



IIT KHARAGPUR



NPTEL ONLINE
CERTIFICATION COURSES

E-BUSINESS

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Week 3: Lecture 1

CONNECTING WITH STAKEHOLDERS

-THE ROLE OF ENTERPRISE PORTAL AND CORPORATE WEBSITE

We are going to learn

- The difference between the corporate website and enterprise portal
- Typical features of an enterprise portal
- Typical features of a corporate website
- Trend in website design

Corporate website Vs. Enterprise portal

- An ***enterprise information portal*** is a Web-based interface and integration of MIS, DSS, EIS, and other technologies that give all intranet users and selected extranet users access to a variety of internal and external business applications and services.
- ***Corporate website*** is an informational website that acts as the companies interface to the public

Enterprise portal-Internal applications

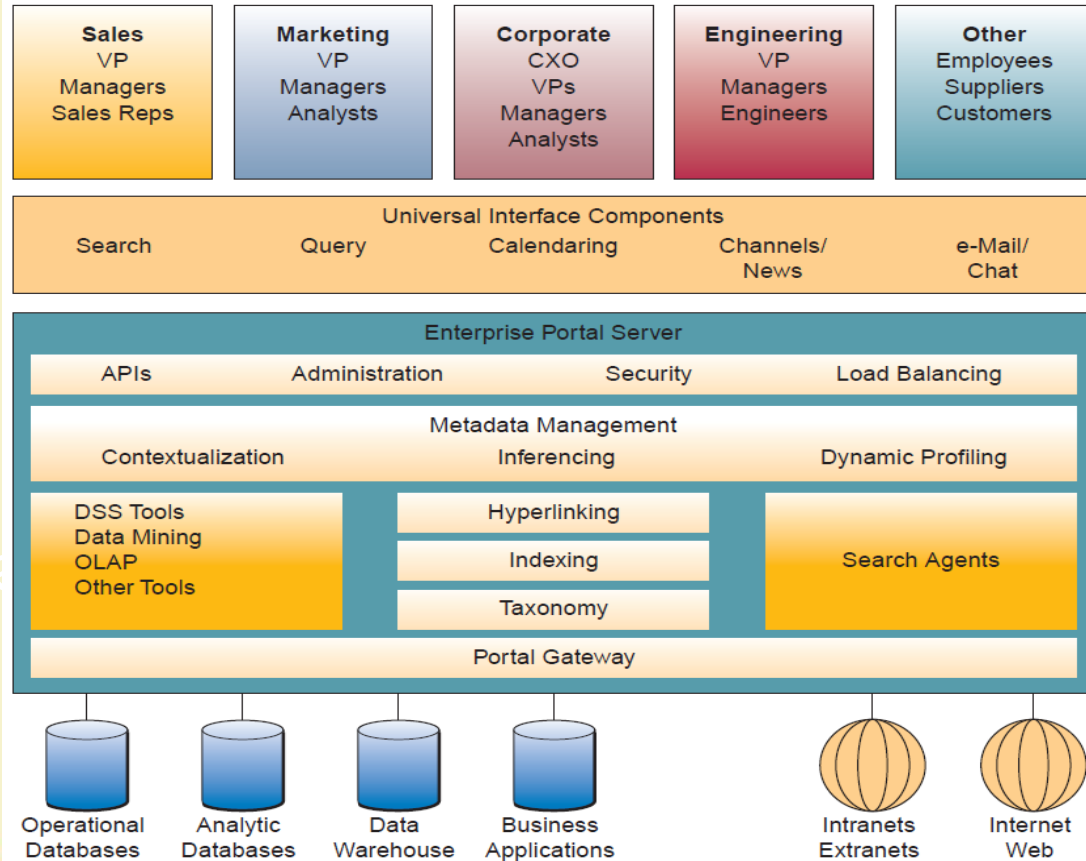
- Access to e-mail
- Project Web sites
- Discussion groups
- Human resources Web self-services
- Customer, inventory, and other corporate databases
- Decision support systems
- Knowledge management systems

Enterprise portal-External applications

- Industry, financial, and other Internet news services
- Links to industry discussion groups
- Links to customer and supplier Internet and extranet Web sites.

Components of an Enterprise portal

Enterprise information portals are typically tailored or personalized to the needs of individual business users or groups of users, giving them a ***personalized digital dashboard*** of information sources and applications



Benefits of Enterprise portal

- More specific and selective information to business users
- Easy access to key corporate Intranet Web site resources
- Direct access to industry and business news
- Access to company data for selected customers, suppliers, or business partners.
- Avoiding excessive surfing by employees across company

Corporate Website - Typical contents

- Homepage
- An "about us" section
 - A summary of company operations, history, and mission statement
- A list of the company's products and services
- A "people" section
 - with biographical information on founders, board members, and/or key executives.
 - Sometimes provides an overview of the company's overall workforce.
- A "news" section
 - containing press releases, press kits, and/or links to news articles about the company
- An "investor" section
 - describing key owners / investors of the company
- A list of key clients
 - suppliers, achievements, projects, partners, or others
- Pages of special interest groups
 - An employment section where the company lists open positions and/or tells job seekers how to apply
 - Investor pages with the annual report, business plan, current stock price, financial statements, overview of the company structure, SEC filing or other regulatory filings
 - Pages for employees, suppliers, customers, strategic partners, affiliates, etc.
- Contact information
 - Different contacts for various issues
 - Sometimes includes a feedback form by which visitors may submit messages
- A terms of use document and statement of intellectual property ownership and policies as they apply to site content
- A privacy policy

https://en.wikipedia.org/wiki/Corporate_website

Typical Design features

- A navigation bar or other means for accessing various site sections
- A unified look and feel incorporating the company logos, style sheets, and graphic images.
- Responsive design for different types of output devices, screen sizes and browsers
- Response time
- Improved navigation
- Website personalization

Corporate Website – Other features

- A splash page as an entry point that directs users to the site's home page
- Embedded search engines for within the website or external searches of the Web
- A site map
- A blog with news and commentary about the company, its products and services
- "Community" pages describing the company's environmental / sustainability, charity, corporate citizenship, and other policies as they affect the public
- A "store locator" or similar feature used to find nearby retail locations of the company or where the company's products or services can be found
- A "downloads" or "media" section for users to obtain web tools, free or trial software, software patches, company demos, promotional material, and the like
- A calendar or events section
- A "links" page with hyperlinks to consumer-oriented or other websites, or information about specific brands and subsidiaries of the company
- A FAQ section

Web analytics

- The measurement, collection, analysis and reporting of web usage data for purposes of understanding and optimizing web design
 - About Navigation
 - About Content
 - About Users

Few metrics

- Hits
- Page Views
- Visits/Sessions
- Click Paths
- Traffic sources

Tools

- Click stream analysis
- Google analytics
 - Page tagging

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Week 3: Lecture 2

E-PROCUREMENT

REENGINEERING THE TRADITIONAL PROCUREMENT PROCESS



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We are going to learn

- What e-procurement is
- Benefits of e-procurement
- Traditional procurement process
- Reengineering of the traditional process using ICT

Procurement, Purchasing and Sourcing

- Procurement is the systematic process of deciding what, when and how much to purchase; the act of purchasing it; and the process of ensuring that what is required is received on time in the quantity and quality specified.

(David N. Burt, Proactive Procurement – the key to increased profits, productivity, and quality, Prentice-Hall INC., N.J., 1984)

Procurement, Purchasing and Sourcing

- Purchasing is the act of buying materials and services of the right quality, right quantity, at the right price from the right source, and at the right time.

(L. Lee, Purchasing and materials management, McGraw Hill, 1971)

- Sourcing is the act of finding, evaluating and engaging suppliers of goods and services.

(L. Lee, Purchasing and materials management, McGraw Hill, 1971)

E-procurement

- Online procurement (e-procurement) is a technology solution to facilitate corporate buying using the Internet and other Information and Communication Technologies (ICT)

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Benefits of e-procurement

- Reduced administrative costs
- Shortened order fulfillment cycle
- Lowered inventory levels
- Lowered price paid for goods
- Increased technological collaboration and planning with business partners

General Electric's (GE's) Trading Process Network (TPN)

- The buyer posts a request for proposal on the Internet for access by prequalified suppliers.
- The suppliers download the request and submit bids electronically.
- The buyer evaluates the bids, negotiates online, and places the order with the lowest bidder.
- The system also facilitates transaction processing
 - Ex. automatically reconciling purchase orders with invoices as part of the payment process.
- TPN also manages contract agreement components of the purchasing process.

Benefits that GE has realized

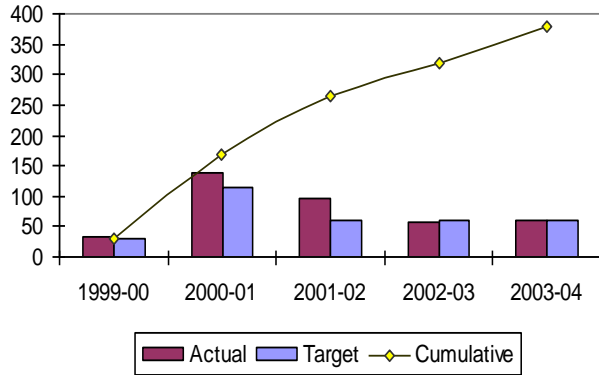
- The transaction cost dropped by 30%.
- Reduced material cost
 - In the range of 5% to 20% by exploring unknown supplier base
 - In the range of 5% to 20% by organization-wide spend analysis
- Time saved by 6 to 8 days per month

Different e-Procurement solutions at Tata Steel

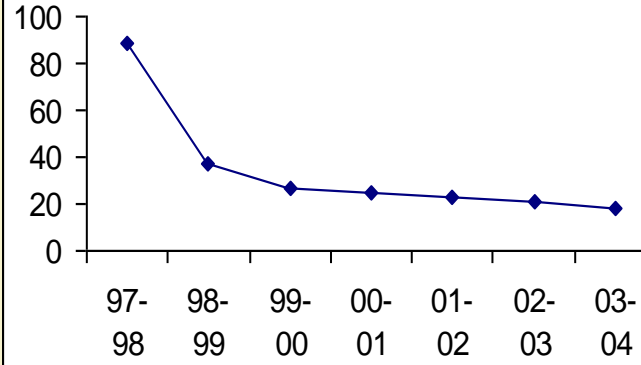
- Metaljunction.com – an e-market for steel industry sponsored by a consortium of SAIL and Tata Steel
- An internal e-Bidding solution
- E-negotiation solution
- Online Stock Information System for VMI suppliers

Benefits that Tata Steel realized

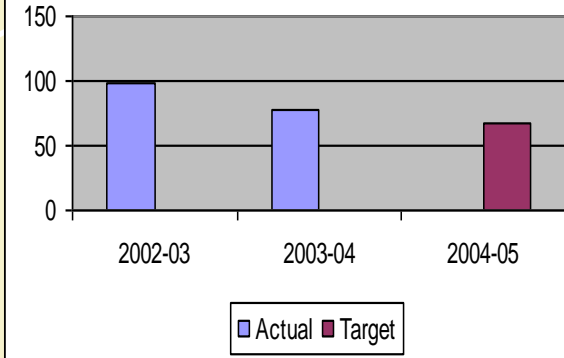
Strategic Sourcing Saving (Rs Crore)



Average Order Lead Time



Inventory (Rs. Crore)



The traditional purchasing process



Purchasing Department Activities Reengineered using ICT

Spend Analysis

- Data aggregation
- Sourcing strategy

Sourcing

- Catalog buying / Contract negotiation
- RFx,
- Supplier selection
- Vendor Management

Tactical Procurement

- Requisitioning
- Approval workflow
- Supplier enablement
- Catalog Management

Settlement

- Purchase ordering
- Invoicing
- Payables
- Receivables

(Robert Guttman, Jayant Kalagnanam, Rakesh Mohan, and Moninder Singh Strategic Sourcing and Procurement In Chae An and Hansjoerg Fromm(eds.)Supply chain management on demand, Springer 2006)

What is reengineered?

- Many new activities, possible because of ICT, appear in the reengineered process
- Unstructured decision making activities are not present as specific activities
- Structured decision making activities are grouped together in different functional categories and automated
- Transaction processing activities (not involving and decision making components) are grouped together and automated

E-Procurement Models

E-Procurement model	Description
E-Procurement software	<ul style="list-style-type: none">• Any Internet-based software application that enables employees to purchase goods from approved electronic catalogues in accordance with company buying rules, while capturing necessary purchasing data in the process.• Can be coupled with the organization's information system
Internet market exchanges	<ul style="list-style-type: none">• Web sites bring multiple buyers and sellers together in one central virtual market space• External to the organizations information system
Internet B2B auctions	<ul style="list-style-type: none">• Internet B2B auctions• Expanded base of potential suppliers from around the world..• Can be coupled with the organization's information system
Internet purchasing consortia	<ul style="list-style-type: none">• Gathers the purchasing power of many buyers to negotiate more aggressive discounts.• External to the organizations information system

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Week 3: Lecture 3

E-PROCUREMENT

-NEW PARADIGMS IN THE PROCUREMENT PROCESS



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We are going to learn

- Spend analysis
- Sourcing solutions
- Contract management

Spend Analysis

- **Spend analysis** is the process of collecting, cleansing, classifying and analyzing expenditure data with the purpose of reducing procurement costs, improving efficiency and monitoring compliance. Spend analysis can provide answers to such questions as:
 - What was bought
 - When was it bought
 - With whom did we buy it
 - How much did we pay for it

Spend Analysis

- Besides aiding in purchasing, it can also help in other areas of business such as inventory management, budgeting and planning, and product development.
- Spend analysis is often viewed as part of a larger domain known as *spend management* which incorporates spend analysis, commodity management and *strategic sourcing*.

Spend Analysis

- It is a strategic activity that helps developing an aggregate view of the procurement spend across the organization using the transaction data.
- The aggregate spend by commodity, supplier, plant etc provides a basis for identifying cost saving strategies.
 - Ex. to find commodity classes or plants where reducing suppliers and increasing volume to a small number of (preferred) suppliers might allow for better price negotiations.
- It helps in deciding on the sourcing strategy

Functional requirements for spend analysis

- **Data Cleansing/Scrubbing**
 - Towards aggregating data from across the organization
 - Manual or semiautomatic
 - Text similarity
 - Machine learning
 - Ex. Supplier normalization, commodity mapping, and catalog buying
- **Data Warehousing**
 - an integrated view of all the relevant data from disparate sources is critical for generate various views of aggregated spend and report generation.
- **Analytics**
 - Data mining
 - Optimization
- Example of spend analysis software
 - Ariba (<http://www.ariba.com/solutions/buy/spend-analysis>)
 - Ketera deem (<https://www.deem.com/spend>)

Selecting Sourcing Strategy

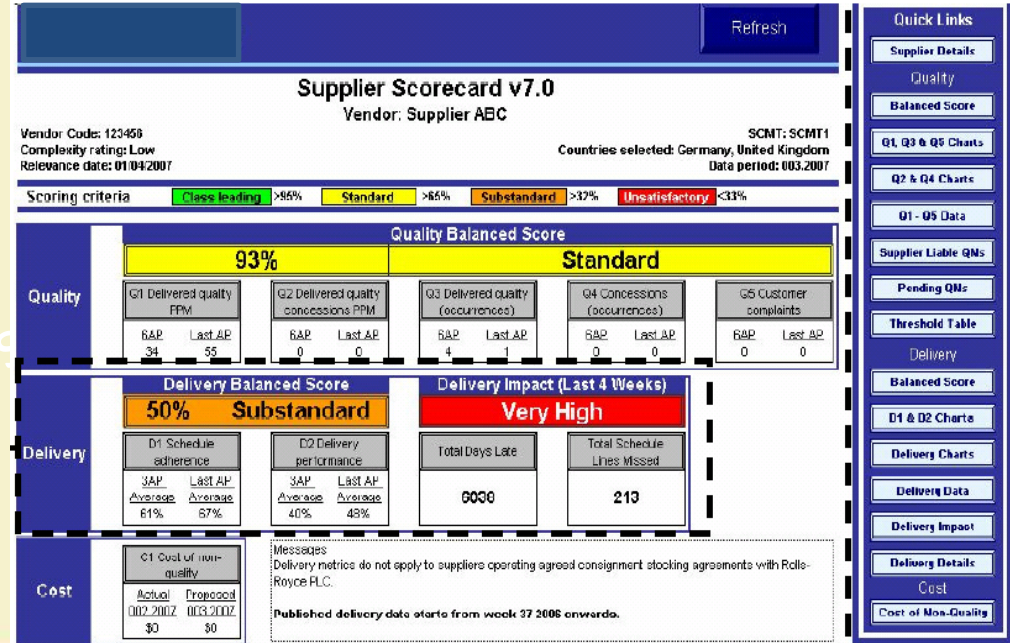
- Evaluate different sourcing options for each commodity class or other dimension and identify the potential cost savings
- Supplier Scorecarding
 - analyze the supplier performance against a set of company's strategic metrics.
 - Identify top suppliers to whom future allocation awards would likely to go (despite potentially having higher prices)
 - Identify suppliers who would need to be more aggressively managed as part of the “supplier relationship” activities

Supplier Scorecarding

- A supplier scorecard reflect the performance of an organization's key suppliers.
- Fields in a scorecard may include:
 - financial spending details with each supplier,
 - e-transactions to date,
 - supplier performance (quality of goods, service, logistics ability, etc.), and
 - payment terms.
- Supplier Evaluation Dashboard
- Continuous monitoring
- Making the supplier aware of his performance
 - Links can be provided

Minimum typical evaluations to consider in a Scorecard

- Quality
- Service
- Delivery



Sourcing Solutions

- Catalog buying (Supplier Driven):
 - Internet-based software application
 - enables employees to purchase goods from approved electronic catalogues in accordance with company buying rules
 - captures necessary purchasing data in the process
 - Ex. Ariba (Ariba-punch-out)

Sourcing Solutions

- Contract Pricing (Buyer Driven/Through third party service providers):
 - Based on negotiation technique/ Reverse auction
 - Core Ingredients of Contract Pricing
 - Solicitation (RFx)
 - Protocol for price discovery
 - Contracts
 - Types of market places by third party
 - Vertical: Industry specific, Ex. Metal junction
 - Horizontal: No specific industry focus, Ex. Thomas Register

Solicitation

- Solicitation is the process of seeking information, proposals, and quotations from suppliers. While solicitations can be verbal, quality and consistency is enhanced if the process is formalized as a written or electronic document.

Request For Information

RFI

An open enquiry that spans the market seeking broad data and understanding

Request For Quotation

RFQ

An opportunity for potential suppliers to competitively cost the final chosen solution or solutions

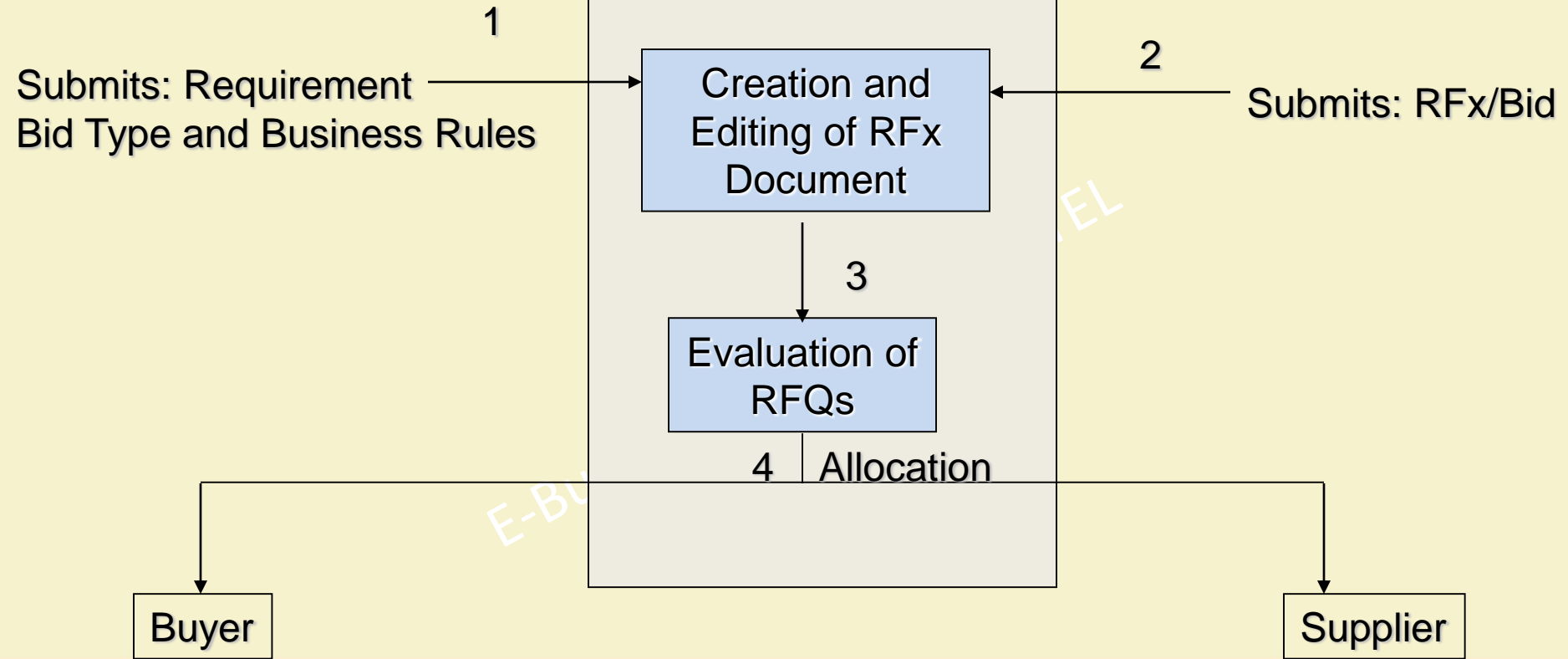
Request For Proposal

RFP

Based on the RFI, a business requirements-based request for specific solutions to the sourcing problem

RFx for Contract negotiation

- The RFI (Request for Information), RFQ (Request for Quotation), and RFP (Request for Proposal) – collectively referred to as RFx
- Each represents a document and a means for a buyer to specify the requirements of a purchase along multiple dimensions from multiple suppliers.
- RFx applications support a common set of activities such as creation and editing of RFx documents that mimics the paper based counterpart.
- They have the provision to specify business rules
- They also provide decision making capabilities for creation and evaluation of complex RFQs and bids



Characteristics of *RFx* Systems

- A sourcing platform should make the RFx process as easy and straightforward as possible for all of the parties involved.
- It should also be versatile enough to be used for both goods and services, and for both direct and indirect spend categories.
- It should also support a wide range of RFx types and sizes, from simple RFIs to complex RFPs.

Formats and settings for reverse auction bids

- Basic settings
 - multiple quantities of a line item
 - multiple line items
 - start and reserve prices
 - partial quantity bids and award allocations
 - bundled bids

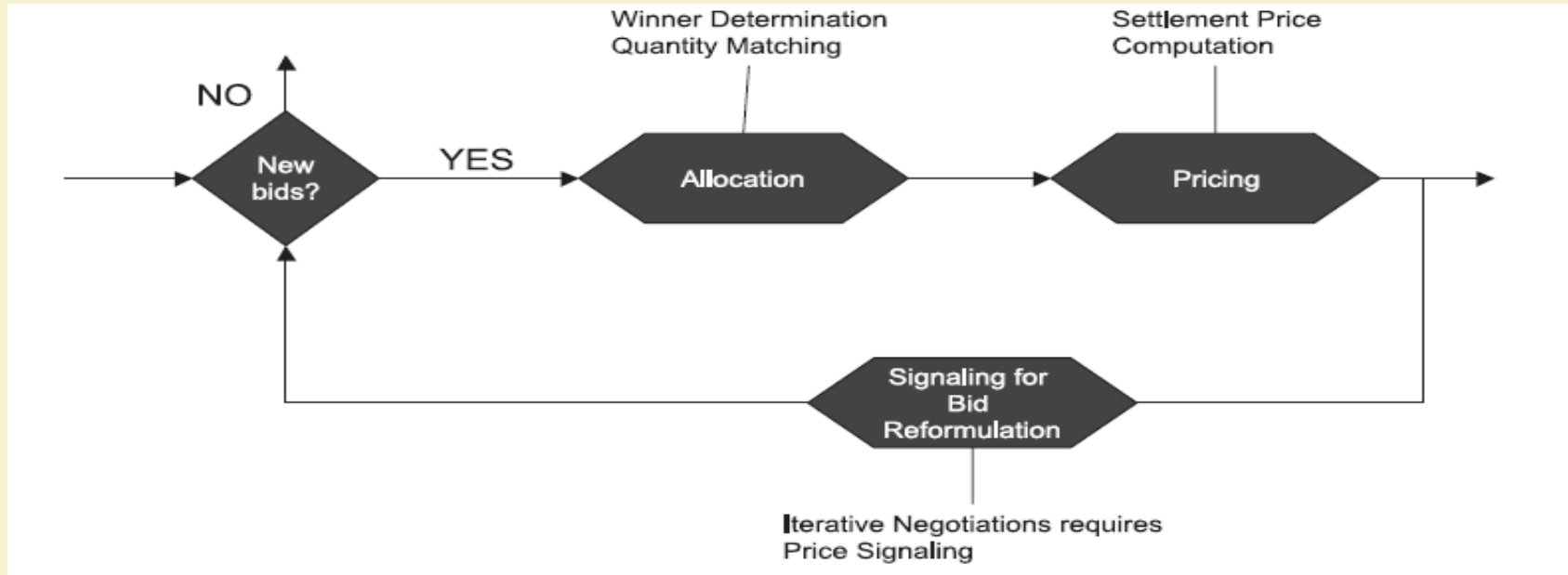
Formats and settings for reverse auction bids

- Advanced
 - Combinatorial Auction – allows suppliers to mix bundled bids along with un-bundled bids
 - Volume Discount Auction – allows suppliers to establish price discounts at certain quantities
 - Multi-attribute Reverse Auction – the winner(s) is determined by a score (rather than just price) calculated using the buyer's weights and preferences for price, quantity, and any number of other attributes.

Protocol for price discovery

- Single round price discovery
 - RFQs are often used in a single round process that is similar to a one shot sealed bid auction where the winners are selected (based on the recommendations of the bid evaluation engine) once all the bids are in.
 - Also called online tendering
- Multiple round price discovery
 - In a price negotiation context, it is often desirable to have a multiround process where after each round the suppliers are allowed to reformulate their bids based on information about the winning bids (more like based on feedback from the auctioneer).
 - Also called reverse auctions

Multiple round price discovery



Process Flow for Iterative Auctions

Contract Management

- Contracts are legal documents containing price of the item(s) to be procured, and other terms and conditions.
- Once executed, these contracts are meant to be used to procure the contracted line items (perhaps via a procurement system) using the negotiated prices and terms
- A sourcing platform should provide a means to generate a contract based on its preceding RFx and auction negotiations, support contract negotiations, and monitor compliance to the contracts' business commitments over time

State-of-the-art of contract mgmt s/w

- What they do
 - An alert notification is sent when a contract is soon to expire.
 - The buyer's purchase volume commitments can be monitored with alert notifications sent if there is danger of buying under the minimum quantity within the designated time period.
 - Notifications can be sent alerting the buyer and/or supplier of a supplier's violation of a delivery commitment.
- What they don't do
 - The contract commitments to be monitored must be manually selected out of the contract's negotiated legalese into a structure easier to analysis.
 - The business process data and raw transaction data - needed to assess whether commitments are being fulfilled or violated is also captured manually

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Week 3: Lecture 4

E-PROCUREMENT

—E-PROCUREMENT IMPLEMENTATION ISSUES AND RISKS



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We are going to learn

- Implementation scenarios
- Process Risk
- Barriers to adoption

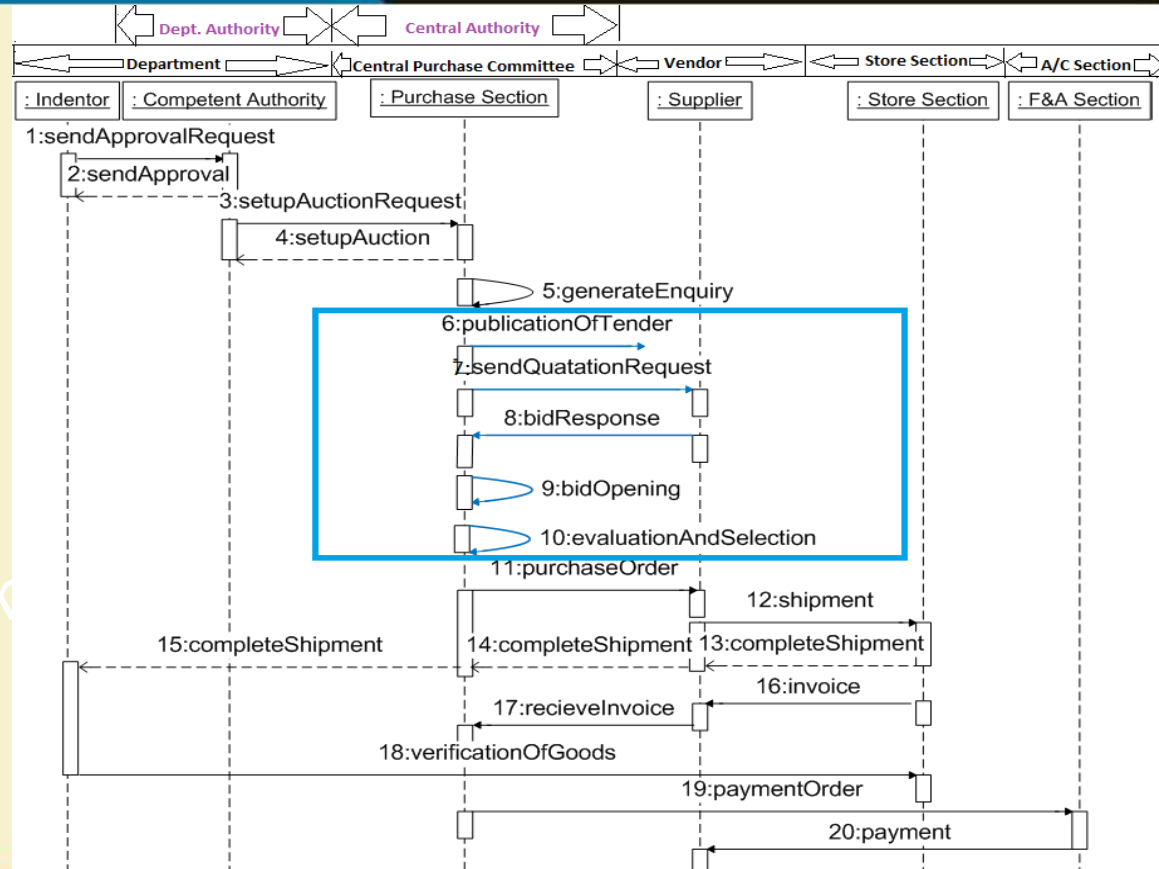
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E-Procurement Models

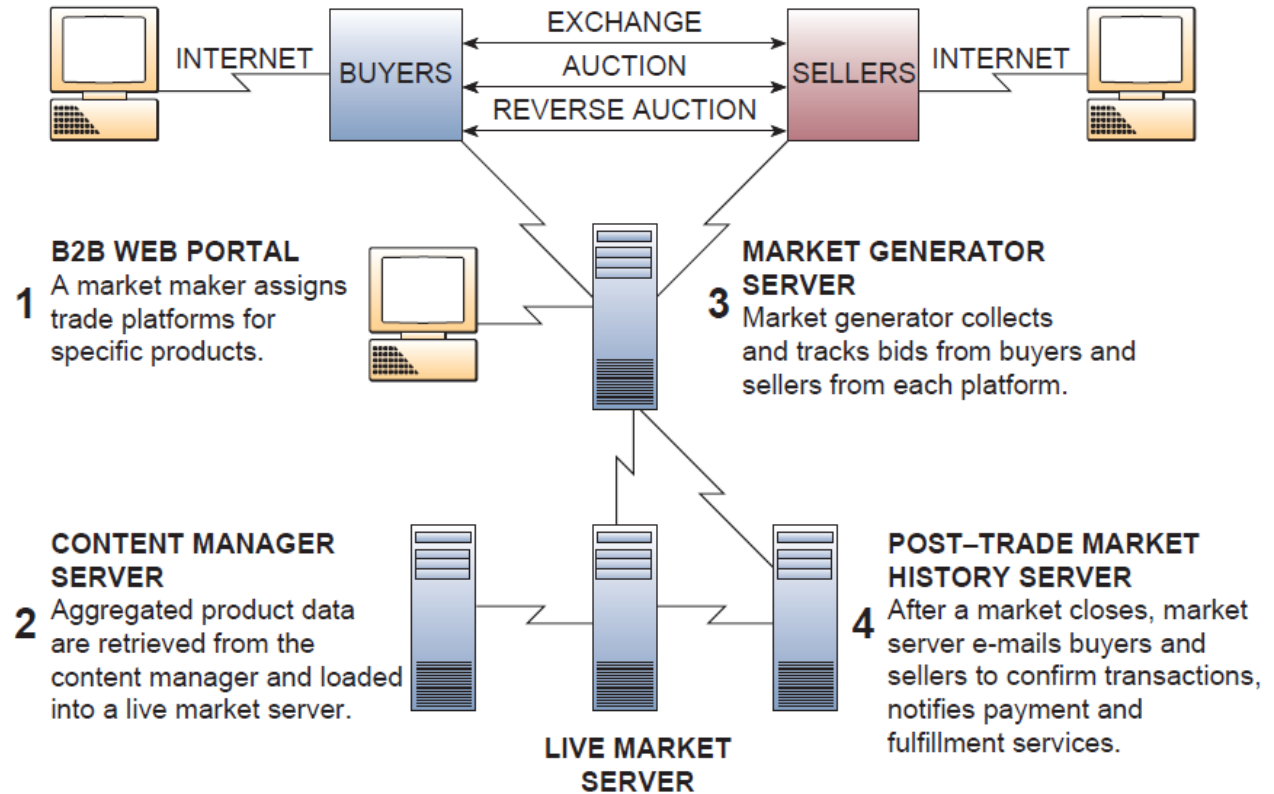
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Automating the tendering process of a typical organization

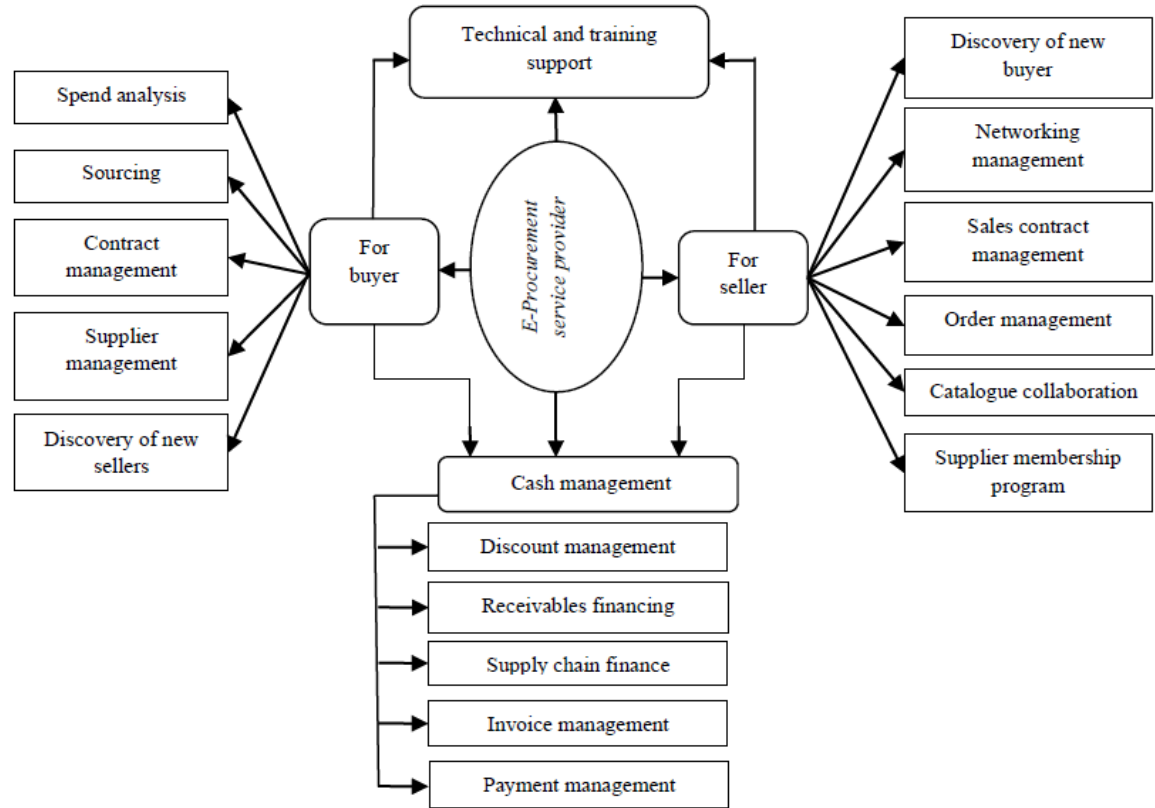


E-procurement through

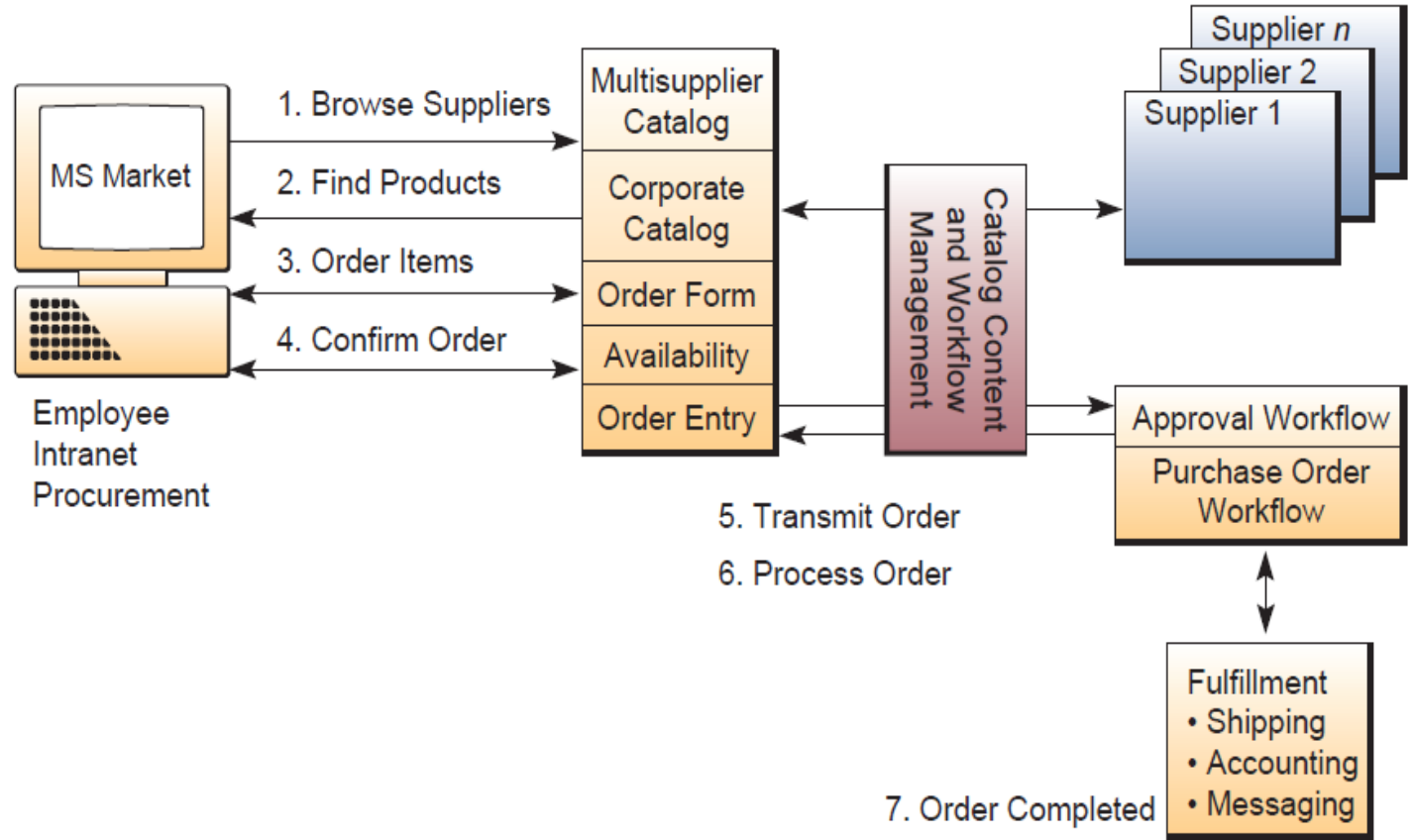
- Internet market exchanges
- Internet B2B auctions
- Internet purchasing consortia



E-procurement through third party service providers



Procurement through e-catalogues



Risks Associated with e-Procurement Technologies

- Internal business risks
- External business risks
- Technology risks
- Process risks

Internal business risks

- Availability of appropriate resources for successful implementation
- Integration with the existing information infrastructure.
- Significant investments

External business risks

- Cooperation of the suppliers
 - Investment in technology is also required by them
 - No guarantee on the return on investment
- E-catalogues in the required formats
 - reflecting custom pricing and/or special contractual agreements
 - Regular update
- Buyer-supplier relationship

Technology risks

- Lack of clear understanding of which e-procurement technologies best suit the needs of each company
- Lack of a widely accepted solution for integration of different e-procurement software across the supply chain
- Lack of clear and open standards that would facilitate inter-organization e-procurement technologies

Process risks

- Organizations must be confident, for example, that unauthorized actions will not disrupt production or other supply chain activities when committing to e-procurement technologies.
- Challenge for the e-procurement technology adoption is to provide evidence to non-users that by using these technologies
 - They do not undermine control, security, or privacy requirements;
 - They are not so technically complex that organizations without a sufficient technology skill set cannot use them
 - The new business model provides the right incentives to supply chain constituencies to effectively use these technologies.

Most Frequently Identified Barriers to E-Procurement Technologies Utilization

E Procurement Software

- Problems integrating with existing system
- Lack of common standard for e-commerce software development
- Lack of suppliers' accessibility to the organization's e-procurement system and/or lack of supplier investment in catalog development

Internet Exchanges

- Not enough suppliers to create a liquid marketplace
- Suppliers reluctance to participate in selling environments where preeminent focus is on price
- Supplier's reluctance to participate because control is lost over the presentation of brand name and product features.

Most Frequently Identified Barriers to E-Procurement Technologies Utilization

E-Auctions

- Organizational discomfort with auctions, as opposed to honoring commitment to supplier partnering and consolidation.
- Downward price pressure on vendors resulting in diminished customer service or quality.
- Inability to identify potential items for auction.

Purchasing consortia

- Pricing is not significantly better than available without consortia.
- Getting sufficient number of vendors into the process.
- Ensuring conformance to state laws and regulations

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Week 3: Lecture 5

CUSTOMER RELATIONSHIP MANAGEMENT

We are going to learn

- What is customer relationship management
- Major application clusters
- Causes of CRM failure
- Trends in CRM

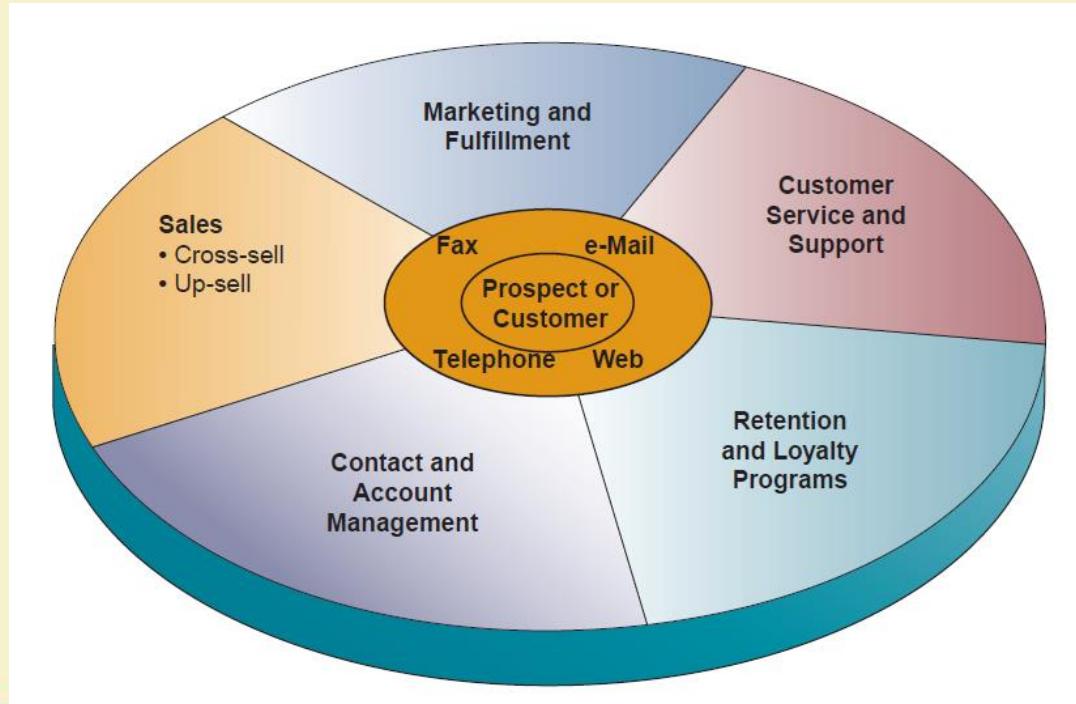
Customer relationship management

- Customer relationship management (CRM) focuses on acquiring and retaining profitable customers via marketing, sales, and service processes.

Purpose of CRM

- Managing the full range of the customer relationship involves two related objectives:
 - to provide the organization and all of its customer-facing employees with a single, complete view of every customer at every touchpoint and across all channels;
 - to provide the customer with a single, complete view of the company and its extended channels .

Major application clusters in CRM



Contact and Account Management

- Captures and tracks relevant data about every past and planned contact with prospects and customers, as well as other business and life cycle events of customers.
- Information from all customer touch points, such as telephone, fax, e-mail, the company's Web site, retail stores, kiosks, and personal contact.
- Stores the data in a common customer database and makes it available throughout the company

Sales

- Cross-selling
 - a customer of one product or service may be interested in purchasing a related product or service
- Up-selling
 - Selling a new or existing customer a better product
- Real-time access to a single common view of the customer
 - Checks on all aspects of a customer's account status and history before scheduling their sales calls.
 - Alerts a salesperson of unresolved service, delivery, or payment problems that could be resolved through a personal contact with a customer.

Marketing and Fulfillment

- Direct marketing campaigns by automatic identification of leads for targeted marketing
- Scheduling and tracking direct marketing mailings
- Captures and manages prospect and customer response data in the CRM database,
- Analyze the customer and business value of a company's direct marketing campaigns.
- Fulfillment of prospect and customer responses and requests by quickly scheduling sales contacts and providing appropriate information on products and services to them

Customer Service and Support

- Real-time access to the common customer database to service personnel
- Helps to create, assign, and manage requests for service by customers.
 - *Call center* software
 - Routing calls based on skills of the service personal
 - *Help desk* software
 - Providing relevant service data and suggestions for resolving problems.
 - *Web-based self-service*
 - Personalized support information
 - Option to receive further assistance through online or by phone

Retention and Loyalty Programs

- Helps to identify, reward, and market to their most loyal and profitable customers.
 - data mining tools and other analytical tools

Three phases of CRM and ICT support

- **Acquire**

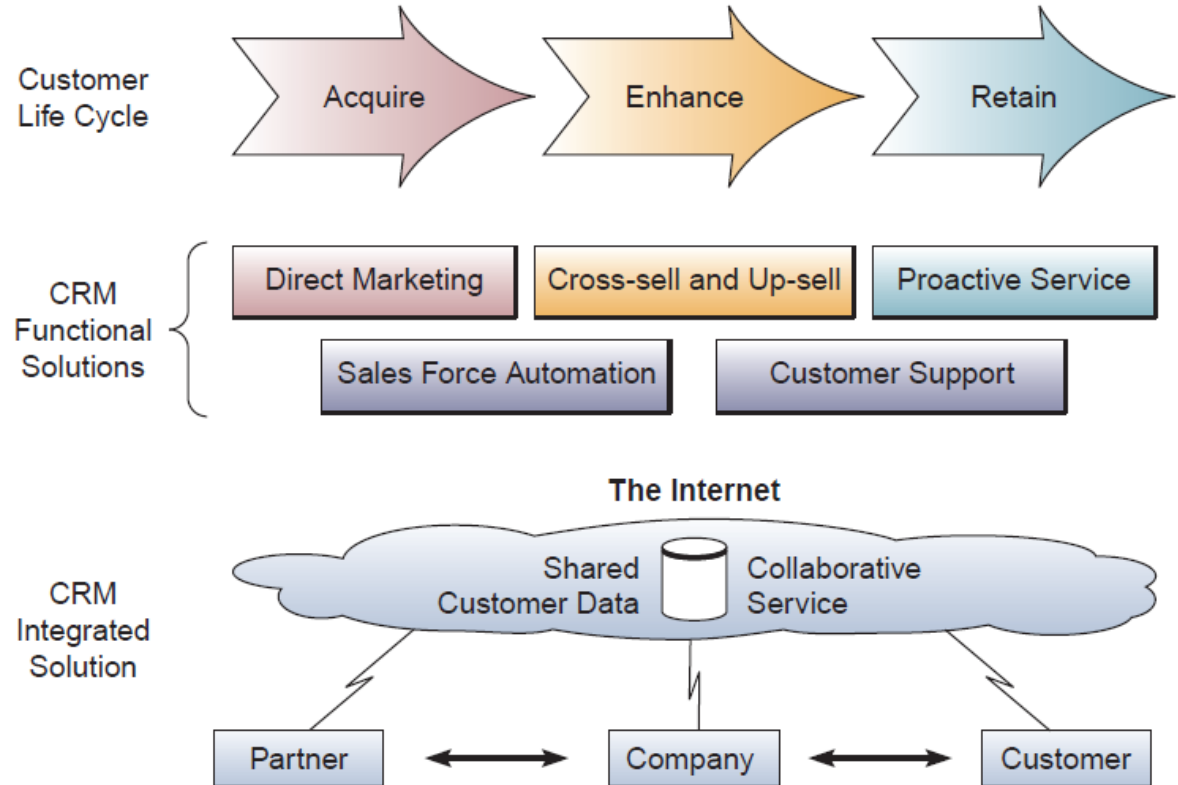
- Getting new customers

- **Enhance**

- Supporting existing customers

- **Retain**

- Making the customer loyal



Causes of CRM failure

- Lack of senior management sponsorship
- Improper change management
- Elongated projects that take on too much, too fast
- Lack of or poor integration between CRM and core business systems
- Lack of end-user incentives leading to poor user adoption rates

Trends -Operational CRM

- Supports customer interaction with greater convenience through a variety of channels, including phone, fax, e-mail, chat, and mobile devices
- Synchronizes customer interactions consistently across all channels
- Makes the company easier to do business with

Trends - Analytical CRM

- Extracts in-depth customer history, preferences, and profitability information from data warehouse and other databases
- Allows to analyze, predict, and derive customer value and behavior and forecast demand
- Allows to approach the customers with relevant information and offers that are tailored to their needs

Trends - Collaborative CRM

- Enables easy collaboration with customers, suppliers, and partners
- Improves efficiency and integration throughout the supply chain
- Allows greater responsiveness to customer needs through sourcing of products and services outside of the enterprise

Portal-Based CRM

- Provides all users with the tools and information that fit their individual roles and preferences
- Empowers all employees to respond to customer demands more quickly and become truly customer-focused
- Provides the capability to instantly access, link, and use all internal and external customer information

Thank You!!

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