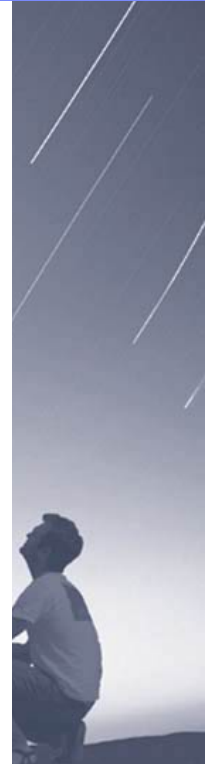# You're a Business Executive – why should you care about Service Oriented Architecture ?

Holly Tiessen

Business Development Executive

hollyt@ca.ibm.com

FEI Regina Chapter April 25, 2007

Agenda

- The need for Innovations and Leaders of Innovation

- The role of Technology to support Innovation

- Evolution of the relationship between Business and IT

   What does Service Oriented Architecture have to do with this?

- Moving forward with SOA as an IT foundation of Innovation

Innovation that Matters To CEOs

Top Innovation Priorities:

- Innovate business models & processes

- Extend the ability to collaborate inside & outside

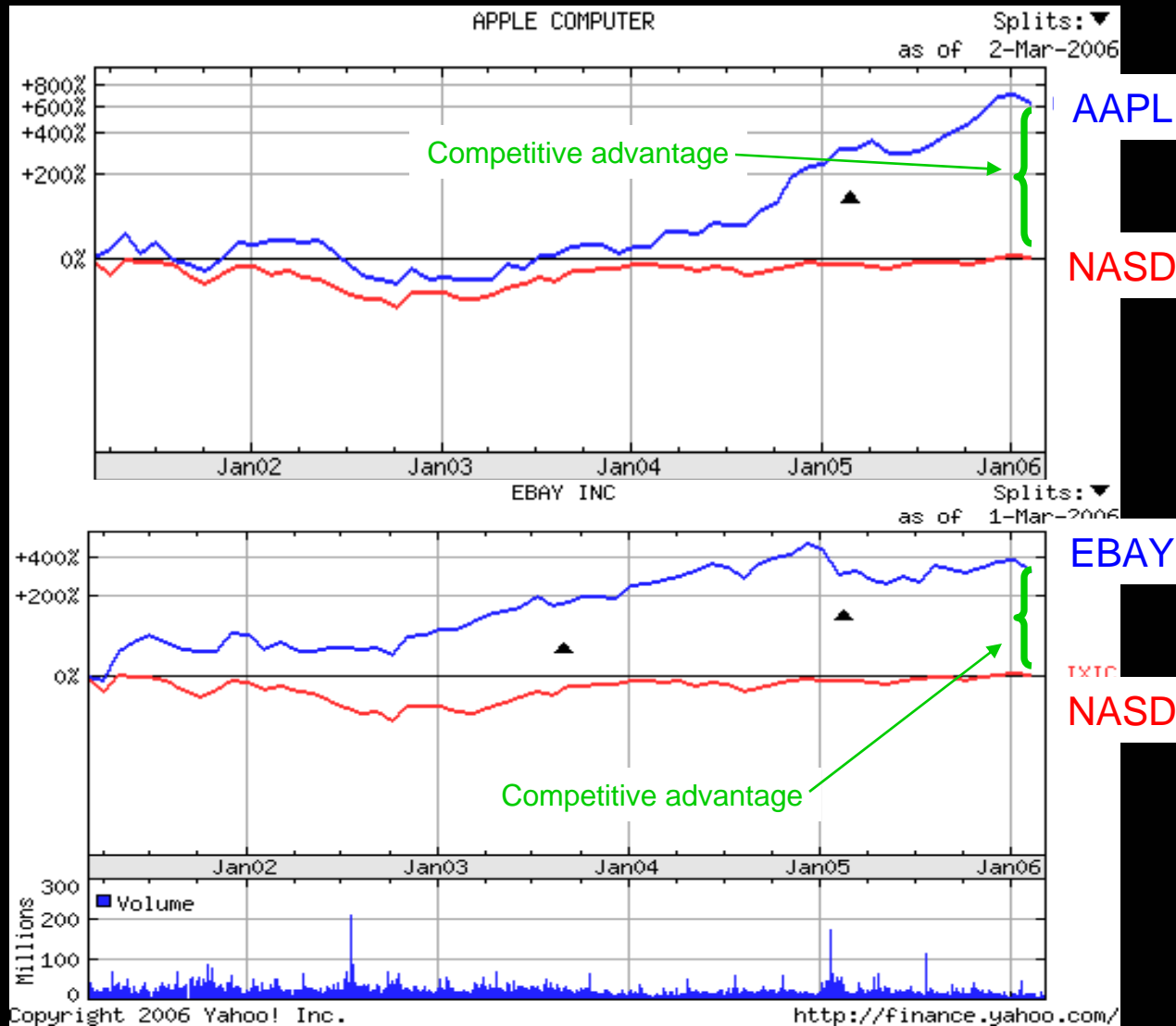- Leverage information for business optimization

*87% of the 968 CEOs surveyed in 2006 believe fundamental **change** is required in next two years to drive innovation*
*78% believe **integrating business and technology** is fundamental for innovation*

IBM Business Consulting Services

Expanding the Innovation Horizon

Global CEO Study 2006

Innovation Requires Business Flexibility

Innovation enables companies to develop a sustained competitive advantage

APPLE COMPUTER Splits: ▼
as of 2-Mar-2006

AAPL

Competitive advantage

NASD

Jan02 Jan03 Jan04 Jan05 Jan06

EBAY INC Splits: ▼
as of 1-Mar-2006

EBAY

NASD

Competitive advantage

Jan02 Jan03 Jan04 Jan05 Jan06

Volume

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Sustained Competitive Advantage

Over the past 5 years, **Apple** and **Ebay** have crushed the market indexes because their **commitment to innovation** created a sustained competitive advantage

Apple has revolutionized both they way we listen to and purchase music by capturing the imagination of consumers

ebay created a self-regulated marketplace by taking the concept of community and capitalism to the extremes

Consequences of Lack of Flexibility Are Huge
JetBlue: The Lessons of Business Agility

"So when the ice storms hit they had no flexibility in their operations; they had no way to respond effectively; they couldn't be agile. They had no Plan B (and winners always have Plan B)."


"In our high change, real time world, **responsiveness trumps efficiency.** *Companies ignore this at their own risk."*

The new mindset for the Agile CFO: *leader of innovation*

Conventional view

The conventional view of the CFO is one as operational and risk-focused:

- Responsive / reactive
- Efficiency and improvement oriented
- Quantitative
- Risk-averse

How does the Agile CFO combine these views?
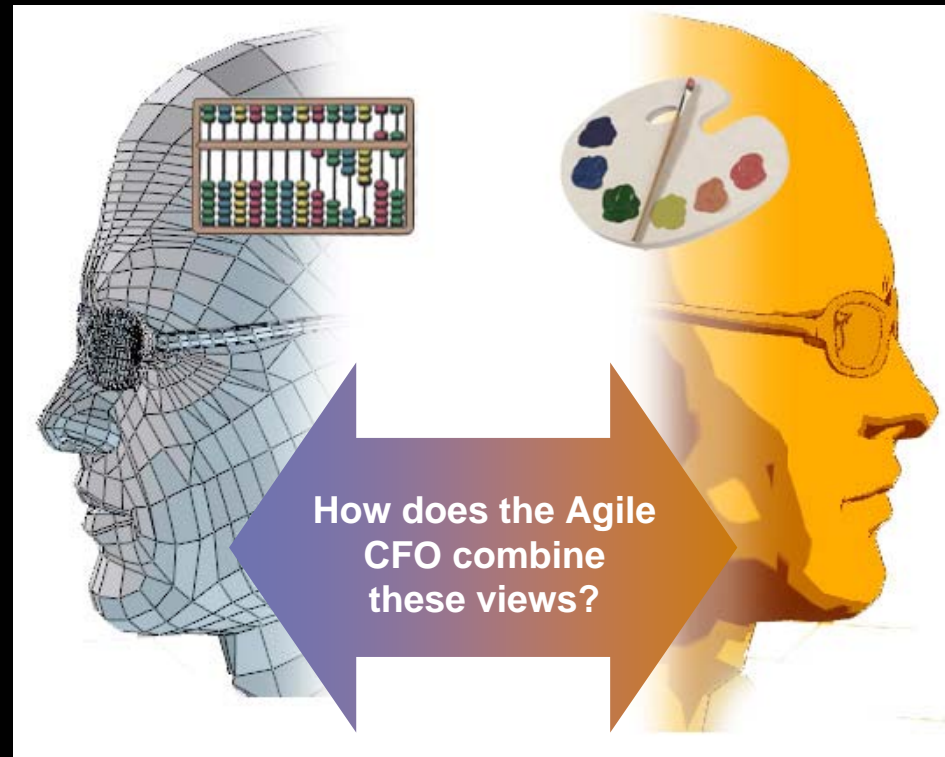
Innovation view

An innovation view requires different, forward-looking skills

- Visionary
- Growth and opportunity focused
- Instinctive
- Risk-taker

The Agile CFO is uniquely positioned to bridge the gap between innovation ideas and making them real operationally

Better suited to understand & adjust operational realities

Better suited to identify opportunities and growth

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Effective CFOs are integrating strategy and technology by standardizing, simplifying and optimizing

Standardizing

Standardizing processes and information definitions drive effective integration and, in turn, innovation
- Drive ownership and mapping of processes
- Create a governance structure to ensure common information standards
- Manage external data sources / suppliers

Simplifying

Simplifying enables technology integration and a single source of truth
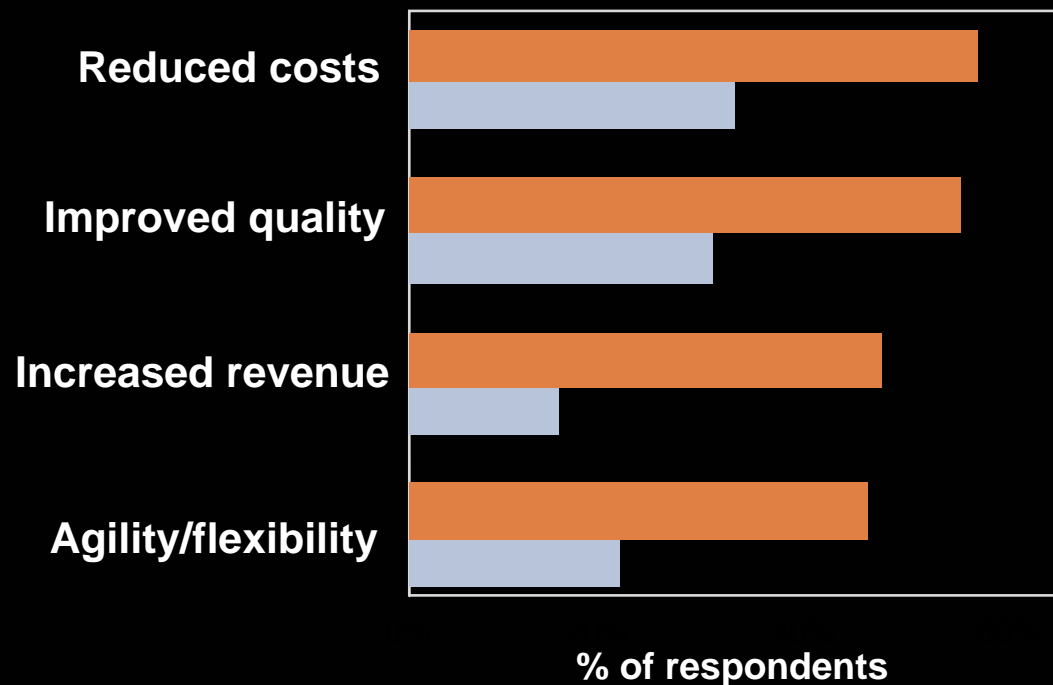- Reduce number of ERP instances
- Rationalize finance budgeting / forecasting tools
- Pursue process simplification
- Increase extent of common processes

Optimizing

Optimizing the delivery model through shared services and/or outsourcing helps to streamline processes and technology as well as make the organization more flexible

Extensive Business & Technology integrators see benefits that drive top line revenue

Top 4 Benefits

Reduced costs

Improved quality

Increased revenue

Agility/flexibility

% of respondents

Extensive Integrators
Limited Integrators

Extensive integrators

- Reported revenue increases 3 times more often than limited integrators

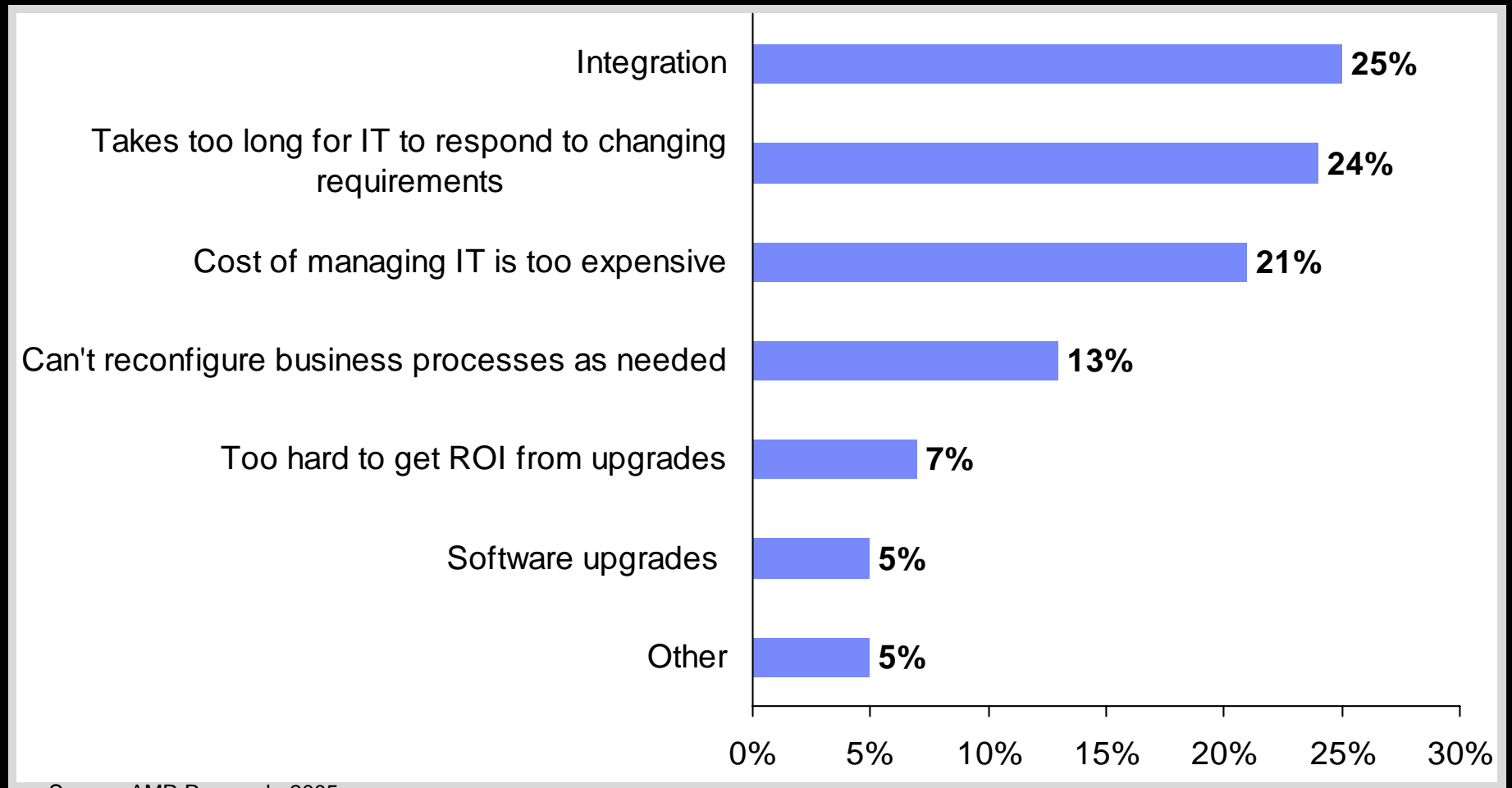- Grew revenue 5% faster than competitive peers

Source: The Global CEO Study 2006, IBM

Business model innovators are 68% more likely to be extensive integrators

But current IT systems are seen as an inhibitor for enabling that change.

Top Challenges in Managing IT

Challenge	Percent
Integration	25%
Takes too long for IT to respond to changing requirements	24%
Cost of managing IT is too expensive	21%
Can't reconfigure business processes as needed	13%
Too hard to get ROI from upgrades	7%
Software upgrades	5%
Other	5%

Source: AMR Research, 2005

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Analysts suggest that Services Oriented Architecture will be a key tool for enabling change and alignment between business and IT

Top Challenges in Managing IT

Integration

Takes too long for IT to respond to changing requirements

Can't configure business processes as needed

Cost of managing IT is too expensive

Too hard to get ROI from upgrades

Top Expected Benefits of Services Oriented Architecture

Faster and more flexible reconfiguration of business processes

Decrease of operational costs of information technology and business processes

SOA is a strategy for designing software that helps eliminate the distinction between business processes and the technologies that enable them.

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SOA Stands for Service Oriented Architecture, But What Does That Mean?

… a service?

A **repeatable business task** – e.g., check customer credit; open new account

… service oriented architecture (SOA)?

An IT **architectural style** that supports integrating your business as linked services
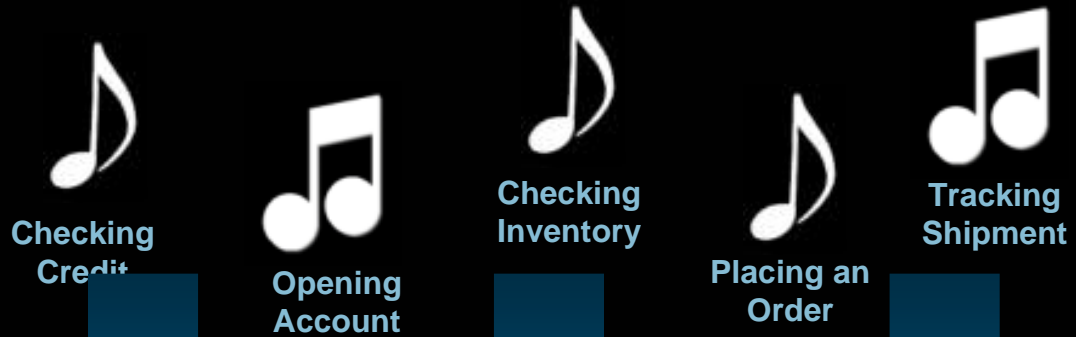
SOA enables…

- Business flexibility
- Reduce cost
- Investment protection

"**Anything that changes can do that much better if the system is architected in SOA.**"

Gene Phifer, Gartner

SOA Is Like Musical Notes

Each musical notes represents a business service

Checking Credit

Opening Account

Checking Inventory

Placing an Order

Tracking Shipment

SOA allows for flexible composition of music

Some simple examples how SOA concepts can be used across all industries, for many different types of business activities

Travel Reservations

Business Situation

A customer is traveling to another city on business and uses your website to book his/her travel itinerary which includes Airline, Hotel, and Car Rental. The web reservation system directly accesses the travel providers system.

Services Used

- Check availability (of flight, hotel, and car)
- Check rates
- **Create reservation**
- Change reservation
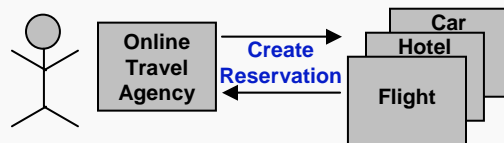
Order Status of online purchases

Business Situation

You are an online retailer and a customer has placed an order and now wants to check the order and shipping status. You can connect to UPS and present the shopper with the order shipping status directly from UPS, without them leave your website.

Services Used

- Check order status
- **Check shipping status** (with shipping partner)
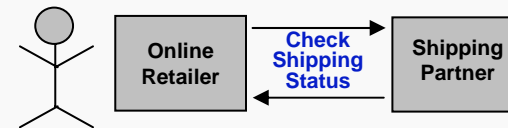
Warehouse & Distribution

Business Situation

You run a distributorship for groceries. Your systems keep track of your inventory, and are set up such that when the supply of a particular good is low, your system automatically sends a request to the manufacturer's system for a new order and delivery.

Services Used

- Check inventory levels
- **Place order**
- Track order
- Track shipping
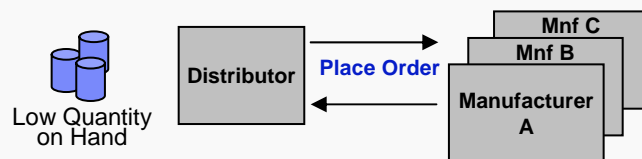
Healthcare e-Prescription

Business Situation

A customer drops off a new prescription at their local pharmacy. The pharmacy keeps a history of medications being taken by this customer. The pharmacy system is able to check how the new prescription interacts with other medications taken before the Pharmacist reviews the prescription.

Services Used

- Enter new prescription
- Review existing prescriptions
- Check for drug interaction
- Display drug interactions
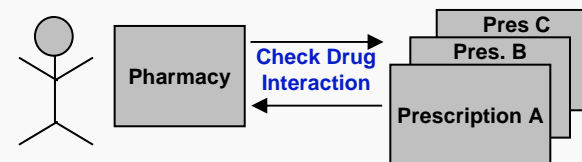
Flexible Business Requires Flexible IT
Customer Perspective: Delaware Electric Co.

The Business Challenge

- **Deregulation** – "It's not your father's monopoly anymore"
- **Finite resources** – Increase electric supply services without increasing costs

Gary D. Cripps
CFO & VP, Finance and IT, Delaware Electric Cooperative, Inc.,

The Response

- Align business and IT objectives – make IT strategic to the business
- Leverage past IT investments
- Turn IT into an enabler

Process Optimization for Financial Management

Financial Management
SOX Compliance

Objectives:

- Enable best of breed account opening process that will be shared across multiple product lines

Actions:

- Shared SOA-enabled process across organization
- Aligned Business and IT on new process models
  - Developed a new differentiated capability for creating an account
  - Move to simpler, faster, secure digital account creation

Results:

85% reduction in transaction time required for customers
30% reduction in cost and time to deliver new business

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One Step Ahead in the World of Style

s.Oliver

Objective:

- Continually update and change fashion lines
- 12 collections annually

Product Lifecycle Management
Garment design and manufacturing
**Supply Chain**
Sales and Distribution

Actions:

- Created a **single interface** for employees and Business Partners

- Created flexible, **re-usable services** for existing Applications

- **Orchestrated and Automated processes** across the organization

Results:

Reduced the time, risk and cost of integration
Quickly release new fashion collections – staying ahead of competition
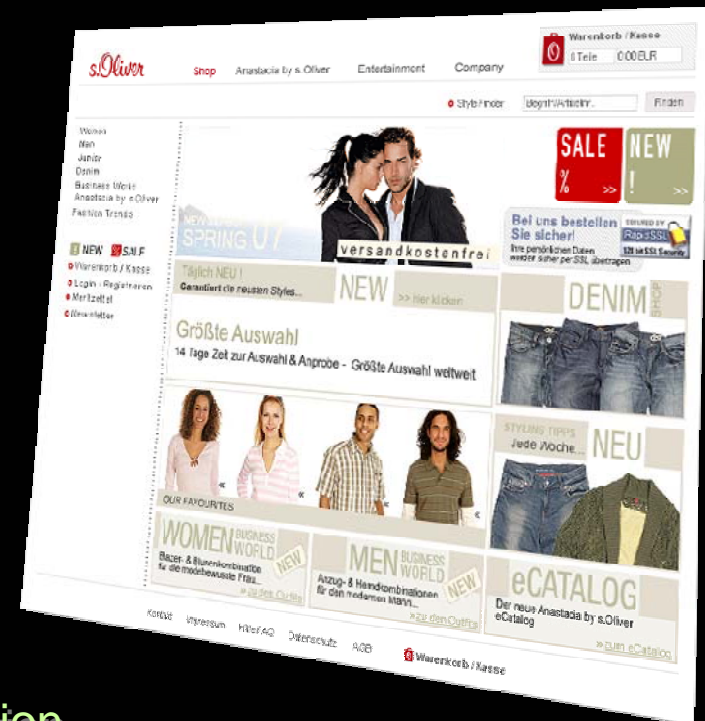
Growing Partners Fast and Flexibly

Goal: Grow revenue though new business

Offering

Objective: offer new food product line by
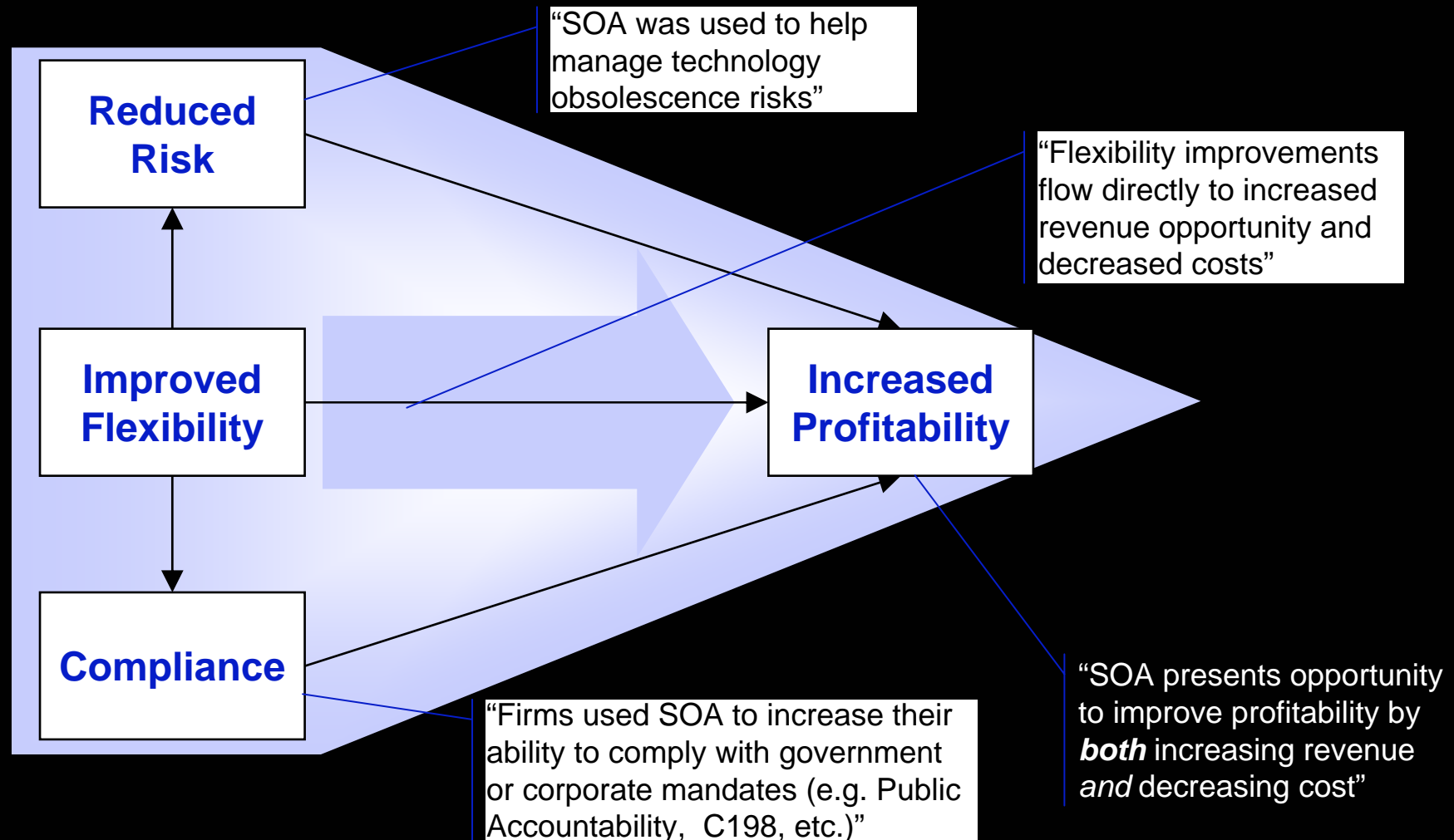
January 1, to meet new resolution rush

Challenge: to avoid high levels of spoilage, all addresses needed to be verified.

Solution: link internal business process to a "commodity" service offered for address verification by StrikeIron.com.

Result: Met deadline and increased revenues and minimized spoilage costs.

SOA implementations generate mutually reinforcing benefits that enhance and complement each other

"SOA was used to help manage technology obsolescence risks"

Reduced Risk

"Flexibility improvements flow directly to increased revenue opportunity and decreased costs"

Improved Flexibility

Increased Profitability

Compliance

"Firms used SOA to increase their ability to comply with government or corporate mandates (e.g. Public Accountability, C198, etc.)"

"SOA presents opportunity to improve profitability by *both* increasing revenue *and* decreasing cost"

SOA Enables Business Flexibility and Agility

IBM Institute for Business Value studied a subset of engagements and found:

97% justified SOA projects based on cost savings & impact to profitability

97%

100%
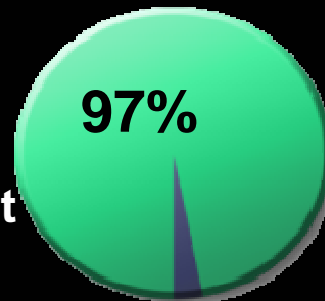
100% realized improved flexibility

71% reduced risk

71%

51%
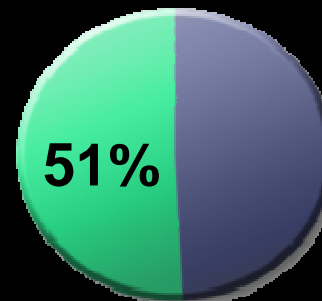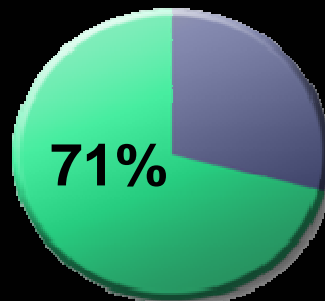
51% experienced increased revenue

Source: IBM IBV Study

"Over 50% of [surveyed] companies indicated that SOA has a positive impact on their business agility."

– Roy Schulte, Gartner Research

Source: IBM Institute for Business Value "The Business Value of Service-Oriented Architecture" 2006

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The projects were driven by business reasons, not technology implementation preferences

Observed Business Pain Points Leading to SOA Projects

Demand for Collaboration	▪ Need to share information and services with partners, suppliers, distributors, and clients
Competitive Pressures	▪ Competitors adopting faster, more flexible solutions ▪ Enabling deployment of products and services ▪ Improving customer service
Mandates	▪ Compliance with government or company mandates
Supplier/Distributor Demand	▪ Demand for improved connectivity ▪ Move away from proprietary, point-to-point solutions
Enter New Markets	▪ Use exposed services to create new lines of business
Need for Technology Change	▪ Obsolete/legacy systems ▪ Insufficient capacity/low reliability ▪ Rigid systems that were difficult to change

Not implementing SOA solutions for their own sake

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Understand what your business looks like
IBM Component Business Model™

Example: consumer packaged goods

	Product management	Customer relationship	Manufacturing	Supply chain & distribution	Business administration
Strategy	Category/Brand Strategy Category/Brand Planning	Customer Relationship Strategy Customer Relationship Planning	Manufacturing Strategy Supplier Relationship Management Production and Materials Planning	Supply Chain Strategy Supply Chain Planning	Corporate Strategy Corporate Planning Alliance Management Line of Business Planning
Tactics	Brand P&L Management Matching Supply and Demand Marketing Development and Effectiveness Product Ideation	Assessing Customer Satisfaction Customer Insights Account Management	Manufacturing Oversight Supplier Control	Distribution Oversight Inbound Logistics / Outbound Logistics	Business Performance Management External Market Analysis Organization and Process Design Legal and Regulatory Compliance
Execution	Concept/Product Testing Product Development Product Management Marketing Execution Consumer Service Product Directory	Value-Added Services Customer Account Servicing Retail Marketing Execution In-store Inventory Management Customer Directory	Make Products Assemble/Package Products Plant Inventory Management Manufacturing Procurement	Distribution Center Operations Transportation Resources En-route Inventory Management	Treasury and Risk Management Accounting and GL Indirect Procurement Facilities and Equipment Management HR Administration IT Systems and Operations

You can *buy into* SOA, as many software firms have adopted SOA and plan to deliver exposable services with their products
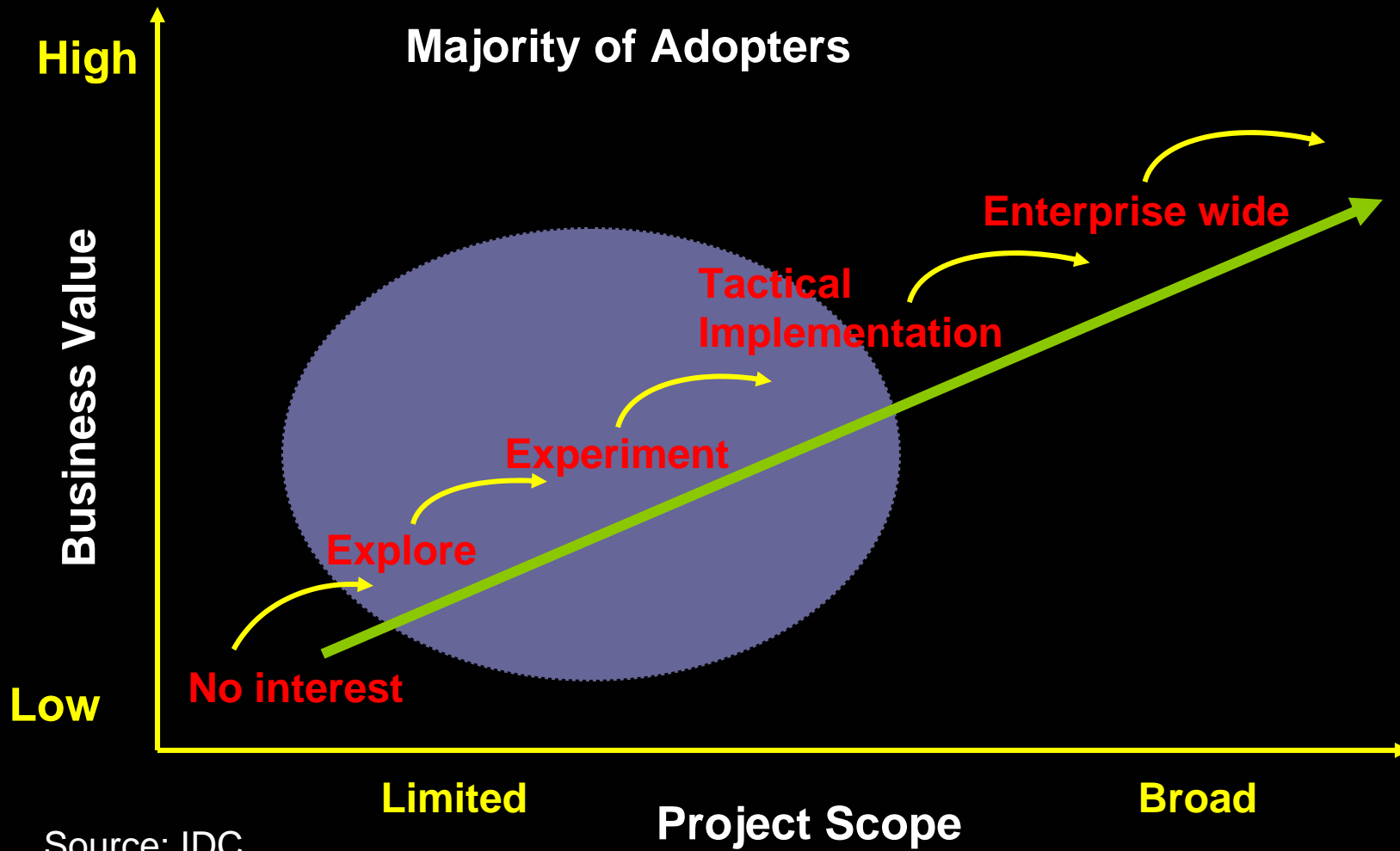
- Users of these solutions can choose how to adopt SOA using services provided by the package

Key software providers with published support for SOA:

- In time, composite business services will be available independent of large packaged software
  - For example, on a subscription or per-use basis

SOA adoption is a long journey:
Business and IT need to support the journey

High

Majority of Adopters

Business Value

Enterprise wide

Tactical Implementation

Experiment

Explore

No interest

Low

Limited   **Broad**

Project Scope

Source: IDC

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The Agile CFO can help determine the innovation portfolio

Best practice companies allocate funds to the innovation development in the following areas:

- ✓ New technology search and evaluation

- ✓ Competitive intelligence gathering and evaluation

- ✓ Breakthrough technology

- ✓ Customer/consumer research

- ✓ Enabling technology (software and hardware)

- ✓ Training, development and education

- ✓ Process improvements

- ✓ Existing product/service extension

- ✓ Ideation

Next Steps

- **Attend IMPACT – LOB & BPM Tracks,   May 20-25**
  - *Overall 100 clients speaking*
  - *Speak to peers*
  - *Technical, IT Executive, and Business Leader Tracks*
  - *http://www-306.ibm.com/software/websphere/events/impact2007/overview.html*

- **Take the SOA Assessment:**
  - *SOA Readiness Assessment on-line*
  - *http://www-306.ibm.com/software/solutions/soa/soaassessment/index.html*

- **Sponsor a SOA Workshop:**
  - *Customized SOA Roadmap Workshop*

Consensus is…*SOA Enables Change Leading to Innovation*

"**Today's** IT architectures**, arcane as they may be, are the biggest roadblocks most companies face when making strategic moves.**"

"*McKinsey "Flexible IT, Better Strategy*"

"*SOA is the **heart of the next wave of innovation**. The leaders that do this well are able to **rapidly change** …*"

SOA is critical for … executing the on-demand vision and in preparing … for the incremental changes … over time. Companies … make better decisions."

Other

- Service-oriented architecture: A practical guide to measuring return on that investment
  - *A measurement approach to add simplicity, sense and speed to the process*
  - *http://www-03.ibm.com/industries/financialservices/doc/content/resource/thought/2071100103.html*

- Short videos
  - *SOA is like building blocks http://www.youtube.com/watch?v=sbd_1G8Kqjs*
  - *SOA is like musical notes http://www.youtube.com/watch?v=zV860odGN5Y*

Holly Tiessen

905-316-4847

hollyt@ca.ibm.com

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