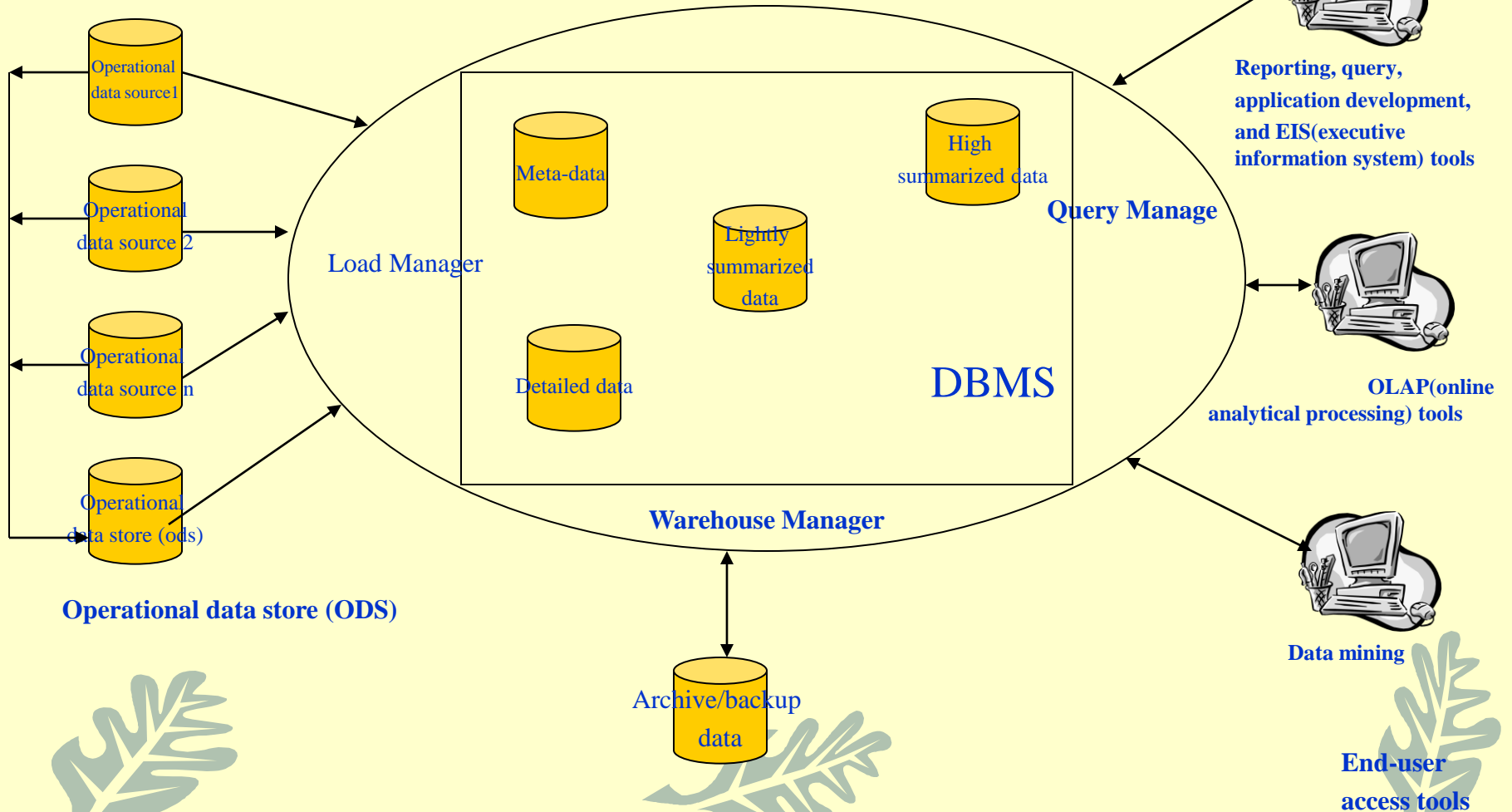


The architecture



Typical architecture of a data warehouse



The main components

- **Operational data sources** → for the DW is supplied from mainframe operational data held in first generation hierarchical and network databases, departmental data held in proprietary file systems, private data held on workstations and private servers and external systems such as the Internet, commercially available DB, or DB associated with an organization's suppliers or customers
- **Operational data store(ODS)** → is a repository of current and integrated operational data used for analysis. It is often structured and supplied with data in the same way as the data warehouse, but may in fact simply act as a staging area for data to be moved into the warehouse







The main components

- load manager → also called the *frontend* component, it performance all the operations associated with the extraction and loading of data into the warehouse. These operations include simple transformations of the data to prepare the data for entry into the warehouse
- warehouse manager → performs all the operations associated with the management of the data in the warehouse. The operations performed by this component include analysis of data to ensure consistency, transformation and merging of source data, creation of indexes and views, generation of denormalizations and aggregations, and archiving and backing-up data





The main components

- query manager → also called backend component, it performs all the operations associated with the management of user queries. The operations performed by this component include directing queries to the appropriate tables and scheduling the execution of queries
 - detailed, lightly and lightly summarized data, archive/backup data
 - meta-data
 - end-user access tools → can be categorized into five main groups: data reporting and query tools, application development tools, executive information system (EIS) tools, online analytical processing (OLAP) tools, and data mining tools.
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