Enterprise Information Systems

Prof. Priti Srinivas Sajja

Department of Computer Science, Sardar Patel University

URL: http://priti sajja.info

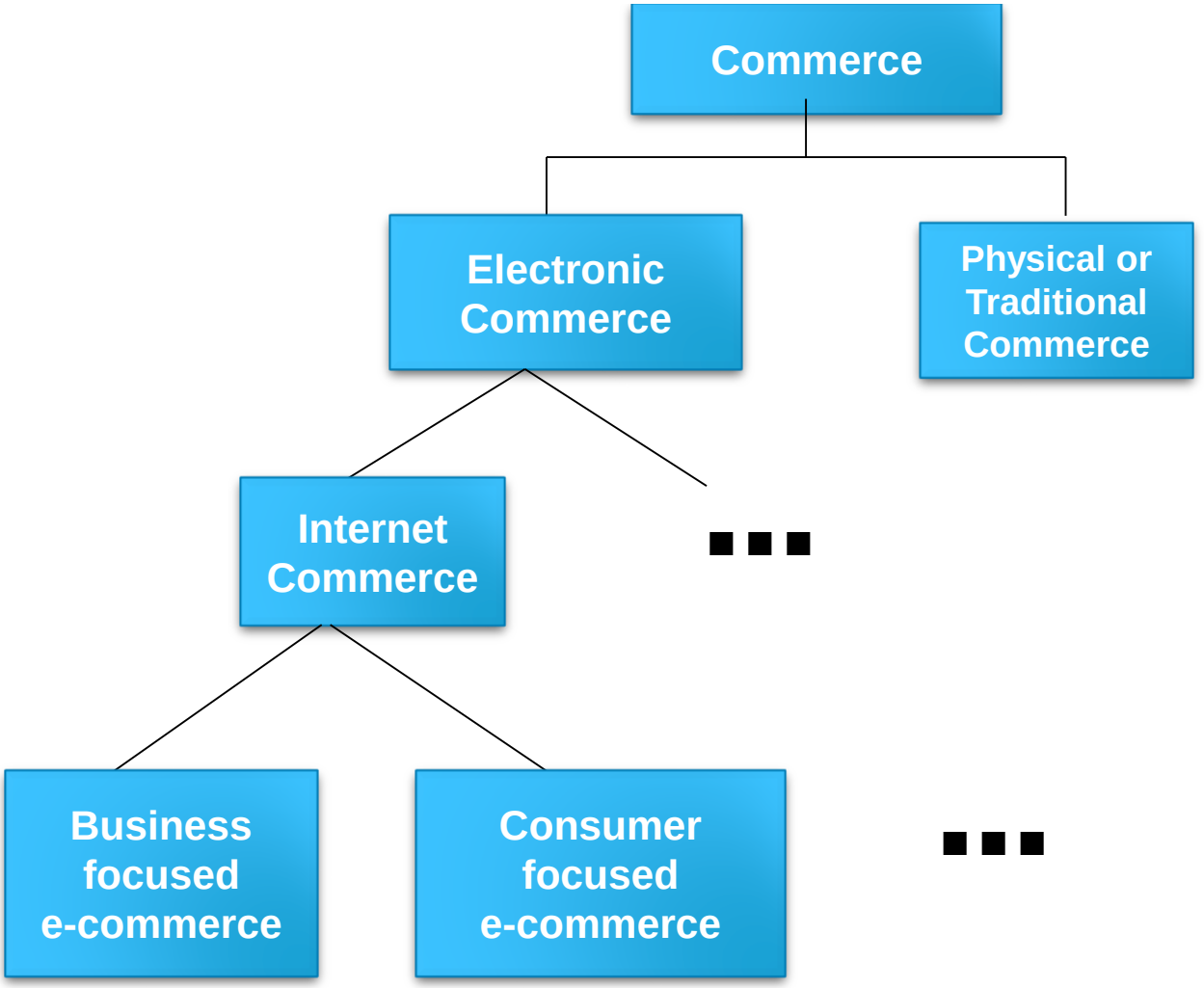
UNIT 4

ELECTRONIC COMMERCE

- E-Commerce is the second big application next to ERP.
- It essentially deals with **buying and selling** of goods.
- With the advent of Internet and web technology, E-commerce today covers an **entire commercial scope** online including design and developing, marketing, selling, delivering, servicing, and paying for goods.
- Some E-commerce applications **add order tracking as a feature** for customer to know the delivery status of order.

ECOMMERCE

Activity of buying and selling



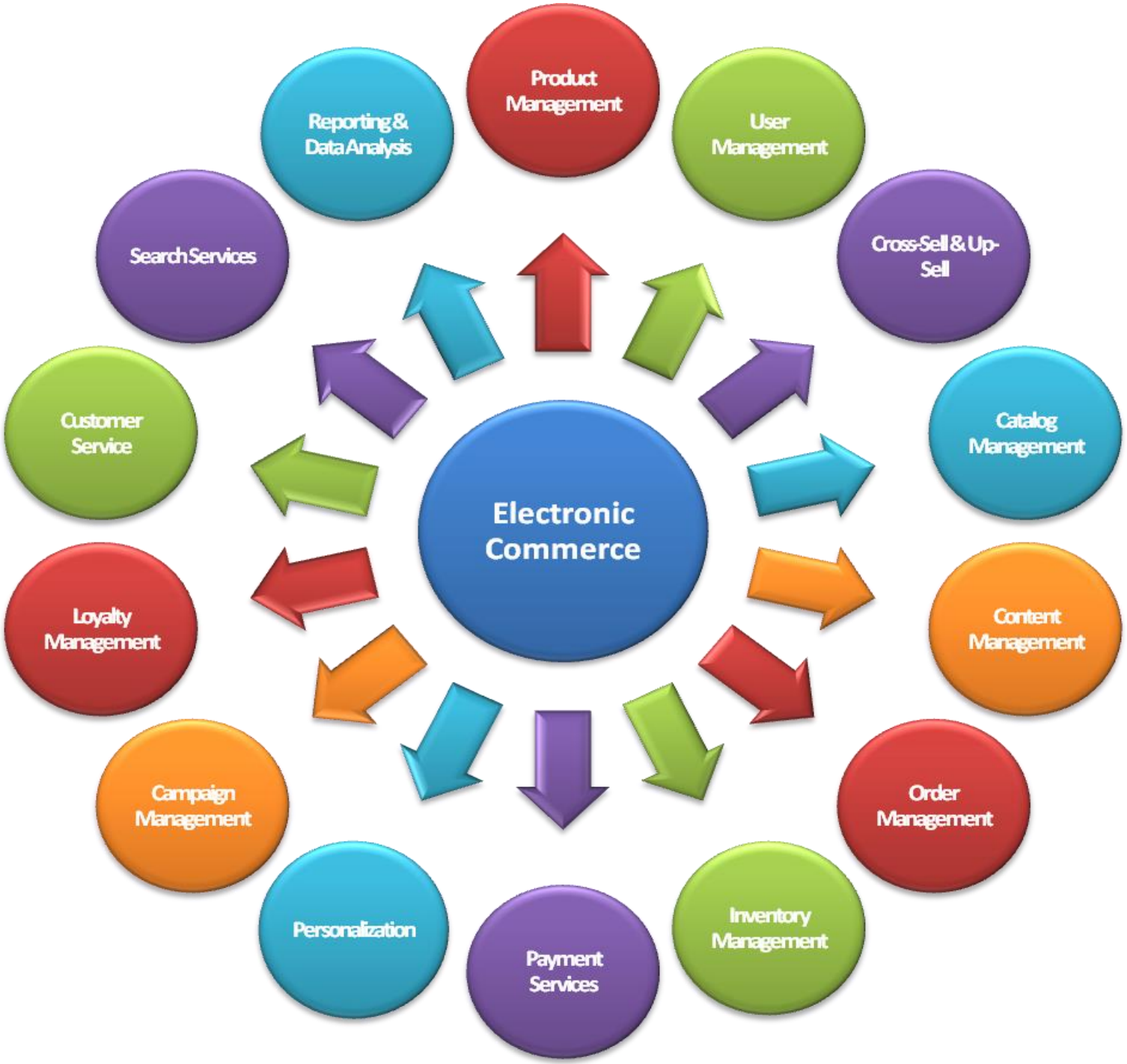
ECOMMERCE

- e-Commerce is defined as **Electronic Commerce.**
- It is the process of **buying, transferring, or exchanging products, services, and/or information via computer networks/Internet.**
- It uses **modern ICT** such as **Internet, Web and Mobiles** using methods such as
  - Electronic Data Exchange (EDI)
  - Electronic Mail (e-mail)
  - Electronic Bulletin Boards
  - Electronic Fund Transfer (EFT)
  - Other Network-based Technologies

ECOMMERCE

www.commercegurus.com

- e-Commerce began in the 1970s.
- The first documented online sale is in **1994→ a CD**
- It is so effective at **reducing costs** and **improving efficiency** that an estimated **95% of Fortune 1,000 companies use** it.


Electronic Commerce
Product Management
User Management
Cross-Sell & Up-Sell
Catalog Management
Content Management
Order Management
Inventory Management
Payment Services
Personalization
Campaign Management
Loyalty Management
Customer Service
Search Services
Reporting & Data Analysis

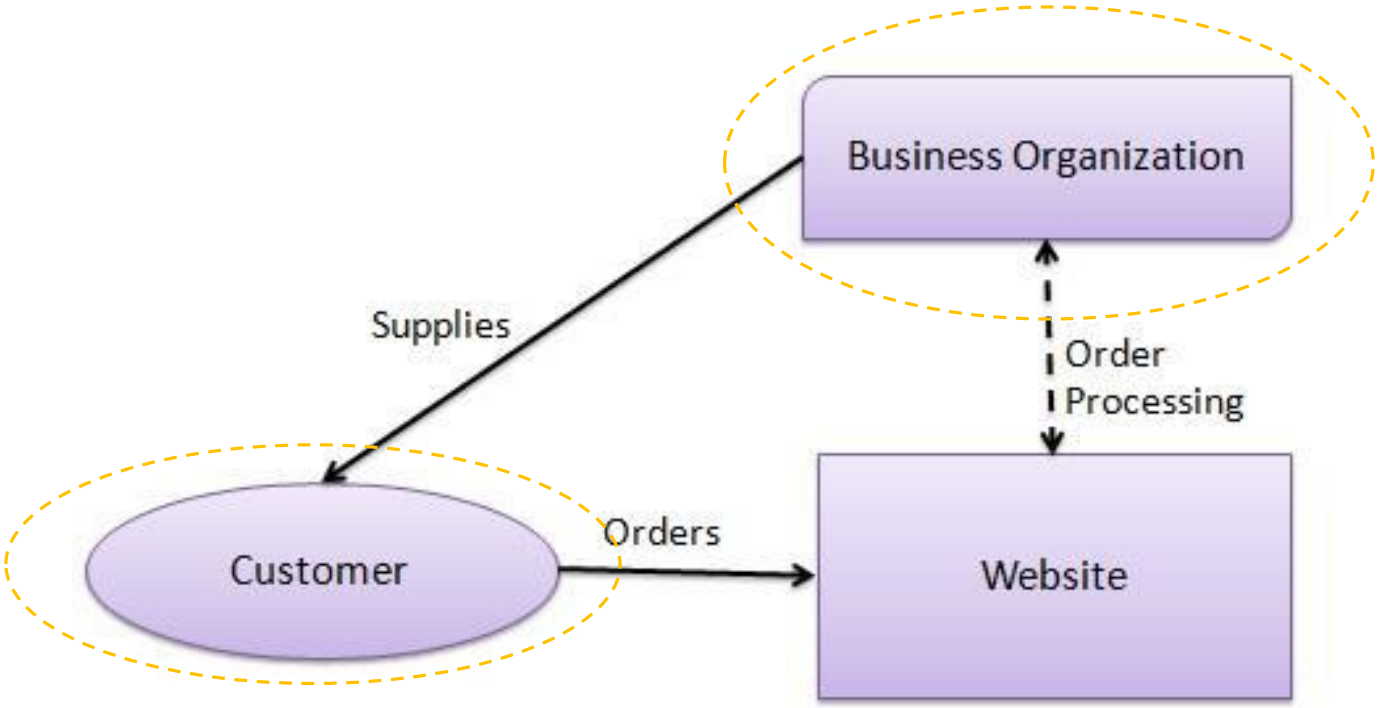
Enterprise Resource Planning (**ERP**) is the **integrated management of core business processes**, often in real-time and mediated by software and technology.

E-Commerce process models can be viewed in four ways and categories.

- B2C: Business Organization to Customer
- B2B: Business Organization to Business
- C2B: Customer to Business Organization
- C2C: Customer to Customer

B2C MODEL

BUSINESS - TO - CONSUMER (B2C)

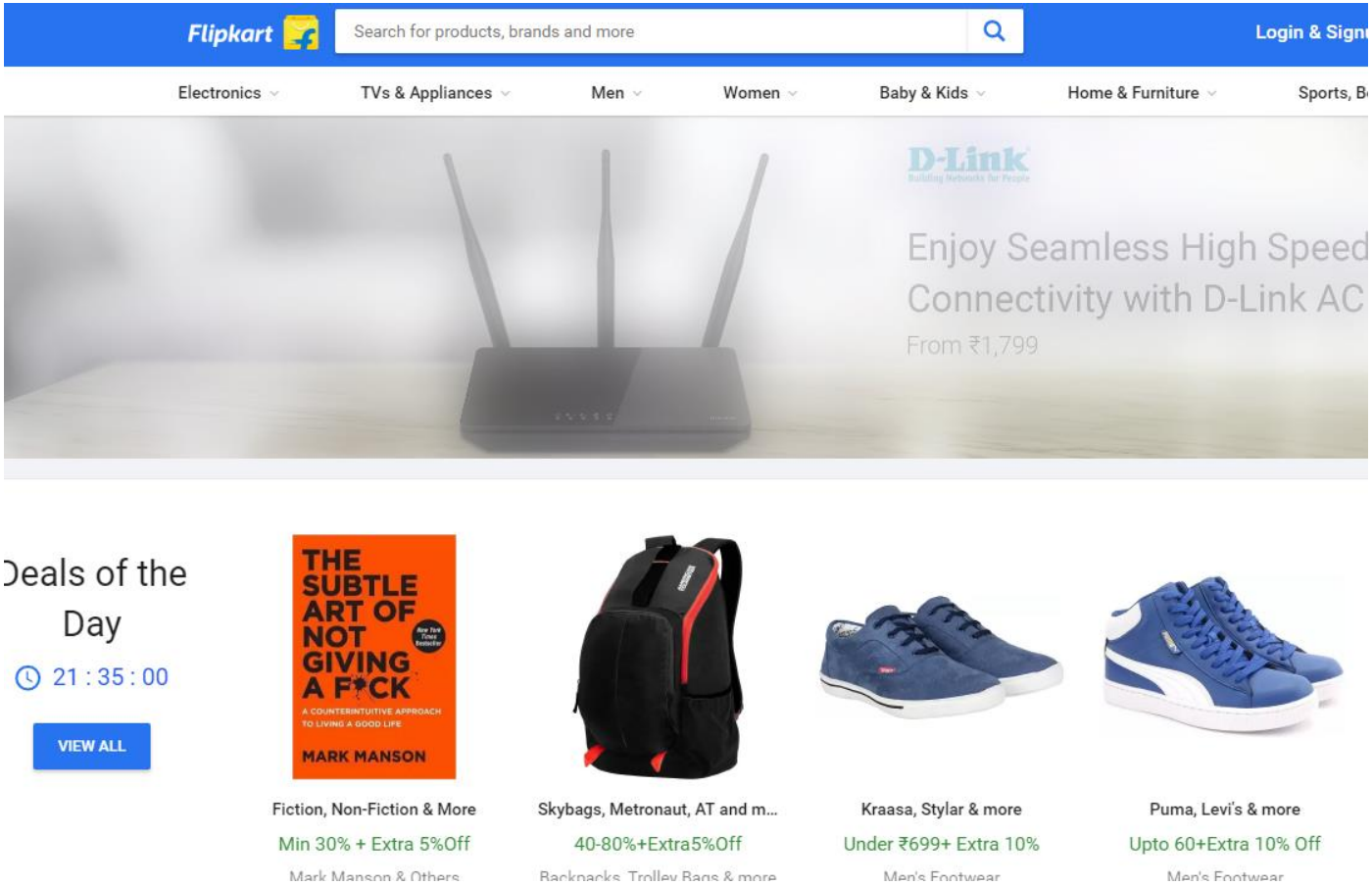


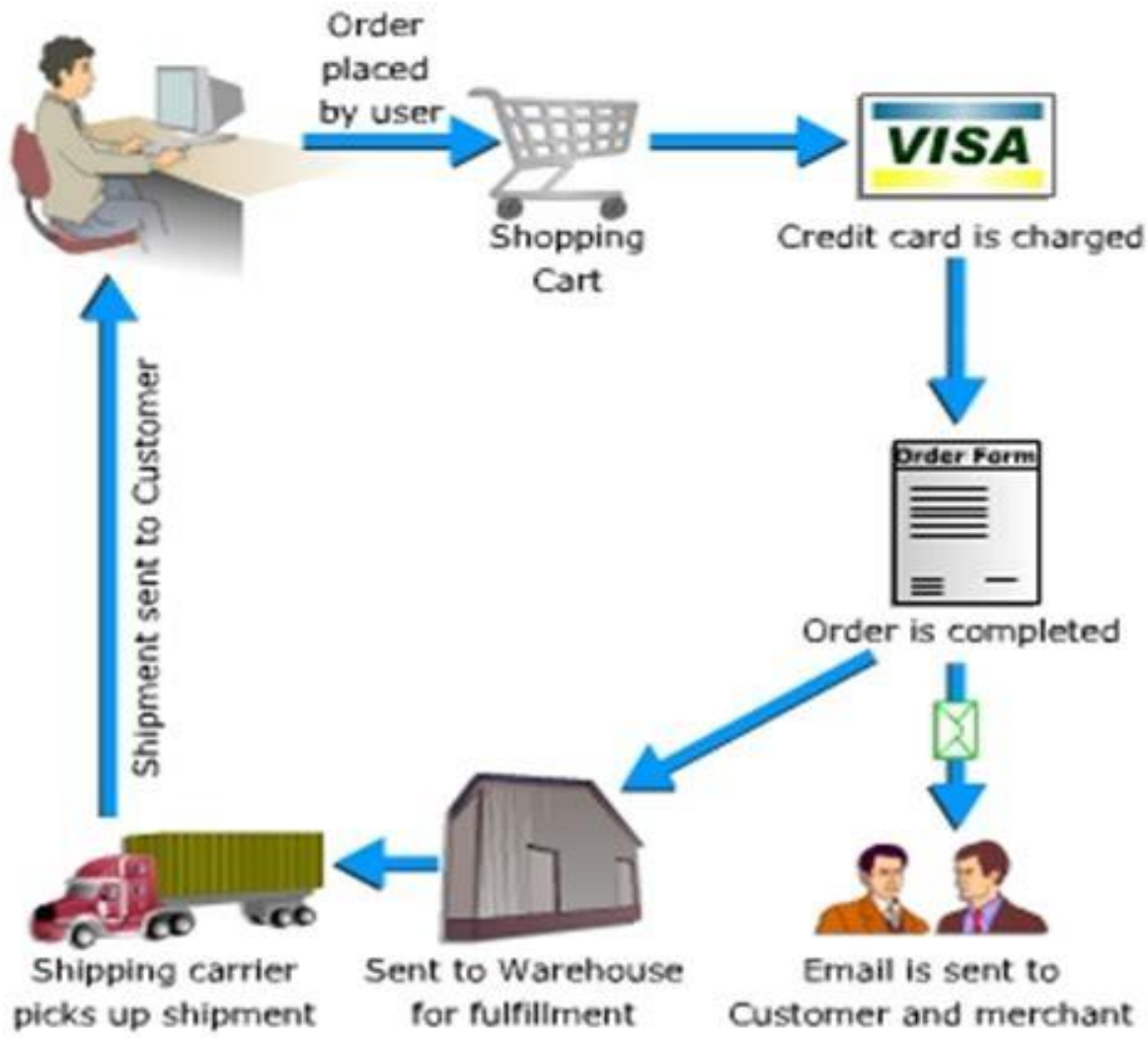
B2C MODEL

BUSINESS - TO - CONSUMER (B2C)

- In B2C Model, business organization uses **websites or portals to offer information about product**, through multimedia clippings, catalogs, product configuration guidelines, customer histories and so on.
- A new **customer interacts with the site and uses interactive** order processing system for order placement.
- On placement of order"' secured payment systems comes into operation to authorize and authenticate payments to seller.
- The delivery system then takes over to execute the delivery to customer.

B2C EXAMPLE


Flipkart
Search for products, brands and more
Login & Sign
Electronics
TVs & Appliances
Men
Women
Baby & Kids
Home & Furniture
Sports, B
D-Link
Enjoy Seamless High Speed
Connectivity with D-Link AC
From ₹1,799
Deals of the Day
21 : 35 : 00
VIEW ALL
THE SUBTLE ART OF NOT GIVING A F*CK
A COUNTERINTUITIVE APPROACH TO LIVING A GOOD LIFE
MARK MANSON
Fiction, Non-Fiction & More
Min 30% + Extra 5%Off
Mark Manson & Others
Skybags, Metronaut, AT and m...
40-80%+Extra5%Off
Backpacks, Trolley Bags & more
Kraasa, Stylar & more
Under ₹699+ Extra 10%
Men's Footwear
Puma, Levi's & more
Upto 60+Extra 10% Off
Men's Footwear



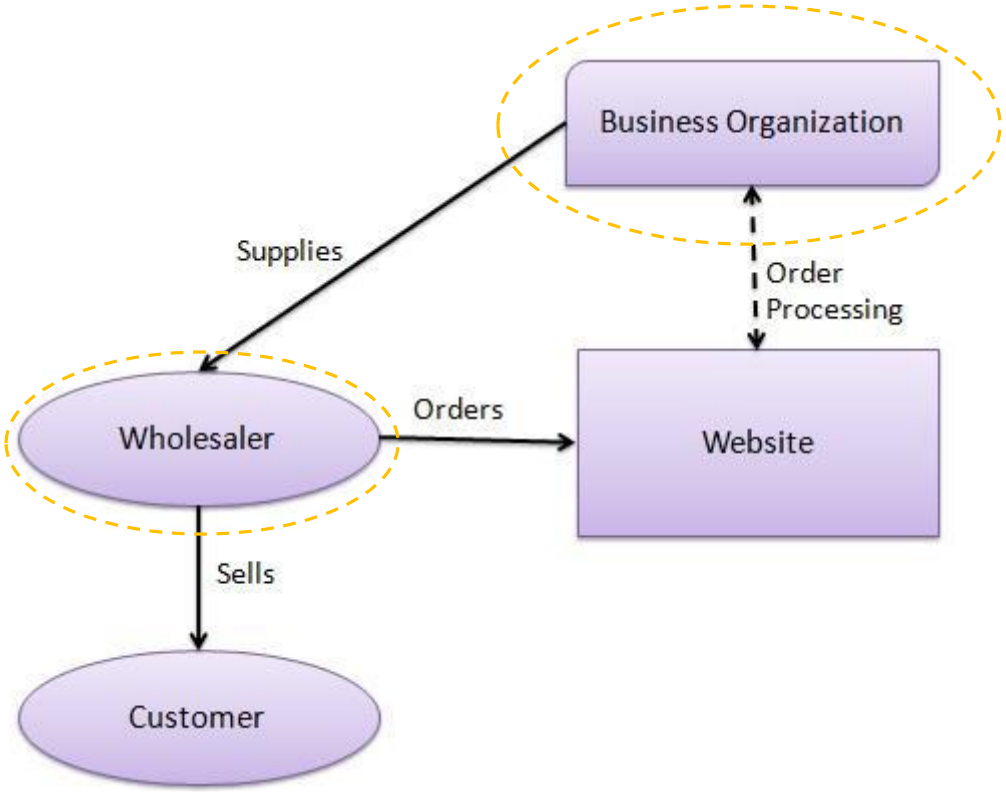
http://digiteen.wikispaces.com/Digital+Commerce

B2B MODEL

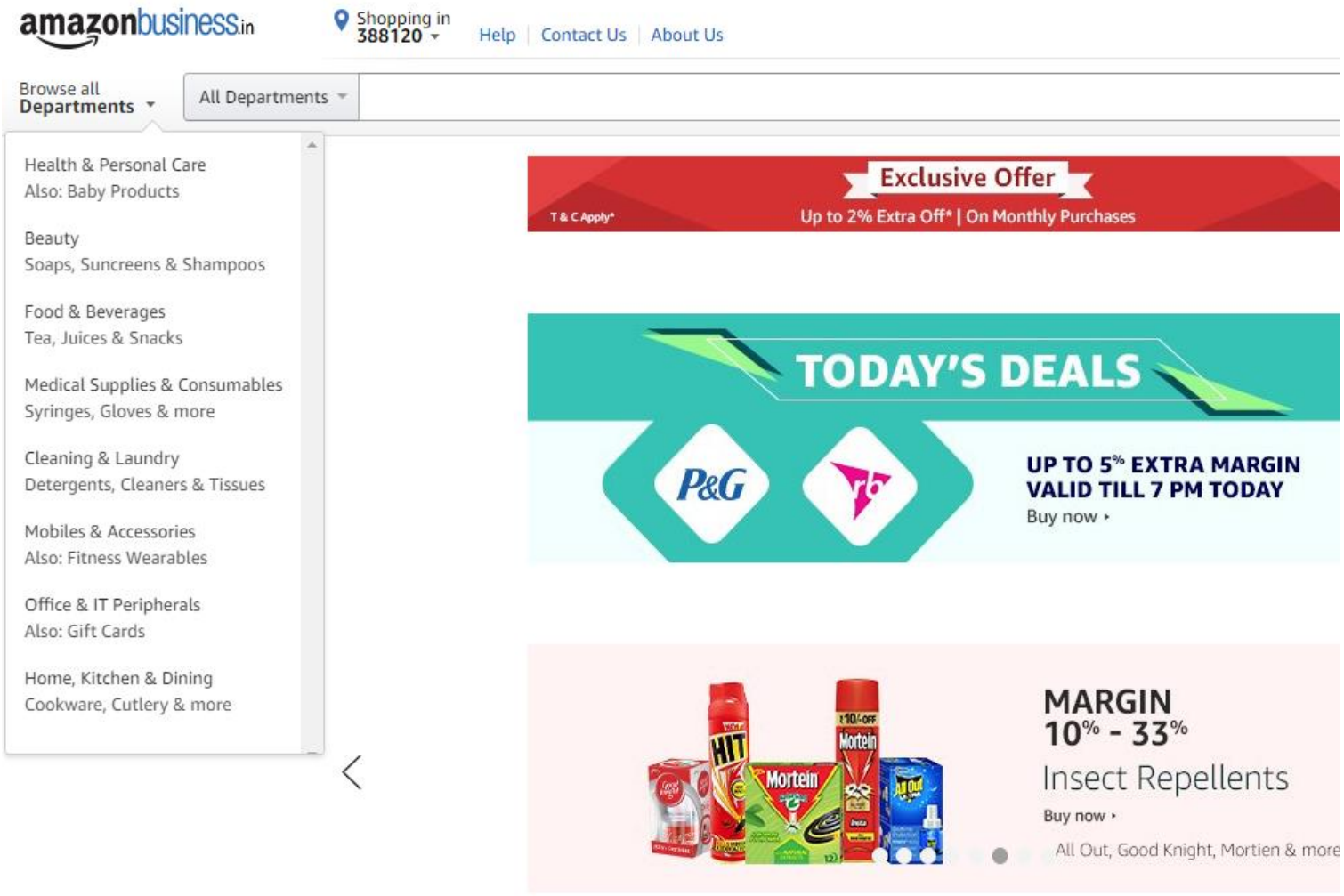
BUSINESS - TO - BUSINESS (B2B)

- In B2B mode, **buyer and seller are business organizations**.
- They **exchange technical and commercial** information through websites and Portals.
- Then model works on similar line like B2C. More advanced B2B model uses Extranet and conduct business transactions based on the information status displayed on the buyer's application server.
- Auto component industry uses this model for supplying parts and components to auto manufacturer based on the inventory levels and production programmed.

B2B MODEL


Business Organization
Supplies
Order
Processing
Wholesaler
Orders
Website
Sells
Customer

B2B EXAMPLE


amazonbusiness.in
Shopping in 388120
Help | Contact Us | About Us
Browse all Departments
All Departments
Health & Personal Care
Also: Baby Products
Beauty
Soaps, Suncreens & Shampoos
Food & Beverages
Tea, Juices & Snacks
Medical Supplies & Consumables
Syringes, Gloves & more
Cleaning & Laundry
Detergents, Cleaners & Tissues
Mobiles & Accessories
Also: Fitness Wearables
Office & IT Peripherals
Also: Gift Cards
Home, Kitchen & Dining
Cookware, Cutlery & more
Exclusive Offer
T & C Apply*
Up to 2% Extra Off* | On Monthly Purchases
TODAY'S DEALS
P&G
UP TO 5% EXTRA MARGIN
VALID TILL 7 PM TODAY
Buy now
MARGIN
10% - 33%
Insect Repellents
Buy now
All Out, Good Knight, Mortien & more

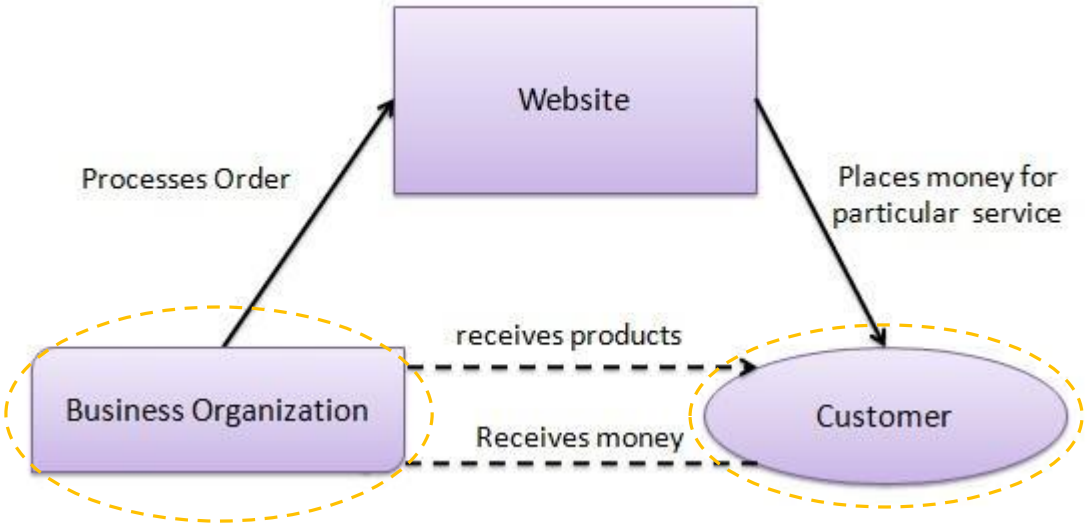
C2B MODEL

CONSUMER - TO – BUSINESS (C2B)

- In C2B model, **customer initiates action** after logging on to seller's website or to server.
- On the server of the selling organization, e-commerce applications are present the for use of the customer.
- The entire **internet banking process** works on C2B model where account holder of the bank transacts number of requirements such as seeking account balance, payment, and money transfer and so on.

C2B MODEL

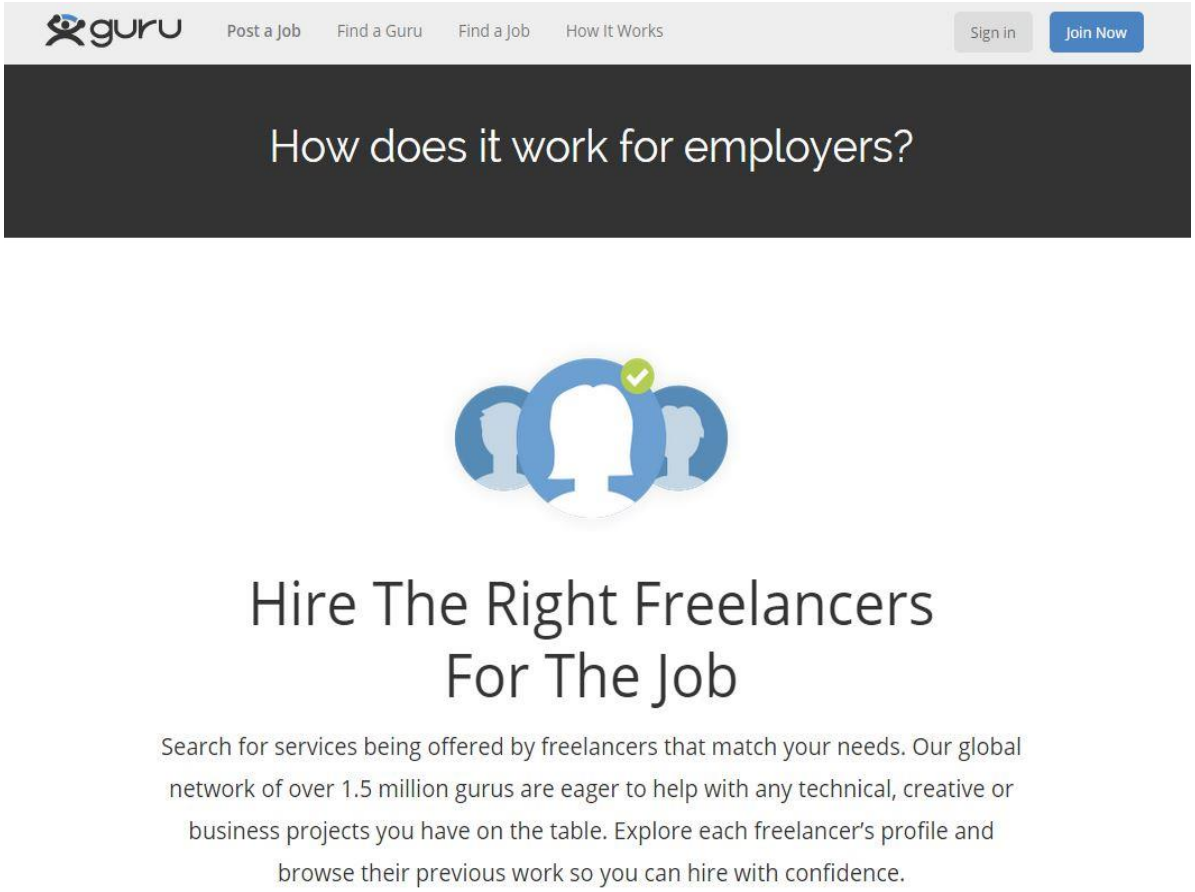
CONSUMER – TO – BUSINESS (C2B)



Eg. Car loan from various banks

C2B MODEL

CONSUMER – TO – BUSINESS (C2B)



C2C MODEL

CONSUMER - TO - CONSUMER (C2C)

In C2C model, **customer participates** in the process of **selling and buying** through the auction website.

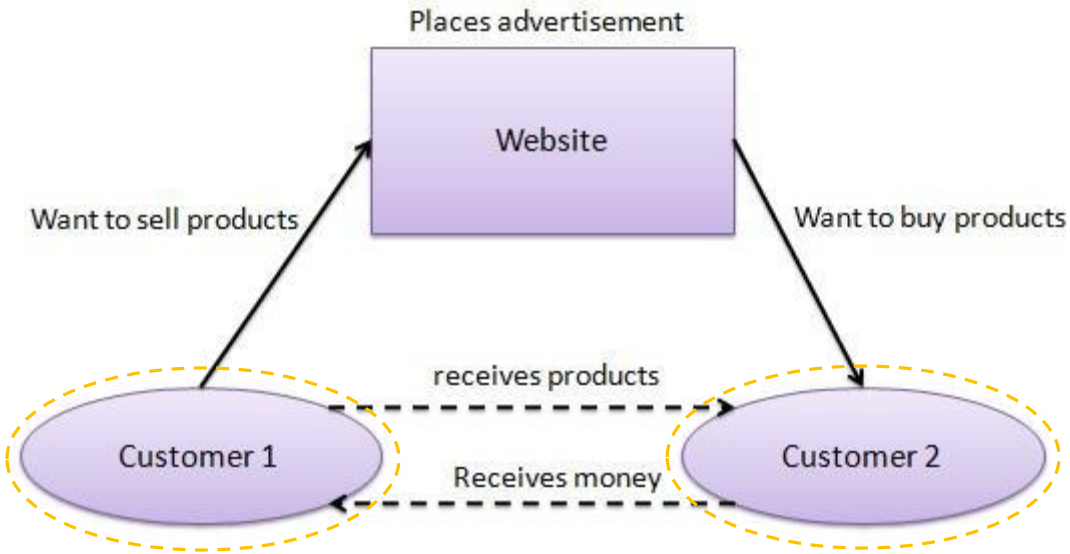
In this model, website used for **personal advertising** of **products or services**.

E-newspaper website, OLX etc. are examples of advertising and selling of goods to the customer.

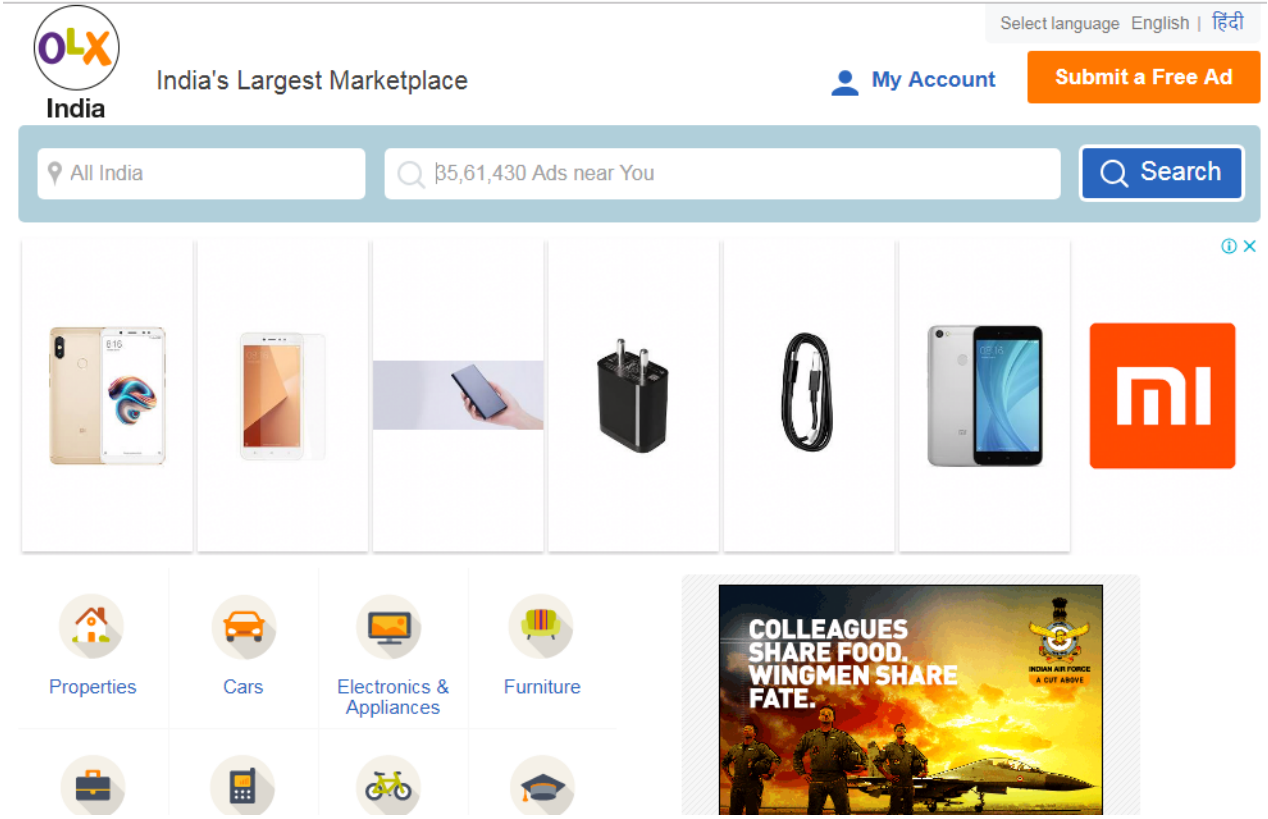
In all model, there are **two channels**: one channel deals with information delivery and sharing, and another channel deals with the commercial aspect buying and selling.

C2C MODEL

CONSUMER - TO - CONSUMER (C2C)



C2C EXAMPLE


OLX
India
India's Largest Marketplace
Select language English | हिंदी
My Account
Submit a Free Ad
All India
35,61,430 Ads near You
Search
Properties
Cars
Electronics & Appliances
Furniture
COLLEAGUES SHARE FOOD. WINGMEN SHARE FATE.
INDIAN AIR FORCE
A CUT ABOVE

ELECTRONIC BUSINESS

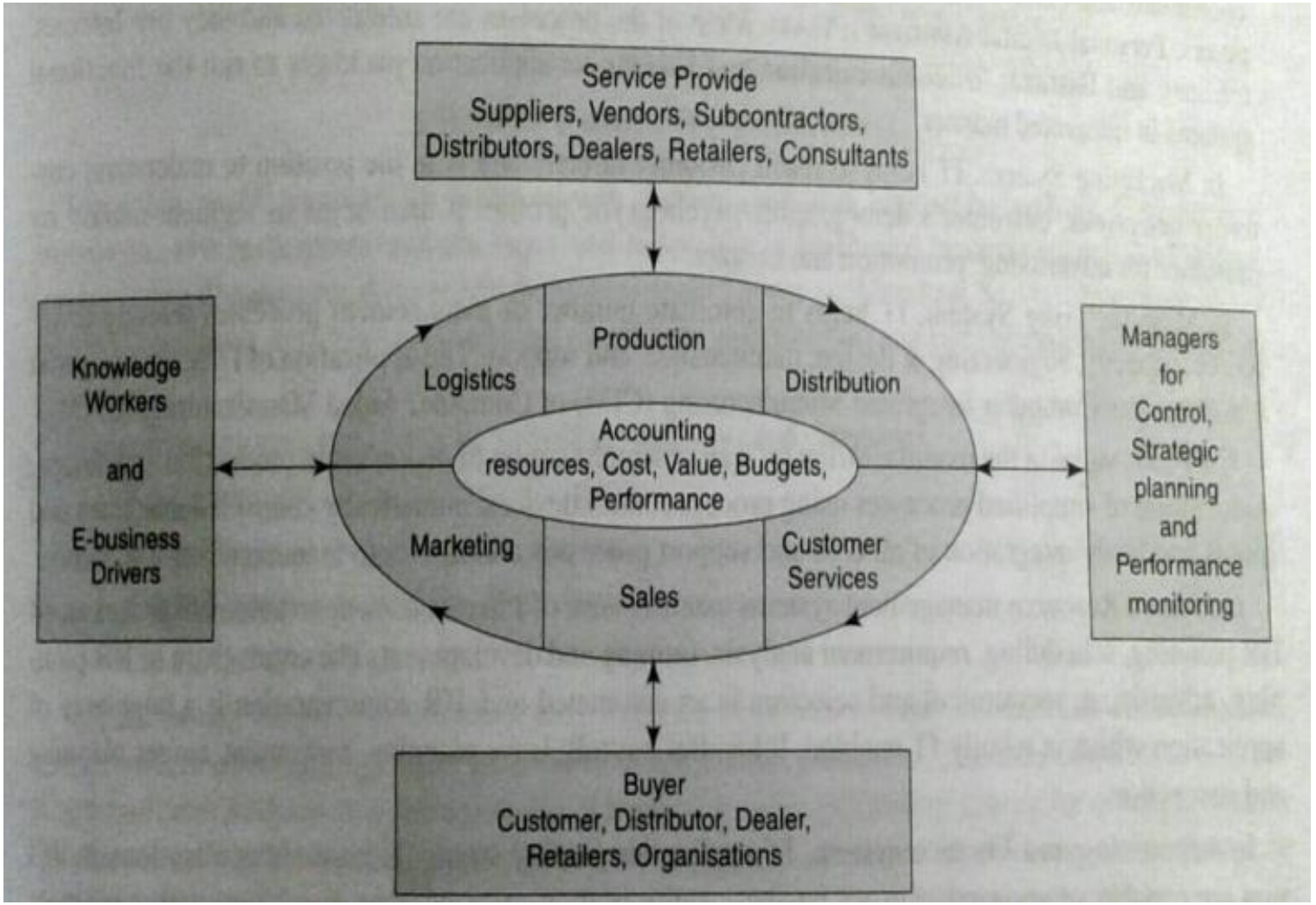
- The **core business processes** of the organization are procurement, manufacturing, selling, distribution, delivery and accounting.
- These core processes are best run by application packages like **Enterprise Resource Planning (ERP)**. If enterprise definition is made **wider** including customers, suppliers and distributors, application package like **Supply Chain Management (SCM)** is best suited for planning and execution of entire business process.
- In addition to these core processes, organizations use internet enabled system and other technologies to handle these processes more effectively.

E-BUSINESS

E-business systems use i**ntranet/extranet capabilities** to process an event in seamless manner covering all technical, commercial, business aspects and implications of an event.

They **perform internal business operations and interface with external agencies**.

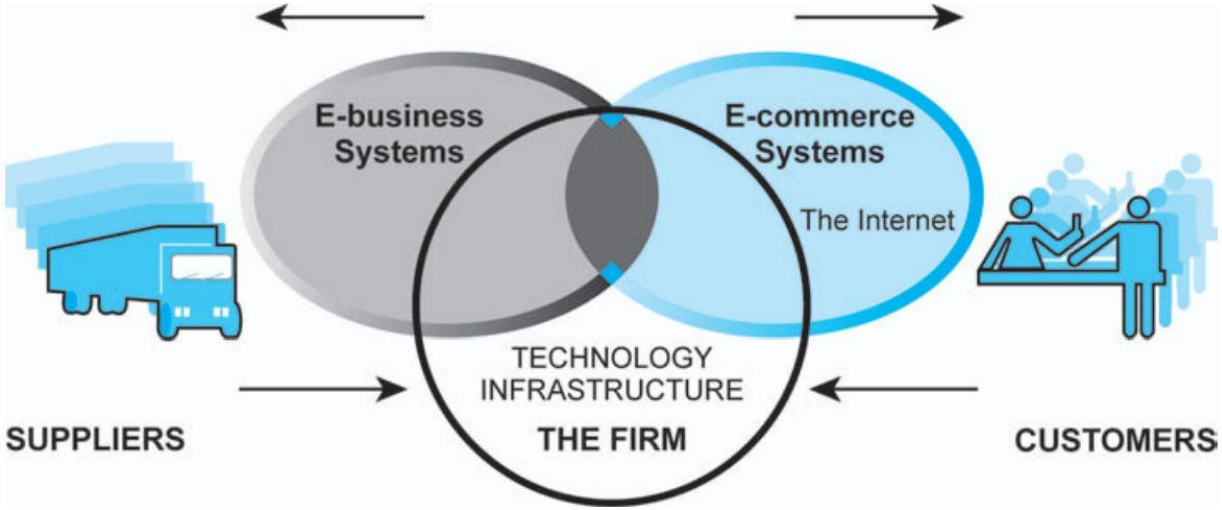
Use of **e-business systems has redefined and redesigned** conventional business model to customer centric process model as shown in below figure.


Service Provide
Suppliers, Vendors, Subcontractors,
Distributors, Dealers, Retailers, Consultants
Knowledge
Workers
and
E-business
Drivers
Logistics
Production
Distribution
Accounting
resources, Cost, Value, Budgets,
Performance
Marketing
Sales
Customer
Services
Managers
for
Control,
Strategic
planning
and
Performance
monitoring
Buyer
Customer, Distributor, Dealer,
Retailers, Organisations

- The **ERP/SCM** and now customer relations management system (**CRM**) is a family of software solution packages dedicated to **core management of functions of business**.
- They are supported by frontend and backend systems and application -designed for
  - transaction processing,
  - workflow management,
  - work group processing and
  - automated process control.
- e-Business systems use **client/server architecture** and run on the internet platform.
- e-Business systems are **foundation for other enterprise applications**, named E-commerce, E-Communication, and E-Collaboration.

- e-Business essentially **concentrates on functional business** information systems and their integrations.
- Traditionally **five business systems** are recognized as
  - marketing,
  - production,
  - procurement,
  - human resource, and
  - accounting & finance.
- These functional systems in e-Business have become more intelligent and **knowledge driven** as against information driven in traditional way of doing business.

E-BUSINESS AND E-COMMERCE

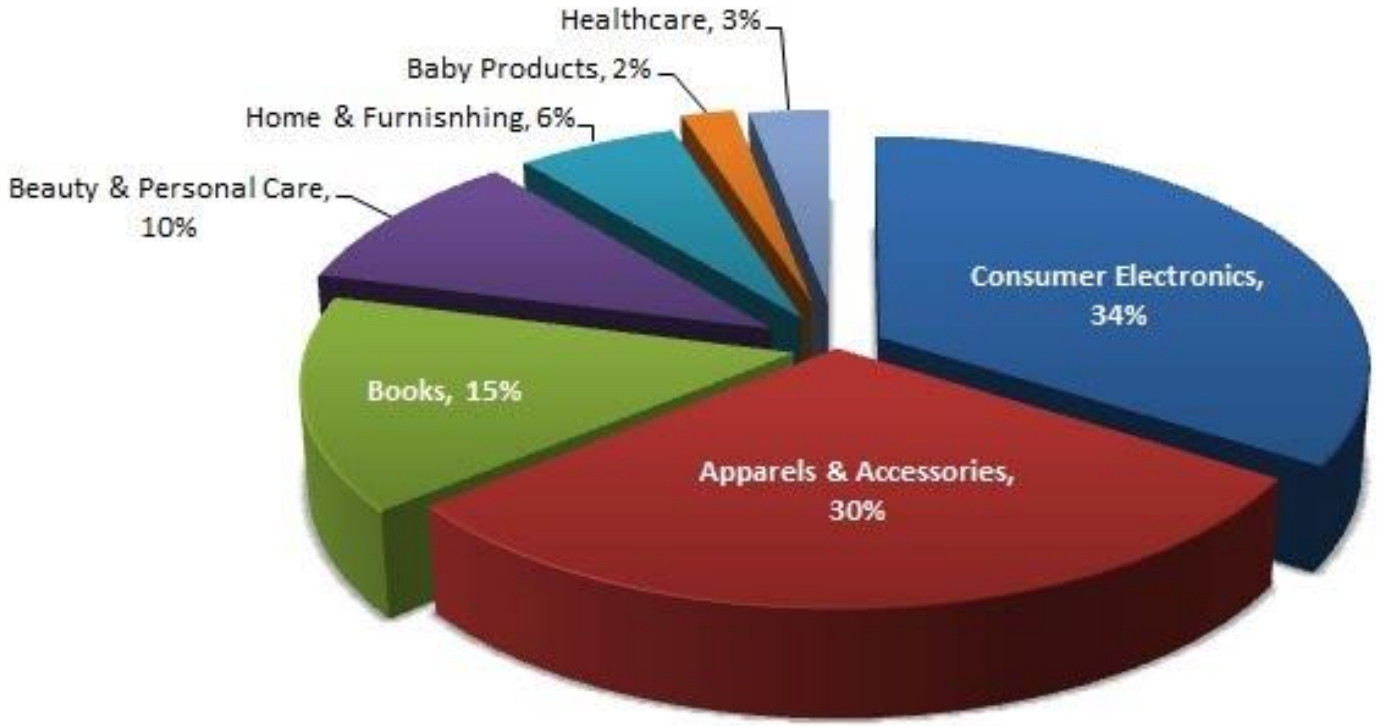


e-Commerce primarily involves transactions that ***cross firm*** *boundaries.*

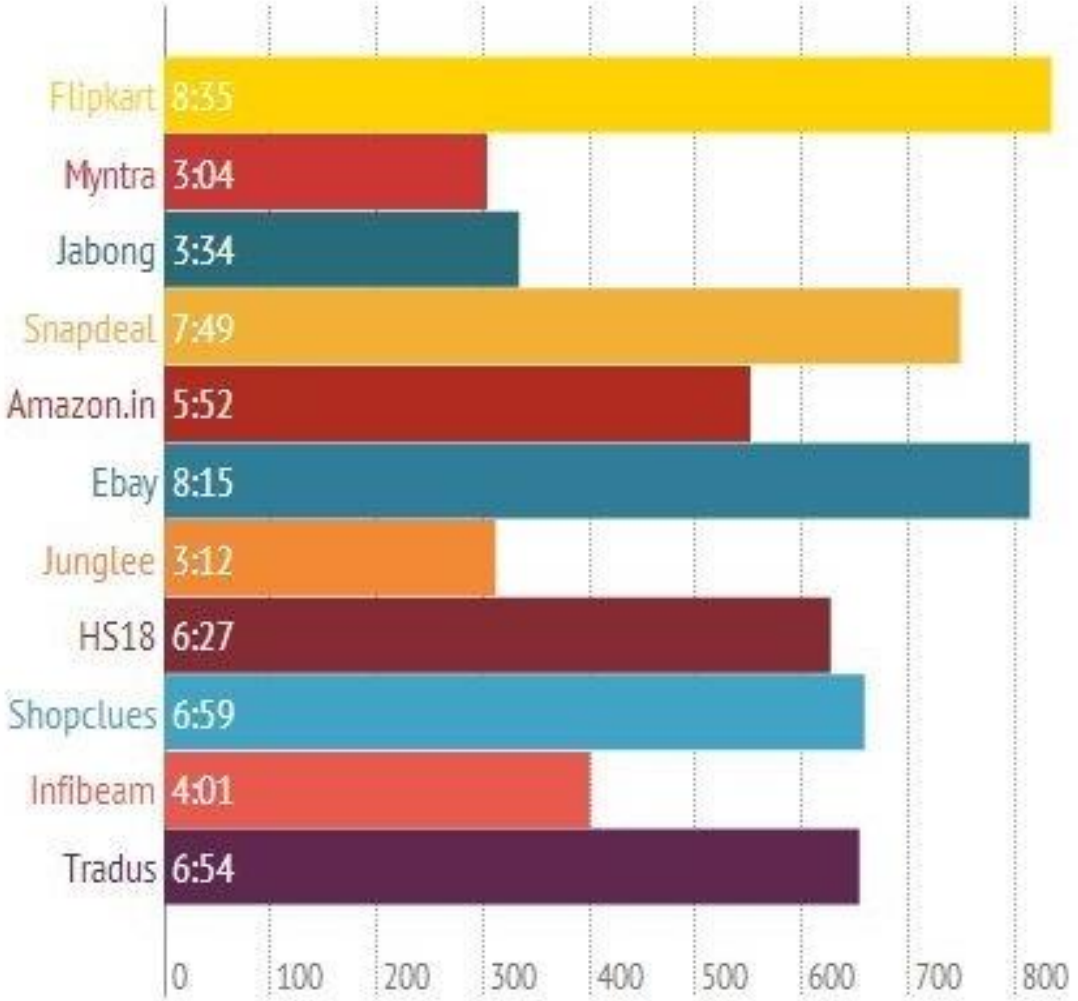
e-Business primarily involves the application of digital technologies to business processes ***within the firm****.*

E-Commerce Industry in India 2012

Highest Number of Shopping Queries

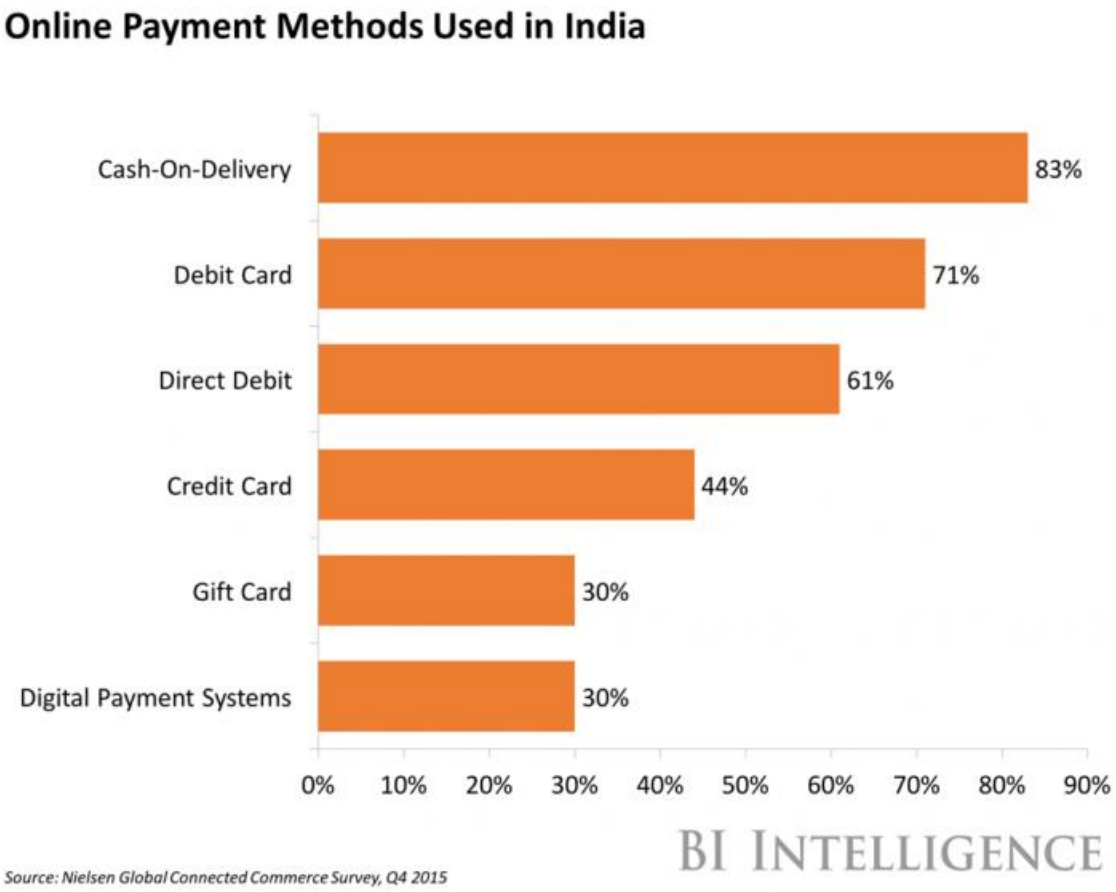


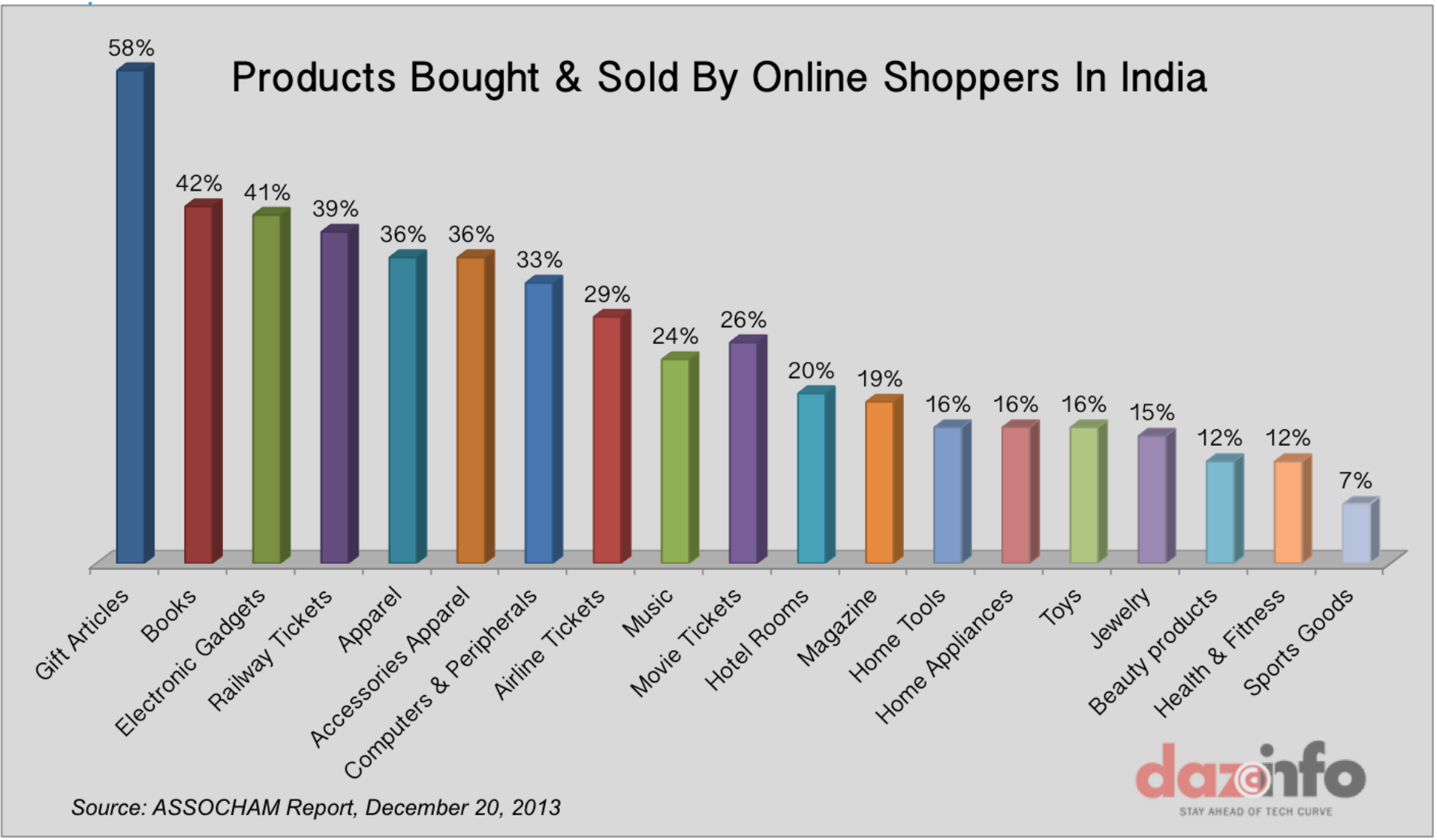
Time Spent per Visit (in mins)



Most Preferred eStore in India
61%
55%
28%
26%
21%
10%
FLIPKART
AMAZON
SNAPDEAL
PAY TM
SHOPCLUES
MYNTRA
Source: CouponRani Survey, Jan-Feb 2016
DAZEINFO

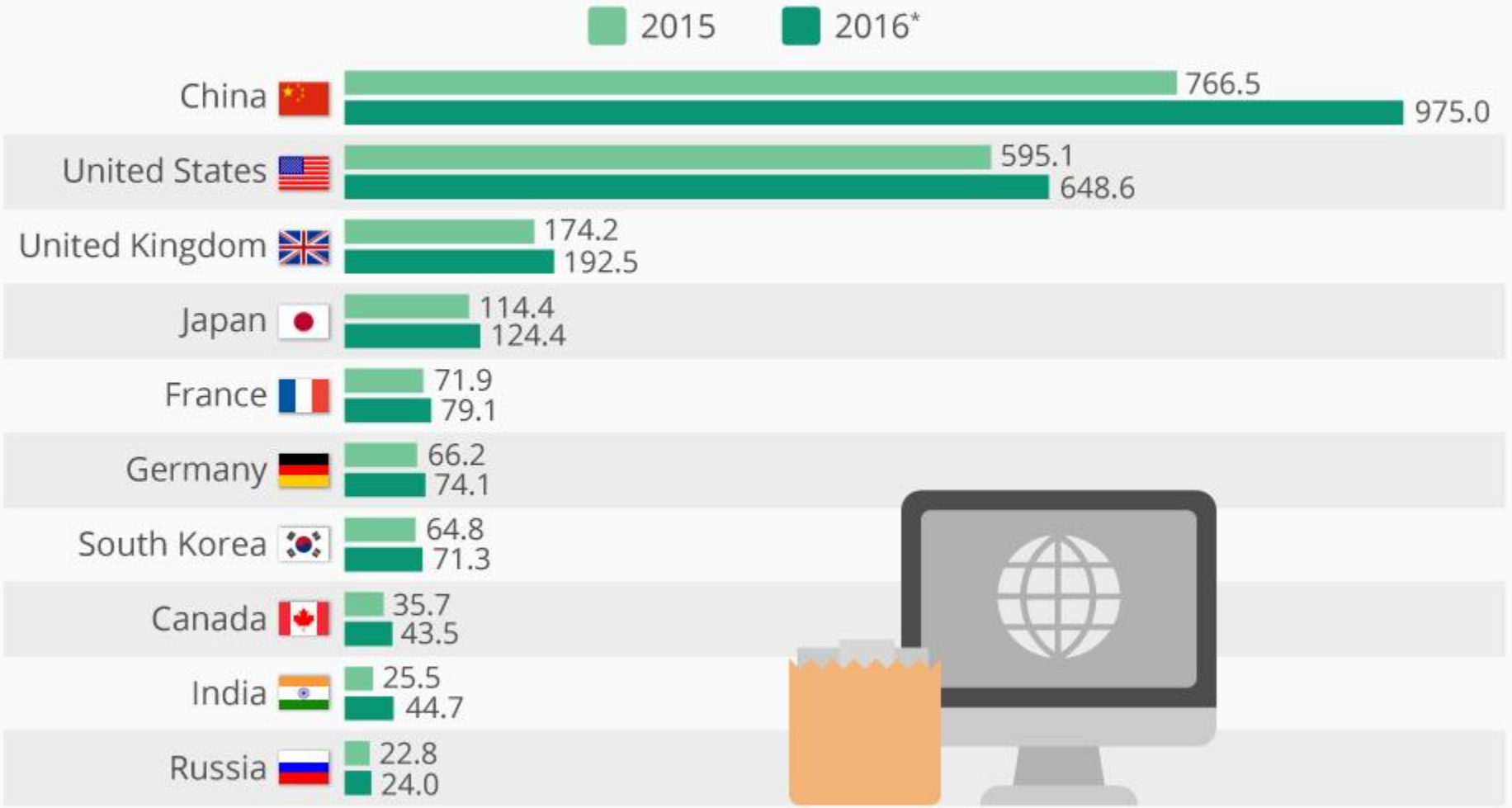
INDIAN SCENARIO




Products Bought & Sold By Online Shoppers In India
58%
42%
41%
39%
36%
36%
33%
29%
24%
26%
20%
19%
16%
16%
16%
15%
12%
12%
7%
Gift Articles
Books
Electronic Gadgets
Railway Tickets
Apparel
Accessories Apparel
Computers & Peripherals
Airline Tickets
Music
Movie Tickets
Hotel Rooms
Magazine
Home Tools
Home Appliances
Toys
Jewelry
Beauty products
Health & Fitness
Sports Goods
Source: ASSOCHAM Report, December 20, 2013
dazinfo
STAY AHEAD OF TECH CURVE

World's Largest B2C E-Commerce Markets

B2C e-commerce turnover in 2015 and 2016 (in billion U.S. dollars)

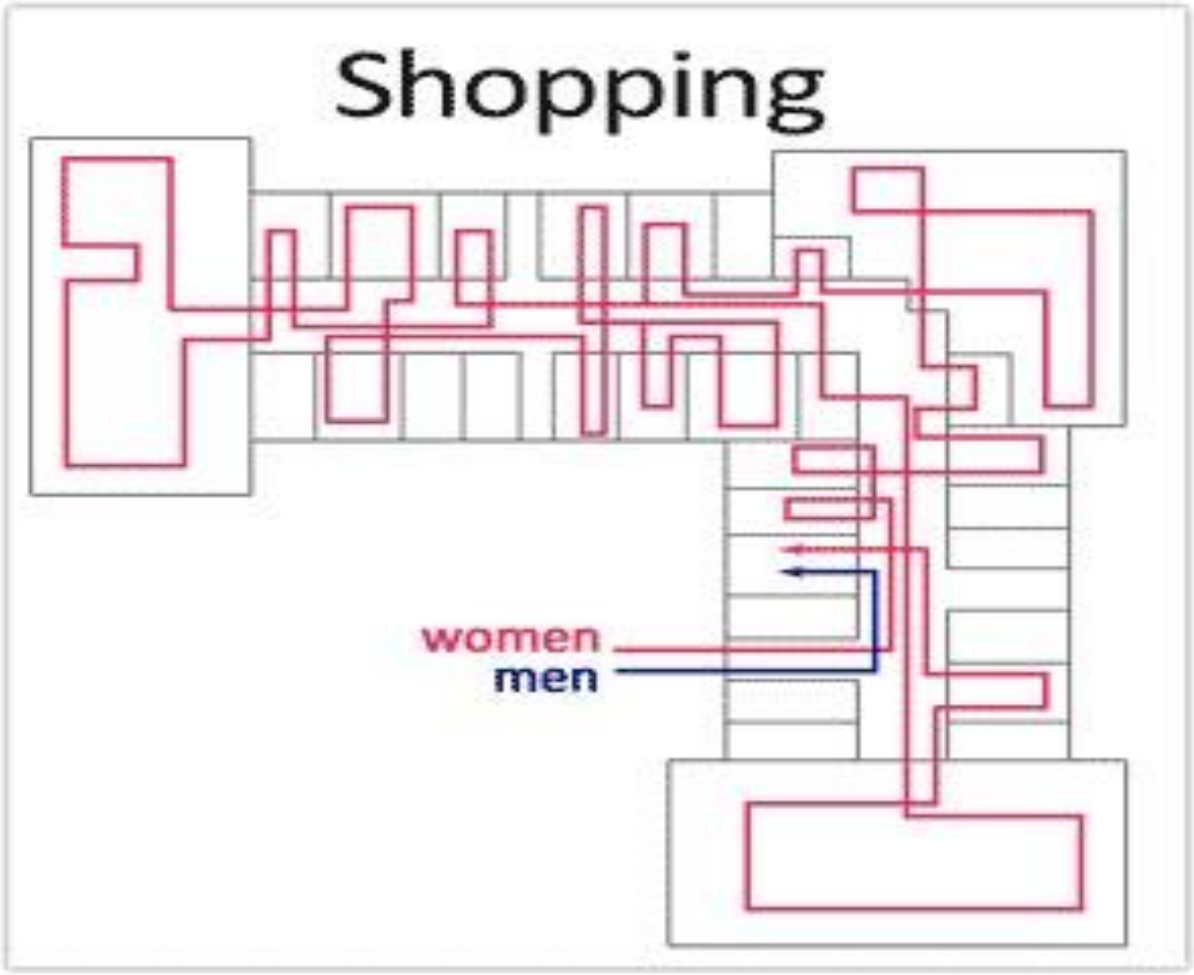


* Forecasts for 2016 made in September

Source: Ecommerce Europe

@StatistaCharts

statista


Shopping
women
men

The Evolution Of Man

FUTURE

5 Emotions Every Human to Human Marketer Must Recognize

- Curiosity
- Trust
- Insecurity
- Excitement
- Uniqueness

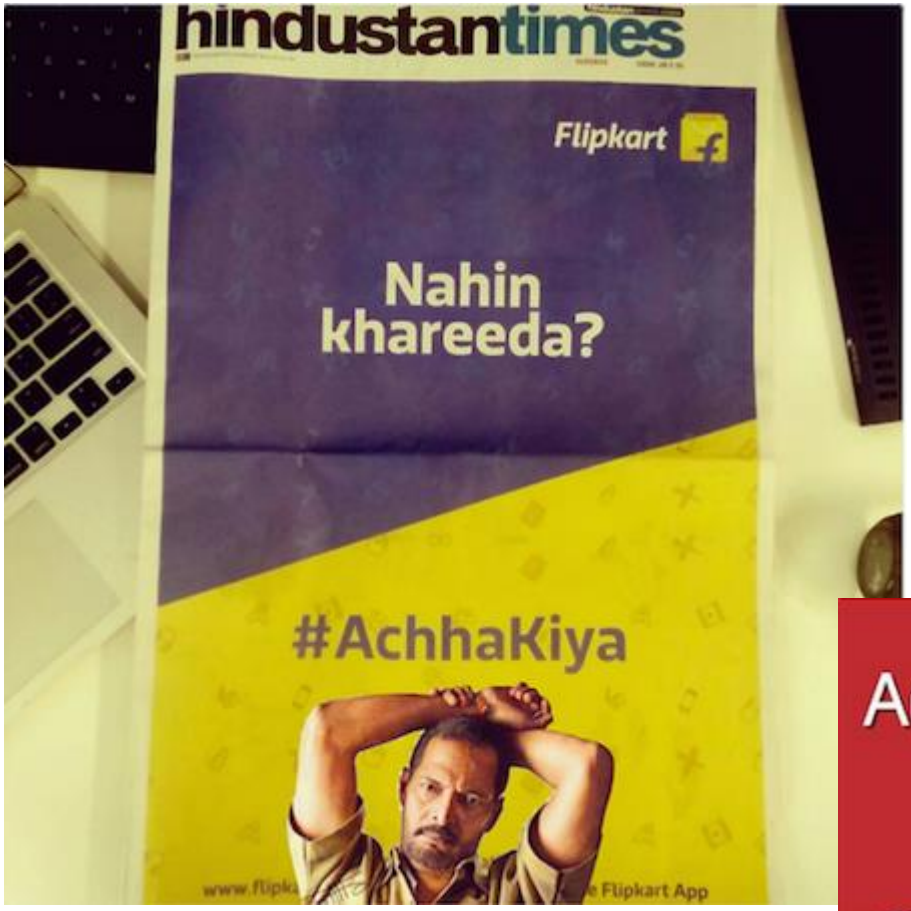
www.hellosoutherly.com/what-does-h2h-instead-of-b2b-b2c-mean-for-business-storytelling/

http://www.exodus-digital-marketing.co.uk/human-to-human-marketing-5-emotions-every-marketer-must-recognise/

h2hselfdefence.co.uk

What most people want
from a computer company
is a good night's sleep.

TODAY,
DON'T LOOK
ANYWHERE ELSE.
INDIA'S GREATEST SALE EVER IS HERE.
flipkart.com
PRESENTS
THE BIG BILLION DAY
STARTING AT 8 AM TODAY
SHOP FROM ANYWHERE
Flipkart MOBILE APP
THE TIMES OF INDIA
FOR OTHERS
IT'S A BIG DAY.
FOR US, TODAY IS
NO DIFFERENT.
BEST SAVINGS GUARANTEED. EVERY DAY.
CHECK SNAPDEAL.COM BEFORE YOU BUY.
snapdeal.com
Bachatey raho!
Turn overleaf for a sneak preview of offers.



Achha kiya bata diya.

#YahanSeKharido

snapdeal

Snapdeal.com
@snapdeal

Follow

Achha kiya bata diya! #YahanSeKharido

7:18 PM - 18 Jun 2015

#AchhaKiya
Flipkart
WELCOME
PANCHSHEEL ENCLAVE
(BLOCKS B, C & D)
Achha kiya bata diya.
#YahanSeKharido
snapdeal

Amazon.in
@amazonIN

09 Apr

.@Zomato Loved all the logos you used in the last 6 months. Was #AurDikhao the brief to your designer? :)

Zomato
@Zomato

Follow

.@amazonIN You should've seen the ones that didn't make the cut ;) pic.twitter.com/dcoKDh68ZW

10:39 AM - 10 Apr 2015

ENTERPRISE RESOURCE PLANNING (ERP)

- The ERP system deals with the **planning and use of resources** of the business.

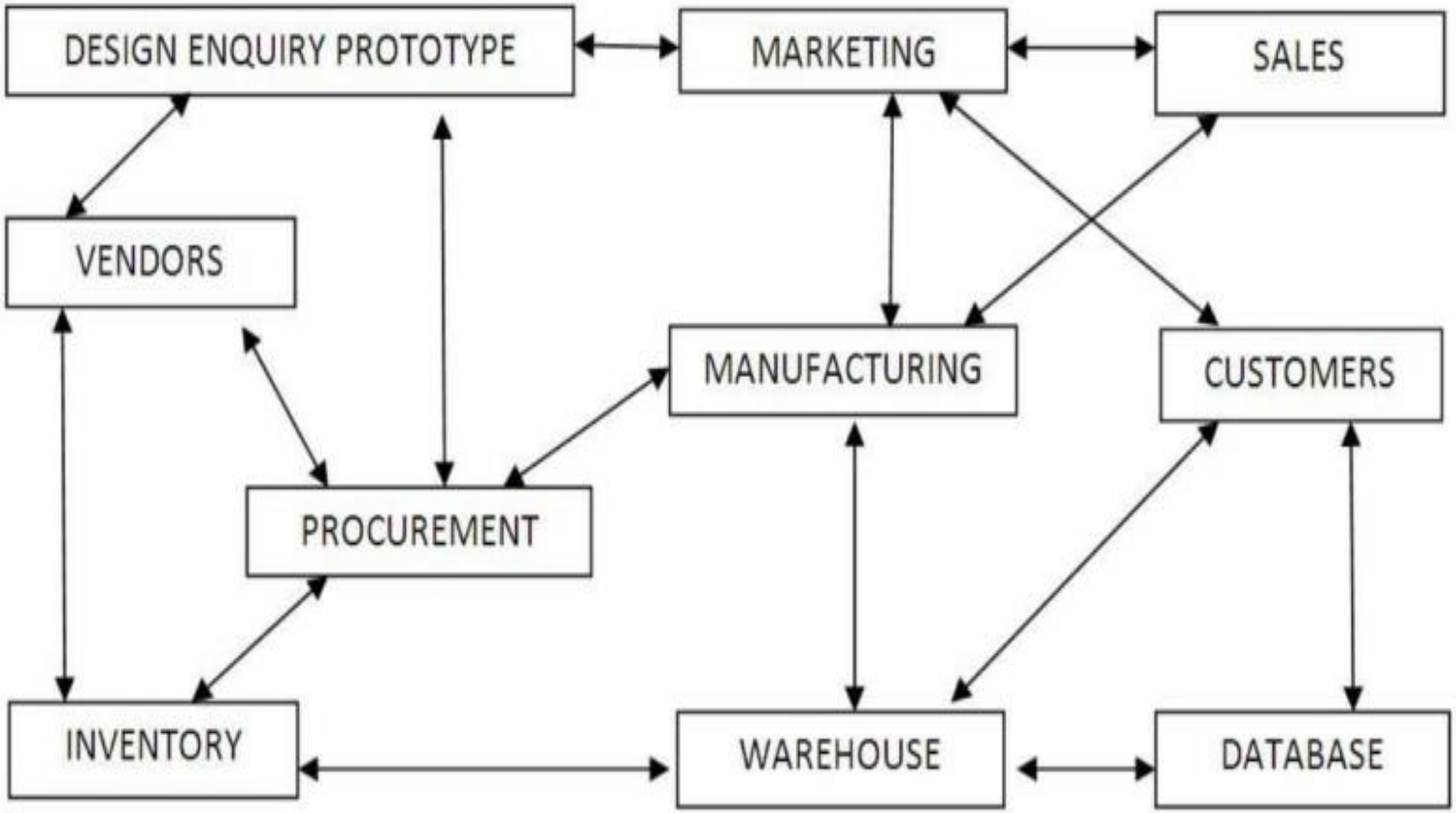
- The ERP provides **methodology of assessing needs** for a given business plan to achieves certain business objectives.
- It also helps to **execute the strategies, plans, decisions, and actions in a time bound manner**.
- The ERP provides a **support system** in the transaction processing, updating, and reporting across the functions.
- **The ERP is a package encompassing all major functions of the business.**
- The product is **generic in nature** and is supposed to incorporate the best business practices, generally followed in most of the companies.

TYPICAL ERP MODULES

1. Sales, Marketing, Distribution..
2. Manufacturing
3. Stores Management
4. Finance
5. Personnel
6. Maintenance
7. Purchase, Inventory
8. Planning and Control

www.esds.co.in

These modules are designed for data capture, data transaction validation, analysis, accounting, updating and reporting.



MODEL OF BUSINESS FUNCTION INTEGRATION

ERP SOFTWARE

NetSuite ERP

Brightpearl *(starting at **$4,900 per year** and as much as over **$20,000 per year for the premium plan**; an enterprise plan is also available on quote basis)*

Intacct *(starts at **$400 per month** with mid-market system as high as **$10,000 per month**)*

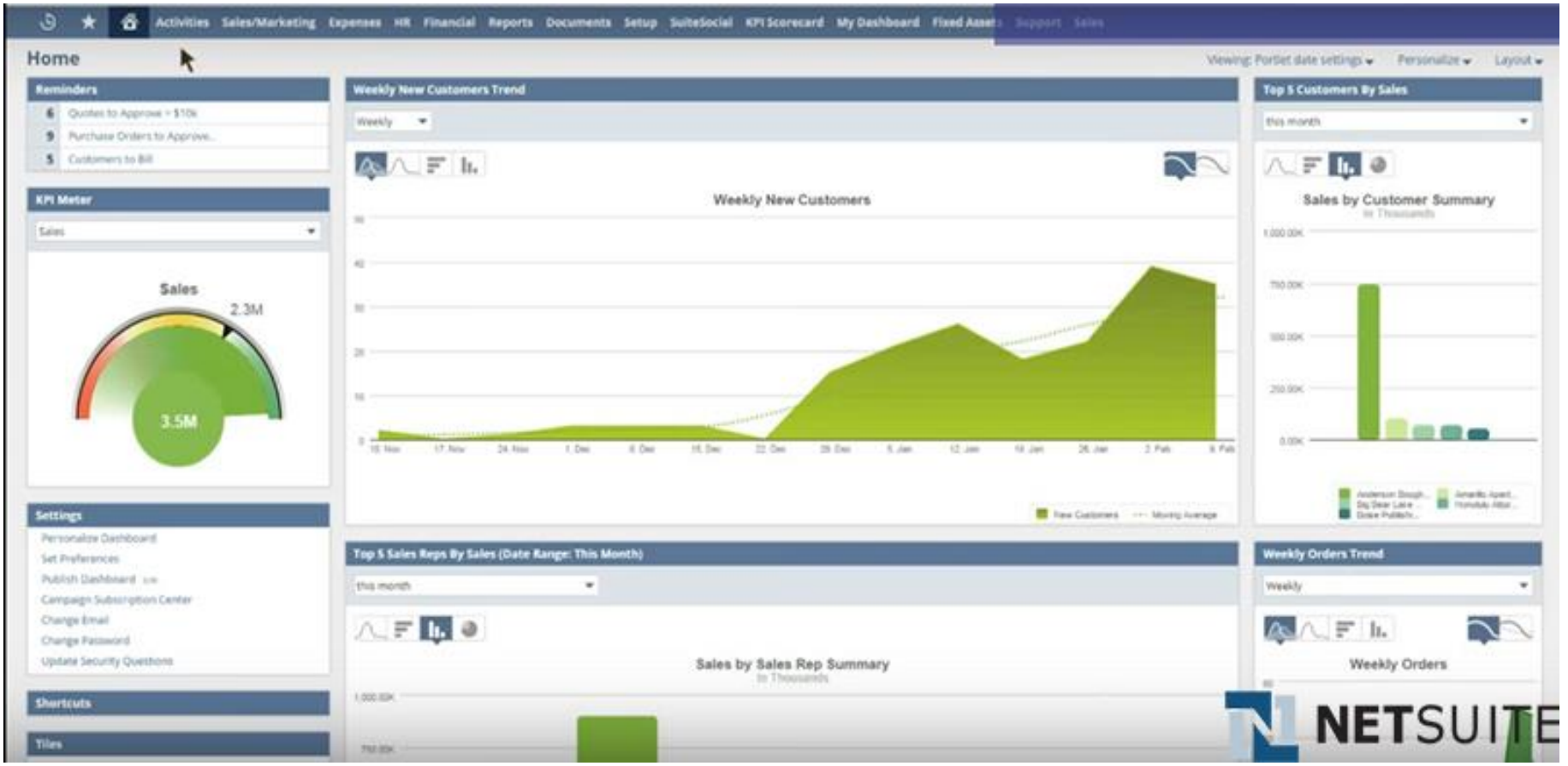
Odoo *(offers a **free app**, optional plan starts at **$26 per month** with an **enterprise plan at around $33 per month**)*

PeopleSoft

Stafiz

Witty Educational Institute Management

AN EXAMPLE ERP SOFTWARE



AN EXAMPLE ERP SOFTWARE

Overview of NetSuite ERP Features

Accounting

- Order-to-Cash
- Audit Trail Visibility
- Procure-to-Pay
- Tax Management

Fixed Asset Management

- Flexible Depreciation Management
- Workflow Management
- Fixed Asset Roll forward
- Integrated Financial Reporting

Payment Management

- Flexible Payment Acceptance
- Global Ready
- Fraud Prevention
- Flexible Payment Processing

Demand Planning

- Demand Planning Engine
- Gross Requirements Inquiry
- Supply Chain Intelligence with MRP

Inventory Control and Warehouse Management

- Cost Management
- Order Fulfillment
- Inventory Control
- Inventory Visibility

Purchasing and Vendor Management

- Integrated Process Workflow
- Centralized Vendor Management
- Routing and Approval

Manufacturing

- Shop Floor Management
- Product Costing
- Manufacturing Routing
- Bill of Materials
- Materials Resource Planning

Billing Management and Invoicing

- Flexible Billing Scheduling
- Integrated Process Workflow
- Shipping & Fulfillment
- Revenue Recognition Management
- Financial Planning
- Human Capital Management
- Core HRIS
- Payroll Services
- Incentive Compensation Management
- NetSuite TribeHR
- Recurring Revenue Management

Useful NetSuite ERP Resources

TYPES OF ERP SOFTWARE

Generic

- **Examples :** Oracle, SAP, Netsuite, Focus 8

Vertical (Industry Specific)

- **Examples:** Microsoft Dynamics AX, Brightpearl, Epicor Retail, **Stafiz**

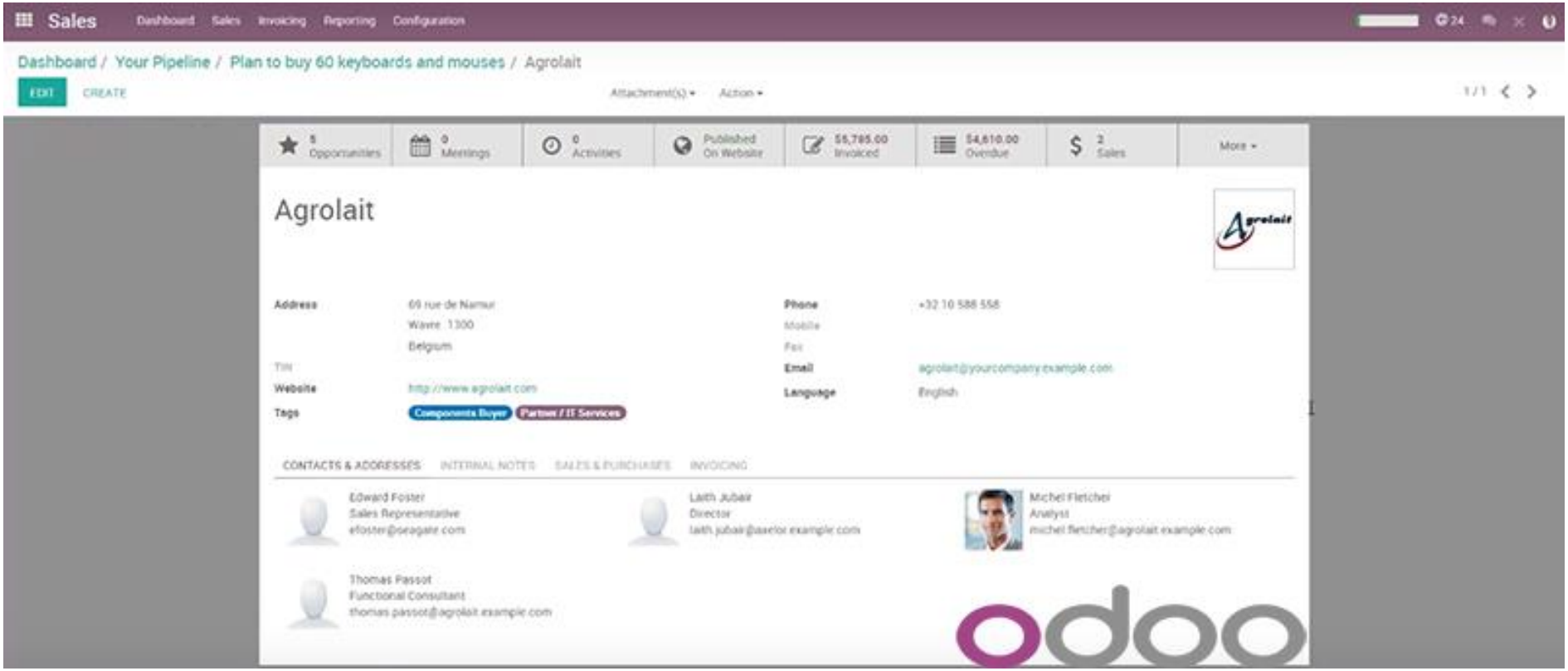
Small Business

- **Examples:** PeopleSoft

Open Source

- **Examples:** Odoo

OPEN SOURCE ERP ERP SOFTWARE



FACTORS TO CONSIDER ERP SOFTWARE

- **Cost & Facilities (Functionalities)**
- **Integration**
- **Capacity**
- **Ability to Customize**
- **Training and Use**
- **Upgrade Vs. Replacement**

BENEFITS OF ERP

Operational Benefits

- **Reduced processing cycle**.
- Access to **multi dimensional information**.
- Empowerment of **employees to become a decision maker**.
- Effective **cost control** through use of cost data for business decisions.
- Increase in **response productivity**.

BENEFITS OF ERP

Business Benefits

- **Higher profits** and improved **ROI** due to cost savings.
- Improved working **capital management** due to **reduced inventory** and receivables .
- Higher **utilization of resource** reducing the cost of production per unit.
- Higher **customer satisfaction** due to prompt deliveries.

BENEFITS OF ERP

Management Benefits

- **Change management*** is easy due to configurable feature of the ERP product. Ease of configuration is due to use of **object technology** in ERP development.
- **Strategical information** about sales, production, resource usage showed through pattern and trends.
- **Secure** information access to authorized users.
- **Cost** of business reduced, business **performance** improved due to other technologies integration with ERP processes.

** …the controlled identification and implementation of required changes within a system.*

TRENDS IN ERP

Mobile ERP:

- ERP solutions now offer native apps for IOS, Android and Windows.

Social ERP:

- ERP 2.0, social ERP adds social media data like Twitter and Facebook profiles and posts into the system.

Cloud (SAAS) and On-premise ERP:

- Either or OR Hybrid.

Dual ERP:

- One layer ERP at corporate level and another at subsidiary level.

Intelligent ERP:

- ERP with AI, ML, and DL.

Hybrid ERP

ENTERPRISE INFORMATION PORTAL (EIP)

- A web portal presents information from **diverse sources** in a unified ways.
- Apart from providing information, web portals **offer other services** such as e-mail, news, stock prices, information, and other features.
- Portals provide a way for enterprise to provide a **consistent look** and feel with access control and **procedures for multiple applications**, which otherwise would have been different entities altogether.
- Two **broad categorizations** of portals are **Horizontal portals** (e.g. Yahoo, Google) and **Vertical portals** (or vortals, focused on one functional area, e.g. salesforce.com).
- A web portal **can be integrated** with many systems of the organization.

TYPE OF PORTAL

- Vertical
- Horizontal
- Knowledge
- Travel
- Healthcare
- Market space
- Corporate
- Domain
- Etc.

TYPE OF PORTAL

Vertical

- Large amount of information on one page for
- Information on one domain typically
- In depth information on specific area
- WebMD, Lexis, Ivillage, AOL, etc.

TYPE OF PORTAL

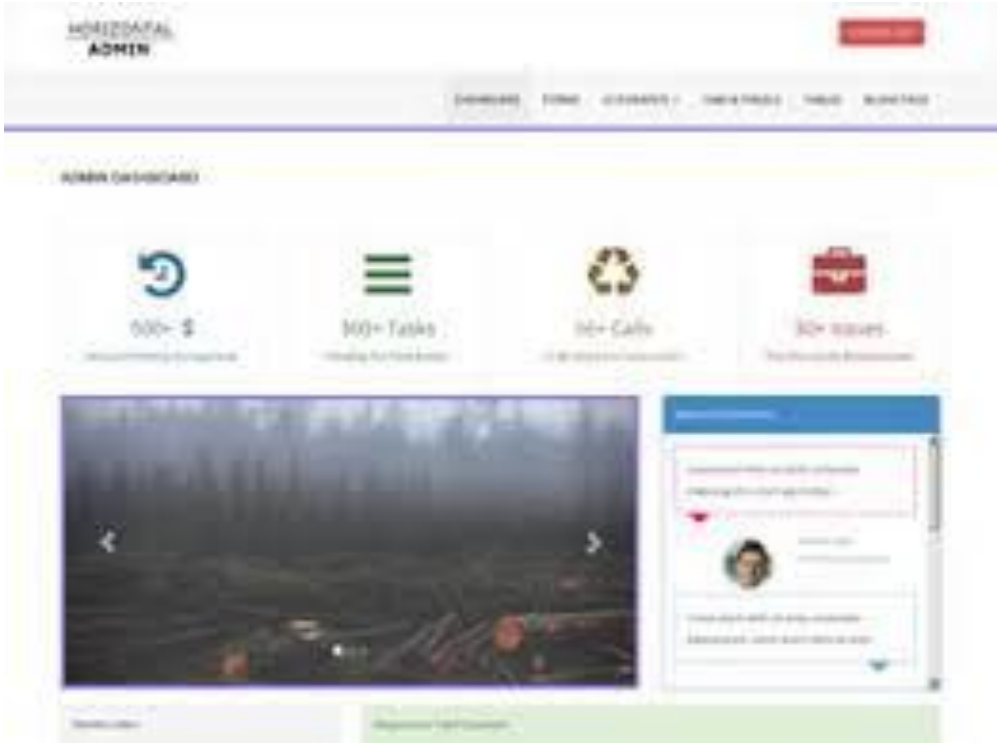
Vertical

- Large amount of information on one page for
- Information on one domain typically
- In depth information on specific area
- WebMD, Lexis, Ivillage, AOL, etc.

TYPE OF PORTAL

Horizontal ⟶

- Broad range of topics
- Yahoo, Google, etc



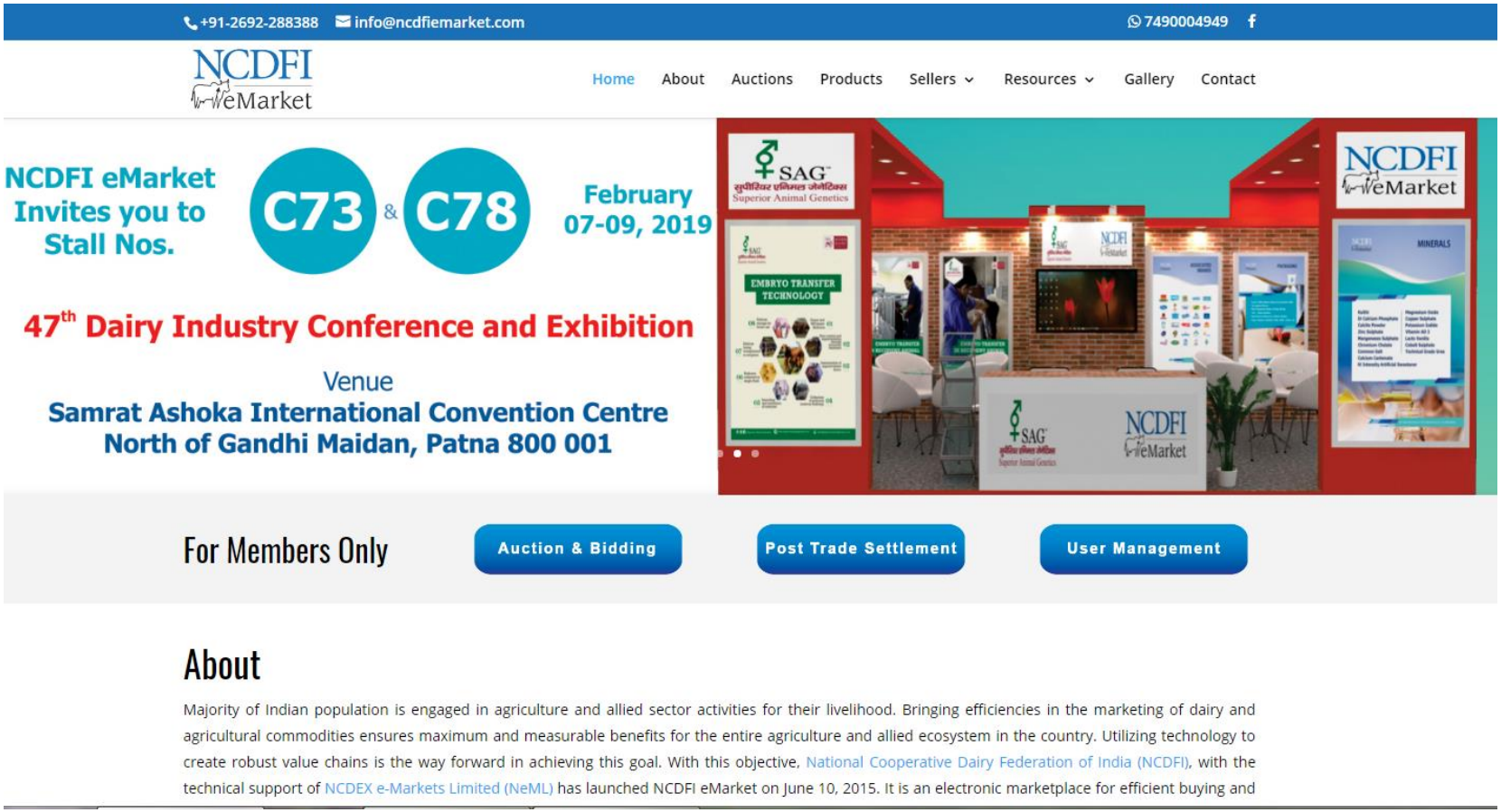
www.free-css.com/template-categories/software

- Business portal are designed **to share information and knowledge** to support collaboration in workplaces.
- Enterprise Information Portals are applications that enable organization to release internally and externally stored info1mation, and provide **users a single gateway to personalized enterprise information** needed to make informed business decisions.
- The benefit of enterprise portal is its **"competitive advantage"** derived from providing access to distributed information stored in enterprise systems.
- Information access to all is **convenient, reliable, and its delivery is** inexpensive.

CORPORATE WEB PORTAL

- **Corporate Web Portals:** Corporate portals, besides displaying their role, are offering **new value-added capabilities** for business. Capabilities such as
  - **managing workflows,**
  - **increasing collaboration between work groups, and**
  - **allowing content creators to self-publish** their information are added.
- Web portals are also designed **to perform E-Commerce**.

CORPORATE WEB PORTAL

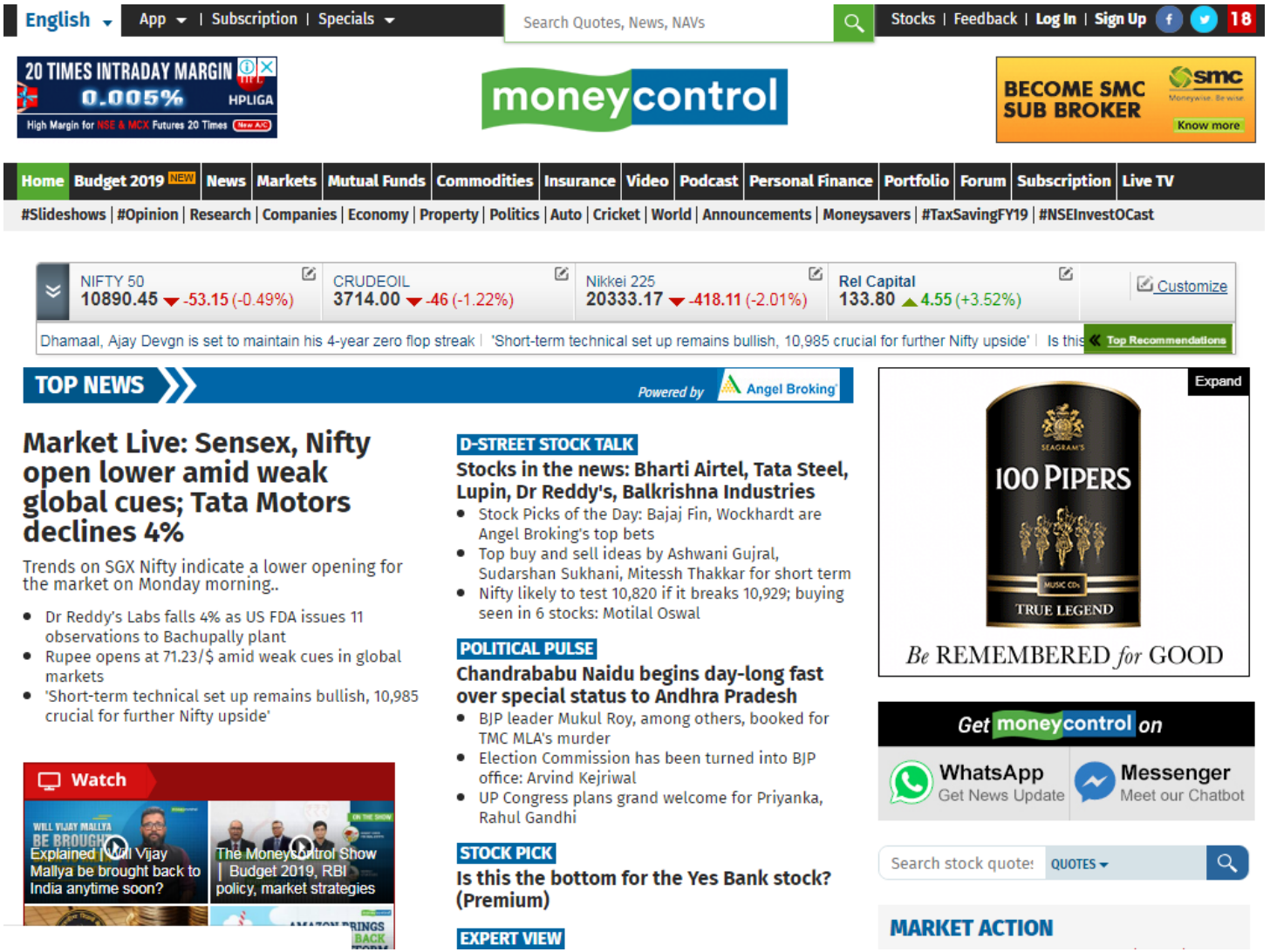


DOMAIN PORTAL

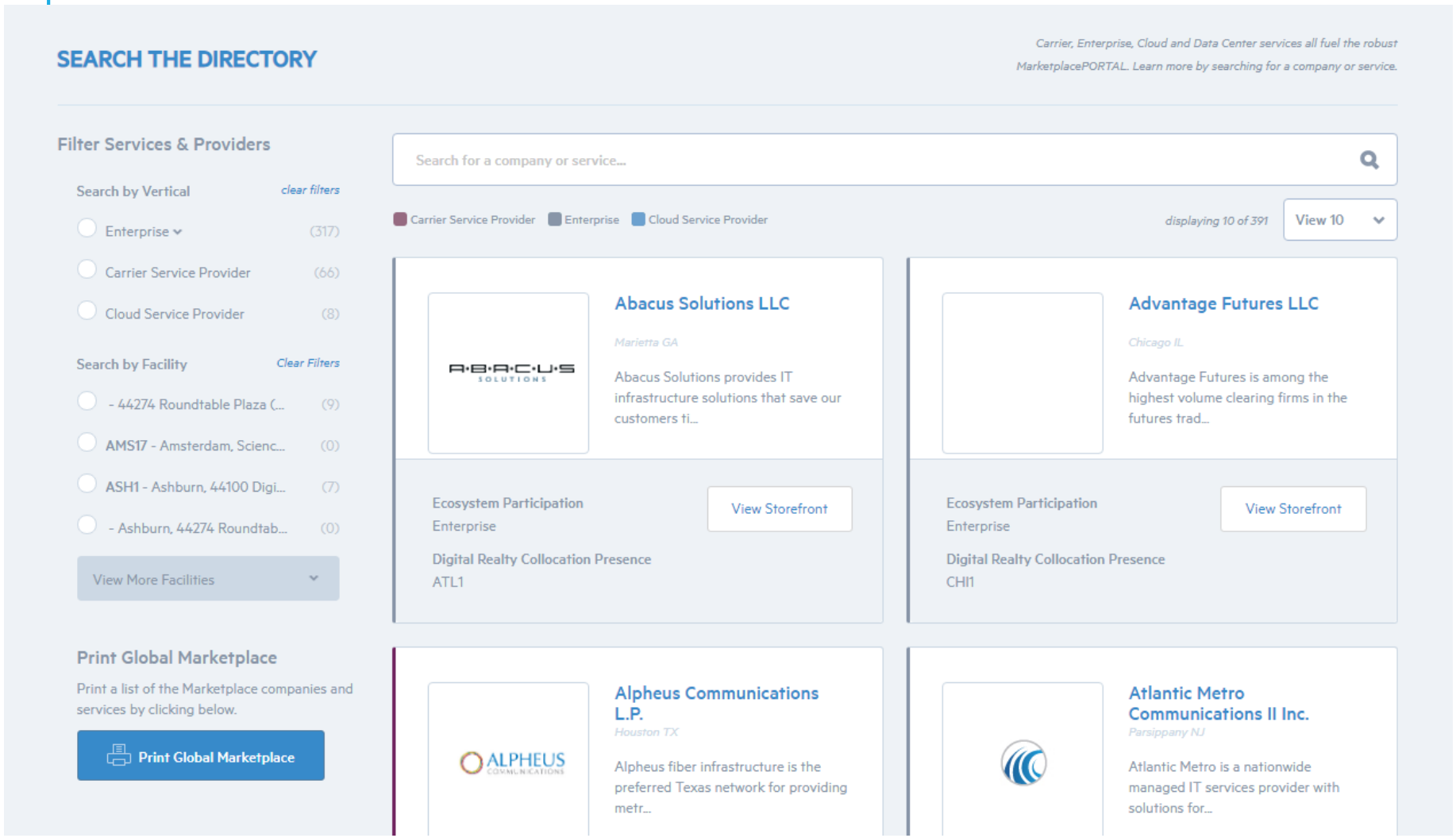
- **Domain Portals:** A number of portal have come about that are **specific to the particular domain** focusing on domain information content .

- It also offers **links to related companies and services**.
- Example stock market portal, search portal

STOCK MARKET PORTAL: MONEYCONTROL.COM



MARKETPLACEPORTAL.COM

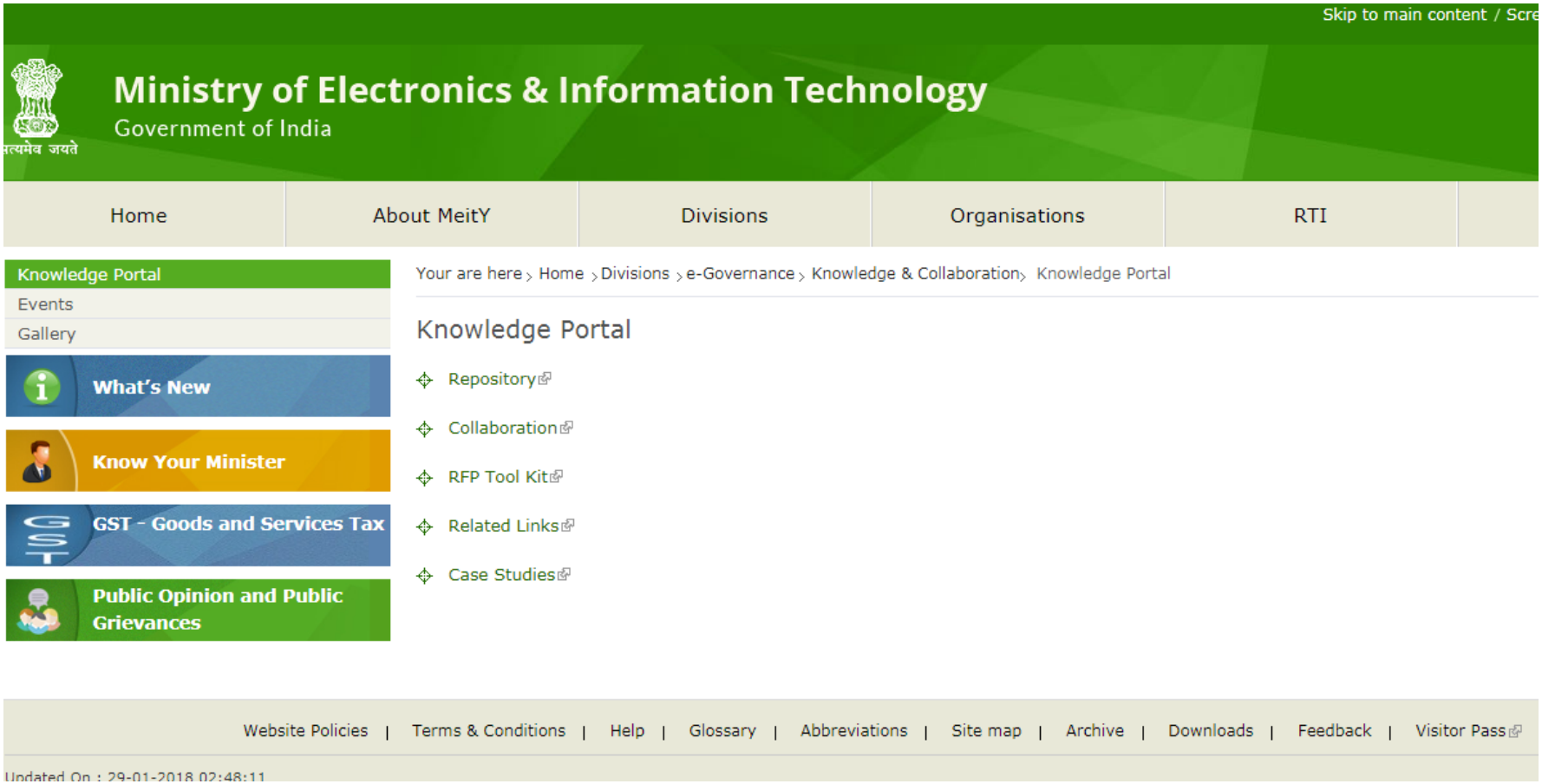


KNOWLEDGE PORTAL

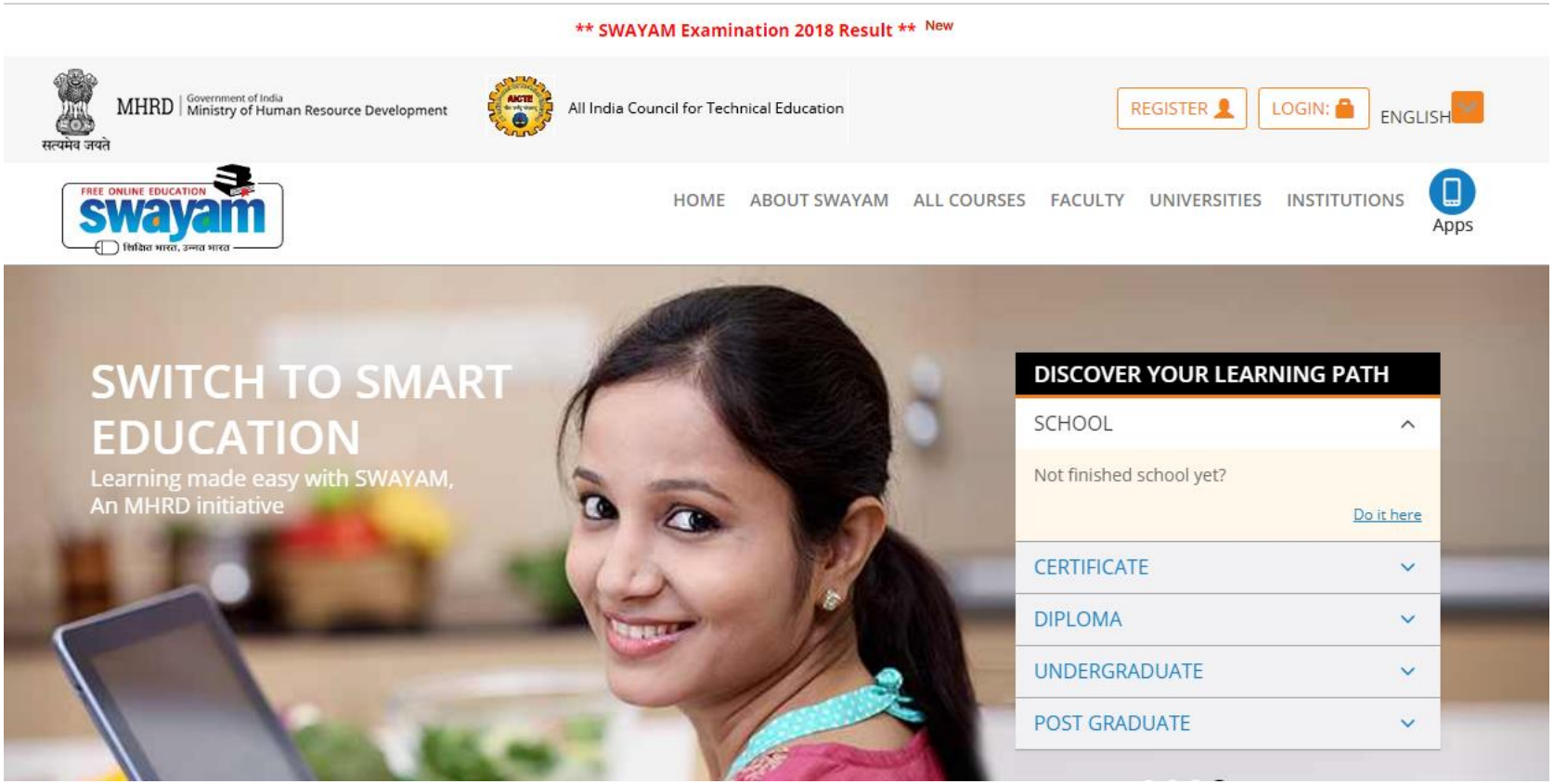
- **Knowledge Portals (KP):** Knowledge portals provide a **flexible knowledge environment** to potentially **large number of users**.

- The mission of a knowledge portal is not only to provide a library-like pool of information, but to **actively support the user** in execution of business processes.

EXAMPLE OF KNOWLEDGE PORTAL



EXAMPLE OF KNOWLEDGE PORTAL



CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

- CRM is a combination of policies, processes and strategies implemented by an organization to **unify its customer interactions** and provide a mean **to track customer information**.
- The objective of a CRM strategy must consider a company 's specific situation and its customer 's needs and expectations.
- Customer Relationship Management (CRM) system is used to **track and organize** its contact with its **current and prospective** customers.
- CRM software is used to support customer interfacing processes. **eCRM→ electronic CRM.**

E-CRM

E-CRM → **inter-active personalized interactions** **and** unifications with the customers in **online and real time** mode.

Features of eCRM are:

- Driven by **online data mining** tools.
- **Real time assessment of customer interactions**, its **analysis and interpretation** and strategizing the actions based on it.
- Begins to build relationship with **customer initiative** and **customer centric**. In E-CRM unlike CRM, every customer initiative is treated separately. Each customer is evaluated in real time using customer intelligence database for action prediction.

SUPPLY CHAIN MANAGEMENT (SCM)

http://www.xectasoft.com/scm/

SUPPLY CHAIN MANAGEMENT (SCM)

Supply Chain Management (SCM) is enterprise software to **manage and integrate customer, suppliers,** and business partners, distributors into organization internal supply involve in the **ultimate provision of product and service** packages required by end customers.

Supply Chain Management spans all

- **movement and storage of raw materials,**
- **work in process inventory, and finished goods**

from point of origin to point of consumption.

SCM system **keeps track of inventory and value of material** and **provides information** to SC manager to act.

SUPPLY CHAIN MANAGEMENT (SCM)

- Supply Chain Management is a cross-functional approach to manage the movement of raw materials and components into an organization, **acting as a bridge between external network of suppliers, customers and business partners.**
- The purpose of supply chain management is to **improve trust and collaboration** among supply chain partners, thus **improving inventory turnover.**
- The SCM performance **is linked to business model** and processes of the organization.
- The SCM systems **outcome and impact is at three levels** strategic, tactical, operational as elaborated in next slides.

SCM IN STRATEGIC ENVIRONMENT

- Strategic network **performance optimization**.
- Strategic partnership with SCM partners to **collaborate for improving** the performance of supply chain.
- **Product design and process design coordination**, so that new and existing products can be integrated into the supply chain for superior supply chain performance management.
- **Information technology infrastructure**, to support supply chain operations.
- **Make or buy decisions**, make or subcontract decisions, domestics or import decisions.
- **Aligning overall organizational strategy with supply strategy**.

SCM IN TACTICAL ENVIRONMENT

- Sourcing contracts and other purchasing decisions.
- Production planning and scheduling.
- Inventory decisions, including quantity, location, and qualify of inventory.
- Transportation strategy, including frequency, routes and contracting.
- Benchmarking of all operation against competitors and implementations of best practices throughout the enterprise.
- Focus on customer demand.

SCM IN OPERATIONAL ENVIRONMENT

- **Daily production** and distribution planning.
- **Production scheduling** for key manufacturing facility.
- **Demand forecasting** planning and scheduling. (exists at many level).
- **Sharing this information** with SC partners for coordination and collaboration.
- **Inbound operations**: Deliveries from suppliers and impact on inventory.
- **Production Operations:** receiving material on shop floor and impact on delivery.
- **Outbound Operations**: Planning dispatches and transportation to meet promised delivery date.
- **Reacting daily on supply chain performance measure.**

BOOST CUSTOMER SERVICE

- Customers **expect the correct product** assortment and **quantity** to be delivered.
- Customers expect products to be available at the **right location**. (i.e., customer satisfaction diminishes if an **auto repair shop** does not have the necessary parts in stock and can't fix your car for an extra day or two).
- **Right Delivery Time** - Customers expect products to be delivered on time (i.e., customer satisfaction diminishes if **pizza delivery** is two hours late or Christmas presents are delivered on December 26).
- **Right After Sale Support** - Customers expect products to be serviced quickly. (i.e., customer satisfaction diminishes when an AV machine stops operating in the summer and repairs can't be made for days)

OTHER FACTORS TO BE CONSIDERED

Reduce Operating Costs

- Decreases Purchasing Cost
- Decreases Production Cost
- Decreases Total Supply Chain Cost

Improve Financial Position

- Increases Profit Leverage
- Decreases Fixed Assets
- Increases Cash Flow

DECISION SUPPORT SYSTEMS(DSS)

- Decision support systems are **interactive software-based** systems intended to **help managers in decision making** by accessing large volume of information generated from various related information systems involved in organizational business processes, like, office automation system, transaction processing system etc.
- DSS uses the **summary information, exceptions, patterns and trends** using the **analytical models**. Decision Support System helps in decision making but does not always give a decision itself.
- The decision makers compile useful information from raw data, documents, personal knowledge, and/or business models to identify and solve problems and make decisions.

DECISION SUPPORT SYSTEMS(DSS)

- The Decision Support System having three phases in **iterative manner**:
  - Intelligence,
  - Design and
  - Choice.
- The DSS basically helps the information system in the intelligence phase where the **objective is to identify the problem** and then go to the design phase for solution.
- The choice of selection criteria varies from problem to problem. It is therefore, required to go through three phases again and again till a satisfactory solution is found.
- In the use of three phase's cycle, you may use either inquiry, analysis, and models or accounting systems to come to a rational solution.

CHARACTERISTICS OF A DSS

- Support for decision makers **in semi structured and unstructured** problems.
- Support for managers at **various managerial levels**, ranging from top executive to line managers.
- Support **for individuals and groups**. Less structured problems often requires the involvement of several individuals from different departments and organization level.
- **Support for interdependent or sequential decisions.**
- Support for intelligence, design, choice, and implementation.
- Support for variety of decision processes and styles
- DSSs are **adaptive** over time.

BENEFITS OF A DSS

- Ability to support the solution of complex problems.
- Fast response to unexpected situation.
- Ability to try several different strategies.
- New insights and learning.
- Facilitated communications.
- Improved management, controls and performance.
- Cost saving.
- Improving managerial effectiveness.
- Improved productivity of analysis.

SOME DECISION SUPPORT SYSTEMS

- Status Inquiry System
- Data Analysis System
- Information Analysis System
- Accounting systems
- Hybrid Model Based Systems

GROUP DECISION SUPPORT SYSTEMS

- GDSS has also **same components** as in DSS, namely database, models, DSS Tools (Query, OLAP, Spreadsheet, Statistical Analysis) and something more which group needs to work together.
- If GDSS is a group responsibility then the group **needs a platform** to conduct the process.
  - **Common chat room with display screen**
  - **LAN to interact** with other members.
  - **Teleconferencing or video conferencing**
  - **Long distance telecommunications network.**

GROUP DECISION SUPPORT SYSTEMS

In all four configurations, GDSS support **software is available on server** for members to use.

Disregarding the configuration model of the group and the type of network use, **following activities are common**.

- **Sending and receiving information** in all forms, types across the network
- **Display of notes, graphics drawing, pictures**.
- **Sharing** ideas, choices, and indicating preferences.
- **Participate in decision making process** with inputs, help and so on.

GROUP DECISION SUPPORT SYSTEMS

- In GDSS, group members **interact, debate, communicate and conclude** using different tools and techniques.
- This process may not happen in **real time in continuous manner**. The process may run for sometime online, and then stop and wait for response, then react on response till the problem is solved.
- Group members are drawn from **different fields having a specific knowledge and application skills**. They pitch in voluntary or when called for to take GDS. Process ahead to conclusion.

ACKNOWLEDGEMENT

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