Operational Excellence, Customer Intimacy
Enterprise Application

Lecture 5
TIM 50  Autumn 2012
Operational Excellence, Customer Intimacy
Enterprise Application

Operational excellence

Enterprise System

Supply Chain Management System

Customer Relationship Management System

Challenges posed by enterprise applications

New cross-functional services Platforms

SCPS
SCES
PRM
ERM
HOW ENTERPRISE SYSTEMS WORK

- Finance & Accounting
  - Cash on hand
  - Accounts receivable
  - Customer credit
  - Revenue

- Sales & Marketing
  - Orders
  - Sales forecasts
  - Return requests
  - Price changes

- Centralized Database

- Human Resources
  - Hours worked
  - Labor cost
  - Job skills

- Manufacturing & Production
  - Materials
  - Production schedules
  - Shipment dates
  - Production capacity
  - Purchases
Business value of enterprise systems;

operational efficiency

Firm wide information to decision making

Enable rapid responses to customer requests

Include analytical tools for organizational performance
Supply chain:

- Upstream supply chain:

- Downstream supply chain:

Supply chain management software

Supply chain planning systems

Supply chain execution systems

**Bullwhip effect**

Information about product demand gets distorted as it passes from one entity to next across supply chain
Customer Relationship Management (CRM) Systems

Knowing the customer
  In large businesses, too many customers and too many ways customers interact with firm

Customer relationship management (CRM) systems
  Capture and integrate customer data from all over the organization
  Consolidate and analyze customer data
  Distribute customer information to various systems and customer touch points across enterprise
  Provide single enterprise view of customers
CRM systems examine customers from a multifaceted perspective. These systems use a set of integrated applications to address all aspects of the customer relationship, including customer service, sales, and marketing.
Customer Relationship Management Systems

**CRM software**

CRM packages range from niche tools to large-scale enterprise applications. More comprehensive have modules for:

- **Partner relationship management (PRM)**
  - Integrating lead generation, pricing, promotions, order configurations, and availability
  - Tools to assess partners’ performances

- **Employee relationship management (ERM)**
  - E.g. Setting objectives, employee performance management, performance-based compensation, employee training
CRM packages typically include tools for:

**Sales force automation (SFA)**
- E.g. sales prospect and contact information, and sales quote generation capabilities

**Customer service**
- E.g. assigning and managing customer service requests;
- Web-based self-service capabilities

**Marketing**
- E.g. capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail
• CRM packages typically include tools for:
  • Sales force automation (SFA)
    • E.g. sales prospect and contact information, and sales quote generation capabilities
  • Customer service
    • E.g. assigning and managing customer service requests; Web-based self-service capabilities
  • Marketing
    • E.g. capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail
Customer relationship management software provides a single point for users to manage and evaluate marketing campaigns across multiple channels, including e-mail, direct mail, telephone, the Web, and wireless messages.
The major CRM software products support business processes in sales, service, and marketing, integrating customer information from many different sources. Included are support for both the operational and analytical aspects of CRM.
CUSTOMER LOYALTY MANAGEMENT PROCESSES MAP

1. Receive service request
2. Obtain customer information
3. Customer information available?
   - Yes: Score customer
     - High value and loyalty?
       - Yes: Provide special offers and service
       - No: Route to best agent
   - No: Route to best agent
4. Resolve service issue

Customer Relationship Management Systems
Operational CRM:
  Customer-facing applications
  E.g. sales force automation, call center and customer service support, and marketing automation

Analytical CRM:
  Analyze customer data output from operational CRM applications
  Based on data warehouses populated by operational CRM systems and customer touch points
  Customer lifetime value (CLTV)
Analytical CRM uses a customer data warehouse and tools to analyze customer data collected from the firm’s customer touch points and from other sources.
Business value of CRM
- Increased customer satisfaction
- Reduced direct-marketing costs
- More effective marketing
- Lower costs for customer acquisition/retention
- Increased sales revenue

Reduce **Churn rate**
- Number of customers who stop using or purchasing products or services from a company.
- Indicator of growth or decline of firm’s customer base
Enterprise Applications:
New Opportunities and Challenges

Highly expensive to purchase and implement
$3.5 million to over $12 million

Technological changes
Business process changes
Organizational changes
Switching costs, dependence on software vendors
Data standardization, management, cleansing
Next-generation enterprise applications

Move is to make applications more flexible, Web-enabled, integrated with other systems

Enterprise suites

Software to enable CRM, SCM, and enterprise systems work together and with suppliers and client systems
Utilize Web services, SOA

Open source & on-demand solutions

Mobile compatible; Web 2.0 capabilities
Complementary analytics products
What types of companies are most likely to adopt cloud-based ERP and CRM software services? Why? What companies might not be well-suited for this type of software?

What are the advantages and disadvantages of using cloud-based enterprise applications?

What management, organization, and technology issues should be addressed in deciding whether to use a conventional ERP or CRM system versus a cloud-based version?
To bring greater value from enterprise applications

- **Enterprise solutions / suites**: Make applications more flexible, Web-enabled, integrated with other systems

- **Service platform**: Integrates multiple applications to deliver a seamless experience for all parties
  - Order-to-cash process
  - Portal software
Service platform:
Integrates multiple applications to deliver a seamless experience for all parties
E.g. Order-to-cash process

Portal software
Used to integrate information from enterprise applications and legacy systems and present it as if coming from a single source
ORDER-TO-CASH SERVICE

Order-to-cash is a composite process that integrates data from individual enterprise systems and legacy financial applications. The process must be modeled and translated into a software system using application integration tools.
Interactive Session: Organizations
Invacare Struggles with Its Enterprise System Implementation

• Read the Interactive Session and then discuss the following questions:
  • How did problems implementing the Oracle enterprise software affect Invacare’s business performance?
  • What people, organization and technology factors affected Invacare’s ERP implementation?
  • If you were Invacare’s management, what steps would you have taken to prevent these problems?
Customer Relationship Management Systems

CRM Software

- CRM packages are available with a wide spectrum of functions
  - Partner relationship management (PRM)
  - Employee relationship management (ERM)
  - Sales force automation (SFA)
  - Customer service
  - Marketing
    - Cross-selling
    - Up-selling
    - Bundling
Operational and Analytical CRM

- **Operational:** customer-facing applications such as sales force automation, call center and customer service support, and marketing automation

- **Analytical:** applications that analyze customer data output from operational CRM applications
  - Based on data warehouses populated by operational CRM systems and customer touch points
  - Customer lifetime value (CLTV)
Getting more value from enterprise applications
  • Flexibility
  • Integration with other systems
  • Enterprise suites
  • Links to customer and supplier systems
Case Study;

Information System Application

Cisco System:
Accelerating Business Transformation with IT

Text Book 2, Musacchio, pp. 145- 164
What is Information Systems?

• Application Perspective

• CASE: Cisco Systems
  – Industry characteristics:
    • Technology change fast
    • Many players: compete intensively
    • Complex environment: many technologies co-exist
    • CEO&P: “if you don't stay ahead of trends, they'll destroy everything you work for and tragically disrupt the lives of your employees.”
Cisco Systems’s Strategy

- **Vision:** to provide an end-to-end single vendor solution that provides more value as integrated set than any best-of-breed implementation from multiple vendors.

- **Goal:** to be the market leader in all of the markets in which it operates.

- **Products:**
  - A broad range of network hardware products;
  - IOS software which provides network services and enables networked applications
  - Professional services in network service design and implementation
  - Technical service and support
Cisco's Products
Cisco Systems’s Strategy

• Customer satisfaction
  • To provide complete solutions to targeted markets and to maintain close ties with the customer.

• Product leadership
  • “Cisco Power Network”

• Strategic acquisitions
  • To meet customer’s changing needs.
  • To keep up with the rapidly evolving market.

• business partnerships,
  • Computer manufacturer, software developer, reseller, system integrator, consulting company.

• Global networked business model
• Redesign its organization and business process and implemented a broad number of IT initiatives aimed at streamlining its operations
Information Systems: Application Perspective

- From Application: application in value chain
  - Enterprise Resource Planning (ERP)
  - Supply Chain Management (SCM)
  - e-business, e-commerce
  - Customer Relationship Management (CRM)
  - Knowledge Management (KM)
  - Business Intelligence (BI)
  - Office Automation (OA)
  - ......
Business-to-Business
How Cisco Enables Electronic Interactions with Sales, Manufacturing, and Service Partners

A Cisco on Cisco Case Study: Inside Cisco IT
Overview

- Challenge
  Support Cisco’s growth by automating routine transactions

- Solution
  Electronic, business-to-business (B2B) interactions with selected partners

- Results
  Cost, productivity, and relationship benefits for Cisco, the partners, and customers

- Next Steps
  Enhance B2B architecture and integrate additional processes
Challenge
Support Cisco’s Growth

- Growth = More
  - Sales orders to process
  - Product units to manufacture and deliver
  - Spare parts to track
  - Service calls to dispatch
  - Invoices to produce

- Challenge for Cisco to handle volume of manual transactions; not scalable for adding new partners

- Expensive and inefficient for large partners to use Web portals for complex sales orders
Data on the Scope of the Cisco B2B Integration as of Mid-2007

<table>
<thead>
<tr>
<th>Distributor Sales and Inventory Status</th>
<th>Sales Orders</th>
<th>Manufacturing Supply Chain and Logistics</th>
<th>Spare Parts and Service Calls</th>
<th>Finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Processes</td>
<td>15 Processes</td>
<td>10 Processes</td>
<td>18 Processes</td>
<td>5 Processes</td>
</tr>
<tr>
<td>5 Partners</td>
<td>65 Partners</td>
<td>135 Partner Channels</td>
<td>20 Partners</td>
<td>123 Partners</td>
</tr>
<tr>
<td>468,000 transactions per quarter</td>
<td>39% of total order volume</td>
<td>341,000 product work orders per quarter</td>
<td>500,000 transactions per quarter</td>
<td>Accounts payable transactions</td>
</tr>
<tr>
<td>Distributor inventory status reports in the U.S.</td>
<td>96,000 sales orders per quarter</td>
<td>Supply chain planning and forecasting</td>
<td>Integrated parts replacement and labor logistics</td>
<td>Treasury and banking transactions</td>
</tr>
<tr>
<td></td>
<td>Supplier purchase orders and invoicing</td>
<td></td>
<td>Damaged goods receiving and repair</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Service request management</td>
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Solution

B2B Integration with Selected Partners

- Automate processes across the supply chain
- Link Cisco and partner systems for automated transactions and information exchanges
- Communicate over the Internet using secure gateways and industry standards (RosettaNet, EDI, XML)
- Integrations are unique to each partner:
  - Systems involved
  - Geographic scope
  - Process complexity
  - Automation goals
Solution

**B2B: Seamless Interactions**
Between People, Processes, and Systems

- **Order Fulfillment and Supply Chain Management**
  - 100% Outsourced Manufacturing
  - 100% Outsourced Outbound Logistics

- **Order Acquisition and Management**
  - Over 85% Channels
  - Order Management

**Possible Future Offerings**
- Market to Order
- Business Intelligence
- Opportunity Management
- Many Others
Results
Advantages for Cisco, Partners, and Customers

- 50+ partners use some form of B2B integration
- 96,000 sales orders (39% of total) processed per quarter
- Benefits for Cisco and partners:
  - Lower transaction costs
  - Higher employee productivity
  - Faster product and service delivery
  - Greater of data exchanges
  - Stronger partner and customer relationships
Examples of Results Achieved by Cisco and its Partners from B2B Integration

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td>Order Processing <em>(partners)</em></td>
<td>50-60% decrease in order-processing time</td>
</tr>
<tr>
<td></td>
<td>20% reduction in calls to determine order status</td>
</tr>
<tr>
<td>Vendor and Process Management <em>(partners)</em></td>
<td>Consolidated global purchasing into a single process and system</td>
</tr>
<tr>
<td>Cost Savings <em>(partners)</em></td>
<td>2003-2006 savings reported by one partner:</td>
</tr>
<tr>
<td></td>
<td>US$4.2 million savings in employee costs</td>
</tr>
<tr>
<td></td>
<td>US$3.8 million savings in processes</td>
</tr>
<tr>
<td></td>
<td>Savings reported by another partner:</td>
</tr>
<tr>
<td></td>
<td>US$1.7 million per year savings with electronic orders (compared to cost of faxed orders)</td>
</tr>
<tr>
<td>Productivity <em>(Cisco)</em></td>
<td>IT scalability: The equivalent of 20 full-time employees built and maintained US$12 billion per year in processes</td>
</tr>
<tr>
<td>Velocity <em>(partners)</em></td>
<td>Minimum 60% reduction in cycle time</td>
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<tr>
<td></td>
<td>Eliminated dual order entry</td>
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<td>Compressed business processes from 15 to 4 steps</td>
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Next Steps
Increase Flexibility and Automation

- Enhance the resilience of the B2B integration environment
- Implement a service-oriented architecture and Web services to deliver new capabilities
- Automate additional processes for:
  - Sales channel interactions
  - Technical service management
  - Global logistics
  - Virtual manufacturing