

Introduction to Management of Information Technologies

LEARNING OUTCOMES

- ❑ Compare management information systems (MIS) and information technology (IT)
- ❑ Explain the difference between data and information
- ❑ Describe the relationships among people, information technology, and information
- ❑ Analyze the role of IT in business

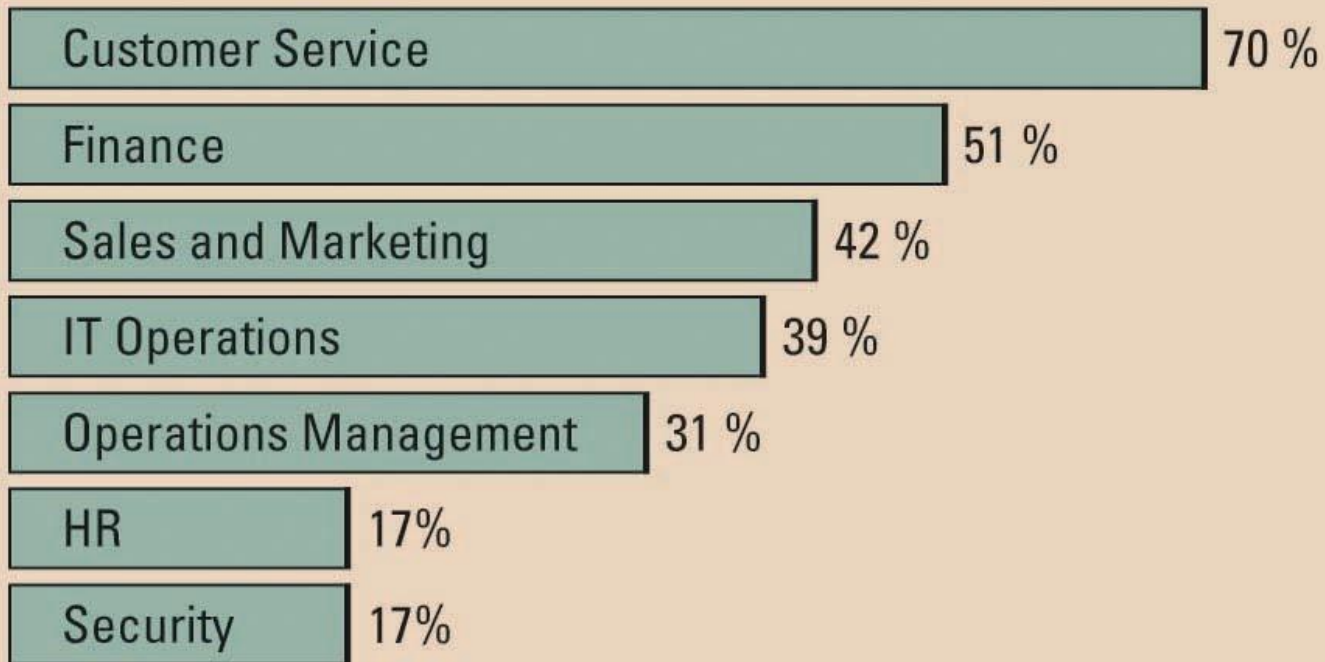
WHAT IS THE ROLE OF INFORMATION TECHNOLOGY IN BUSINESS?

- ❑ Information technology is everywhere in business
- ❑ Understanding & knowledge about IT are key to understanding business and to business operations.



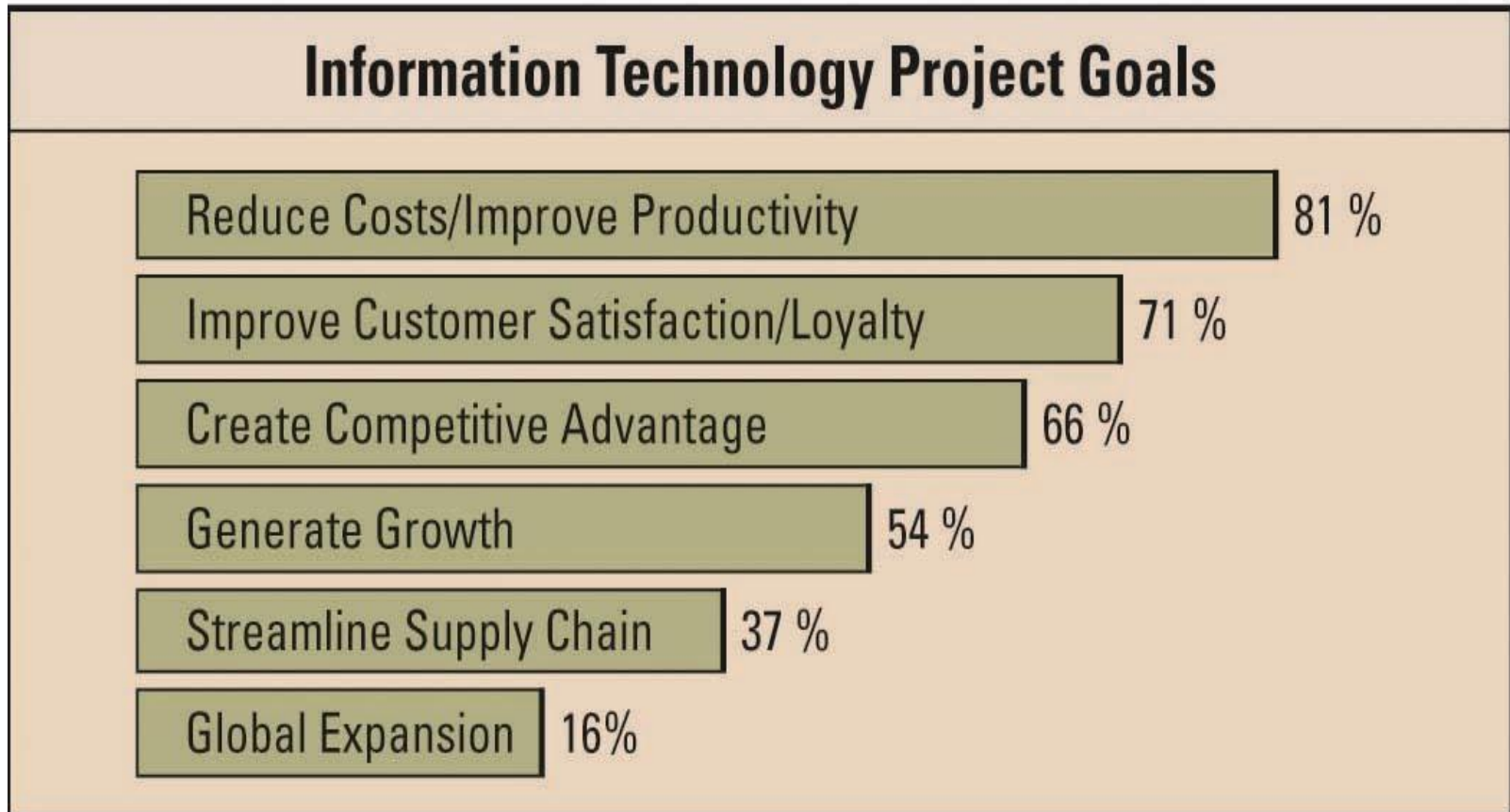
Information Technology's Impact on Business Operations

Business Functions Receiving the Greatest Benefits from Information Technology



Information Technology's Impact on Business Operations (cont.)

Figure 2 (source CIO Magazine)



Technologies & business functions

- **Supply Chain Management (SCM) Systems**

- Refer to a **category of IS** that support the activities related to business supply chain.
- Supply chain involves: (a) materials flow from suppliers, (b) transformation of materials and production processes, (c) distribution of products to customers

- **Typical activities supported:**

- Procurement / purchase of supplies
- Tracking orders from suppliers
- Handling customers orders
- Invoicing
- Tracking customers orders



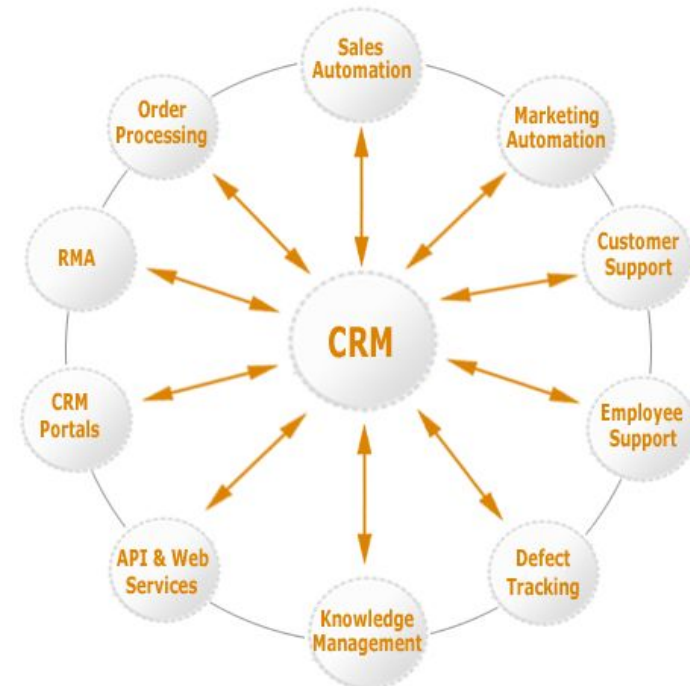
Technologies & business functions (cont.)

- **Customer Relationship Management (CRM) Systems**

- Refer to a **category of IS** that support the activities related to managing and nurturing a company's interactions with customers, clients, and sales prospects.
- Help increase organizational effort by multiple departments like marketing, sales, support division, and customer service to improve customer relations
- **Goals: (1)** find, attract, and win new clients – **(2)** nurture and maintain existing customers – **(3)** entice former customers back into the fold

- **Typical activities supported:**

- Managing Sales teams
- Tracing potential customers
- Running MKT campaigns
- Analyzing sales



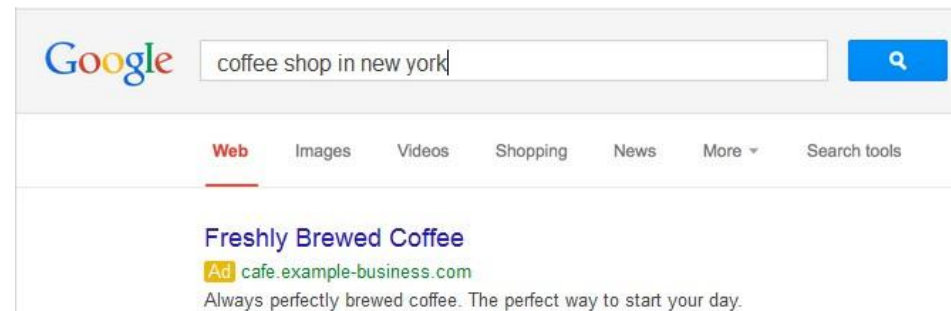
Technologies & business functions (cont.)

- **Search Engine Optimization (SEO)**

- Internet Marketing tool that increases the visibility of a website in a search engine's unpaid results.
- Optimizing a website may involve editing its content, HTML and associated coding to both increase its relevance to specific keywords and to remove barriers to the indexing activities of search engines

- **Google AdWords**

- Google's advertising service that makes your website appears on top of Google Search results.



IT and Business Intelligence

❑ Information technology (IT) refers to

- a **field** concerned with the use of technology in managing and processing information
- Computer-based **tools** used to capture, store, protect, process, retrieve, and transmit information

❑ IT is a main part of Business Intelligence

❑ Business Intelligence

- A broad **array of applications and technologies** used to gather, provide access to, and analyze huge amount of data to support decision making. Its use allows discovering trends, patterns, associations, etc.
- **Information** collected from multiple sources (suppliers, customers, competitors, industry, internal data, etc.) that analyses patterns, trends, relationships for strategic decision making.

Management Information Systems (MIS)

❑ MIS

- ❑ Is a *business function* and *academic discipline*
 - That deals with the application of information systems and information technology to solve business problems
- ❑ Can also be seen as a tool for generating and managing information for managers

- ❑ MIS is a business function, similar to Accounting, Finance, Operations, and Human Resources

Information Systems

- ❑ **Information Systems** – systems designed for use by organizations in order to transform raw data into information that can help workers do their job and managers make decisions.
- ❑ An information system has the following key components:
 - **People**
 - **Technology**
 - **Policies/Procedures/Processes**

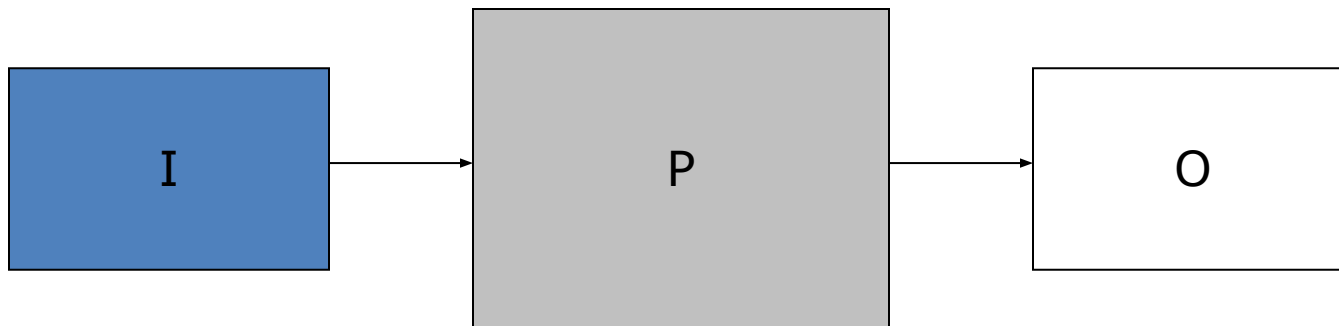


Technology:

Hardware
Software
Databases
Networks

Data versus Information

- **Data** = raw facts that represent the characteristics of an event
 - Example 1:
 - Event: High temperature
 - Data: 100° F
 - Example 2:
 - Event: Sale
 - Data: Sale's date, item number, item description, etc.
- **Information** = facts within a given context
 - Information results from transforming data by adding context and meaning to make it more useful.
 - The temperature **today** at **noon** in **Times Square, NYC** was **100° F**



Note: Info generated by one system may be used as input in another system

The Value of Information – Information Quality (IQ)

Characteristics / dimensions of IQ:

- **Accuracy** (Is information correct? Can we rely on it?)
- **Timeliness** (How current is the information?)
- **Accessibility** (Can the information be accessed when needed?)
- **Engagement** (Is the information capable of affecting a decision?)
- **Application** (Is the information relevant to the current context?)
- **Completeness** (Are any of the values missing?)
- **Consistency** (Is aggregate/summary info in agreement w/ detailed info?)
- **Rarity** (Is the information previously known?)