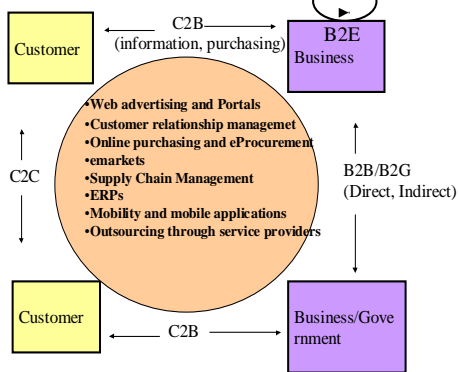


SESSION : EC/EB Applications

- Web portals
- Customer care and customer relationship management
- Online Purchasing and e-procurement
- Electronic marketplaces
- ASPs /CSPs
- ERPs
- supply chain management

Amjad Umar

NGE (Next Generation Enterprise) Conceptual Model



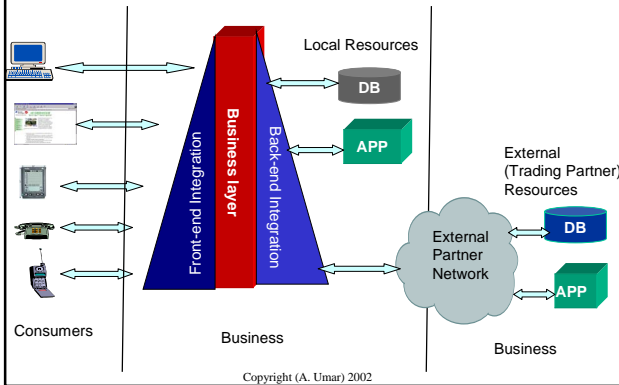
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EB Apps

→Business Patterns	C2B-Information	C2B-Purchasing	B2B-Direct	B2B-Indirect	B2E	C2C
EB Applications↓						
Web advertising and Portals	x		x		x	
Customer relationship management (CRM)	x		x	x	x	
Online Purchasing and EProcurement	x	x	x	x	x	
Electronic marketplaces and trading hubs	x	x		x	x	
Supply Chain Management			x	x	x	
Enterprise resource planning (ERP) systems					x	
Data Warehouses and Data mining	x	x	x	x	x	x
Outsourced applications	x	x	x	x	x	x
Mobility and mobile applications	x	x	x	x	x	x

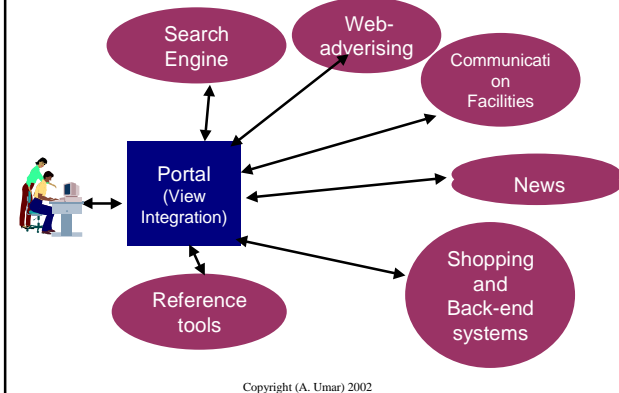
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High Level EB Architecture



Portals

Enterprise-based portal provides entry points into the organization for others



Portal Dimensions*

	Horizontal	Vertical
Internet Based	MegaPortals	Portals
Enterprise Based	HEPs	VEPs

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Customer Relationship Management (CRM)

CRM is “a management approach that enables organizations to identify, attract and increase retention of profitable customers, by managing relationship with them”.

Source: “CRM Strategies”, Ovum Report, 1999

CRM is not just:

- Web and Internet
- VOIP
- business processes
- methodologies
- CRM is an enterprise-wide initiative that requires a combination of marketing, sales, service and technology, as well as the other inner-workings of an organization.

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Why CRM?

• “Average firm loses 10% of its customers each year due to poor customer relations” *Source: “CRM Marketplace”, Aberdeen, 2000*

• Traditional competitive differentiators are not enough

Product → Difficulties due to quick replication

Price → How to compete with trading hubs and electronic marketplaces

Promotions: → Abundance of clubs, and sales

Distribution sites → less influential due to “virtual” enterprises

Customer Relationship Management is the primary means of winning customer loyalty

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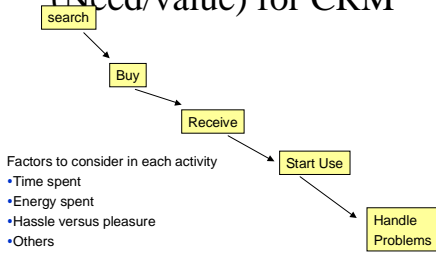
Some facts

(Source: Kalakota, Gartner, Aberdeen)

- It costs 6 times more to sell to a new customer than an existing
- A typical dissatisfied customer will tell 8 to 10 people
- A company can boost its profits by 85% by increasing customer retention 5%
- The odds of selling a product to a new customer are 15% versus 50 % to an existing
- 70% of complaining customers will do business again with the same company if it quickly takes care of the problem.
- Example (Source: : Knowledge Stream Partners) X wireless was adding 1.5 million customers / year but losing 900,000 customers/year. With avg rev/Customer/Month=\$55 this amounted to losing \$600,000,000 Retention is cost effective vs \$300 for a new customer

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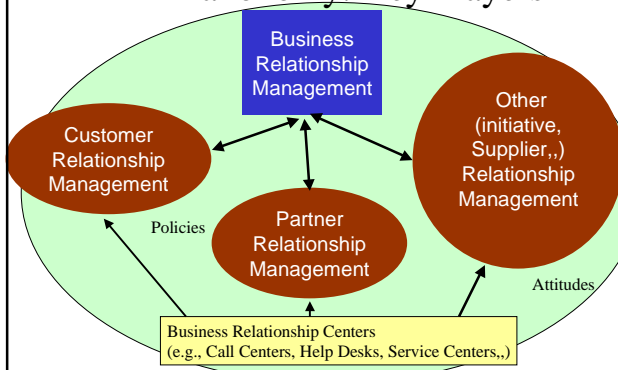
Analyzing Customer Behaviour (Need/value) for CRM



Data mining for behaviour analysis
"Clickstream" mining on the Web

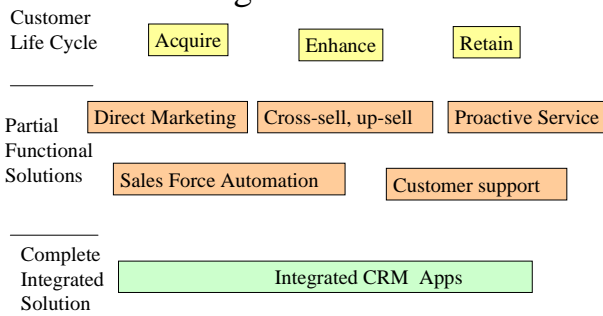
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A Taxonomy: Key Players

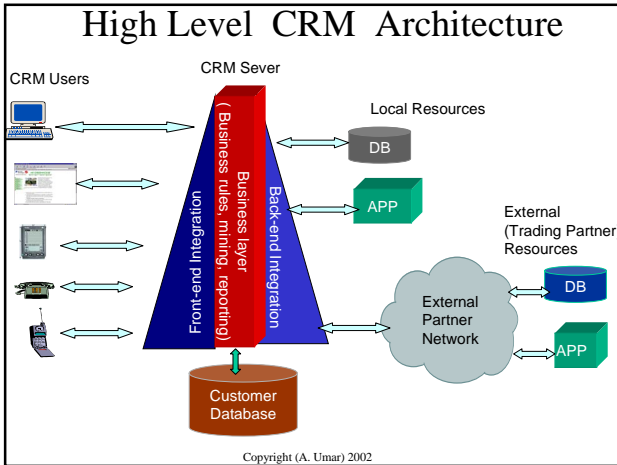


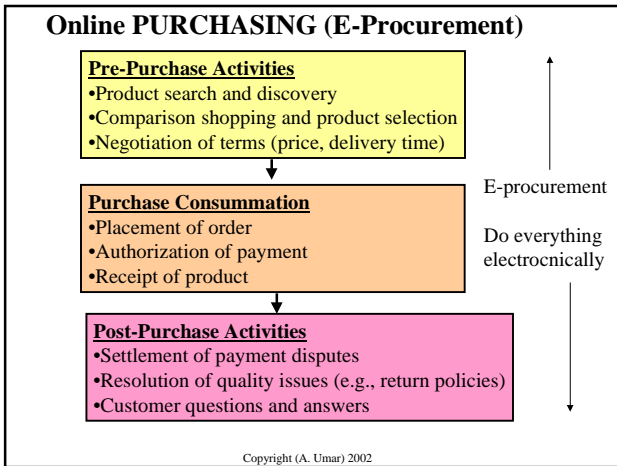
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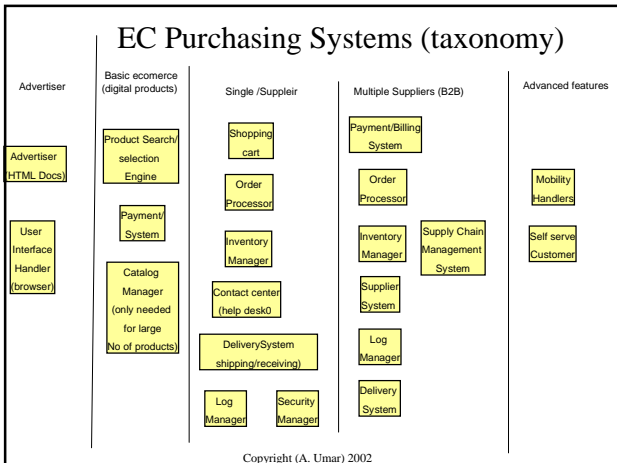
Integrated CRM



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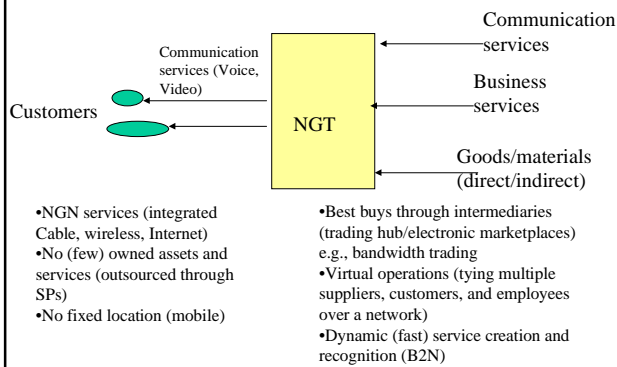


Virtual Enterprises, Inventories and Shopping Malls

- Virtual (Extended) Enterprises
 - Absence of “physical” things (office, distance, owned assets,)
 - Business entities exist on the Web
 - User interacts through a Web site (many partners in background)
- Virtual inventories
 - Arranged by products
 - User issues a request
 - User does not know the physical companies and inventories”
- “Active” virtual Inventories
 - The inventories are tied to back-end supply chains to fill order
- Virtual shopping malls follow this

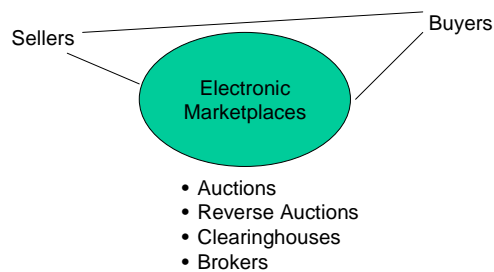
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Next Generation Telcos (NGT)



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Electronic Marketplaces

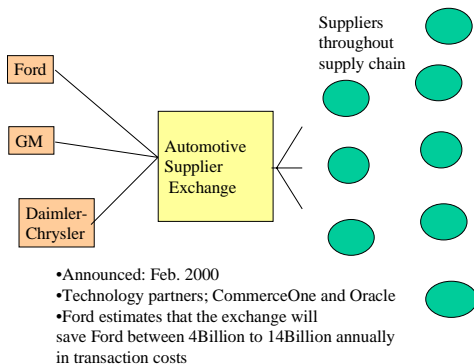


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Electronic Marketplace Functions

- matching buyers and sellers
 - determining product offerings
 - searching
 - price determination
- facilitating the exchange of goods and services along with associated information (e.g. payments, transactions)
 - logistics and settlement (i.e., how the goods/services are delivered and how payments are made)
 - trust management (how buyers and sellers are mutually protected from malicious or opportunistic behaviors)
 - physical infrastructure, such as a robust network infrastructure and a software architecture suitable for trading
- providing an institutional infrastructure
 - regulatory framework for the enforcement of common trading rules

Example of E-market: Automotive Supplier Exchange



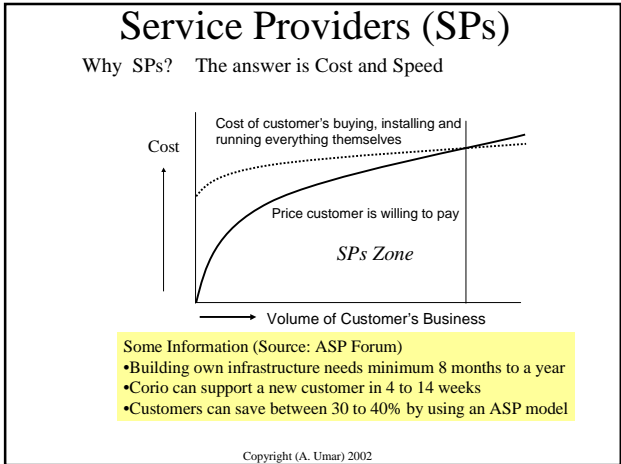
Examples of eMarkets

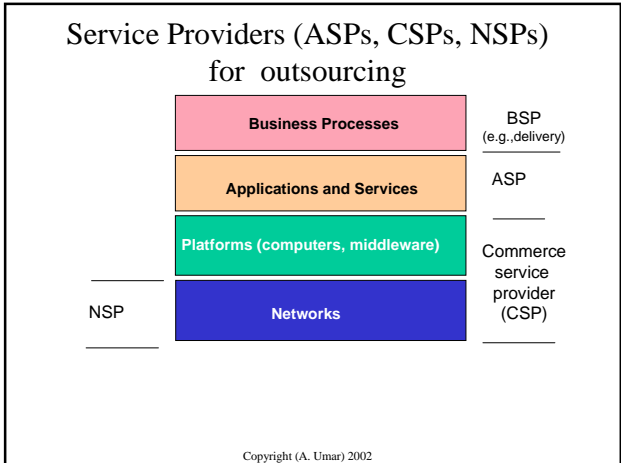
- mySAP.com Marketplace (markeplace.mySAP.com) for a variety of marketplaces oriented towards the enterprise
- Marketplace for the Real Estate Industry (myimmobile.com)
- Marketplace for the Healthcare Industry (www.newforma.com)
- Marketplace for Industrial Goods (emaro.com)
- Marketplace for the Chemical and Pharmaceutical Industry (chemfarm.mySAP.com)
- International eTailing Marketplace (www.groceries.com)
- MRO (maintenance, repair, operation) Hubs such as www.granet.com and www.hicmyr.com
- Yield managers for spot buying of supplies such as www.Employeease.com, www.Adsaction.com and www.Ampac.com
- Emarkets in the telecom industry such as telezoo.com, demandline.com, and espoke.com
- Bandwidth traders in telecommunications such as pkcomm.com, Enron.com, thegtx.com, and band-x.com

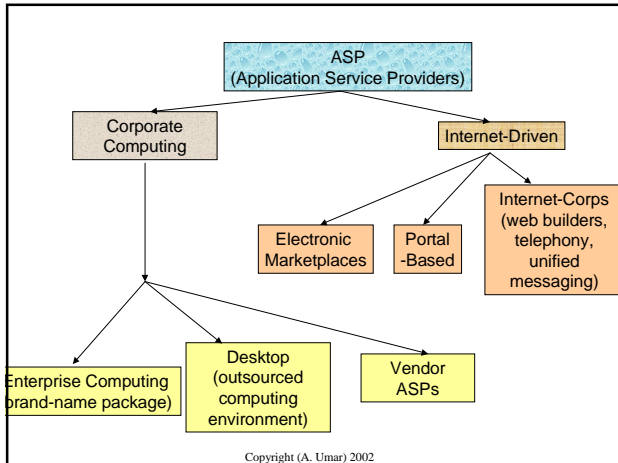
A classification of B2B eMarkets (Source: [Kaplan 2000, HBR])		
	General Materials and Supplies (Horizontal)	Industry Specific Materials and Supplies (Vertical)
Systematic Buying (Agreed-upon Purchases)	MRO (Maintenance, Repair, Operation) <ul style="list-style-type: none"> Ariba www.oranger.com Bizbuyer.com 	Catalog Hubs <ul style="list-style-type: none"> Chemdex SciQuest.com PlasticsNet.com
Spot (ad hoc) Buying	Yield Managers <ul style="list-style-type: none"> Employeease Addauction.com Capacityweb.com 	Exchanges <ul style="list-style-type: none"> e-steel paperexchange.com AltraEnergy IMXExchange

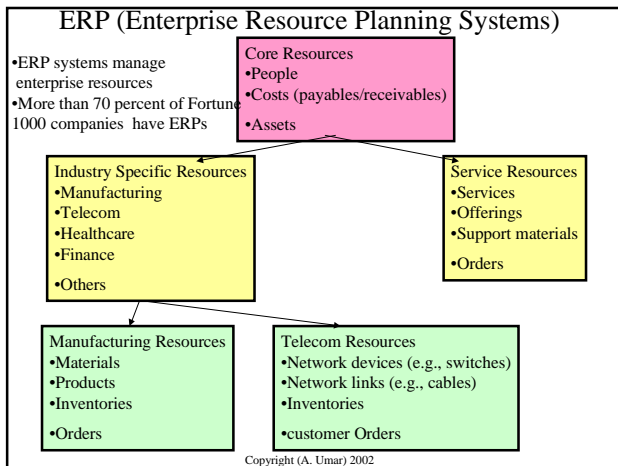
For examples of emarkets, see www.bobcat.com

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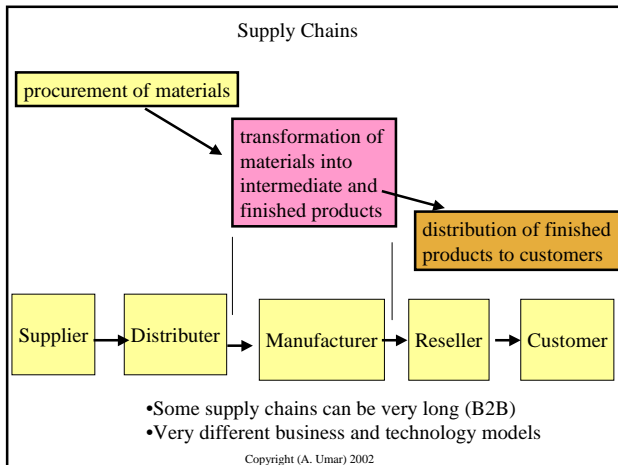


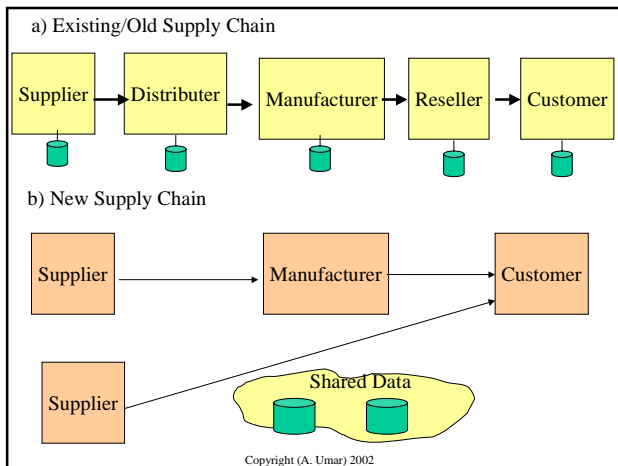


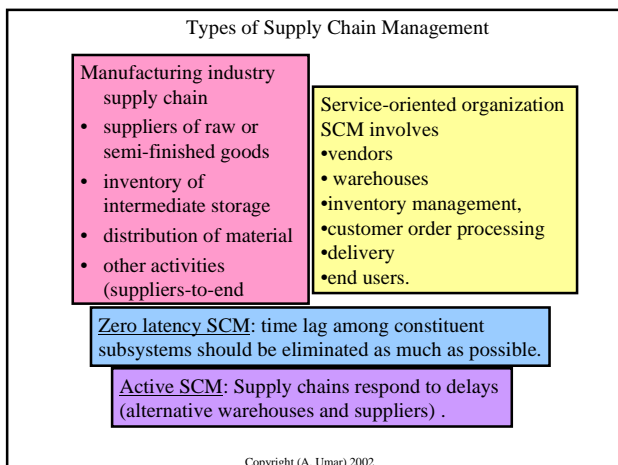
Commercial ERP systems

- Major players (many others) with focus on “back-office”
 - SAP
 - Peoplesoft
 - Oracle
- Typically contain database and several modules integrated around the database
- Facilitate changes in business and technologies
- Mostly quite expensive but offer many benefits (Ericsson)
 - Reduces time
 - Order processing time from 1 hour to 10 minutes
 - Production scheduling time from 18 hours to 30 minutes
 - Improves quality (98% orders delivered on time)
 - Consolidate and integrate many functions (uniform access)
 - Improve decisions across organization
- Becoming very Web-oriented
- Trying to find their place in Ebusiness (ERP to BRP)

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Supply Chain Management Systems

- There are at least 60 SCM products and solution providers
- Key product vendors include
 - i2 Technologies
 - BEA Software
 - Manugistics
 - Persistence Software
 - Oracle
 - SAP
 - Sybase
 - Agile Software Inc.,
 - Calico Commerce,
 - Veritas Software,
 - Descartes Systems group
 - QAD Inc.,
 - Summit Technologies
 - RBA Associates
 - SNS Supply Chain Management
 - HK Systems Inc.

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Supply Chain Management

- Several successful examples of multi-national corporations that maintain their competitive edge due to efficient supply chains
 - Procter & Gamble
 - Wal-Mart
 - Coca-Cola
 - Hewlett Packard
 - Cisco
 - IBM
 - Sun Micro Systems
 - Compaq Computers
 - DELL
 - 3COM

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Selling Chain Management

Order
Life Cycle

Inquire/
Prospect

Customize

Commit

Order

Partial
Functional
Solutions

Sales Lead

Configurator

Contract
Pricing

Order
Entry

Product
Catalog

Available to
Purchase

Proposal and
Quote

Commission

Complete
Integrated
Solution

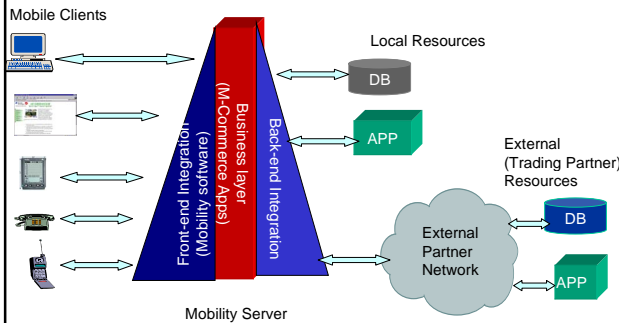
Integrated Selling Chain Apps

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Mobile EB/EC Applications

- Mobility of:
 - Customers
 - Suppliers and Businesses
 - Employees
- Mobility applications in EB/EC
 - Mobile ebusiness applications (MEBAs), e.g., M-CRM, M-portal
 - Mobile ecommerce (M-Commerce)
 - Positional commerce (*p-commerce*)
 - Voice commerce (*v-commerce*)
 - Television commerce (T-Commerce)
- Issues in building mobile applications
 - Network speed (wireless networks slower and unreliable)
 - Display features (increased voice usage)
 - "Roaming support"
- Two views:
 - Mobile applications are fundamentally new applications.
 - Mobility is another dimension of the existing EB/EC applications

High Level Mobile Architecture



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Concluding Comments

- Many different approaches to discuss DBs, DWs, and DM.
- Our approach: applications in EC/EB
 - Electronic marketplaces
 - Web portals
 - ASPs /CSPs
 - ERPs
 - supply chain management
 - Customer care and customer relationship management
- Next step: What are the DB, DW, DM technologies and how do they enable/support EB/EC

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