



| IBM SOA

The Smart SOA Approach to Driving Business Value in Financial Markets

Sandy Carter
Vice President, SOA & WebSphere
Strategy, Channels & Marketing
IBM Corporation

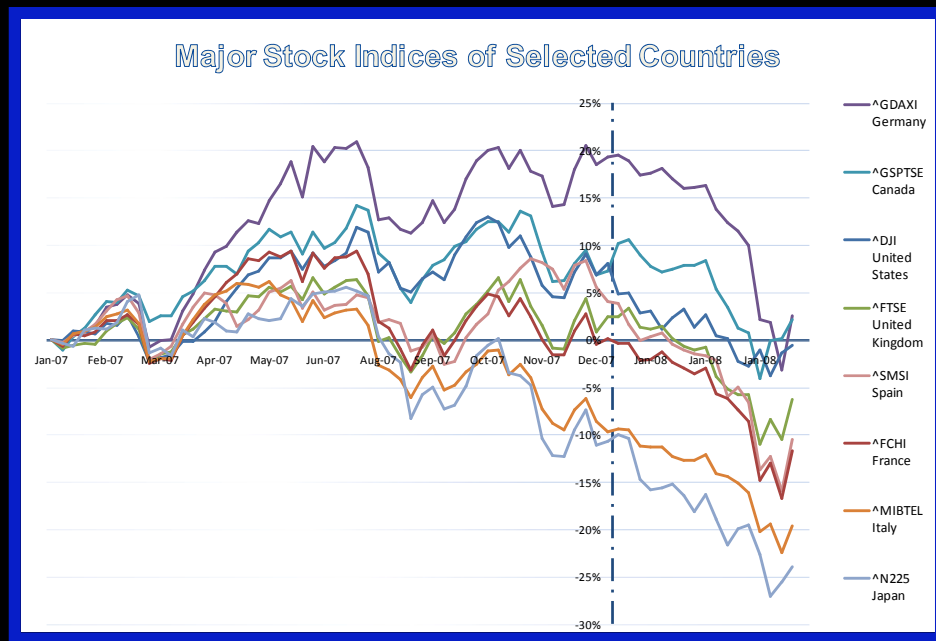


Today's dynamic times require business growth

- Oil at \$100 a barrel



- More volatile and interconnected Global exchanges



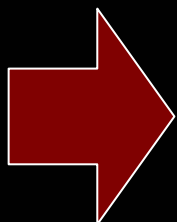
Innovation that Matters To CEOs

Top Innovation Priorities:

- **Extend the ability to collaborate inside and outside**
- **New innovative business models and processes**
- **Leverage information for business optimization**



Source: 2006 IBM Global CEO Survey



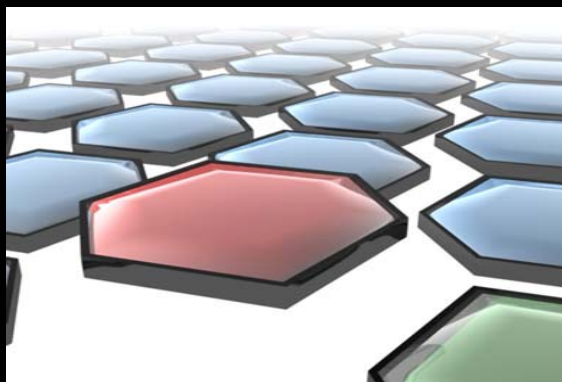
87% Expect fundamental change in next 2 years

78% Believe innovation requires greater business and technology alignment

What is SOA?

... 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

Innovation requires change. SOA makes change easier

SOA means different things to different users or domains

Service Oriented Architecture: Overview

- a **set of services** that a business wants to expose to their customers and partners, or other portions of the organization

Business

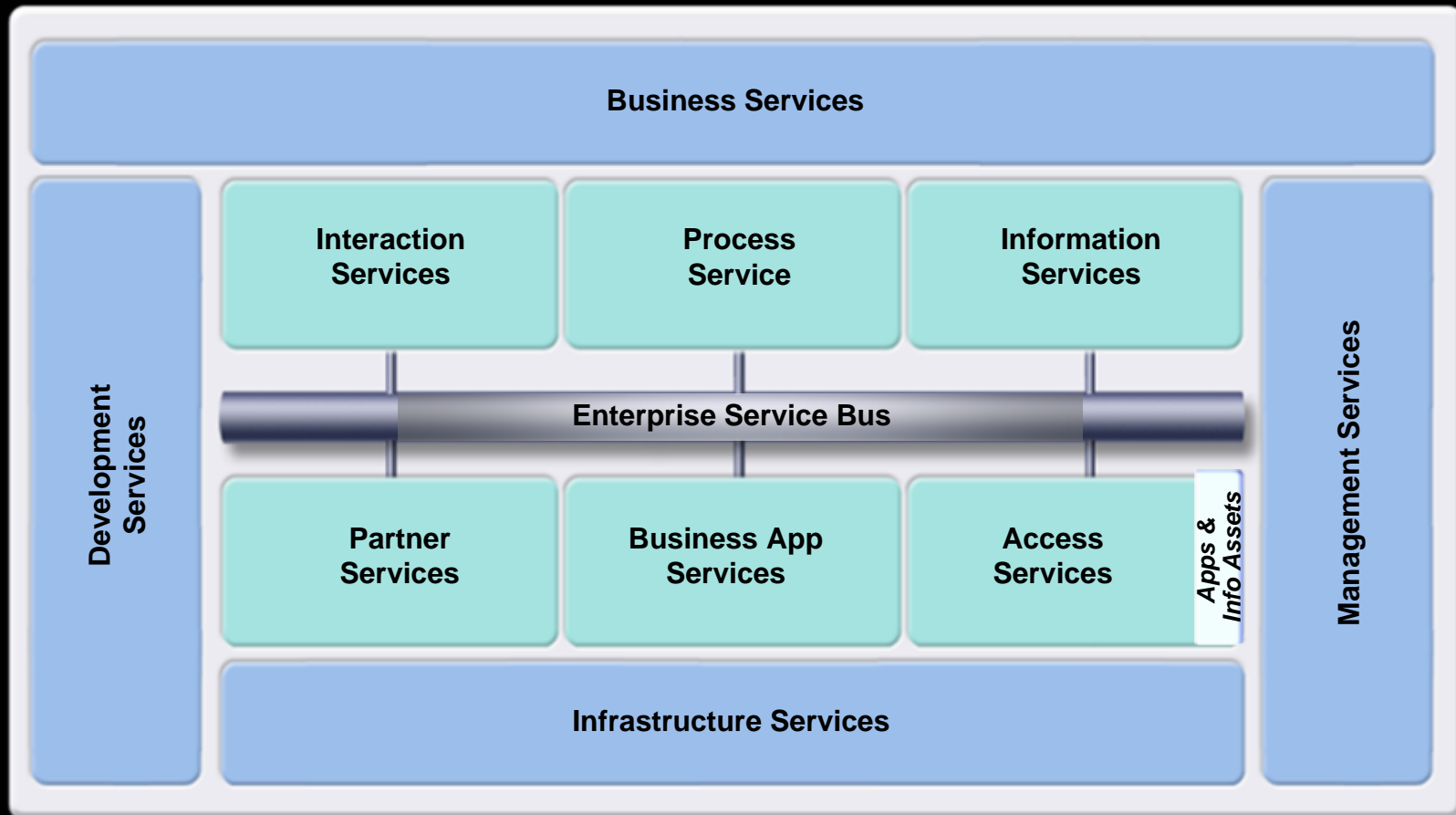
- an **architectural style** which requires a service provider, requestor and a service description
- a **set of architectural principles, patterns** and criteria which address characteristics such as *modularity, encapsulation, loose coupling, separation of concerns, reuse, composability and single implementation*

Architecture

- a **programming model** complete with standards, tools and technologies such as Web Services

Implementation

SOA Reference Architecture



Adapting fast is not enough. Change needs to demonstrate value at lower cost.

Three change imperatives

– Incremental:

IT preserves and extends existing systems based on business priorities

– Business Led:

The business decides the actions, IT dynamically adapts (Policy based)

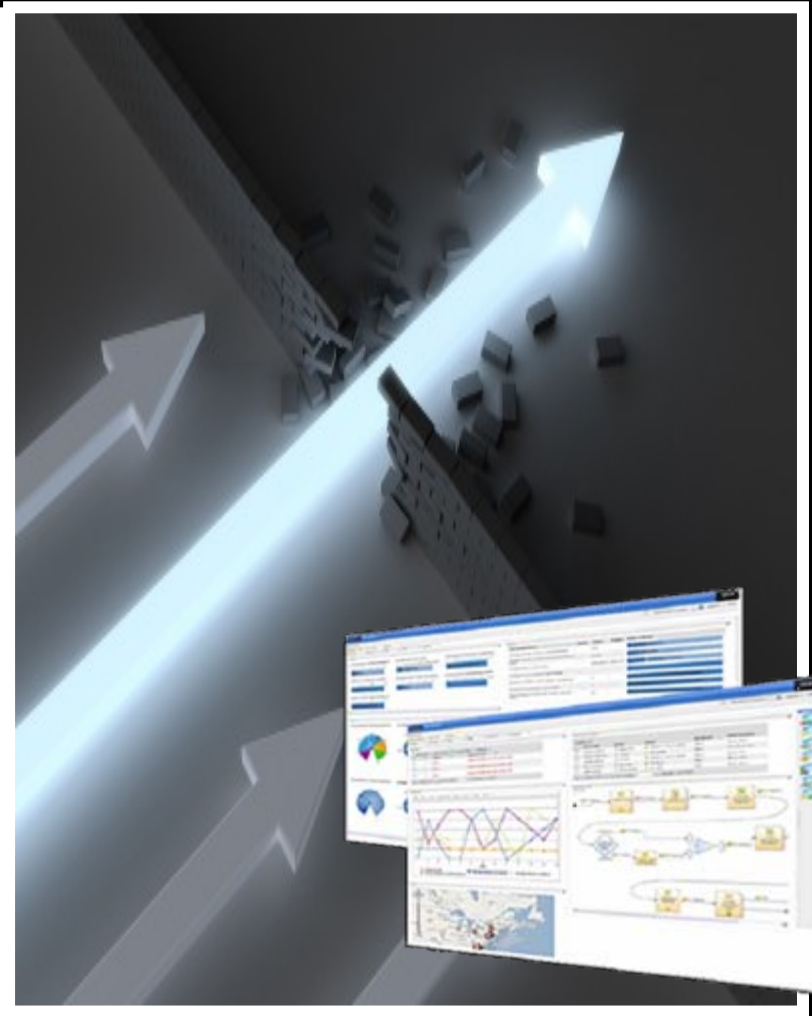
– Collaborative:

Business Leaders and IT create, adapt and optimize strategies, process, KPIs, etc.



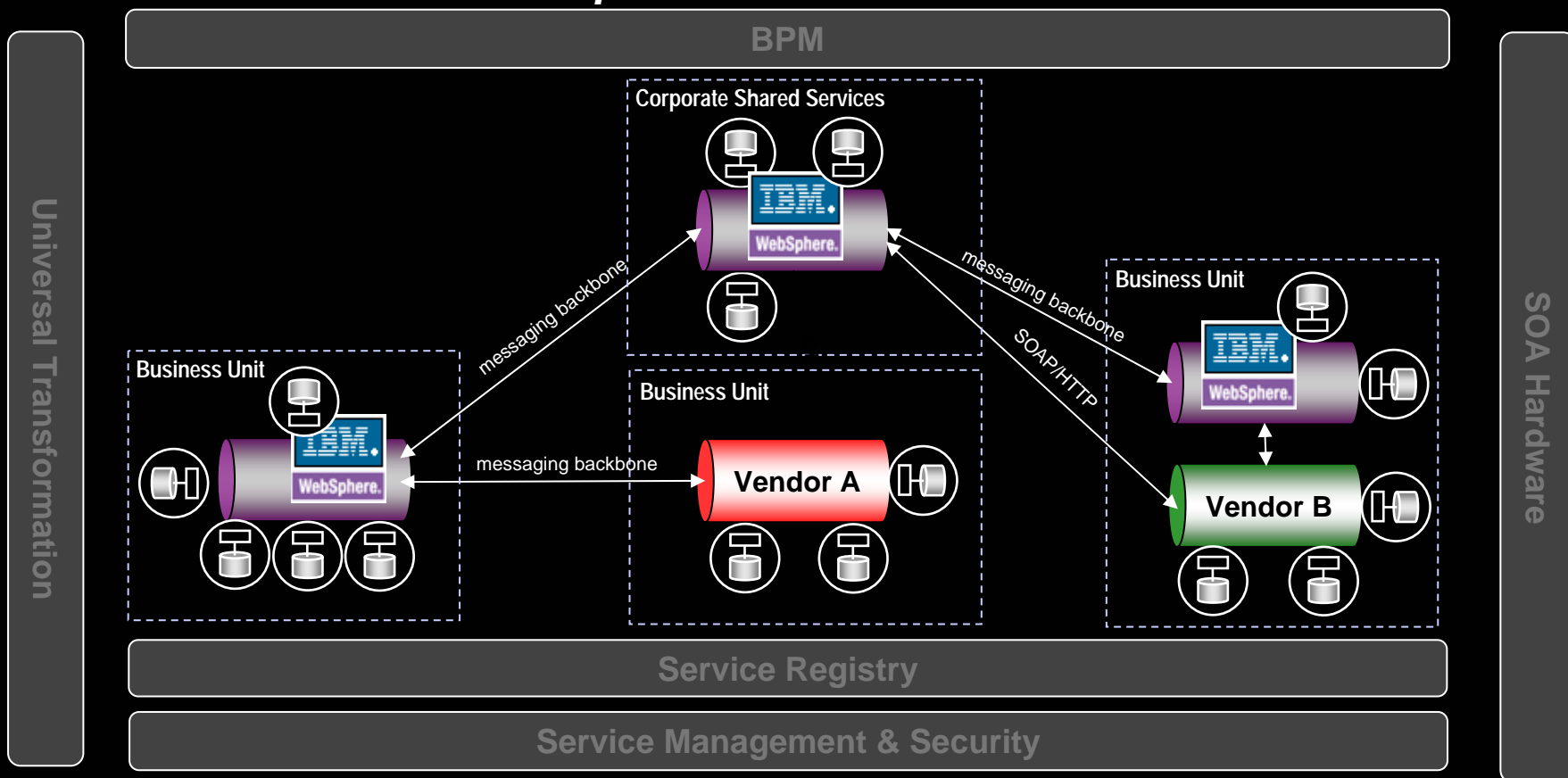
Change Imperative: Incremental

- Incremental WITH existing back-office applications
 - Service-enable *pieces* of an existing system based on business priorities
 - Enhance integration with a federated enterprise service bus
-
- WebSphere for z/OS
 - IBM SOA Configuration for Leveraging Legacy and Packaged Applications
 - WebSphere Enterprise Service Bus



Advanced ESB Deployments – Federated ESB Topologies

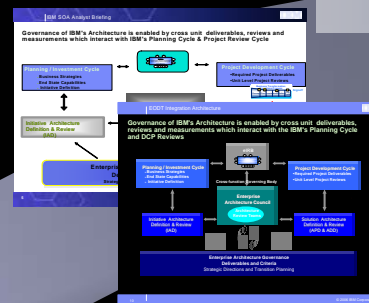
- **A single enterprise-wide ESB is rarely attainable – most businesses will have multiple ESBs across business units**



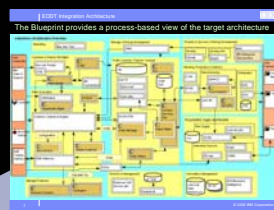
- **As business processes span organizational boundaries, businesses will need to enable integration across ESBs, which requires an SOA competency center with strong governance practices and support capabilities**

Evolution of SOA within IBM

2007
Business Unit Integration
and
New Technologies



2006
Enterprise Governance



2005
Opportunity Projects
and
Enterprise Architecture



2002 - 2004
Early Projects

1990's - 2001
Exploratory

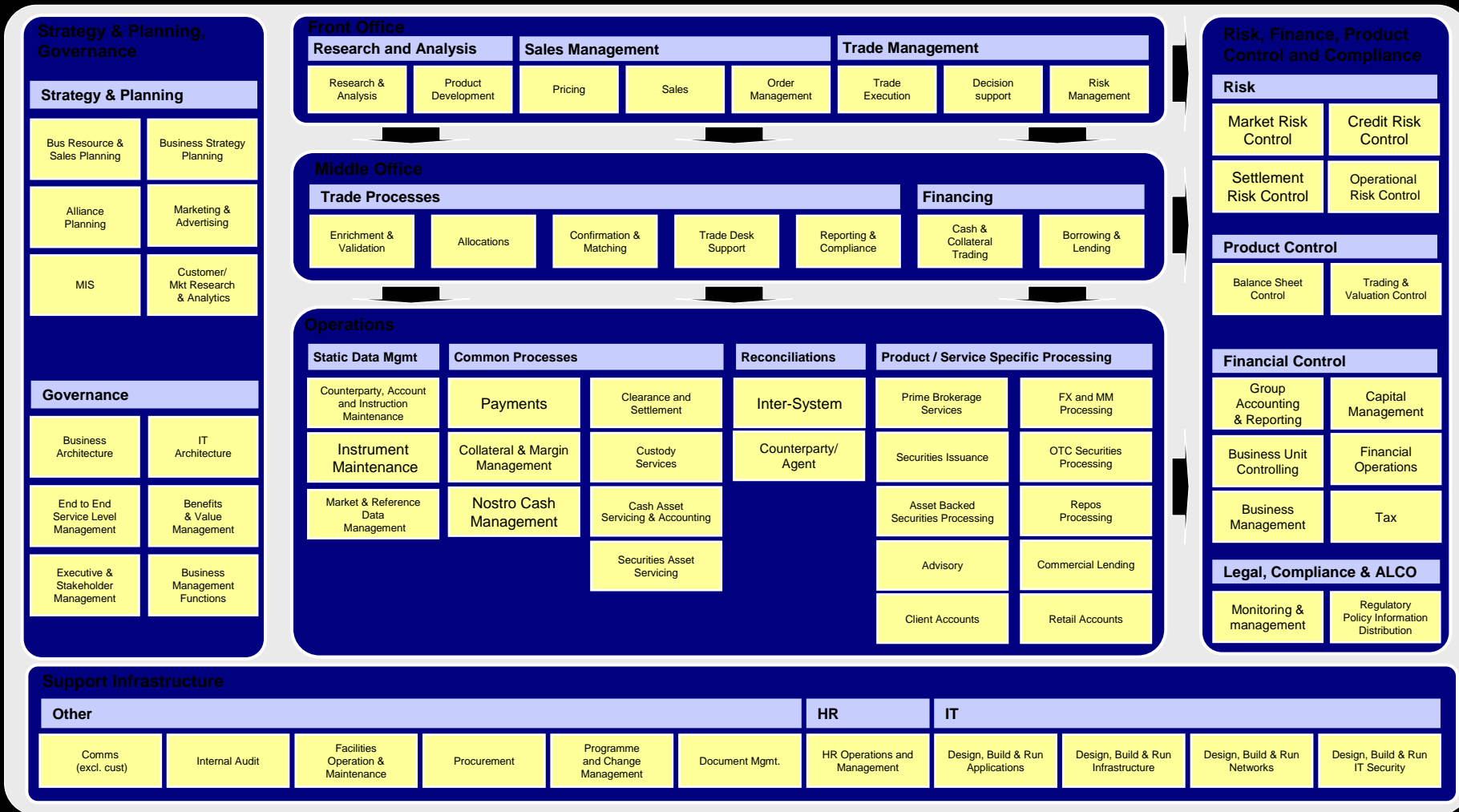
"Factory in a box"

Change Imperative: Business Led



- Business can make changes
 - It is in their language
 - Enables better decisions
-
- CBM
 - WebSphere Business Monitor through Web 2.0
 - Business Policies with WebSphere Business Services Fabric

Component Business Model for Financial Markets



Why are policies so important?

Policies are....

- Combinations of declarative statements:
 - “Provide an alert if market conditions for a particular currency impact a client with significant holdings”
 - “Clients with multiple accounts receive expedited call center response”
- Written in an understandable business context
- Consolidated into one place for easy change
- And unlike rules.....
 - Not limited to strict procedural flow (if A...then B... then C...until Z)

Result:

Change is faster and easier

Business led BPM helps property and casualty insurer grow revenues

Policies used to customize support services for a diverse independent agent community

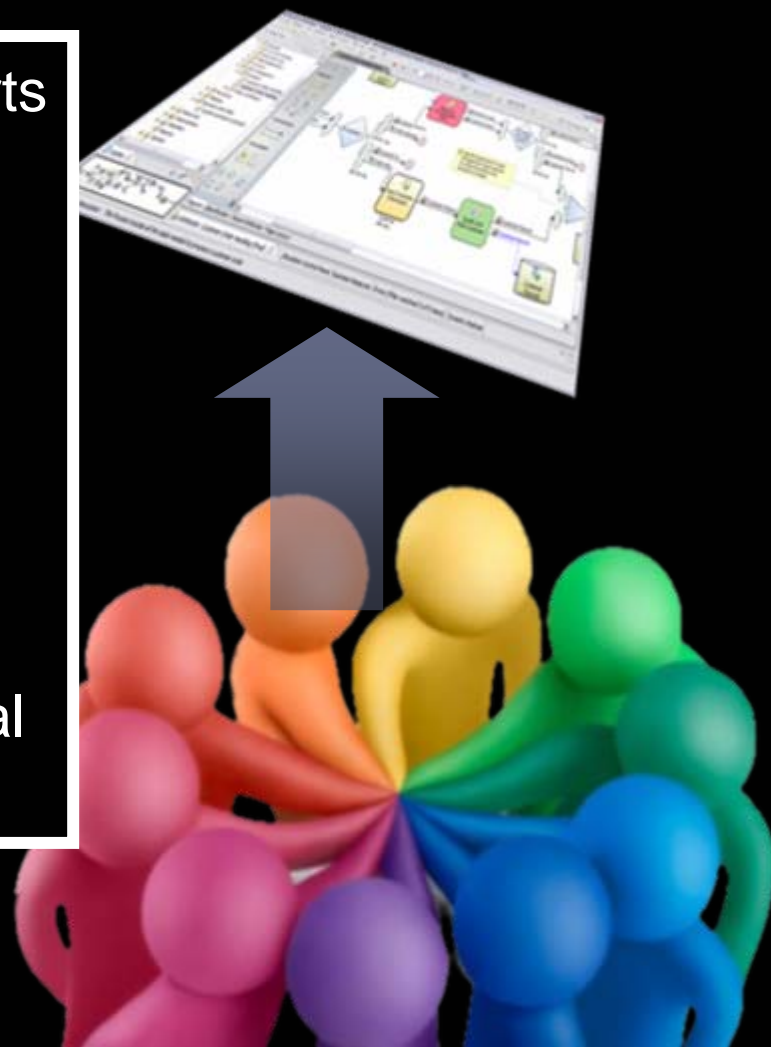
With IBM SOA

- New quote system launched in 7 mo. to 32 states
- Delivered 100X quotes per month target
- Expected revenue (GPW) increase from 3 to 4%
- New billing solution launched in 3 months
- 40% reduction in call center volume



Change Imperative : Collaborative

- Collaborate with Subject Matter Experts
 - Support diverse design tools
 - Keep discovering new areas for improvement
-
- WebSphere Business Modeler Publishing Server and FileNet
 - WebSphere Business Modeler, Lotus eForms, Sametime, WebSphere Portal
 - IBM BPM methodology



Continuous collaboration of business and IT delivers value

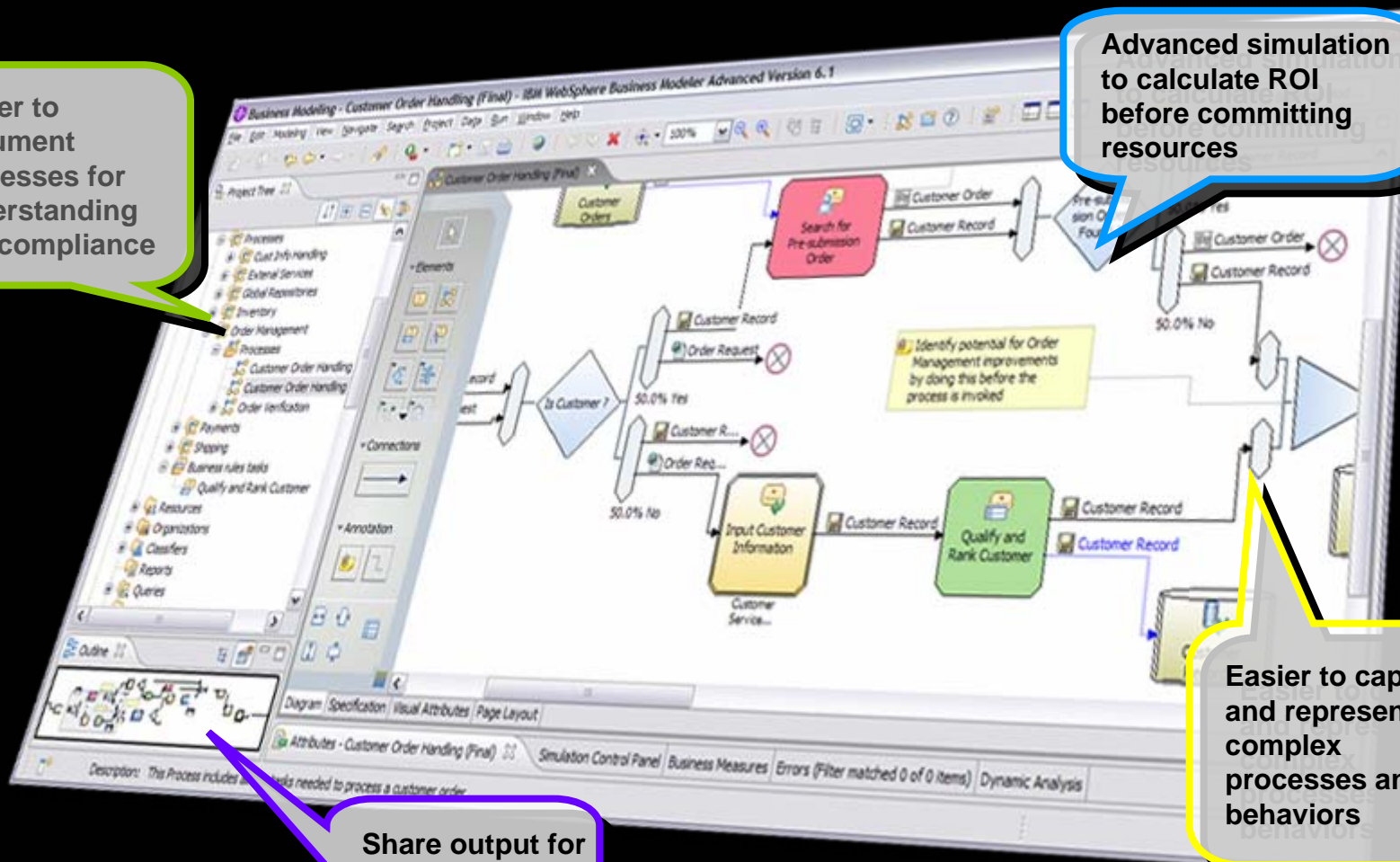
Aligned IT and Business result in DOUBLE the productivity gains of isolated business and IT efforts

Source: London School of Economics – McKinsey survey and analysis of 100 companies in France, Germany, UK and US

Collaborative design and simulation for strong execution

Easier to document processes for understanding and compliance

Advanced simulation to calculate ROI before committing resources



Share output for training and collaboration

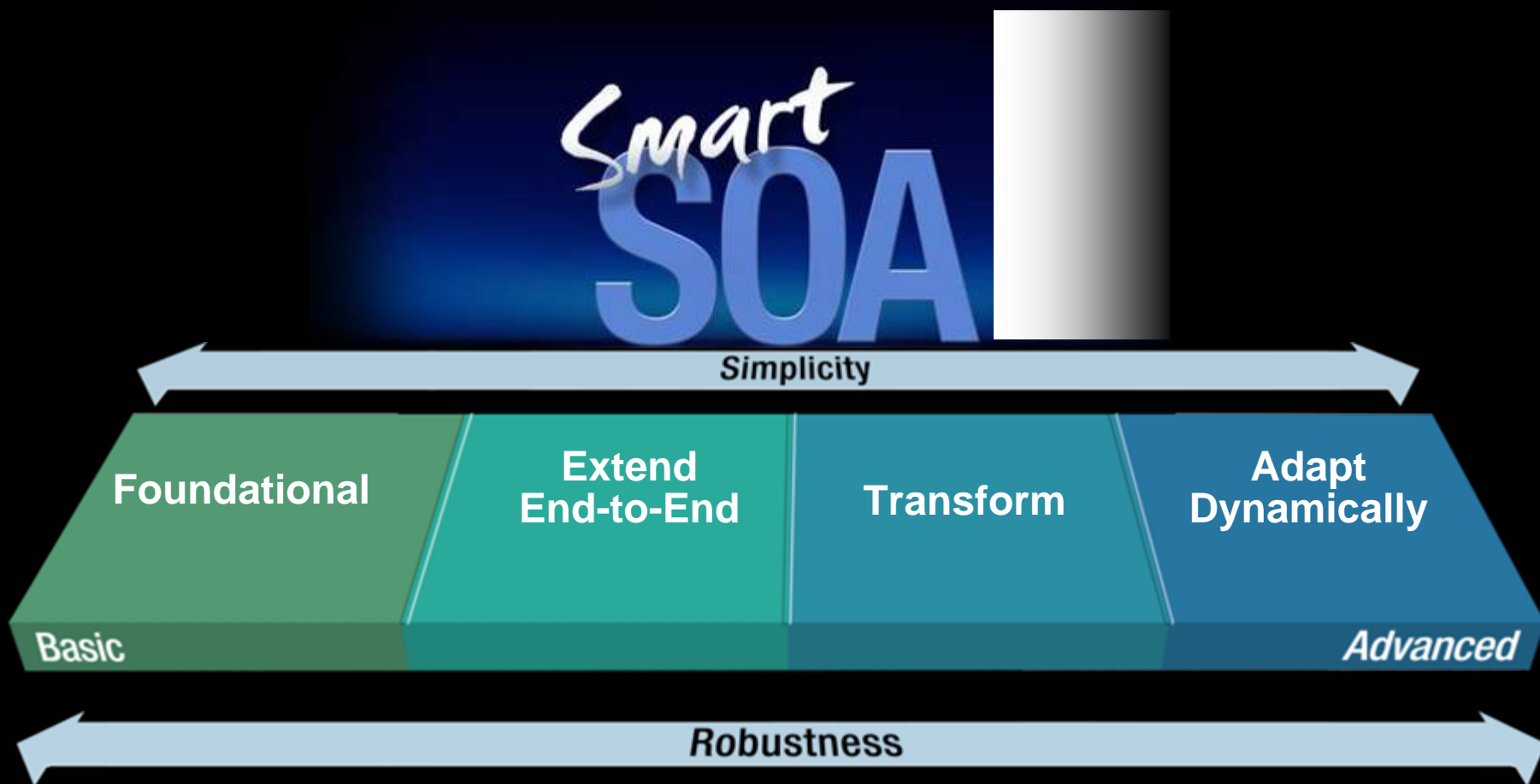
Easier to capture and represent complex processes and behaviors

HSBC streamlines storefront and underwriting processes



Incremental Approach: There is a Smarter Way!

Aligning service-oriented approaches



A set of guiding principles to help extend business value of deployment

Globally Integrated Enterprises build 21st century skills

IBM's Management Game

A new approach to BPM experiential learning



CODE: A BPM Simulator
INNOV8

Press

BusinessWeek

IBM's Management Games
 No fooling around: Big Blue is promoting a video game that could change the way companies develop leaders and manage projects

BBC

FT.com

eWEEK.com

ITWEEK

GAMASUTRA

Academics

usc Marshall
 University of Southern California

Carnegie Mellon
 Heinz School
 Policy | Management | Information Technology

THE UNIVERSITY OF TEXAS AT AUSTIN
McCOMBS SCHOOL OF BUSINESS

ASU
 ARIZONA STATE UNIVERSITY

MANCHESTER
 1824
 Manchester Business School

- China (7)
- Japan (3)
- Canada
- Australia
- Italy
- Israel
- ...

Awards

OMMA AWARDS
 FOR ONLINE ADVERTISING CREATIVITY



AWARD OF MERIT WINNER
 SOCIETY FOR NEW COMMUNICATIONS RESEARCH

MarCom Awards

Morgan Stanley

Global Wealth Management Group

SOA program

GWMG Information Technology

February 2008

Agenda

- Background (p.3)
- Challenges (p.4)
- Responses (p.5)
- Solution: SOA – Governance / Canonical Service Bus / Tools (p.6)
- Case Study: FA Workstation (p.10)

Background

Business

- Domestic US Brokerage
- \$6.6B Revenue
- 17% PBT
- 450 Branch Offices
- 8300 Financial Advisors
- #1 in Industry for Revenue per Advisor

Technology

- 800 FTEs, 600 Consultants
- Private fiber WAN
- Centralized distributed and MF data center
- Web-based applications
- Data in SQLServer, DB2, Teradata, and VSAM
- Development sites in New York and offshore vendors

Challenges

- High Performance
- Highly Available
- Security
- Time to Market
- Constrained Budget
- Highly Distributed Workforce
- Centralized Data
- Centralized Application Infrastructure
- Large catalog of disparate legacy applications

Responses and Solution: SOA

Response constructed based on these main pillars:

- Standards
- Governance
- Software Infrastructure

A Service-Oriented Architecture (SOA) delivers the following capabilities:

- SOAP, WSDL and UDDI provide governable standards
- Software supporting the standards is available on all Morgan Stanley platforms (Mainframe, J2EE, .NET)

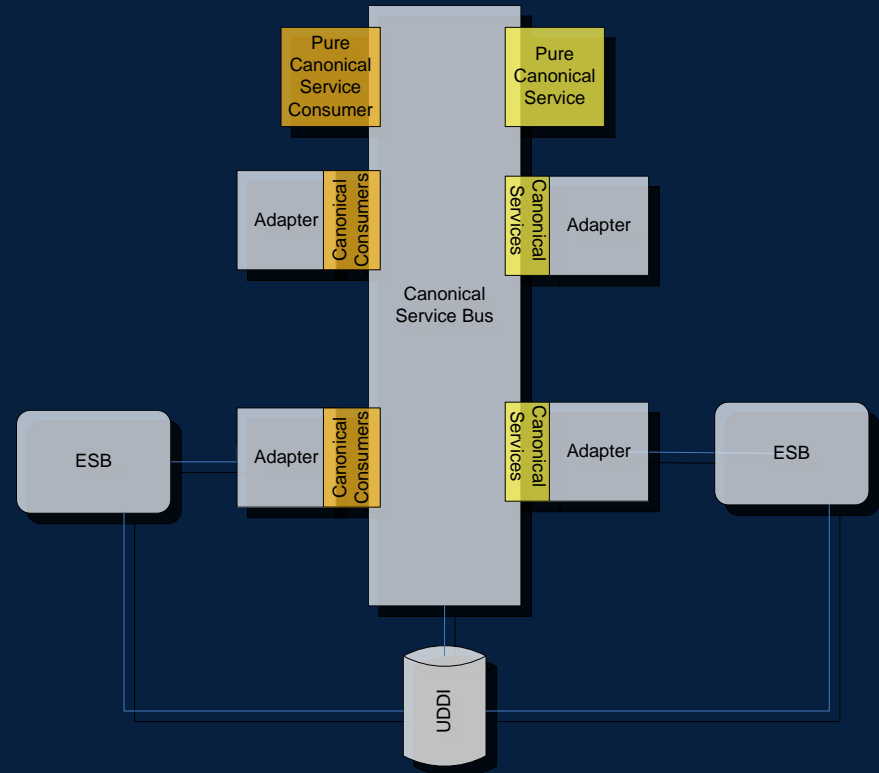
Governance

- Governing body
 - Canonical Service Oversight Board (CSO)
 - Membership comprises Applications, Messaging, Architecture and Data Services
- Responsibilities:
 - Defines the development model (top-down).
 - Defines SOA Standards – WSDL, UDDI catalogues.
 - Defines Policies around Service interfaces, WSDL / UDDI usage
 - Reviews candidate shared Services
 - Developed and maintains Web Service catalogue
 - Reviews integrated with SDLC

Canonical Service Bus

Federation of lightly governed ESBs around 'Canonical Service Bus'

- Board maintains strict control on Services deployments
- ESBs are less restricted
- Adapters support legacy systems with a Service face
- ESBs and CSB share the same platform, development Tools
- Entire CSB shares catalogue (UDDI)
- Monitoring and alerting with CSB to support SLAs.



Tools

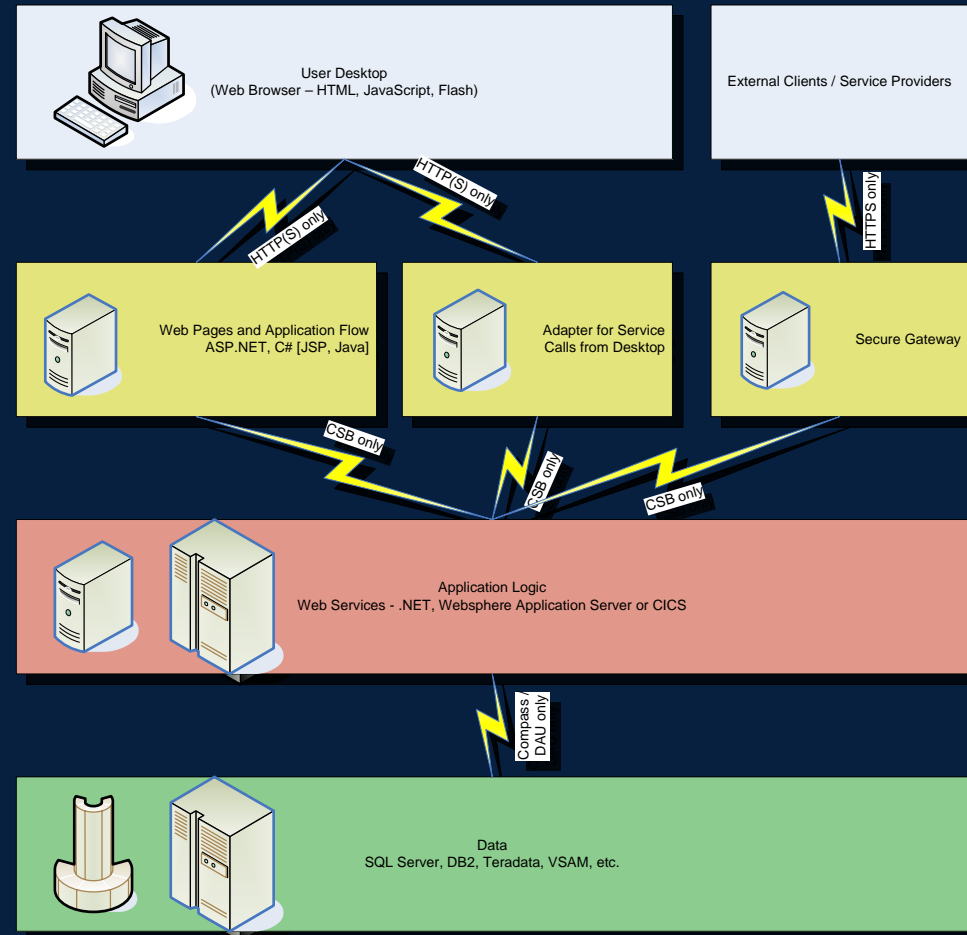
Tool Integration is essential to success of SOA

- Development tools (Visual Studio, Rational Developer) are integrated with UDDI
- Automatic support for WSDL
- Access to CSB is transparently supported
- Deployment tools synchronize UDDI with actual Services
- Governance tools enforce policies affecting deployed objects

Case Study: FA Workstation

CSB in the FA Workstation.

- Application UIs built by many teams are 'plugged in' to the workstation framework web tier.
- All applications share (and contribute to) a suite of services accessed through the CSB (and federated ESBs)
- Strong separation of responsibilities and simple communication model reinforces sharing.

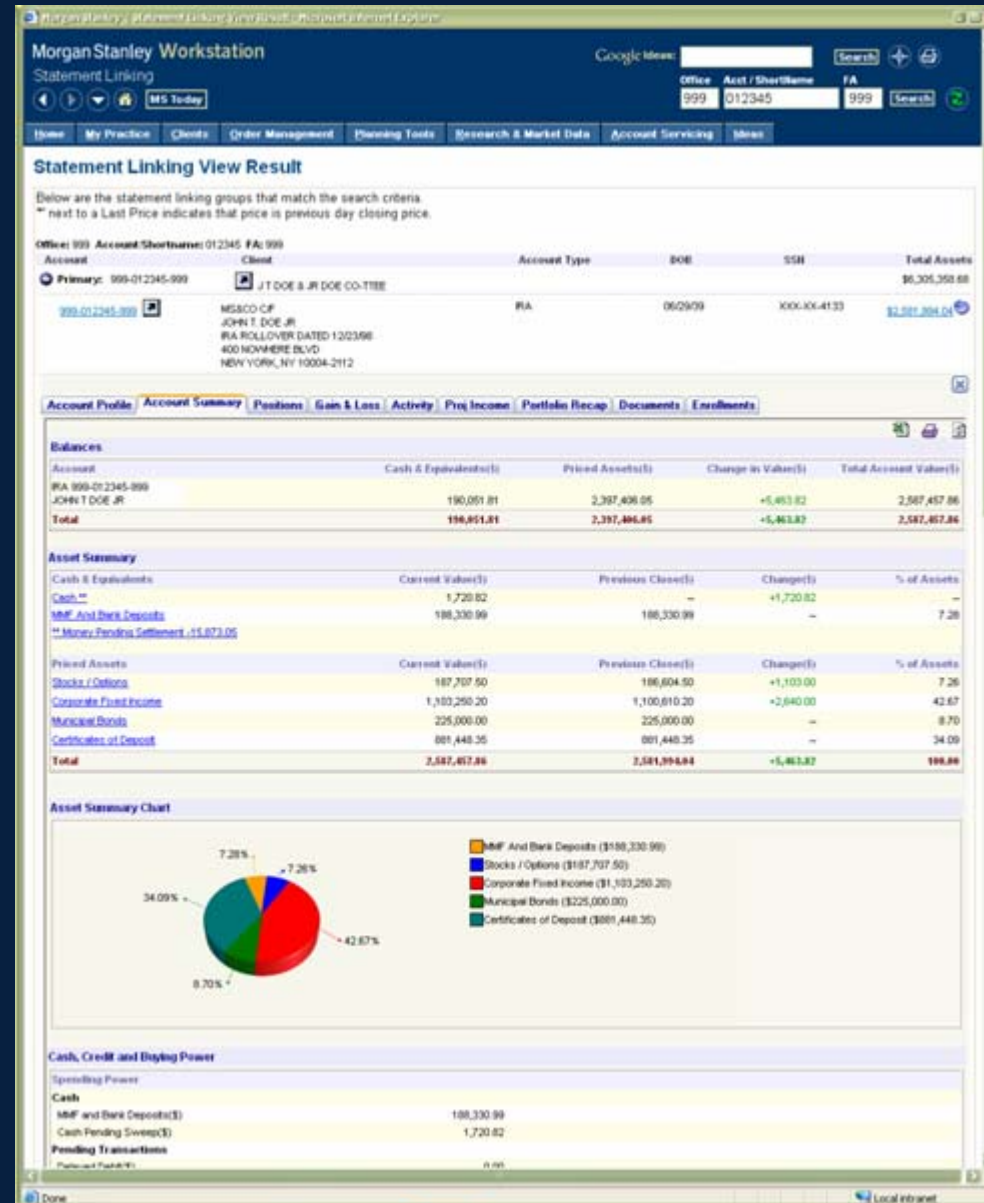


Note: ClientServ shares the Web Services with FA Workstation.

Development Workflow

The FA Workstation applications are developed using a lightweight process as follows:

- 1) Analysts design pages and workflow in close collaboration with the business.
- 2) All style, navigation, data access, logging, security, etc is provided in the framework.
- 3) Analysts and Developers use Web tools and IDE integration to search UDDI for Web Services providing the required data.
- 4) Developers build ASP.NET pages consuming standard services.
 - Web Service adds/changes reviewed by the CSO
- 5) After SDLC reviews and testing, software is deployed under change control
 - New/changed WSDL deployed to UDDI making it available for future sharing.



Business Results & Lessons Learned

Results

- Improved Advisor Productivity - \$479k per advisor to \$819k per advisor.
- Data Consistency - shared client and transaction data between clients and advisor.
- Reduced risk through centralized security policy and entitlement management.

Lessons Learned

- Don't forget governance.
- Some developers will resist relinquishing control.
- Pick a few metrics and measure success (reuse, time to market, bugs, etc).

impactXperience

Smart SOA Conference
April 6-11, Las Vegas

2008 IMPACT



Find out more at the IBM booth
Register at: ibm.com/soa/impact2008

IBM®

SOA/BPM Projects are successful when they ...



Are driven by the needs of the business

Focus is on end-to-end horizontal processes



Utilize the right skills

For continuous business and IT alignment



Guarantee technology can support mission critical nature of the business

Quality of service needs to be assured

Smart
SOA

Thank you!

More information: ibm.com/soa