The Vision of Service-Oriented Management

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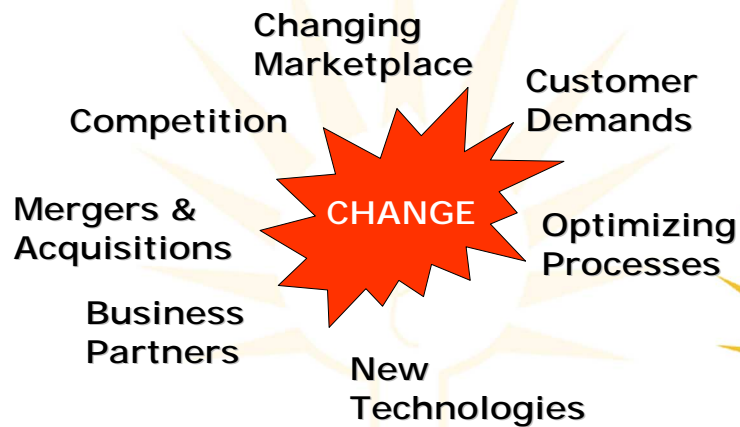
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Business Constant: Change

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Changing Marketplace

Competition

Customer Demands

Mergers & Acquisitions

CHANGE

Optimizing Processes

Business Partners

New Technologies

A Business is Never <u>STATIC</u>

IT: Fulfilling Business Requirements

Business Requirements
- Service Customers
- Manage Operations
- Increase Worker Productivity
- Communicate with market
- Ensure reliable and secure operations
- Develop new products and services
- Respond to new business drivers

IT Capabilities
- Implement CRM Systems
- Implement ERP Systems
- Manage desktop environments
- Manage server environments
- Manage email systems and web sites
- Manage network and storage operations
- Develop applications

However, it rarely works that way...

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Business Requirements

IT Interpretation

Long development cycle

Final Implementation
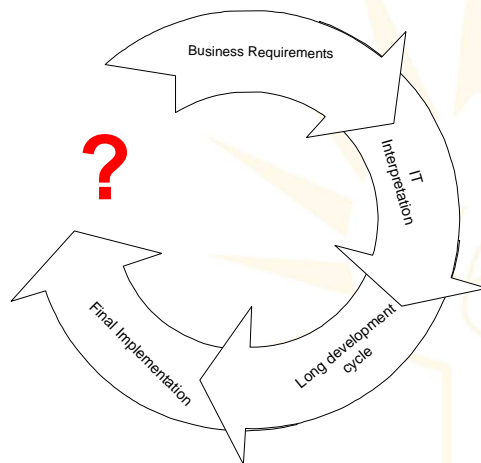
- Requirements change
- Interpretations often inaccurate or limited
- Lengthy development cycles impervious to change
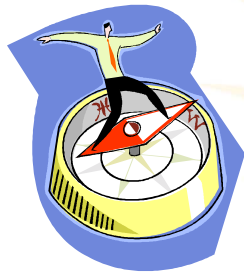- Implementations "cast in concrete"

Result: IT that places limitations on Business

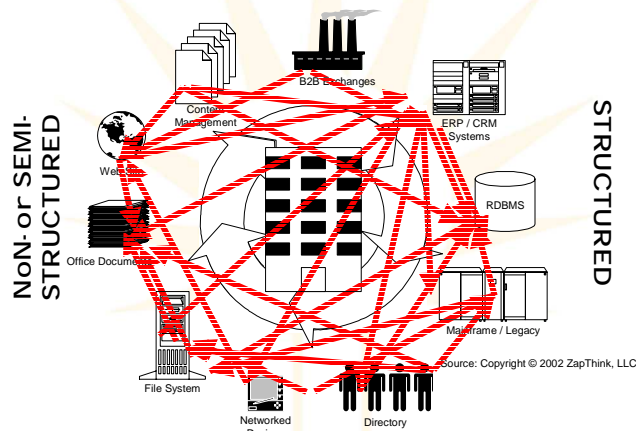# Business Agility

- What companies require is *Business Agility…*

  » Responding quickly to change, *and*

  » Leveraging change for competitive advantage

The Problem is Integration

NoN- or SEMI-STRUCTURED

STRUCTURED

B2B Exchanges

Content Management

ERP / CRM Systems

Web Sites

RDBMS

Office Documents

Mainframe / Legacy

File System

Networked Devices

Directory

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Integration Approaches of Yesterday

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- Custom Integration: Coding to Interfaces
  - APIs: COM, Java, COBOL, Assembly?
  - Distributed Computing?: DCOM, CORBA
  - Screen-Scraping and Emulation (3270 and HTML)
  - Message-Queues
- EAI and B2Bi Middleware
  - Automating interface-level integration
  - Bus or hub-and-spoke architecture

Fundamentally *brittle* approaches to integration

Enter SOAs based on Web Services

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- Service-oriented architectures (SOAs) represent software functionality as discoverable Services on the network

- Such SOAs provide a *layer of abstraction* that hides the complexity of the underlying technology from the business user

- These business-oriented Services enable *business agility*

Web Services are the Trees....

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Service Orientation is the Forest

Service Orientation *Idées Fortes*: Loose Coupling

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- Consumer and Producer controlled by different people

- Changing one doesn't break the other

- Build one without being aware of the other

Service Orientation *Idées Fortes*: Asynchrony

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- The Web is synchronous: click a button and wait for a response

- Service interactions can also be asynchronous: allow for long-running processes

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Service Orientation *Idées Fortes*: Coarse Granularity

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- Business-oriented requests and responses

- Blocks of information exchanged

- Encapsulate APIs into fine-grained, atomic Services and compose them into coarse-grained, business Services

SOA Abstraction Layer

- Coarse-grained business Services
- Location independence
- Underlying systems loosely coupled from Service consumers
- Dynamic discovery and invocation

Sounds good, but how does it work?

SOA Enablement…

- Provide and enforce the SOA layer of abstraction

- Combine fine-grained APIs into coarse-grained business Services

- Mask complexity of underlying technology: message protocols, adapters, APIs, etc.

- Handle quality of service, scalability, etc. "behind the scenes"

"Web Services Mgmt" a part of "Service-Oriented Mgmt"

Web Services Management

- Are your Services up and running?

- Are the right consumers accessing the right Services?

- How do you keep consumers & producers of Services loosely coupled when Services change?

- How do you fix things when something goes wrong?

- Are you providing the required quality of Service?
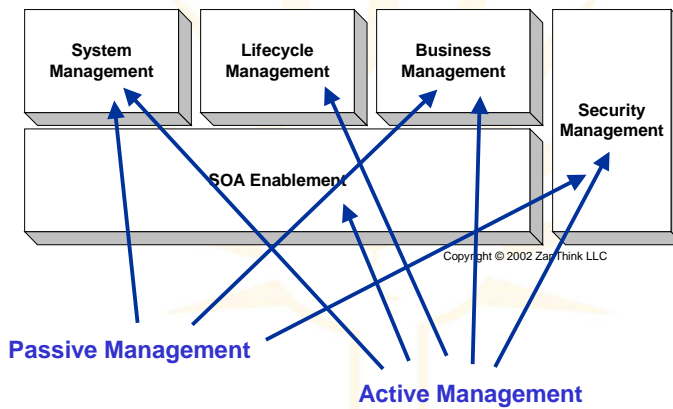
Addressing Management Issues

- Passive management
  - Monitoring Web Services
  - Monitoring Web Services dependencies
  - Providing alerts
  - Providing business visibility (BAM)

- Active management
  - Addressing performance/availability issues
  - Rerouting around problems
  - Lifecycle management
  - Managing Service contracts
  - *SOA enablement*

The Five Categories of WS Management Functionality

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System Management

Lifecycle Management

Business Management

Security Management

SOA Enablement

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Passive Management

Active Management
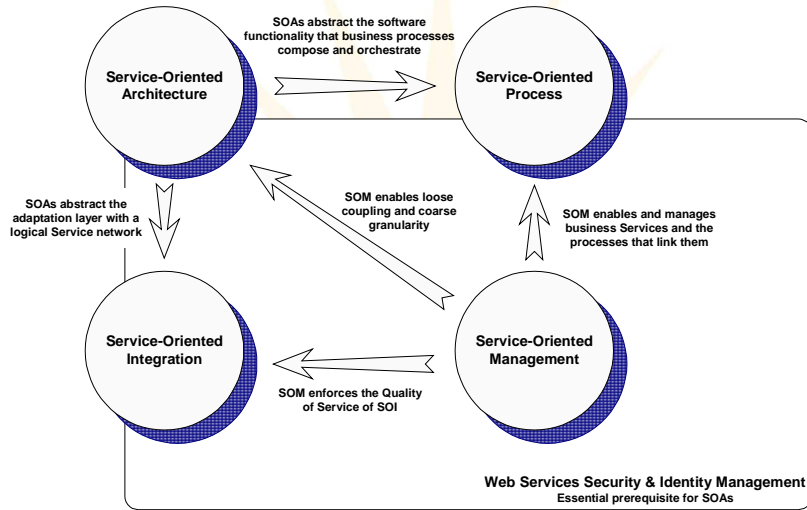
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Important Points: Managing Services

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- You need management when you offer your first "mission critical" Web Service (don't wait!)

- Management is critical for building and running enterprise-class SOAs

- Web Services can also be used to manage systems and applications in the enterprise

- The Service-Oriented Management space is still in flux, with too many vendors and shifting feature sets
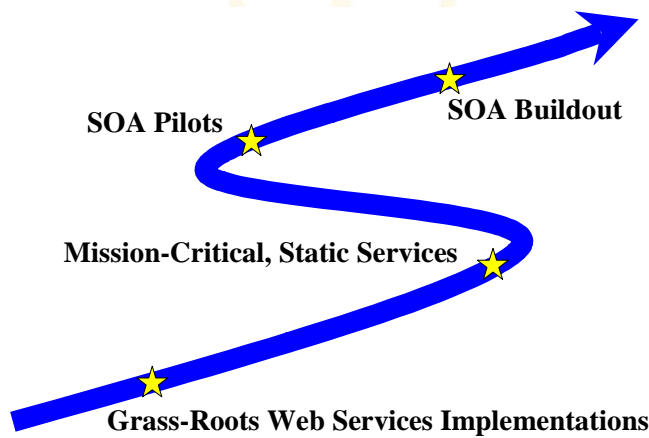
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The SOA Implementation Framework

Service-Oriented Architecture

Service-Oriented Process

Service-Oriented Integration

Service-Oriented Management

SOAs abstract the software functionality that business processes compose and orchestrate

SOAs abstract the adaptation layer with a logical Service network

SOM enables loose coupling and coarse granularity

SOM enables and manages business Services and the processes that link them

SOM enforces the Quality of Service of SOI

Web Services Security & Identity Management
Essential prerequisite for SOAs

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The Web Services/SOA roadmap

SOA Buildout

SOA Pilots

Mission-Critical, Static Services

Grass-Roots Web Services Implementations

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The Service-Oriented Enterprise

- IT resources are available on demand to businesses as Services

- The Service-oriented abstraction layer enables companies to run their operations and conduct business with each other in a dynamic and automated fashion

- Business drives IT, and agile IT enables agile businesses

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ZapThink is an industry analysis firm focused exclusively on XML, Web Services, and Service-Oriented Architectures.

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