

COMMONWEALTH OF AUSTRALIA

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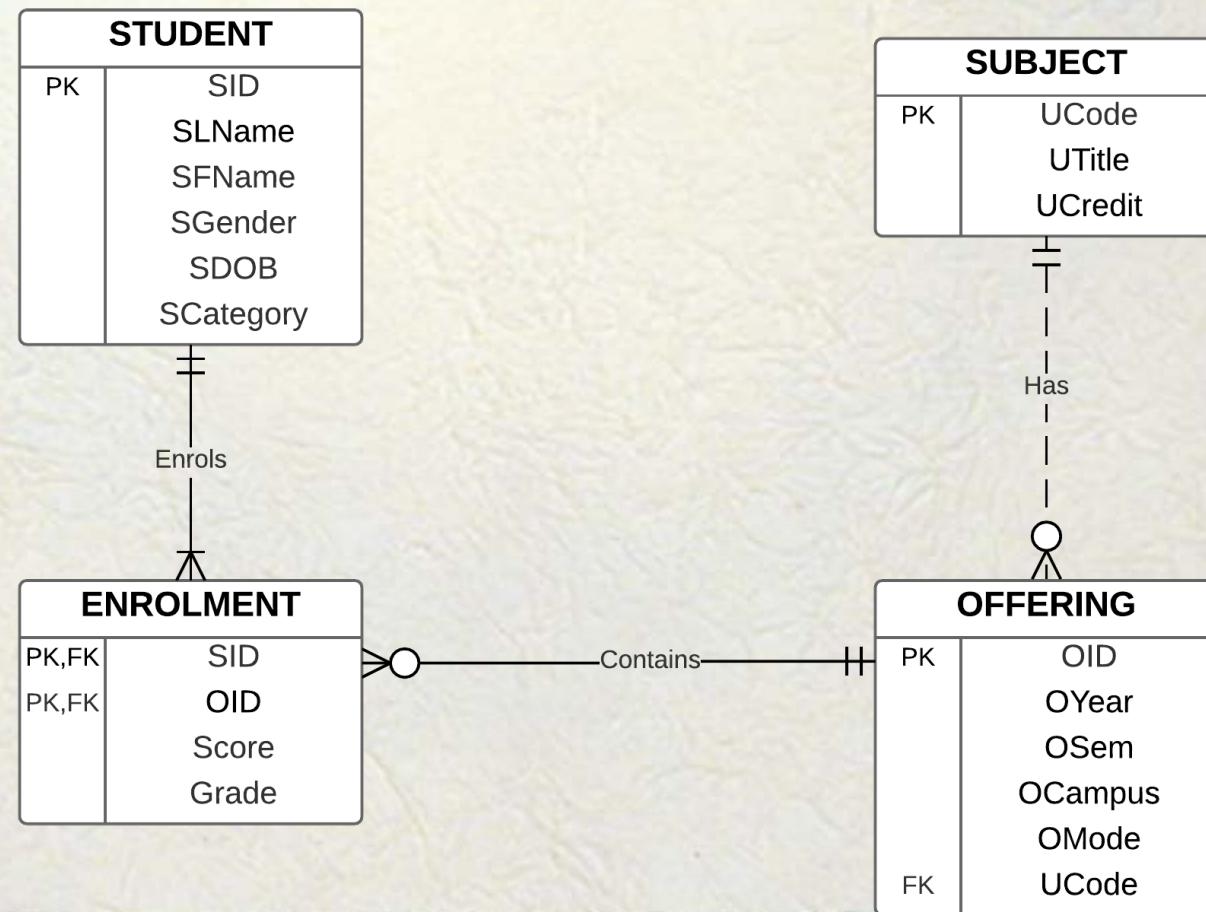
FIT3003

Data Warehousing and Business Intelligence (Introduction)

Assoc. Prof. David Taniar

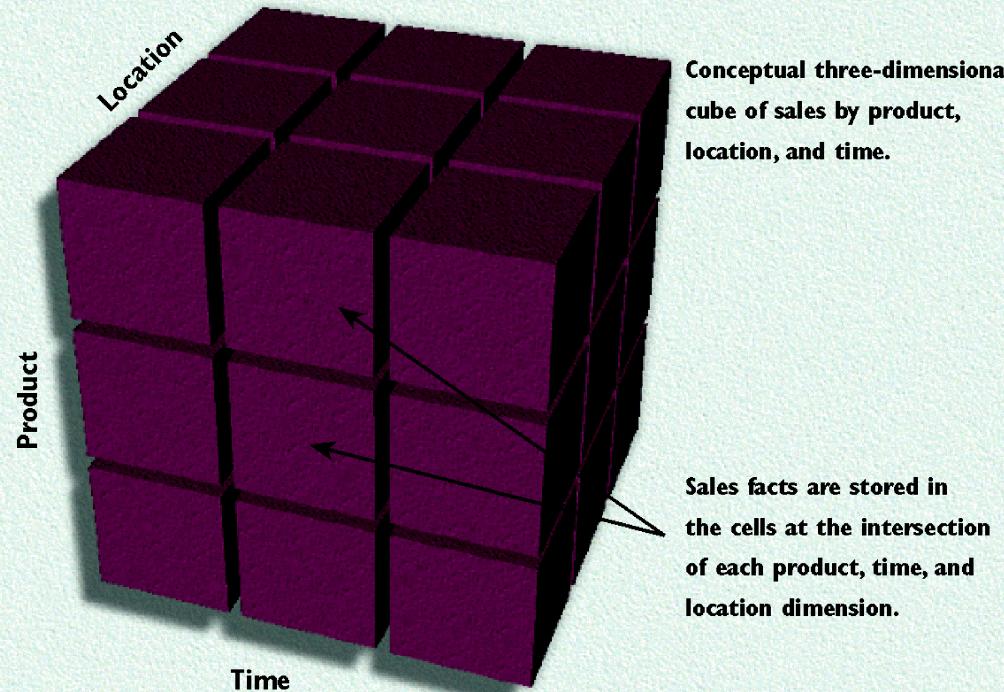
Operational Database

The Enrolment Database

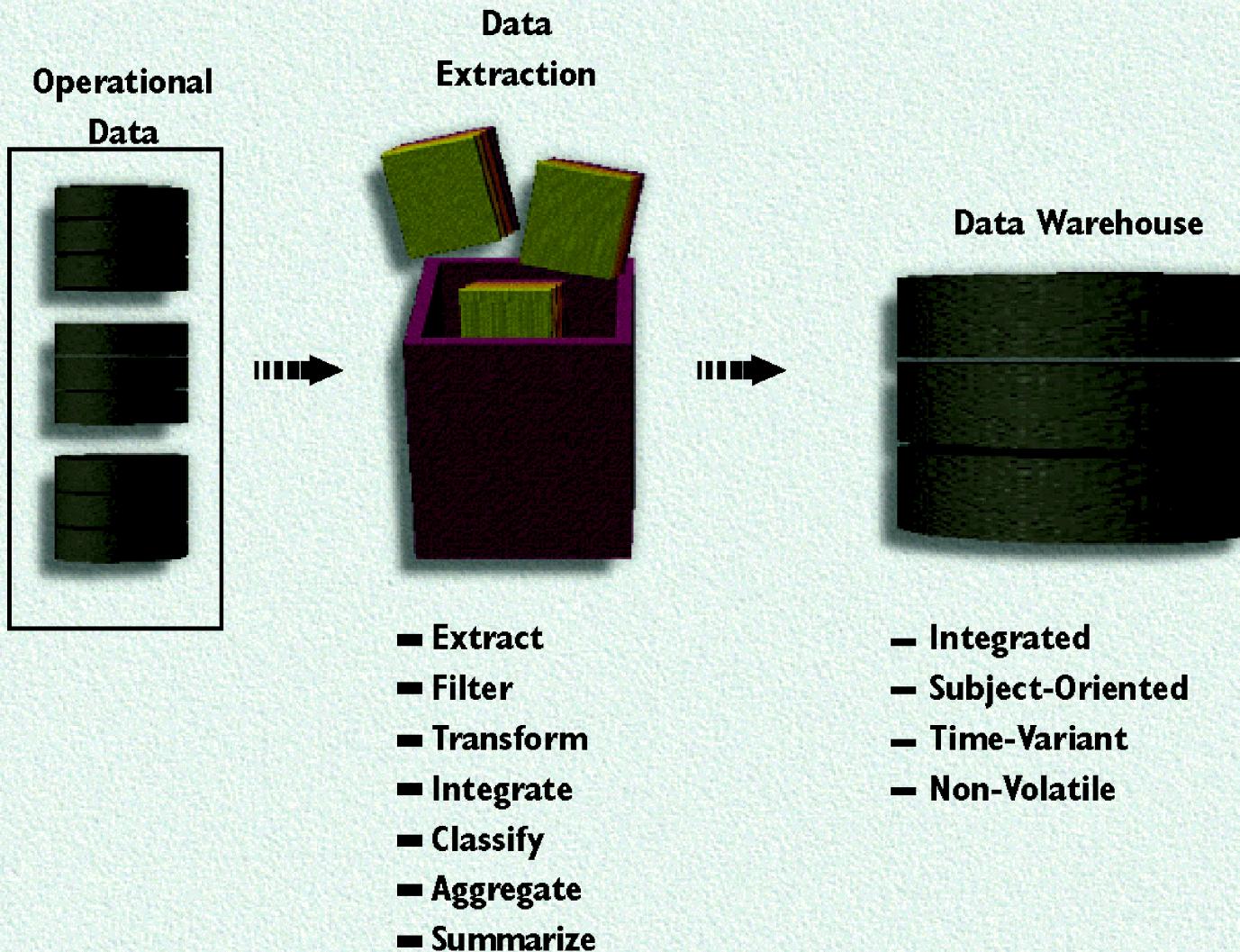


Data Warehouse

Multidimensional data view



From Operational to Data Warehousing



From Operational to Data Warehousing

ETL

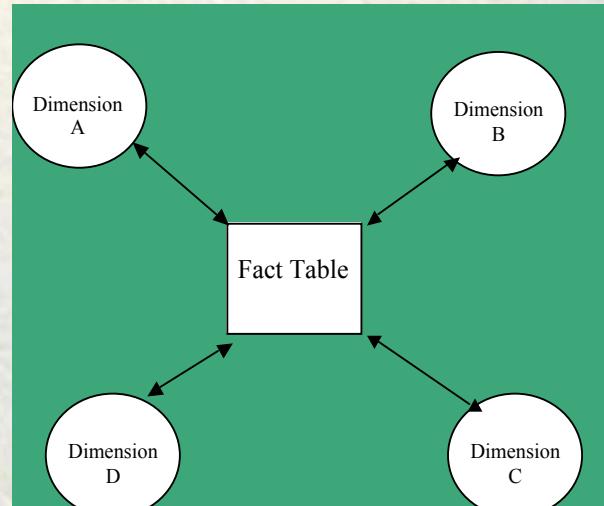
The whole process of **extracting** data from the Operational Databases and to transform them into a Data Warehouse is called ETL (Extraction, Transformation, and Load).

Data Warehouse Design

The need for a new modelling technique to support multi-dimensional views of a collection of data.



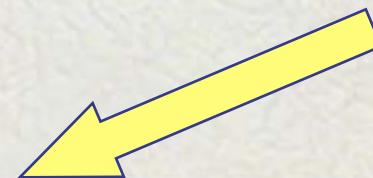
Data Warehouse -
a cube with multiple
dimensions



The underlying schema
(eg. Star schema)

Data Warehouse Queries

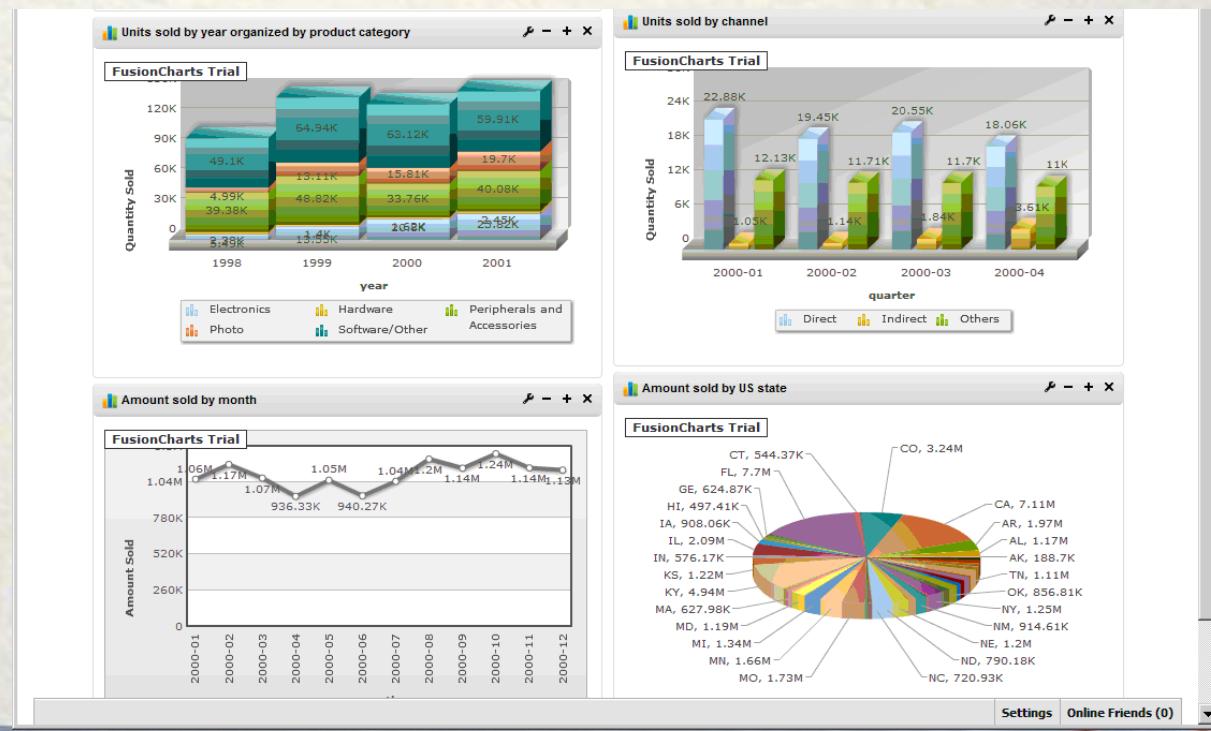
The nature of the new Data Warehouse storage structure requires a tool that supports the retrieval of large number of records from very large data sets and summarizes them “on the fly” ⇒ OLAP (**On-Line Analytical Processing**) tool.



**OLAP
Query**

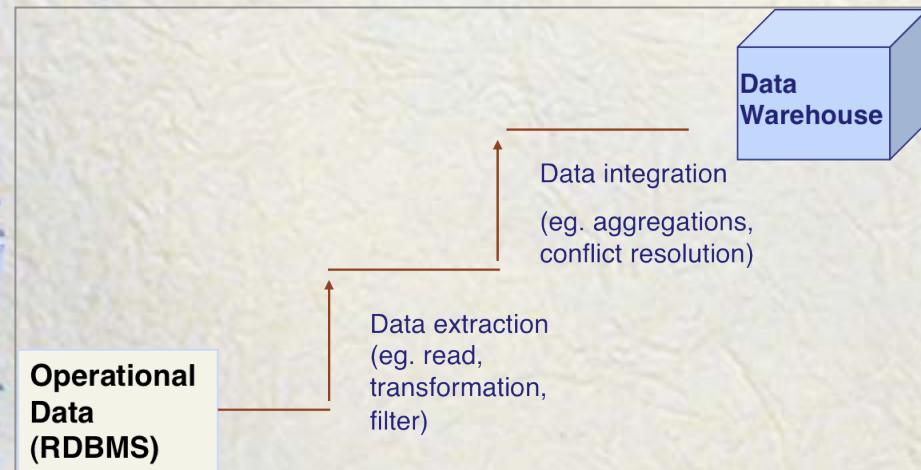
Business Intelligence

A new emerging area that focuses on different techniques and tools to get useful analysis or knowledge from data/ information/document collection which will be useful for managerial decision making.
Data Warehousing plays an important role in business intelligence.



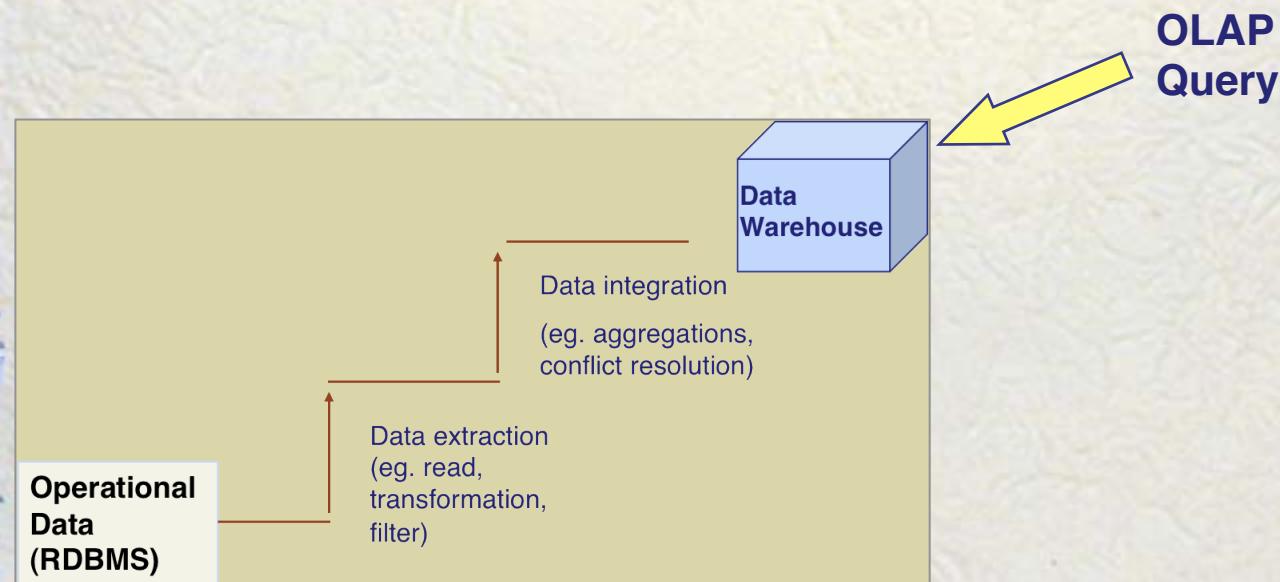
Summary

The need for an effective decision support system has motivated the emergence of the new data storage facility called **Data Warehouse**.



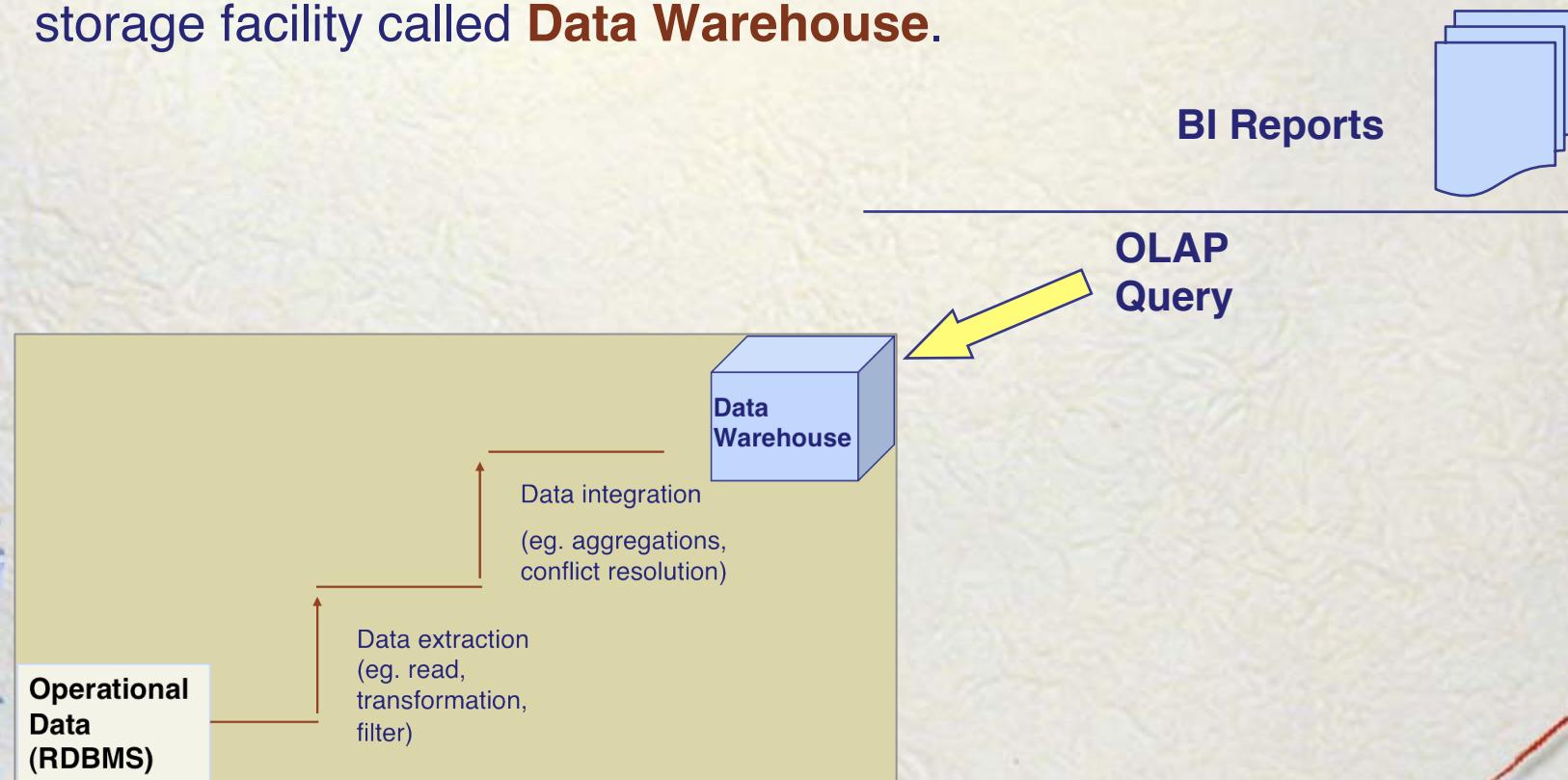
Summary

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Main Questions...

- How do we design the data warehouse model?
- What methods are available to implement it?
- Case studies

- However, before we do this, we need to revise SQL