

WHAT ROLE DOES/SHOULD IT PLAY IN THE WORLD OF BUSINESS? (WEEK 1)

The Role of IT in Business:

- Creating office documents, maintaining schedules etc
- Allowing employees to communicate with each other and with customers/suppliers
- Capturing business transactions
- Providing information about an organisation's business operations to support and assist managers
- Evaluating options to help managers make decisions
- Emulating human expert decision-making
- Monitoring the competitive environment for strategic planning

How did this happen?

- The contributions of many "HEROS" who have taken crucial steps (see the following slides)
- Millions of Business Women and Men (like you) who contribute to the evolution of new applications of IT in the world of business every day!!!

Some Heroes (Bricklin, Gates, Jobs, Berners-Lee, Zukerberg)

Dan Bricklin - Father of the Spreadsheet

- Daniel Singer "Dan" Bricklin (born 16 July 1951), often referred to as "The Father of the Spreadsheet", is the American co-creator, with Bob Frankston, of the VisiCalc spreadsheet program.
- While a student at Harvard Business School, Bricklin co-developed VisiCalc in 1979, making it the first electronic spreadsheet readily available for home and office use. It ran on an Apple II computer.
- VisiCalc is widely credited for fueling the rapid growth of the personal computer industry.
- Instead of doing financial projections with manually calculated spreadsheets, and having to recalculate with every single cell in the sheet, VisiCalc allowed the user to change any cell, and have the entire sheet automatically recalculated.
- This turned 20 hours of work into 15 minutes and allowed for more creativity

Bill Gates – Co-founder of Microsoft

- William Henry "Bill" Gates III (born October 28, 1955) is an American business magnate, investor, programmer, inventor and philanthropist. Gates is the former chief executive and current chairman of Microsoft, the world's largest personal-computer software company, which he co-founded with Paul Allen
- Gates is one of the best-known entrepreneurs of the personal computer revolution
- Gates's role at Microsoft for most of its history was primarily a management and executive role. However, he was an active software developer in the early years, particularly on the company's programming language products.
- Windows - Microsoft launched its first retail version of Microsoft Windows on November 20, 1985.

Steve Jobs – Apple Visionary

- **Steven Paul "Steve" Jobs** (February 24, 1955 – October 5, 2011) was an American entrepreneur and inventor, who was the co-founder, chairman, and CEO of Apple Inc.
- Through Apple, he was widely recognized as a charismatic pioneer of the personal computer revolution
- During his influential career in the computer and consumer electronics fields, he transformed "one industry after another, from computers and smartphones to music and movies..."

Tim Berners-Lee – Inventor of the Web

- **Sir Timothy John "Tim" Berners-Lee**, OM, KBE, FRS, FEng, FRSA (born 8 June 1955), also known as "**TimBL**," is a British computer scientist, best known as the inventor of the World Wide Web.
- He made a proposal for an information management system in March 1989, and he implemented the first successful communication between a Hypertext Transfer Protocol (HTTP) client and server via the Internet sometime around mid-November.
- Berners-Lee is the director of the World Wide Web Consortium (W3C), which oversees the Web's continued development.

- He was honoured as the "Inventor of the World Wide Web" during the 2012 Summer Olympics opening ceremony, in which he appeared in person.

Mark Zuckerberg – Co-founder of Facebook

- Mark Elliot Zuckerberg (born May 14, 1984) is an American computer programmer and internet entrepreneur.
- He is best known as a co-founder of the social networking website Facebook.
- Together with his college roommates and fellow Harvard University students Eduardo Saverin, Andrew McCollum, Dustin Moskovitz and Chris Hughes, Zuckerberg launched Facebook from Harvard's dormitory rooms.
- As of April 2013, Zuckerberg is the chairman and chief executive of Facebook, Inc. and in July 2015 his personal wealth was estimated to be US\$38.6 billion

Women of IT

- Ada Lovelace – analyst for Charles Babbage's analytical engine and is considered the "first computer programmer".
- Grace Hopper - the first programmer of the Harvard Mark I and invented the term "debugging"—a reference to a moth she extracted from her computer.
- Janese Swanson - developed the first of the very influential “Carmen Sandiego” games.
- Roberta Williams - did pioneering work in graphical adventure games for personal computers
- Marissa Mayer - first female engineer hired at Google
- Mary Lou Jepsen - She is currently the CEO of Yahoo!. Co-founder and chief technology officer of One Laptop per Child (OLPC).

New Technologies - The next BIG THING?

Available today

Cloud Computing: The delivery of computing as a service rather than a product, whereby shared resources, software, and information are provided to computers and other devices as a utility (like the electricity grid) over a network (typically the Internet).

In the future

Artificial Intelligence: Artificial intelligence (AI) is the “intelligence” exhibited by machines or software. It is the field of study which studies how to create computers and computer software that are capable of intelligent behaviour. A foretaste of what the future may hold was seen in early 2011, when an IBM computing system named “Watson” competed against the world’s best Jeopardy! Champions.

WHAT IS BUSINESS ANALYTICS? (WEEK 2)

Data, Information and Knowledge

Data

- Facts and figures without any real context or meaning.
- Explaining Big Data and Customer Experience

Information

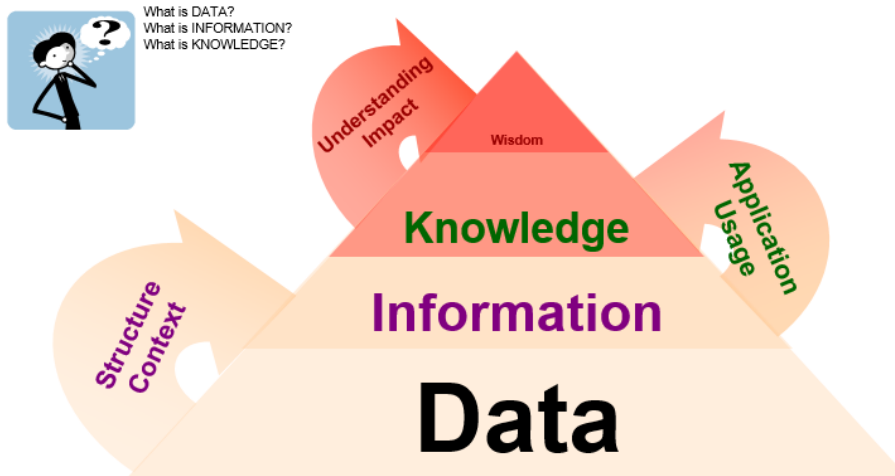
- Data that has been made meaningful and helps someone understand something

Knowledge

- Information that has been incorporated into someone's view of the world

The Data-Information-Knowledge Continuum

Data-Information-Knowledge-Wisdom The DIKW Continuum



Big Data and Information Systems

BIG DATA

Big Data applies to data that can't be processed or analyzed using traditional processes or tools. ...organizations today have access to a wealth of data, ... don't know how to get value out of it because it is sitting in its most raw form or in a semi-structured or unstructured format

Three characteristics that define Big Data:

- Volume,
- Variety and
- Velocity

INFORMATION SYSTEMS

Systems that use information technology to capture data and transmit, store, retrieve, manipulate, and/or display information

Definition: Business Analytics

- **Business Analytics** is the term used to refer to the application of various technologies to enable analytical processing, data mining, performance management, and reporting, so supporting better business decision-making

Forms of Business Analytics – Descriptive, Predictive, Prescriptive

Business Analytics takes three forms:

- **Descriptive Analytics:** The use of data to understand past and current business performance and so make informed decisions.