GROUP COSTING AND PROFITABILITY
GCP ENGINE

»We leverage…
and keep it SAP«

Group contribution margin accounting in an international production network

"A company's real core capability lies in the ability to design and manage the value chain", writes Prof. Dr. Tage Skjott-Larsen, Head of the Department of Operations Management at the Copenhagen Business School. In future, management-level strategy meetings will no longer be concerned with competition between companies. Instead, it is competition between value chains which will decide the agenda. The real challenge will be managing the diverse relationships in a value creation network. Megatrends like globalization and specialization increase the priority of this objective along the value chain.

Many organizations have responded to the increasing challenges involved in managing cross-company processes by implementing APS (Advanced Planning and Scheduling) systems. Products like APO (SAP's Advanced Planning and Optimization application) integrate operative SAP ERP and third-party systems into group-wide demand and supply planning systems which take into account factors such as capacity constraints simultaneously. These ensure that information for quantity planning is optimized and centrally available. On the value creation side, on the other hand, there is a lack of appropriate systems capable of relating global quantity planning to global profit planning. There is currently no system on the market which can model a comprehensive group-wide calculation and profitability analysis based on quantity planning carried out in other systems.

With GCP (Group Costing and Profitability) Engine, a standard software package which is fully integrated with SAP, we provide industrial groups with a system solution for planning, analyzing and controlling the global value creation chain. We focus on meeting the specific requirements of groups utilizing an international production network, but we can also process similar analysis and implementation requirements effectively for groups providing retail or service products.

APS/BI Integration Steps of GCP

❶ Sales planning in DP

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

❷ Supply network planning in SNP

These sales volumes form the starting point for the planning process using GCP. When using the APO component SNP or long-term planning in ERP, planned closing stock, purchases and production figures can also be extracted into GCP.

❸ Planning influences from BPS

Factors influencing the costs of products, which are not modeled (or not modeled to the requisite level of detail) in the ERP systems, may be sourced from the BI component BPS (Business Planning and Simulation).

❹ Top-down planning in GCP

If planned purchase and production figures are not available or are incomplete due to missing appropriate planning systems, GCP will determine these figures top-down based on given sales volumes. This process is known as dynamic resource allocation. By this procedure, GCP immediately reacts to changes in sales planning and derives the quantities to be purchased, produced and transported for the entire group.

❺ Cost center planning in CO-CC

You can also have the system determine activity quantities, which the cost center planner needs in order to carry out planning for the cost center in the ERP system. In practice, these processes are often very time-consuming. Even if sales and operations planning have already been changed, the cost center planner continues to work with the "old figures", as recalculation would take too long.

❻ Iteration of tariffs in CO-CC

Once the cost center planners have completed their work, the tariffs can be iterated and used for mass product costing within ERP.

❼ Product cost planning in CO-PC

Once the product costings have been released, GCP will transfer their itemizations into the GCP format and calculate costs and results from the group view in later steps.
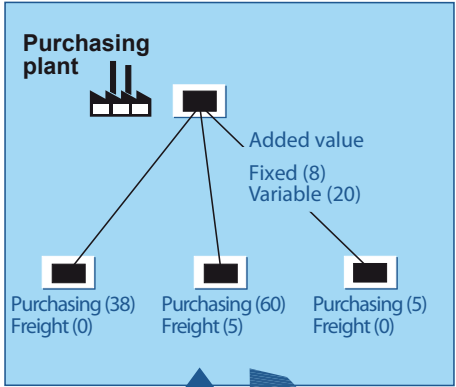
❽ Bottom-up costing in GCP

This data is the basis for the bottom-up costing of group manufacturing costs and for the cost rollup across the Value chain levels.

❾ 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 is to be reported on hierarchy levels (article group, product hierarchy according to sales, product hierarchy according to production, customer groups, countries, industries), we recommend the use of a system architecture including SAP BW or another BI tool.
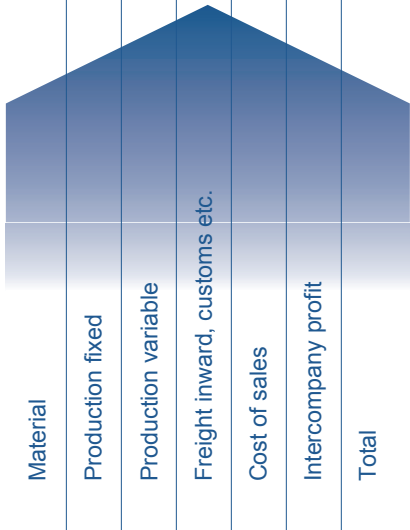
Cross-Company Cost Rollup

Both, group cost accounting and consolidated profit center accounting, require their own parallel accounting processes, which are modeled by versions. Therefore, GCP utilizes different versions to perform group and profit center calculations. These versions need to be defined in GCP customizing. An essential characteristic of this accounting method is cross-company cost rollup, a standardized database and calculation algorithm for all versions, irrespective of whether these are planned, actual or simulated calculations.

Purchasing plant

Added value
Fixed (8)
Variable (20)

Purchasing (38) Freight (0)
Purchasing (60) Freight (5)
Purchasing (5) Freight (0)

(5)
Road freight

Port Hamburg

(60)
Transfer price

Ocean freight
(4)

Selling plant

Added value
Fixed (6)
Variable (10)

Purchasing (20) Freight (0)
Purchasing (9) Freight (1)

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

Material	Production fixed	Production variable	Freight inward, customs etc.	Cost of sales	Intercompany profit	Total

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

Cost component split for raw material/market						
29			1			30
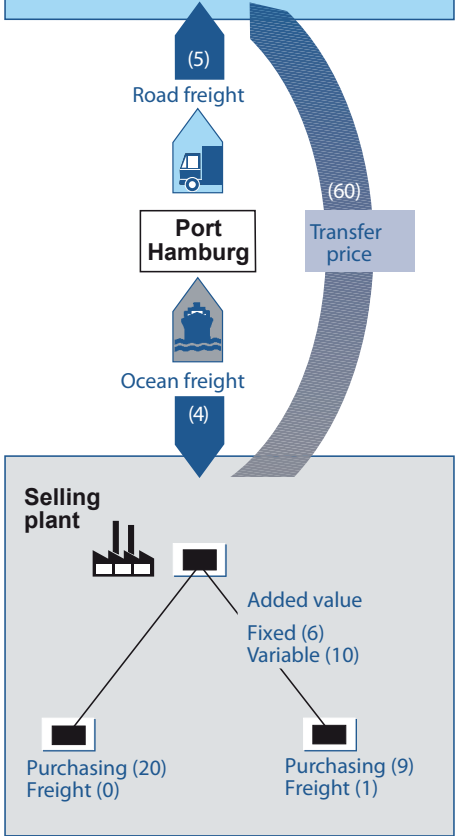
Intercompany profit (CL n+1) =
Transfer price (CL n) – cost of sales (CL n) = 60 – (46 + 4) = 10

The graphic on the left shows the group-wide universally structured value creation process within GCP, exemplarily between two companies. Transfer prices and cost of sales (outward freight, marketing and sales and distribution costs, etc.) are highlighted as factors that influence costs:

At the selling plant, the ocean freight costs may not be added to the manufacturing costs. At the next costing level (CL), however, these costs must be taken into account and will be applied for the receiving plant. The costs of inward freight (road freight in this case) must also be added in this step. Furthermore, an intercompany profit will be generated for the receiving plant at this level.

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.