

What is an Information System

Organized combination of

1. Hardware
2. Software
3. Communications Networks
4. Data
5. People

Computer Hardware Technologies

- Examples
 - Dell PowerEdge 2600 File Server
 - Apple iMac
 - Sony LCD Flat Panel Monitor
 - iPod
 - IDAutomation USB Barcode Scanner
 - RFID Chip

Computer Software Technology

- Examples
 - Windows XP
 - Graphics Card Driver Software
 - PowerPoint
 - mySAP Customer Relationship Management
 - Peachtree Accounting
 - iTunes Software

Telecommunications Network Technologies

- Examples
 - Ethernet
 - Netgear Wireless Router
 - Cable Modem
 - Cell Phone
 - WiFi, WiMax card
 - Bluetooth device

Data Resource Management Technologies

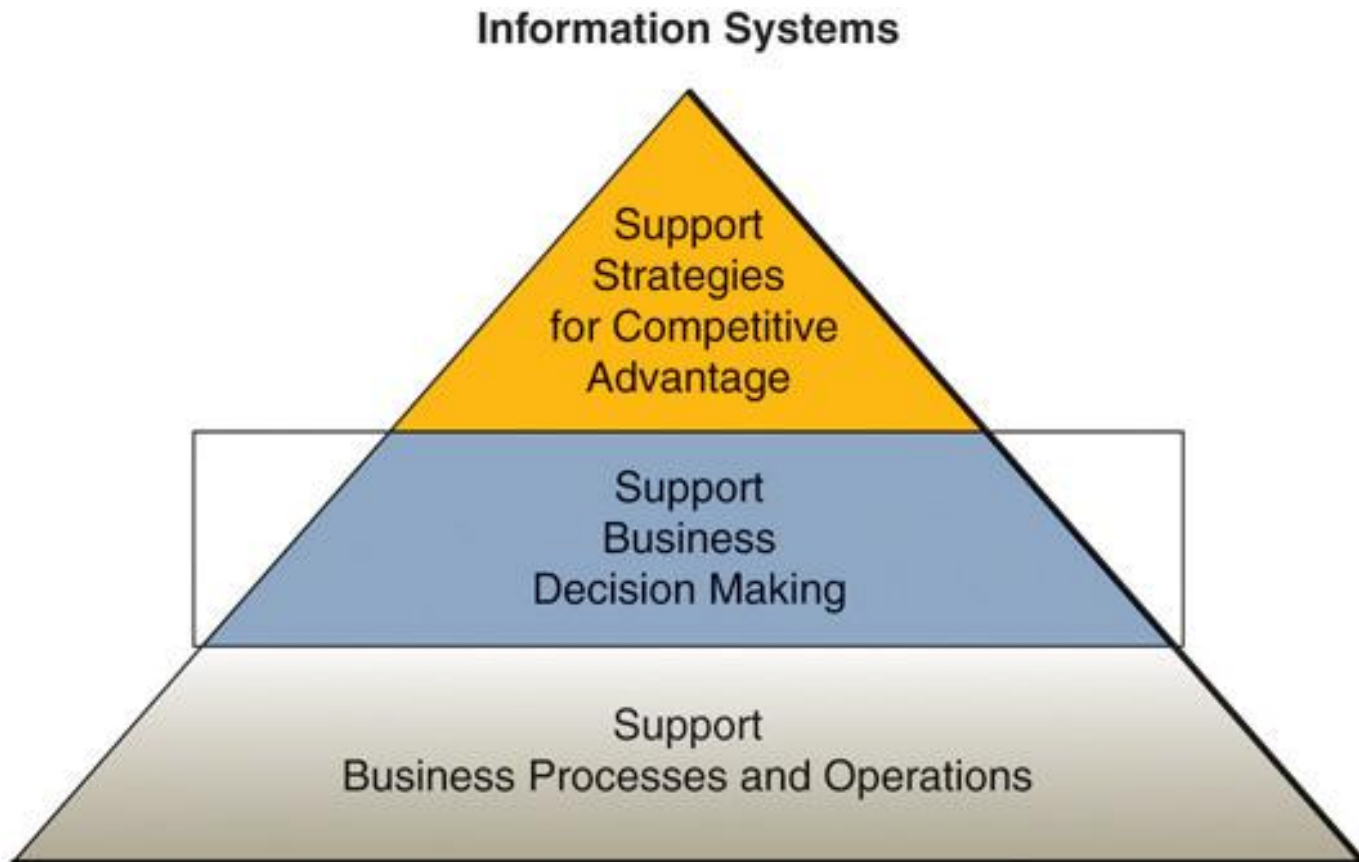
- Examples
 - IBM DB2 8.2
 - Microsoft SQL Server 2000
 - Oracle Database 10g
 - MySQL
 - Data Mining Software

People Technology ☺

- People are the 5th component of an Information System
- Everyone forgets the importance of people in an information system.
- **Example:** End User, Data Entry Person, Manager, Programmer, DB Administrator, Cashier, Secretary, Professor.

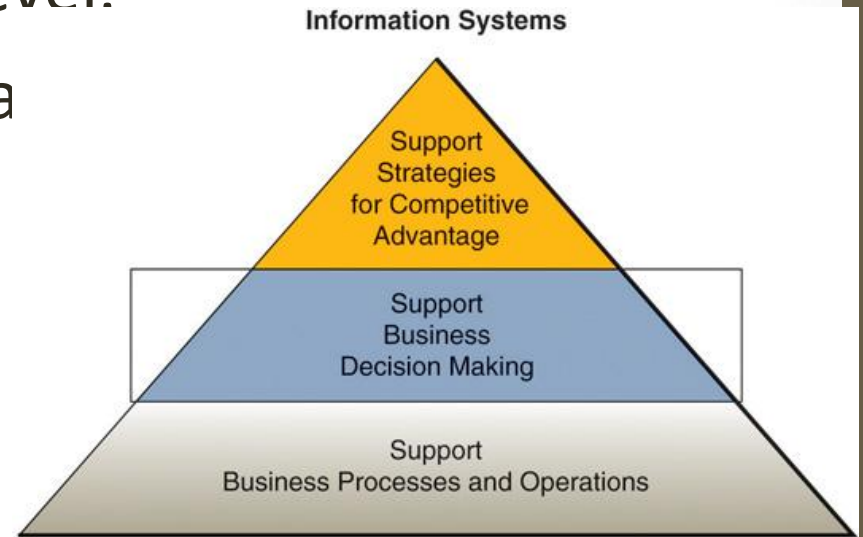
Information Systems Serve 3 Roles

- IS can support 3 different levels in business

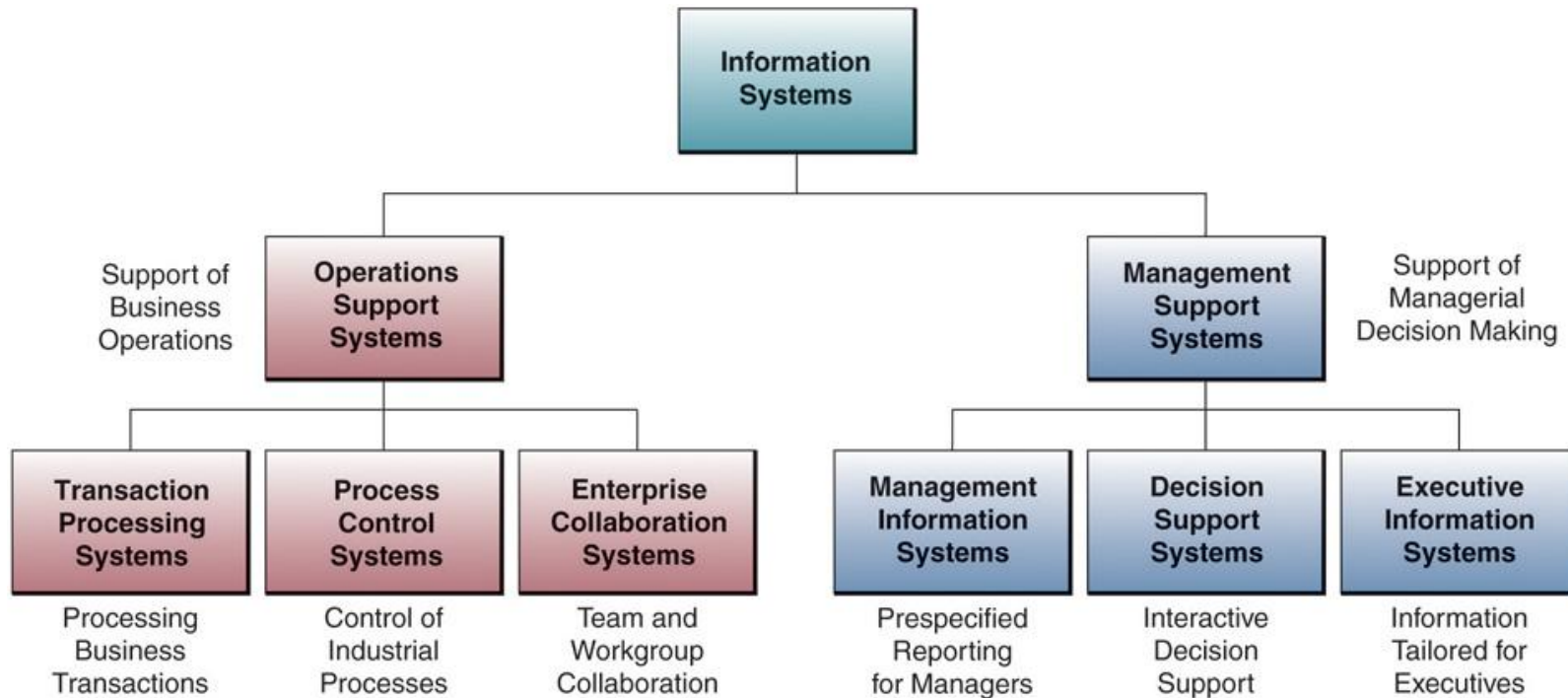


Expanding Role of IS

- Information Systems are being used in more areas, especial at the strategic level.
- At the same time, Informa **participation of End Users (The Grunts)**
- Biggest advantages of IS: Information can flow up the pyramid faster and more effectively.



Types of Information Systems



Transaction Processing System (TPS)

- Supports Operations
- Updates Operational Databases
- Examples:
 - ATM Machine System – Banking Transactions
 - Cash Register System – Point of Sale Transactions
 - Accounting System – Checking Account Transactions
 - Even Pay-per-view or OnDemand is a TPS

Process Control Systems (PCS)

- Supports Operations
- Monitor and Control Industrial/Manufacturing Process
- Examples:
 - Petroleum Refining
 - Power Generation
 - Automobile Manufacturing

Enterprise Collaboration Systems (ECS)

- Supports Operations (Surprised?)
- Teamwork, communication, and collaboration
- Examples:
 - E-mail
 - Chat
 - Video Conferencing
 - Calendaring
 - Journaling
 - Workflow
 - File Sharing (Kazaa, Morpheus, Limework, Napster)

Management Information System (MIS)

- Supports Management (duh?)
- **Analysis & Reporting**
- Charts, Graphs, Summary Tools
- Examples:
 - SCT Banner – Managing College Information (Siena uses it)
 - Spreadsheet (Excel) – One of the first and most basic
 - Oracle's Corporate Performance Management

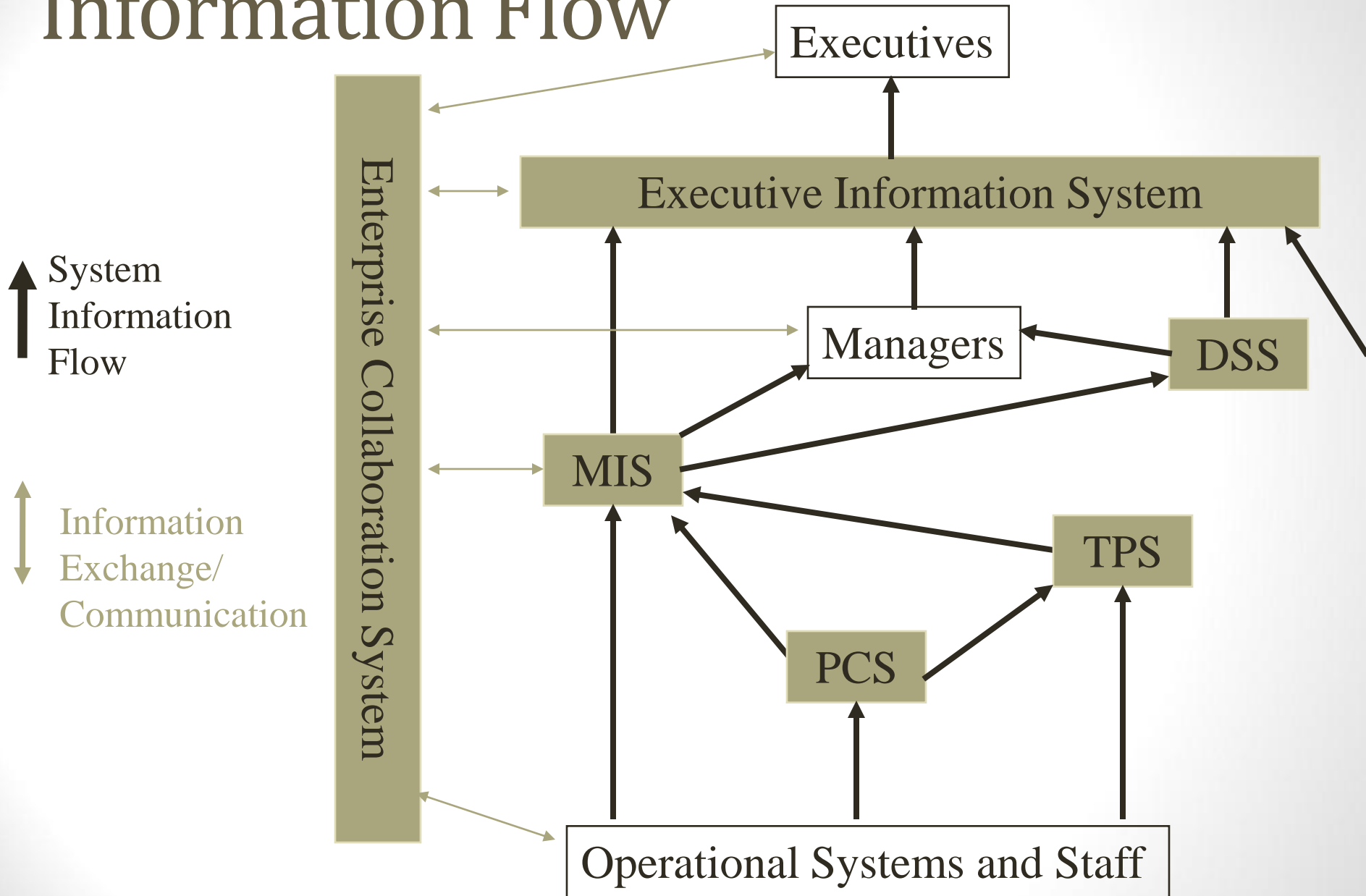
Decision Support System (DSS)

- Support Management
- What-if Analysis, Decision Modeling, Scenario Building, Highly interactive, ad hoc.
- Examples
 - Enterprise Decision Manager 2.0 Fair Isaac Corporation
 - AIMMS 3.6
- Most DSS's are custom developed for specific companies; very few out-of-the-box products.

Executive Information Systems (EIS)

- Supports high-level strategic management
- Provides critical info from other systems (MIS and DSS).
- **Portal Concept:** one place with links to all information
- EIS's integrate **external information** such as economic developments and news about related markets and competitors. Helps strategic decision making, not necessarily tactical.
 - Tactical – doing things the right way right
 - Strategic – doing the right things

Information Flow



Information Flow

Management

Enterprise Collaboration System

Executives

Executive Information System

Managers

DSS

MIS

TPS

PCS

Operational Systems and Staff

Operations

