The Future of Enterprise IT
2010 – 2020

From Systems of Record to
Systems of Engagement
Agenda

• IT Today
  • Enterprise IT: Systems of Record
  • Consumer IT: Systems of Engagement

• The Big Disconnect
  • Evolution or Revolution?
  • The Forcing Function

• Enterprise Systems of Engagement
  • What Will Change
  • Impact on IT Organizations
  • Impact on the IT Industry
Enterprise IT: The Current State
Systems of Record are Largely Complete

- **Transaction systems for global commerce** . . .
  - Financials, Order Processing, Inventory, HR, CRM, Supply Chain . . .
  - Mainframes, minis, client-server, PC, Internet-enabled, SaaS

- **Drove three decades of investment**
  - Data centers everywhere
  - OLTP and Business Intelligence were the key drivers
  - Network seen as a transport mechanism only

- **Y2K put the capstone on this trend**
  - Pulled forward a half decade of investment
  - Enterprise IT has had to go through a long “digestive” period
  - Focus in past decade has been on *efficiency investments*
IT Innovation: For the Past Decade

Enterprise IT
On Hold

Consumer IT
On Fire
Redefining IT for Consumers
The Digitization of Human Culture

• **Access**
  - Infinite content, no barriers to entry, no barriers to exit
  - Communications are any-to-many-to-one
  - Social networks, blogs, Skype, Twitter

• **Broadband**
  - Pictures and video are the killer apps
  - Newspapers and magazines are toast
  - TV and radio are being reengineered even as we speak

• **Mobile**
  - PC for the emerging markets
  - iPhone sets the bar in mature markets
  - Texting, camera, location-based services

This *is* cloud computing
What does it mean for the enterprise?
The Big Disconnect

How can it be
I am so powerful as a consumer
And so LAME as an employee!!??

How disruptive do you think Consumer IT will be to Enterprise IT?
Consumer IT: The IT Organization’s View
An Evolution in Infrastructure

- **Infrastructure as a Service**
  - Hosted Data Centers
  - Savvis, Rackspace, Terremark, AT&T, Verizon, Singtel, Akamai

- **Virtualized Data Centers**
  - Servers & Storage
  - VMWare, Cisco, EMC, NetApp, HP, Dell, IBM

- **Software as a Service**
  - Enterprise Apps over the Internet
  - Salesforce.com, Workday, SuccessFactors, Webex

- **Platform as a Service**
  - Composite Apps on a Cloud Platform
  - Force.com, Azure, EC2, Google Maps

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Consumer IT: The End User’s View
A Revolution in Applications

- **Info on Demand**
  - Search
  - Social Search
- **Instant Access**
  - Communications Apps
  - Social Networks
- **Mobile Access**
  - Fully Empowered Mobile Clients
- **Video on Demand**
  - Broadcasts
  - Conferencing
- **Instant Access**
  - SMS, Facebook, Twitter, Skype
- **YouTube, Telepresence**
- **Google, Bing, Technorati, Yelp**
- **iPhone, iPad, Blackberry, Android**
Evolution or Revolution?

• **Evolution: The View from the IT Organization**
  - Continuation of last decade’s trend lines
  - Focus is on *Systems of Record*
  - Significant issues around mission-critical risk
  - Not fundamentally disruptive

• **Revolution: The View from End User Community**
  - New social contract for communication, collaboration, content
  - Focus is on *Systems of Engagement*
  - Ratified by consumer IT, violated by enterprise IT
  - Radically discontinuous with current infrastructure & policies

**What will force enterprise IT to commit to systems of engagement?**
Global Business Dynamics Will Drive the Enterprise IT Revolution

Globalization

Outsourcing

Commoditization

Partnering

Impacts Both B2B & B2C

Differentiation

Specialization

• Increased demand for
  • Collaboration
  • Relationship Management

• Challenge: To engage with peers globally to solve problems
  • Answers are not in Systems of Record
  • They are in other people’s (and often other companies’) heads

• Burden falls on the middle of the organization
  • Not front-line workers engaged in transactional workflows
  • Not top executives engaged in strategic issues

• Need to invest in “IT for the middle tier”
  • Communication and collaboration systems
  • Broad and easy access to Systems of Record on demand
Systems of Engagement for B2B

• The Revolution
  • Scale collaborative capabilities through *systems of engagement*

• Spotlight falls on the **middle** of the enterprise organization
  • Not about getting more efficiency from the bottom
  • Not about getting better strategic views at the top

• Path Forward
  • Invest in the productivity of knowledge workers and relationship managers

• Enterprise Facebook
• Enterprise YouTube
• Enterprise Twitter
• Global presence detection
• On-demand conferencing
• Telepresence everywhere
• Mobile access to everything
• Global search
• Community content management
• **With more revolutionary applications to come . . . .**
Some Early Use Cases

• **New product introductions**
  • Trouble-shooting global supply chains
  • Coordinating global product launches

• **Virtual experts**
  • Beta programs for next-generation technology products
  • Telemedicine for consulting physicians

• **Collaborative management**
  • Seeing “eye to eye” on the critical issues
  • Making decisions in real time
Impact of Global Business Dynamics on B2C B2C Transactional Networks

• **Commoditization**
  - Massive volumes but at very low margins
  - Margin relief is key for developed economies
  - Consumer preference is the critical lever

• **From Transactions to Interactions**
  - Battle for preference at the moment of choice
  - Offline demographic promotions being disintermediated
  - Pressure to make relevant offers in real time
  - Answers are in computers or databases
  - But they are tiny needles in massive haystacks
  - Must find them and activate them before prospect moves on

Real-Time Analytics supplant Business Intelligence
Next-Gen IT for Coordinated Networks

- **Next-Gen Point of View**
  - Innovate through *correlations*
  - Scale through *interactions*

- **Spotlight falls on metadata, analytics, and real-time**
  - Pre-programmed transaction systems are too inflexible
  - Real-time adaptive systems are required

- **Path Forward**
  - Invest in realtime analytics, closed loop systems, and machine learning

- **Collaborative filtering**
- **Behavioral targeting**
- **Personalized transactions**
- **Location-based services**
- **Predictive analytics**
- **Machine learning**
- **Fraud detection**
- **Multi-channel engagement**
- **With more revolutionary applications to come . . . .**
What Are Some Use Cases?

• **Up-selling self-service**
  - Offers appear in the context of a current transaction
  - No competition, ready to close

• **Next-generation promotional marketing**
  - Pay-for-results business model
  - Yield is a function of data and algorithm quality and quantity

• **Next-generation brand marketing**
  - Digital experiences to amplify brand images
  - Digital traces to garner consumer insights
Systems of Record & Systems of Engagement

• **Systems of Record create efficiency**
  - Impossible to do global commerce without them
  - Focus on cost, quality, and contractual commitments

• **Systems of Engagement create effectiveness**
  - Address the complexities of global business relationships
  - Focus on time, innovation, and personal commitments

• **Systems of Record need Systems of Engagement**
  - Troubleshoot the exception conditions

• **Systems of Engagement need Systems of Record**
  - Access the relevant fact base

• **Correct architecture**
  - SOEs operating **on top of and in touch with** SORs
  - This is where the evolution in infrastructure comes in
## Implications for IT Organizations

<table>
<thead>
<tr>
<th>Systems of Record</th>
<th>Systems of Engagement</th>
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<tbody>
<tr>
<td>Command &amp; Control</td>
<td>Collaborative</td>
</tr>
<tr>
<td>Transaction-oriented</td>
<td>Interaction-oriented</td>
</tr>
<tr>
<td>Data-centric</td>
<td>User-centric</td>
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<tr>
<td>User learns system</td>
<td>System learns user</td>
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<tr>
<td>Security is a key issue</td>
<td>Privacy is a key issue</td>
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These are big, big changes
Where does one start?
For *Systems* of Engagement, Focus on *Moments* of Engagement

• Focus on the critical few moments of engagement that determine whether you win or lose with your strategy
  • Product Leadership: Moments of adoption
  • Customer Intimacy: Moments of trust
  • Operational Excellence: Moments of risk

• Focus on the people in your organization that are present in these moments
  • Product Leadership: Field Engineering, R&D
  • Customer Intimacy: Relationship managers, Customer Support
  • Operational Excellence: Supervisors, Trouble Shooters

• Focus Systems of Engagement on meeting the needs of these people in these moments—*and hurry!*
Implications for the Industry

The Morphing of the Stack!
The Traditional Systems of Record Stack

Business Process Consulting
Desktop Environment
Transaction Applications
Business Intelligence
Document-based Collaboration

Web Application Infrastructure
Systems Management Infrastructure
Database
Operating System

Mainframes
Servers
Storage
Data Network
Microprocessors
The Morphing of the Stack

- Business Process Consulting
- Mobile Clients
- Transaction Applications
- Business Intelligence
- Session-Based Collaboration
- Interaction Applications
- Voice/Data/Video Network
- Data Network
- Database Caches
- Virtual Systems Management
- Cloud/Infrastructure Management
- In-Memory Caches
- Mainframes
- Servers
- Storage
- Microprocessors

Business Layer

Compute Processes

Compute Engines
The New Systems of Engagement Stack

Business Process Consulting
  Mobile Clients
  Interaction Applications
  Real-Time Analytics
  Session-based Collaboration

Mobile Application Infrastructure
  Public/Private Cloud Management
  In-Memory Caches
  Virtual Systems Management

Infrastructure Services

Voice/Data/Video Network
  Microprocessors
Two Different Trajectories

Data-Center-Centric Stack

- Business Process Consulting
- Desktop Environment
- Transaction Applications
- Business Intelligence
- Document-based Collaboration

Consolidated Suites for Optimization

- Mainframes
- Servers
- Storage
- Data Network
- Microprocessors

Network-Centric Stack

- Business Process Consulting
- Mobile Clients
- Interaction Applications
- Real-Time Algorithms
- Session-based Collaboration

Best of Breed for Differentiation

- Mobile Infrastructure
- Public Infrastructure
- Virtual Systems Management

- Infrastructure Services
- Voice/Data/Video Network
- Microprocessors

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Recap

• IT Today
  • Enterprise IT: Systems of Record *Consolidate & Optimize*
  • Consumer IT: Systems of Engagement *Invent & Invest*

• The Big Disconnect
  • Evolution or Revolution? *Both*
  • The Forcing Function? *The Dynamics of Global Business*

• Enterprise Systems of Engagement
  • What Will Change? *Invest in IT for the Middle. Analytics for the Edge*
  • Impact on IT Organizations? *Revolution & Evolution*
  • Impact on the IT Industry? *Another Generation of Leaders*