Business School
UNIVERSITY OF COLORADO **DENVER**

Information Systems Program

Module 2
Introduction to Databases and DBMSs

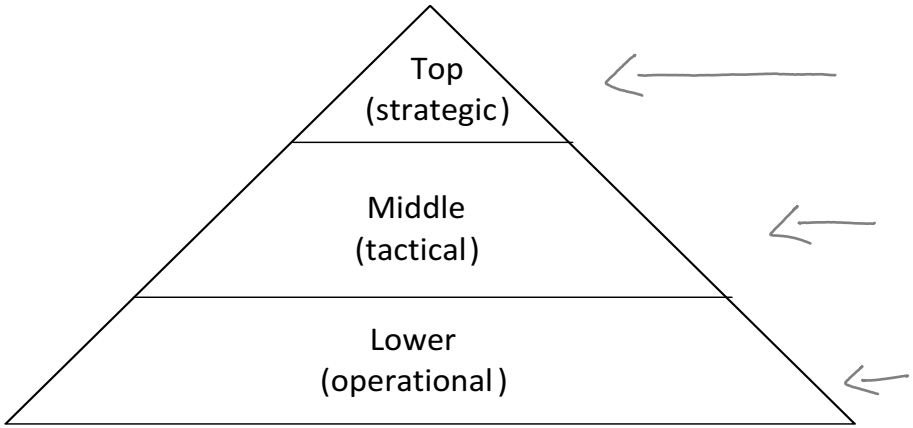
Lesson 6: Overview of Data Warehouse Processing

Lesson Objectives

- List three levels of decision making and at least one decision on each level
- Define data warehouse
- Explain at least one characteristic different for transaction processing versus business intelligence processing

Decision Making Hierarchy

Decision making hierarchy



Typical decisions

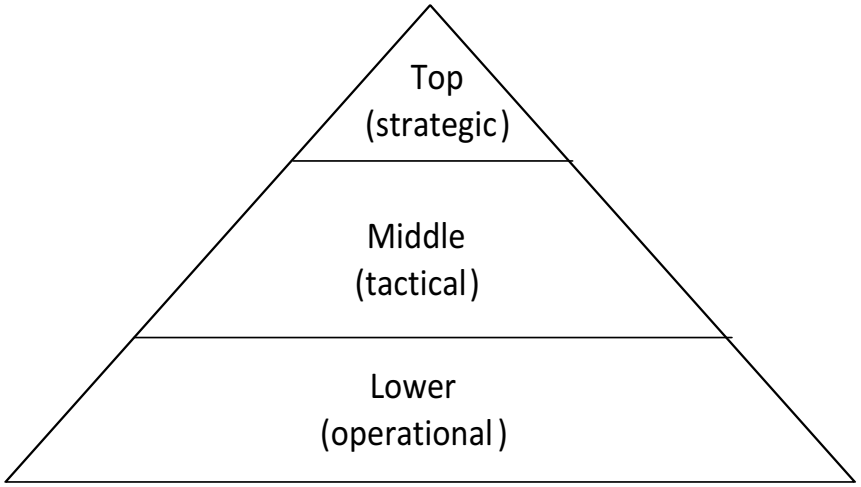
Identify new markets, choose store locations

Choose suppliers, forecast sales

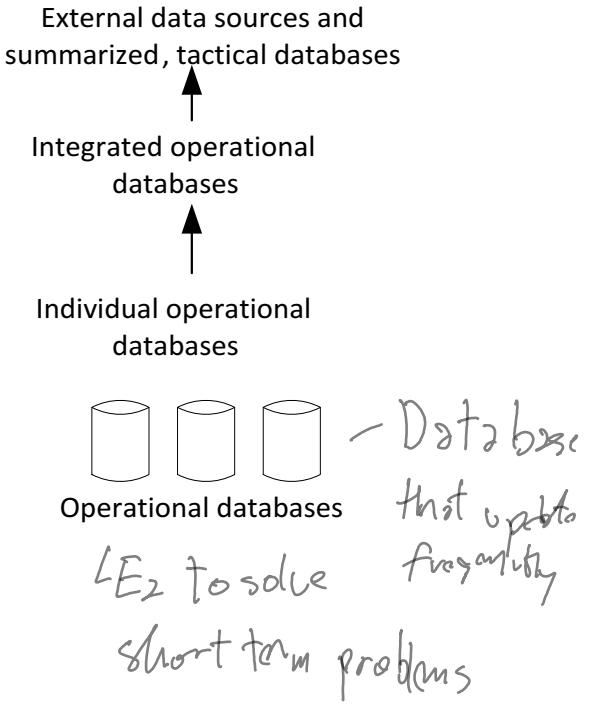
Resolve order delays, schedule employees

Database Support

Decision making hierarchy



Database support



Data Warehouse Characteristics

- Essential part of infrastructure for business intelligence
- Logically centralized repository for decision making
  - Populated from operational databases and external data sources
  - Integrated and transformed data
  - Optimized for reporting

Comparison of Environments

- Transaction processing
  - Primary data in operational databases
  - Large volumes of transactions with relatively small amounts of data per transaction
  - Some reporting requirements for operations
- Business intelligence processing
  - Secondary data from operational databases
  - Substantial processing for transformations and integration
  - Large volumes of data for reporting

Summary

- Data warehouse processing supports tactical and strategic decision making
- Business intelligence processing evolution since mid 1990s
- Different DBMS features for business intelligence support