Chapter 10:

Thriving in a new economy

Contains:

- The components of Digital Economics
- Twelve theme of the new economy
- The ten technology shift
- The Internet Economy and its indicators
- E-commerce and Digital Economy

DIGITAL ECONOMICS

Supporting Infrastructure

e-Business

e-Commerce

Digital Economy

- Digital economy is defined as an economy which focuses on digital technologies, i.e. it is based on digital and computing technologies.
- It essentially covers all business, economic, social, cultural etc. activities that are supported by the web and other digital communication technologies.
- The digital economy, also known as the Internet economy, new economy, or the Web economy, refers to the economy that is based in a large part on digital technologies, including digital communications networks (Internet, intranets, etc.), computers, software, and other related information technologies.
- In other words, the term digital economy refers to the convergence of computing and communication technologies through the Internet and the resulting flow of information and technology that is stimulating e-commerce and stimulating vast organizational changes.

The impact of digital economy on business can be divided into three major categories:

- improving direct marketing,
- transforming organizations,
- redefining organizations.

There are numerous impacts of B2C **direct marketing**, and they include: product promotion, new sales channels, direct savings, customer service, brand or corporate image, customization, advertising, ordering systems, markets, reduced cycle time. As an example, the delivery of digitized products and services can be reduced to seconds. Even the administrative work related to physical delivery across international borders can be reduced significantly, cutting the cycle time by more than 90%.

Transforming organizations is based on the premise that rapid progress in digital economy forces companies to adapt quickly to the new technologies and offers them an opportunity to experiment with new products, services and business models. People in organizations are forced to learn and adapt immediately, and this process of adaptation is followed by strategic and structural changes. At the same time, the nature of work itself has to be transformed. Digital economy workers have to be very flexible and very few will have truly secure jobs in the traditional sense. Many will work from home.

There are many potential changes that will **redefine organizations**. Completely new products are created and existing ones are customized. Such changes redefine organizations' missions and the manner they operate. Mass customization enables manufacturers to create specific products for each customer. Using the Web, customers can design or reconfigure products for themselves (T-shirts, furniture, jewelry, and even cars). Digital economy affects entire industries. This leads to the use of new business models that are based on the wide availability of

information, for example, electronic intermediaries.

Merits of Digital Economy

Digital economy has given rise to many new trends and start-up ideas. Almost all of the biggest companies in the world (Google, Apple, Microsoft, Amazon) are from the digital world.

1. Promotes Use of the Internet
2. Rise in E-Commerce
3. Digital Goods and Services

- Gone are the days of Movie DVD and Music CD’s or records. Now, these goods are available to us digitally. There is no need for any tangible products anymore. Same is true for services like banking, insurance etc. There is no need to visit your bank if you can do every transaction online. So certain goods and services have been completely digitized in this digital economy.

4. Transparency

- Most transactions and their payment in the digital economy happen online. Cash transactions are becoming rare. This helps reduce the black money and corruption in the market and make the economy more transparent. In fact, during the demonetization, the government made a push for online transactions to promote the web economy.

Demerits of Digital Economy

1] Loss in Employment

The more we depend on technology, the less we depend on human resources. The advancement of the digital economy may lead to the loss of many jobs. As the processes get more automated, the requirement for human resources reduces. Take the example of online banking itself.

2] Lack of Experts

Digital economy requires complex processes and technologies. To build the platforms and their upkeep require experts and trained professionals. These are not readily available, especially in rural and semi-rural areas.

3] Heavy Investment

Digital economy requires a strong infrastructure, high functioning Internet, strong mobile networks and telecommunication. All of this is a time consuming and investment heavy process. In a developing country like ours, development of the infrastructure and network is a very slow, tedious and costly process.

There are three main components of this economy, namely,

1. e-business
2. e-business infrastructure
3. e-commerce

e-business

- Electronic Business, shortly known as e-business, is the online presence of business.
- It can also be defined as the business which is done with the help of internet or electronic data interchange i.e. is known as E-business. E-commerce is one of the important components of e-business, but it is not an essential part.
- e-business is not confined to buying and selling of goods only, but it includes other activities that also form part of business like providing services to the customers, communicating with employees, client or business partners can contact the company in case if they want to have a word with the company, or they have any issue regarding the services, etc. All the basic business operations are done using electronic media.
- There are two types of e-business, which are:
- **Pure-Play**: The business which is having an electronic existence only. **Example**: Hotels.com
- **Brick and Click**: The business model, in which the business exists both in online i.e. electronic and offline i.e. physical mode.

e-business infrastructure

- The **architecture of hardware, software, content and data** used to **deliver e-business services** to employees, customers and partners infrastructure can also be considered to include the methods for **publishing data and documents** accessed through **e-business applications.**
- A key decision with managing this infrastructure is **which elements are located within the company** and **which are managed externally** as third-party managed applications, data servers and networks

e-commerce

- e-commerce is an abbreviation used for electronic commerce.
- It is the process through which the buying, selling, dealing, ordering and paying for the goods and services are done over the internet is known as e-commerce.
- In this type of online commercial transaction, the seller can communicate with the buyer without having a face to face interaction.
- Some examples of real world application of e-commerce are online banking, online shopping, online ticket booking, social networking, etc.
- The basic requirement of e-commerce is a website. The marketing, advertising, selling and conducting transaction are done with the help of internet.
- Any monetary transaction, which is done with the help of electronic media is e-commerce.

Twelve theme of the new economy

1. Knowledge
2. Digitization
3. Virtualization
4. Molecularization
5. Integration / Internetworking
6. Disintermediation
7. Convergence
8. Innovation
9. Prosumption
10. Immediacy
11. Globalization
12. Discordance

A dozen overlapping themes are emerging that differentiate the new economy from the old. By understanding these you have the precondition for transforming your business for success.

1.Knowledge

- Information technology enables an economy based on knowledge.
- But notwithstanding the rise of artificial intelligence and other "knowledge technologies," knowledge is created by human beings - by knowledge workers (professional and technical workers) and by knowledge consumers.
- To begin, the knowledge content of products and services is growing significantly as consumer ideas and information and technology become part of products.
- Take, for example, the new era of smart products which are beginning to revolutionize every aspect of society.
- **Smart Clothes:** Clothing manufacturers are placing chips in clothes that can contain information on where and when the item was made, who manufactured it, when it was imported, when it arrived in the store, and when it was placed on the rack. When the item is purchased, information can be added about who purchased it, the date, and the amount paid. The item has a memory that can provide useful information to everyone in the value network.

Smart cards: one card for all these functions plus driver's permit, personal health information including drug interactions and organ donor info, spouse's sizes for gift giving - all managed by a single microprocessor embedded in the plastic.
Smart houses: Burglar and fire alarms, appliances, and lighting can be controlled from a handy keypad or by dialing up the system from an outside phone.
Smart roads: Pavement can do more than carry vehicles to destinations. Roadbeds will monitor traffic and weather conditions, then issue warnings about dangerous conditions ahead.
Smart cars: An integrated system monitors both your driving performance and the car's operations, automatically scheduling service visits where the technician plugs in and knows immediately what's wrong under the hood. Maps and directions will be broadcast via global positioning satellites.
Smart tiers, Smart pucks, smart telephones, etc.

Example: Smart Clothes

https://www.google.com/atap/project-jacquard/

2. Digitization

- Age of Sand, racing through glass fibers
- All information can be represented as either 1 or 0
- Bits could be used to represent more and more types of information, such as graphs and photographs
- Vast amounts of information can be squeezed or compressed and transmitted at the speed of light.
- If a picture is worth a thousand words, the right multimedia document retrieved at the right time is worth a thousand pictures.
- By comparing something as simple as the post office and its delivery of physical mail to the digital electronic mail systems of today (even though they are relatively primitive), you can begin to understand the effect of digitization on the metabolism of the economy.

3. Virtualization

- As information shifts from analog to digital, physical things can become virtual- changing the metabolism of the economy, the types of institutions and relationships possible, and the nature of economic activity itself.
- In the new economy, there are the following:

--**Virtual alien**: People working and participating in one country's economy who are physically located somewhere else for example, "virtual data entry workers" who live in India.

--**Virtual ballot box:** Any information appliance (TV, telephone, computer, kiosk, etc.) from which citizens can vote.

--**Virtual bulletin board:** Message Maestro, hyperlinked to other boards. Push pins not required.

--**Virtual corporation** (virtual enterprise, extended enterprise, interenterprise). The conjunctional grouping, based on the Net, of companies, individuals, and organizations to create a business.

--**Virtual coupon**: On the Net, encouraging you to buy

--Virtual mall: An environment on the Net in which like things can be found, as in "virtual shopping mall" or "virtual shoe sale."
--Virtual market: Any place in cyberspace where people shop.
--Virtual office: Anywhere. The location of work for the nomadic office worker.
--Virtual reality. The overriding oxymoron for virtualization.

Example: Virtual Reality

4. Molecularization

- The old corporation is being disaggregated
- Replaced by dynamic molecules and clusters of individuals and entities that form the basis of economic activity
- Mass becomes molecular (based on the individual) in all aspects of economic and social life
- Mass media -> Molecular
- Mass production -> Molecular

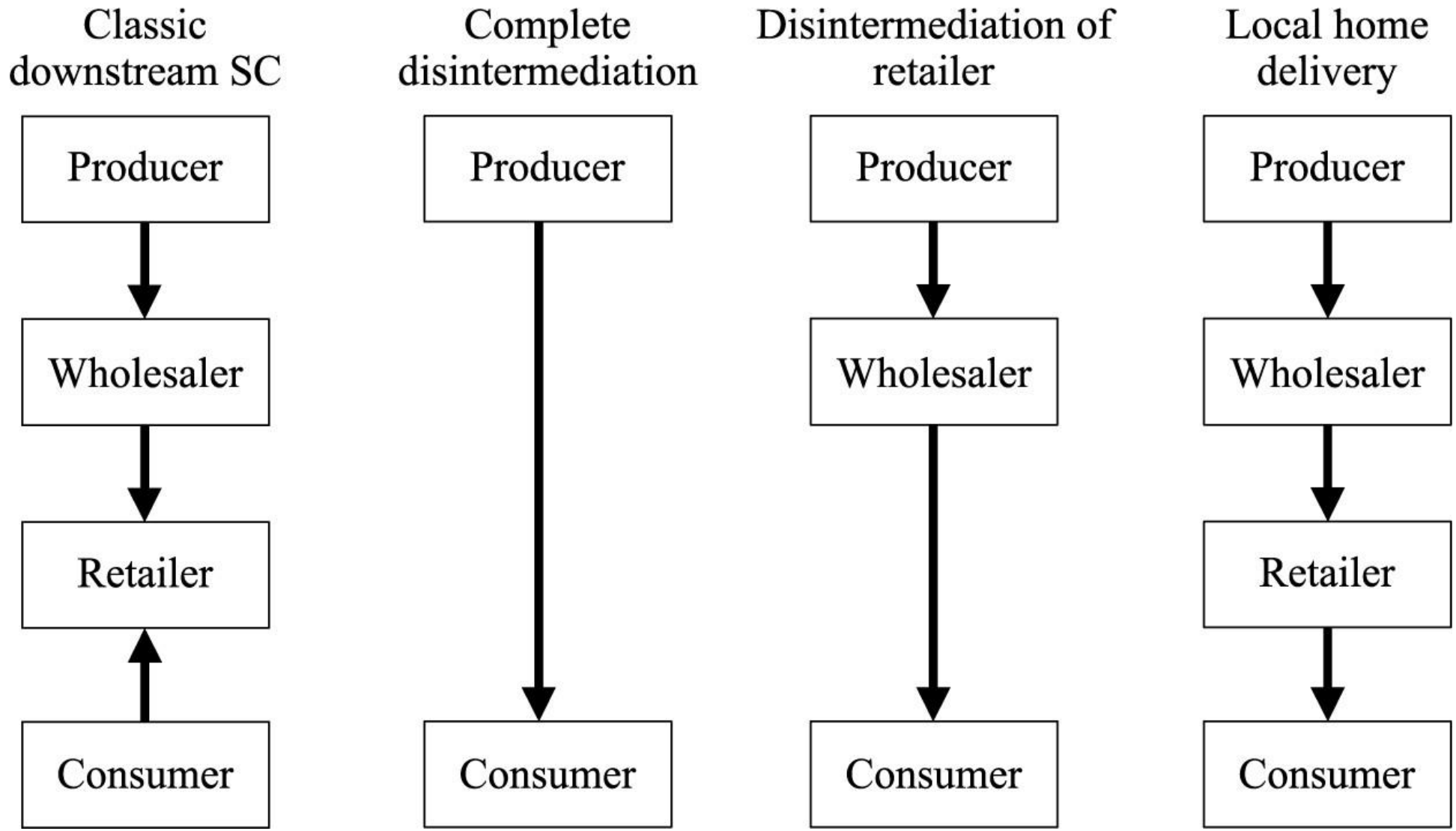
- The new enterprise has a molecular structure.
- It is based on the individual. The knowledge worker (human molecule) functions as a business unit of one.
- Motivated, self-learning, entrepreneurial workers empowered by and collaborating through new tools apply their knowledge and creativity to create value.
- Conditions may warrant a solid structure that tightly binds molecules together. The capacity for new relationships is profoundly increased through the new infostructure.
- There is still a role for the organization to provide a base structure for such molecular activity, but it is a far cry from the old hierarchy.
- When such molecular activity is extended to the economy as a whole, we can see very different kinds of relationships that make discussion of the virtual corporation seem trite.
- For example, the mass media will become the molecular media, through which readers, listeners, and viewers become customers able to access and interact with millions of "channels." They do so when they choose, rather than according to the schedule of a broadcaster.
- Mass production becomes molecular production with production runs of one rather than one million pairs of jeans. Even products become composed of molecules linked together through standard interfaces.

5. Integration / Internetworking

- Integration molecules into clusters that network with others for the creation of wealth
- Internetworked Enterprise
- Style of networking from host computer
- The new technology networks enable small companies to overcome the main advantages of large companies economies of scale and access to resources.
- The Internetworked Enterprise will be a far-reaching extension of the virtual corporation because there will be access to external business partners, constant reconfiguration of business relationships, and a dramatic increase in outsourcing.
- The Internetworked Enterprise will behave like the Internet, where everyone can participate and the total effort is greater than the sum of the parts.

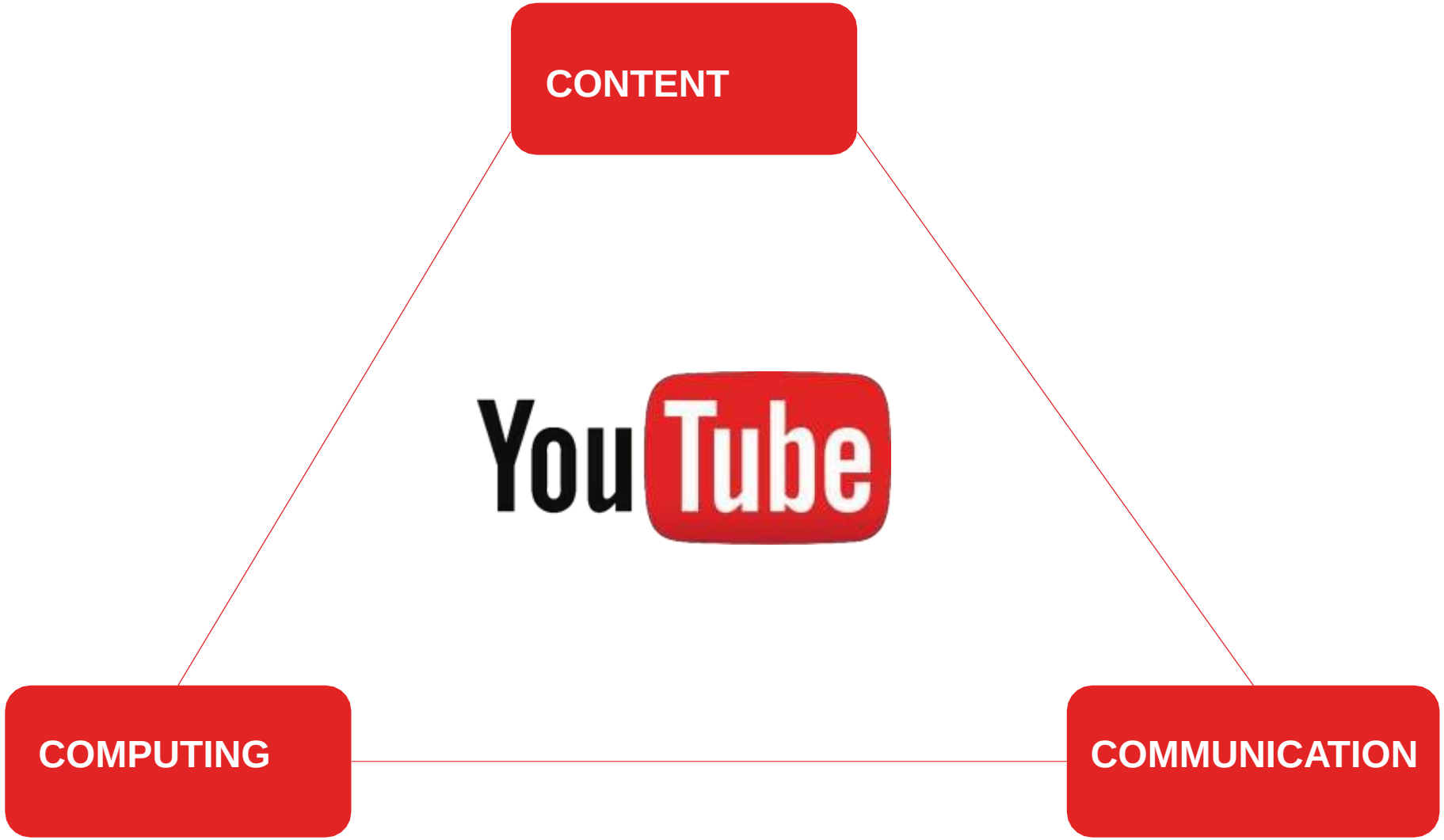
6. Disintermediation

- Middleman functions between producers and consumers are being eliminated through digital networks; e-commerce
- Changing the single pattern
- For instance: Musicians and their producers won't need recording companies, retail outlets, or broadcasters when their music becomes a database entry on the Net.
- Food producers won't need wholesalers or supermarkets when customers can replenish supplies weekly by accumulating entries in their shopping-list database and take delivery at home.
- Manufacturers could use the new infrastructure to sell direct over the network, thereby eliminating intermediary retail channels.
- As technology facilitates the exchange of information between suppliers and customers, we need to find new ways to deliver value to our clients. Rather than being in the transaction or information exchange business we need to become value-added facilitators of deals and ongoing partners for commercial real estate advice and knowledge and help. In doing so, it will make more sense for sellers to partner with us rather than to try and do it themselves.


Classic downstream SC
Producer
Wholesaler
Retailer
Consumer
Complete disintermediation
Producer
Consumer
Disintermediation of retailer
Producer
Wholesaler
Consumer
Local home delivery
Producer
Wholesaler
Retailer
Consumer

7.Convergence

- Created by three converging industries that, in turn, provide the infrastructure for wealth creation by all sectors
- Becoming the basis of all sectors
- The new media are already beginning to transform the arts, the way scientific research is conducted, and the way education is delivered.
- They are on the threshold of transforming the firm as we know it and changing the way we do business, work, play, live, and probably even think.


CONTENT
YouTube
COMPUTING
COMMUNICATION

8.Innovation

- **“Obsolete your own products”**
- This theme is made clear to product planners, strategists, engineers, developers, and managers at Microsoft and is constantly reinforced in all aspects of their work, beginning with their first orientation on their first day at the job.
- If you've just developed a great product, your goal is to develop a better one that will make the first one obsolete. If you don't make it obsolete, someone else will.
- For example, Microsoft technologist Ken Nickerson is proud to say that it was Microsoft (with Windows 95) that succeeded in making obsolete the best-selling software of all time, Microsoft's own DOS.
- Indeed, a key driver of the new economy is innovation, including a commitment to a continual renewal of products, systems, processes, marketing, and people

- Innovation drives every aspect of economic and social life. In the arts, whole new art forms are emerging based on interactive multimedia.
- Multivolume encyclopedias are being replaced by a single CD-ROM that can hold 360,000 pages of text. Not so long ago, music videos were a promotional add-on for a singer; now, they are necessary for success.
- In the innovation economy, human imagination is the main source of value.
- The critical challenge for any company in the digital economy is to create a climate in which innovation is prized, rewarded, and encouraged.
- Every country needs innovative workplaces and organizations that foster creativity. Growth in the innovation economy comes from small- and medium-sized businesses rather than large corporations or governments.
- Product and service leadership is one way to win in the innovation economy, but it is not adequate to understand the customers and their concerns and desires.
- You must innovate beyond what your markets can imagine. You must understand the needs of your customer's customer. Your organization needs a deep-seated and pervasive comprehension of emerging technologies. And you need a climate in which risk taking is not punished, creativity can flourish, and human imagination can soar.

9. Prosumption

- In the new economy the gap between consumers and producers blurs.
- As mass production is replaced by mass customization, producers must create specific products that reflect the requirements and tastes of individual consumers.
- In the new economy, consumers become involved in the actual production process.
- They can, for example, enter a new car showroom and configure an automobile on the computer screen from a series of choices.
- Chrysler can produce special-order vehicles in sixteen days. The customer creates the specs and sets in motion the manufacture of a specific, customized vehicle.
- Every consumer on the information highway becomes a producer by creating and sending a message to a colleague, contributing to a bulletin-board discussion group, altering the end of a movie, test driving a virtual car, or visualizing the brain of a patient across the country.

- As the information and knowledge content of products and services grows, organizations will shift from being only consumers of information and technology to the point at which they are infotech producers.
- Automotive companies won't just assemble vehicles; they'll produce everything from infomercials to driver navigational tools and programming about auto safety. Toyota is already appealing to the forty-something buyer with a thirty-minute infomercial and the twenty-something crowd with an interactive CD.

10. Immediacy (Immediate)

- Becomes a key driver and variable in economic activity and business success
- The new enterprise is a real time enterprise, which is continuously and immediately adjusting to changing business conditions through information immediacy
- Goods are received from suppliers and products shipped to customers "just in time," thus reducing or eliminating the warehousing function and allowing enterprises to shift from mass production to custom on-line production.
- For instance; Electronic Data Interchange (EDI) – linking computer systems between suppliers and their customers for purchase orders, invoices, billing, and record keeping, companies can save considerably over manual (nondigital) methods

11. Globalization

- Driving the extension of technology
- To meet the demand of global consumers
- Global business need to be able to link with customers, suppliers, employees, and partners throughout the world
- Boundary-less firms, global organization etc.
- It is driven by and driving the new technology that enables global action. Computer networks allow companies to provide 24-hour service as customer requests are transferred from one time zone to another without the customer ever being aware that the work is being done on the far side of the world.
- Networks enable smaller firms to collaborate in achieving economies of scale. Software development can be conducted on networks, independent of location. The office is no longer a place, it is a global system. Technology is eliminating the "place" in workplace. Home may be where the heart is, but increasingly the office is anywhere the head can be connected.

- These connections will empower us and enhance freedom and democracy. Citizens will be able to communicate, both send and receive information, on a previously unimaginable scale.
- globalization is driving the extension of technology.
- The new geopolitical world is opening up new markets everywhere, demanding a global response.
- Global businesses need to be able to link with customers, suppliers, employees, and partners throughout the world. New opportunities in global financial markets require an information infrastructure for exploitation.

12. Discordance

- Discordance- lack of harmony, agreement.
- Unpredicted social issues such as; privacy, access, quality of work life, quality of life etc. are beginning to arise
- The nature of work and the requirements of the workforce in the digital economy are fundamentally different
- The concept of labor is undergoing a radical redefinition
- The new economy is bringing high-paid, high-value jobs, but there is little job mobility between old and new
- In the new economy, those workers with access to the new infrastructure can participate fully in social and commercial life.
- Those without access, knowledge, and motivation will tend to fall behind. If not managed properly, this will increase social stratification severely, creating a new underclass.

- The have-nots will become confronted with the contradiction between the magnificent potential of the new technology on the one hand and their declining quality of life on the other.
- In the new economy, learning will more and more be provided by the private sector. This will come about not out of social responsibility but, rather, because working and learning are becoming the same activity for a majority of the workforce and because knowledge is becoming an important part of products.
- Moreover, the traditional educational institutions are failing to meet the needs of the economy, and there are huge and growing opportunities for learning products and services. This places a greater responsibility on individuals (those who can afford it) to achieve lifelong learning potentially increasing social chasms.

The ten technology shift

1. From Analog to Digital
2. From Traditional semi-conductor to Microprocessor Technology
3. From Host to client / server computing
4. From Garden Path Bandwidth to Information Gateway
5. From Dumb Access Device to Information Application
6. From separate data, text, voice and image to multi-media
7. From Proprietary to open system
8. From Dumb to Intelligent Network
9. From Craft to Object Computing
10. From GUI’s to MUIs, MOLEs, MUDs, MODs, AVATARs and VR (Virtual Reality)

1.From Analog to Digital

- Digitization turns analog waves into a version of Morse codes consisting of dots and dashes or of ones and zeroes.
- Started in 2002, when the world began storing more information in digital than in analog format.
- In 2000, three-quarters of the world's information was still in analog form. By 2007, all but 6 percent had been preserved digitally.

2.From Traditional semi-conductor to Microprocessor Technology

- Microprocessor advancement began in 1968 with the formation of Intel Corporation in Mountain View, California.
- The first single chip microprocessor, Intel 4004 was developed in 1971.

3. From Host to client / server computing

- Host:
  - Any end device in a network.
  - Can either be a server, a client or both.
- Server: A computer that has software that enables it to receive requests from a client and provide required services
  e.g. email.
- Host computing:
  - The master-and-slave relationship of terminals connected to host computers.
- Client/server computing:
  - Business units work together in well-structured enterprises.
  - Distributed computing on networked systems.

4. From Garden Path Bandwidth to Information Gateway

- If a plain old telephone service (POTS) is a garden path (in terms of how much information it is able to carry) then the emerging technologies are equivalent to superhighways 1 mile and 16 miles wide respectively, an incredible advance in information-carrying capacity.

5. From Dumb Access Device to Information Application

- 'Dumb' access devices (like television) are becoming interactive, and thus more useful as 'information appliances.
- One can record, program, and view it at your convenience.
- The Internet has also allowed companies, such as Amazon.com, to learn a great deal about their customers.

6. From separate data, text, voice and image to multi-media

- Rather than have separate software programs and files for each information format, the emerging technology will enable multimedia communications and interactions to take place as a matter of routine.
- Technologies that used to work as separate technologies now share resources and interact with each other synergistically.

7.From Proprietary to open system

- In 1984 Richard Stallman developed the 'free software'- software which could be copied by others and made changes too as they pleased.
- Higher chances of innovation and development of the software in OSS.
- One of the most famous and successful open source software projects is Linux.

8. From Dumb to Intelligent Network

- In1997, David Isenberg, then an AT&T researcher, published an article called Rise of the Stupid Network.
- Concept of intelligent network with intelligent end-points is highly emerging.
- Data retrieval are done by specialized software programs called 'information agents rather than by searching for information by using single purpose search procedures ('dumb' networks).

9. From Craft to Object Computing

- Chunks of software are created instead of creating large and complex software programs.
- Enables the rapid assembly of software rather than its laborious crafting.
- Easy to maintain and modify existing code as new objects can be created with small differences to existing ones.

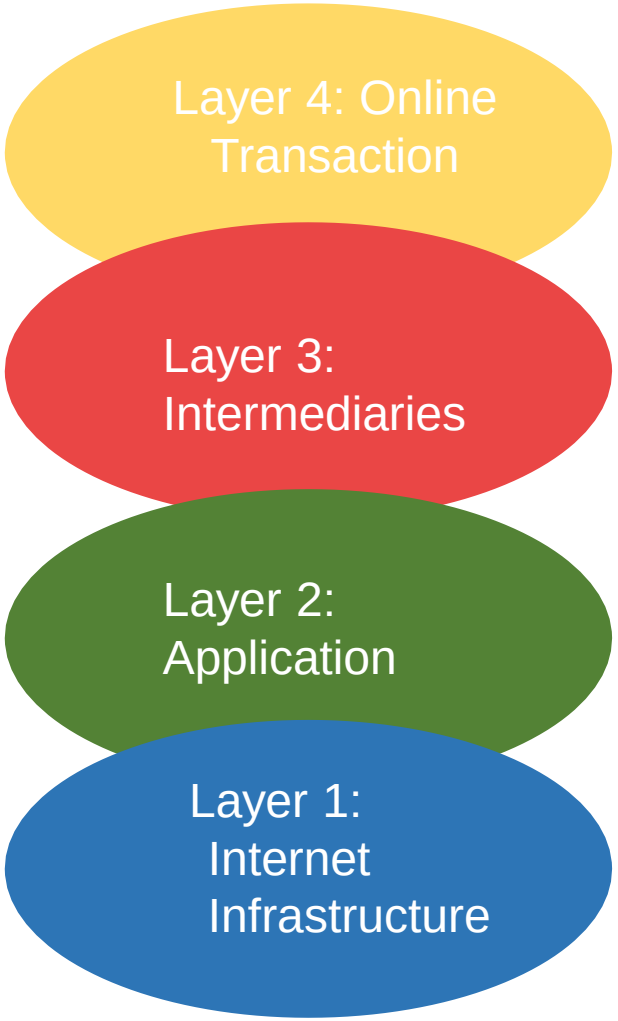
10. From GUI's to MUIs, MOLEs, MUDs, AVATARs and VR

- The standard graphic user interface (GUI) enabled a point-and-click-on-icons type of user interface.
- Replaced by much more compelling and flexible technologies - called multimedia user interfaces (MUIs), multi-user domains (MUDs), and just plain virtual reality (VR).

The Internet Economy and its indicators

- The first step in defining the Internet Economy was to build a conceptual framework and taxonomy.
- The Internet Economy can be conceptualized as a collection of IP-based networks, software applications and the human capital that makes the networks and applications work together for online businesses, and agents (corporations and individuals) who are involved in buying and selling products and services in direct and indirect ways.
- There is a natural structure or hierarchy to the Internet Economy that can be directly traced to how businesses generate revenues. Based upon this type of structure, we broadly classify the Internet Economy into infrastructure and economic activity categories.

Internet Economy Indicators



Economic Activity

Infrastructure

- The **infrastructure category** is further divided into two distinct but complementary "layers": the **Internet infrastructure layer**, which provides the physical infrastructure for Electronic Commerce, and the **Internet applications infrastructure**, which includes software applications, consulting, training and integration services that build on top of the network infrastructure, and which makes it feasible for organizations to engage in online commerce.
- The **economic activity** category is also subdivided into two layers: electronic intermediaries and online transactions. The **intermediary layer** involves the role of a third party in a variety of capacities: market maker, provider of expertise or certification that makes it easier for buyers to choose sellers and/or products, search and retrieval services that reduce transaction costs in an electronic market, and other services that facilitate the conduct of online commerce. The **transactions layer** involves direct transactions between buyers and sellers like manufacturers and e-tailers.

Layer 1: Internet Infrastructure

- A physical economy critically depends on an efficient infrastructure involving transportation, energy, raw materials, and skilled workforce.
- Likewise, the growth of a digital economy depends on the ubiquitous presence of high speed and intelligent electronic networks, and the ability to share any type of content between all agents in the economy.
- Accordingly, the Internet infrastructure layer includes companies that manufacture or provide products and services that make up the Internet network infrastructure.
- This layer includes companies that provide telecommunications and fiber backbones, access and end-user networking equipment necessary for the proliferation of Internet-based Electronic Commerce. This layer includes the following types of companies:
    - National and regional backbone providers
    - Internet Service Providers
    - Network equipment for backbones and service providers
    - Server & client hardware (e.g. Dell, Compaq, HP)

Layer 2: Internet and Network Applications Infrastructure

- Products and services in this layer build upon the above IP network infrastructure and make it technologically feasible to perform business activities online.
- In addition to software applications, this layer includes the human capital involved in the deployment of Electronic Commerce and E-Business applications.
- For example, Web design, Web consulting, and Web integration are considered as a part of this layer. This layer includes the following categories:
    - Internet consultants (e.g. MarchFIRST, Scient)
    - Internet commerce applications (e.g. Microsoft, Sun, IBM)
    - Multimedia applications (e.g. RealNetworks, Macromedia)
    - Web development software (e.g. Adobe, Allaire, Vignette)
    - Search engine software (e.g. Inktomi, Verity)
    - Online Training (e.g. Sylvan Prometric, SmartPlanet)
    - Web-enabled databases (e.g. Oracle, IBM DB2, MS SQL Server
    - Network operating systems, Web hosting and support services, Transaction processing companies

Layer 3: Internet Intermediary

- Internet intermediaries increase the efficiency of electronic markets by facilitating the meeting and interaction of buyers and sellers over the Internet.
- They act as catalysts in the process through which investments in the infrastructure and applications layers are transformed into business transactions.
- While much has been written about a large-scale disintermediation in the transformation of the physical to the digital economy, the Internet necessitates a new breed of intermediaries whose roles are naturally information and knowledge intensive.
- In the physical world, intermediaries are distributors and dealers, whose primary role is to increase the efficiency of distribution and to lower buyer transaction costs by locating close to the customer population.

- By sharp contrast, physical proximity is not an issue on the Internet; online search, evaluation, communication, coordination, assurance of vendor and product/service quality are the important aspects in the Internet Economy.
- Internet intermediaries play a critical role in filling information and knowledge gaps, which would otherwise impair the functioning of the Internet as a business channel. This layer includes:
    - Market makers in vertical industries (e.g. VerticalNet, PCOrder)
    - Online travel agencies (e.g. TravelWeb, Travelocity)
    - Online brokerages (e.g. E*trade, Schwab.com, DLJ direct)
    - Content aggregators (e.g. Cnet, Cdnet)
    - Portals/Content providers (e.g. Yahoo, Excite)
    - Internet ad brokers (e.g. DoubleClick, 24/7 Media)
    - Online advertising (e.g. Yahoo, ESPN Sportszone)
    - Web-based virtual malls (e.g. Lycos shopping)

Layer 4: Internet Commerce

- This layer includes companies that generate product and service sales to consumers or businesses over the Internet. This indicator includes online retailing and other business-to-business and business-to-consumer transactions conducted on the Internet.

  - E-tailers selling books, music, apparel, flowers, etc. over the Web (e.g. Amazon.com, 1-800-flowers.com)

  - Manufacturers selling products direct such as computer hardware and software (e.g. Cisco, Dell, IBM)

  - Transportation service providers selling tickets over the Web (e.g. Delta, United, Southwest)

  - Online entertainment and professional services (e.g. ESPN Sportszone, guru.com)

  - Shipping services (e.g. UPS, FedEx)

E-commerce and Digital Economy

E-commerce

- a process of buying, selling, transferring, or exchanging products, services, and/or information via electronic networks and computers

E-commerce categories

- Two major categories
  - **Business-to-consumer(B2C)**
    Online transactions are made between businesses to consumers and individual
    Example: Amazon.com, eBay.com
  - **Business-to-Business (B2B)**
    Businesses make online transactions with other businesses.

- Other categories
  - **Consumer-to-consumer (C2C)**
  - **E-government**

Benefits of E-commerce

- Benefits to organizations
  - Global reach
  - Cost reduction
  - Improved customer relation
- Benefits to consumers
  - More product and services
  - Information availability
  - Cheaper products and services

Business applications

- Email
- Instant messaging
- Online shopping
- Online banking

Digital Economy

- Refers to an economy that is based on digital computing technologies.
- It is also sometimes called the Internet Economy, the New Economy, or Web Economy.
- Internet economy is made up of companies directly generating all or some part of their revenues from Internet or Internet-related products and services.
- Examples: Cisco, Dell, IBM, HP, Oracle, Microsoft and Sun Microsystems.

Impact

- The confluence of two forces has created the Internet Economy- the Globalization of business and the Networking of information technology.
- It is widely accepted that the growth of the digital economy has widespread impact on the whole economy.
- Various attempts at categorizing the size of the impact on traditional sectors have been made.

Conclusion

- Traditional firms are actively assessing how to respond to the change brought about by the digital economy.
- For corporations, timing of their response is of the essence.
- Banks are trying to innovate and use digital tools to improve their traditional business.
- Governments are investing in infrastructure.

THANK YOU!