

Dictionary for Controllers

-important controlling terms-

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3	Abweichungen	Variances
4	Arbeitsplan	Operations plan
5	Auftrag	Order
6	Beeinflussbare Kosten	Controllable costs
7	Benchmarking	Benchmarking
8	Berichtswesen	Reporting
9	Beschäftigung	Capacity utilisation
10	Bestandsbewertung / Bestandsveränderung	Inventory valuation / inventory change
11	Betriebsergebnis	Operating result
12	Betriebsnotwendiges Vermögen	Operating assets
13	Bewegungsbilanz / Kapitalflußrechnung	Statement of changes in financial position
14	Bezugsgrößen / Leistungsarten	Output unit
15	Break - Even – Analyse	Break-even analysis
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21	Controlling-Kalender	Controlling year planner
22	Cost Center, Profit und Service Center	Cost centre, profit and service centre
23	Deckungsbeitrag	Contribution margin
24	Deckungsbeitragsrechnung	Contribution accounting
25	Einzelkosten	Direct costs
26	Entscheidungsrechnung	Decision account
27	Erfahrungskurve	Experience curve
28	Erfolgspotentiale	Profit potentials
29	Erwartungsrechnung	Forecasts to end of year
30	Finanzplan	Financial budget
31	Fixkosten	Fixed costs
32	Früherkennung	Early warning
33	Gemeinkosten	Overheads / indirect costs
34	Gesamtkostenverfahren	Total cost analysis
35	Gewinnziel / Gewinnplanung	Profit objective / profit planning
36	Grenzkosten	Marginal costs
37	Herstellkosten / Herstellungskosten	Cost of goods sold
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49	Kostenarten	Types of cost
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51	Kostenträgerrechnung	Product costing
52	Kostentreiber	Cost drivers
53	Kundendeckungsbeitragsrechnung	Customer contribution accounting
54	Lebenszykluskosten	Life cycle costs
55	Leistungsbeurteilung	Performance assessment

56	Leitbild	Mission statement
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58	Management – Erfolgsrechnung	Management result account / internal profit & loss account
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69	Produktkosten (Proko)	Product costs (proco)
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97	Verrechnungspreise	Transfer prices
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99	Wertanalyse	Value analysis
100	Wirtschaftlichkeitsrechnung	Economic appraisal
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102	Ziel	Objective

Absorption costing

Absorption costing is the form of costing in which all costs incurred by the business are charged to the individual products and services. Full costs comprise either all costs which have arisen during the manufacture of a product or delivery of a service (full *manufacturing costs*) or all costs which have arisen for the products sold within a period (full *cost price*). The calculation of full costs is only possible through the allocation of the structure costs, that is to say through their proportionalisation, since not all costs arising in a business stand in a direct causal relationship with the goods manufactured or sold. Because of this violation of the causal principle allocated structure costs can never be *relevant to decisions* as they do not vary in proportion to the output.

Accruals and deferrals

The *accruals and deferrals* distinguish expense and revenue in financial accounting on the one hand from costs and income in cost accounting on the other hand. Any sums that have nothing to do with the aims of the business should not appear in the cost accounting. Such sums include neutral and extraordinary expenses and expenses on real estate which is not directly necessary for the running of the business, not to mention donations and gifts and expenses arising from speculative transactions. The same principle applies to the accrual and deferral of revenue.

Accruals and deferrals are also undertaken to even out profits; this is done above all by deferring costs from one period to the next to avoid showing results that are either too good or too poor. However, controllers regard this method with contempt. Since controllers don't consider variances as evidence of guilt but rather as a cause for reflection, results should be presented in accordance with the accrual of costs and revenue based on the actual events of a specific business period.

There is a tendency in 'internal' accounting (management accounting) nowadays, brought about by the valuation principles enshrined in the IAS (International Accounting Standards) and the US-GAAP (Generally Accepted Accounting Principles), to show if possible only those costs which relate to actual expenses. In this way calculatory types of cost (imputed) vanish, while, on the other hand, depreciation e.g. on debtors and inventory can be regarded as costs. Thus the publicly presented result can be more easily reconciled with the internal result, but here we are overlooking the fact that external reporting and 'internal' accounting serve different purposes.

Activity-based costing

Activity-based costing is a cost accounting procedure focussed on the indirect processes along the value chain. It assigns costs to main and sub-processes, plans and ascertains from *cost drivers* cost rates for the process output. Its results can be applied to *cost management* and to differentiated *product costing*. Activity-based management is a part of a broader process management that aspires to an optimisation of all processes.

Actual data, actual performances, actual costs

The term 'actual data' refers to all the data of the past period(s). The actual costs are the costs that have effectively occurred over a period. They are recorded on the basis of vouchers in the accounts payable department, payroll and materials accounts as well as the general ledger and then transferred to the cost accounting.

Actual performance is that performance which a cost centre has effectively achieved over the month reported (in terms of manufacturing or wages bills). If the performance is measured in given units (standard time) then the term used is 'actual-target-performance'. If, on the other hand, the actual time worked is measured, then the term is 'actual-actual-performance'. If the actual-target performance as well as the actual-actual-performance is recorded, then the variance in the degree of utilisation efficiency can be calculated. The actual performances are derived from the operation data gathering. This is to be understood as a tool (using either manual or electronic means) for registering consumption and performance in the manufacturing process.

If a record of performance is to be kept also in the field of administration, e.g. by the introduction of standards of performance, then it follows that a system of collecting administrative data has to be built up.

Benchmarking

Benchmarking is an instrument for analysis and planning which allows you to compare your own company with the very best of your competitors. Furthermore, you can make comparisons with the best practice demonstrated by companies in a different line of business. It is therefore a process which compares the methods, operations and results of business functions with one or more other enterprises in order to pinpoint opportunities for rationalisation or for improving quality and performance.

Break-even analysis

The *break-even point* refers to the volume of sales at which a business goes into profit. On the way to reaching the break-even point all contributions are needed to meet the structure costs incurred by the business. Break-even can be reached in three stages:

- *Cash break-even:* The revenue from sales covers all the product variable costs and all the structure costs requiring cash payments
- *Break-even to maintain assets:* The revenue from sales covers calculatory depreciation costs
- *Target break-even:* The sales revenue covers all costs including the planned profit

Budgeted costs / budgeted output

Budgeted output is the output that a cost centre should achieve on average per month, expressed in output units. It is derived by means of computations and estimates from the sales volume budget, the production programme and from the operations which have to be carried out within the cost centre responsible for which a budget is being set. If this cannot be done analytically, then a forecast output volume is defined as budgeted output. Budgeted costs are the result of cost budgeting. The budgeted costs are as far as possible determined analytically, in that questions are asked in every cost centre as to which employees, resources, premises and other services are needed to achieve the budgeted output. The resulting quantities are then multiplied by the budgeted prices.

Within the planning framework the centre's required productive capacity, i.e. its budgeted performance, should be collated as closely as possible with the capacity available, so that the lowest total costs are incurred. It is therefore recommended on the one hand to invest heavily in the quality and reliability of the sales volume and production volume planning, and on the other hand to organise the available capacity in a way that it can be adjusted by taking small steps.

Budgeting

The word *budget* is used to characterise the accounting side of planning (budgetary accounting), e.g. sales volumes, turnover, costs, head counts, output. The instruments used in budgeting are the budgeted balance sheet, the profit & loss account, the financial budget, the liquidity budget. Having a budget does not mean that the money has to be spent; we should consider it rather, since it is after all derived from the business's objectives, as a springboard or guard rail enabling the business to reach its goal.

Calculatory costs

Calculatory costs are types of cost which do not directly correspond to any type of expense found in financial accounting, either because they are accrued in financial accounting or because they involve no direct expense. They are often opportunity costs, i.e. costs arising from missed opportunities to earn interest or income. The best-known are:

- calculatory social security costs (imposing on the cost centres a single type of cost for the multiplicity of social security benefits, over which, however, the centre manager himself has no influence.)
- calculatory depreciation
- calculatory interest
- calculatory entrepreneurial salary
- calculatory risk costs

In financial accounting only those amounts paid to outside investors are allowed as interest. On the other hand, in management accounting one would prefer to bear the costs of all the capital, including equity, which is why a calculatory interest rate is set for the total capital employed. In the best practice calculatory interest is planned analytically, which leads to a profitplan and a ROI target figure.

Capacity utilisation

In the realm of cost accounting *capacity utilization* means the output of a cost centre expressed in *output units* or *standards of performance* of the cost centre concerned.

In the actual account this capacity utilisation is measured either manually or by computer with an instrument designed to gather output figures, generally known as *operation data gathering*.

In planning there are two alternative possibilities for establishing the *planned capacity utilisation* of a cost centre:

- Planned capacity utilisation may be deduced in the following way. Starting with the production programme the *capacity demand* for each product to be manufactured and its relevant cost centre is deduced from the *bill of materials* and *operations plans*. This yields the planned capacity utilisation for this cost centre (in the sense of the output required by the market).
- Planned capacity utilisation may also be forecast. In businesses that are more *geared to contracts* it is not possible to deduce the planned capacity utilisation figures directly from the production programme, since the composition and size of the contract can only be approximately specified in the planning phase with details such as set-up, waiting, reprogramming and processing times unavailable. In this case the planned capacity utilisation of the cost centres is determined, in fact forecast on the basis of past figures. These can be: combination of the sales outputs, capacity utilisation of the previous years, average number of employees per cost centre, product mix of previous years, ratio of invoiced output to machine / employee hours performed in the past, etc.

The planned capacity utilisation is therefore the basis for the calculation of the *planned cost rates* of the cost centre, since it is not the installed capacity which is being sold but the output produced.

The *degree of capacity utilisation* of a cost centre is the comparison between the actual output of a period and its budgeted planned capacity utilisation.

Cashflow statement

The *cashflow statement* is used in the planning and management of the finances. The following scheme is recommended. The actual and forecast figures involved are set side by side each other in the budget.

- Indirect method (model structure)

profit (net income)	
+ depreciation on fixed assets	
+/- change in long-term provisions	
gross cashflow	
+/- changes in accounts receivable	} plus sign in the case of reduction (credit; reduction in accounts assets)
+/- changes in stocks of raw materials and supplies semi-and finished products	
- increase in work in process	
+ advances received	
-/+ changes in accounts payable	} minus sign in the case of reduction (debit; reduction in accounts payable)
-/+ changes in short-term provisions	
= operating cashflow	
- capital investments	
+ capital divestments	
-/+ changes in long-term debts	
= free cashflow (after interest)	
- dividend distributions (proprietor's withdrawals)	
-/+ changes in short-term bank debts	
= change in the liquid means account (liquidity)	

- Direct method for calculating the various types of cashflow (numerical example)

+ net turnover		15'900
+ inventory growth semi & finished products		-
- inventory reduction semi & finished products		520
- material expense for the period		6'630
- personnel expense for the period	3'500	
less provisions for pensions	<u>- 30</u>	3'470
- expense of sub-contracted supplies and services		1'000
- other expenses for the period		1'200
- voluntary grants (from the result)		80
= cashflow before interest and tax (CFBIT)		3'000
- interest payments (financial result)		630
- income tax		340
= gross cashflow = CF I		2'030
- increase in accounts receivable		100
- increase in inventory raw materials and supplies		100
+ decrease in inventory semi & finished products		520
+ increase in interest-free debts		90
+ income tax		340
= cashflow from operations = CF II		2'780
+ interest payments		630
- income tax		340
- capital investments		650
+ capital divestments		200
= free cashflow		2'620

The direct method starts with the liquidity-related positions in the profit & loss account. It is therefore more suitable for disclosing to management the turnover surplus positions and thus the way liquidity is generated. Both methods of calculation must lead to the same gross cashflow.

Contribution margin

Contribution margin I (CM I) is calculated by subtracting the variable costs of sales (product costs) from the net revenue. CM I demonstrates how much the individual article, the product etc. contributes towards covering the structure costs of a business as well as towards the profit. It is the yardstick for assessing a product's profitability.

In trade CM I corresponds to the difference between the net sales price and the acquisition cost of an item and is called the *trade margin*.

Product assessment by means of contribution margin I

The CM I per unit is important when in the case of a customer or a market segment there is a bottleneck in terms of volume. It is worth then promoting the products with the bigger CM I per unit.

The CM I as percentage of sales is the essential reference figure to consider if the bottleneck is the customer's purchasing budget, the market volume or the degree of market saturation, since it shows which products bring in the bigger contributions towards the profit.

The CM I per output unit of a cost centre is the relevant figure if the available capacity of the cost centre is what is causing the bottleneck.

The CM I per material input unit (kilogram, piece, metre) is applied where the result needs to be maximised in cases where there is a limited availability of certain types of material.

If there are several simultaneous bottlenecks which have a restrictive effect on each other, then questions of optimisation come to the fore, and these can be solved by using the methods of *linear programming*.

Contribution accounting

Contribution accounting is the tool for planning and controlling the business's activities towards the profit objective. Its task is twofold:

- to enable managers to have a better understanding of the effects their decisions are likely to have on the profit. (*decision accounting*);
- to convert objectives into figures to provide performance ratings for managers (*responsibility accounting*).

Contribution accounting involves the linking of a market-oriented philosophy with economic quantities and values; it leads to a way of thinking that begins with the customer. A well-developed contribution accounting system therefore makes transparent whether market planning as well as technical and organisation structures are moving collectively towards the profit goal.

Contribution accounting by stages

Contribution stages arise when the blocks of structure costs which are clearly assignable to the object in question (without applying a key) are deducted from CM I. It is not yet possible to see how much a particular item has brought in by way of profit, but the contribution which an article, a product or a product group or a range of goods makes towards the covering of the structure costs can be calculated as a figure that can be planned, controlled and for which somebody is responsible.

Very informative contribution stages arise when the whole account is structured in the form of a *sales result account*. Its aim is to show the result and the measure of success in reaching the objective of one or more sales organisations according to individual sources of profit.

For that purpose, all changes have to be isolated which depend on factors that the sales department can not influence or may even be unaware of. For that reason the product costs in the sales result account are always standardised, i.e. as budgeted - also in the case of job-order production as pre-costed at the beginning of manufacturing the order - then deducted from the net revenue, and the structure costs of the other function areas in the budget and in the actuals are always presented as planned figures. Variances between the budget and actuals, which cannot be assigned to sales do not appear in the sales result account either, but are shown in the variances résumé.

The number of contribution stages to be set up will depend on the organisational structure of the business, whose areas of responsibility will be reflected in the structure of the CM stages.

Since more and more often now multi-dimensional contribution account stages have to be established as well, it is a good idea not just to number the contribution account stages but to provide them with appropriate names. The sales result account should, if possible, include all the figures susceptible to the sales department's influence, and demonstrate how far the sales department is succeeding in reaching its targets.

Structure of the sales result account	Sum Firm	Product group A			Product group B		
		Total	P1	P2	Total	P3	P4
Gross turnover							
Discounts							
Net turnover							
Sales deduction							
Net revenue							
Standard product costs (variable costs of sales at standard)							
Contribution margin I							
Structure costs of the product (e.g. promotion)							
Product contribution margin							
Structure costs of the product group (e.g. market promotion)							
Product group contribution margin							
Sales structure costs							
Sales contribution margin (objective of manager in overall charge of							
Other budget structure costs in stages for:							
- production							
- research & development							
- administration							
- other function areas							
Liquidity-related contribution margin							
Target-cashflow							
Management result							

Multidimensional contribution accounting

Since on the one hand the market is tackled in a variety of different ways and on the other hand not only the products dimension is essential for strategic planning, there is now an increasing need for a multidimensional presentation of contribution margins. So it must be possible, depending on a business's work practices, procedures and philosophies, to be able to create multidimensional contribution accounts according to sales areas, regions, distribution channels, fields of application, customers' needs or strategic business units.

Such multidimensional contribution accounts are devised according to the above-mentioned principle, namely that only those structure costs are deducted in stages from the CM I which are unequivocally assignable (by voucher) to the object in question . So we have clear contribution targets, for which managers are responsible, per sales area, profit centre, distribution channel, strategic business unit etc.

Controllable costs

Controllable costs are those costs for which the head of a business unit (cost centre, service centre, profit centre) is directly responsible, because he can also influence them independently, using his own initiative. The types of costs that belong to a cost centre are those that can be unambiguously allocated to it. In addition there are the directly collectable secondary types of costs, but not those costs allocated to a key.

Every manager should also accept responsibility for directly controllable costs within his or her sector of the organisation. It is therefore important for controllers to ensure that the total costs of the enterprise can be registered as direct costs (i.e. directly allocatable) of a cost centre, a product or an order. This makes possible a clear-cut responsibility accounting.

Controller / Mission statement for Controllers

Controllers provide a management service. They both devise and maintain the business tools for budgeting, comparisons of budgeted and actual figures and forecasts. Their task is to ensure transparency for costs and results at every level of management: from company policy to strategy, budgeting and planning down to day-to-day operations.

The mission statement put out by the *IGC International Group of Controlling* defines the role of the controller as follows:

Controllers provide an accompanying service in management accounting and financial analyses for managers which will enable them to plan and control their operations according to agreed objectives.

- Controllers are responsible for the transparency of business results, finance, processes and strategy, thus contributing to higher profitability.
- Controllers co-ordinate sub-targets and sub-plans in a holistic way and organise a system which is future-oriented and covers the business as a whole.
- Controllers moderate the controlling process so that every decision-maker can act in accordance with agreed objectives.
- Controllers ensure that managers receive all necessary information.
- Controllers create and maintain the controlling systems.

Controllers are internal economic consultants (advisors) to all decision-makers and act in the role of a navigator towards the achievement of goals.

Controller organisation

Controllers are there to ensure that managers do their own controlling. So there shouldn't be any department called 'Controlling' since managers might get the impression that the controllers wanted to deprive them of the job of controlling.

As appropriate descriptions for departments in which controllers work, the following have been used: *Controller Service, Management Service, Business Administration Department.*

The areas of work that controllers have to cover are so comprehensive that even in medium-sized businesses pressure is there for a *decentralisation* of the controller's tasks and for corresponding *specialisation*. The following are examples of decentralised controllers:

- *Marketing & Sales Controller*
- *Factory of production Controller*
- *Logistics Controller*
- *Research & Development Controller*
- *IT Controller*

Decentralised controllers are normally assigned to a superior and connected to the central controller service by a dotted line (in the organisation chart). This indicates the managerial authority of a business's chief central controller.

Because controllers have fundamental responsibilities that extend right across the whole business, it has proved effective in practice - for the purpose of enforcement - to incorporate the company's top controller into the management.

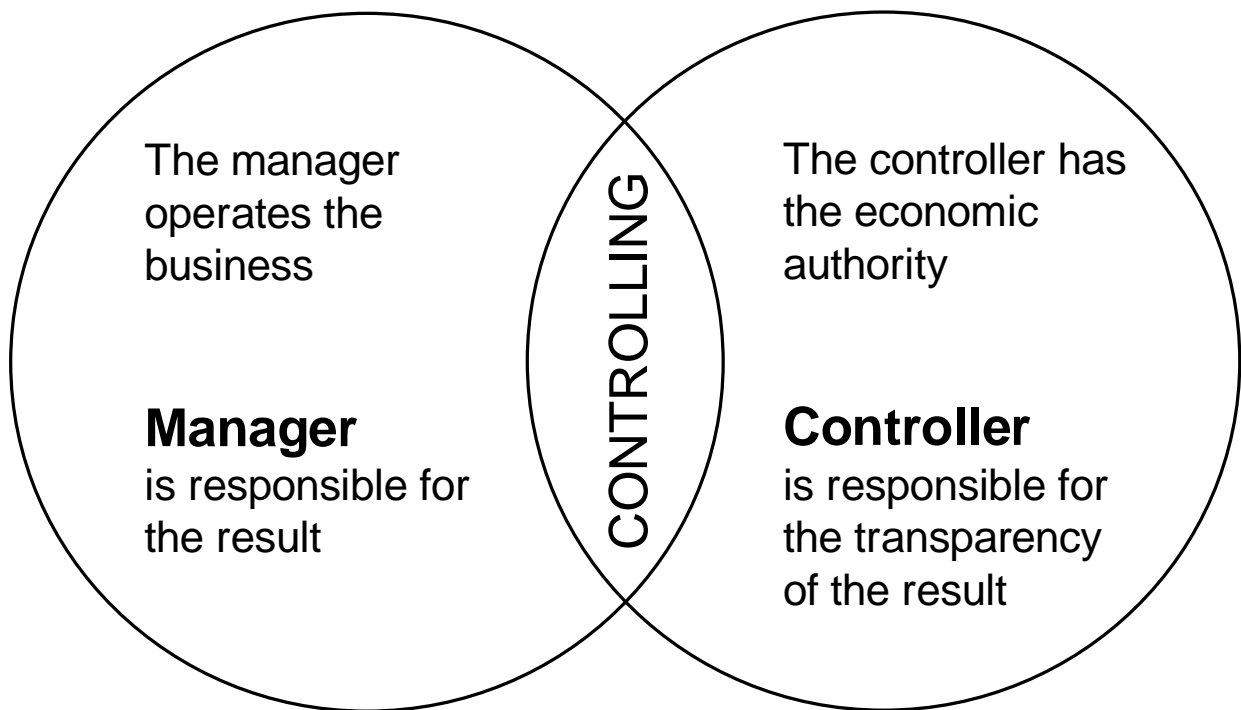
Controlling

Controlling takes place when manager and controller co-operate. Controlling is the whole process of setting objectives, of budgeting and controlling (in the sense of steering and regulating). It follows that management must practise controlling since it is they who have to decide on what the objectives should be as well as how high and work out the content of the budget. Controlling as a management activity should therefore be

undertaken in every business, however small. Nor should controlling be thought of as just the professional controller's job.

Operative controlling is a management activity that comprises the fixing of objectives, budgeting and controlling in the middle-term and single year time span. Typical objectives would be liquidity, profits and business strength.

Strategic controlling is a management activity that comprises the planning, testing, implementation and monitoring of strategies. The time span is unlimited and is just as long as the period covered by the strategy. Typical objectives here would be existing and future potentials for success, market shares as well as (free) cashflow.



Controlling year planner

Controlling and the controller's work must be carried out in obedience to dates and deadlines, something that can be facilitated by using a year planner of the kind illustrated below.

<p>Strategic planning</p>	<p>Re-examine objectives for existing product / market combinations Formulate objectives for new profit potentials of success Initiate draft project planning for new profit potentials Draw up cost budget for existing product / market combinations Revise cashflow statement</p>	
<p>Medium-term planning</p>	<p>Convert market objectives into annual objectives, plan sales volumes, prices and turnover Set objectives for proportional costs Determine development of fixed costs per functional area Budget for multi-year projects and fix investment budget Set up multi-stage and multi-dimensional CM-accounts Ascertain ROI budget and depreciation requirement Recalculate finance budget</p>	
<p>Operative planning for the year</p>	<p>Establish annual objective and new organisation structure Plan sales volume and turnover according to Products, customers and SBU's Plan project sections for the year Investment budget for the year Stock and production program-planning Determine capacity requirements from market and internal offer per cost center, plan activity level Profit and depreciation requirements Basic data for the development of the most important types of cost (personnel, material, energy) Budgeting of primary costs per cost centre Discuss cost budgets Build up management result account in a multi-dimensional way Revise corporate objectives once again Revise personal objectives Make amendments to the plan Get commitment to plans, budgets and the management result account Carry out short-term liquidity planning</p>	
<p>Implementation</p>	<p>Registration of actuals: -sales volume, revenues, -costs, variances Compilation of comparison between budgeted and actual figures as well as management result account. Discussion of monthly results Discussion of measures with those responsible</p>	<p>to be done daily by those responsible within-the management accounting department.</p> <p>To be done monthly by the management accounting department. Beginning of following month between central/ decentralised controllers and cost centre managers</p> <p>Departmental heads and top management; monthly controller's meeting.</p>
<p>Specific tasks for the controller's department</p>	<p>Update the controlling hand-book: concepts, structures, responsibilities, procedures, forms Update the breakdown of revenues, costobjects and cost centres Update planning guidelines Checking dates for projects and planning inputs Check strategic assumptions Evaluate investment proposals Training for managers Reporting early warning signals</p>	<p>half-yearly</p> <p>before the new planning round and as required for next planning year monthly at budget dead-line</p> <p>as required according to special programme and requirements as required</p>

Co-ordination

Co-ordination means the linking of sub-systems, especially sub-plans. It can come about as a result of directives, personal and departmental initiatives or the regular planning process. In order to be able to talk about a co-ordinated planning system there must be co-ordination which takes into account the time factor, the vertical and horizontal dimensions of the organisation, as well as functions. Controllers are charged with

the task of ensuring this co-ordination between the various areas and managers in their planning systems, accounting systems, in their reporting as well as in their meetings.

Corporate policy

Corporate policy has the task of harmonising external interests in the company (i.e. interests that determine its purposes) with internally pursued objectives, in order to create a match between the environment and the business at its centre. This should in the long term guarantee the business's autonomy. To achieve this, management must establish the basic *values* and standards of conduct that should become second nature; at the same time they must determine the principles of behaviour for dealing with customers, suppliers and employees. Corporate policy consists of the following elements:

- *vision*
- *mission statement*
- *business concept*

A vision is a concrete picture of the future, near enough for people to see that it is realisable, but far enough away to stir the enthusiasm in the organisation's workforce for a new reality. For a vision to be communicable it should consist of a brief, memorable play on words. The mission statement grows out of the vision. However, for actual strategic and operative management vision and mission statement are still too vague. They must be spelled out in more detail in the business concept.

Cost allocations

Cost allocations refers to the charging of cost centres or cost objects with structure costs from cost centres upstream without there being any causal connection. Structural cost are thus distributed in a proportional way.

Cost centre accounting

Cost centre accounting is one of the three main parts of cost accounting. Cost centre accounting serves as the cost centre's controlling tool for the cost centre budget and as a basis for the calculation of cost rates for product costing. So it answers the question, *where* have costs occurred or may be expected to occur. The cost centre is the place where costs occur. Cost centres are established in accordance with the tasks that need to be performed. The first criterion for designating cost centres is the company's organisation plan. At least one cost centre is set up for each area of responsibility. The next question is whether the centre's service can clearly be measured in output units and whether these output units can accurately represent the causes of the costs in the centre. If not, then a division into several cost centres is often the sensible solution.

Cost centre, profit and service centre

What is meant by a *profit centre* is an organisational unit - usually within the framework of a divisional organisation - which independently and under its own responsibility aims to make a profit (e.g. Return on Investment). A fully equipped profit centre has its own sales and marketing organisation, its own production and its own purchasing departments, but cannot take independent decisions on the investment programme. The profit centre in this pure form is uncommon; it is more usual to find profit centres in the form of sections of businesses which under unified management can make an independent appearance in the market-place, but which do not have access to all the functions mentioned above. In such cases the objective is expressed in terms of contribution margin volumes after deduction of those costs that can be unambiguously allocated to a profit centre. Direct access to the market is, of course, essential for the creation of a profit centre.

A *service centre* is an internal organisational unit, which provides service against payment to other cost centres. The philosophy here is to anchor the entrepreneurial idea firmly in the company itself. A service centre should adjust the services it offers according to the demand within the company and compare its prices with those offering equivalent services on the open market. Its objective then is to charge its total costs to the internal recipients. However, if the services offered by the service centre are not directly comparable with those obtainable from outside, the problem of cost allocation arises.

A *cost centre* is a self-contained, and from the point of view of organisation and responsibility, an autonomous sub-section of a business, but which unlike the profit centre has no access to the market. Consequently no profit objective can be set in a cost centre since no revenue is received from market activity. So a cost centre manager is not expected to work with an agreed profit or contribution margin objective, but rather to keep to a cost budget as his target.

Cost drivers

Cost drivers are influencing factors (output units) used in activity based costing which are bound to bring about changes, especially increases in the structure costs. The thinking behind this is that the structure costs are driven by the activities. If, for example, the average order size declines, then more and more invoices have to be written for the same turnover, which with existing capacity over-stretched leads to the need for additional staff and consequently higher structure costs. The controller's task is therefore to demonstrate how more taxing demands by managers (and customers) result in extra services and hence a leap into higher structure costs.

Cost of goods sold

The *cost of goods sold (or cost of sales)* express what a product or service costs when the costs are included of all the functions that are involved in the production of the finished product. These are principally:

- the *direct material costs* and the *variable manufacturing costs* which together give the product costs,
- the *material overheads*, the structure costs of purchasing and warehousing,
- the *manufacturing structure costs*, the structure costs of production planning and control, of construction and development (where not triggered by the order) and the costs of administration.

By cost of goods sold is generally meant the *full costs of goods sold*, i.e. the costs for all the functions involved in the output of goods or services. These are required for the drawing up of the profit-and-loss statement based on full costs and eventually for the drawing up of the balance sheet (inventory pricing). The variable costs of sales, or simply product costs are required for the ascertainment of contribution margin I.

Costs of goods sold (German: Herstellungskosten) is a concept from the *German Commercial Code* (§ 255 para. 2 HGB and § 275 para. 3 HGB). In contrast to the usual practice of calculating costs of goods sold (on the basis of full costs) in other countries and in management accounting imputed interest and risk may not be included, although, on the other hand, appropriate shares for administration costs are permitted. According to IAS and US-GAAP regulations inventories are to be valued at full costs of goods sold but without the inclusion of imputed interest.

Cost of sales accounting method

The cost of sales accounting method is one way of setting out the short-term result account. It is the counterpart to the period accounting method. The costs incurred in the manufacture of a specific product are set against the revenue achieved in the sales of that product.

Method of calculation: Turnover less reductions in earnings of all kinds less manufacturing costs of the outputs necessary to achieve the sales turnover

= gross turnover result less marketing costs less general administration costs...

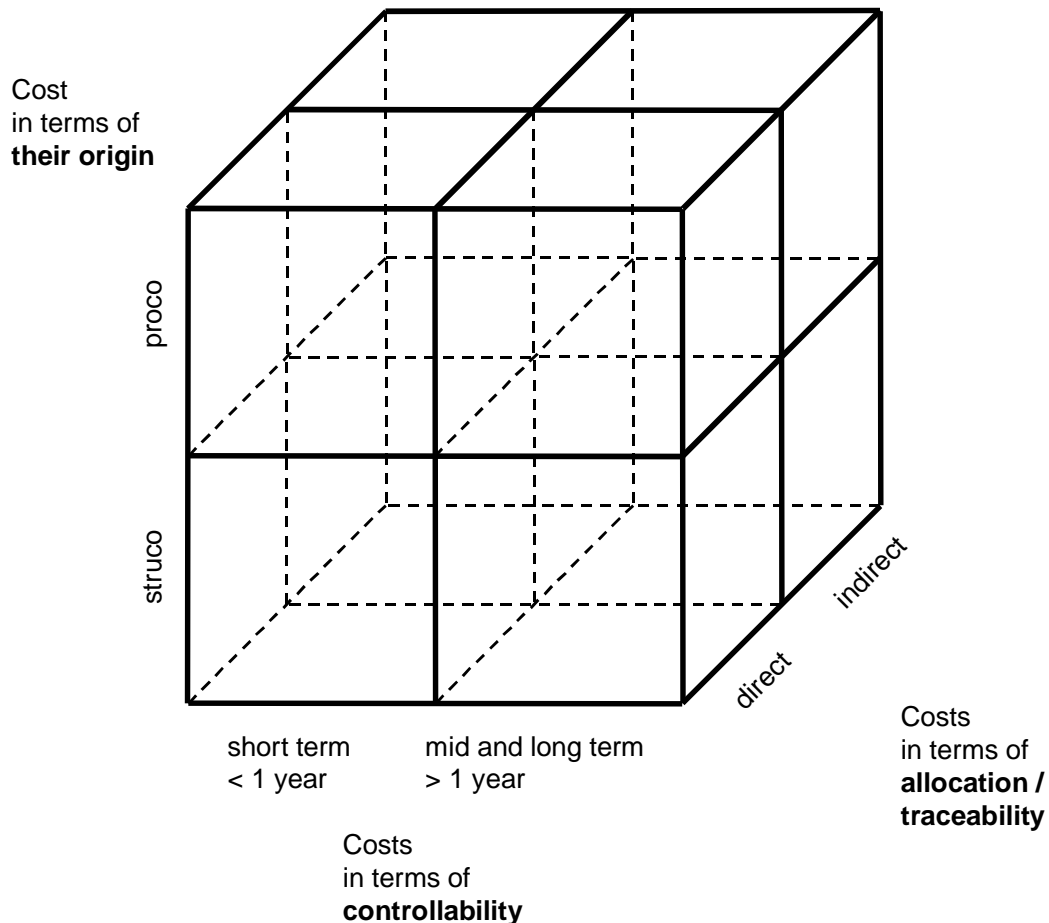
Costs

Costs are the rated consumption of goods and services for the production of output. The rating conforms to the requirements of the management (*decision and responsibility accounting*).

If we want to make managers responsible for costs and revenues and prepare them for decisions we must firstly present the *cost facts* in the clearest possible way, showing how they are inter-linked, and secondly make consistent use of clearly defined concepts. The *cost cube* is no new theory but rather an explanatory

model for cost facts, which has proved itself very well in practice. It presents the *cost concepts* in three dimensions:

Controller's cost cube



- Product costs/ structure costs (vertical axis):
 In this dimension one has for the purposes of *decision accounting* to differentiate between those costs incurred by the *structure of the products* and those caused by the *structure of the business*. Product costs (variable costs) are necessary at the outset to produce the goods or services.
 In contrast to these are those costs that are defined by a business's capacity and organisational structure, costs, in other words, that are not directly dependent on output but are determined by decisions over the business's capability to produce goods and services. These structure costs express the effort taken to ensure that goods and services can be produced at all.
- Controllability in the short or middle term (horizontal axis):
 'Who has the competence and the time to influence costs as they arise?' This is the question put by *Responsibility Accounting*. This dimension shows which cost elements can be altered in which time period. There are product costs which can change within the space of a month, while, for example, another materials supplier or another employee is being sought. But there are also product costs which are only alterable in the middle or long term, because they occur in the course of the production process or because where the production staff are concerned periods of notice have to be observed. On the other hand one also meets immediately controllable structure costs like, for instance, advertising costs for product promotion, which can be reduced from one day to the next.
- Direct and indirect costs (third dimension in the cube):

Whether it is a matter of direct or indirect costs depends on the object in question. The salary of the employee in the accounts receivable department (structure costs, controllable in the middle term) belong to the *direct costs* of the book-keeping cost centre, but to the indirect overhead costs of the products. Material costs for highly refined parts (product costs, controllable in the long term, because only one supplier is available) are direct costs of the manufactured product. Tool costs for a specific customer order are direct costs of that order.

The same three-dimensional way of thinking applies to the costs dependent on revenue. Commissions, deductions from revenue, carriage charges, parts of the distribution costs dependent on orders no longer depend on the volume produced but on sales-mix, sales volume and revenue, which means they need to be represented by a detached cube.

Customer contribution accounting

Customer contribution accounting refers to the amount of contribution margin a particular customer brings in once all costs which have been clearly (i. e. verifiable by voucher) incurred in connection with this customer, have been deducted from the revenues. Customer group surveys are important assessment tools for the development of marketing policy and for strategic management.

Article	Amount purchased	Gross turnover	Sales deductions	Product costs	CM I	CM I in % of turnover	CM per unit	% -share	
								in turnover	in CM I
Direct customer structure costs									
Customer CM									
<u>Facts of the case:</u>					<u>Measures / matters for discussion:</u>				

Decision account

Decision accounts show what additional costs will be incurred as a result of any decision as well as costs that will be saved, and / or what revenue will be gained or lost as a result of the same decision. So it is always the differences from the initial situation that are relevant to decisions, i.e. revenue and cost elements which are changed precisely by that decision. A change can also mean preventing a deterioration which would otherwise occur. Changes in sales may produce additional revenue, but also lead to deductions from revenue in the form of discounts, bonuses and commissions. With changes in volume, on the one hand, costs either increase or decline, while on the other hand the costs change as the business's structures undergo adjustments. When volumes change more (or fewer) *product costs* are incurred, while where structures are readjusted, blocks of structure costs are built up or dismantled. From this basic knowledge we can conclude that *structure costs allocated by a key* are never relevant to decision-making. For it is always the product / variable costs or the blocks of structure costs that are changed, or it is a case of forestalling threatening variances.

Depreciation

Depreciation refers to the costs incurred in the wear and tear on production facilities and assets in the production process. The purpose of depreciation is to maintain the asset value of the production facilities employed. The performance potential of an existing facility, expressed in monetary units, must be maintained during its period of use, so it follows that the means of production have to be written off against replacement cost or current market value, so that at the end of its useful life (and taking into account inflation) an

equivalent facility, that is to say one which is capable of the same performance, can be purchased to replace it. This often leads to a need for a higher degree of depreciation than that permitted by the tax authorities. Hence, in accounting, a distinction is made between fiscal and calculatory imputed depreciation. It is only the latter that is relevant in cost accounting. However, in the US-GAAP regulations, only the balance sheet depreciation figures are taken into account in the cost of sales accounting method.

Direct costs

Direct costs can be assigned (or posted) by means of voucher and without using a key to the object in question. These objects may be broken down into products, services, orders, cost objects, projects, profit centres, divisions, cost centres (departments, regions, branches).

The *costing* should be organised in such a way that for all chargeable items there should be clear vouchers and an unambiguous posting to accounts. Keeping to this rule is the foundation of a system of cost accounting that involves management responsibility.

Early warning

Early warning signals or weak signals are bits of information which as far as their origin and effects are concerned may not be classified with any certainty. As a rule it is a matter of highly indefinite and uncertain presumptions about future changes in the business environment. The earlier the weak signals can be localised and qualified, the sooner strategic measures can be taken as well as opportunities and risks recognised. It is the job of strategically active controllers with the aid, for example, of networks, to identify the indicators and systematise them in an early warning system.

Economic appraisal

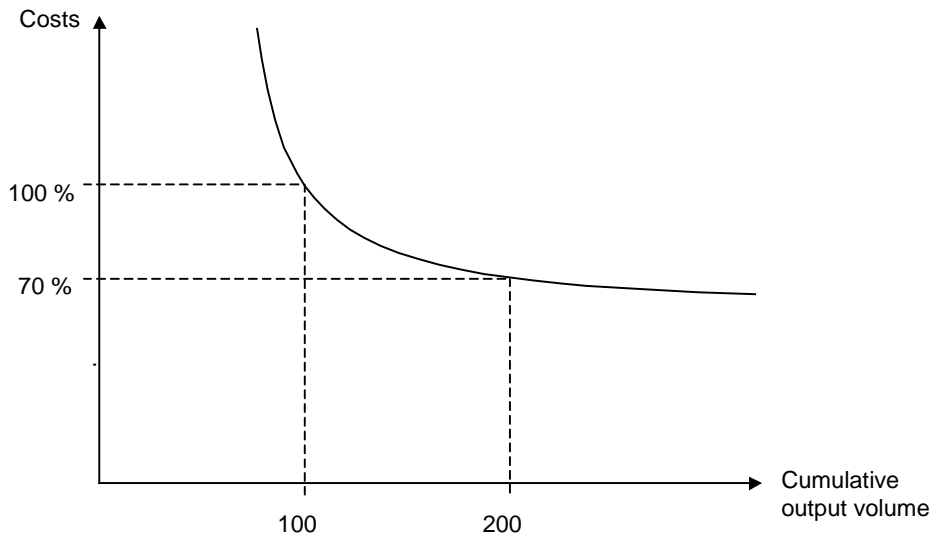
The first stage of *investment appraisal* is often *the economic appraisal* which presents a cost comparison for the choice of processes. What does the hour or the product cost using the new process? You assume, of course, that the investment has already been made. You compare, for example, the capital costs of an automated process with the labour costs of a process more heavily dependent on manual labour. Economic appraisal, which is mostly an annual account, also includes calculatory imputed depreciation and calculatory interest.

Experience curve

The *experience curve* is based on observed experience that when the volume of goods produced is doubled, the total costs per unit may be reduced by between 20 and 30 percent. The causes of the experience effect are:

- learning in the narrower sense,
- rationalisation,
- standardisation,
- technical progress,
- more favourable procurement,
- changes in the materials used,
- distribution of the structure costs over a greater production volume.

The experience curve effect describes a potential for cost reduction, which is attainable through conscious cost management, but which by no means happens automatically.



Financial budget

Financial planning is there to maintain the liquidity and stability of a business. In a period lasting more than a year the task is to develop the ratio of equity and outside capital stability in the light of investments that need to be made and the aims of the firm's mission statement. So thought must be given to the question whether the future of the company is financeable while remaining solvent. Moreover, one must plan what financial means are required and when in the budget years - and where these means are to come from - and again when. The planned cashflow statement is the right instrument for this (creating structural and strategic liquidity).

In the period of under a year one must ensure, by looking ahead, that solvency is maintained at all times. Proceeding from the balance sheet and the transactions in the profit & loss account it is essential to plan the in and out payments in accordance with strict deadlines. The tool applied here is the solvency budget or the liquidity budget with forecast (finance controlling).

Fixed costs

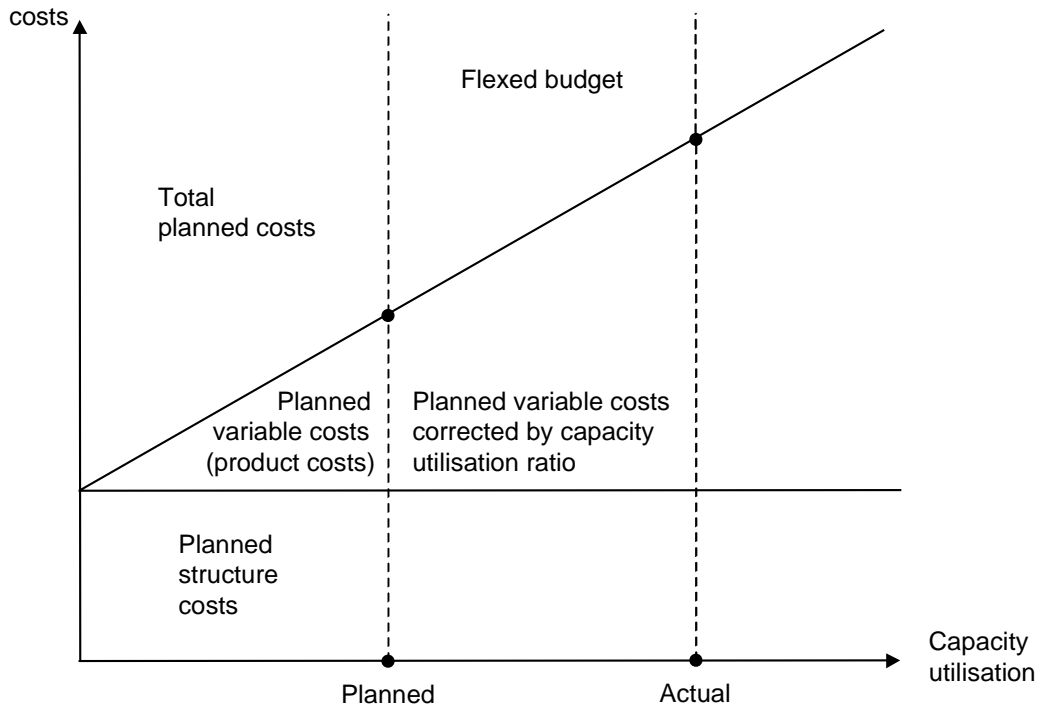
Fixed costs complement the variable costs (product costs). Fixed costs are incurred in order to ensure that the company can produce and sell. So fixed costs are defined by the company's structures, in other words by its organisation and capacities, which is why they are also called structure costs. These costs are not unalterably fixed. If decisions are taken to alter a company's structures, then the structure costs will also change. For this reason we should abandon the term 'fixed costs' and use the more logical term 'structure costs'.

Flexed budget

The flexed budget consists of the planned costs for the actual output. As a calculation:

flexed budget = (actual output x variable planned cost rate) + planned structure costs.

The flexed budget shows what the actual output should have cost, had it gone strictly according to plan. Since the planned costs are target figures important to achieve, it is also possible to say that the flexed budget is the yardstick by which production efficiency may be measured.



Forecasts to end of year

The forecast is the logical continuation of the comparison between budgeted and actual figures. Here the managers are asked for their forecasts for the remainder of the budget period and these are then quantified and qualified. The intention is to see whether the business will succeed in achieving its planned objectives to year end (or to the end of the budget period). What is being sought are the expected actuals, which is why people talk about an actuals-future account. On the basis of the results achieved so far, of experiences to date, and the remainder of the budget the managers consider corrective measures and their effects. In collaboration with the controller the quantified forecasts of cost centres, cost objects and revenue objects are assembled and consolidated so that it will be plain to see whether the economic goals can be achieved, or after the latest estimate how great the variance is likely to be. Thus the forecast rests on the principle of feed forward and is therefore a form of contemplating the future. 'feed-forward'

Internal auditing

The *internal auditing* supports the board of directors by observing its functions of control and supervision as well as its commitment to reach business objectives. Organised as an independent staff department it works on behalf of the management to which as a rule it is directly responsible.

Internal auditing's overall aim is the classic one of protecting the business against losses of assets. Within the context of this aim the task of the internal auditors is:

- to develop and implement preventative, systematic measures of control and supervision as well as to check, above all, whether they are effective and comprehensive.
- to pinpoint potentials for both improvements in performance as well as for reductions in costs.

To this end processes and commercial transactions in every part of the business are checked by the internal auditors according to the principles of

- efficiency
- safety
- conformity to regulations

They make a particular point in seeing that planned controls are implemented and are effective in practice.

Within the bounds of its supervisory activities the internal audit has an unlimited right to information. Alongside its checking function it also has an advisory function, but it has no executive authority.

While the internal audit supports the board of directors in effectively securing commercial success, the controller service supports the running of whole enterprise in accordance with objectives.

Internal services

Internal services are what one cost centre provides for another. If the exchange of services can be measured and if the amount of service procured is dependent on the actual output of the centre procuring the service, then the internal services are calculated according to work reports. But if the exchange of services cannot be measured clearly, then the costs are apportioned according to a pre-established key (*allocation of costs*) or an *internal contract* is agreed to cover the costs. Internal service calculations are always carried out with planned cost rates, which result from the annual budgeting. In this way the receiving centre knows what charges it has to reckon with in the course of the year. Variances in the centre providing services are not passed on since they only belong to the supplying centre's sphere of responsibility.

Inventory valuation / inventory change

The rule of thumb for the budgetary *inventory valuation* is: 'Cost or market, whichever is lower'.

As a rule stocks are evaluated at the *historic buying rate* or *full production costs*. In individual cases the following yardsticks may be used:

- standard prices
- floating average prices
- HIFO (Highest In - First Out)
- LOFO (Lowest In - First Out)
- FIFO (First In - First Out)
- LIFO (Last In - First Out)

If the sales prices sink below the original historic buying rate or full production costs then inventory items must be valued at the lower market price.

Investments

The *investment budget* is the plan which determines the essential investments with the concomitant sums for the next budget year.

The *investment appraisal* is a form of the *economic analysis* designed to elicit whether a disbursement for particular purpose will be worthwhile. Before a larger disbursement is decided on and included in the investment budget, an investment appraisal should be carried out. It is a question here of a simple *cashflow analysis* designed to show whether the sum of all the uses over the whole planned period of the investment's useful life will exceed the sum of all the disbursements to be effected. Various investment appraisal procedures come into play:

- The simple or *static procedures* juxtapose uses and disbursements without paying attention to the timing of the cashflow; they are therefore only suitable for estimates.
- In the *dynamic procedures* the cashflows are discounted to the starting point of the investment. In this way the time value of money is taken into account. As a discount rate it is sensible to use the Return on Investment (ROI) which is laid down in the business plan, since every investment should be as profitable as the established ROI objective.

Kaizen / Continuous Improvement

The Japanese word *kaizen*, made up from the two kanji-signs 'kai' (to change) and 'zen' (goodness), means striving after constant, systematic and gradual improvement. Kaizen is an approach that acknowledges the importance of people, since it promotes the motivation of the employees and their identification with the tasks they are performing. It does this by giving them the opportunity to share in the development of processes. In Europe, where the kaizen idea has been taken over, it is also known as *Continuous Improvement*.

The most important element in Continuous Improvement is the workshop. There the participants - as a rule employees in the area to be scrutinised - and under the guidance of a specially trained moderator - analyse the work processes already in place and work out possible improvements where weaknesses have been exposed. The participants themselves generally implement the solutions they have proposed directly after the end of the workshop.

Life cycle costs

Life cycle accounting is a combination of investment appraisal and cost accounting, which refers to the concept of the *life cycle*, in order to accommodate types of costs generally not included in the cost accounting. To this end controllers try to analyse the costs of a product over all the phases of its life (from development to discontinuance). This should lead to recommendations for the *product design* as well as for the *purchasing decisions*. The aim is to optimise the costs over the whole life cycle.

Liquidity

By *liquidity* we mean the capacity of a company to meet all its financial commitments punctually from its available assets. A distinction is made between the structural or *strategic liquidity*, which arises from the net working capital as well as from the *free credit limits*, and the *dynamic liquidity*, which is ensured by the solvency plan for short-term cash management. The net working capital is the difference between the current assets and the short-term liabilities and provides a measure of the business's financial manoeuvrability.

Maintenance of assets

Before a profit can arise the costs of the fixed assets installed in the business have first to be covered. This *maintenance of assets* is carried out by estimating *depreciation*. Since fixed assets become technically outdated or because of inflation become more expensive to replace, the question has to be asked as to what are to be regarded as assets. In the German-speaking countries commercial and fiscal law lay down that it is the acquisition value that represents the assets. But this thinking makes little sense to the business entrepreneur. For if an asset has to be replaced at a higher price than the historic purchase price, then the entrepreneur has no chance, if he has depreciated just the acquisition value, of recovering the performance potential which the asset previously had at the same price. It follows, that for internal purposes, that depreciation is based on the *replacement cost* of an asset of similar value and capable of similar performance, which leads to the determination of *calculatory (imputed) depreciation*. Since in the case of assets that have a long useful time it is impossible to forecast the replacement price, people make shift in practice with depreciation based on whatever the asset's *current value* happens to be (inflation accounting). Current value is the amount which is to be paid on the market today for a particular asset.

Manager, management

A *manager* may be described as a member of a business who normally leads other people. The concept of manager is not bound to any particular level in the hierarchy. Managers who are also members of the board of management are the executives. *Management* involves the leading of complex social systems and means that the reciprocal relations between people and things are viewed holistically both in decision-making and in everyday practice. So it should encompass the whole system and its links with its various environments.

Management result account / internal profit & loss account

The *management result* is the target figure for the whole operative activity of a business. It is produced by adding the *standard result* and the balance of the variance resumé. In the variance resumé, which is a component of the cost accounting, all variances that are not contained in the *sales result account* are collated

according to causes and spheres of responsibility. Thus the management result is collated from the sales result account as a multi-stage contribution account (standard result) and from the cost accounting. In the planning phase management result and standard result agree since there are still no variances from the cost accounting to be taken into consideration.

To be able to cross from the management result to the financial result (which observes commercial and fiscal regulations) you need in the end the *reconciliation bridge* where all those entries are included which are valued differently in the management-oriented accounting from in the balance sheet. A positive management result in a given period comes about when after taking account of the actual revenue and the actual costs you get a better result than your planned target result. The management result is therefore the operating result after deducting the target profit.

Marginal costs

Marginal costs are the manufacturing costs of any manufactured unit. As long as the total cost graph of a product or cost centre runs in a linear way, the marginal costs for each manufactured piece are the same and correspond to the variable costs / product costs. The concepts of product costs, variable costs and marginal costs are synonymous.

Market share absolute, relative

The *market share* is the relationship of the sales volume of a business or of a product to the volume of the relevant market in one year. In the absence of statistics for volumes market share is often calculated on the basis of turnovers.

The *relative market share* compares a business's own turnover or sales volume in a given period with its biggest competitors in this market. Example:

	Turnover	Relative market share	Absolute market share
Competitor A:	120	0.48	20%
Competitor B:	100	0.40	16.67%
Competitor C:	30	0.12	5%
Ourselves:	250	2.08	41.67%
Other competitors:	100		16.67%
Total:	600		100%

If it proves difficult to obtain market data then the business can still estimate its market position with the aid of the relative market share, so long as it knows the turnover figures for its biggest competitors.

Mission statement

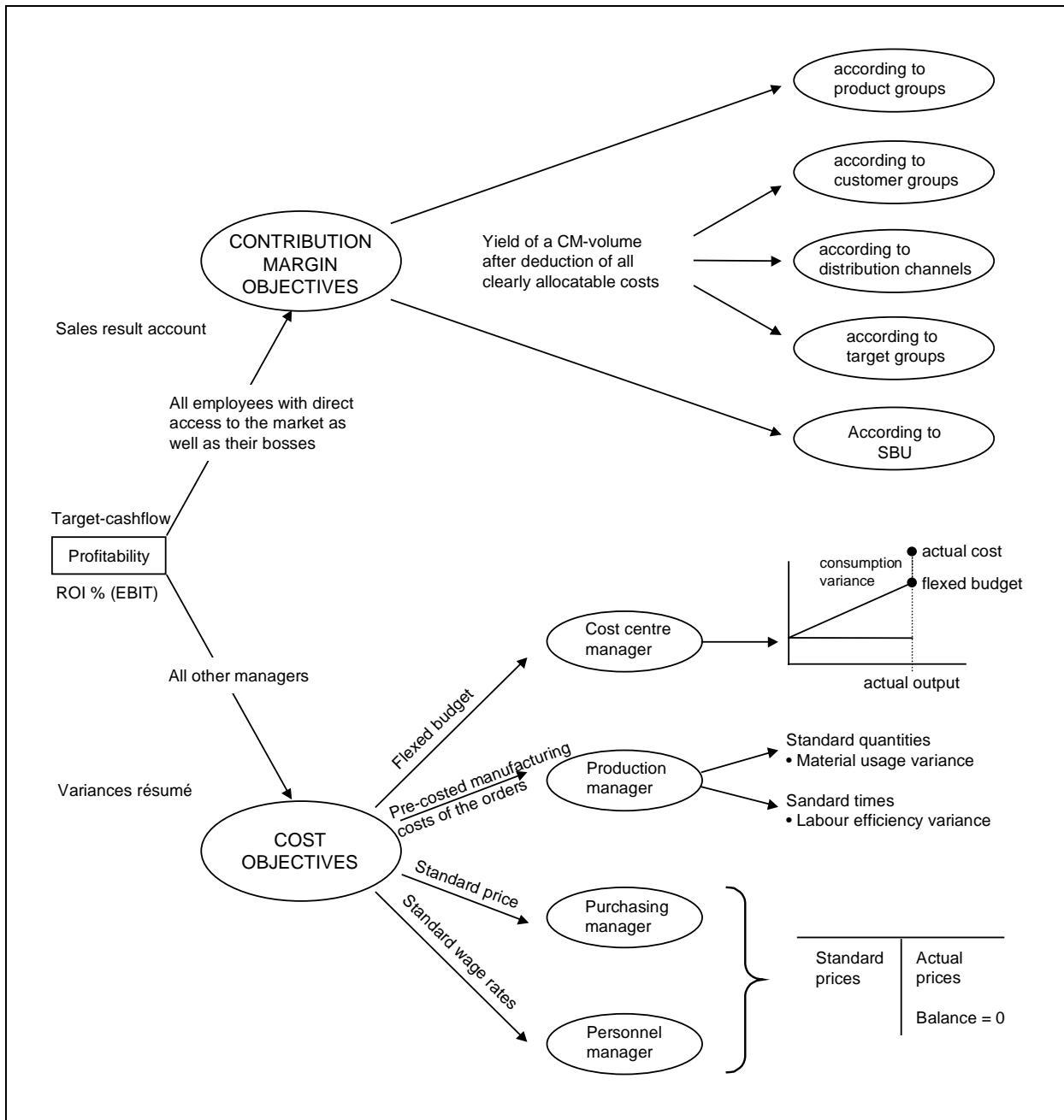
The mission statement provides the ground rules for the way a company is managed. It does this by familiarising the firm's employees with the main objectives and parameters of the enterprise's whole range of activities. So a clear mission statement answers the question: Who do we want to be? It is a written expression of corporate identity. Clarification and formulation of the mission statement belong to the tasks of standardising management, i.e. to the elaboration of a company policy. Mission statements serve to motivate all employees. The word comes from the Latin 'movere', i.e. to move. But movement in the sense of reaching the main objectives will only happen if top management sets an example by living up to the mission principles.

Moderation

For controllers moderation is a method of running discussions, since their task is to support managers in their efforts to find decisions. By mastering and skillfully applying various *moderation techniques* (brainwriting, mind-mapping, creativity techniques, minute-taking during discussions, chairing meetings) controllers can promote the creative potential of groups and effectively steer the course of decision-making processes.

Objective

An *objective* is a striven-for future state which is precisely defined in terms of content, time scale and scope. One can also regard an objective as a result to be arrived at. Thinking and working with objectives is indispensable for effective controlling. *Management by objectives* and controlling grow together. Objectives are supposed to designate what is to be achieved and accordingly need to be worked out anew for every year. In an objective-oriented *corporate culture* a person qualifies as a manager by planning his / her objectives precisely (without building in reserves) and then achieving them too.



Operating assets

By *operating assets* is meant the active side of the balance sheet (assets) stripped of all items not necessary for the business, or items having little direct bearing on the business.

Operating result

The *operating result* is the result that the business has achieved in line with its commercial aims, that is to say before deduction of interest and income tax. It is also referred to as EBIT (Earnings before Interest and Taxes).

Operations plan

So the operations plan is the quantitative basis for the calculation of the manufacturing/ service costs (e.g. in public administration). In the operations plan the various operations are listed in the precise sequence in which they are carried out. At the same time each operation is allocated to a cost centre and provided with a standard time. So the operations plan serves as the basis for the calculation of the manufacturing costs. The operations plan items valued in accordance with the product / variable cost rate lead to the product / variable manufacturing costs.

Product no. 103010, **Operations plan** (for one unit), e.g. a ringbinder

Cost centre	Operation	Standard time
Welding foils	Welding transparent holder for label on back of folder	0.1 min.
Assembly	Join the folder module and the mechanism module	0.4 min.
Packing	Insert label and pack	0.3 min.

Opportunity costs

Opportunity costs are the costs of the alternative use of a factor in short supply. They are to be considered in *decision accounting* when a *bottleneck situation* occurs. If, by way of example, there is a shortage of production capacity and a product cannot be manufactured in adequate quantities, then the predictable losses in contribution margin are the opportunity costs for choosing the other product. In order to keep the opportunity costs as low as possible we select when making programme decisions first and foremost those products which offer the highest CM I in relation to the respective bottleneck unit.

Order

While cost centres describe the places where costs arise, in many businesses people put the additional question: for what purposes have costs been incurred?

So by order we have to understand a cost collector, in other words an account to which costs and revenues may be allocated according to well-defined purposes. Distinctions here are made between general in-house overheads orders (such as trade fair orders, maintenance jobs, promotions), investment orders and orders of a cost object type.

Output unit

Output unit is the yardstick of performance for a cost centre involved in the process of producing a product. It should be able to demonstrate the causal connection between the cost centre costs and the cost centre output. In very many cost centres the *output unit* is the employee or machine hour. But it is also possible to measure performance more effectively in pieces, metres, square metres or kilograms.

Overheads / indirect costs

Indirect costs complement the direct costs. Whenever costs can be clearly allocated to an object (for example, cost centre) by voucher, then it is a question of direct costs, but if they accrue collectively for this and other objects, they are then indirect costs or overheads. The salary of a departmental head of a production workshop would count as a direct cost in this department, or as overheads related to the orders that pass through this department.

Performance assessment

Performance assessment means to determine and judge how far a manager has achieved his / her objective. Part of achieving an objective, of course, is to announce variances from the objective at the right time. That is the controller's job.

Planning and planning frameworks

Planning is the intellectual anticipation of possible future circumstances, the selection of desirable circumstances to aspire to (objectives) and the determination of relevant measures that need to be taken. So the business has constantly to adjust to internal and external changes, requiring decisions to be taken with an eye to future effects.

As controller one has to rely on an inter-linked and in itself consistent planning framework. And here the following planning stages should be considered (see chart). The corporate policy statement could also be actively borne in mind during strategic planning, which may be broken down into three planning stages.

Planning stage	Main question	Decision contents	Plan elements
Corporate policy	Who do we want to be?	Set up main objectives	Vision, mission statement,
Strategic planning	Where do we want to go?	Find profit potentials and select	Strategic plans
Operative planning	How do we reach our objectives?	Exploit profit potentials	Middle-term planning Annual planning
Reactive planning	How do we react to turbulence creating	Take corrective steps to stay on course to achieve objectives	Forecasting
Implementation			

Portfolio concept

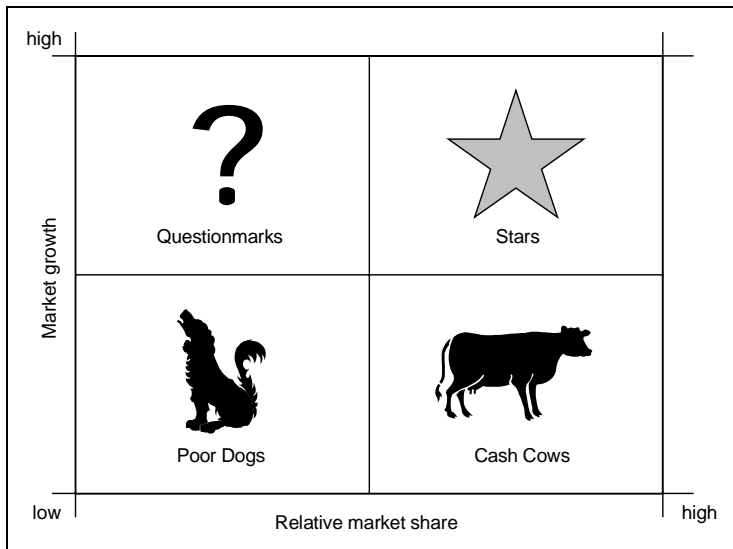
In the *portfolio concept* the business is seen as a portfolio of strategic business units. Differing strategic business units in differing competitive positions with differing features of market attractiveness require differing strategies.

The strategic business units are represented as circles and arranged in a matrix which includes a risk-determining (external) dimension and a profit-determining (internal) dimension, from which the directions in which the strategic business units develop may be inferred.

In our example the familiar 4-field matrix is used, defined by the two axes *market growth* and *relative market share*. Relative market share expresses the *relative competitive position* of any given strategic business unit. The market growth shows the attractiveness of the market concerned against the background of the *life cycle* concept.

The size of the circles can be used to symbolise graphically the turnover, the contribution margin or the cashflow of a strategic business unit.

The matrix is basically divided into four quadrants because it is possible to formulate for each of them a so-called norm strategy.



Norm strategies

Question-marks are the strategic business units which are developed in markets that demonstrate a high market growth (especially in the case of new products), but in which the business has not yet reached any leading competitive position. Recommended strategy: promote or quit.

The term *star* describes a strategic business unit characterised by a high-volume market growth and dominant relative market share. To maintain its market position a star generally requires a high injection of funds, in order to be able to keep pace with the expanding market. Recommended strategy: maintain market share.

Cash cows are strategic business units with low-volume market growth and dominant relative market share. They are generally the main source of the cash flow and should fund new product developments. Recommended strategy: maintain market share without making significant new investment.

As far as *Poor Dogs* are concerned, these are strategic business units that show a low-volume market growth and a low relative market share. In general little hope of positive cash flow and profit may be expected from them. Strategy: re-launch, sell or abandon.

By a *Re-launch* is meant the repositioning of an existing product, which generally entails a series of alterations in the product concept like the addressing of new target groups, product improvements (product, packing, design) and the launching of a supportive promotion campaign. In this way the product has been given a face-lift and enters a new phase of growth.

The portfolio concept has proved to be a versatile tool in the sphere of strategic management (e.g. in materials management too).

Posting to accounts

Controlling requires that cost accounting systems post accruing costs and revenues to the various activities that have given rise to them. This involves making primary and secondary entries in the books. A voucher (for instance, an invoice entered in the book) can be posted, depending on what provoked it, to cost centres, projects, orders or market segments in the result account. A system of posting vouchers according to their origins is therefore absolutely essential for the task, at a later date, of checking actual costs within the information systems and / or carrying out variance analyses.

Primary and secondary costs

Primary costs (or costs not allocated according to a key) are costs which in the context of posting to accounts of cost types are charged directly to the cost centre i.e. by voucher. *Secondary costs* are complementary. They arise from charges made for the services of another cost centre.

Product costing

By a cost object we mean, depending on the purpose of the analysis, a single item, an order (customer's or production order), a batch, a product or possibly even a product group. In service businesses cost objects could be, for example, a project, a loan, an insurance a theatre production, a hospital operation, the handling of a building contract for local government. The idea of product costing is to show why, i.e. for which products and services costs are incurred. Thus, with product costing it will be possible to see how high the costs are that a product has to bear whether as product costs or as assigned structure costs.

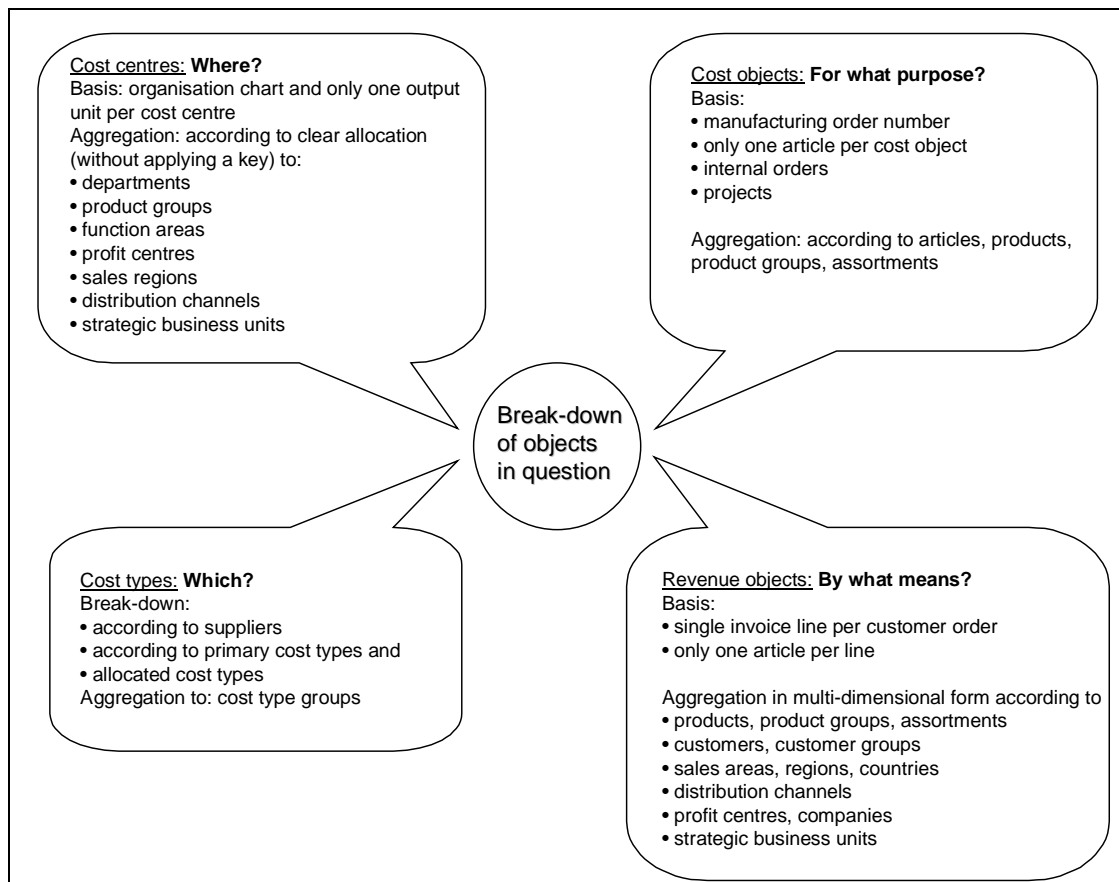
Product costing is a collective term for:

- Product costing (per unit or per order):
- Product costing: preliminary, interim, actual
- Product costing per period (record of costs of all goods produced within a given period)
- Product costing: budget, actual; comparison of budgeted and actual figures, evaluation of changes in inventory.

If precise costs and output figures can be gathered per manufacturing order, then the costs of the order can be calculated at the same time and it is equally possible to compile consolidated calculations for customer orders, for semi-finished and finished products and for whole product groups. The choice of the lowest hierarchical level in the product costing (generally the manufacturing order) determines the possible degree of detail in the analysis reports.

The concept of cost object is typical of sender-oriented thinking in accounting. Why the total costs of the business are charged to the cost object is to enable people to see how far these costs are also covered by the market prices. But this can never really succeed since there is no direct causal connection between produced and sold volume on the one hand and structure costs on the other. If you include the full manufacturing costs in the product costing you must always be aware that the resulting figures can never be exact.

The actual product costing supplies the actual costs of a product or order. The actual product costing of an order shows how far the actual costs of an order have varied from the pre-costed costs of this order.



Product costing scheme

In order to ascertain the costs of a product or a service you use a *product costing scheme*, which shows how the individual cost elements are to be assembled. The best-known of these schemes, which is based on the method of calculation of output, is constructed as follows:

Product costing scheme (traditional)	Marginal costing	Absorption costing
Direct material costs	■	■
Material overheads		■
Variable manufacturing costs	■	■
Manufacturing structure costs		■
Costs of external supplies	■	■
Special direct manufacturing costs	■	■
	Product costs	Full manufacturing costs
Special direct sales costs		■
Sales structure costs (Sales overheads rate)		■
Administration structure costs (Administration overheads rate)		■
		Full costs

The figures from the marginal costing (or *calculation of product costs*) are necessary for *contribution accounting*, while the figures from the absorption costing are needed for the *inventory valuation* and for the setting of cost-based selling price targets. For this reason this calculation should be carried out for every unit in the file of articles for all semi-finished goods and for every article produced.

Product costs (proco)

Product costs are the costs that 'slip into' the product, determining its physical existence. The technical background comprises bill of materials, recipe and operating plan. Product costs are formulated traditionally per calculation unit - per hour, per piece, per kilogram, per order. It follows then that they are the additional costs for 'one more unit'. Product costs are also described as marginal costs or variable costs.

Production planning and control

The *production planning and control system* is the central data, planning and handling system for production as a whole. In this system, among other things, large amounts of data are also processed and managed which are of importance for the cost accounting:

- *standard volumes* for materials in the bill of materials
- *standard times* for the operations in the individual cost centres
- standards for *set-up times* and capacities of the cost centres and work places

The *manufacturing programme* states how many units of what finished goods are to be produced. It arises from the *sales plan* (in terms of volume) which is amended in the light of the planned changes in the inventory. The manufacturing programme is the basis for the materials requirement planning and for the capacity requirements planning in production.

Profitability

The term *profitability* expresses a relationship of a profit figure to other business figures which have helped to bring about this profit. So, for example, the turnover profitability or return on sales measures the fraction of the profit in the turnover before deduction of taxes and interest (EBIT) and shows how much was 'earned' on each monetary unit sold:

$$\text{Turnover profitability} = \frac{\text{Profit before interest and taxes} * 100\%}{\text{Turnover}}$$

Profit objective / profit planning

The *profit objective* or ROI budget ('profit requirement budget') contains as a plan all the demands which can be made on the profit before deduction of profit taxes and interest. First and foremost comes the interest on borrowed capital required for business operations, distributions on equity capital, profit tax, budgeted payments to third parties or to the staff which are to be made from the profit, budgeted creation of new reserves (investment in the business's future), long-term provisions which cannot be regarded as cost components.

Demands on capital invested		4.52 Mil.
on the part of the staff:	allocation to staff welfare fund	80'000
on the part of the banks:	8% on the mortgage of 0.8 Mil.	64'000
	10% on average 1.6 Mil. short and long-term loans	160'000
on the part of the shareholders:	10% dividend on 1.0 Mil. subscribed share capital	100'000
on the part of the business to secure its future:	transfer to reserves (retained earnings)	140'000
on the part of the state:	60% from taxable income (for example)	360'000
Total profit requirement:		904'000
taxable income:	600'000	
less 60% tax	<u>360'000</u>	
Net profit	240'000	
This results in a ROI objective of 20%		
$904'000 / 4'520'000 = 20\%$		

The *target cash flow* is compiled from the *depreciation budget* and the *ROI budget*. By relating the target cashflow to the capital invested operating assets we get the cash flow ROI.

Profit potentials

Critical success factors are those variables, whose characteristics contribute largely to market success, and which are essential if you wish to be successful in competition within your industry. They are derived from industry and competition analysis as well as from market surveys, customer opinion polls and data banks etc. *Profit potentials* are a business's strengths and at the same time critical success factors. What it amounts to is the sum of all preconditions specific to products and markets that make for success (especially capacities and key competences), which have to be present before the moment of realisation of success arrives. The development and maintenance of market positions - and hence the creation of new products and / or markets - are of the first importance here.

Profit potentials influence the planning that leads to operative success; they are necessary, but not on their own adequate conditions for profit and liquidity. To find and select the right profit potentials is strategic management's main task.

Prognoses

Prognoses are forecasts based on investigations into the state of the market, the behaviour of competitors, and data concerning the environment. A prognosis is also the extrapolation of past economic trends into the future. They contribute, furthermore, to the data base used in corporate planning. It could be said that the planning building is erected on the site supplied by the prognoses. The difference between planning and prognoses lies in the fact that planning contains decisions on what needs to be done (or not as the case may be) and how it will be carried out.

Project controlling

Projects are business schemes with defined dates for beginning and end and consequently need a special controlling system not only at the strategic level but also at the operative level. *Project controlling* encompasses the planning, managing and controlling of output, costs and dead-lines of a project. In the

context of projects controllers should first supervise the observance of dates, a useful aid for which is the project plan which is devised by means of milestones or *network technique*. The next step is to check the investment expenditure in a project, and to this end the extended *investment appraisal* and the *investment budget* are referred to. To control the project costs you employ product costing since a project can be treated from a costing point of view like an order with possible sub-orders. The progress of the project should be judged by ascertaining the stage reached (percentage of completion). Merely to consider the costs incurred to date is not sufficient. This applies accordingly to controlling geared to customer orders in cases of complex job-order production.

Quality

According to the European standard ISO 8402 *quality* is the totality of features of a unit with regard to their ability to meet defined and predicted requirements. While quality was understood traditionally as a characteristic of products or services with the customers' requirements coming first, the concept of quality in the context of total quality concepts now extends over whole businesses. The customers' requirements of the management are now joined by the requirements of employees, investors and the general public. How far these requirements are met is a measure of the total quality of a business.

Quantity structure / value structure

The *quantity structure* of a product or a service is determined by its technical specifications. It may be found on the one hand in the *bill of materials / recipe* (material required) and on the other hand in the operations plan (*standard times* in the cost centres and *set-up times*). When linked with the value structure the material and manufacturing costs of a unit or an order may be calculated.

A bill of materials contains information about the composition of a product and lists the components to be purchased and single parts required for the manufacturing, not to mention the semi-finished products. For each of these parts the standard volume (in the sense of an objective to be reached) is also adhered to.

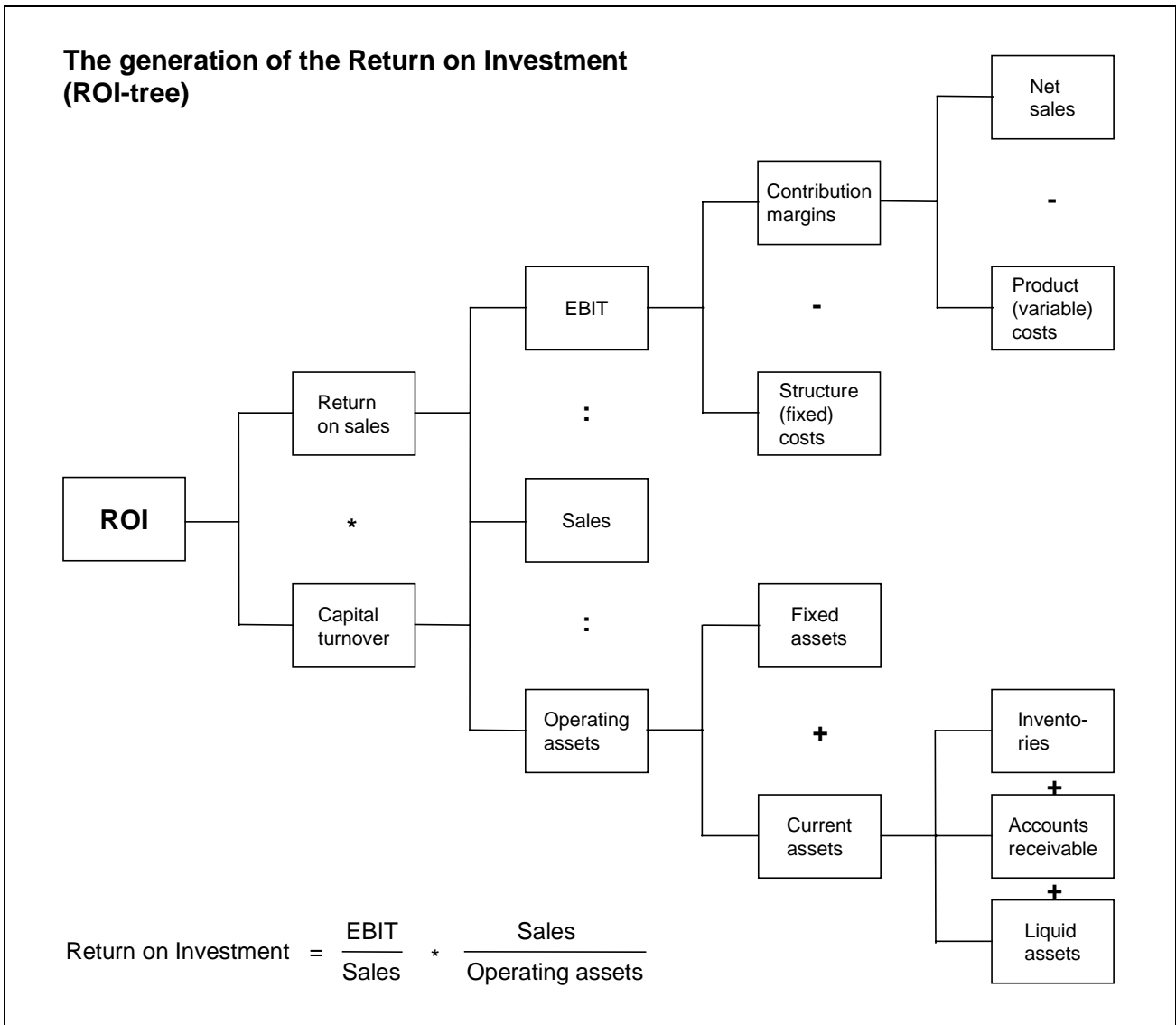
By set-up time is meant the time required in a cost centre for a specific machine to be retooled, so that a different article can be produced on this machine. Set-up times are clearly chargeable to the order and are done so as variable / product costs.

The value structure supplements the quantity structure. It is the ad valorem basis for the calculation of a product or a service. It includes:

- Planned or *standard prices* of the material to be used in the product in question,
- *cost rates* of the manufacturing cost centres,
- possible planned *wage rates* per hour in so far as single wages can be charged to orders and products.

Ratio systems

Ratio systems are mathematically or logically connected combinations of ratios (absolute or relative figures with special significance). Ratios are derived from planned values or actual data and serve as a standard by which to present cause and effect of operations in a causal connection. Under the entry 'objective' we have a *ratio system structure* which can be used in the comparison of budgeted and actual figures. It is an extension of DuPont de Nemour's well-known ROI scheme. The ROI-tree (see diagram) shows the *return on investment* (*properly speaking: return on operating assets*) and the factors that influence it in an inter-linked pattern of accounting. The upper part, which leads to the EBIT (earnings before taxes and interest), is built up as contribution accounting, while the lower part depicts the structure of *capital employed*.



Reporting

Reporting ensures that statements are made, both written and also oral, if the latter is possible and desirable, concerning how far individual reporting units have reached their objectives, where they have come up with variances, what the most important reasons of these are, and what *corrective measures* management has taken to deal with them. So a form of reporting that promotes controlling is always based on budgetary accounting where the business objectives are converted into figures.

Comparing actual performance with the objectives leads automatically to *forecasting*, which in the view of the managers concerned shows what costs, revenue or output additional to the actuals so far may be expected as a consequence of the corrective measures up to the end of the given period (usually year end).

What form the reporting takes depends on the organisation structures and processes in any given business. There are, admittedly, many suggestions for the development of *ratio systems*, but whatever definitive system is developed will reflect the needs of those responsible in the business. Reporting embraces in the form of data all the formal internal and external information which is put at the disposal of the responsible line-managers for the fulfilment of their tasks. Thus understood reporting is a part of a management information system dealing with finance, customers, innovations and processes ('Balanced Scorecard' as used in golf).

Responsibility accounting

The whole management accounting system should be constructed on the principle of responsibility. Since managers are also responsible for the financial results it is important to ensure, through the creation of cost centres, cost objects and contribution accounting, that clear distinctions are made in the reporting between costs, output and revenue as well as cost allocations applying a key or calculatory (imputed) figures which are directly and independently controllable during the space of one year by the person responsible. Within these categories targets should be set which are then to be checked against the actuals in order to make the practice of responsibility transparent.

Return on Investment (ROI)

The Return on Investment is what should 'come back' from the investment. The ROI is the form in which the profit goal is presented. The profit is related to the invested capital / operating assets, because the management has to earn the profit with the investment, i.e. with the available assets. The ROI ratio can be broken down into two basic components:

ROI = Return on sales * Capital turnover

$$\text{ROI} = \frac{\text{Earnings before interest and taxes} * 100\%}{\text{Sales}} * \frac{\text{Sales}}{\text{Operating assets}}$$

In German, ROI is called '*Gesamtkapitalrentabilität*'. But here the operating assets should be used as a basis and not, for instance, the unadjusted balance sheet total. (See diagram under 'Ratio systems')

Sensitivity analysis

A *sensitivity analysis* is used to find out how sensitively a decision-making model e.g. an *investment appraisal* reacts to the change in base figures, e.g. investment sum or benefits. In this way figures which are still acceptable may be determined and a *risk profile* drawn up.

Shareholder / shareholder value

The *shareholder value approach* is used to see whether the management of a company can succeed in increasing the company's value from one period to the next, bearing in mind the state of existing business and the investments needed to maintain its market position together with a proper return on capital employed. And here the shareholder value analysis comes into play.

For this one needs the free cashflows of the future periods, the WACC (weighted average cost of capital) which covers both the market risk as well as the specific risk for the business, and the *residual value* shown as perpetual annuity.

Because the interest on outside capital in contrast to the equity costs is fully tax -deductible and an overall consideration of the capital costs is aimed at, the interest on the outside capital is to be corrected downwards by taking into account the proportional taxes involved (1-t).

The average is deduced from the free cashflows of the periods in question. It is assumed when calculating the company's value that these free cashflows would in future come in every year, so that by applying the WACC one can calculate the present value of this perpetual annuity.

The shareholder value analysis is suitable above all for the financial evaluation of strategies, since the free cashflows can be calculated for the single years of the strategy horizon and discounted by means of the WACC. If the sum of all discounted present values is larger than zero, then the strategy is right for increasing the company's value.

If this analysis should be applied to the evaluation of a company it should be remembered that the investments for maintaining the existing market position can only be very roughly estimated.

We are talking here about so-called 'value-oriented' business. How much, in other words, is the firm worth to the proprietor looked at in the long term rather than from the immediate perspective of the current balance sheet.

The following definitions are valid:

Shareholder value = company value less outside capital

Company value = $\frac{\text{present value of all future free cash flows}}{\text{WACC (weighted average cost of capital)}}$

WACC = $\text{PI} * \text{OCS} * (1-t) + (\text{Beta} * (\text{MP} - \text{RFI}) + \text{RFI}) * \text{EQS}$

PI = average rate of interest paid by the company for outside capital: 6.5%

OCS = outside capital share of the balance sheet total: 60%

t = income tax rate on profit before taxes: 30%

Beta = Beta-factor which indicates how strongly the share price in this line of business or that company fluctuates when the stock exchange index rises by one point: 1.5

MP = expected average rate of market return for a line of business or a market (stock exchange): 8%

RF = interest rate for risk-free investment: 5%

EQS = equity share of the balance sheet total: 40%

WACC = $6.5\% * 60\% * (1-30\%) + (1.5 * (8\% - 5\%) + 5\%) * 40\% = 6.53\%$

Free cashflow of the period concerned: av. 1.7 Mil. p.a.

Perpetual annuity = free cashflow p.a. / WACC = 1.7 Mil. / 6.53% = 26.03 Mil.

Company value = perpetual annuity = present value of all future free cash flows

Shareholder Value = 26,03 Mil. - 10 Mil. outside capital (assumption) = 16,03 Mil.

Special direct costs

Special direct costs of sales and production are cost elements which can be unambiguously assigned to a manufacturing or customer order and so be taken into account in the product *costing*. Examples: special tools and equipment for products, special carriage and promotion costs for a specific order or customer.

Stakeholder

Following the concept of 'shareholder' the concept of '*stakeholder*' combines all those interest groups that have claims on the company, e.g. employees, customers, suppliers, creditors, members, associations, the media, the general public, the tax authorities.

Standard costing

Standard costing is an offshoot of *budgeting* (German: Plankostenrechnung) where all the output supplies are always calculated at standardised rates. Supplies from stock are always valued at the standard purchase price and outputs from cost centres at the *budgeted cost rate*. This has the great advantage that in the comparison between budgeted and actual figures variances which have occurred in upstream systems do not appear in downstream systems. In this way the requirement of responsibility accounting is met whereby only those costs that are capable of being controlled are shown.

The standard product costs derive from the budgeted or preliminary costing. In costing they are arrived at per product by multiplying the materials required (standard quantity) by the corresponding standard material prices as well as the working hours (standard hours) by the appropriate variable cost rates. They therefore express what the single product will incur in the way of output-related costs. In the preliminary calculation the standard product costs are calculated in terms of a specific order, i.e. according to exact specifications from

the customer but with standard prices and budgeted cost rates. So any difference that may arise is to be attributed only to changes in the order.

Standards of performance

The standards of performance (SOPs) belong to the structure costs. They express the productivity of performance in the administration. They too have an output, which like that of any directly productive cost centre may be planned by means of output units / activity type and rendered identifiable. The SOPs help to test the structure costs for their suitability. They are intended to make this part of the firm's performance structure transparent. SOPs can be both quantitative (number of book entries, orders etc.) and qualitative (fluctuation rate, customer satisfaction etc.).

A standard of performance is the yardstick for a centre's possible performance. So SOPs are planned like the a cost centre's capacity utilisation rate. One should try to adapt the capacity installed in the centre to the expected needs of the market (external and internal). Through the juxtaposition of the output volumes against the budgeted costs, cost rates for processes or in-house output tariffs could also be computed.

Statement of changes in financial position

The *Statement of changes in financial position* shows the alteration in the inventory accounts between two balance sheet dates. This is purely a consideration of differences. Once it can be shown in detail from which of the company's sources during the reporting period funds have flowed in (source of funds) and how or for what purposes they were employed (application of funds), you have the cash flow statement, which is harnessed to provide transparency in financial budgeting.

The source of funds results from the cashflow, from the increase of debts (raising of equity and debt capital) and decrease of assets (running down of stocks, sale of plant), while the application of funds arises from increases in assets (investment in capital assets, growth of accounts receivable) and reductions in debts (repayment of a loan, decrease in accounts payable).

Strategic tools

A large number of tools have been developed for the finding, selecting and drafting of strategies. Controllers and other people who want to assist in the strategy development process should think carefully which set of methods they want to use for their own business. It is advisable to use only a few methods, but those correctly in order, in all this wealth of analyses, not to neglect the most important point, namely that of gaining new and coherent strategies.

Strategic business analysis is the evaluation of a business's performance potential and its core capacities. It includes the analysis of the strategic base position (potential, dependencies, market position), of business units, of functional areas and of the value chain from the supplier through to the customer.

Value chain analysis is a tool used in strategic business analysis. Every business may be regarded as the sum total of value-adding and support activities which together form the business's 'value chain'. Value chain analysis describes the value added by each step in the manufacturing process and sets against this the costs and the possible potential for differentiation.

Portfolio analysis see Portfolio concept

Product / market matrix

Markets /	Existing	New
Products		
Existing	Market penetration	Market expansion
New	Product / product-mix expansion	Diversification

The product / market matrix helps in the search for new products and markets and the integration of existing product/market combinations. From this risk profiles and synergy potentials are drawn up.

The competition analysis or business sector survey is an element in the environment analysis. The structure and development of a business sector directly influence the competition and so indirectly the strategies that a business can sensibly employ. A business sector's profit potential is determined by five competition factors:

- Threat from new competitors
- Threat through substitute products
- Negotiating power of the buyers
- Negotiating power of suppliers
- Rivalry among existing businesses

A *scenario* is a picture of an imaginable future situation. As a rule several scenarios are envisaged (optimistic, pessimistic and realistic) in order to delimit future space for opportunity. In contrast to a prognosis, the scenario technique proceeds from the idea that there can be more than one trend for future development. When discussing scenarios the term 'future behaviour patterns' is also used.

Potential analysis is an instrument in strategic controlling used to establish available *profit potentials*. Here the basic idea is that a business's strengths are compared with those of its most important competitors and the key factors of the market. Potentials are capabilities to solve a problem for a customer and better, moreover, than the competitors can. What is important in the analysis of the profit potential is that the influences on which the profit depends are mostly known already and can be brought under control before an effect becomes apparent in the result. To do such an analysis you have to draw up a list of criteria which express what kind of problems the customer wants solved. The profit potentials are drawn up before the profit, not after.

SWOT analysis is the English abbreviation for the analysis of

- Strengths
- Weaknesses
- Opportunities
- Threats

It is used mainly as a form of self-analysis in a business's normative and strategic planning.

GAP-analysis is the identification of the nature and extent of the gap between the desired future development of a business and what may be expected on the basis of current business activities. This gap may be divided into an operative one (difference between the continuation of past activities with no change and the potential development of the core business optimised by operative measures) and a strategic gap (difference between the strategic planned target and the best possible development of the core business while exploiting all operative opportunities to optimise).

A *basis strategy* describes the strategic alignment of the whole business. Three types may be distinguished:

- comprehensive cost leadership
- differentiation
- concentration on focuses (niche strategy)

The aim of cost leadership is to achieve a comprehensive lead in costs over the competitors; it requires large production volumes and a lean cost structure.

Differentiation strategy lifts products or services from competitors' offers in order to add an extra value to them, for which the customer is also prepared to pay a corresponding premium. Such factors as brand design technology, customer service, distribution system etc. lend themselves to differentiation. The four central sources of differentiation are:

- Quality
- Design
- Image
- Service

Niche strategy obtains where a business concentrates on the quite special needs of a segment within the business sector (market niche). It can employ either cost leadership or differentiation, but refers just to a market segment. Niche strategy also provides smaller businesses with the opportunity to develop competitive advantages.

Strategy

Open the ancient Greek dictionary and you will find under strategy: 'Ways and means of leading the army in the field; art, skill'. It also means to triumph over someone through military cunning. In the market economy military cunning would refer to thinking in terms of competitive advantages. What kind of advantage puts one ahead of a competitor in the conquest of the fortress named 'clientele'? Is it rock-bottom prices, is it differentiation strategies in the sense of better quality or better customer service? Is it strategies in the sense of the lifelong provision for a target group? Is it the strategy of the global player or the strategy of being strong 'in your own backyard'?

Strategic planning aims to discover what profit potentials the firm, or rather the strategic business unit has to offer and what new profit potentials the firm should develop. It seeks to discover whether it is doing the right thing for the right customers. Operative management should then exploit the available profit potentials, that is to say convert them into contribution margins and profits, and develop the new profit potentials.

A strategic business unit is a delimitation, for organisational convenience, of the most homogeneously possible fields of activity, which are typified by common strategic characteristics and for each of which an independent product-market-strategy can be worked out and put into practice.

Functional area strategies serve to put the corporate strategy into practice at the level of individual areas of business functions like marketing, R&D, personnel, finance etc. They ensure that all the functional areas with a bearing on strategy make their contribution to the implementation of the overall strategy, that potentials for rationalisation are realised and additional capacity potentials are developed.

Structure costs (struco)

Structure costs are costs that create the organisational framework in purchasing, in marketing, in research into new products, in the administration, in logistics, in corporate culture, in the navigability of the business. Structure costs too are to be planned in the light of operations, in conjunction with *Standards of Performance* (SOP) for qualities and quantities. The structure costs are also called *fixed costs*, *period costs* or *capacity costs*. By tradition they are formulated for a certain period.

Target costing

Target costing is the concept of the market-oriented target cost management which applies in the early phases of product development. With target costing products are to be developed to fulfil functional features defined by the customer, thus involving costs permitted, as it were, by the customer. The question that stands in the foreground is: what may a product cost? Costing goes hand in hand from the very beginning with product planning and settles on the price determined by market research.

Time-based Management

Time-based competition is a management philosophy originating in Japan which perceives time as the critical success factor and uses it in place of costs as a yardstick for success. A more efficient handling of time as a resource should result in a fall in production costs, while at the same time improving the quality of service.

Total cost analysis

In the total cost analysis the total expenditure on materials, personnel and depreciation for a given period are set against the turnover for this period. If the production volume is greater than the sales volume then an increase in stocks is to be added to the income (counter entry in the inventory account on the debit side). Cf. capital cashflow account -direct method.

Total Quality Management (TQM)

Quality means meeting requirements. The management philosophy of *Total Quality Management* perceives quality in the broadest sense as the *critical success factor* and subjects it to systematic planning and control. It is top management's chief task to create through personal example and publicity a high level of *quality awareness* throughout the business. Every manager and his/her team is responsible for the quality of the operations in their area.

Transfer prices

The concept of the *transfer price* in the sense of a clear demarcation should be applied very sparingly. Transfer prices enable exchanges of goods and services to be settled between interrelated companies or divisions within a single company. If services are exchanged between cost centres then the term *internal cost allocation* is used.

In the field of group cost accounting a special problem arises, namely that the group member company that obtains a product or a service accepts the historic buying rate in terms of material input from the group affiliate. But the group member that does the supplying has a method of classifying costs and also a calculated profit which the recipient is not permitted to see. To achieve transparency for the group the headquarters group controller ought to ensure that types of costs are broken down in the calculations in such a way that consolidated material inputs, wages inputs etc, are visible.

Treasurer

As understood in the English business world the *treasurer* looks after the financial management of a business and is responsible for:

- raising of capital and funds,
- contacts with banks and capital markets
- cash management
- rolling middle-term financial planning for the business,
- hedging of financial risks

Types of cost

Different types of cost arise in a cost centre or in a cost object. The most important groups of types of cost are:

- personnel costs (wages and salaries, bonuses, overtime payments, temporary staff, social security benefits),
- material costs (raw materials and supplies, assembly parts and single items drawn from stock),
- outside services (services not connected with material or repairs, from third parties),
- repair and maintenance costs,
- other costs (expenses for travel and hospitality, rents, postage, telephone etc.),
- cost allocations (charges of costs from other cost centres for internal services like, for example, building costs, warehouse costs, management and administration costs),
- calculatory imputed depreciation (commercially necessary depreciation for the capital assets and possible inventories in the cost centre),
- calculatory imputed interest (commercially necessary interest on the capital invested in the cost centre).

Cost type accounting serves to collect and break down all the different types of costs within a given period. The key question asked here is: what costs have been incurred? So cost type accounting is not a special kind of accounting, but merely a systematic way of registering costs. The collection of costs happens through the posting to accountants of the vouchers in the available accounting systems (accounts payable, wage accounting, materials accounting, etc.).

Value analysis

Value analysis (functions cost analysis) pursues the objective of recognising and eliminating all those costs that are not necessary for the value and / or function of a product or service. So it is a question here of a systematic approach that comes to terms with the product in its entirety and in its individual components. For this reason not only experts from purchasing, production and sales should be involved in the value analysis team but, if at all possible, suppliers and customers too. A controller is often detailed to lead the team.

Variable costs

Variable costs are costs that come about because a product is manufactured or a service delivered. They are determined by the structure of the cost centre service or of the product (bills of material, operation plans, recipes). What share of the costs varies with the output is laid down in the cost budget. If the actual output is lower than planned this means that variable costs are converted into structure costs, because they cannot 'slip into' the products. In the case of a higher than planned output the reverse happens and the structure costs are converted into variable costs, which means that an increased use of available capacity is made to achieve productive output.

Variable costs are a synonym for product costs. However, controllers would be well advised not to use the term 'variable costs' since the pairs of terms 'controllable / calculatory' and 'product costs / structure costs' are very often confused, which leads to bad decisions and communication barriers.

Variance analysis / comparison of budgeted and actual figures (CBA)

The variance analysis in the broadest sense is the comparison between actual values and output on the one hand with 'what should have been' on the other. In this form the term relates to the enterprise as a whole. Variance analysis in the narrower sense is the comparison within cost centres of budgeted costs which should have been incurred by efficient, i.e. planned production of output, with the actual costs incurred. And this gives rise to the consumption variance. What causes lie behind these variances are analysed in the CBA, so that ways and means of avoiding such variances in future can be identified and any corrective measures agreed.

The expression 'talking through the costs' refers to discussions between cost centre managers and controllers on the subject of variance analyses. The aim is briefly to identify the causes of significant variances between budgeted and actual figures, to decide on suitable corrective measures and to consider whether the variances will increase in the future or level out again, i.e. to evolve the forecast.

Variances

A variance is a difference between a planned or budgeted value and an actual value. Variances give managers the opportunity to consider possible corrective measures and to implement them. The causes of a variance from the planned or budgeted figures are ascertained by means of a variance analysis.

The word variance has become accepted, although quite unintentionally it gives the impression that it is to be used to allocate blame. It could easily be replaced by a word like 'difference', or a phrase like 'degree of targeting accuracy, or delta'.

For the task of a controller, which is supposed to support the managers' own controlling, all variances are relevant, both those that arise in the field of financial figures as well as those that result from simple comparisons of performance or from observation of the market, in other words those variances found in strategically relevant sectors such as customer satisfaction or market share.

Zero Base Budgeting (ZBB)

Zero base budgeting is first of all a way of thinking about budgeting, namely starting from scratch. Secondly it is a budgeting technique which does not start from the existing cost structure but seeks new and more efficient ways of achieving output. The aim of the ZBB method is to increase the controllability of the structure costs.