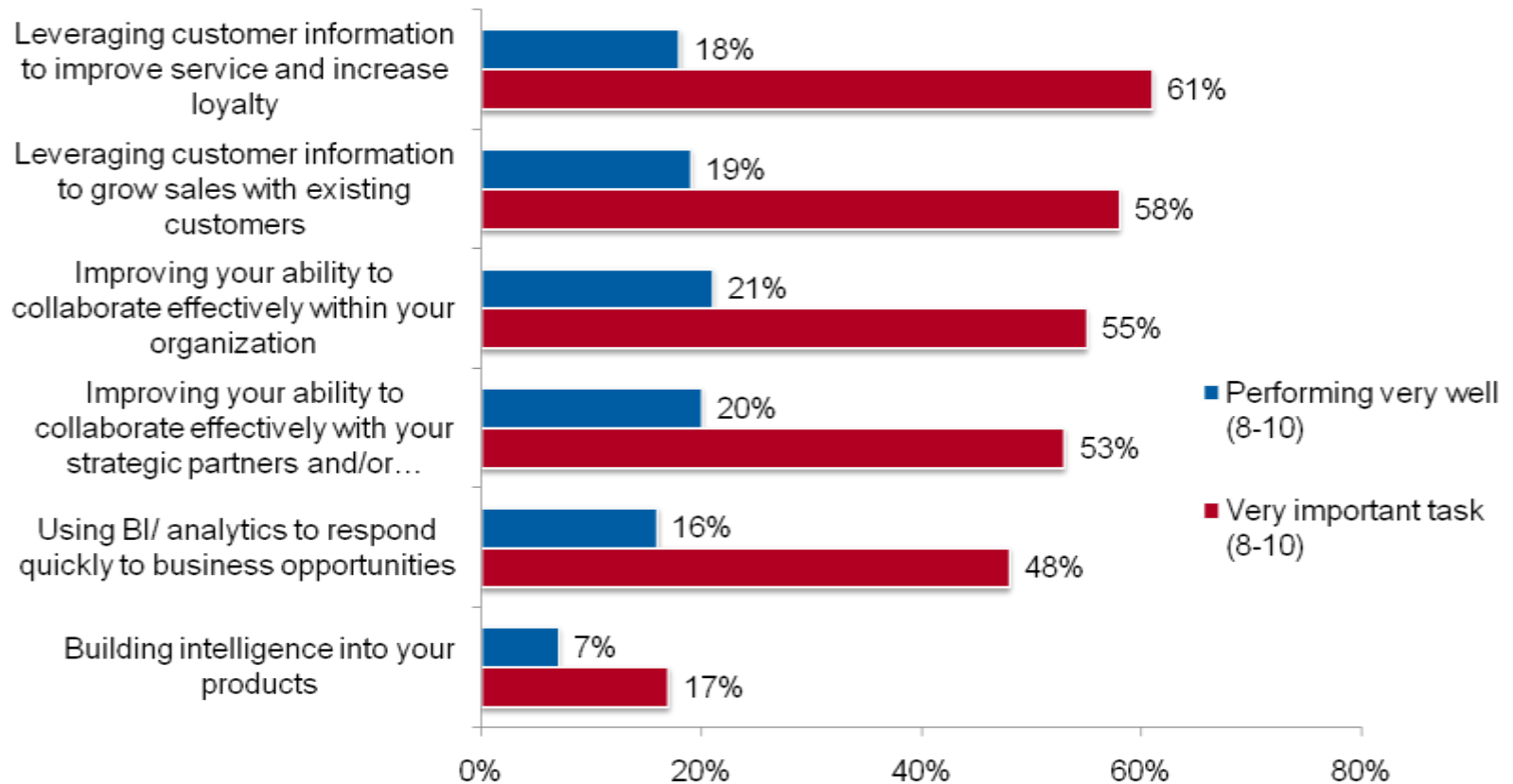
Closing the Performance Gap

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)

Category	Percentage
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%

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)
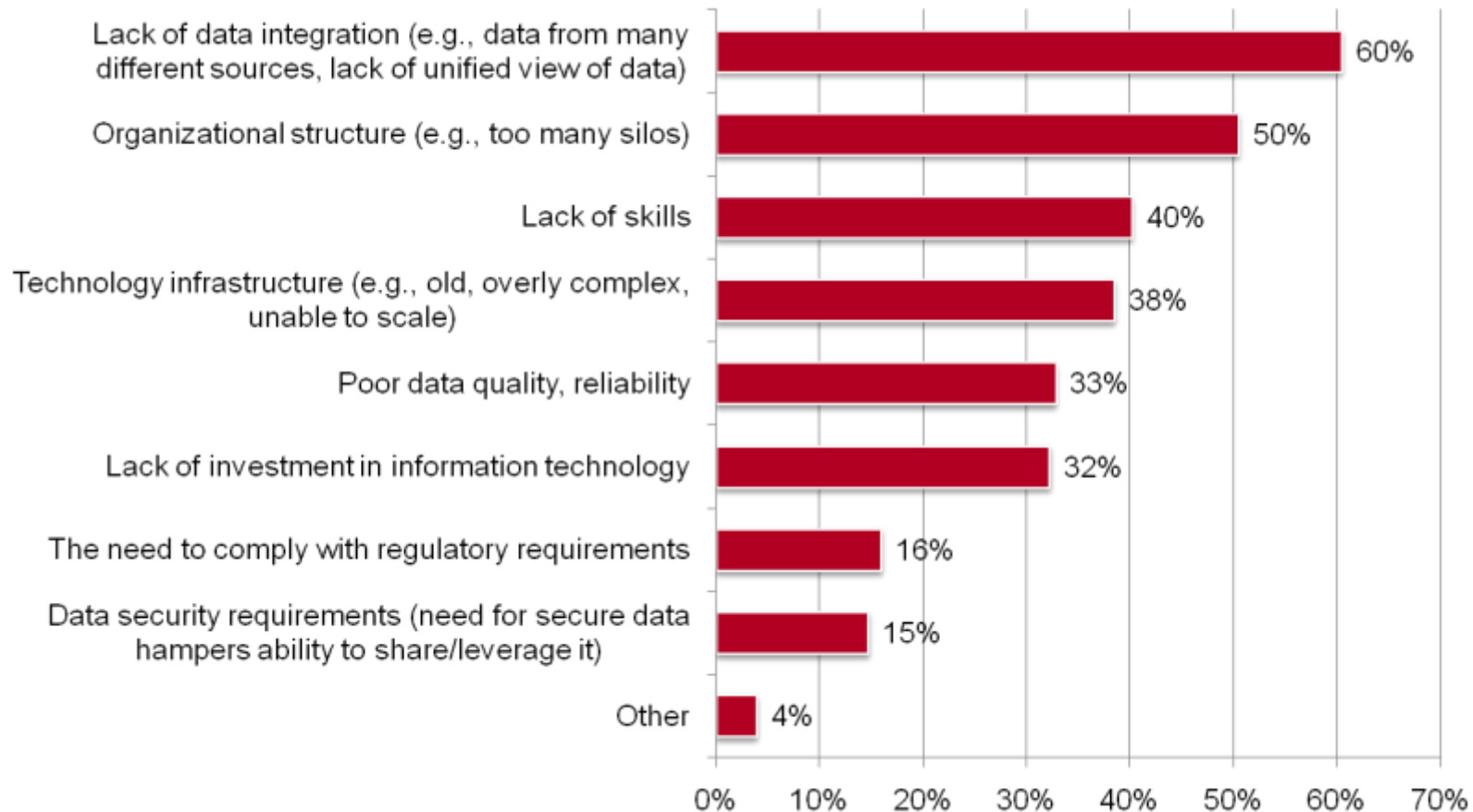
Barrier	Percentage
Lack of data integration (e.g., data from many different sources, lack of unified view of data)	60%
Organizational structure (e.g., too many silos)	50%
Lack of skills	40%
Technology infrastructure (e.g., old, overly complex, unable to scale)	38%
Poor data quality, reliability	33%
Lack of investment in information technology	32%
The need to comply with regulatory requirements	16%
Data security requirements (need for secure data hampers ability to share/leverage it)	15%
Other	4%

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
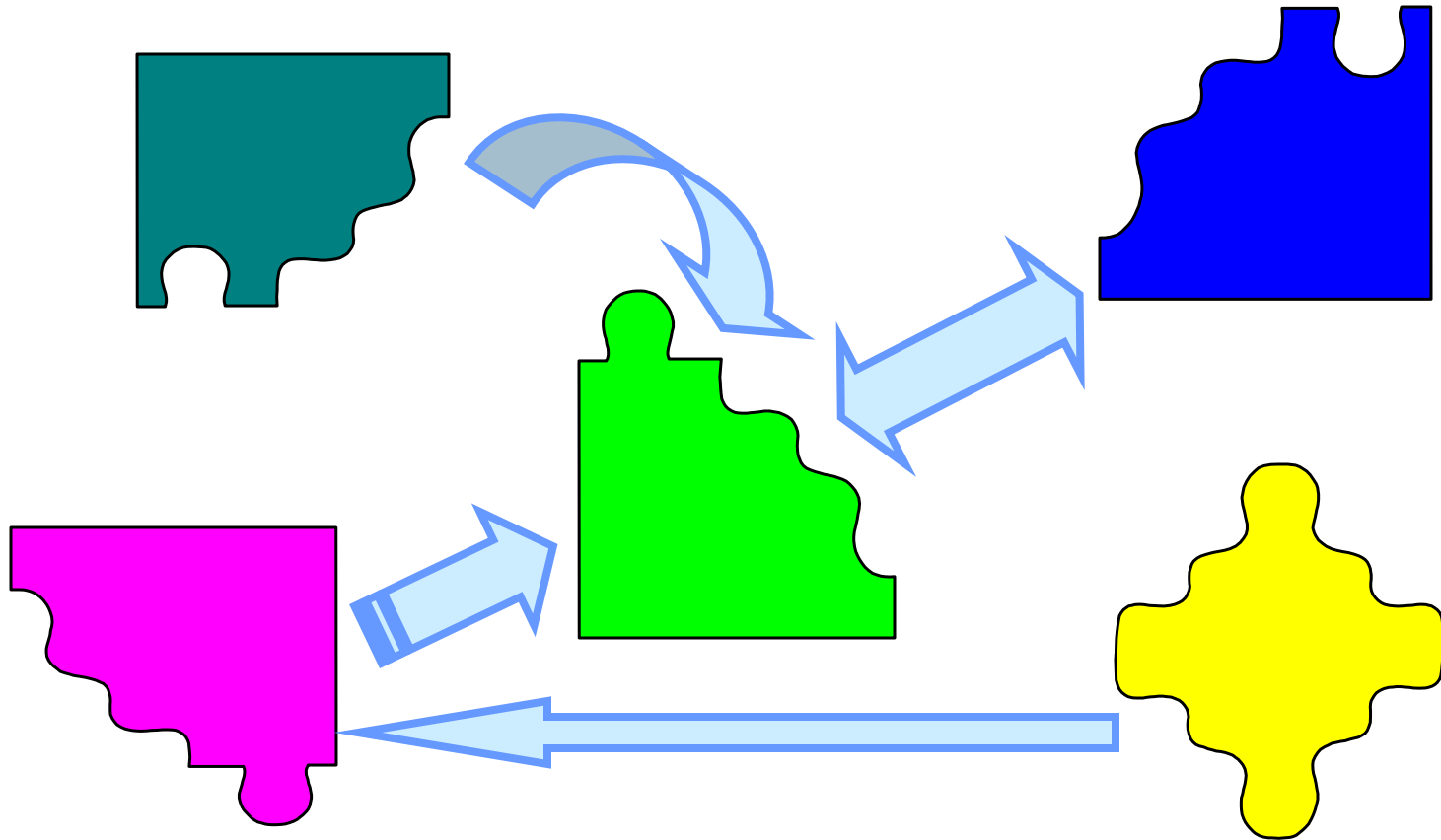
Standards are important:
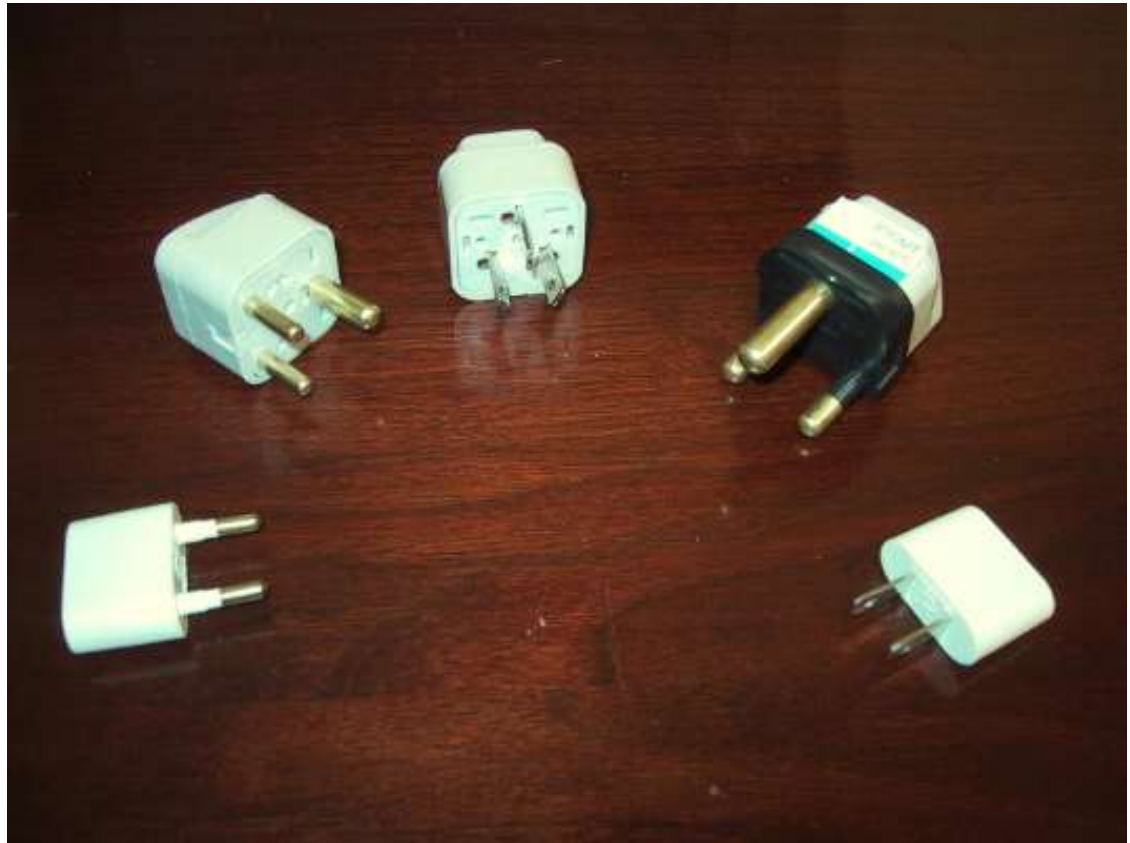
Example: Great Baltimore Fire

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)

Business Modeling Isn't Hard
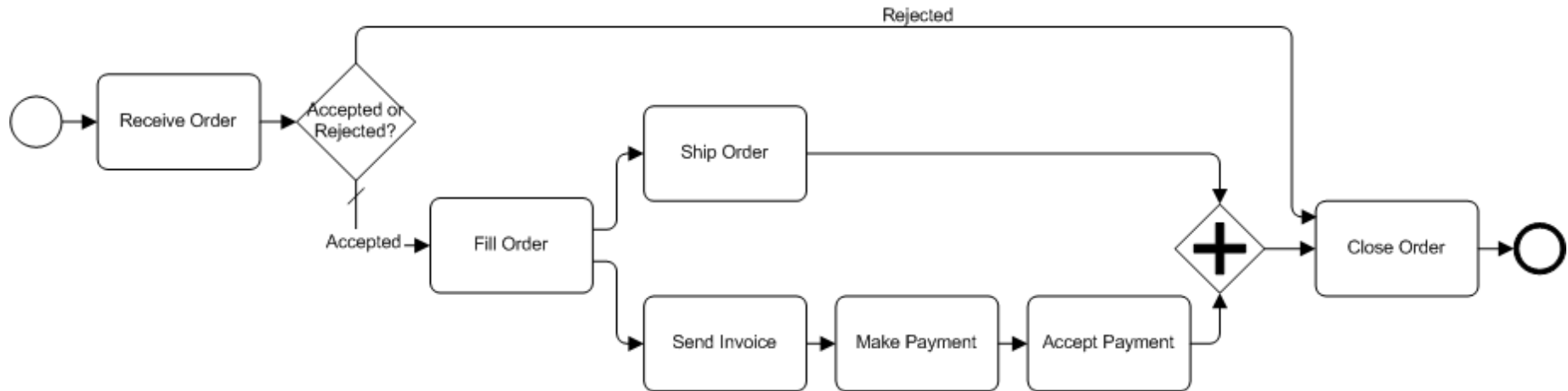
1. Receive the order

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
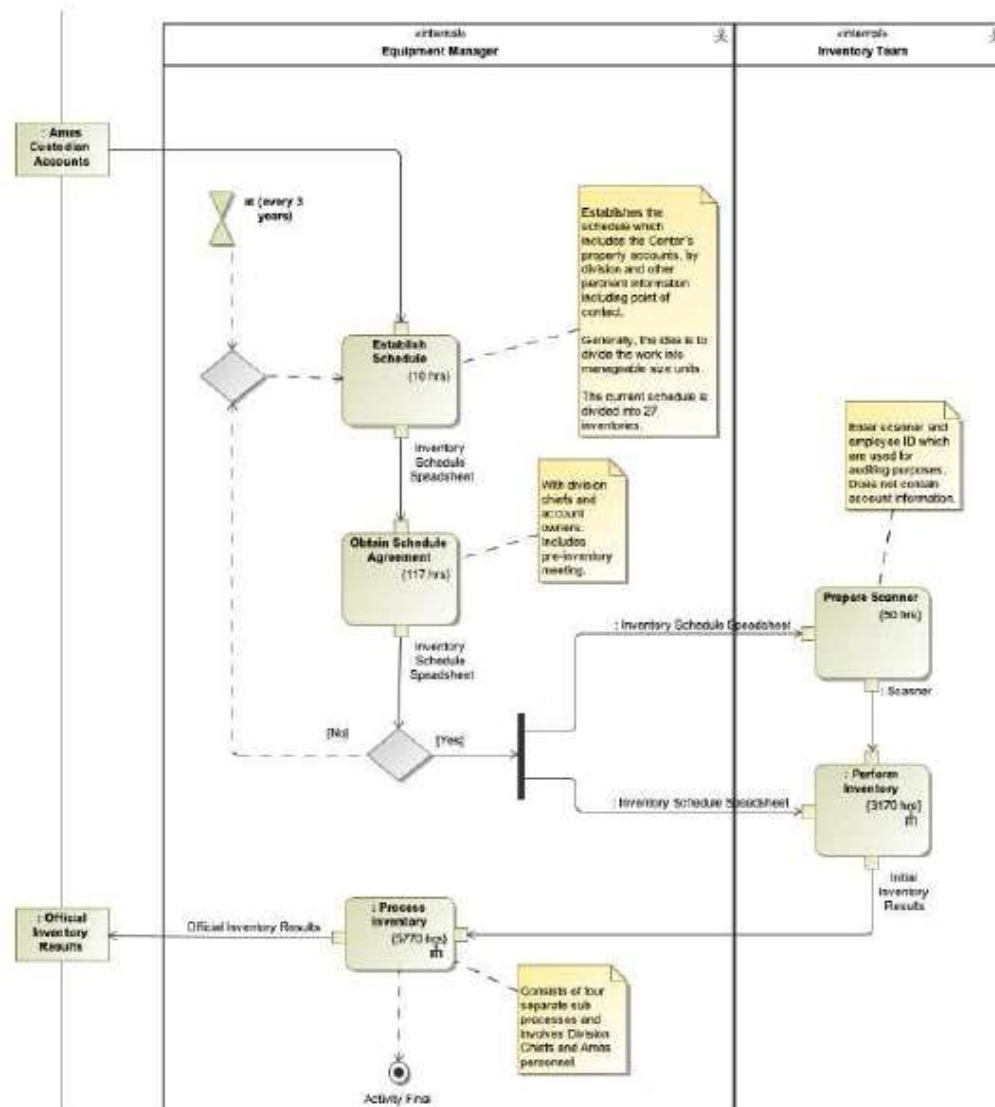
Measuring BPM Maturity: BPMM

- 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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Photo courtesy of NASA Goddard Photo and Video