

IT Transformation in the Age of the Borderless Enterprise

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PART 1

Business Realities

Global Real-Time Economy

- Formerly separate national and regional markets now electronically connected into one real-time global market
- Real-Time economy does what markets do so well; it's called "efficient price discovery"
- In most businesses profit margins are under constant pressure; low and heading lower
- **Real-time economy is like *giant stock market!***
- Profit in hyper competitive real-time economy comes from many small adjustments & some big wins as companies respond to constantly changing opportunities and threats
- ***"I'm all for progress. It's change I don't like."* Mark Twain**

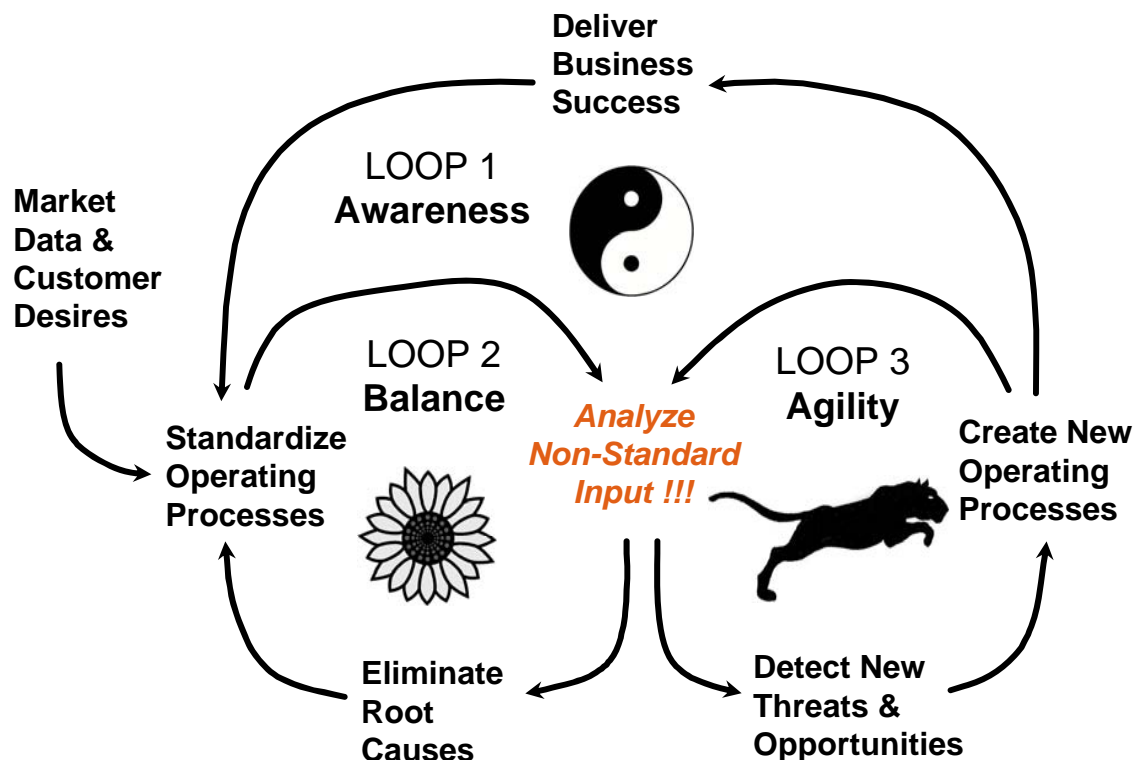
Responsiveness = Profitability



- Efficiency requires predictability and low change
- In high change world ***responsiveness trumps efficiency!***
- Responsive Enterprise is to real-time economy as assembly line was to industrial economy – source of wealth
- Respond to changing customer needs by wrapping products in blanket of tailored, value-added services (they are information based)
- Earn additional 2 – 4% (and sometimes more)
- Use responsiveness to differentiate yourself or else participate in “grim race to the bottom”
- Tale of the evolving mobile phone... is it a phone or a fashion?

Dynamics of Responsiveness

- Three feedback loops illustrate how responsive organization works
- Responsiveness is a blend of balance and agility with the awareness to know when to do which
- *It is continuous, incremental change!*



LOOP 1: Awareness = Observe and respond
LOOP 2: Balance = Improve existing processes
LOOP 3: Agility = Create new processes

PART 2

Borderless IT Infrastructure

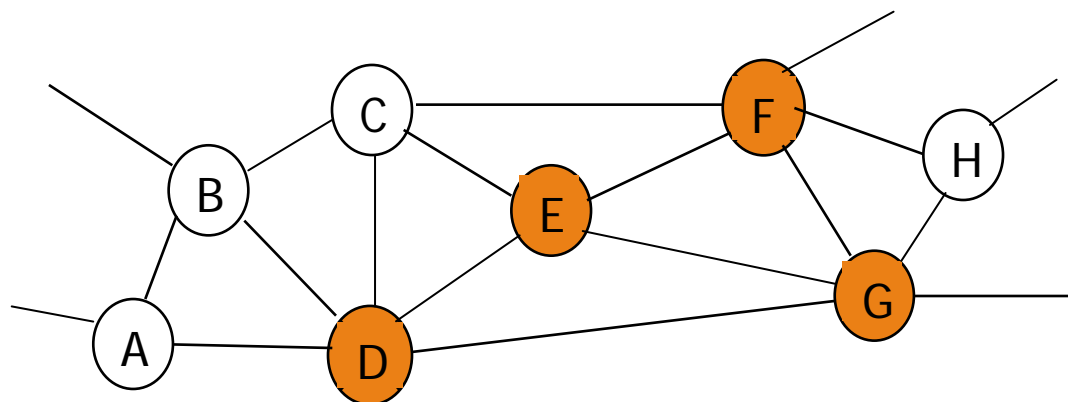
Moving Toward Responsiveness

- IT architecture for responsive operations is built on top of existing systems (ERP, CRM, SCM, etc.) – maximize leverage of existing systems and infrastructure
- Responsiveness calls for adding new systems such as:
 - Data Warehouses and Business Intelligence (BI)
 - Business Process Management (BPM)
 - Simulation and Predictive Analytics
- Use parts of old systems in creation of new systems; grow systems iteratively as needs unfold
- **SOA - Virtualization - Cloud - SaaS - Mashups = Agile & Responsive**

Definition: SOA

Services Oriented Architecture – “systems architecture that uses loosely coupled services to support requirements of business processes and users” *Wikipedia April 2007*

Services on network (network could be within datacenter or across Internet) available in SOA environment combined as needed in support of evolving business processes



Need to Manage:

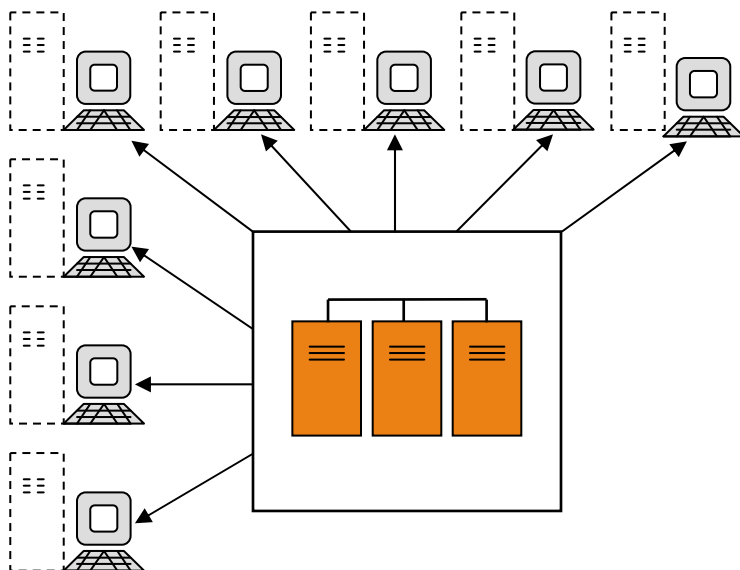
- Service Directory
- Connections
- Performance

Could also call this “**Web Oriented Architecture - WOA**”

Definition: Virtualization

Server Virtualization – “partitioning one [or many] physical server computer[s] into multiple servers that each has the appearance and capabilities of running on its own dedicated machine.”

Wikipedia April 2007

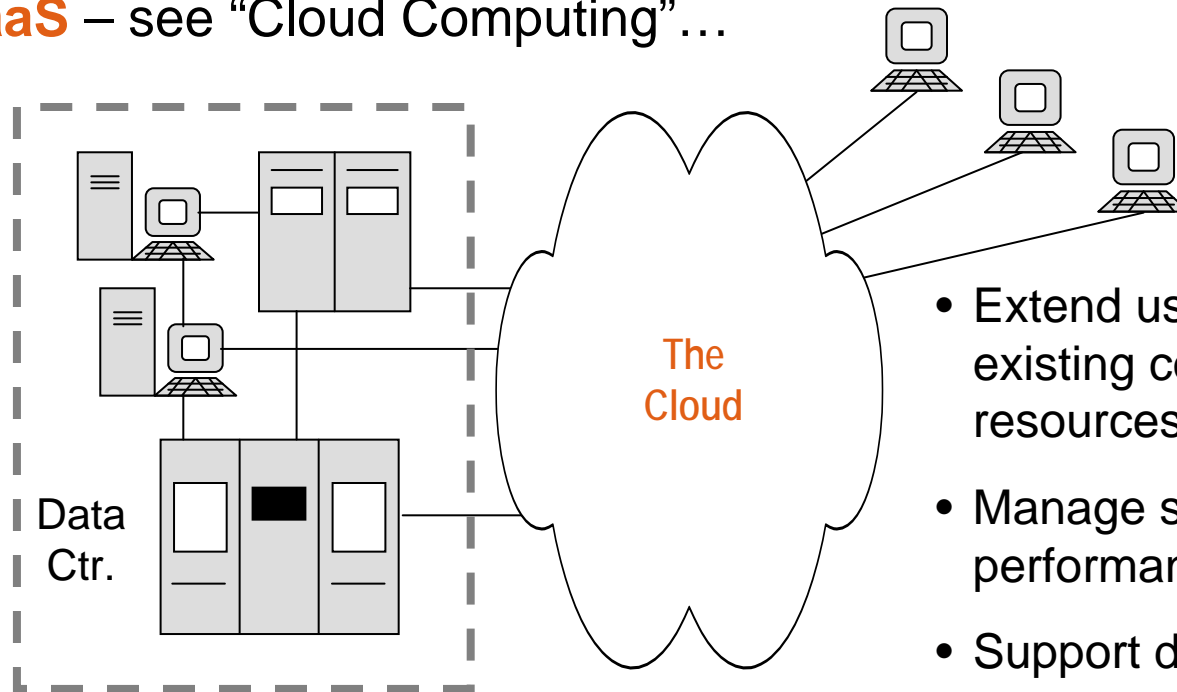


- Optimize use of server resources
- Improve server administration
- Common practice on mainframes now available for other architectures

Definition: Cloud Computing

Cloud Computing – packaging of applications, computing power and data storage as a metered service with low initial cost to acquire and pay-as-you-go operating model

SaaS – see “Cloud Computing”...



- Extend use and reach of existing computing resources
- Manage system performance in the cloud
- Support different virtual computer architectures

Disruption of IT Paradigm - *AGAIN*

- *"...five years from now, the IT profession as you know it will no longer exist."* Don Tennant, *Computerworld*
- *"Cloud computing is to storing and processing data what the electrical grid is to plugging in your television: a scalable way to deliver services while matching supply and demand across the grid."* Tim Beyers, *Motley Fool Rule Breakers*
- SOA, Virtualization, Cloud Computing and Agile Development offer new opportunities for IT infrastructure that is fast, flexible, cost effective and embedded in business processes
- Those that master the use of these technologies and techniques will set the pace for everyone else

PART 3

Business Case Study

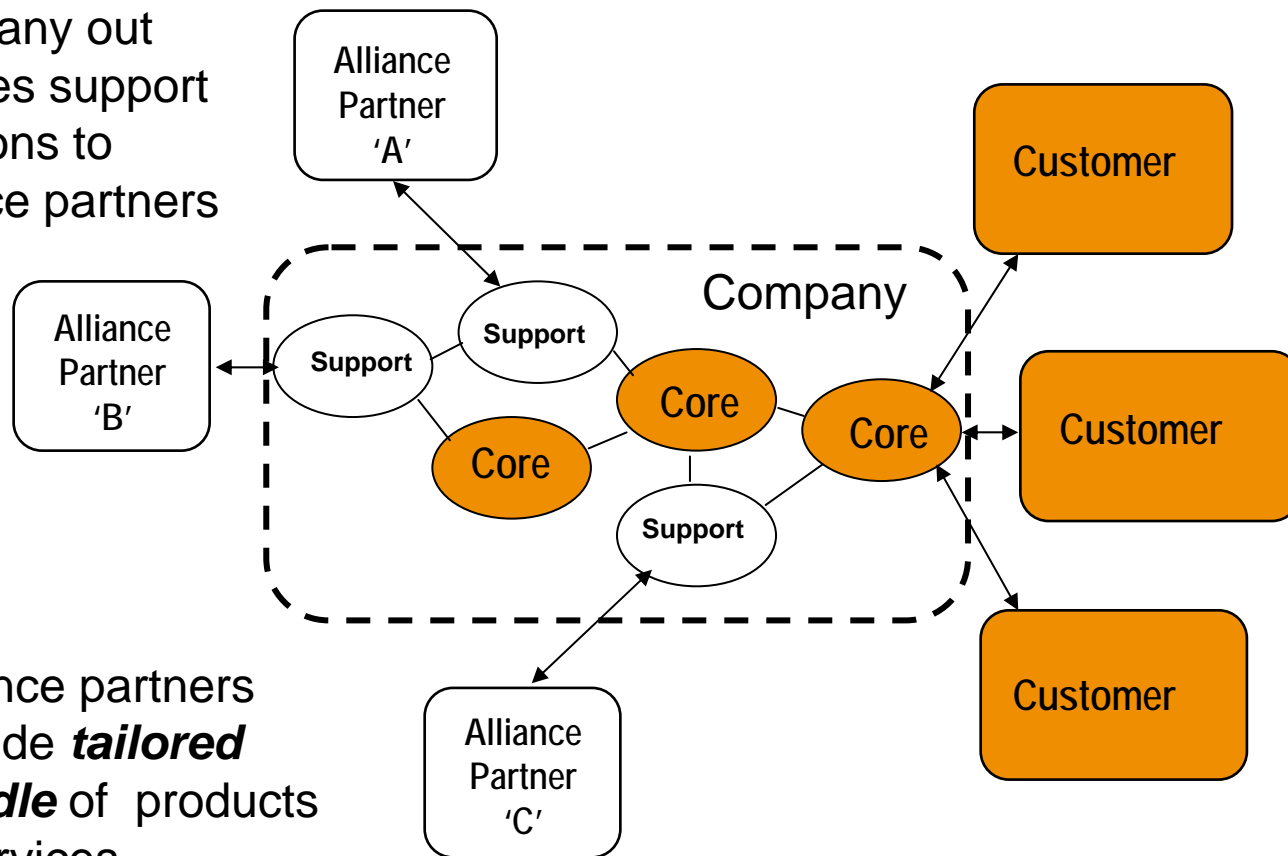
“IT Agility in Action”

Is IT a Profession or a Utility?

- Does IT matter; is it a competitive advantage?
- Efficient 24/7 operation of existing systems is no longer a competitive advantage – *it's a given!*
- Companies need to leverage their systems and their business strengths to focus on responding to change and new opportunities in their markets
- Company IT groups focus on development of new systems and continuous adjustment and improvement of infrastructure
- Responsive IT enables companies to continually optimize their performance – *earn additional 2-4% (and sometimes more)*

Company and Alliance Partners

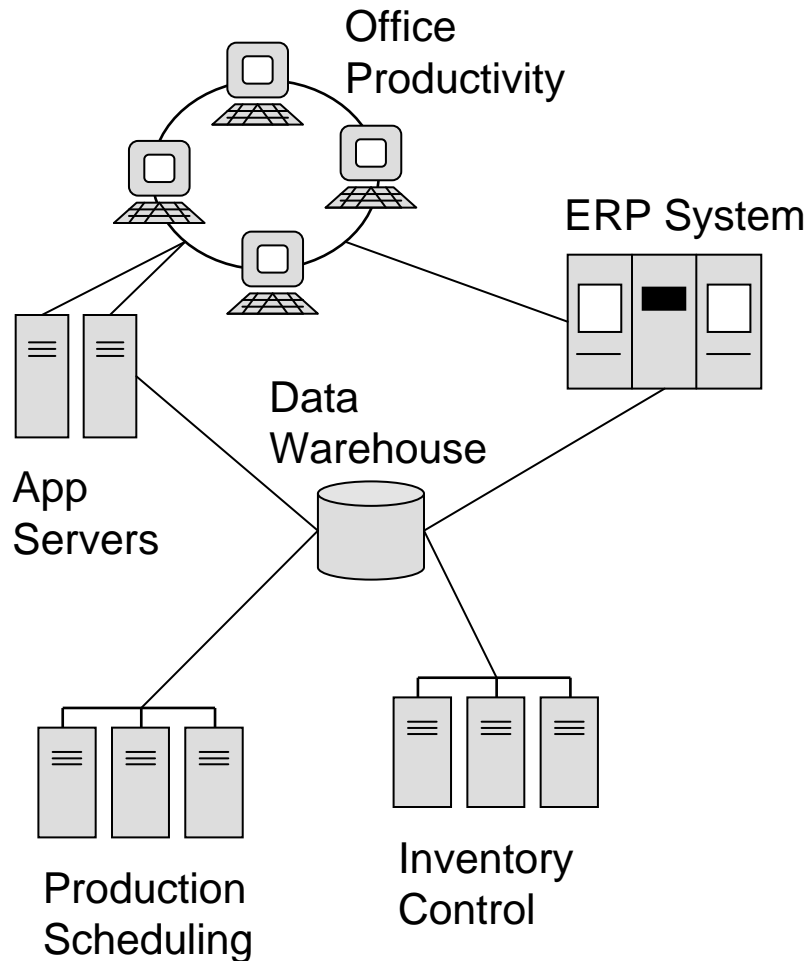
Company out sources support functions to alliance partners



Company focuses on **core functions** that **produce unique value-add** for its customers

Alliance partners provide ***tailored bundle*** of products & services

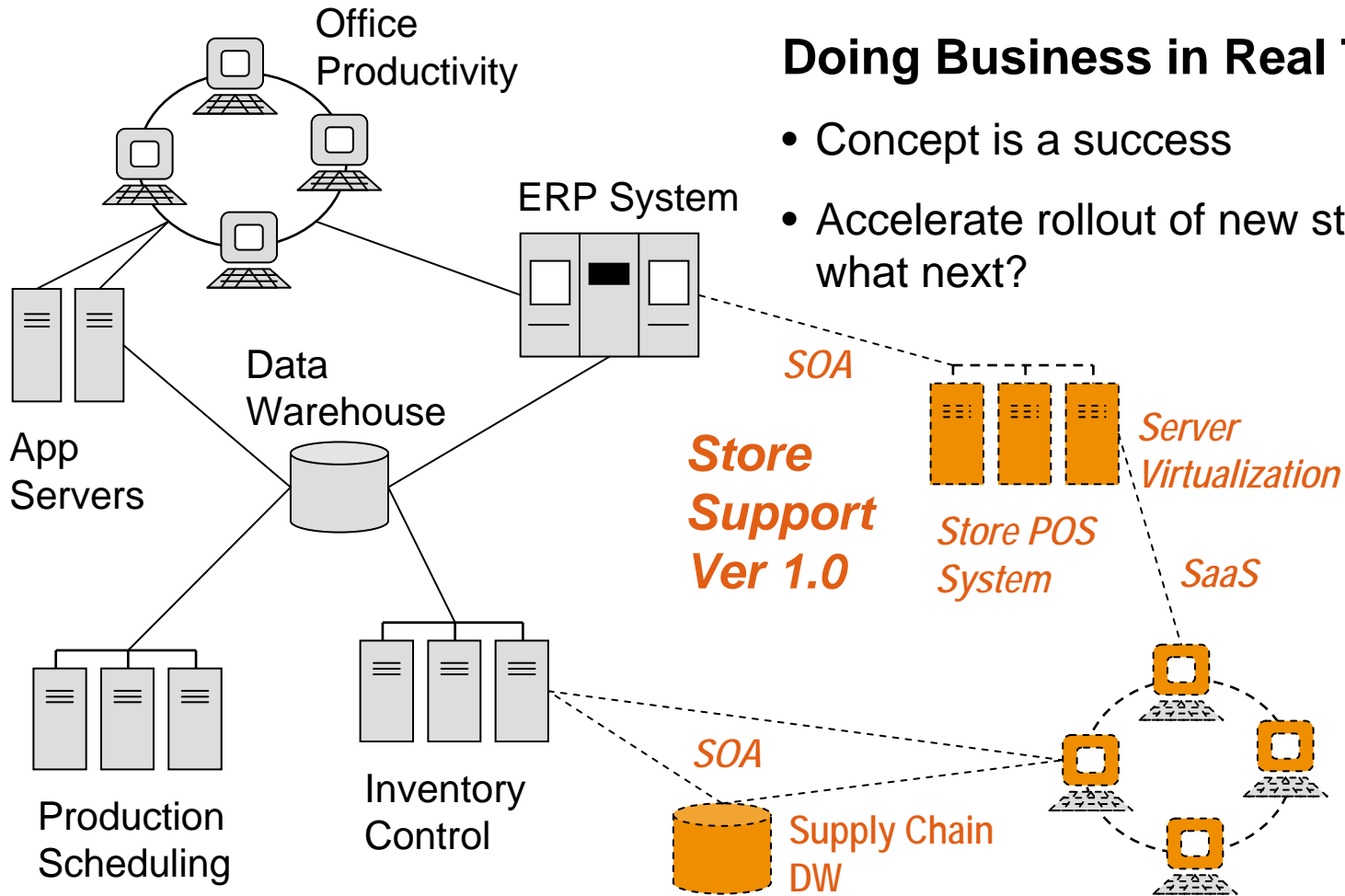
Case Study



Doing Business in Real Time

- Old-line candy company selling through traditional low margin retail channels
- People see opportunity to sell “designer chocolate” and related items in cozy storefront setting
- Company decides to quickly market test idea by opening a few stores
- **Need systems support in 90 days!**
- **Consider TCO of solution: lease/buy; sunk costs; scalability; flexibility**
- ***Business agility calls for IT agility...***

Case Study



Doing Business in Real Time

- Concept is a success
- Accelerate rollout of new stores... what next?

Hybrid IT Architecture

Case Study

Store Support Ver 2.x

Extend In-House Systems in Cloud

Cloud Computing

The Cloud

SaaS

BPM

CRM

ERP

Store POS System

Analytics & Simulation

SOA

Supply Chain DW

Data Warehouse

Office Productivity

App Servers

Inventory System

Production Scheduling

- *No Cap Ex*
- *Variable Cost*
- *Scalable*

Lessons Learned

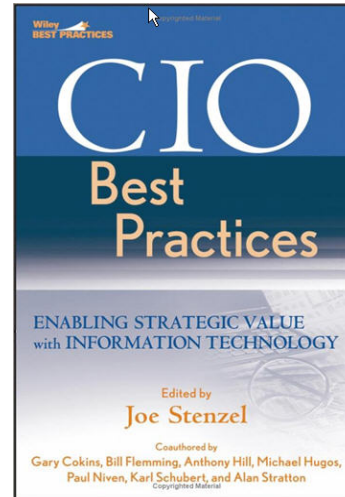
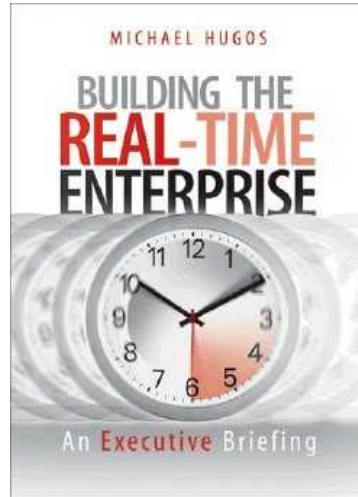
1. Web portals and mashups provide unified user interface by replacing different system screens with common GUI front-end
2. Maximize use and re-use of existing applications (ERP/CRM/SCM) with SOA
3. Maximize server utilization through virtualization
4. Split systems processing between in-house platforms and cloud/SaaS platforms; host new system in-house or in the cloud as security and business needs dictate (cloud computing nascent but evolving quickly)
5. Extend in-house systems, improve performance of applications and reach new users and customers via cloud computing options
6. Continuous incremental change to IT infrastructure as business unfolds
(No big bang projects!)

Parting Thought

If change is the one predictable thing in a world where so much else is so unpredictable, then **companies optimized to deal with change** will certainly be more successful than companies not optimized to deal with change. That is why **responsiveness trumps efficiency**; that is why responsiveness and the business practices that bring it about are the **basis for sustainable prosperity** in this century.

Michael Hugos, *Business Agility: Sustainable Prosperity in a Relentlessly Competitive World*, Feb. 2009 (John Wiley & Sons Publishers)

Learn More...



Presentation excerpted from two of my books:

- *Building the Real-Time Enterprise*, author, 2005
- *CIO Best Practices*, co-author, 2007

Join the conversation on my Computerworld column and CIO blog:

- CIO Magazine Blog: [Doing Business in Real Time](#)
- Computerworld Column: [IT Leadership Insights](#)