

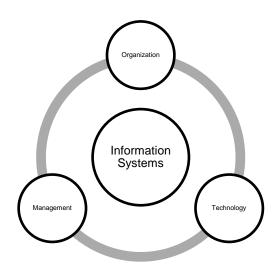


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# **Information System**

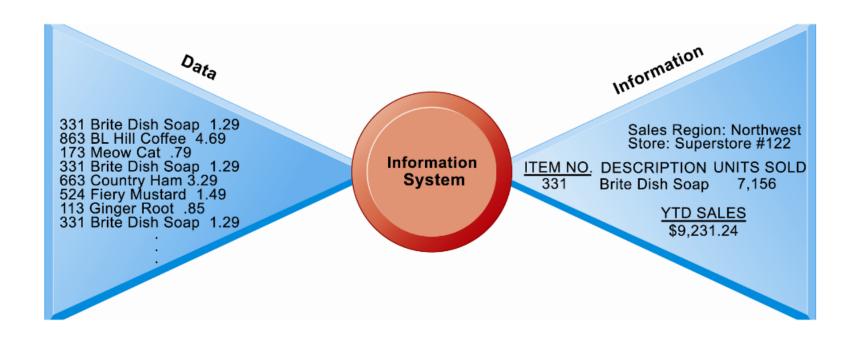
- Set of inter-related components
- Capture, process, store and spread information
- Supports the decision making, coordination and control
- Uses computers and software (technical instruments and basic tools of an IS)
- More than computers:
  - The effective use of IS requires understanding the organization, management and information technology
  - An IS generates value to the organization as a solution for managing the challenges presented by the environment



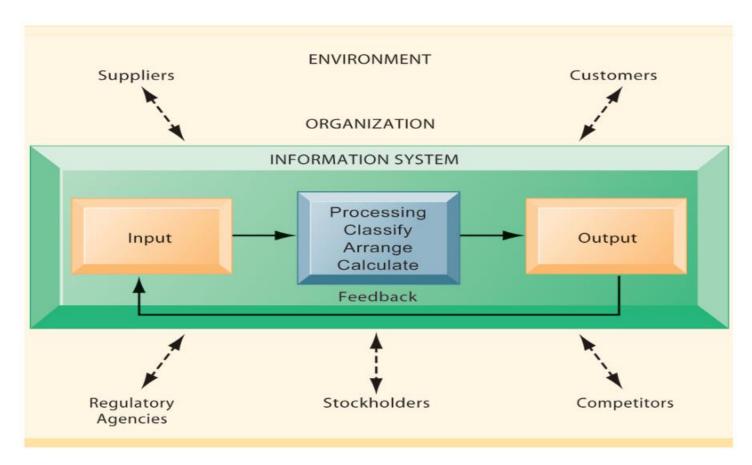
#### **Data vs. Information**

• Data: Raw data

Information: processed data (with context)



## **Activities of an Information System**



- Input: Capture of raw data from the organization or environment
- Processing: Convert raw data into information
- Output: Transfer of the processed data to people or activities that use it
- Feedback: Output is returned to the organization's members to help evaluate or correct the input

# Different perspectives of an IS

#### Structural

"A group of people, processes, data, models, technology and partially formalized languages, forming a cohesive structure that serves some organizational purpose or function"

#### **Functional**

"a technologically implemented means for the registration, storage and dissemination of data / information. IS facilitate the creation and exchange of meanings that serve defined purposes such as control, making sense and reasoning"

#### **Business**

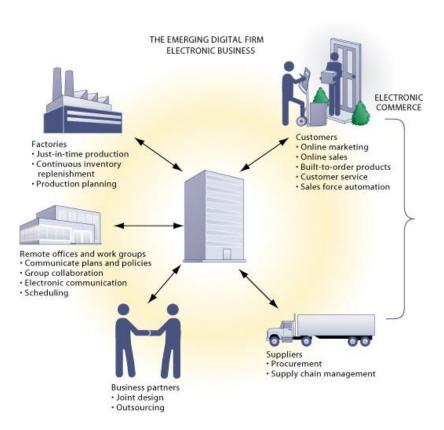
"It is an organizational and management solution based on information technology, for challenges and problems created in a business environment"

# The IS's importance on business

- Business organizations are hierarchies that consist of three main levels
  - Information systems support each of these levels
- · Business transformation by IS
  - Growing mobile digital platform
  - Increasing use in the "bigdata" business
  - · Growth in cloud computing
- Globalization opportunities
  - The Internet has dramatically reduced operating costs on a global scale
  - · Increase in foreign trade
  - · Presents challenges and opportunities

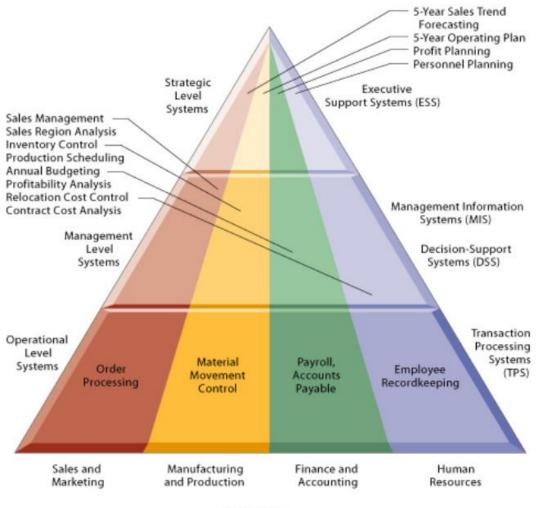


## The importance of IS in Business



- Growing interdependence between
  - · Ability to use information technologies
  - · Ability to implement corporate strategies
  - · Achieve corporate goals
- Organizations invest in IS to achieve six important business objectives
  - 1. Operational Excellence
  - 2. New products, services and business models
  - 3. Closer relationship with Customers and Suppliers
  - 4. Improvement in decision making
  - 5. Competitive advantage
  - 6. Survival

## Types of IS

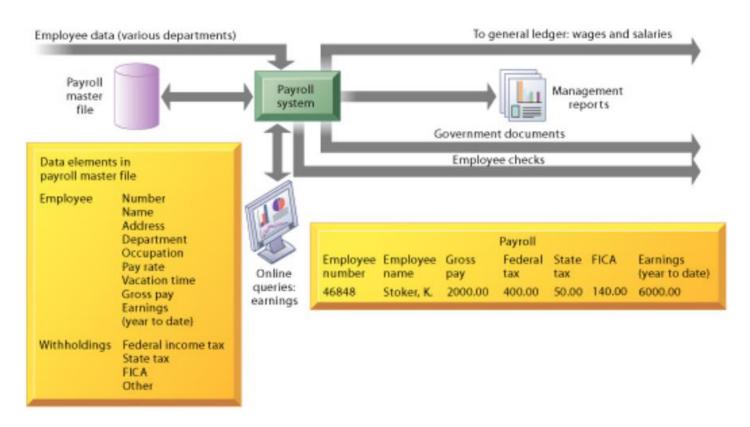


FUNCTIONAL AREAS



## **Transaction Processing Systems (TPS)**

Operational Level



ACTUAL

versus

**PLANNED** 

0.85

1.01

1.06

0.91

0.95

0.94

1.19

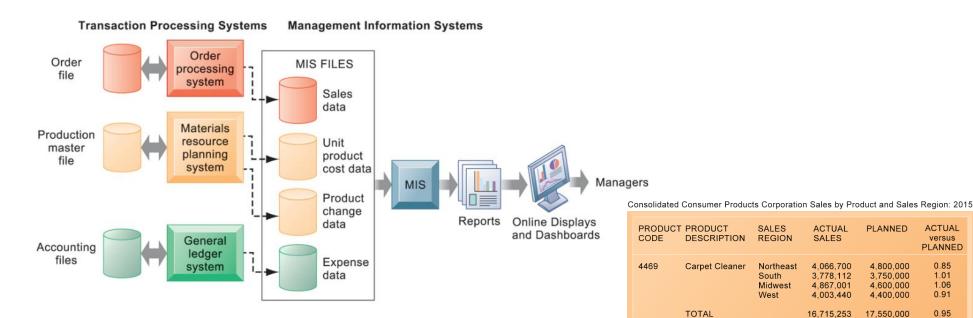
1.12

0.93

1.05

## **Management Information Systems (MIS)**

#### Management level





3,676,700

5,608,112

4,711,001

4,563,440

18,559,253

3,900,000

4,700,000

4,200,000

4,900,000

17,700,000

Northeast

Midwest

South

West

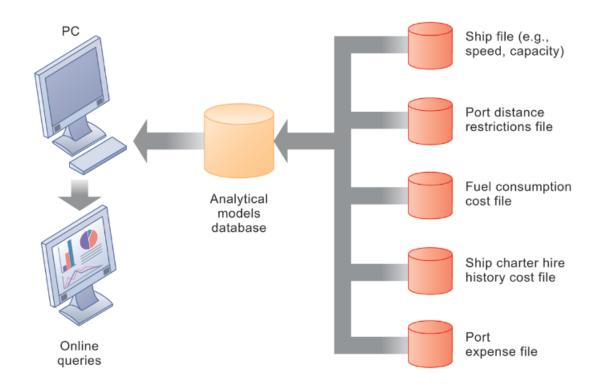
Room Freshener

**TOTAL** 

5674

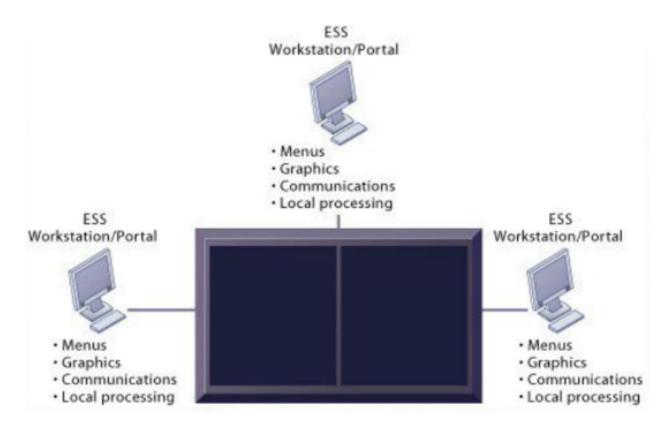
# **Decision Support Systems (DSS)**

#### Management Level



# **Executive Support Systems (ESS)**

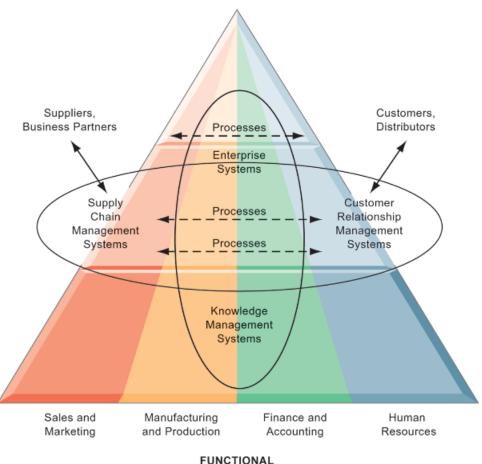
Strategical Level





## **Integrated Systems**

- · Systems that connect the company
- Cover different functional areas
- Execute business processes that "go through" the company
- Include all levels of management
- Four applications:
  - · Business management systems
    - Enterprise Resource Systems (ERP)
  - · Supply chain management systems
    - Supply Chain Management Systems (SCM)
  - Customer relationship management systems
    - Customer Relationship Management Systems (CRM)
  - Knowledge Management Systems
    - · Knowledge Management Systems (KM)
      - Ex: Business Intelligence (BI)









Do conhecimento à prática.