

GROUP COSTING AND PROFITABILITY GCP ENGINE



// Group Contribution Margin Accounting in an International Production Network

Prof. Dr. Tage Skyott-Larsen, Head of the Department of Operations Management at the Copenhagen Business School writes: "A company's real core capability lies in the ability to design and manage the value chain." In future, the agenda of meetings for strategic decision making will be dominated by discussions on the value chain and its ability to keep the organization competitive. The challenge will be managing the diverse relationships in a value creation network. Trends such as globalization and specialization will increase the relevance of this phenomenon even further.

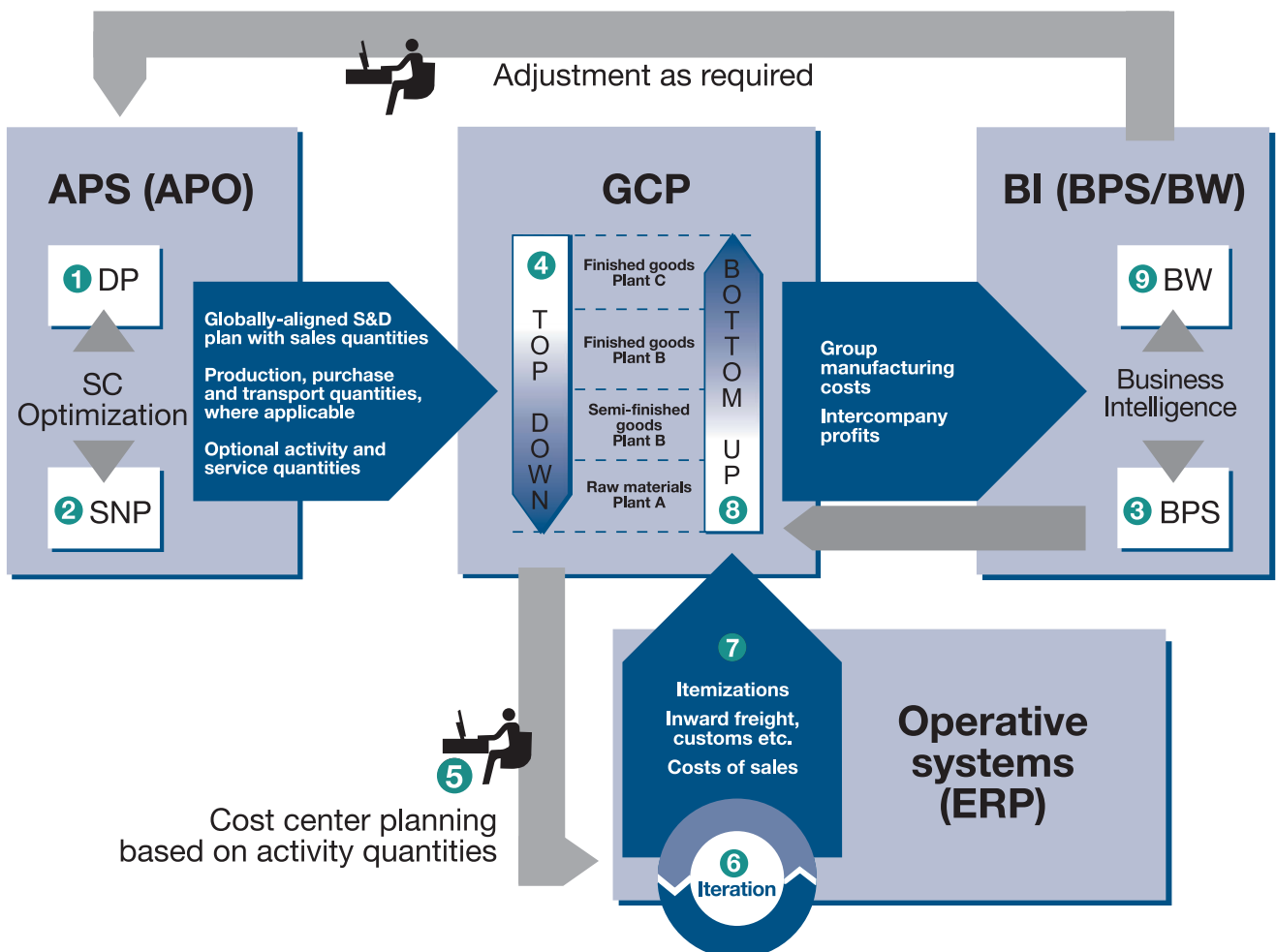
Many organizations have responded to the increasing challenges involved in managing processes across companies by implementing APS (Advanced Planning and Scheduling) systems. Products like APO (Advanced Planning and Optimization) integrate SAP ERP and third-party systems into group-wide demand and supply planning tools, which simultaneously take into account factors such as capacity constraints. Such tools ensure that information for quantity planning is optimized and centrally available. If we look at the value creation process, however, there is a lack of appropriate systems capable of relating global quantity planning to global cost and profitability planning.

Currently the market does not offer demand driven standard solutions (e.g. APS) illustrating the group cost and profitability of an enterprise. The GCP (Group Costing and Profitability) Engine provides Clients with an automated solution for planning, analyzing and controlling their global value chains by maintaining at the same time a full integration with SAP. We can meet the requirements of Groups where the production network is spread across different geographies and highly complex, as well as help Clients in sectors such as Retail and Services by making the best use of appropriate reporting requirements.

/// Cross-Company Cost Rollup

Both, group cost accounting and profit centre valuation, require their own parallel valuation views in SAP, which are represented by versions in GCP. The set-up of the GCP Versions is part of the customizing activity. All Versions regardless of whether the figures are for plan, actual or simulation purposes, use the same logic and the same algorithms, thus for guarantee the integrity and consistency of the final results.

/// APS/BI Integration Steps of GCP



1 Sales Planning in DP

The planning process can start from a CRM system, where advertising effort and marketing campaigns impact Demand Planning (DP) in APO. Alternatively, consolidated sales figures can be sourced from SAP BW, SAP ERP (CO-PA or SD) or from other local ERP systems.

2 Supply Network Planning in SNP

The sales figures described above are the first level input into the engine. If available from APO component SNP or from long-term planning in ERP, purchasing and production data as well as planned closing stocks may also be extracted and loaded into GCP.

3 Planning Influences from BPS

Factors that contribute to the cost of products which are not modelled (or not modelled to the appropriate level of detail) in the ERP systems, may be sourced from the BI component BPS (Business Planning and Simulation).

4 Top-Down Planning in GCP

If planned purchase and production figures are not available or are incomplete, GCP can calculate these figures starting from the sales volumes and following a top-down approach. This process is known as dynamic resource allocation. GCP can then show the impact derived from the changes in the sales figures by calculating the quantity of material to be purchased, as well as the consequent production and logistics volumes necessary to meet the increased or decreased sales demand.

5 Cost Center Planning in CO-CC

You can also have the system determine activity quantities, which the cost centre planner needs in order to carry out planning for the cost centre in the ERP system. In practice, these processes are often very time-consuming and even if sales and operations planning have already been changed, the cost centre planner is still forced to work on old numbers, as recalculation of activity volumes would take too long and the time available would not be sufficient to complete the analysis based on the new numbers.

6 Iteration of Activity Prices in CO-CC

Once the cost centre planners have completed their task, the activity prices can be iterated and used in CO-PC.

7 Product Cost Planning in CO-PC

Once the product costings have been released, GCP will extract their itemizations into the GCP format and calculate costs and results from the group view in later stages.

8 Bottom-Up Costing in GCP

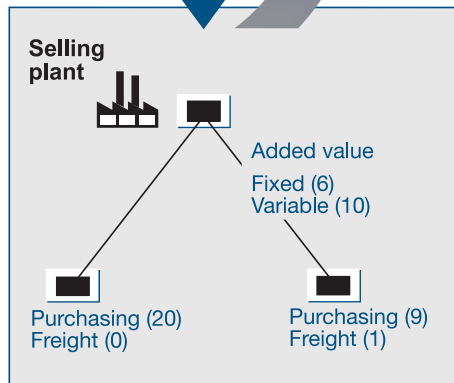
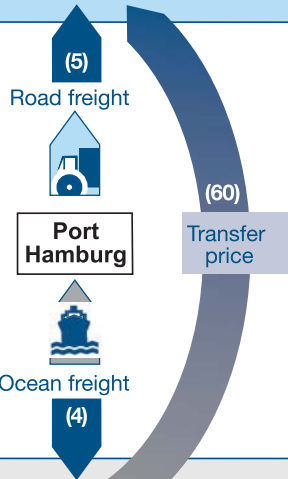
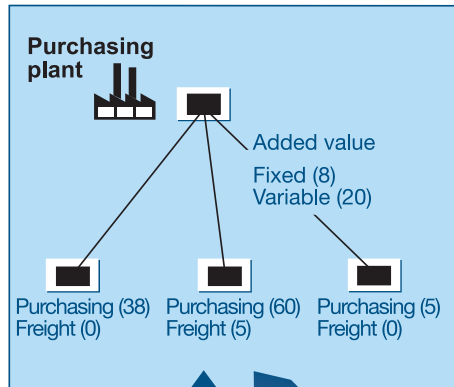
GCP can calculate manufacturing costs bottom-up and show the impact of these results on each level of the value chain (roll up costs).

9 Profitability Reporting in BW

The results of the cost rollup kept at the lowest level within the product hierarchy can be reported directly in GCP by means of a powerful, self-developed tool called ALV Browser. If however, rectified to CO-PA, GCP data needs to be reported on hierarchy levels (product group or product hierarchy, countries, sales organizations, customer group or hierarchy, industries), IM&C recommends the use of the GCP content for SAP BW or other BI tools.

GCP Engine Expertise

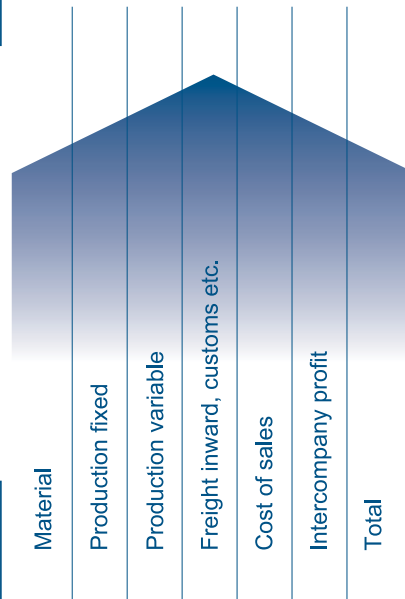
The development of the GCP Engine is the product of many years of experience in implementing and optimizing ERP systems. Our experience with complex Supply Chain Management projects along with industry-specific knowledge gives us a solid foundation for tailoring GCP to your requirements. The first step involves creating a prototype using your own data. The functionality of the GCP Engine acts as an accelerator in the project and the system integrates seamlessly into the customer's existing system landscape.



Group Manufacturing Costs

Cost component split for assembly						
72	14	30	6	4	10	136

Cost component split for raw materials IC						
72	6	10	6	4	10	108



Cost component split for assembly						
29	6	10	1	0	0	46

Cost component split for raw material/market						
29			1			30

Intercompany profit (CL n+1) =
Transfer price (CL n) – cost of sales (CL n) = 60 – (46 + 4) = 10

The graphic on the left is an example of the value creation process for two separate companies as it appears in GCP. Transfer prices and cost of sales (outward freight, marketing, sales and distribution costs, etc.) are highlighted as factors that influence costs.

The selling plant may not add the freight cost to the manufacturing cost. At the next level, however, these costs will be applied to the receiving plant together with the inward freight cost. The IC profit figure will also be calculated for the receiving plant at this step of the process.

GCP on HANA

Extracting all relevant cost and revenue data in a regular GCP closing process and mapping it with appropriate supply chain information is often limited by performance issues. The option to install GCP on BW running on HANA unburdens the ERP source systems and accelerates reading the replicated table information in HANA by making it considerably faster. Moreover, the sparsely populated cost components fields make it perfect for condensing information by using in-memory technology. In addition to this, savings can be made by using future HANA based new developments within GCP, which leave calculations in the database, and provide better modelling and analytics capability.