

## Contents

Digital Economy .....	3
New Business Methods in Digital Economy.....	3
Reverse Auctions .....	3
Group Purchasing.....	3
e-Marketplace.....	3
Types of Organizations.....	4
Pure Brick .....	4
Pure Click.....	4
Brick and Click.....	4
Business Functions and the Role of ICT .....	4
Threats and Opportunities of ICT in Business.....	5
Privacy .....	5
Security .....	5
Product Commercialization.....	5
E-Commerce and E-Business.....	5
Types of E-Commerce Transactions.....	5
B2B – Business to Business .....	5
B2C – Business to Consumer.....	5
C2C – Consumer to Consumer.....	5
C2B – Consumer to Business.....	6
B2E – Business to Employee.....	6
G2C – Government to Citizen.....	6
Internet and Business.....	6
Virtual storefronts.....	6
Information brokers .....	6
Online marketplace.....	6
Content provider.....	6
Online service provider.....	7
Portal.....	7
Virtual Community.....	7
E-Commerce Trends.....	7
E-Marketing .....	8

**Prepared by – Teran Subasinghe**

Use of ICT in Marketing.....	8
Web Advertising .....	8
Data Mining.....	8
Mobile Marketing .....	8
Notes:.....	8
New Trends and Future Directions .....	9
Intelligent System .....	9
Artificial Intelligence .....	9
Kansei Systems.....	9
Man Machine Coexistence.....	9
Fundamentals of Agent Technology.....	10
Software Agents .....	10
Multi-Agent Systems .....	10
Applications of Agent Systems .....	10



itguru.lk  
teran.lk

## **Digital Economy**

Digital economy is one collective term for all economic transactions that occur on the internet.

A digital economy is one that is based on information technology (IT), computers, the internet, and the free flow of data and communications on a global scale, both within and between industries, to facilitate business and commerce. The digital economy has revolutionized the way many firms do business.

### **New Business Methods in Digital Economy**

#### **Reverse Auctions**

***A reverse auction is a type of auction in which the traditional roles of buyer and seller are reversed.***

Type of auction in which several sellers offer their items for bidding, and compete for the price which a buyer will accept. The buyer usually has the option to accept any bid or reject all. Bid-based construction or supply contracts are examples of reverse auction.

#### **Group Purchasing**

Group purchasing, also known as collective buying, offers products and services at significantly reduced prices on the condition that a minimum number of buyers would make the purchase that is for each purchase there should be multiple buyers.

**Eg:** If subscribers to a discount website are tempted by a discount offer, they enter their payment details online and wait. When a minimum number of people sign up for the same offer, the deal is confirmed and a voucher is sent to their inboxes.

#### **e-Marketplace**

An online marketplace (or online e-commerce marketplace) is a type of e-commerce site where product or service information is provided by multiple third parties, whereas transactions are processed by the marketplace operator.

In an online marketplace, consumer transactions are processed by the marketplace operator and then delivered and fulfilled by the participating retailers or wholesalers.

**Eg:** Ebay, Amazon, Aliexpress, etc.

## **Types of Organizations**

### **Pure Brick**

Pure Brick businesses are businesses are completely offline and do not have an online presence. All the businesses financial transactions and communication takes place within the premises.

### **Pure Click**

Pure 'Click' businesses are businesses are completely online and do not have an offline landbased businesses ('brick'). All the businesses financial transactions and communication takes place online.

### **Brick and Click**

Brick-and-Click is a business model in which a company operates both an online store (the clicks) and an offline store (the bricks) and integrates the two into a single retail strategy.

## **Business Functions and the Role of ICT**

All most all the areas of a business are affected with I.C.T. and has improved with the use of ICT.

- Accounting and ICT
- Human resource and ICT
- Production and ICT
- Marketing & sales and ICT
- Supply chain management and ICT
- Business communication and ICT
- Secure payment mechanisms
  - Payment gateways
  - Secure credit card payments
  - Third party systems – PayPal etc
  - Mechanisms
    - Data encryption
    - Virtual and crypto currencies (bit coin etc.)

## **Threats and Opportunities of ICT in Business**

### **Privacy**

Data privacy, also called information privacy, is the aspect of information technology (IT) that deals with the ability an organization or individual has to determine what data in a computer system can be shared with third parties.

### **Security**

ICT security refers to relevant incidents as well as measures, controls and procedures applied by enterprises in order to ensure integrity, confidentiality and availability of their data and ICT systems.

### **Product Commercialization**

The commercialization or go-to-market process is one of the most important activities for any business. Companies are searching for methodologies and techniques to rapidly validate their concepts and at an early stage integrate market needs into their development process so that they can accelerate the go-to-market process of a new product.

## **E-Commerce and E-Business**

E-commerce refers to buying and selling online, while e-business encompasses all business conducted online. E-commerce can be viewed as a subset of e-business.

### **Types of E-Commerce Transactions**

#### **B2B – Business to Business**

B2B e-commerce can be simply defined as the commerce between companies. In Business-to-Business type of electronic commerce system, companies do business with each other. For say, a manufacturer selling a product to a wholesaler, a wholesaler selling a product to the retailer. Here manufacturer, wholesaler and retailer all are doing their separate businesses.

#### **B2C – Business to Consumer**

In this model, the company sells their products, goods or services directly to the consumer online. Here the customer can view products on the website that they want to buy and can order it. After receiving the order details, the company will process the order and then send the products directly to the customer. For example, Amazon, Flipkart etc are this type of e-commerce business model which we are using in our daily life.

#### **C2C – Consumer to Consumer**

Here a consumer sells products, goods or services to other consumers using the internet or the web technologies. The C2C business model helps us to sell our assets or properties like a car, house, bike, electronics etc via online to other consumers. Ikman.lk, carmudi.lk, etc are this type of business model.

### **C2B – Consumer to Business**

A consumer to the business model is a type of commerce where a consumer or end user provides a product or service to an organization. It is the reverse model of the B2C or business to consumer model.

In this model, individual customers offer to sell products or services to the companies who are prepared to purchase them. For example, if you are a software developer, then you can show a demo of your software or skills that you have on the sites like freelancer, fiverr etc. If a company likes your software or skills then the company will directly buy the software from you or can hire you for their services.

### **B2E – Business to Employee**

This involves selling products and services within the company, advertising to employees through such in-company applications as intranets and e-mail. Often, special discounts or deals are extended to employees to encourage them to buy from the company. B2E enterprise can also refer to the spread of information and helpful services among employees to encourage overall company growth.

### **G2C – Government to Citizen**

Government uses G2C model website to approach citizen in general. Such websites support auctions of vehicles, machinery or any other material. Such website also provides services like registration for birth, marriage or death certificates, paying taxes, registering vehicles, etc. Main objectives of G2C website are to reduce average time for fulfilling people requests for various government services.

## **Internet and Business**

### **Virtual storefronts**

A website that allows a person to research, order and pay for a good online. For example, one may visit a website to find a book, read reviews and then purchase it.

### **Information brokers**

Is a business that collects personal information about consumers and sells that information to other organizations.

### **Online marketplace**

A marketplace is different from a virtual storefront in that marketplaces allow third parties to list and sell products through the site and marketplaces tend to take a percentage cut of the sale as their reward. Refer to e-Marketplace for definition.

### **Content provider**

An Internet content provider is a website or organization that handles the distribution of online content such as blogs, videos, music or files. This content is generally made accessible to users and often in multiple formats.

Eg: Youtube

### **Online service provider**

An online service provider (OSP) can, for example, be an Internet service provider, an email provider, a news provider (press), an entertainment provider (music, movies), a search engine, an e-commerce site, an online banking site, a health site, an official government site, social media, etc.

### **Portal**

Website that serves as a gateway or a main entry point ('cyber door') on the internet to a specific field-of-interest or an industry. A portal provides at least four essential services: (1) search engine(s), (2) email, (3) links to other related sites, and (4) personalized content. It may also provide facilities such as chat, members list, free downloads, etc. Portals such as AOL, MSN, Netcenter, and Yahoo, earn their revenue from membership fees and/or by selling advertising space on their webpages.

### **Virtual Community**

A virtual community is a community of people sharing common interests, ideas, and feelings over the Internet or other collaborative networks.

### **E-Commerce Trends**

- Personalization and Customer Engagement
- AI, Assistants, and Chatbots
- Interactive Product Visualization
- Explosion of AR
- Web Payments

itguru.lk  
teran.lk

## **E-Marketing**

E-marketing is the process of marketing a product or service using the Internet.

### **Use of ICT in Marketing**

#### **Web Advertising**

includes: email campaigns, social media activity, your **website**, and your blog.

#### **Data Mining**

Data mining is a process used by companies to turn raw data into useful information. By using software to look for patterns in large batches of data, businesses can learn more about their customers to develop more effective marketing strategies, increase sales and decrease costs.

Databases in marketing can be used to predict customer behavior with data mining tools and techniques.

#### **Mobile Marketing**

Mobile marketing is a multi-channel, digital marketing strategy aimed at reaching a target audience on their smartphones, tablets, and/or other mobile devices, via websites, email, SMS and MMS, social media, and apps.

#### **Notes:**

itguru.lk  
teran.lk



## **New Trends and Future Directions**

### **Intelligent System**

An intelligent system is a machine with an embedded, Internet-connected computer that has the capacity to gather and analyze data and communicate with other systems.

Intelligent systems exist all around us in point-of-sale (POS) terminals, digital televisions, traffic lights, smart meters, automobiles, digital signage and airplane controls, among a great number of other possibilities. As this ongoing trend continues, many foresee a scenario known as the Internet of Things (IoT), in which objects, animals and people can all be provided with unique identifiers and the ability to automatically transfer data over a network without requiring human-to-human or human-to-computer interaction.

### **Artificial Intelligence**

Artificial intelligence is the branch of computer science concerned with making computers behave like humans. And is also the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

### **Kansei Systems**

Kansei Engineering is a method for translating feelings and impressions into product parameters. It parametrically links the customer's emotional responses (i.e. physical and psychological) to the properties and characteristics of a product or service. In consequence, products can be designed to bring forward the intended feeling.

### **Man Machine Coexistence**

The development of ICT should be sustainable that machine shall not take the place of the man. Machines shall always be a tool for man, no other way. (Living together).

## Fundamentals of Agent Technology

### Software Agents

are applications that perform repetitive tasks, without being managed by a human. The agents are also referred to as “robots”, “bots”, “crawlers” and “worms”. A popular use for the software is shopping. Shopping bots automatically check web-sites for the best prices. Then alert the user through email about the best price. Also, another popular use for agents are from websites such as Monster. At Monster, the bots automatically check the job posts weekly. After the bots or agent finds a post that matches a description from the job seeker, the program alerts the user through email. This prevents the job seeker from check continuously. The agent saves the use a large amount of time.

### Multi-Agent Systems

A multi-agent system (M.A.S.) is a computerized system composed of multiple interacting intelligent agents within an environment. Multi-agent systems can be used to solve problems that are difficult or impossible for an individual agent or a monolithic system to solve.

### Applications of Agent Systems

Multi-agent systems are applied in the real world to graphical applications such as computer games. Agent systems have been used in films. They are also used for coordinated defence systems. Other applications include transportation, logistics, graphics, GIS as well as in many other fields. It is widely being advocated for use in networking and mobile technologies, to achieve automatic and dynamic load balancing, high scalability, and self-healing networks.





