Accounting Case Study

**Facts**

The early adopter of technology, finance and financial data. Since all require the careful diligence and 100% accuracy to run most financial analysts are data-savvy. They need to analyze performance trends and key financial metrics. A DW can significantly reduce problems and streamline the analyst’s responsibilities. Most managers, analysts, and CEO’s needs access to the company’s financial data, but each may need it in a different format.

**DW concepts**

* General ledger
  + Core foundational financial system
    - Included items such as purchasing, payables, and receivables
  + Snapshot contains a grain of one row per accounting period
  + The chart of accounts is the cornerstone for the general ledger
    - Consists of a series of identifiers
  + Sometimes tracks sets of book s or subledgers to support various requirements
  + Period close
  + Two most important dimensions in the proposed G/L design are account and organization
  + To-date facts are not consistent with the grain used in the G/L and should be left out of the schema
    - OLAP handles to-date metrics more gracefully
  + Multiple currencies
    - Should be represented with both local currency and corporate currency in two separate rows
  + G/L journal transactions
    - Used to complement the periodic snapshot in case and anomaly is identified
  + Multiple fiscal accounting calendars
    - Single fiscal calendars correspond to a single calendar month
    - With a large company with many subsidiaries it may be useful to specify a fiscal year based on that certain subsidiary
  + Produce financial reports such as balance sheets and income statements
* Budgeting Process
  + Budget can be integrated into most modern G/L systems
    - If G/L lacks the integration capability then you have to look for alternative
  + The alternative is a series of events and is as follows
    - Manager creates a budget broken down by budget lines items and is approved
    - The budget is more and more becoming a dynamic entity rather and a static process
    - Typically not a once per year deal
  + Grain is the net change of the budget line item in an organization cost center that occurred during the month
* Dimension attribute hierarchies
  + Fixed depth positional hierarchies
    - Has a fixed set of levels with meaningful labels
      * Such as calendar hierarchy – day-month-year
      * Or fiscal periods – 5-4-4
  + Slightly ragged variable depth hierarchies
    - Geographic hierarchies
      * Simple location
        + Address, city, state, country
      * Medium complex location
        + Adds a zone level
      * Complex location
        + Adds district and zone levels
    - These together represent a slightly variable hierarchy
  + Ragged variable depth hierarchies
    - Parent/child tree structure
    - A special bridge table is built to represent each path in the tree from parent to all children below the parent
    - Shared ownership and time varying are examples of ragged hierarchies
* Consolidated fact tables
  + Used in comparing actual to budget variances
    - Can presume that annual budgets and/or forecasts have been broken down by accounting
  + Combine metrics from multiple business processes at common granularity
* Role of OLAP and packaged analytic solutions
  + OLAP has been used extensively for financial reporting, budgeting, and consolidations applications
  + OLAP cubes are fed by relational dimensional models
  + OLAP cubes can deliver fast query performance
  + Perfectly suited for complicated organizational rollups and complex calculations

**Summary**

Financial companies and departments were the early adopters of DW technology for all financial data. For this reason financial analysts and manager have become data-savvy in the era of data. Utilizing a strategically set up DW analysts and leverage this technology to help then create reports of key financial metrics and analyze performance trends.