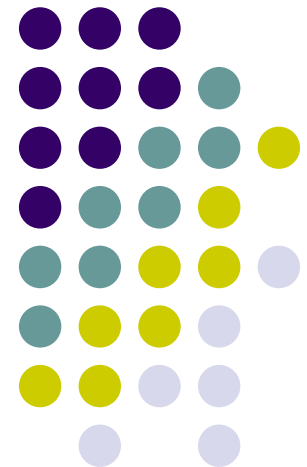
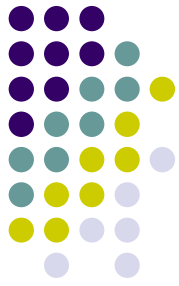


WIDP

## Enterprise Concepts

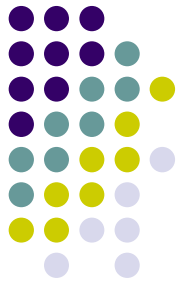


# Electronic Business Models



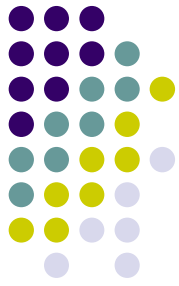
- We will discuss electronic business models from a system perspective
- The main objective is to describe models in their **full life-cycle**
- We will elaborate on issues that concern *Designers, Developers & Trouble-shooters*
- We will use systemic metaphors to establish a platform for **creative & organised** thinking (elements and their interactions)

# You will be able to



- Describe a range of electronic and wireless business models
- Distinguish between various existing models
- Plan, design and operate an electronic business system to spec
- Solve problems arising at different stages of e-business life-cycle
- Evaluate e-business systems from both consumer and business angles

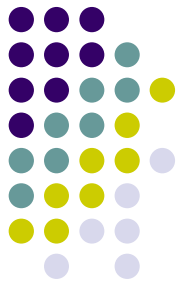
# Systems



The three schools of thought that provide definition for systems:

- **Mechanists**
- **Organists**
- **Holists**

# Mechanical Systems (Closed System)



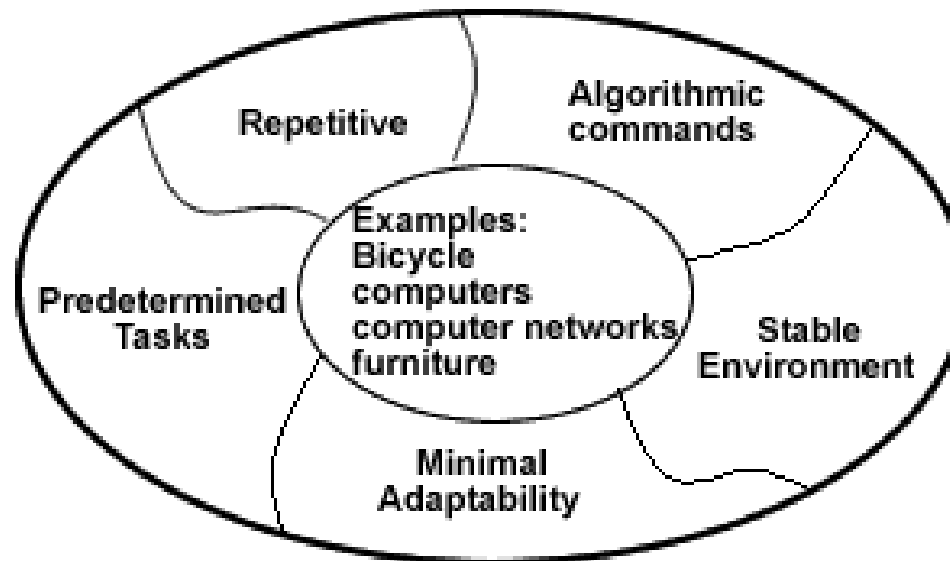
The ***Mechanists*** define system as:

- Aggregation of parts where the whole is equal to sum
- The constituents of a system are standard parts with defined relationship between them e.g. bicycle, car etc.
- Emphasis is on the performance of each part where *pre-determined & repetitive* functions implement specified operations

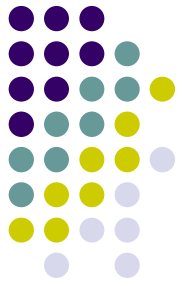
# Main Characteristics of a Closed System



## Mechanical System

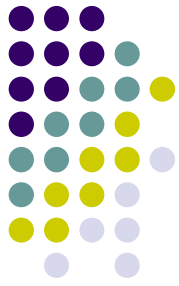


# Challenges to Mechanists



- It came from **human relation theorists**
- Respect for social and psychological needs of people will improve the *effectiveness & efficiency* of operations

# Open System

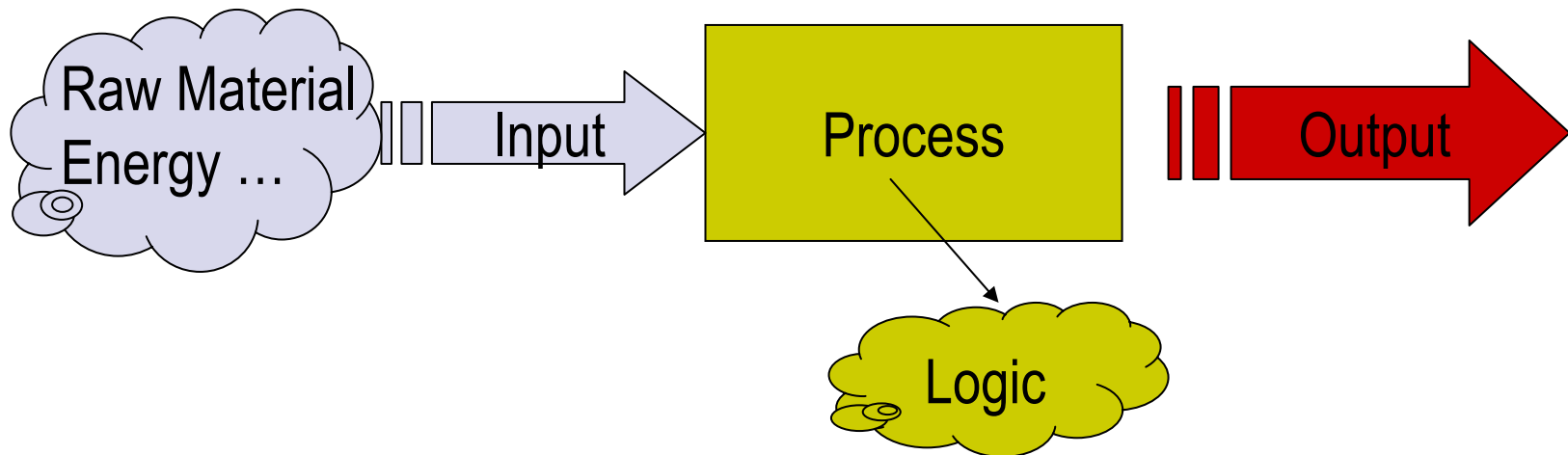


The *organists* describe a system as:

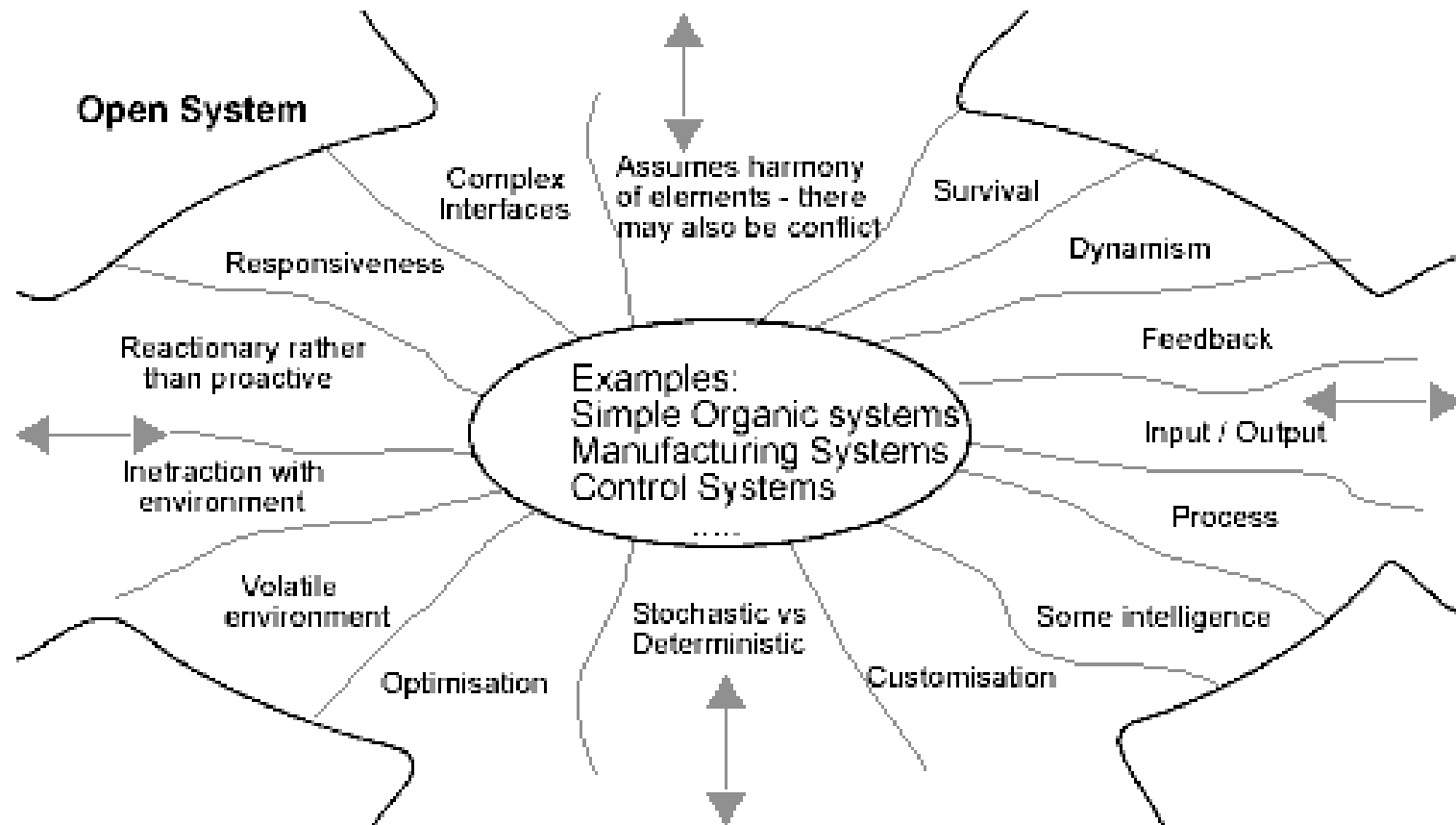
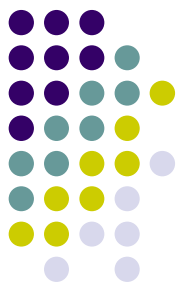
- A set of interlinked elements with synergetic properties
- The whole is greater than simply the sum of the constituents of the system
- They constantly interact with the outside world
- Adaptation and survival in complex situations is the objective they pursue



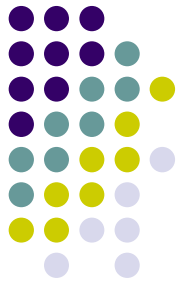
# Open Systems cont.



# Main Characteristics of Open Systems

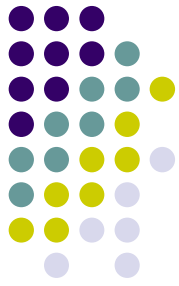


# Open Systems Answered ...



- Some of the issues concerning dynamical systems analysis
- However, the increased complexity of socio-economics dynamics needed to be considered i.e. ***Viability issues***

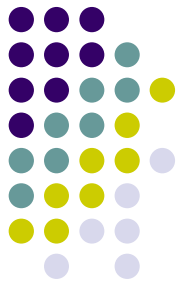
# Viable Systems



The *Holists* define a ***Viable System*** as:

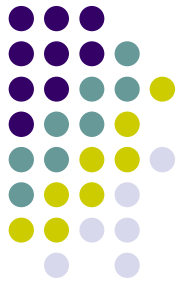
- Interacting networks that in addition to their constituent elements govern the complex interactions between:
  - Functional,
  - Socio-economical,
  - Cultural, and
  - Political elements

# Viable Systems Emphasis



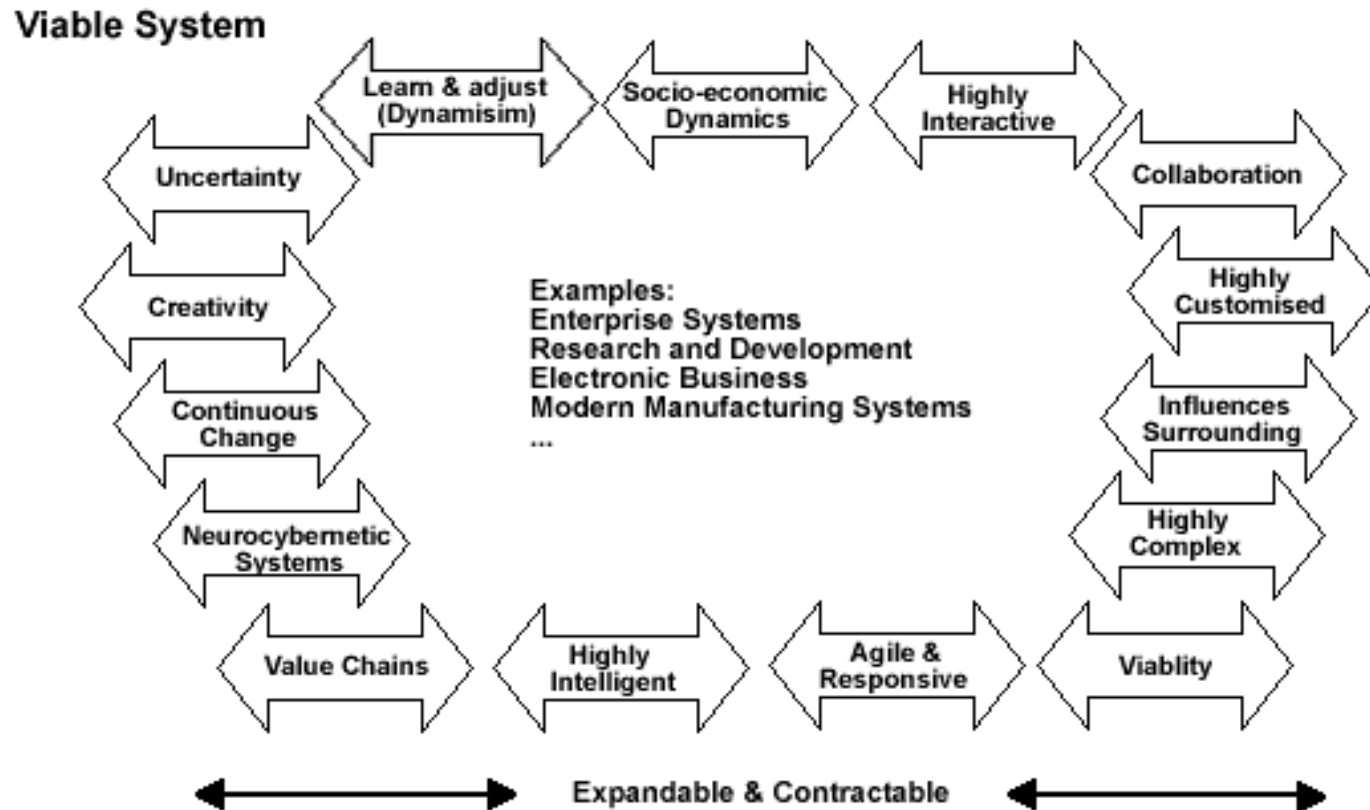
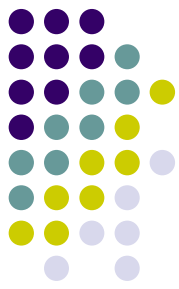
- Aggressive prediction,
- Active Learning, and
- Monitoring & Control

# Viable Systems Focus



- Data Acquisition (Past – Present → Future)
- Information Processing
- Viability
- The **Viable Systems** not only adapt to changes but also *influence and change* the environment to their advantage
- Reinvention – Creativity – Innovation

# Characteristics of Viable Systems



# Electronic Business Models in Detail

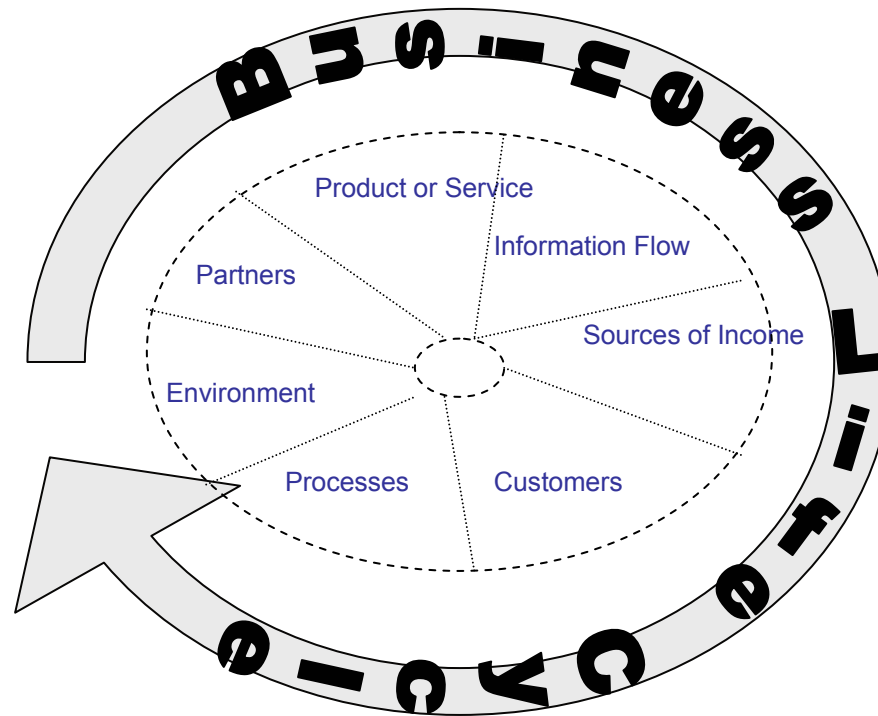
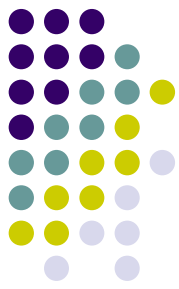


The dynamics of e-Business models require a thorough understanding of:

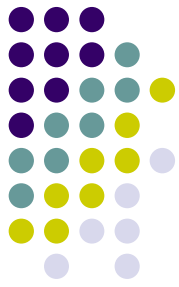
- The nature of product or service delivered by the system
- The players, the information structure, resources, and the relationship between them
- The raw material – the method of processing the material to provide end product
- Sources of revenue
- The environment the business functions in
- Business life cycle: birth, growth, maturity, and sustainability



# The Business Model and its Life Cycle



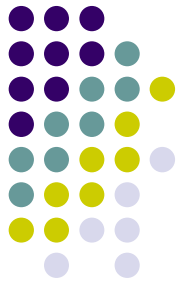
# Business Model Life Cycle



E-Business life cycle consists of a multi-stage:

- **Non-Cyclic functions** – Are conducted once in the life cycle
- **Cyclic functions** – are continuous activities that need to be implemented and repeated if necessary

# Non-Cyclic functions



Three stages of non-cyclic functions:

## 1. Create

- Assess competition
- Novelty and uniqueness of the product
- Consumer perception
- Business duration

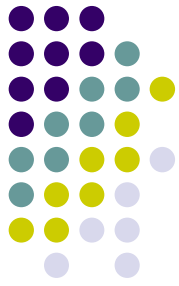
## 2. Groundwork

- Logistics and financial requirements
- Identification of strategic business associates

## 3. Launch

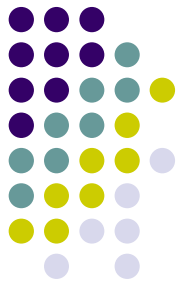
- Physical presence and advertising

# Cyclic Functions



1. **Maintain**
  - Day-to-day activities
  - Consolidates customer relationships
  - Enhances relationships and interactions with business associates
2. **Innovate**
  - Continuous improvements on product design and process optimisation
  - Includes business administration and technological improvements
3. **Sustainability**
  - Comprehension of dynamics of the environment
  - Embed capabilities for sustainability
4. **Remain**
  - Flexibility to adjust to change e.g. cultural, economical and political

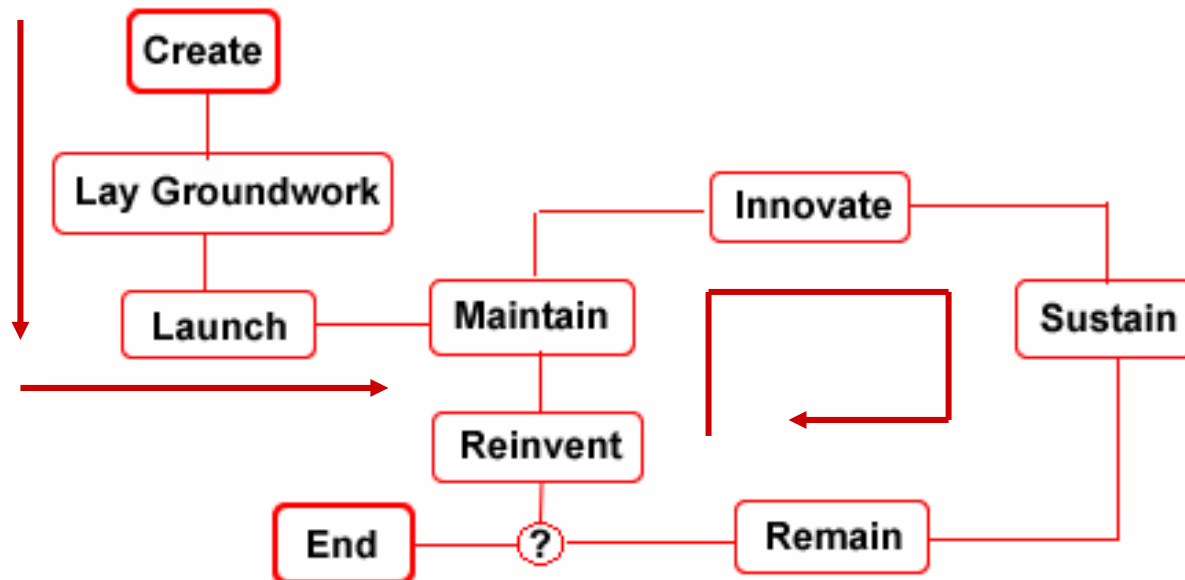
# Cyclic functions cont.



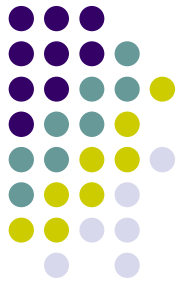
There is time to make decisions:

5. **Reinvent**

6. **End**



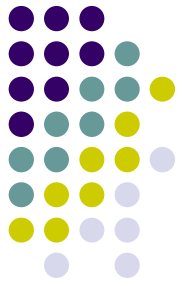
# E-Business Model Architecture



To provide a sound platform for a sound electronic business the architect of the business model should represent:

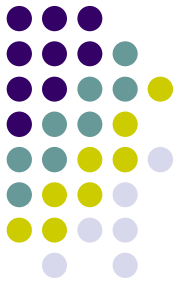
- The product/service – **What is it that you are going to offer ?**
- The information structure and flow – the digital construct **networks and responsibilities**
- Activities and added value **Involvement, other players, various activities and role of players**

# Identity, Brand & Capability



The business modeller should be able to:

- Set the mission and objectives (***identity***)
- Develop plans for the organisation to cope with dynamic objectives and maintain high quality of service (***brand***)
- Carry out an analysis of the *purpose* and the *synergetic* qualities of the existing or planned departments within the system (***capability***)



# E-Business Models Questions to be addressed

- What are we going to gain ?
- What is in it for our business associates and partners ?
- Is it sustainable ?
- What are the risks ?
- Who does what ?
- Business Capability ?

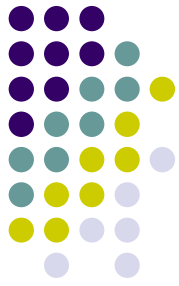


# Business Model Sources of Revenue



- Target Market – Global vs. Local
  - Marketing Research & Strategy
  - Sources of income and Business process Costs
  - ROR – if I invest £ I will gain £££
  - Business to Consumer ?
  - Business to Business ?
  - Market Share
  - Competition
  - Customer Perception
  - Business Reengineering – Continuous update of product and process
- } Both

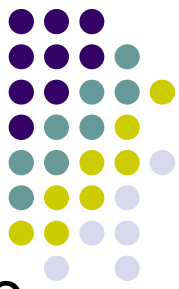
# Fixed Position vs. Mobile Access



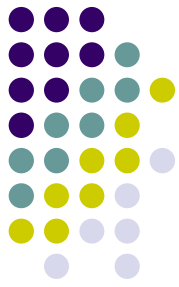
Internet technology and the WWW have created a platform for dissemination of shared information.

- **Fixed Position:** The revolution in PC technology has provided direct access to the WWW from office and home computers, it requires:
  - Personal computers
  - Enabling hardware and software
  - Communication mediums (wired)

# Fixed Position vs. Mobile Access cont.

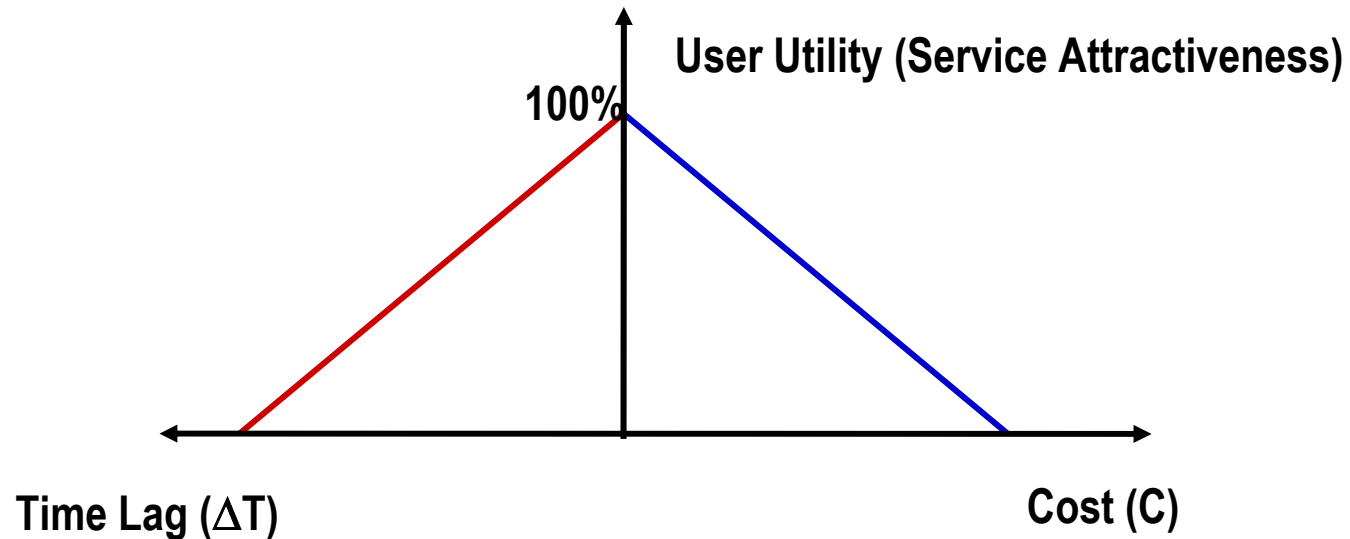


- **Mobile Access:** Provides connections to the WWW to the mobile devices. It is similar to fix-position access but some fundamental differences due to:
  - Screen size, computing capacity and power limitations
  - Immediate access to real-time information
  - Cost of connection



# Relationship between Service Attractiveness , cost and Time Lag

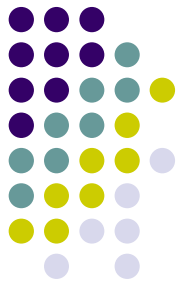
There is trade-off between real-time and immediate access to information and mobile device connection fees:



Where  $\Delta T$  is the difference between the time an event takes place ( $T_E$ ) and the time that the information is received ( $T_R$ ) by the user:

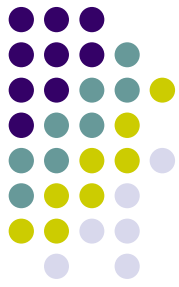
$$\Delta T = T_E - T_R$$

# Electronic & Mobile Business Models



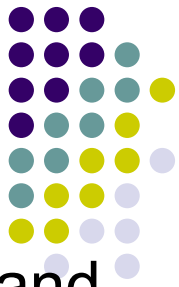
- **E & M Shopping**
- **E-Malls**
- **E & M Auctions**
- **E & M Value Chain Integrators**
- **E & M Content Provider**
- **E & M Financial Services**
- **E & M Entertainment**
- **Online Collaborative Platform**
- **E Manufacture**

# E & M Shopping



- A new platform for traditional high street retailers
- A special opportunity to save with “*web exclusive*” offers
- With the advancement of multimedia and software technology the thrill of high street shopping has been embedded (The Touch Factor)
- Provides **secure** transaction facilities
- Also offers customers the use of traditional commercial channels such as telephone, fax, and address to the nearest shop

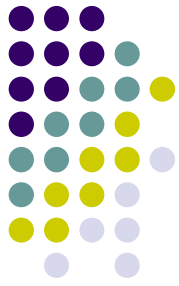
## E & M Shopping cont.



Mobile technology and computing has added remote and instant accessibility. Shoppers who shop using their mobile devices look for special features such as:

1. Does this mode of shopping have any advantage to other modes?
2. Are there any specific incentives if the order is put through mobile devices?
3. Will there be sufficient information on the product via mobile services?
4. Does the mobile service provide better purchasing options such as product alternatives and real-time updates

# E & M Shopping cont.

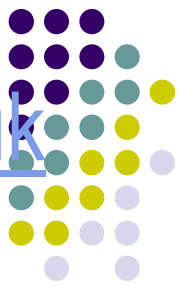


As a designer of a e&m Shopping business model there are specific features that you need to consider:

- Product Browsing
- Product Comparing
- Ordering and Payment
- Product Delivery
- Secure Transaction



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### WEB EXCLUSIVE

Top 20 DVDs from £7.99 Plus FREE Delivery

**Philips 34" Flat Panel LCD TV**  
 £1,000.00  
 INFO

**Packard Bell Refurbished Freeview Digital TV Receiver**  
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**Sony 24" Digital TV, Video & DVD Package**  
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**Kenwood Stainless Steel Dual Fuel Range Cooker**  
 £369.95  
 INFO

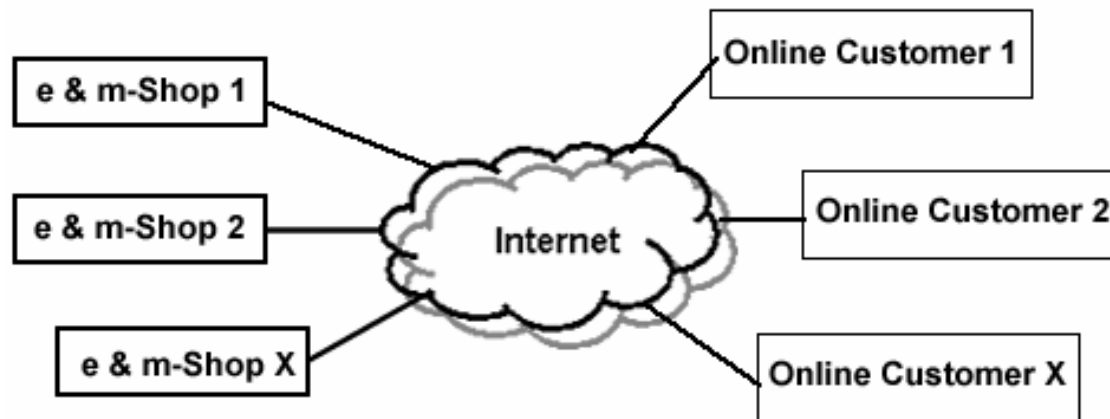
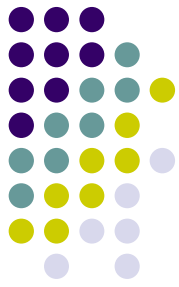
### CURRENT PROMOTIONS

Top 20 DVDs from £7.99

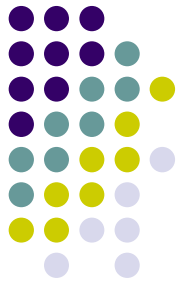
Click Here

Free To Enter

# A Schematic view of m&e Shopping

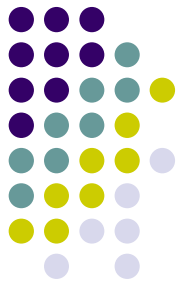


# E & M Malls

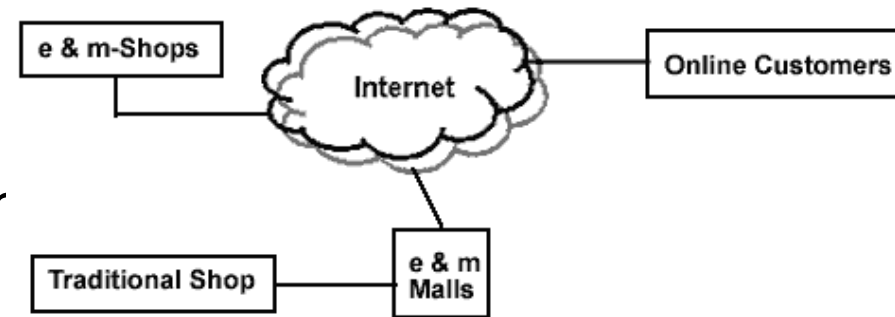


In addition to the features for E Shops, E Malls are marketspaces where a collection of E Shops or their products and services are gathered under a common umbrella

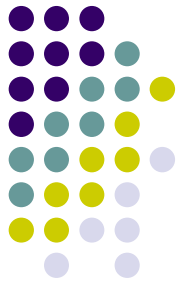
# Features of E Malls



- Branding
- Cost reduction
- Competition with traditional r
- Instant commercial interactic
- Exposure to a wider market vs. inter-market competition
- Providing shopping consultancy



# E & M Auctions

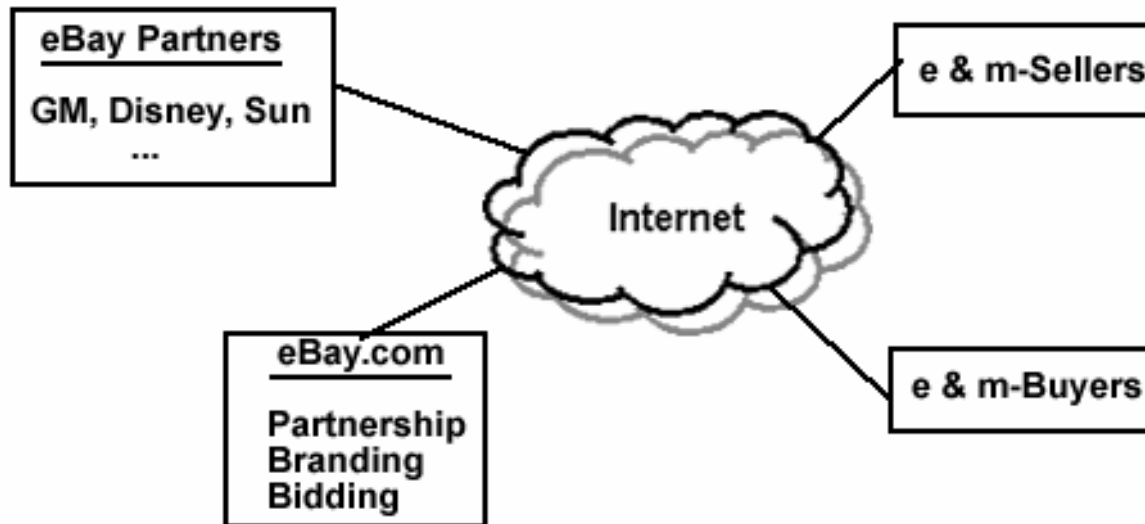
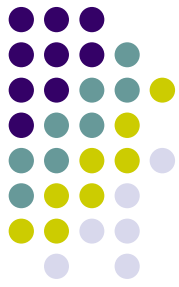


Similar to traditional auctioning uses embedded electronic capabilities to facilitate biddings and transactions

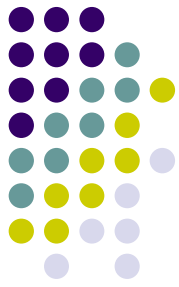
The main features:

- Provision of attractive products
- Community building
- Bidding facilities
- Validation and Verification
- Security

# Schematic overview of E & M Auction

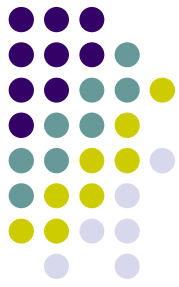


# E & M Value Chain Integrator



- The legacy of e-commerce is to rid of non-value adding middleman
- For example E& M VCIs such as online travel agencies:
  - Design package holidays
  - Provide special offers
  - Provide accommodation and recreational services by negotiating prices with service providers (lastminute.com)
- They save customers time, and money in finding the most efficient and desirable holidays or business venues/trips

# E & M VCI product market strategy



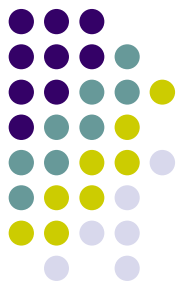
- Focussing on current sales opportunities with emphasis on cost reduction. The objective here is to establish a market presence among the leading players.
- Using Internet technology for improved product or service presentations. It offers innovative marketing services such as multimedia, additional customer services, insurance, and financial arrangements.



# E & M VCI sources of revenue



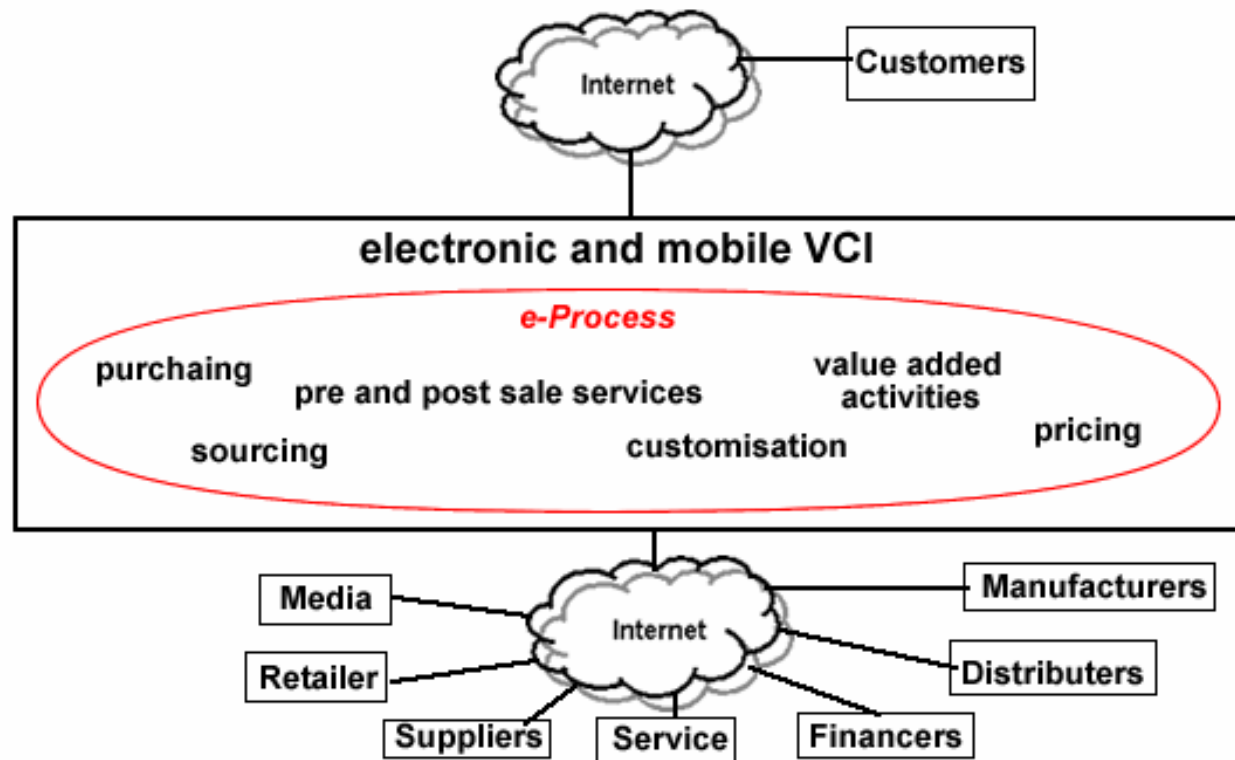
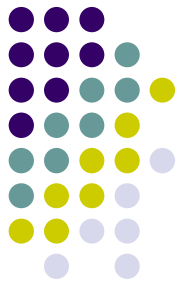
- Extra charges for added value activities
- Commissions from service/product suppliers (Partners)
- Customer subscription fees for specialised services



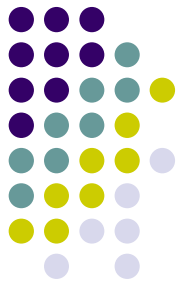
## E & M VCI features

- Product customisation
- Wide choice of supplier
- Low purchasing cost
- Utilisation of Electronic Process (Keen et al): Strong inter-organisational and extra-organisational relationship between players. The emphasise is on **prioritising**, **coordinating** and **sourcing** using a combination of:
  1. software applications to convert business activities to electronic format, thus facilitating automation of processes,
  2. creation of electronic links to business partners,
  3. project management and resource allocation with aim to manage people, workflow and routines that constitute business functions, and
  4. exception and error handling, the capability to address technical and organisational shortcomings with minimal damage to reputation and business practices.
- Provide a platform for shorter lead-time with the emphasis on convenience for retailers, suppliers and customers.

# E & M VCI Schematic view

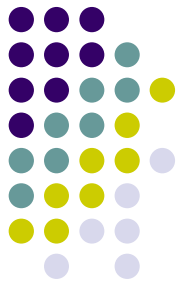


# E & M Content Provider



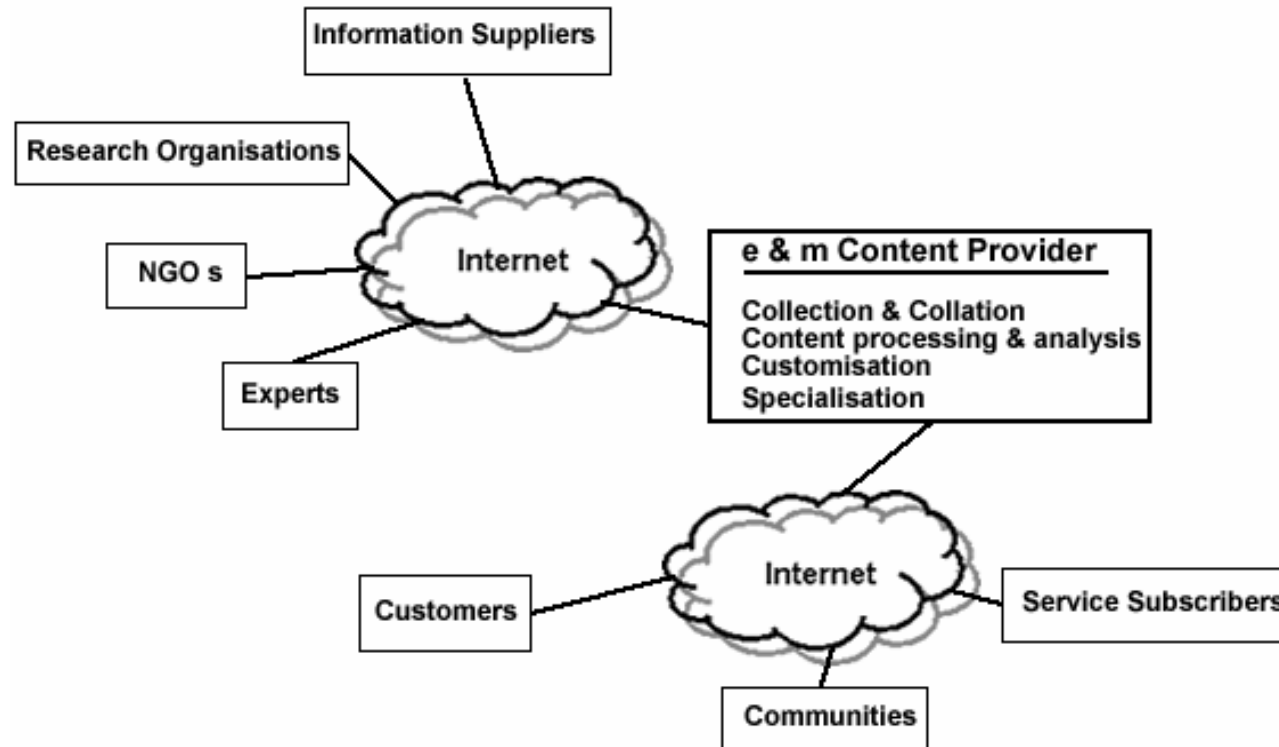
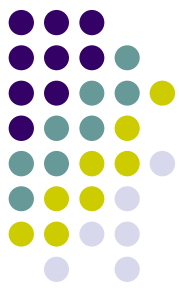
- Supply detailed and critical information with regards to products, services, communities, fan clubs, politics, religion, and politics
- May be free of charge
- Some examples can be NGOs, research councils, health advisors, unions, sports and music fans

# E & M Content Provider main features



- Rich in content
- Specialised with the aim to increase public awareness and contribute to knowledge and research.
- Powerful search engines: Embedded software for searching the WWW or the specialised website or sites. Google.com is one the most powerful online search engines that find and supply content free of charge.

# E & M Content Provider Schematic view

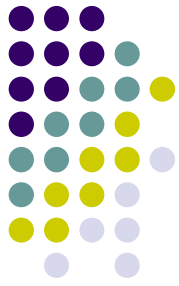


# E & M Financial Services



- Deals with online customer-oriented banking, investment and financial services.
- Customers are expecting to have instant access to financial services
- Traditional banks have realised the demand and potentials to improve customer relation and quality of service
- It helps traditional banks to reduce operational overhead costs

# E & M Financial Services



- Online Banking
- Online investment
- Online Shareholding

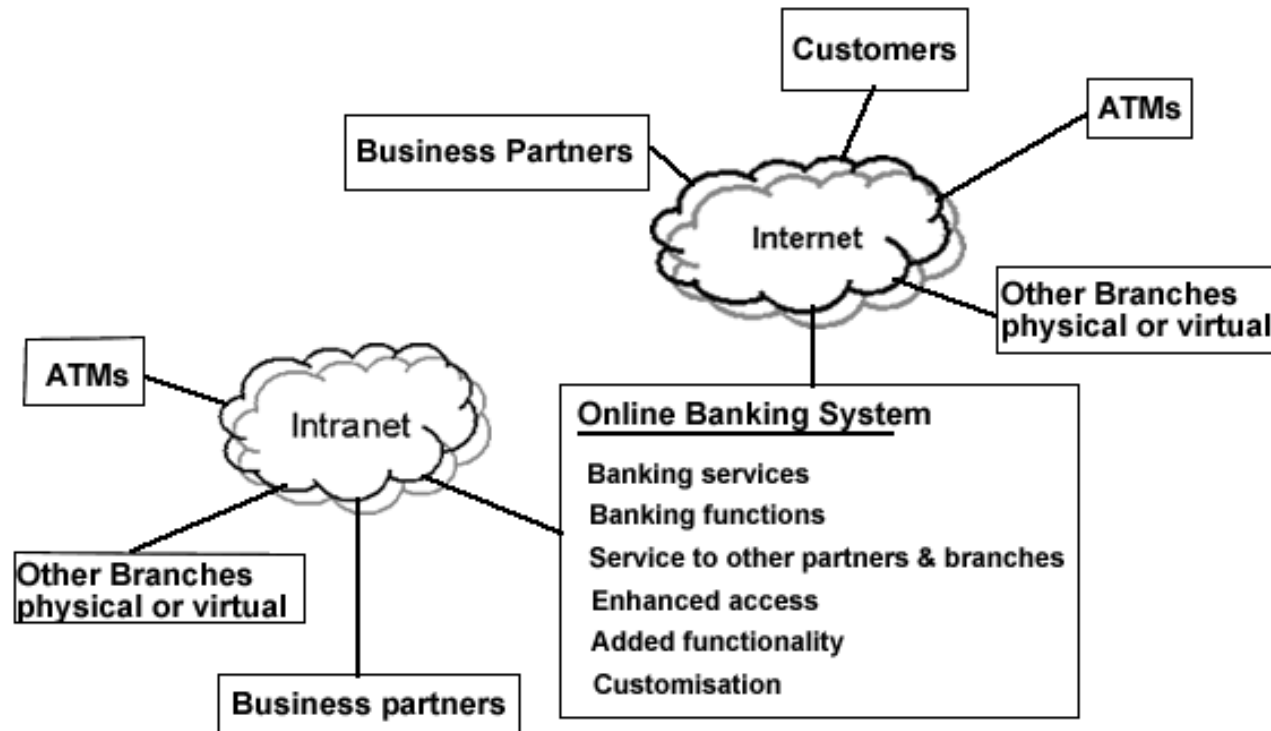
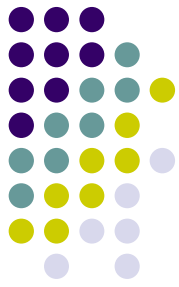


# E & M Financial Services (Online Banking)

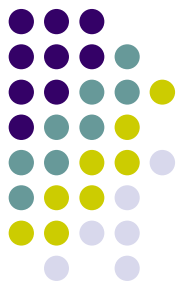


- Online secure banking services and functions
- Cross branch networking and integration
- Enhanced access, added functionality and customisation:

# Online Banking Schematic view

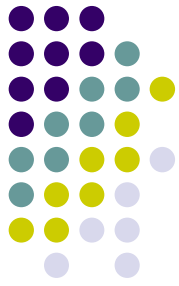


# E & M Financial Services (Online Investment)



- The additional edge that has made online financial systems attractive and ubiquitous is electronic investment and shareholding
- The value chain for investment services include: investment strategy, investment decisions, finance planning, trade execution, portfolio servicing (Westland 2000), and performance measurement (Capability paper).
- The value chain and value added activities for brokerage firms are: marketing, research provision, capability analysis, investment advice, trade execution, account servicing, financial planning, and asset management.

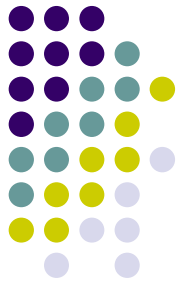
# Online Investment Systems features



In addition to general features of online financial services online investment exhibit some specific characters:

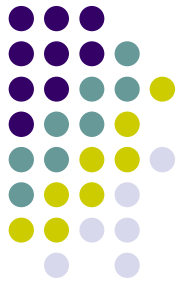
- Fairness
- Efficiency and Transparency
- Orderly

# E & M Financial Services (Online Shareholding)



- online stock trading encourages traders join the electronic shareholding to reduce traditional brokerage costs
- offers private investors the opportunity to hold shares in electronic form while retaining the full benefits of legal ownership
- With direct access to market information investors are able to observe various security process and forecasts.

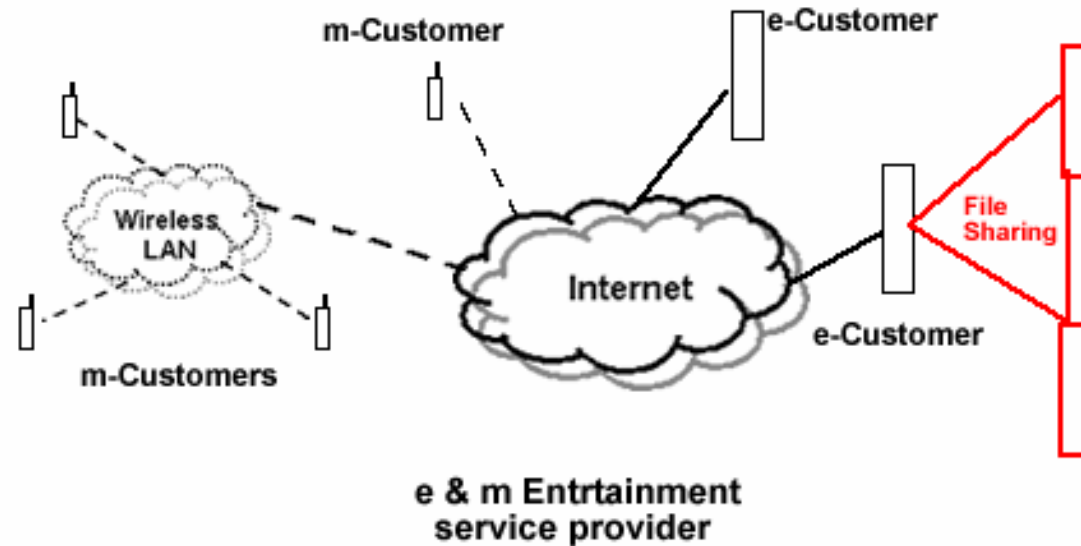
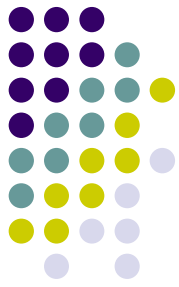
# E & M Entertainment



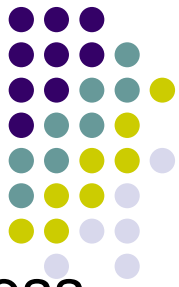
The E & M Entertainment include:

- Transmission of online services such as: radio, video, games, music, etc.
- In the case for mobile devices and their restricted computing and power capacity, ring tones and mobile games
- A major issue with online entertainment is copyright and piracy (The amount of loss associated with piracy in music industry is about 10% of the annual turn-over [source RIAA])

# E & M Entertainment schematic view



# Online Collaborative platform (OCP)



The rationale behind online collaboration platform business model is that companies form permanent (**strategic alliance**) or temporary (**alliance of convenience**) to **plan**, **control** and **reduce** procurement costs.

In this virtual world of cooperation large consortiums are built to bid for projects, huge purchases and research grants.

***“Size Matters”***

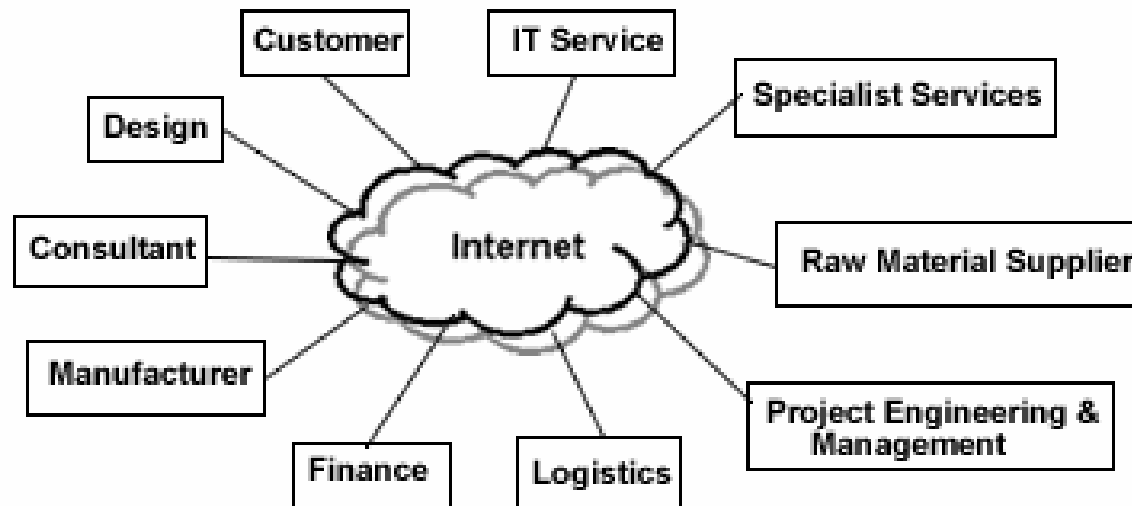
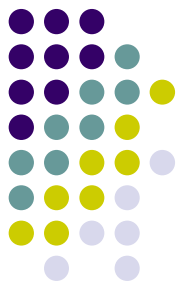


# OCP main features

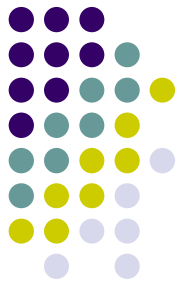


- Customer orientation
- Collaborative purchasing
- Collaborative engineering

# Schematic view of OCP



# Electronic Manufacture

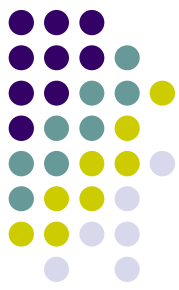


It is essential for any manufacturing system to:

- generate,
- store, support, and
- disseminate information during the product life cycle.

Production life cycle can be described as the time it takes from customer putting the order, design process, logistics, production process, testing and documentation, delivery, after-sale services, and regular updating of data.

# E Manufacture (Product Data Management)



PDM systems provide a structure in which all types of product information can be described in electronic format. For example:

- Production configuration
- Project plans
- Design data
- Product specifications
- CAD drawings and models
- Maintenance and service records
- Safety and regulatory requirements
- Engineering analysis and results
- Production Process Flowcharts
- Production Schedules
- Machine part specifications
- Robots, CNC and NC programs
- Bill of Material (BOM)
- And other

# Global Manufacturing System

