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About this document

Controlling, in a broad sense, means to be able to carry out budgeting, auditing and to provide information. BAAN IV Controlling provides new functionality in this field.

Chapter 1 provides a brief discussion of BAAN IV Controlling.

Chapter 2 explains terms and definitions.

Chapter 3 deals with overhead budgeting and control.

Chapter 4 discusses cost pricing and valuation.

Chapter 5 describes profit and sales control.

Chapter 6 lists some technical issues.
1 Introduction to BAAN IV Controlling

There are many ways to interpret the term controlling, whether within an organization, within Baan, or even among different cultures. Whereas in America controlling incorporates all accounting subjects, in Europe the internal accounting is often subordinated to the tasks of controllers. Because a deeper penetration of the International Accounting Standards (IAS) and the internationalization of business is expected in the future, the differences in the interpretations of controlling should decrease.

So, controlling tasks and controlling organizations can be described as follows:

Controlling is the coordination task of budgeting, auditing, and providing information to improve business procedures in organizations. The controller supplies decision-relevant data to management and can even be part of the board. The controller’s main focus is on strategic planning, cost reduction, profit analysis of certain products, product lines, profit centers, and/or customers and their financial impact on whole entities or corporations. Both central and decentral controlling functions can be found in different businesses. So, the manufacturing order calculation and analysis is often a dispatcher’s task, who works line-oriented, whereas in make-to-order (MTO) or engineer-to-order (ETO) businesses this is more likely the project manager’s or central controller’s responsibility.

Within Baan, the term controlling can apply to a broad range of topics and applications. For the use of central controllers, many already existing applications are grouped together in a new menu called Controlling. So, order analysis will be found here in addition to capacity utilization, stock valuation, sales statistics, and miscellaneous costing functions.

Various enhancements are created. So, flexible cost budgeting, marginal costing, contribution margin accounting, and variance analysis become core functions of the module. The implementation and necessary application frame depend on many factors, including business, management structure, reporting requirements and centralization/decentralization of organizations, and penetration of controlling functions in the company.

The following chapters discuss many critical aspects of controlling functions and features as well as implementation proposals.
Absorption variance/Occupation deviation
Variances that are only applicable if the full cost accounting system is used. This variance is the difference between the planned fixed costs and the actually charged (=absorbed) portion of fixed costs.

Actual costs
Actual costs are the real cost amounts posted in a certain period. Actual costs are compared with allowed and budgeted costs.

Allocated costs/Secondary costs
Costs that are not directly related to a dimension but are results of allocations between dimensions based on performance relations. Debits and credits from allocations are also used under the term allocations in and allocations out.

Allowed costs
Costs that are shown as a flexible cost budget per cost center and reference unit, depending on the actual output performance of this reference unit. The following formula applies for performance dependent planning:

\[ \text{Allowed costs} = \text{Actual output performance} \times \text{Variable plan cost rate} + \text{Fixed plan costs} \]

If the performance independent planning is without reference units, the allowed costs are the same as the planned fixed costs.

Basic plan costs
Starting amount for determining the plan costs. Changing the basic plan costs will influence the tariff plan costs and the plan costs. Plan costs and basic plan costs will differ if the plan costs are manually changed or if tariff evaluations are made.

Cost allocation sheet
Report per dimension/cost center or reference unit showing cost amounts per cost type (ledger account).

Cost category
A set of cost types (ledger accounts) that is used in allocation to restrict the amounts to be allocated to a subset of all cost types. These cost types have non-zero values on the source dimension.

Cost center
Logical unit of responsibility and specific manufacturing performance. Examples of cost centers are work centers, machines, tasks, and so on. Cost centers will be represented as dimensions.

Cost driver
A logical unit from which costs are caused (driven). In the BAAN IV approach, this term is incorporated in the terms reference unit or performance unit. Cost drivers measure the performance of dimensions and determine rates or surcharges: for example: man hour, machine hour, and so on.

Cost object
Unit to which costs can directly be related. Examples of cost objects are items, item groups, and projects.

Cost type
Type in classification of planned costs and actual costs. The ledger accounts of the General Ledger (GLD) module are used as cost types. Parent accounts or child accounts can be defined in budgeting and analysis.
**Dimension**
Types that can be divided up into dimensions and that provide a vertical view of ledger account results. In this context, in the dimension type cost center accounting all cost centers of the certain company are incorporated.

**Dimension type**
These are different accounting cycles. Examples of dimension types are business units, cost centers, cost objects, profit centers, and so on.

**Efficiency variance/Consumption deviation**
The difference between the actual costs and the allowed costs. The difference regularly is the responsibility of the cost center manager.

**Fixed costs**
Costs that are completely independent from the output performance of a dimension. One more unit of performance quantity has no effect on the fixed costs in the regarding time frame.

**Ledger account**
A key element to which actual and budget data is posted in order to get insight into the result, equity, and liability of the company. Typically in CNT, ledger accounts are used as cost types.

**Overhead costs**
Costs that are not directly related to cost objects such as products or projects but are planned and controlled in cost centers.

**Plan costs**
The decisive costs for deviation analyses compared with the basic plan costs and the tariff plan costs. Additional fixed costs are allocated to the tariff plan costs.

**Political price coverage/Over-/undercoverage**
A deviation that only occurs if the political rates and surcharges differ from the calculated values. This deviation is the difference between the two rates (surcharges) multiplied by the actual performance.

**Primary costs**
Costs that are directly related to a dimension. Regularly, these costs are directly updated from the General Ledger (GLD) or the payroll system through GLD.

**Rates**
Rates can be determined in CNT and can be used as operation rates in cost price calculation. A rate gives the price for one reference unit (operation unit) in a certain cost center (such as a work center or task: for examples: man rates or machine rates.

**OLAP**
Online Analytical Processing. A method for storing and analyzing multidimensional data.

**Sublevel**
Level of accumulation for ledger account and dimension hierarchies.

**Surcharges**
Can be determined in CNT and used in cost price calculation. An amount has to be calculated based on another amount. This surcharge amount is expressed as a percentage of the base amount.

**Tariff plan costs**
This amount is derived from the basic plan costs via a tariff evaluation, which is made by entering a distribution code. When the tariff plan costs are changed, the plan costs will get the new amount of the tariff plan costs.
Variability
The percentage of variable costs as part of the full costs.

Variable costs
Costs that are directly dependent on the performance of a cost center. One more unit of output performance causes a proportional increase of variable costs.
3 Overhead budgeting and control

3.1 Planning cycle

3.1.1 Sales and resource planning

The planning cycle of Baan starts with sales budgeting. The sales plan is the overall level of sales that you expect to achieve in a certain period. The period usually contains a year budget and is subdivided into months. Various budgeting criteria can be selected in sales statistics to support different business requirements. These business requirements can contain many combinations. For example, volume of sales by site, region, customer group, and product. This demand is regularly forecast by sales management and incorporates aspects such as changing clients needs, growth rates, new markets, and new technologies.

Out of the sales plan a production plan can be developed, which is the overall manufacturing-output level needed to fulfill the sales targets. The manufacturing volume will be loaded from the sales budget and aggregated for a product family that can encompass product groups, items, and so on. Production planning back-flushes the needed materials (personnel capacities and machine capacities through resource planning). Production planning and resource planning are primarily considered an interactive activity. Therefore, demand management and execution planning activities are interrelated. In BAAN MPS this is carried out by parallel planning codes to simulate different cases.

The resource plan establishes long-range capacity limits based on production plan requirements. Materials and personnel or machine utilization can be requested for the a.m. planning horizon. On work center level the over- and undercoverage of man hours and machine hours is compared with hours budgeted to fulfill the sales target and available capacity. The planner/manager can decide whether to change capacity or to discuss sales/production output to be revised.

3.1.2 Overhead budgeting

Performance and cost center budgeting

One of the main objectives in the planning cycle besides sales budgeting, is to budget the overhead costs of cost centers and other dimension types. Therefore, the dimension is the key in some maintenance sessions and reports (cost allocation sheets). Overhead budgeting is not a stand-alone procedure; this section describes how the overhead budgeting fits into the entire process of company planning.

The volume of budgeted hours per work center and performance unit/cost driver results from resource planning for the overhead budgeting system. For example, in cost center budgeting you can enter the required hours to fulfill the resource plan. The needed man hours and/or machine hours, and their practical or maximum capacity (in bottleneck centers) usually constitutes the volume level for the year or period.

For example, the machine run time in the lacquering center can directly impact the required performance and costs of dependent service centers such as energy and machine maintenance. In other words, if the run time of the machine is doubled the required kilowatt-hour and the corresponding costs must be doubled as well. Moreover, the energy cost center must increase its provided energy. You can also set up all other possible sorts of performance dependencies and allocation schemes. The former waterfall allocation from Cost Allocation (CAL) is modernized by the so-called price iteration. Through price iteration, you can establish multiple performance dependencies between cost centers and calculate the exact allocation rate.
Accounts for allocations in and out can be defined unrestrictedly. So, at a manufacturing center, the manager can directly see on cost-type level where the costs come from (energy, water, building, maintenance, R & D, and so on). In addition, the defined machine hours will more or less affect the total costs of the cost centers itself. The impact on the total costs depends on whether the costs in the focused time frame can be influenced (variable costs) or not (fixed costs).

You can flexibly define the performance unit or cost driver. For example, tonnage, liters, kilowatt hours, square meters, number of items, number of sales orders, and so on. Each cost center can also have an unlimited number of drivers. By assigning more than one driver to a certain cost center you can set up a detailed machine hour rate budget. Each machine is planned with costs and runtime to calculate more precise rates for cost pricing, whereas all machines are add up in their center budget.

This analytical cost budgeting provides the user with the so-called bottom up approach; every budget is started from detail and is aggregated through drivers to cost centers and accounts or cost types. Moreover, the company’s controller also performs top-down budgeting. In Financial Budgeting System (FBS) you can start on account or cost-type level to support this requirement. In BAAN IV Controlling both systems can be run against each other to give the controller an instrument to negotiate budgets with the cost center managers or his management.

Moreover, BAAN IV Controller provides the functionality to perform a break-even analysis on cost behavior for the entire company. Through the total part of fixed costs it is now clear where the break-even level of minimum sales volume and contribution must lie to cover the fixed costs. Everything above is profit.

For budgeting and allocations, BAAN IV Controlling covers both Plaut’s flexible cost budgeting (FCB) and Kaplan’s activity-based costing (ABC). ABC needs several enhancements in batch-oriented activity calculation and cost pricing.
Integrated cost pricing

Each machine or cost center is planned with costs and run time/man hours to calculate more precise rates for cost pricing directly in budgeting.

Moreover, the hour rates (marginal costs and full costs per hour) are kept per machine, per task, or per cost center. The detailed rating per cost type is supported for each rate.

For example, the lacquering hour rate is:

US-$ 37.42 full costs / US-$ 6.16 marginal costs

The cost type salaries impacts the full rate with the fully performance-independent (variable rate = 0) so-called partial costs of US-$ 13.91 per hour.

The detail lines, aggregated lines, or compressed rates can be loaded into the operation rates per task or work center used in cost pricing (CPR) and/or project control system (PCS). This topic is discussed more in detail in Chapter 4, Costing and transfer pricing.

Other overhead, such as like warehousing or purchasing cannot directly be charged to products. Instead, these overhead costs are surcharged at a certain cost-pricing level. BAAN generates percent surcharges, by linking a surcharge base to the overhead center. An integration table links the calculated surcharges on cost centers directly to items, item groups, or projects. Material-related, manufacturing-related or project-related surcharges are also available with marginal or full cost differentiation.

For example:

<table>
<thead>
<tr>
<th>Surcharge base:</th>
<th>direct material</th>
<th>1,000,000.--</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total overhead costs:</td>
<td>warehousing</td>
<td>200,000.--</td>
</tr>
<tr>
<td>Result:</td>
<td>warehousing surcharge</td>
<td>20 % (marginal 5 %)</td>
</tr>
</tbody>
</table>
By using ABC, you can enter budgeted activity rates volume-related as a fixed (amount) surcharge on item, item group, or project level. In other words, the budgeted values can have a direct impact on the cost pricing of standard items or projects.

Conclusion: in these cases the update of standard costs will be carried out by retrieving rates and surcharges from the settled yearly budget. This bundles and relates the company-wide accepted sales target, the new released costing structure for each item produced or purchased, and the total budgeted company costs for the focused planning horizon (mostly the next year).

3.2 Overhead cost allocation sheet, allowed costs and variances

3.2.1 Integration

Whereas BAAN IV Controlling provides the budgets, the actual costs are integrated from Finance. Actual performances of the cost centers can be taken out of hours accounting. Direct performance transactions can be posted or backflushed depending on the performance of target cost centers.

3.2.2 Actual performance allocation

Allocations can be performed alternatively in Cost Allocations (CAL), Controlling allocations, or in direct performance posting procedures. The decision which procedure to use strictly depends on the business. In standard costing, allocations are most often carried out by using a standard rate. This is done in Controlling allocations and performance posting. Help cost centers are mainly allocated by using the standard rate multiplied by budgeted performance. For example, the target center rents a room from the building center for a fixed price per square meter. Service centers, such as maintenance, sell their actual maintenance hours for a negotiated rate (actual performance x standard rate). In both examples, problems such as bad performance or excessive actual costs will show at the cost center where they occur. These problems are not transferred to others. The underlying principle is that the cost center manager should only cover those costs for which the manager is responsible. When you use overhead orders such as R&D projects or tools construction, you can use CAL to allocate the actual costs to the responsible cost center.
3.2.3 Variance calculation and reporting

Certain sessions calculate the allowed costs and variances so that you can carry out the cost-center analysis. Usually this overhead control is performed on the basis of the actual cost-allocation sheets. These cost-allocation sheets can be generated both on cost-center level or even more detailed on each driver, for example, machine. The report lines can be freely defined with the so-called report structure. In the report columns all possible budget (actual, estimated, and deviation values) are recorded. Because cost types with a higher level code can be recorded in the report structure, a reference must be made to a hierarchy on ledger accounts. Based on these references, the necessary aggregations will be generated. Within the specified cost-center hierarchy, each organization level can be printed and inquired (refer to relational OLAP).

If in the selection for the print reports a range of periods is specified, the user can choose whether the periods must be printed separately or accumulated. In this way you can generate quarterly or biannual rolling reports.
### 3.2.4 Analytical tool-set

**What can be analyzed in overhead control?**

1. Capacity utilization (absorption variance) of the cost center.  
   For example: cost center is underutilized with 80%, excess capacity of 20%.

2. Scab, waste, efficiency (efficiency variance) in the cost center by each cost type.  
   For example: excessive material costs in the center.

3. Uncovered costs because of political decisions (political price variance).  
   For example: cost center does not receive enough money for their work, because certain market targets require a political rate that lies below the calculated rate.

4. Total costs and variances on each cost center, department, entire company and therefore the capacity utilization through the entire organization.

5. Break-even analysis throughout the organization.

6. Performance relations and dependencies between cost/profit centers.

7. Impact of actual overhead costs on cost pricing (actual rates/surcharges).

8. Development/forecasting of costs compared to former year/periods and within the actual year.

9. Benchmarking of cost centers/departments/profit centers/activities and so on, in cost and performance behavior.
Relational OLAP: roll-up and drill-down features in parallel hierarchies

Hierarchies on cost types and hierarchies on cost centers or other dimensions are identified through the so-called sublevel definition. You can represent actual values and variances in any aggregation for these hierarchies budgets.

Hierarchical results can be analyzed as follows:

1. Dimensions by parent dimension
2. Ledger accounts by dimension
3. Dimensions by ledger account
4. Ledger accounts by parent ledger account

Irrespective of the selected session, the user can easily switch between the display sessions. Switching between display sessions makes it easy to turn the cube from ledger hierarchy to hierarchies of ledgers within dimension hierarchies and to dimension hierarchies within ledger hierarchy or vice versa. The sessions offer drill-down facilities, which allow the user to navigate from total company level to individual transaction documents into Finance and roll-up back again.

Data is stored multidimensionally for each hierarchy, year, period, dimension, account, and every thinkable combination within ledger and dimension hierarchy. Storing data multidimensionally makes it possible to carry out high performance roll-ups and drill-downs in this relational OLAP system.

Moreover, reporting includes the intelligence of hierarchy structures. This means that a flexible, user-definable reporting can be set up which incorporates the dimension hierarchy information. For example, you only need to define one report for the entire organization (cost center) structure. The report prints every cost center, department, profit center up to the highest aggregation in the company by using one layout. This reporting session offers the same structure as the budgeted or actual cost allocation sheet.

3.3 Multisite aspects

3.3.1 Planning cycle

BAAN IV Controlling lies on top of the BAAN IV Finance. Therefore, the functionality covers all regular multisite situations between logistics and Finance/Controlling.

Nevertheless, the consultant must carefully define in the implementation that work centers/machines in logistics have counterparts in the cost-center structure of BAAN IV Controlling. The counterparts must be defined because in a multisite situation the resources from capacity requirements planning on work-center level must match the budgeted performance (hours) in the cost center budgets.

The same goes for automatic cost pricing, where, for example, the cost center rates of a single finance company must be integrated into operation rates of multiple logistics companies. Surcharge loads are handled in the same way. Although the sessions are multisite enabled, the definition of links must still be set up properly.
3.3.2 Overhead costing and analysis

The actual costs are taken from BAAN IV Finance. Therefore, covered man and machine hours for manufacturing orders are credited in the cost centers by using a multisite integration. In respect to hours accounting history, you can load actual performances from different logistics companies to calculate allowed costs and variances for a multisite situation.

A multisite situation for the internal performance allocation between several finance companies is currently not possible. The same is true if multiple finance companies should be consolidated, for example, for the use of profit centers (excluding legal accounting). The relational OLAP and analysis system stops at finance-company level.
4 Cost pricing and valuation

4.1 Decision making by using marginal and full costing

4.1.1 Principle

Budgeting updates both marginal and full cost prices for items or projects through cost pricing. When deciding on whether to make or buy, you require marginal costing in addition to the full cost information.

The underlying philosophy is: everything that technically can be realized by the company itself and that remains within the available capacity can be produced inside and must not be delivered by third parties. This rule applies, except when the internal tasks that must be carried out are too expensive. The decision baseline lies at marginal costs, which inform the product/project manager and the company controller to accept every work for the work center that earns more than the marginal costs. It is useful to accept work that earns more than the marginal costs, because it covers parts of the fixed work-center costs or even company costs. Covering costs reduce the loss in other profit centers and these profits are merged with the profits made elsewhere.

Fixed costs occur even when nobody works (fixed salary, depreciation, and so on). When dealing with underutilization and if the price is higher than the marginal costs of the product or project, the responsible manager should accepted the order. In a capacity-constrained situation, that is when bottleneck work centers are involved, this must be analyzed in detail. When the order could not be given outside or is not profitable to have it carried out by a third party, the acceptance of the order is not indicated unless the company receives more than full costs. Otherwise they could skip some profitable orders in the future, enlarge shipment time, and increase loads at the bottleneck work center.

In conclusion you need to have both variable and full costs available for items as well as for projects budgeting and estimation. To look up the impact of components on projects or products, through the entire bill of material structure several inquiries and print reports show all levels of marginal and full costs.

4.1.2 Decision examples

What questions does a controller or manager consider in certain situations by using marginal and full cost information?

- Can I buy a specific item/service cheaper outside than internally?

  Budgeting and estimation for projects or purchase items, supplies or operations should be shown with marginal costs to decide for make or buy. Full costs should be shown as well, because full cost must be kept in mind to be profitable overall.

- What does the entire project cost from a perspective of order calculation?

  The focus is on total costs. A profitability analysis is carried out.

- What should be the minimum sales price if there is less market competition?

  Full costs plus contribution surcharge.

- What should be the sales price if there is high market competition?

  For example, when the full cost price issues-$ 10,000.-- and the marginal costs are US-$ 8,000.-- the company is underutilized. It is useful to accept the order for US-$ 9,000.-- because it helps to cover the company fixed costs with US-$ 1,000.--.
4.2 Costing and transfer pricing

Each machine or cost center is planned with costs and run time/man hours to calculate more precise rates for cost pricing directly in budgeting. Moreover, the machine, task, or cost center keeps the hour rates for both marginal and full costs per hour. The detailed rating by cost type is supported for each rate. In addition, BAAN generates percent surcharges for overhead cost centers, such as warehousing or purchasing. You can link these surcharges to the percent surcharges per item, item group, or project. Material, manufacturing, or project-related surcharges are also available with marginal or full cost differentiation.

Both marginal and full cost rates can be loaded into the operation rates per task or work center used in Cost Pricing (CPR) and Project Control System (PCS).

The user can decide to layer all cost lines on rate level or compress them to one rate split into fixed and variable. The decision depends on the level of detail needed in costing. You can store by each cost price component or line by line under one cost price component.

By using ABC, budgeted activity rates can be entered volume-related as a fixed (amount) surcharge on item, item group, or project level. In this way, the budgeted values can have a direct impact on cost pricing of standard items or projects.

There are various reasons and ways to act in costing. One is to analyze the cost structure of a manufactured item and to develop decision-relevant pricing levels. Alternative scenarios can be looked up by comparing different cost-price calculations. The impact of certain sales volumes on the cost prices for items or projects needs to be reflected. So far a simulation cost-price calculation code would be reloaded from a simulated budget.
### 4.3 Stock and WIP valuation

A further objective of the cost-prize calculation is to calculate the fixed transfer price as the stock valuation method in the underlying standard costing environment. In this standard costing environment the standard costs will be updated by retrieving rates and surcharges from the settled yearly budget. A parameter defines whether to use marginal or full costs as the valuation price. Depending on local legal requirements most often full cost valuation is chosen.

In BAAN IV Finance the actual costs are posted on cost-center level and distributed in BAAN IV Controlling to each driver. By doing this, you can even calculate the actual machine rates per hour and compare them with the budget rates. The actual rates can be used for a parallel cost price calculation. If actual rates should be used in hours accounting, you can also enter the actual rates in the actual machine rates or in the actual work-center rates. In the second case, the manufacturing orders and WIP receive more time near actual costs (usually from former month rates) that flow through the production result into the profit and loss statement. This does not influence the stock valuation.
5 Profit and sales control

5.1 Profit accounting, contribution margins and statement of operating results

In cost-object accounting, a project, an item, or an item group defines a cost object. To see how much fixed costs are directly covered for cost-object accounting, it is useful to split up the actuals into fixed and variable. Management can derive useful information about the profitability of product lines, departments, or profit centers and of the allowed headcount in overhead departments. This method of allocating not covered overhead costs is called stepwise fixed cost coverage or stepwise contribution margin accounting and is incorporated in the profit accounting system.

The stepwise fixed cost coverage is shown below:

<table>
<thead>
<tr>
<th>Step</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sales revenues of products − Marginal costs of products = Contribution margin I of products</td>
</tr>
<tr>
<td>2.</td>
<td>− Fixed costs of products = Contribution margin II of products</td>
</tr>
<tr>
<td></td>
<td>• contribution margins II to one product group</td>
</tr>
<tr>
<td>3.</td>
<td>− Fixed costs of product group (product line work centers) = Contribution margin III product groups</td>
</tr>
<tr>
<td></td>
<td>• contribution margins III of product groups to one profit center</td>
</tr>
<tr>
<td>4.</td>
<td>− Department/profit center fixed costs = Contribution margin IV profit center</td>
</tr>
<tr>
<td></td>
<td>• contributions margins IV of profit centers to company</td>
</tr>
<tr>
<td>5.</td>
<td>− Company fixed costs = Operating result of company (contribution margin V)</td>
</tr>
</tbody>
</table>

By means of step-wise fixed-cost accounting, the controller has a better insight into the company’s profit structure. The controller recognizes how a product contributes to the company profit or covers certain parts of the fixed costs. Decision-relevant data is provided about how to set up or skip a product assortment. Departments or profit centers are informed about the fit of their product profits to their fixed cost structure and their contribution to the company profit.

This structure has to be set up in Financial Statements (FST). Data is integrated from Finance history or budgets. Actual values come through Sales (SLS) or the BAAN IV Controlling integration.
5.2 Accounting procedure

5.2.1 Cost and sales objects (CSO)

The CSO most often is a product, customer (order), or project grouping that is used for profit and direct cost analysis. You can distinguish between cost object calculation and cost object accounting. Cost object calculation is carried out in Cost Pricing (CPR) or Project Control System (PCS), where products, customer orders, or projects are calculated. This is more a piece-oriented or order-oriented approach, which was already discussed in Chapter 4.

For the use of operating results, this data must be enhanced with period information according to budgets and actual values. Therefore, CSO is often called short-term profit accounting. The CSOs must be classified and grouped in a certain hierarchy. For this reason, a CSO is one of the Finance dimensions, in which you can enter both actual and budget values. You can also create one hierarchy (BAAN IV Finance) or more hierarchies (BAAN IV Controlling).

5.2.2 Methods

Total period cost-method

This method corresponds to P & L accounting in BAAN IV Finance. All cost types are calculated against the revenues by grouping them into main expenses, such as personal, material, depreciation, tax and so on. The difference with the turnover cost-method is that the total period expenses are subtracted from the total sales expenses and not the cost of goods sold. Moreover, stock changes are registered.

For example:

<table>
<thead>
<tr>
<th>Sales revenue</th>
<th>Deductions</th>
<th>+/- Stock changes components and products</th>
<th>+ Operations to activate</th>
</tr>
</thead>
<tbody>
<tr>
<td>= Performance (gross profit)</td>
<td>= Personal expenses</td>
<td>= Material expenses</td>
<td>= Third parties expenses</td>
</tr>
<tr>
<td>= ...</td>
<td>= Operating result (net profit)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is obvious that information on company level and on detailed CSO level is interesting. In the second case, total period costing must be combined with the stepwise fixed cost coverage. In other words, for every CSO level the direct costs must be assigned and covered indirect overhead must be delimited against the period actuals. Different from the turnover cost-method, the CSO does not receive the costs of goods sold from BAAN IV Sales. The material issues, operation costs, and surcharges for manufacturing orders are posted through BAAN IV Inventory (INV) with actual volume to CSO. Production results are not taken into account, because actual manufacturing expenses are already posted to the cost object. Purchase results are usually assigned on company level.
Nevertheless, it is not so easy to class overhead expenses to cost objects. The advantage of this method is that stock production for certain cost objects is directly visible for accounting. This visibility makes sense, because stock build-up is cost consuming (space, calculated interest and so on) and should be incorporated in sales and profit center control.

This method is mainly used in manufacturing business with high inventory production.

**Turnover cost-method**

This method is most commonly used in world wide business. Different from the total period cost-method, not all periodic expenses are linked to the cost objects. The cost of goods sold are subtracted from the revenues. This is carried out with standard costs multiplied by the sales volume of certain items or projects. This method is easier to set up, because the revenues and cost of goods sold (COGS) for the CSOs can be directly posted through BAAN IV Sales (SLS) and do not need manufacturing data on CSO detail level.

For example:

<table>
<thead>
<tr>
<th>Sales revenue</th>
<th>Deductions</th>
<th>Cost of goods sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance (gross profit)</td>
<td>Department fixed costs</td>
<td>Production/purchase results</td>
</tr>
<tr>
<td>Sales and administration</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td>Operating result (net profit)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In case of the combination with the stepwise fixed-cost coverage method on higher levels (for example, department), you can assign production results and fixed costs that are not allocated to a department. Purchase results, sales, and administration costs usually flow into the statement of operating results on profit center or company level.

### 5.2.3 Allocation of indirect overhead to cost and sales objects

The stepwise fixed-cost coverage method is a more decision-relevant way of designing the statement of operating results. This method has already been discussed in Chapter 5.1.

The implementation of this method needs a more precise allocation procedure. BAAN IV Controlling supports the way to link all overhead costs from centers, manufacturing departments, sales and administration centers and so on to certain levels of CSOs. The allocation procedure takes into account that uncovered overhead costs consist of different variances and fixed costs that must be covered on different CSO levels. It is possible that, for example, the efficiency variance and the fixed costs of the assembly line can be assigned on product-group level. The political price variance, on the other hand, has to be assigned to the profit center where the decision of product price support by a lower center rate has been made. Moreover, the target allocation accounts can also be chosen. Usually the manufacturing overhead is steered into line fixed manufacturing costs and manufacturing variances to give a hint to the origin. To support a more sliced approach the same is done with sales and administration costs. Allocations in and out are now more visible and not hidden in one line.
### 5.3 Sales control

In addition to the discussed integrated value flow that supports all relevant accounting principles, Sales Statistics (SST) is also an important instrument. Advantages of statistical information lie in short-term analysis and provisional requests. Technical aspects are the digging in mass data, selections from details and a lot of selection criteria that will not be posted so detailed.

So sales control will be a mixture of information from finance and statistics. The sales controller will use SST for the analysis of the following requirements:

- Purchasing behavior of client groups, markets, product lines, and so on
- Benchmarking over companies, profit centers
- Control of reaching sales targets (budget versus actual)
- Sales development over periods, trend analysis
- Profitability of products, product lines, and so on

The trend analysis deals with the impact of certain marketing and sales instruments on the revenues or profits of products, product lines, sales centers, and so on. The causes of sales variances through fashion, changing customer behavior, sales program decisions, and so on must be analyzed.

Unprofitable manufactured items can be made visible. You can consider changing internal behavior such as to buy components instead of producing them. For these reasons decision relevant data is needed.

To cover this the user can choose marginal costing for SST.
Sales Controlling - Sales Statistics -

Revenues
- Discounts
- Commissions
__________________
= Net Profit
- Marg. Costs
__________________
= CM I
- Alloc. Fixed Costs

Quantities,
Alt. Quantities

combinations
land
region
branch
representative
order type
customer
main customer
customer group
adress
warehouse
item
item group
statistics group
project
financial company
contact

Sales
Order Backlog
Cancellations
Sales Budgets
6 General technical issues

6.1 Installation

6.1.1 New customer installation
Delivery will be on master tape/master CD-ROM including extensions. Follow the usual installation procedures.

6.1.2 Conversion tools
There is a conversion tool available for customers who already have standard BAAN IV installation. Existing data in BAAN IV Distribution and BAAN IV Manufacturing that is mainly used for cost pricing (CPR/PCS), valuation, and for sales statistics (SST) can be converted to a BAAN IV Controlling layout.

Please, see section 6.4.1 Packages and modules.

6.2 Coexistence with other packages/extensions
The following table shows the compatibility of CNT with the other BAAN IVc extensions:

<table>
<thead>
<tr>
<th>Package</th>
<th>Description</th>
<th>Compatibility</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLO</td>
<td>North-American Globalization</td>
<td>yes</td>
<td>The GLO software is built in BAAN IVc standard.</td>
</tr>
<tr>
<td>SCH</td>
<td>Supply Chain</td>
<td>yes</td>
<td>The merged version SCC must be installed (see document for SCC).</td>
</tr>
<tr>
<td>WF</td>
<td>Workflow</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>DEM</td>
<td>Dynamic Enterprise Model</td>
<td>yes</td>
<td>Deliverable together with DEM ATO on CD-ROM.</td>
</tr>
<tr>
<td>OLAP/FST</td>
<td>Financial statements with OLAP</td>
<td>yes</td>
<td>The two extensions have to be installed in a VRC derivation structure.</td>
</tr>
<tr>
<td>MOOPI</td>
<td>Production fine planning</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>MC</td>
<td>Multicurrency</td>
<td>planned</td>
<td>A Multicurrency enabled BAAN IV Controlling extension will be based on BAAN IVc.</td>
</tr>
<tr>
<td>LRA</td>
<td>Cable Length &amp; Rolls Application</td>
<td>yes</td>
<td>Proloq solution for cable industry, customization.</td>
</tr>
<tr>
<td>EPM</td>
<td>Enterprise Performance Manager</td>
<td>yes</td>
<td>Several performance indicators are predefined.</td>
</tr>
<tr>
<td>NL1</td>
<td>Dutch BAAN IV Project extension</td>
<td>yes</td>
<td>The two extensions have to be installed in a VRC derivation structure.</td>
</tr>
</tbody>
</table>
6.3 Service information

6.3.1 Product management/marketing/consulting
Information about philosophy, market strategy, training, consulting, presales, and sales
documents can be requested from Baan Controlling Product Management and Consulting.
Group Manager is Michael Weidel, Hannover, Germany.

6.3.2 Licensing
Michael Walther from Sales Support, Hannover, Germany, is responsible for licenses.

6.3.3 Development
The extension is maintained by the Baan R&D group of Uwe Vehmeier, Hannover, Germany.

6.3.4 Product maintenance and support
First level support is covered by the local Baan organizations and distributors. Uwe
Vehmeier’s Baan Development Group is responsible for second level support and product
maintenance. Case take-in is handled via the standard routines.

6.4 Technical issues

6.4.1 Packages and modules
A new package BAAN Controlling (ct) has been introduced. In addition, there have been
changes made to many standard software components of the following BAAN IV packages:
Common, Distribution, Finance, Constraint Planning, and Manufacturing.
The five packages are delivered in the VRC: \texttt{B40L\_c\_cnt}

6.4.2 Languages
The software will be available in the following languages (s=software, h=online Help):
  - US (s, h)
  - GE (s, h)
  - FR (s, h)
  - NL (s, h in US)
6.5 Available material and information

<table>
<thead>
<tr>
<th>Material/Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controlling brochure</td>
<td>Marketing document with BAAN IV Controlling and entire accounting information</td>
</tr>
<tr>
<td>PowerPoint Presentations</td>
<td>Marketing and Sales Manager (internal)</td>
</tr>
<tr>
<td></td>
<td>Roadshow Controlling &amp; accounting (presales presentation)</td>
</tr>
<tr>
<td>Screen cam Controlling</td>
<td>Controlling example on lotus screen cam player</td>
</tr>
<tr>
<td>Dynamic Enterprise Model</td>
<td>Process flow of entire planning, costing, analysis, and integration</td>
</tr>
<tr>
<td>Functions and features</td>
<td>Functional overview letter</td>
</tr>
<tr>
<td>White paper</td>
<td>Vision, philosophy, and functional overview of BAAN IV Controlling</td>
</tr>
<tr>
<td>Demo tape</td>
<td>Controlling examples in Baan IVc environment</td>
</tr>
<tr>
<td>Definition study</td>
<td>Requirement analysis/solution proposal for costing, accounting and analysis</td>
</tr>
<tr>
<td>Functional design</td>
<td>Data model and session design; base document for software engineers</td>
</tr>
<tr>
<td>Lotus Notes database</td>
<td>Available material, questions and answers</td>
</tr>
<tr>
<td>Course book</td>
<td>Training course with integrated examples, tour through BAAN IV Controlling</td>
</tr>
<tr>
<td>Product positioning paper</td>
<td>Positioning against competitors, within Baan applications and to partner products (Hyperion)</td>
</tr>
<tr>
<td>Customers list by country</td>
<td>Customers with BAAN IV Controlling installations</td>
</tr>
<tr>
<td>Release plan for BAAN IV Controlling</td>
<td>Availability: releases, time schedule, languages</td>
</tr>
</tbody>
</table>