Introduction to Management Information Systems

Importance of Management Information Systems

Foundations of Information Systems

In your lifetime

- access to information (e.g. web use)
- digital transformation
- data (e.g. to make decisions)
- insight (e.g. customers needs)

what next? AI and ___ ?

working in groups

https://www.ted.com/talks/margaret_heffernan_forget_the_pecking_order_at_work

https://www.youtube.com/watch?v=Vyn_xLrtZaY

5 minutes

What has changed?

Groups - https://www.randomlists.com/team-generator

Write your ideas (5 minutes)

- why are information systems increasingly important, and
- how has business has changed in the last 10 years that has made this happen

why are the following areas relevant to the growth of Information Systems?

- choose 3

- write your ideas

- summarize

- present to class

1. Competition
2. Globalization
3. Uncertainty in the Marketplace
4. Tendency of Outsourcing
5. Reduced Hierarchy and Improved Transparency
6. Clout of Civil Society and Media
7. Focus on Knowledge in Business
8. Awareness of the Value from Managing Information
9. Customer Focus
10. Investment on Information Technology

#1 Competition

Competition

- most important trend in the modern business environment is the increase in competition

- businesses have had to become more efficient and effective

- increased focus on the efficient use of its resources to beat competition

- most of the measures that a business entity takes today are with a focus on competition

Market Dynamics Favoring the Efficient

- markets have become demand driven.

- Customers today have greater choice and hence demand for better quality at a lower price,

- which in turn favors those companies which are efficient in their use of resources

- as they can deliver a better quality product at a lower price.

The Fast Pace of Recent Technological Change and Innovation

- increased Information Exchange
  - free flow of information about markets, competitors, strategies and alternatives
- pace of IT changes
  - e.g. circuit(VLSI) design, nano technology, biotechnology
- disruptive technologies
  - bridge advantages of established companies vs start-up firms
  - greater focus on innovation in products and processes.

increased competition

- business environmental has changed

- necessitated new information management

- challenge is to integrate and enable organizational structure, culture and form with information management

- so that management decision-making is faster, accurate, timely and reliable.

increased competition

- WTO has reduced trade barriers
- cultural changes and social empowerment
- businesses more accountable and open
  - Corporate governance initiatives and media focus
- businesses have to be proactive
  - using predictive analysis

- need for faster access to the right kind of information & insight
- to improve the quality of management decision-making.
- companies are investing millions in IT infrastructure for better information management.
- Investments in
  - Enterprise Resource Planning (ERP),
  - Customer Relationship Management (CRM),
  - Data Mining and Data Warehousing (DM and DW) systems

  now the norm rather than the exception

#2 Globalization

How many of your products, devices, things around you, are solely from Thailand?

e.g. phone

- the phone, apps, technology, research, investments, market

factors:

- Privatisation, deregulation, improved transportation infrastructure & communication, trade blocks (WTO,EU), global companies

Threats to business

- Local businesses face increasing competition from global players.

- go global or remain local ?

- forced businesses to become more efficient

- customers more demanding

Globalization and Liberalization

- derive value in any location

- cheaper labour costs with

  - business-friendly government policies or

  - low cost scale manufacture/service to create value for the shareholders.

Globalization

the process of interaction and integration among people, companies, and governments worldwide

advantages

- maximize customer base
- shared facilities e.g. cloud computing
- access to technologies

disadvantages

- digital divide
- Cultural, ethnic, political challenges

Globalization

- less international barriers to business

- lower costs and increased efficiency

- resources, materials, labour, production – available cheaper / specialized in other countries

- global markets, global manufacturing hubs, global logistic hubs, global labor force and global presence

- more businesses scale up to a global scale

- find lucrative markets

- global supply chain

#3 Uncertainty

marketplace uncertainty

- development is faster
- more alternatives, made in shorter time, from more competitors from different locations
- unknown competitors, unknown technologies
- global financial market meltdowns and slowdowns create uncertainty
- greater capacity to absorb external shocks by reducing reaction time to change
- Information management becomes a crucial weapon
- information management value seen as a player in the difference between success and failure

#4 Outsourcing

outsourcing

Anyone located anywhere can deliver service anywhere making the service delivery independent of boundaries.

- businesses focus on their core functions and outsource other functions

- Business Process Outsourcing (BPO) firms provide

  - voice and non-voice customer relationship management,

  - legal process management, etc.,

  at a fraction of the cost.

- large cost savings by transferring these non-core jobs to developing countries

- made possible by the great advances in ICT

outsourcing areas

Direct selling by tele calling-Outbound calls

Direct selling by tele calling-Inbound calls

Customer grievance handling by receiving calls

Customer support by tele-calling

Medical transcription

Legal process outsourcing

Technical support to sales team through inbound calls

Billing support and management

Accounts management

Human resource management

Recruitment assistance

Marketing analytics support

IT application development

IT maintenance

Entire IT management

IT hardware support

IT software support

- Ensuring quality of output
- Ensuring timely output
- Ensuring zero cost escalation
- Ensuring minimum customer complaints
- Ensuring synchronized service over different time zones
- Ensuring zero stoppages

- Service orientation
- Ensuring proper client management
- Ensuring zero stoppages
- Managing a large body of young and educated labor force
- Managing a large IT platform
- Ensuring efficiency of service level
- Ensuring polite and amiable customer handling

#5 Transparency

Transparency

- organization structures of business organizations are becoming flatter reducing unnecessary hierarchy

- more informal, efficiency focused and work driven culture

- more on work and how to get it done and less on massaging egos of superiors and adhering to strict hierarchy

- free and open culture has resulted in greater efficiency and a culture of open communication and fast action and decisions based mostly on data driven reports.

- Transparency has improved because of the impact of multinationals.

- The increased transparency has resulted in faster and more efficient reactions from employees.

- The trust levels in companies have gone up with rise in transparency.

#6 Media & People Power

consumers are aware of different burning issues thereby creating challenge for business, with

- environmental issues

- consumer protection issues,

- Environmental pollution,

- global warming, consumer protection,

- safety, etc.

- companies are more accountable and in the public scrutiny
- public awareness & active media has forced companies to
  - increase compliance on regulatory and ethical fronts.
  - comply with public-welfare issues
  - be rated on their performance
- cost of non-compliance is much higher now, with loss of goodwill and public image

#7 Knowledge

- Focus is more on using knowledge to increase output and get greater value for the resources applied.

- More and more companies are investing therefore, in research and development to come up with new and better products and services.

- This knowledge focus has led to very fast obsolescence of products and services and hence, has indirectly led to increased competition.

#8 Managing Information

- proactive decision-making is very effective
- better than the reactive type of decision-making
- companies make information their competitive advantage
- managers focus on analyzing data to derive predictive kind of information
- so that decisions can be based on the future
- analytics based competitors more agile to changes in the marketplace
- reaction time is much less.

#9 Customer Focus

Customer Focus

- Businesses have become increasingly aware of the need for customer focus to improve market share.

- They have realized that the customer today has a choice as never before.

- Companies need to ensure customer loyalty through good delivery and service

#10 Tech

IT investment

- greater value in IT investments

- commoditization of IT

- most successful companies have MIS, ERP, CRM and / or KM systems

- competitors also have similar systems

- success for companies that use the IT and their own data to find insights for decision-making.

- These companies succeed as their decisions are proactive

IT is not 'the solution'

It is the use of IT & information by people that result in success

1 what businesses do

2 customers moment of value

3 role of IT

role of IT: knowledge comes from having information

To provide services needed for customer touch points:

1. Knowledge of the time
2. Knowledge of the location
3. Knowledge of the form

IT tools help provide:

the right people,

the right information,

at the right time

to make decisions

But, success relies of information sharing and usage

Problems occur   not (*just*) in the technology

    but with the corporate processes

The system 'allows' sharing

    but do people share?   Can't assume

IS & IT

- Information Systems (IS) and Information Technology (IT) are not the same

- IT, or ICT, focuses on the technology

- IS can incorporate IT, but not always

- IS often incorporates IT but also involves how it is applied and managed

- how the IS and the IT are managed is an aspect of Management IS (MIS)

computerised IS advantages

Speed can process millions of instructions each second

Accuracy eliminates or reduces human error

Reliability can operate 24 hours a day

Programmability flexible with software modifications, can be used to create letters, produce cash flow forecasts or manipulate databases.

Repetitive tasks suited to highly repetitive tasks

Judgement/experience incapable of solving problems using their own judgement and experience.

Improvisation/flexibility unable to react to unexpected situations and events, difficult to modify

Innovation lack creativity, unable to think in the abstract

Intuition no intuition, dealing with difficult issues, events, emotions

Qualitative information foresight comes from decision influences such as confidence, BIS cannot act upon qualitative information

IT architecture

- High level map or plan of the information assets in the organization
- IT infrastructure
- All applications
- Architecture of the organization

Physical facilities

- IT components   network, wireless network, hardware, software
- IT services   system development, data management
- IT personnel   usage, produces

- Hardware
- Software
- Collaboration and communication technologies
- Data and knowledge
- Faculties
- Services
- Personnel
- Partnerships

IT

- IT architecture & IT infrastructure – basis of Information systems (IS) in an organization
- IS collects, processes, stores, analyses and disseminates information for a specific purpose
- Computerized information systems (CBIS)
  - IS uses computer technology

Plan for, develop and manage

the coordinated use of IT & information

by people

Now customer based

- Serve customers
- Customer service

e.g. success of amazon

Customer 'touch points'

- TIME   - when the customer wants it
- LOCATION   - where the customer wants it
- FORM   - how the customer wants it
- DELIVERY   - In the manner to satisfy the customer

e.g.

Ice-cream company survey customers,

older customers want 'sugar-free',

urban customers want 'coffee flavour'

Thank you!

any questions?