

ISYS2160

Information Systems in Internet Age

Lecture 2: Internet and E-Commerce

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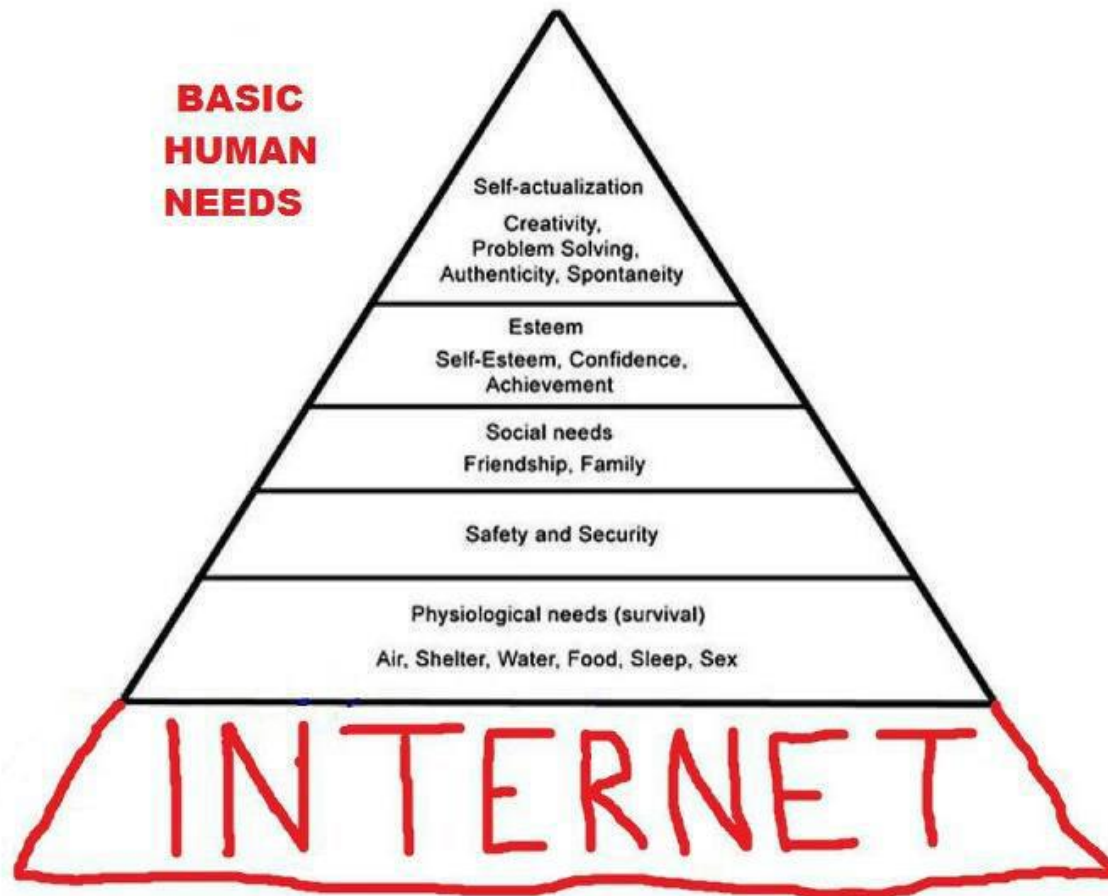
What We have discussed

- System
- Process View of Systems
- Key System Principles
- Information system



Today's objectives

- Understand the definition and varieties of **e-business** and **e-commerce**.
- Discuss the various issues in **business-to-consumer (B2C)** e-commerce.
- Discuss the various issues in **business-to-business (B2B)** e-commerce.



The Internet

- is the global system of interconnected computer networks that use the Internet protocol suite (TCP/IP) to link devices worldwide.
- **Physical connection** of millions of networks, computers, network devices, and related infrastructures

The WWW (World Wide Web)

- Resources (information), and their interconnection and flow over the Internet
- A system of interlinked hypertext documents accessed via the Internet
- Content: Consists of **Websites** and **Web pages**

The world is changing



ITs



1995

2005

2010

2011

2012

2015





The world is changing



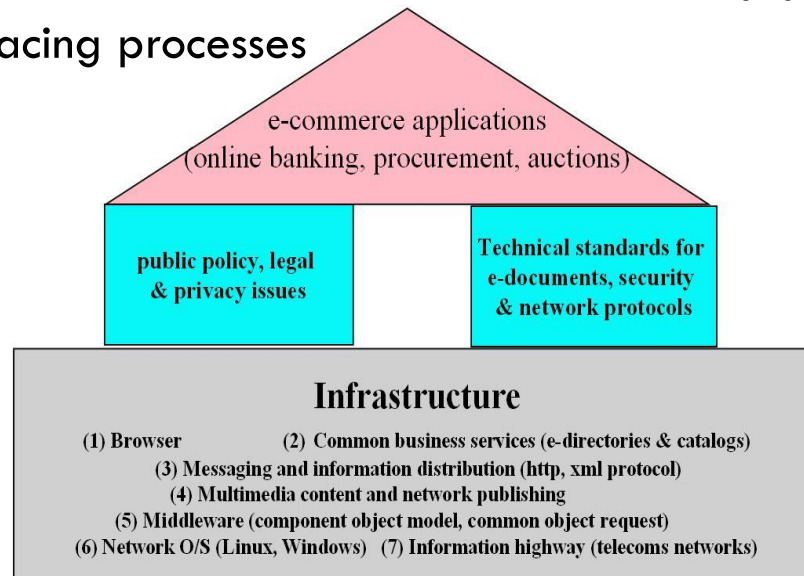
E-Commerce vs. E-Business

Electronic Commerce (E-Commerce)

- Conducting business electronically
 - Sharing business information
 - Maintaining business relationships
 - Performing business transactions

(No consensus in the field over its definition)

- Outward-facing processes



Electronic Business (E-Business)

- A much broader concept than e-commerce
- Also includes internal processes: production, inventory management, risk management, knowledge management and etc.



Unique Features of E-Commerce

EC Features	Description	Example
Global Reach	Products and services can be marketed over vast distances	Almost anyone can access Amazon.com
Integration	Web sites can be linked to corporate databases to provide <u>real-time</u> access to <u>personalized</u> information	Customers can check account balances at commonwealth netbank
Mass customization	Firms can tailor their products and services to meet a customer's particular needs.	Customers can build their own PC on www.dell.com
Interactive communication	Companies can communicate with customers, improving the image of responsiveness.	Customers can receive real-time online support (e.g. Apple.com)

Unique Features of E-Commerce

EC Features	Description	Example
Universal Standards	The technical standards for conducting e-commerce are the universal standards (Internet Standards).	
Richness	Video, audio, text, etc	
Information Density	Reduces information costs and raise quality	
Disintermediation	Cutting out the “middleman” and reaching customers more directly and efficiently	Customers can purchase shoes from Adidas website directly instead of going to retail stores



Integration

ANZ Welcome, MS A CUSTOMER 11 April 2013 10:05 NZT Last login: 11 April 2013 09:47 Log off Help

Home Your accounts Pay & transfer Apply & open Your settings Messages & documents

Previous Account 01-1234-0123456-01 Savings account \$4,433.86 Next Account

Savings account [change account nickname](#) **\$4,433.86** **\$4,433.86**
Classic Available funds Account balance
01-1234-0123456-01

Statement: [Online Only change](#)

Transactions Account details **Statements**

Here are your recent statements for this account
Need to see older statements? [View statements from the last seven years in your document library](#)

☐ Select all [View selected](#) [Download selected](#)

<input type="checkbox"/>		Oct 10, 2012	Statement	06-0513-0037124-03	View	Download	(2 pages)
<input type="checkbox"/>		Aug 10, 2012	Statement	06-0513-0037124-03	View	Download	(3 pages)
<input type="checkbox"/>		Jun 08, 2012	Statement	06-0513-0037124-03	View	Download	(2 pages)
<input type="checkbox"/>		Apr 10, 2012	Statement	06-0513-0037124-03	View	Download	(3 pages)
<input type="checkbox"/>		Feb 10, 2012	Statement	06-0513-0037124-03	View	Download	(4 pages)
<input type="checkbox"/>		Dec 09, 2011	Statement	06-0513-0037124-03	View	Download	(4 pages)

You need Adobe Reader to view PDF files. You can download [Adobe Reader](#) free of charge.

Previous Account 01-1234-0123456-01 Savings account \$4,433.86 Next Account

Your bank mail

Your accounts

Make transfer

From*

To*

Amount*

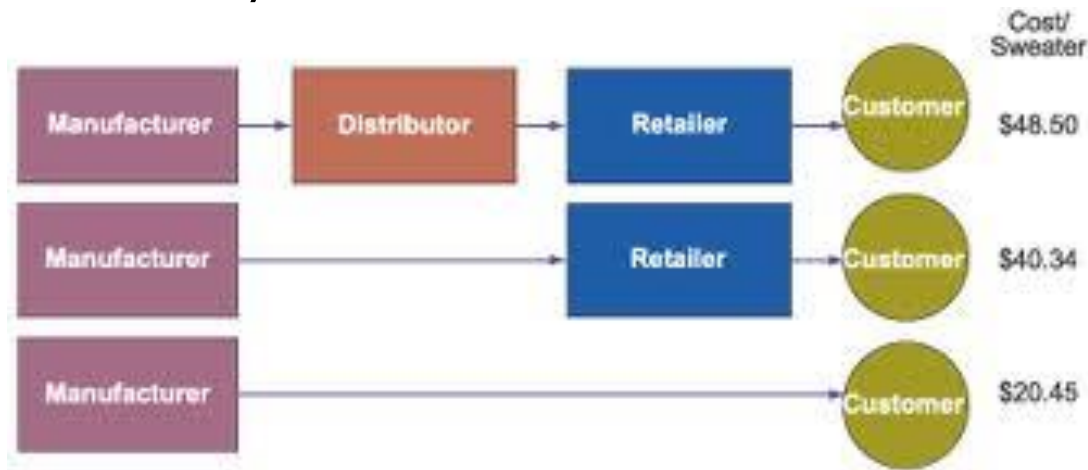
Reference

[Transfer](#)

•Realtime
•Personalized

– Disintermediation

- Cutting out the middlemen and reaching customers more directly and efficiently



What is good about disintermediation?

What might be the problems?

> Costs:

- Developing quality website
- Maintaining product information
- Marketing Expenses
- Competing with the rest of the Internet for customer's attention

› Reintermediation

- Reintroducing middlemen in order to reduce the chaos brought on by disintermediation
- Example: Amazon.com, Ebay.com
- Benefits?
- Read the news:
- Swisse will go direct to market in China in 2016 with its own online presence on Tmall
- (<http://www.smh.com.au/business/vitamins-giant-swisse-to-bypass-middle-man-in-online-china-20160119-gm9nhg.html>)

Vitamins giant Swisse to bypass middle man in online China

January 20, 2016

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Swisse will go direct to market in China in 2016 with its own online presence on Tmall. It has a heavy marketing budget, which includes ambassadors such as Nicole Kidman and sport stars Lleyton Hewitt and Ricky Ponting.

Photo: Angela Wylie

Australia's biggest vitamins company, Swisse Wellness, is revamping its strategy in China, ploughing more resources into a direct-to-market approach where it will set up its own site on the powerful Tmall e-commerce website to snare more profits leaking away to entrepreneurs who have been intermediaries.



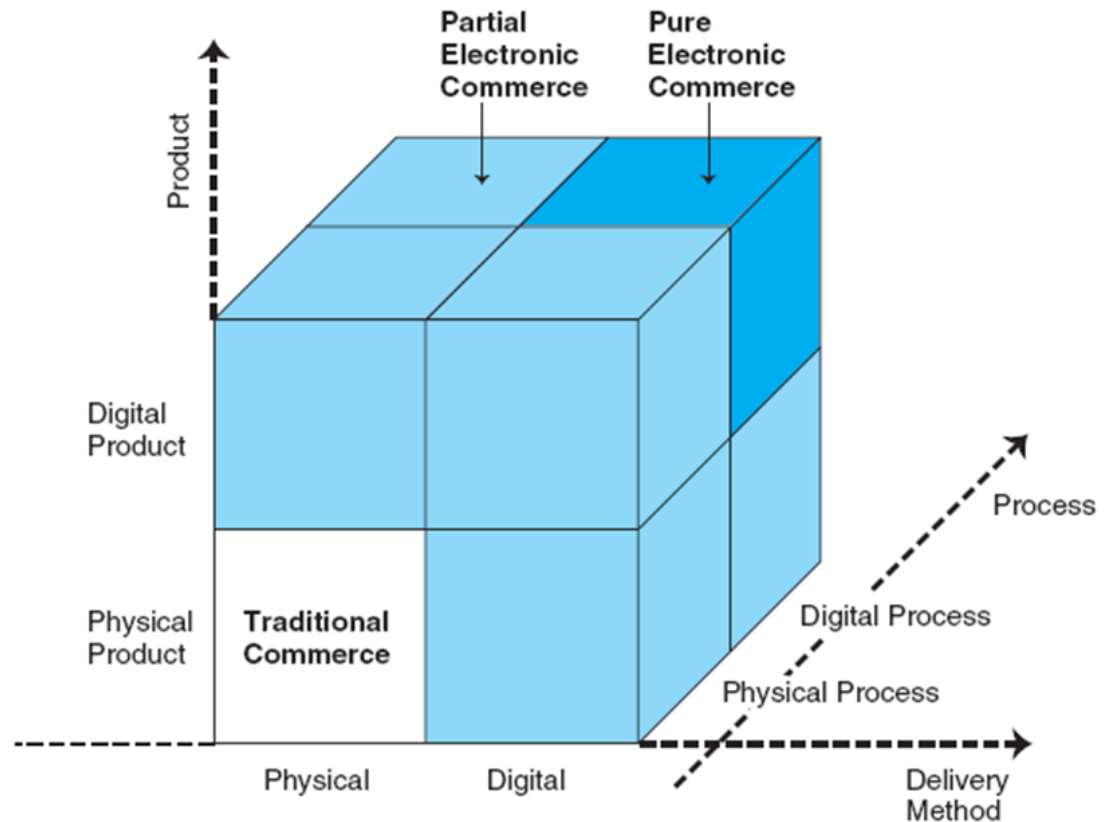
Forms of E-Commerce

– Dimensions

- Product
- Process
- Delivery Method

– Forms

- Traditional Commerce
- Partial E-Commerce
- Pure E-Commerce



Source: Turban et al. (2012)



Forms of E-Commerce

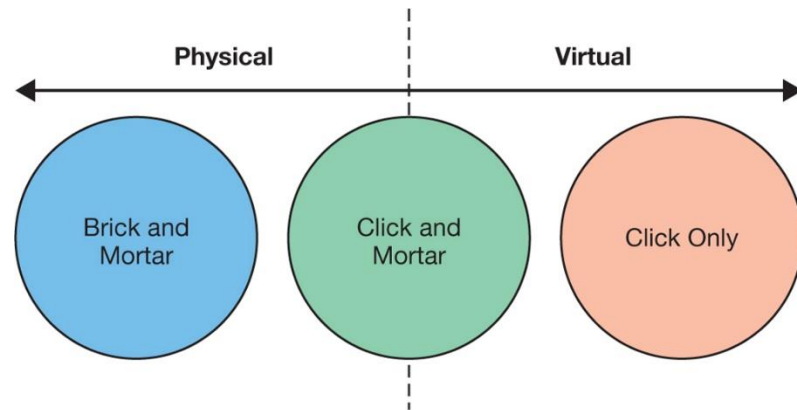


Identify the form of E-Commerce for the following scenarios

- Purchasing from Amazon
- Purchasing a book from Amazon
- Purchasing an e-book from Amazon

Forms of E-Commerce Options for Business

- **Brick-and-mortar** business
 - Only physical presence
 - Choose not to performs any e-commerce functions
- **Click-and-mortar** business
 - Both physical presence and Web presence
 - E-Commerce functions
 - E.g., Coles Click & Collect
 - Shoppers can return products locally
- **Click-and-order** business/**Pure play**
 - Only interact with customers over the Internet
 - E.g., Amazon



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Most Common Types of E-Commerce

- **Business-to-consumer** (B2C)
 - Example: Amazon.com
- **Business-to-business** (B2B)
 - Example: MyBoeingFleet, ChemConnect
- **Consumer-to-consumer** (C2C)
 - Example: eBay
- E-Government
 - **Government-to-citizens** (G2C)
 - Example: Centralink
- M-Commerce

The largest form
of EC in terms of
revenues?

Business originating from...

Supply

Selling to...

Demand

EC Revenue Models

Revenue Type	Description	Who is Doing This?
Traditional sales	A consumer buys a product/service from the Web site	Chemistwarehouse.com, iTunes.com
Web advertising	Fees are generated from advertisers in exchange for advertisement	Facebook.com, Answers.com
Affiliate marketing	Paying businesses that bring or refer customers to another business	Amazon.com's Associates Program
Subscription	Users pay a monthly or yearly recurring fee for the product/service	Netflix.com, World of Warcraft, LinkedIn Premium
Licensing	Users pay a fee for using protected intellectual property	Symantec, Norton
Transaction fees/Brokerage	A commission is paid to the business for aiding in the transaction	PayPal.com, eBay.com, Groupon.com

Profit from our experience

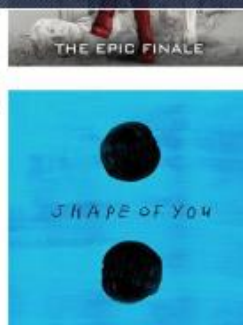
Earn up to 10% advertising fees with a trusted e-commerce leader

Join Now for Free

Learn More »



blond



FORTITUDE



SHAWN MENDES ILLUMINATE



Earn 5% on Digital Music and Videos



Join

It's easy and free to join
Get up and running today. Just one approval to join — no third-party advertiser approvals.

Learn More »
Join Now »



Advertise

Choose from over a million products to advertise to your customers
Whether you are a large network, content site or blogger, we have simple linking tools to meet your advertising needs and help you monetize your web site.

Linking Tools »



Earn

Get up to 10% in advertising fees
Earn advertising fees from Qualifying Purchases, not just the products you advertised.
Plus, our competitive conversion rates help you maximize your earnings.

What's New

Boost your earnings with Native Shopping Ads

Display highly relevant and dynamic product recommendations in a stylishly designed, responsive and mobile-optimized ad unit.

Get Started

Links & Banners

It's easy to advertise Amazon products by building links and banners. When you add these links and banners to your web page and visitors click on them from your page, you can earn up to 10% on all purchases made during their shopping session.

How Do I Build Affiliate Links to Amazon?

Amazon helps you build links to Amazon.com and amazonsupply.com with a range of tools.

Text Links

Kindle Fire HDX 7"
HDX Display, Wi-Fi, 16 GB -
Includes Special Offers

Image Links



Enhanced Links



Product Links

Link to a specific product on Amazon and show some information about that product. The Product Links tool lets you build customized Text Links, Text and Image links, and Image only links to Amazon products.

- Your links will include your Associate tag and you will be paid for qualifying revenues coming through this link.
- Use Product Previews to enhance your Product Links.
- [Add Product Links now](#)

Banners

Link to Amazon product categories and promotions using our stylish graphical banners.

- Many standard banner sizes and shapes available.
- Show special graphics for special Amazon promotions such as Back to School or Mothers Day.
- Easy to add.
- Earn referrals of up to 10% of sales.
- [Add Banners Now](#)





Stages of B2C E-Commerce

e-Information

- Dissemination of promotional and marketing material
- Global customers can access timely information, 24/7/365
- Reduces cost and time needed to disseminate printed materials
- However, no transactional capabilities

e-Integration

- Customers can access dynamic, customized information (such as bank statements)
- However, no transactional capabilities

e-Transaction

- Customers get real-time access to information about products and services
- Customers can make purchases and payments and conduct banking or investment transactions

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– Some definitions:

- **Retailers** – A sales intermediary that operates between manufacturers and customers
- **E-tailers** – Retailers that sell over the Internet
- Retailers and e-tailers implies sales of products/ services to individual customers (i.e. B2C EC) as opposed to corporate customers (i.e. B2B EC) although many e-tailers now sell to both markets.
- Qn: Why do manufacturers need retailers?

— Benefits of e-tailing

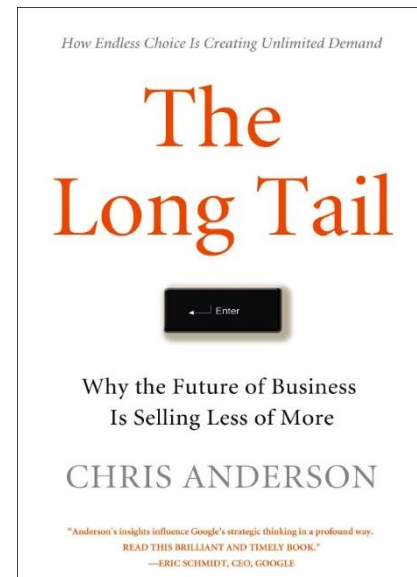
- Product
 - With no store size and shelf space restrictions, companies can sell a far wider variety of goods.
- Place
 - Internet storefronts are available on almost every computer connected to the Internet.
- Price
 - The efficiency of online retailers, with high volumes and low overhead allow for very competitive pricing.

— Drawbacks of e-tailing

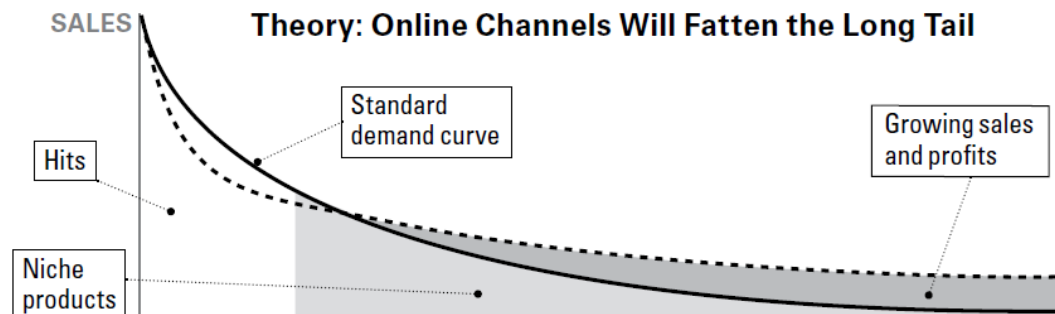
- Product delivery
 - Additional time for products to be delivered
- Direct product experience
 - Lack of sensory information



- Blockbuster Strategy
 - Focus marketing resources on a small number of likely best sellers
- Long Tail Strategy
 - Cater to niche markets in addition to (or instead of) purely selling mainstream products



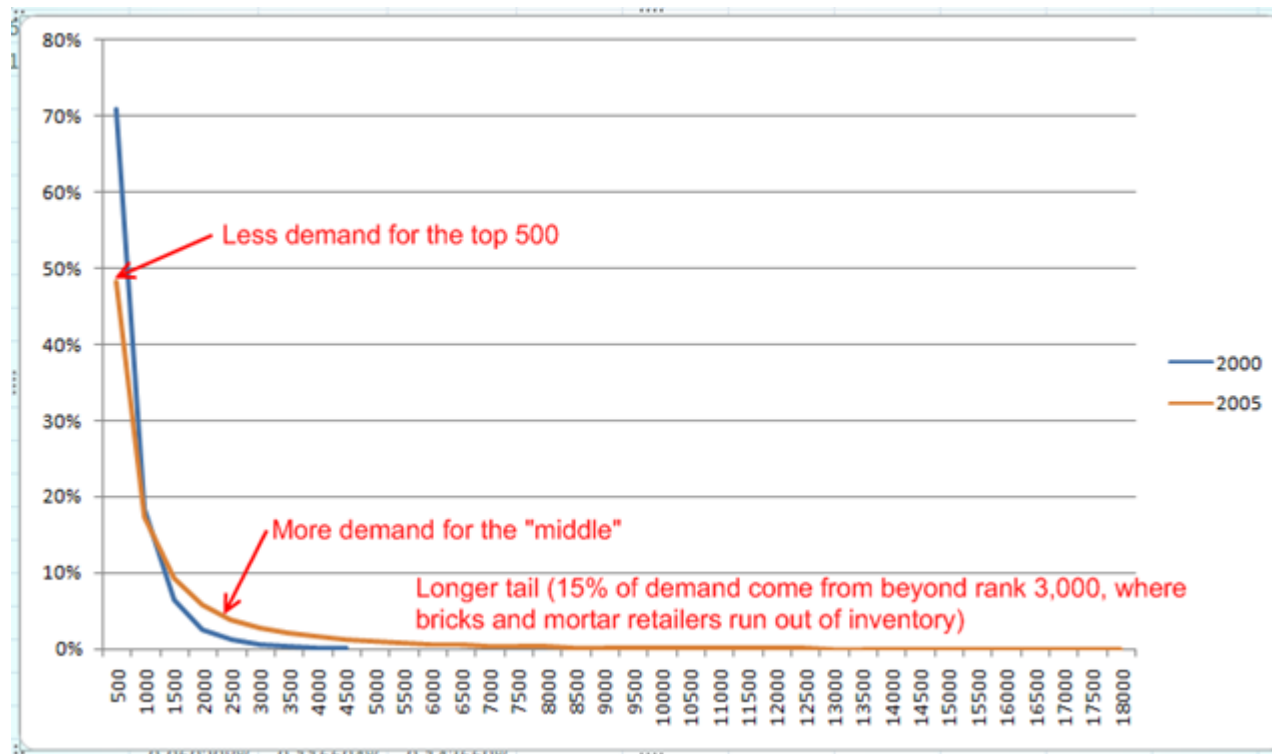
- Merchandise assortments are growing
 - Goods don't have to be displayed on store shelves, physical and cost constraints on selection disappear
 - Search and recommendation tools can keep a selection vastness from overwhelming customers
- Online channels change the shape of the demand curve
 - Consumers value niche products geared to their particular interests more than they value products designed for mass appeal
 - The tail will steadily grow not only longer (as more obscure products are made available) but also **flatter** (as consumers discover products better suited to their tastes)
- Obscure products erode the immense share traditionally enjoyed by a relatively small number of hits
 - Many small markets in niche products that don't individually sell well enough for traditional retail and broadcast distribution will together exceed the size of the existing market of hits





Long Tail Strategy

Long Tail analysis on the Netflix ratings data (2000 – 2005)



Source: longtail.com

- Some innovative e-tailing models:
 - Auction
 - Prices are determined dynamically by competitive bidding
 - Name Your Own Price (e.g. Priceline)
 - A special type of reverse auction originally pioneered by Priceline
 - A buyer specifies a price and a product or service, and sellers accept bids
 - Sellers' brands are not revealed to customers prior to the consummation of a transaction
 - Enables sellers to sell products and services at discounted prices without cannibalizing their own retail sales and without competing with their own distributors
 - Group Buying (e.g. Groupon)

Attracting and Retaining Online Customers



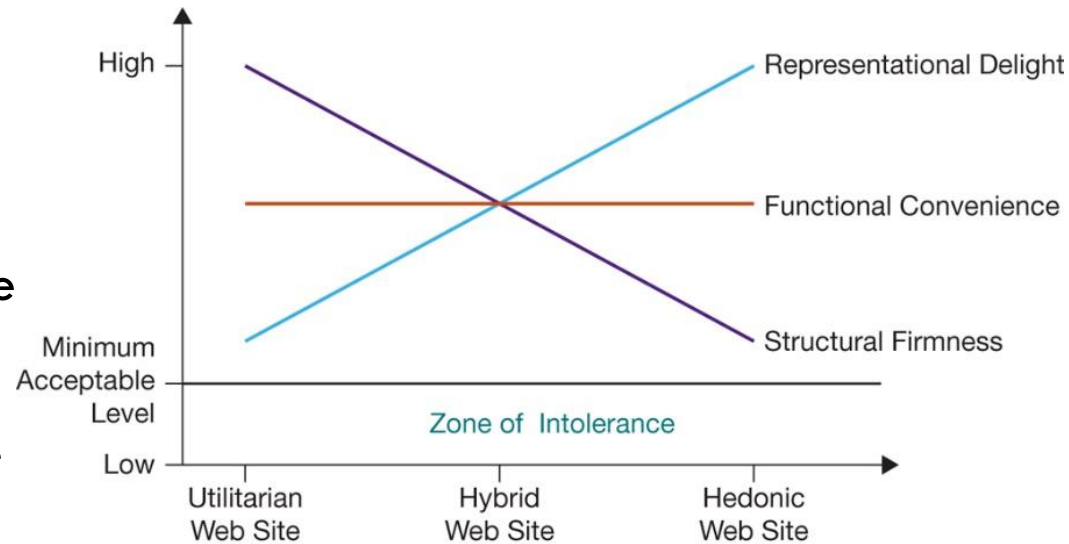
- Why do you visit an e-commerce website?
- Why do you re-visit the e-commerce website?

- The website should offer something unique
- The website must motivate people to visit, to stay and to return
 - Reviews
 - Community
 - Recommendation
- You must advertise your presence on the web
 - Website address
 - QR codes
- You should learn from your website: Web analytics
 - E.g the length of the visits, page views, common entry and exit pages and etc.



Attracting and Retaining Online Customers

- Designing Web Sites to Meet Online Consumers' Needs
 - Structural Firmness
 - Characteristics that influence the Web site's security and performance
 - Functional Convenience
 - Characteristics that make the interaction with the Web site easier or more convenient
 - Representational Delight
 - Characteristics that stimulate a consumer's senses



The importance of the different set of characteristics depends on the nature of the website and/or business

— B2B e-commerce

- Transactions conducted between different businesses, not involving the end consumer
- Both the sellers and the buyers are business organizations
- Companies attempt to electronically automate trading or communication processes in order to improve them
- B2B transactions require proprietary information (such as orders for parts) to be communicated to an organization's business partners

- Electronic Marketplaces (E-Marketplaces)
 - Online markets in which buyers and sellers exchange goods or services electronically
 - **Private E-Marketplaces**
 - Sell-side e-marketplace
 - One company sells either standard and/or customized products to qualified companies electronically
 - Forward auction
 - » Sellers solicit bids from many potential buyers
 - Buy-side e-marketplace
 - One company makes purchases from invited suppliers
 - Reverse Auctions
 - » One buyer, usually an organization, seeks to buy a product or a service, and suppliers submit bids
 - » Request for Quotation (RFQ)

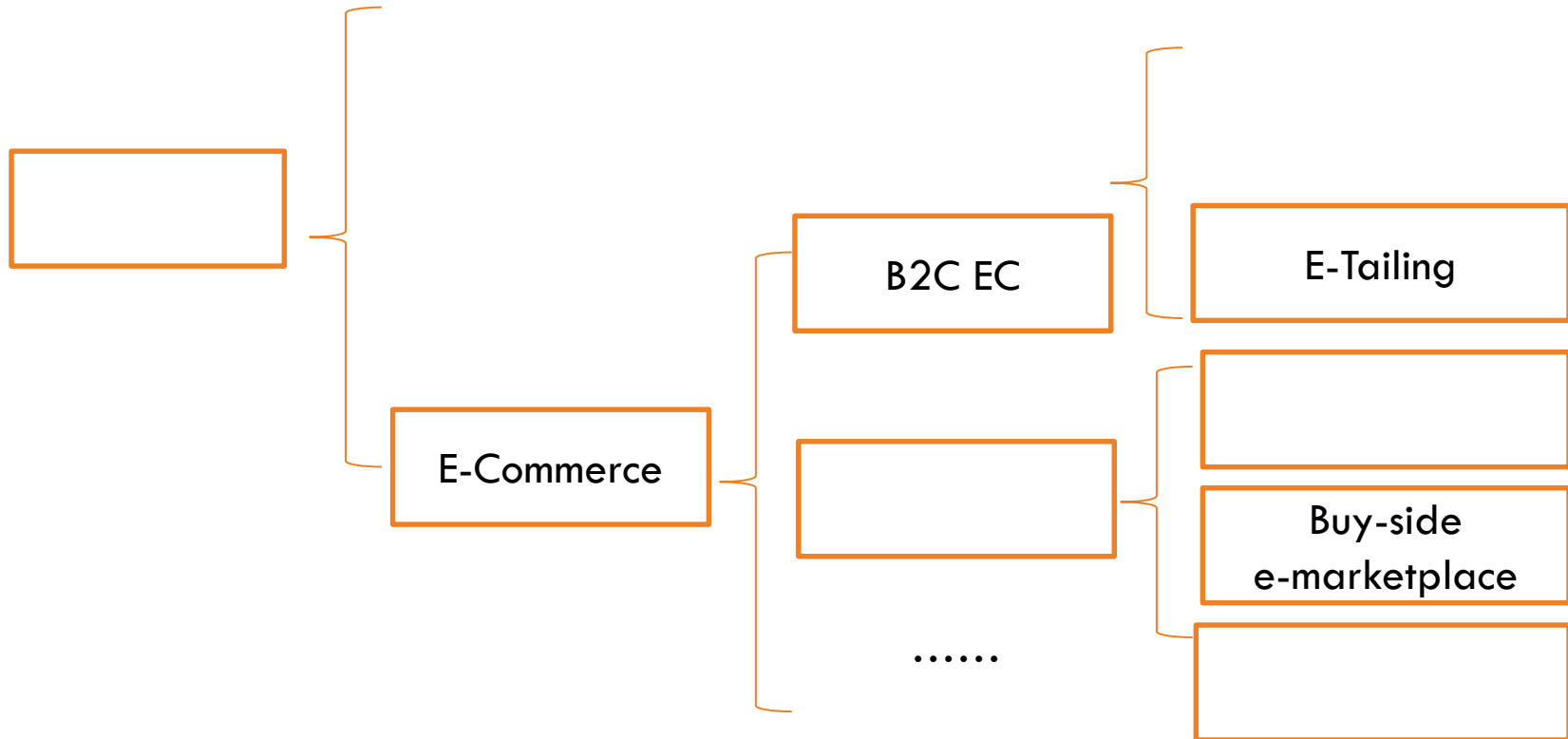
- Electronic Marketplaces (E-Marketplaces)
 - **Public E-Marketplaces (Exchanges)**
 - Many sellers and many buyers
 - **Vertical exchanges**
 - Connects buyers and sellers in a given industry
 - E.g. ChemConnect.com
 - **Horizontal exchanges**
 - Connect buyers and sellers across many industries
 - E.g. Globalsources.com, Alibaba.com
 - **Functional exchanges**
 - Needed services (e.g. temporary help or extra office space) are traded on an “as-need” basis

— Key Drivers

- Availability of secure broadband Internet platform and private and public B2B e-marketplaces
- Need for collaborations between suppliers and buyers
- Ability to save money, reduce delays and improve collaborations
- Emergence of effective technologies for intra- and inter-organizational integration



Summary



— Reading

Rainer, R.K., Prince, B., and Cegielski, C.G. *Introduction to Information Systems: Supporting and Transforming Business* (5th Ed). Wiley, 2014.

Chapter 7: E-Business and E-Commerce