

Multi BOM Explosion on Product Costing Data

This article describes a solution to report and analyze on product costing data (cost estimation) for complete product structure (multi BOM level view). It includes views for product structure by BOM level or on aggregated data, a 'where-used' functionality for material (base material or assembly), the possibility to analyze by activity type and many more.

The current situation for most SAP user

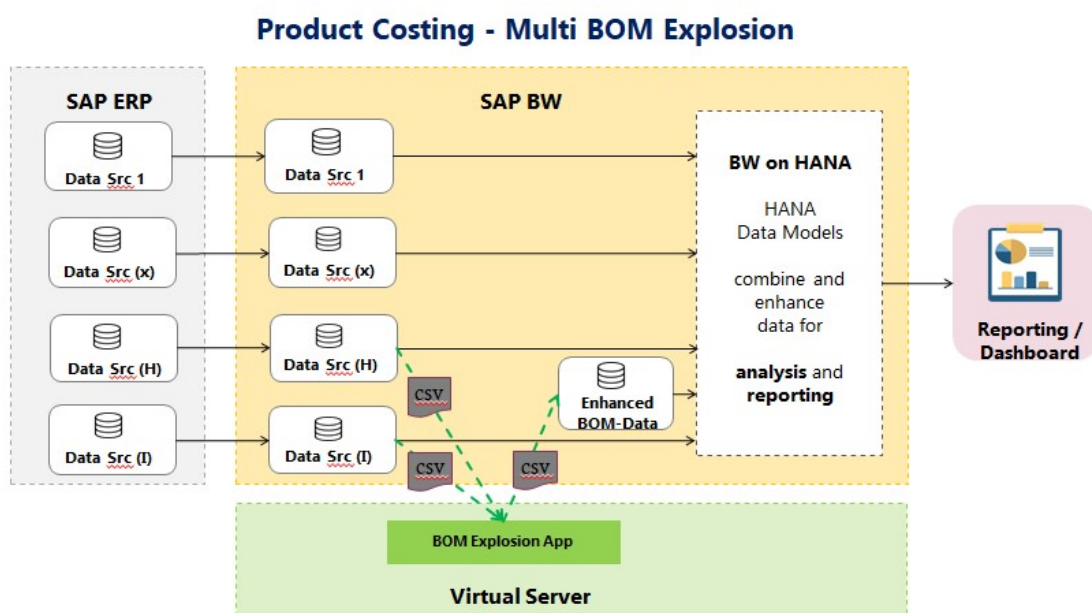
The SAP ERP product costing module delivers highly detailed costing information for profound decision making but the user can not benefit due to missing data access. The SAP ERP transactions for product costing (e.g. CK13N, CK33, CK86, etc.) or BOM structure display (e.g. CS13, CS14, CS15, etc.) are very restrictive and not designed for detailed analysis.

Some customers have developed their own programs and transactions for support. But in general it is necessary to manually select, download and prepare the required data for further analysis. The effort increases with the depth of the product structure and can become very time consuming.

Approach

The solution follows a very simple approach and provides the data at your fingertip. The SAP ERP product costing source data is loaded via generic data extraction into respective aDSO objects in the inbound layer of your SAP BW system (BW on HANA or BW/4HANA). The BOM explosion app is fed by a data extraction out of the SAP BW system and delivers a result dataset with enhanced BOM data.

All additional layers are virtual and based on HANA calculation views (CV) that are combined in a HANA data model. The data model is linked into a SAP BW composite provider and enables an easy access for the customer specific frontend layer to develop reports and dashboards.



The simple approach and concept for this solution enable a daily or even more frequent data update for a high data volume (e.g. 1Mio product costing header and 4Mio BOM item data records / structure depth: 25 levels max. , ~10 levels avg.). The data load processes and the BOM explosion app are designed very robust and create negligible to zero support effort. The only requirement is the stability of the underlying SAP ERP product costing table structure.

Benefits

- With this solution you get a fast, simple and convenient access with a high quality standard.
- You can use your own frontend environment for the report and dashboard development.
- It gives the user a complete overview of the product costing versions (including cross-plant production) with a high flexibility for specific data selection (e.g. multi-selection on material, time-range, version, etc.), drill-down, and analysis and version comparison.
- Interesting insights are available for product structure, material usage, material consumption, prices and also fix and variable cost details, and activity and resource details.
- The underlying data model can be combined with other data sources and provide additional opportunities for data analysis.
- The material usage can be combined to analysis material shortage issues, material or vendor replacement activities. Combined with planning it can also be used for budgeting and planning as well as for vendor contract negotiation activities.
- Price and costing information details allows the analysis of a full product BOM structure and the impact of material or activity price changes.
- Activity and resource details (e.g. activity type, object ID, cost center, etc.) can be analyzed and used to check the impact on sales volume or doing a specific bottleneck planning.
- Integrated unit conversion to material base unit of measure

Conclusion

The greatest benefit of this easy to use and self-explanatory solution is its high level of data detail, accuracy and quality available. You do not loose time anymore for data selection, extraction and preparation for your analysis and can concentrate on your main activity. The solution provides many options for data combination and integration to increase the analysis capabilities.