Chapter 2

Financial Accounting (FI)

Overview

Financial Accounting is divided into the following areas:

- G/L Accounting (FI-GL)
- Accounts Receivable Accounting (FI-AR)
- Accounts Payable Accounting (FI-AP)
- Asset Accounting (FI-AA)
- Special Ledger (FI-SL)
- Consolidation (FI-LC)[1]

Accounts Receivable Accounting

Accounts Receivable Accounting is part of the R/3 *Financial Accounting* component and is used to efficiently regulate and monitor business transactions with customers. In the IDES system, approximately 70 customers have been created in company code 1000 (Germany).

Most of the customers in company code 1000 (Germany) are maintained centrally, and belong to IDES sales organization 1000 (Frankfurt), or 1020 (Berlin). You will find a list of all IDES customers (customer master data) in Appendix B.

Accounts Payable Accounting

R/3 Accounts Payable Accounting is used to manage account-based data for all vendors. This data is transferred to Accounts Payable Accounting by means of the integrated business processes for invoice verification. Payments can be generated for invoices that have been released. These payments are made by the due date.

Most of the vendors in company code 1000 (Germany) are maintained centrally, and belong to IDES sales organization 1 (Europe), or 1000 (Germany). You will find a list of all IDES vendors (vendor master data) in Appendix B.

Asset Accounting

Asset Accounting complies with German and American legal regulations regarding the valuation of assets. Acquisitions, retirements, transfer postings, depreciations and write-ups can be entered, calculated and processed. In addition to the asset evaluations prescribed by law, you can also define as many depreciation and valuation methods as you require for Controlling. At present, approximately 200 assets are defined as fixed assets in the IDES system. Each fixed asset is assigned to a cost center, business area and profit center, and is registered in a plant. The asset master records identify the capital assets that make up a company's fixed assets. These asset master records have been divided up into asset classes so that the assets can be structured more clearly.

[1]As of Release 4.0, EC-CS is part of Enterprise Controlling (EC). CS stands for Consolidation.

The following asset classes have been defined in the IDES system for the chart of depreciation for Germany.

Asset class	Description	Asset type	Number range
1000	Real estate	10000	01
1100	Buildings	10000	01
2000	Machines declining depr.	20000	02
2100	Machines straight-line-depr.	20000	02
3000	Fixture and fittings	30000	03
3100	Vehicles	30000	03
3200	Personal computers	30000	04
4000	Assets under construction	40000	05
5000	Low value assets – individual management	50000	05
5001	Low value assets – collective maintenance	50000	05

Special Ledger

The functions in Special Ledger enable you to work with customer-specific ledgers. These ledgers contain factors from additional account assignments, and are used for company-specific reporting purposes. Validation and derivation functions are available for all customer-specific ledgers. Ledgers are integrated fully with the other functions in Financial Accounting.

The IDES system contains the following ledgers:

Ledger	Name of ledger	Component	Use
00	G/L account for transaction figures (standard)	FI-GL	Updating G/L transaction figures in company code and group currency
0R	Export ledger for Ledger 0 (standard)	FI-GL	Export transaction figures to another system using Application Link Enabling (ALE) (exported to another client in the IDES system)
0F	Cost of sales accounting ledger (standard)	FI-GL	Update line items for functional areas. You can use this ledger to create a profit and loss statement using cost of sales accounting.
3A	Reconciliation ledger (standard)	CO-OM	Reconciliation between CO and FI
8A	Profit center accounting (standard)	EC-PCA	Update transaction figure in Profit Center Accounting
L2	G/L transaction account (IDES-specific)	FI-GL	Update G/L transaction figures in a hard currency (third currency); used for company code 6000 (Mexico)

Consolidation

This involves consolidating the individual financial statements of all internal trading partners to produce consolidated financial statements. These consolidated financial statements should portray the situation regarding finances, investments and revenue as if all the companies involved were unified into a single company.

The consolidated entity in the IDES system is the IDES corporate group, which comprises the following three IDES subgroups: IDES Europe, IDES America and IDES Asia.

A “standalone” example has also been created in the IDES system. This example shows how individual financial statements that come from an external database are consolidated in the R/3 System. The model that is created for this is separate from the IDES model. Data is imported from external databases into the IDES clients, where it is consolidated to form a separate corporate group.

The necessary definitions and master records of the companies and subgroups are defined in the Consolidation system (FI-LC).

Before you can consolidate this data, you must transfer financial statement data to the Consolidation system and make the necessary standardizing entries and conversions. Consolidation involves the following steps:

- ❑ Making standardizing entries
- ❑ Translating currency
- ❑ Eliminating corporate group payables and receivables
- ❑ Eliminating intercompany profit/loss in inventory
- ❑ Eliminating intercompany profit/loss in transferred assets
- ❑ Consolidating investments

Organizational Structures

Company code

A company code is the smallest organizational unit for which a complete self-contained set of accounts can be drawn up for purposes of external reporting. At present, IDES comprises nine company codes. Each company code fulfills a specific business task. Plans are underway to introduce two further company codes (two company codes in North America to provide an example for the Retail area).

Company code Name	HQ	Currency	Chart of A/Cs	Business task
1000 IDES Germany	Frankfurt	DEM	INT (alternative KTP GKR)	Can be used to demonstrate the business processes of Logistics, Accounting and Human Resources. Shows everyday accounting processes and closing operations.
2000 IDES Great Britain	London	GBP	INT (alternative KTP CAGB)	Streamlined company (FI, CO in a "medium size" company). Logistics business transactions can be transferred to Financial Accounting (account determination).
2100 IDES Portugal	Porto	PTE	INT	Local production scenarios using ALE. Most processes defined in Logistics. All necessary settings in Financial Accounting have been made to ensure that data can be transferred between the centralized and local systems.
2200 IDES France	Paris	FRF	CAFR	Sales company only. Business transactions (alternative KTP are documented from a Logistics and INT) Accounting perspective.
2300 IDES Spain	Barcelona	ESP	INT	Sales scenarios using ALE. Most processes defined in Logistics. All necessary settings in Financial Accounting have been made to ensure that data can be transferred between the centralized and local systems.
3000 IDES USA	New York	USD	CAUS	Can be used to demonstrate the business processes of Logistics, Accounting and Human Resources. Shows everyday accounting processes.
4000 IDES Canada	Toronto	CAD	CAUS (alternative KTP CACA)	Streamlined company (FI, CO in a "medium size" company). Logistics business transactions can be transferred to Financial Accounting (account determination).
5000 IDES Japan	Tokyo	JPY	CAJP	Can be used to demonstrate FI and HR. (Currently under construction).
6000 IDES Mexico	Mexico City	MXN	INT	Model for demonstrating material ledger functionality, and accounting in a third currency (hard currency). Model currently under construction.

Company

A company is the smallest organizational unit for which individual financial statements can be drawn up (in accordance with the appropriate trading laws) for purposes of external reporting. A company's financial statement forms the basis of a consolidated financial statement.

A company can comprise one or more company codes. In IDES, however, each company comprises one company code. A company is always defined on the basis of a version.

Subgroups

A consolidation group is called a subgroup if the consolidation units are companies.

The IDES group comprises three subgroups: IDES Europe, IDES America and IDES Asia. The IDES group has a centralized head office. The subgroups comprise the following companies:

Subgroup IDES North America

Company code Name	Company
3000 IDES USA	3000
IDES USA Trading company	Planned
IDES USA Trading company	Planned
4000 IDES Canada	4000
6000 IDES Mexico	6000

Subgroup IDES Europe

Company code Name	Company
1000 IDES Germany	1000
2000 IDES Great Britain	2000
2100 IDES Portugal	2100
2200 IDES France	2200
2300 IDES Spain	2300

Subgroup IDES Asia

Company code Name	Company
5000 IDES Japan	5000

Credit control area

A credit control area is an area responsible for granting and monitoring customer credit.

This credit is monitored across all company codes. The IDES system contains four credit control areas:

Credit control area Name	Company codes	Currency	Sales organization
1000 IDES Europe	1000 2000 2100 2200 2300	DEM	1000 Germany Frankfurt/ Germany Berlin 2000 Heathrow/Hayes 2100 Portugal Porto 2200 France Paris 2300 Spain Barcelona
3000 IDES North America	3000 4000	USD	3000 USA Philadelphia 3020 USA Denver 4000 Toronto
5000 IDES Japan Under construction	5000	JPY	5000 Tokyo Under construction
6000 IDES Mexico		6000	MXN 6000 Mexico City

Business areas

A business area is an organizational unit of financial accounting that represents a separate area of operations or responsibilities within an organization. Financial accounting transactions can be allocated to a specific business area.

As a legal entity, the company code represents the company that draws up a financial statement. You can also use the business area to form organizational units which extend beyond a company code and which represent a separate area of operations or responsibilities within an organization. The business area forms internal structures for external reporting. This enables you to report on the profit and loss (P+L) statement and selected balance sheet items for product lines or regional structures.

The business areas in the IDES system are defined in accordance with the strategic business segments of the IDES corporate group:

Business area	Name	Division	Name	Plant
1000	Mech. engineering	01	Pumps	1000/3000
1500	Consumer products: Food	05	Food	1100/3100
2000	Plant engineering	06	Elevators	1300/3300
3000	Automotive	02 09 10	Motorcycles Accessories Vehicles	1000/3000 1000/3000 1000/2000 2100/2300 3000/4000
4000	Chemicals	03 12	Paints Solvents	1100/3100 1100/3100
5000	Consumer products: Non-food	04 12	Lighting Cosmetics	1200/3200 1100/3100
6000	Pharmaceuticals	13	Pharmaceutics	1100/3100
7000	Electronic products	07 15	High tech Electronic components	1200/2200 3200 6000/6100
8000	External services	08	Services	1200/000 2200/3200 4000
9900	Corporate Other			

Functional areas

Functional areas classify the expenses of an organization by function (such as administration, sales and distribution, marketing, production, and R&D) in accordance with the requirements of cost-of-sales accounting. Functional areas are derived from business processes by means of substitution rules. They are defined as follows in the IDES system:

Functional area	Name	Substitution	Cost center category
0100	Production costs	Production orders Work in progress Direct posting to cost object or sales order	1 Production 2 Service cost centers
0300	Sales costs	Internal orders for Sales and Marketing	3 Sales and distribution
0400	Administrative costs	Internal order for Admin. and Management	4 Administration 5 Management
0500	R&D costs	Internal orders for	6 Research and development research and development

Cross-system company codes (ALE)

A cross-system company code is a company code that is unique throughout a group and which has a cross-system company code ID in addition to its local company code ID. A cross-system company code is a cross-system organizational unit that has to be defined for distribution scenarios.

In a distributed environment, there is one central system for each cross-system company code. (This is simulated by client 800 in the IDES system.) You have to assign a company code to this cross-system company code in every system that is part of the distributed environment. (Two different clients – 810 and 811 – are used to simulated two systems in IDES.)

The following four cross-system company codes have been defined in the IDES system for use in ALE scenarios:

Cross-system company code	Company code	Name
1000	1000	IDES Germany
2000	2000	IDES Great Britain
2100	2100	IDES Portugal
2300	2300	IDES Spain

Settings and Special Features in Financial Accounting

Currencies

In order to meet country-specific legal requirements, the accounts of international subsidiaries are managed in up to three currencies simultaneously. This means that each business transaction results in local, group, and possibly hard currency historical records.

The currency of the client, the German mark, is the corporate group currency. The client currency is defined as the second currency in each company code. The first currency is always the company code currency.

In the IDES system, an exception to this rule is company code 6000 (Mexico). The second currency there is the hard currency (US dollar). In this case, the corporate group currency is defined as the third currency. A special ledger (L2) manages postings in both currencies simultaneously.

Posting period and document number ranges

The posting period is a period within a fiscal year for which transaction figures can be updated. In the IDES system, all the Financial Accounting posting periods have been left open so that past and future postings can be generated. An exception to this is Asset Accounting: here, only the current fiscal year and the previous fiscal year are ever left open.

The fiscal year variant K4 contains 12 periods plus 4 special periods. At present, the document number ranges are valid until 1999.

Tax on sales/purchases

The IDES system has been set up to handle taxes for all company codes. Structure TAXD is used for handling taxes in Germany. The appropriate tax codes, calculation structures and account determination have all been set up. Structure TAXUSJ is used in the American company code (approximately 80 jurisdiction codes have been provided). Generally speaking, the sales tax ID and jurisdiction codes are contained in the customer and vendor master records.

Settings and Special Features in FI-GL

Chart of accounts

G/L Accounting uses a chart of accounts that you can implement for a specific company or for an entire corporate group. If you want to meet both groupwide *and* country-specific requirements, you can use several charts of accounts simultaneously.

IDES uses different transaction charts of accounts and alternative charts of accounts for IDES Europe, IDES America and IDES Asia.

Subgroup Europe	Company code	Transaction chart of A/Cs	Alternative chart of A/Cs	Currency
IDES Germany	1000	INT	GKR	DM
IDES Great Britain	2000	INT	CAGB	GB
IDES Portugal	2100	INT		PTE
IDES France	2200	CAFR	INT	FRF
IDES Spain	2300	INT		SPE

Subgroup America	Company code	Transaction chart of A/Cs	Alternative chart of A/Cs	Currency
IDES USA	3000	CAUS		USD
IDES Canada	4000	CAUS	CACA	CAD
IDES Mexico	6000	INT		MXN

Subgroup Asia	Company code	Transaction chart of A/Cs	Alternative chart of A/Cs	Currency
IDES Japan	5000	CAJP		JPY

Business transactions

G/L account postings

At present, the IDES system contains the same document types and posting keys as the standard system. The field status variant is used to specify which fields of a field status group are ready for input, which are required fields, and which are hidden for G/L account postings. The variant defined for this in the IDES system is variant 1000. This variant applies to each company code. The following company codes have been defined to meet country-specific requirements:

Company code	Name	Screen variant
2200	IDES France	2
3000	IDES USA	2
4000	IDES Canada	2

Cross-company code transactions

Cross-company code transactions have been defined for transactions between the following company codes:

Company code in CC[2]	Settled against CC[2]	Payable posted to account	Receivables posted to account
1000	2000	194002	194002
1000	2200	194003	194003
1000	3000	194001	194001
2000	1000	194001	194001
2200	1000	188000	188000
3000	1000	194002	194002
3000	4000	194003	194003
4000	3000	194002	194002

Clearing open items

In chart of accounts INT, accounts that accrue exchange rate differences arising from valuation and from clearing have been created for every account that handles open items.

The realized exchange rate differences are posted to account 230000 (for expenses) or 280000 (for revenue). If you want to post expenses or revenue resulting from exchange rate differences during valuation, use account 230010, or 280010.

Financial statements

Financial statements describe the status of a company or group on a key date from a business point of view. Financial statements are drawn up in accordance with legal or internal regulations. Generally speaking, financial statements comprise several parts.

The R/3 System provides you with a range of reports that you can use to generate adjustment postings. You will need to set up account determination for this in Customizing. Settings have already been made for the areas involving foreign currency valuation and goods/invoice receipt in the IDES system.

Foreign currency valuation

The following valuation method has been defined for valuating foreign currency:

Valuation method	Settings made
DEMO	Valuation on the basis of the lowest value principle. Only expenses from exchange rate differences are posted for valuations. Possible revenues are only posted when actual exchange rate differences occur.
VAL1	Basic valuation; Here, revenues and expenses are posted for valuations and actual exchange rate differences.

Accounts for automatic postings have been created for charts of accounts INT and CAUS.

[2]CC = Company code.

Goods receipt/invoice receipt

Any offsetting entries made for goods receipts or invoice receipts in Materials Management are always posted to a clearing account. In the IDES system, this clearing account is account 191100 for company codes that use chart of accounts INT or CAUS. At the end of a period, the system checks in Materials Management to see if goods receipts and invoice receipts have been entered for the individual purchase orders. On the balance sheet key date, transfer postings are accrued in Financial Accounting for all transactions which have not been closed, and for which an adjustment account and target account have been created in the IDES system.

Account	Name	Description
191199	Adjustment account	Goods/invoice receipt settlement – external procurement (adjustment)
191101	Accruals/deferrals a/c	Goods/invoice receipt for delivery and services not performed
191102	Accruals/deferrals a/c	Goods/invoice receipt for deliveries and services not settled

Defining financial statements

The revenue and expenses of a period are compared with each other in the profit and loss (P+L) statement in order to determine the company's results and the underlying reasons for these results. The P+L statement is an obligatory component of the end-of-year financial statement. You can draw up the P+L statement using period accounting or cost-of-sales accounting. The IDES system can handle cost-of-sales accounting by dividing up the expenses by functional area.

The general ledger in the IDES system is subdivided on the basis of business areas. To ensure that the reports created at the business area level are consistent, all the G / L account postings have to be assigned to a business area and, if necessary, split. This takes place in the subsidiary ledgers, or in the integrated R / 3 components from which the data was derived. For this reason, the balance sheet and the P+L statement can be subdivided by business area, and collective cross-company code reports can be created for several business areas.[3]

CC	Fin.statmt. version	Business area Balance sheet	Period-accounting	Cost of sales-accounting	Language
1000	INT	X	X	X	D
2000	INT	X	X	–	–
2100	INT	X	X	–	–
2200	INT	X	X	–	–
2300	BSFR*	X	X	–	F
3000	BSUS	X	X	X	E
4000	BSUS	X	X	–	–
5000	INT	X	X	–	–
6000	BSJP*	X	X	–	E

– Not in IDES X In the org. unit
*Balance sheet structure under construction

[3] Subsequent debiting is not possible for business areas. The settings for subdividing payables and receivables, or tax amounts by business area are still incomplete.

Integration

- Asset Accounting
  Complete account determination settings have been made for company codes 1000 and 3000.
- Overhead Cost Controlling
  Regardless of the CO transaction, CO-FI reconciliation postings involving company codes that use chart of accounts INT are posted to account 49998. Company code 3000 uses chart of accounts CAUS. Depending on the CO transaction in question, the reconciliation postings are posted to account 499997 or 499998.

Settings and Special Features in FI-AP

Invoice parking

In Accounts Payable Accounting in IDES, you can enter an invoice and park it without having to enter all its details. Parked items are not taken into account in the monthly transaction figures, but they can be monitored on an open item basis. A parked document can be added to, checked and posted at a later stage – even by another employee.

Parking is possible in Accounts Receivable Accounting, Accounts Payable Accounting, Asset Accounting and G/L Accounting. You can also park documents during invoice verification in Materials Management (MM).

Recurring entries

As their name suggests, recurring entries are business processes in Financial Accounting that you have to repeat at regular intervals. The IDES system uses a rental agreement to show how recurring entries are handled. The monthly rental is posted using a recurring entry document.

Automatic payment transaction

The payment program processes domestic and foreign payments for vendors and customers. It creates the payment documents, and supplies data to the payment medium programs. These ABAP/4 programs either print out a payment list or payment forms (checks, for example), or create data media such as magnetic tapes or diskettes.

In the IDES system, the payment program has been preconfigured so that it can handle this process. Several banks have been defined as house banks for IDES. These house banks pay open items on the basis of predefined selection criteria. Payment methods have been specified in vendor master data. Limits and value dates have been defined for these payment methods.

Info System for Accounts Payable

You can use the information system in Accounts Receivable Accounting and Accounts Payable Accounting to quickly analyze one or more operational areas. You can report on the payment history or the total amount of due items, and break down results for particular time intervals. The information system in IDES comprises a number of analyses which are updated on a weekly basis. This allows you to analyze the payables of the IDES corporate group from different perspectives. Every figure can be traced back to the individual document from which it came.

Payment transactions

In the IDES system, you can clear due invoices either manually, or using a payment program. The following payment methods are available:

- Check
- Bank transfer
- Foreign bank transfer
- Payment by data carrier

In the IDES system, accounts for company code 1000 (Germany) have been set up with three house banks to handle such payment transactions.

House bank	House bank A/C	Fictional A/C no.	Name
1000	1000	1231312	Current account
1200	1200	121234	Current account
1300	1300	38882008	Current account
1000	1050		Foreign exchange account

Settings and Special Features in FI-AR

Dunning of customers

Dunning notices remind customers that they have overdue items which have still not been paid. These dunning notices are generated automatically using the dunning program. The dunning program specifies which accounts and which items are to be dunned. The dunning program determines the dunning level, and creates the appropriate dunning notices for this level. The dunning program prints out the dunning notices, and updates the dunning data in the overdue items and in the relevant customer's master data.

In the IDES system, most customers have dunning procedure 0001 defined in their master record. Dunning procedure 0001 comprises 4 dunning levels, one level every 14 days. Different dunning notices are sent each time, and the dunning level is increased by one. These letters have been defined with headers and footers for company code 1000.

Customers

At present, there are approximately 70 customers in company code 1000. All the other company codes contain only a few master data records which have been defined to demonstrate specific processes.

IDES convention	Account group	No. range	Range	Use
4-character	0001	01	1-99999	External customers
5- character	PLNT	01	1-99999	Affiliated companies
6- character	DEBI	02	100000-299999	Training

Customer liquidity areas

The following liquidity areas have been set up in the IDES system:

Planning group	Description
E1	Customers whose invoices are paid by bank collection
E2	Domestic customers
E3	Foreign customers
E4	Affiliated companies
E6	Large customers

Info System for Accounts Receivable

You can use the information system in Accounts Receivable Accounting and Accounts Payable Accounting to analyze business factors as frequently as required. The analyses include reporting on customer payment trends, cash discount procedures, and any exchange rate risks involving customers.

A range of options are available in the IDES system for analyzing and editing the reports in the information system for Accounts Receivable Accounting. You can, for example, branch into line item display, separate open items, send messages or display graphics.

Settings and Special Features in FI-AA

Depreciation

Depreciation keys are defined for each depreciation area of an asset. These keys specify the useful life and the depreciation method for the asset. The depreciations are posted at regular intervals and updated in G/L Accounting. The following depreciation areas have been created in the IDES system:

Depreciation area	Description
01	Book depreciation
03	Special reserves
20	Cost-accounting depreciation
30	Consolidated balance sheet in local currency
31	Consolidated balance sheet in group currency
51	Investment support

Post-capitalization

In the R/3 System, the term post-capitalization refers to the subsequent capitalization of assets that were posted as costs in a fiscal year that lies in the past and has already been closed. Generally speaking, this will be queried during the government tax audit.

The IDES system can demonstrate how to post a post-capitalization. The regular posting of subsequent acquisitions to an existing asset (as a result of expansion, or modernization, for example) can be shown as a normal asset acquisition. You can post to the original asset master record and increase its value, or open an asset sub-number and manage the subsequent acquisition separately there.

Settings and Special Features in FI-LC

The consolidation system in IDES only supports simultaneous consolidation. This consolidation procedure processes in a single step all of the investments that exist in the subgroup, and the resulting minority interest.

Consolidation master data

Certain master data records have to be defined in Consolidation (LC) so that consolidated financial statements can be drawn up. The IDES system contains descriptions on creating an overview of the terminology used in LC, an overview of the companies involved, and an overview of various reporting hierarchies.

Status management in Consolidation

The status management facility has been set up in its entirety in the IDES system. Status management in LC determines whether or not consolidation tasks are permitted on the basis of the status of the companies in question. You can maintain the status of the companies from a single screen. Maintaining the consolidation status allows you to define and coordinate the sequence of the individual consolidation tasks. You can also use the consolidation status to see which tasks have already been performed.

Data monitor

During the SAP R/3 System project, data might have to be acquired for Consolidation from different applications. Some companies use through-posting or summarization to transfer data from the R/3 Financial Accounting (FI) or Controlling (CO) components. Other companies transfer their data from external sources or using PC data entry programs that are supported by the R/3 System. You can use the data monitor to identify the various sources of data, and automate the transfer of data into Consolidation (LC).

The IDES system can be used to demonstrate the three main functions of the data monitor:

- ❑ Data transfer procedure for each company
- ❑ Data transfer status for each company
- ❑ Fast and easy transfer of data to LC for one company, or several companies simultaneously

Currency translation

Once the data has been transferred to Consolidation (LC), all standardizing entries have been made, and the local currency amounts have been validated in local currency, the local currency amounts can be translated into the corporate group currency.

In the IDES system, each legally independent unit draws up its financial statements in the currency of the country in which it is situated. So that reporting requirements can be met, certain transactions that were made in foreign currency first have to be translated into local currency. The subsidiary's financial statements are then translated into the corporate group currency. In the IDES system, the temporal method of currency translation is used for the European subgroup. The modified current-rate method (in accordance with FASB 52 standards) is used for the American subgroup.

Business area consolidation

In addition to the usual legal requirements placed on reporting, some authorities (The Securities and Exchange Commission in the U.S.A., for example) also require that consolidated financial statements be broken down by business area. A business area is a segment that contributes substantially to the overall production of a corporate group. The actual rules that have to be applied for business areas can differ depending on the requirements stipulated by the authorities involved. In Consolidation (LC), you can create financial statements that comply with these requirements.

All of the companies in the IDES American subgroup are broken down by business area. When data is transferred from FI, it is possible to store this data so that it can be viewed from two different perspectives.

- The legal perspective

  The data of the company codes and of the companies assigned to these company codes is transferred into Consolidation.

- The business area consolidation perspective

  Substitution of the LC company master records on the basis of the FI “company code – business area” combination.

Investment Management (IM)

Overview

Generally speaking, extensive, company-wide planning and budgeting procedures are followed before investments are made. From a Controlling point of view, there are three main issues that have to be addressed:

- Preinvestment analysis
  Check to see if the investments that are planned will actually benefit the company
- Cost planning
  Determine the overall investment costs for a given period
- Budgeting
  Allocating the funds available for investments to areas of responsibility company-wide

The Investment Management component of the R/3 IDES system can be used to demonstrate many aspects of investment controlling. The entire investment process is covered – from the planning phase right through to settlement.

Settings and Special Features

Capital investment program

Capital investment programs can be used to manage budgets with a large number of individual measures (orders or projects). A capital investment program comprises individual items that are linked up by means of a hierarchical structure. This hierarchical structure might, for example, be the same as the group's organizational structure. You can, however, set up and organize this structure as you please. To maintain the capital investment program in the IDES system, proceed as follows:

First, create a program definition. Define the following here:

- Approval year
- Fiscal year variant
- Currency

Second, define the individual items of the capital investment program, and arrange them hierarchically. In addition to the overall values for the plan and budget depicted on the approval side of the capital investment program, you can also manage annual values in the capital investment program.

IDES provides you with orders and projects so that you can perform investment measures (build a new administrative building, for example, or procure and install new hardware). The main differences between orders and projects are:

- In projects, the objects that bear costs can be structured hierarchically.
- Orders, on the other hand, are always one-dimensional. In other words, it is not possible to organize budgets, for example, hierarchically within several orders.
- Only projects are integrated with networks and Logistics functions. This means that it is not possible to work through capacity and resource planning scenarios with orders.

In the IDES system, Investment Management has a cross-company code capital investment program with a total of 65 items.

The hierarchy of capital investment program 30000 (IDES investment 1997) corresponds to the organizational structures in IDES. This top item of the capital investment program is called 1 “Europe” and represents controlling area 1000. Items 10 “Germany” (company code 1000) and 20 “Great Britain” (company code 2000) are positioned directly below this top item. The level below this represents selected profit centers, and the last hierarchy level contains cost centers that are assigned to these profit centers.

The following diagram illustrates the entire hierarchy of the capital investment program as it appears in IDES. The capital investment program is planned bottom-up. After this, top-down budgeting is performed (see Appendix B).

Capital investment order

Investment measures are projects or internal orders for handling expenditure on fixed assets that are not directly capitalized and do not become part of fixed assets due to their size and the proportion of internal funds in question. These objects, also referred to as investment orders or investment projects, are in effect used to implement an investment measure. In other words, they are used to collect primary and secondary costs, calculate overhead rates and interest, manage down payments and purchase order commitments, and a range of other functions.

Statistical orders

You can handle each order in cost accounting as a statistical order. You can only debit a statistical order statistically – costs are never affected. This also means that you cannot perform accounting for statistical orders.

In Investment Management, a statistical order is used to manage budgets for assets which are not assets under construction and which can be assigned directly to an account. You can link a statistical order to one or more assets. If acquisitions are posted for this asset, the amount appears under the original cost element both on the cost center (thus affecting costs) and also on the order (statistically). However, the system checks the order budget first (active availability control). This means that statistical objects can be used as budget objects for one or more assets.

A statistical order is required because it is not possible to assign a budget directly to assets. You can also use a statistical WBS element instead of a statistical order.

Investment measures

In 1997, a total of 39 investment measures were created for program item 10 “Germany”. These investment measures can be broken down as follows:

- Projects
- Ten projects have been created:
  - Project 1-4200 / P: Investments for cost center (CC) 4200 (Investments in production)
  - Project 1-4210 / P: Investments for CC 4210 (reorganization of assembly)
  - Project 1-4270 / P: Investments for CC 4270 (installation of conveyor belts)
  - Project 1-4220 / P: Investments for CC 4220 (introduction of software)
  - Project 1-4130 / P: Investments for CC 4130 (construction of warehouse)
  - Project 1-4400 / P: Investments for CC 4400 (test laboratory)
  - Project 1-1200 / P: Investments for CC 1200 (renovation of restaurant)
  - Project 1-2100 / P: Investments for CC 2100 (introduction of software)
  - Project 1-2200 / P: Investments for CC 2200 (introduction of software)
  - Project 1-4275 / P: Investments for CC 4275 (Product line laptops)

Actual values and commitments are posted for the investment projects using the Materials Management component. Internal activity allocations and postings are also made in Financial Accounting. Completed project phases are settled using assets. Projects 1-4200 / P and 1-4275 / P are particularly extensive and well structured. However, since certain projects come later, some WBS elements did not have any values in 1997.

- Orders

  A total of 29 orders were created using internal number assignment:

  - Five orders with line item settlement (order type IM01):
    These orders are assigned to program items 1-4205, 1-1000, 1-1230,1-4277 and 1-4278. The actual values are posted using the Financial Accounting component. Internal activity allocation is also performed. The line items are settled using assets.
  - 24 statistical orders for assets (budget orders, order type IM09):
    These orders are, for example, assigned to program items 1-3100, 1-3200 and 1-4120. Assets are created in various asset classes for these orders. The actual values are posted using the Financial Accounting component.

In order to obtain an integrated report for the FI-AA and PM components, pieces of equipment have been created for the assets linked to the orders of program items 1-3140, 1-3200, 1-4100 and 1-4280. These pieces of equipment are all assigned to asset class 3200 (personal computers), and have been assigned maintenance costs using the Plant Maintenance component. Pieces of equipment (equipment numbers P-1000-N001 through P-1000-N009) for eight existing assets (asset numbers 2108 through 2116) of asset class 2100 (Linear machines) have also been assigned maintenance costs. These pieces of equipment stem from the Plant Maintenance "Clarification Plant" example.

Settlement and closing for investment measures

The items incurred by an investment measure are usually settled at regular intervals. Each item can be settled individually (line item settlement), or collectively (summary settlement). These two methods of settlement differ from each other in the system resources that they use up, and in the precision of the proofs of origin of asset charges.

Both these methods of settlement are possible in the IDES system. In line item settlement, each item is handled individually. This means that a very high degree of detail is possible in the proof of origin. The runtime of a line item settlement is higher than the runtime of a summary settlement, where the items are settled collectively on the basis of cost elements. The proof of origin for a summary settlement is broken down by cost element.

In the IDES system, you perform a summary settlement for a WBS element by entering the settlement rule for each cost element group (source assignment), and a line item settlement for an order.

Treasury (TR)

Overview

The R/3 Treasury component is subdivided into Cash Management, Funds Management, and Treasury Management. At present, Cash Management can be demonstrated in the IDES system. The aims of Cash Management are:

- Ensuring liquidity so that any payment obligations that are due can be fulfilled
- Monitoring cash flow

In R/3 Cash Management, the cash position shows the activity in bank accounts, and the liquidity forecast shows the activity in sub-ledger accounts.

Settings and Special Features in IDES

Planning level

The planning level shows the origin of the data in the cash position and liquidity forecast. This means that flows to bank accounts and clearing accounts can be broken down. In Appendix B, you will find an overview of all the planning levels that have been defined in the IDES system.

Planning group

In cash management and forecast, you assign your customers and vendors to a planning group which reflects certain characteristics, risks, or the type of business relationship in question. This arrangement makes it possible to break down the display of the cash forecast according to the reliability of your forecasts regarding the outflow or inflow of cash. In Appendix B, you will find a list of the planning groups that have been created in the IDES system.

Showing liquidity

You can use the data from the cash position and the short-term liquidity forecast to show your company's overall liquidity. The cash position is calculated on the basis of all payments (taking the value date into account) within a short planning interval.

Cash concentration

In cash concentration, the balances from different bank accounts are concentrated in one target account. The system proposes a cash concentration option based on the existing structure. The results of this are sent to the banks in the form of payment orders. Payment advice notes are also created. In the IDES system, you can create a cash concentration proposal, and then process it further.

Controlling (CO)

Overview

In the IDES system, Controlling comprises the following areas:

- Overhead Cost Controlling (CO-OM)
- Product Cost Controlling (CO-PC)
- Profitability Analysis (CO-PA)

This ensures that all controlling processes can be coordinated, monitored and optimized.

Overhead Cost Controlling (CO-OM)

Overhead Cost Controlling is used for planning, managing and monitoring overhead costs. Since overhead costs cannot be assigned directly to cost objects, they are assigned to the cost centers on which they were incurred, or to the jobs that gave rise to them. The R/3 System provides you with an extensive range of tools for ensuring that they are allocated to the correct source.

At the end of a posting period, once all the costs have been allocated, the planned costs (adjusted to the operating rate) are compared with the actual costs. This enables you to analyze any discrepancies between planned and actual costs that exceed a predefined threshold. You can then process these variances further in Controlling.

Various cost accounting strategies (static standard costing, and flexible standard costing, for example) are represented in Overhead Cost Controlling using the companies in the IDES corporate group.

Product Cost Controlling (CO-PC)

Product Cost Controlling calculates the costs that are incurred when a product is manufactured, or a service provided. R/3 Product Cost Controlling provides important information for pricing and pricing policies, controlling the cost of goods manufactured, stock valuation, and profitability analysis. Product Cost Controlling in the R/3 System comprises both Product Cost Planning (that is, planning the cost of products before an order to commence manufacturing is placed), and Cost Object Controlling.

In the IDES system, Product Cost Planning can be demonstrated by performing product costing for various manufacturing processes (order-related production, repetitive manufacturing, make-to-order production, engineer-to-order production, and process manufacturing). Product costing is an instrument that you can use to plan costs and determine prices for materials. You can calculate the manufacturing costs and the cost of goods sold per manufacturing unit. Product costing is performed on various dates throughout the year using what are referred to as costing variants.

In Cost Object Controlling, the costs incurred in production are assigned to the appropriate cost objects. Depending on the type of company in question, various objects can be used as cost objects. In the IDES system, production orders, run schedule headers, sales orders, service orders, projects, networks, and other objects are all used as cost objects.

Profitability Analysis (CO-PA)

As its name suggests, Profitability Analysis is used to analyze profits. Profitability Analysis supports all aspects of real-time profitability accounting. User-definable market segments which can, for example, be broken down by product, customer, order, or company department (sales organization, say, or business area) are valuated on the basis of their profit margin or contribution margin. The information gained from this profitability analysis can be used for pricing, selecting customers, offering special conditions, and regulating quantity flow.

A range of online, multidimensional reporting options are available. If required, these analysis reports can be summarized. In addition to operating profits and key figures, it is also possible to display variance analyses such as target/actual comparisons, annual comparisons, and operating profit comparisons.

There are two forms of profitability analysis available in the R/3 System: cost-based profitability analysis, and account-based profitability analysis. The IDES system can be used to demonstrate cost-based profitability analysis. Here, the sales and costs relating to the product sold are compared against each other for each market segment.

Organizational Structures

Operating concern

An operating concern represents a part of an organization for which the sales market is structured in a uniform manner. By setting off the costs against the revenues, you can calculate an operating profit for individual profitability segments, which are defined by a combination of classifying characteristics, such as product group, customer group, country, or distribution channel. In the IDES system, the operating concern IDEA is the highest-level unit of the Controlling structure. This operating concern contains all the controlling areas in IDES.

Controlling area

A controlling area is an organizational unit used to represent a closed system for cost accounting purposes. Five controlling areas have been created in the IDES system. Controlling areas 1000 (Europe) and 2000 (North America) have been set up almost identically.

Subgroup	Controlling area	Currency
Europe	1000	DEM
France	2200	FRF
America	2000	USD
Mexico	6000	MXN
Japan	5000	JPY

Postings are saved in the currency of the controlling area, in the object currency and, if applicable, in a different document currency. The objects involved here include cost centers, orders, and projects. These objects are also assigned to a company code from Financial Accounting. (In the IDES system, the object currency is always the same as the currency of the corresponding company code.)

Company code

A company code is the smallest organizational unit for which a complete self-contained set of accounts can be drawn up for purposes of external reporting.

In IDES, cost accounting can be performed across company codes. In other words, several company codes have been assigned to one controlling area.

Controlling-area	Subgroup	Company code	Currency	Remarks
1000	Germany	1000	DEM	
1000	Great Britain	2000	GBP	
1000	Portugal	2100	PTE	Shows ALE business processes
2200	France	2200	FRF	
1000	Spain	2300	ESP	Shows ALE business processes
2000	USA	3000	USD	Identical to CC 1000
2000	Canada	4000	CAD	Identical to CC 2000
6000	Mexico	6000 (hard currency)	USD	MXN is object currency
5000	Japan	5000	JPY	Model under construction

Profit centers

Profit centers are management-oriented structures that are used for the purpose of internal control in an organization. You can analyze operating results for profit centers using either the cost-of-sales or the period accounting approach. In the IDES system, a profit center hierarchy has been set up for controlling area H1 (Europe), and another for controlling area H2 (America). All cost center and orders *must* be assigned to profit centers and business areas. The product-oriented breakdown of the profit centers is taken into account here.

The only exceptions to this rule are company codes 2300 (Spain) and 2100 (Portugal). In both these company codes, the profit centers are created on the basis of functional factors, whereas the business area is product-oriented. This should be remembered when cost centers and orders are being assigned. In Appendix B, you will find an overview of the cost centers, and the company codes, business areas and profit centers to which they have been assigned.

Cost elements

Cost elements are the items in a chart of accounts that are used to classify the organization's valuated consumption of production factors within a controlling area.

One of the main differences between this type of account assignment and the type of account assignment used in Financial Accounting is that, in addition to a controlling area and cost element, you also have to specify a further account assignment object (cost center, for example, or order, WBS element, cost object or profitability segment). This ensures that there is a self-contained accounting system within cost accounting.

There is a G/L account in Financial Accounting for each primary cost element. Secondary cost elements, on the other hand, are only used for internal activity allocation, and exist in Controlling only.

Chart of accounts

A chart of accounts is a classification of accounts defined in Financial Accounting as a framework for recording values and value flows. In order to ensure that financial statements are drawn up correctly by the R/3 System, you can define a chart of accounts as an operating chart of accounts, country chart of accounts, or corporate group chart of accounts. IDES uses one operating chart of accounts for each controlling area.

Chart of A/Cs	Controlling area	Name
INT	1000	Europe
CAUS	2000	North America
INT	6000	Mexico
Cajp	5000	Asia
CAFR	2200	France

Cost element structure

The G / L accounts and cost element in charts of accounts INT and CAUS are practically identical. This means that it is possible to use an overall cost element group (called OAS) for all charts of accounts.

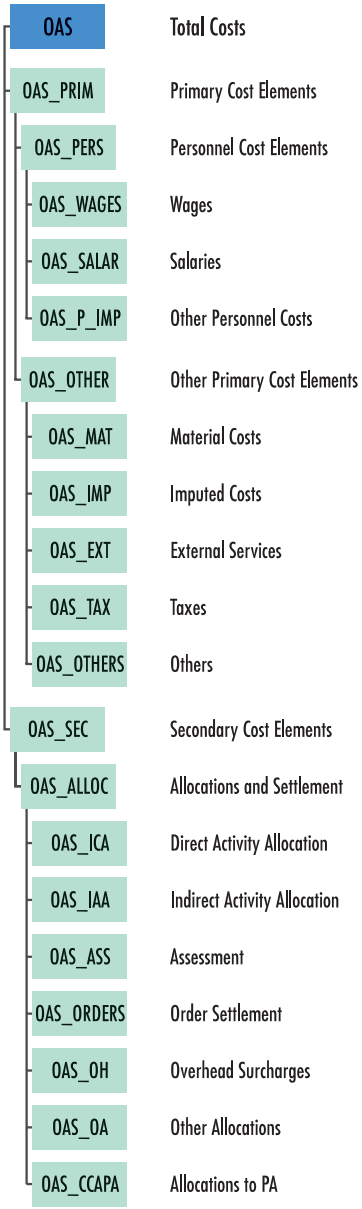

Fig. 2-1: Overhead Cost Controlling (CO-OM) Cost centers and internal orders

Activity types

Activity types are used to integrate Overhead Cost Controlling with other components. Work centers are assigned to cost centers, and are given the same activity types as these cost centers. An activity type is a unit within a controlling area used for classifying the activities produced or provided by a cost center, and forms the basis for allocating costs. Activity types are included in preliminary, simultaneous, and final costing. The activity types used most frequently in IDES are as follows:

Activity type	Name
1231	Energy consumption KWh
1410	Repair hours
1412	IT services
1420	Machine hours
1421	Wage hours
1422	Setup hours
1510	Corporate services
1520	Cafeteria
1530	Telephone usage
1540	Telephones
1550	Motor pool
1560	Human resources

Statistical key figures

You can plan and post statistical key figures on a cost center. Statistical key figures are used for key figure analyses, and form a basis for internal activity allocations. The following key figures are used frequently in the IDES system:

Statistical key figure	Name
9100	Employees
9101	Square meters
9200	Kilometers
9201	Telephone units
9202	Telephones
9900	Cost splitting

Cost center structure

A cost center is an organizational unit within a controlling area that represents a separate location of cost incurrence. Controlling areas 1000 (Europe) and 2000 (America) have the same cost center structure. The individual cost centers are arranged so that they form a hierarchical structure. The company codes of Financial Accounting are also taken into account, and appear as subhierarchies.

Settings and Special Features in CO-OM

Cost accounting strategies

- IDES Germany – Company Code 1000
  Flexible standard costing is used in company code 1000 (Germany). This type of standard costing is activity-independent. It is based on activity types, and broken down into fixed and variable cost and quantity portions. The transfer prices of the activity types can be determined iteratively by the system on the basis of planned costs and activity quantities. Planned and actual full costs records are allocated. In the "Elevators" branch, actual prices are allocated for external services.
- IDES Great Britain – Company Code 2000
  Static standard costing is used in company code 2000 (Great Britain). This type of costing is not very detailed, and is activity type independent. The transfer prices that have been entered manually are always used here. In addition to activity allocation, primary cost distribution and the assessment for passing on costs are also used here. No costs are planned or rates set for the "Energy" cost center, even though actual activities are allocated. Only actual quantities are allocated on the "Energy" cost center. This quantity flow is valuated at a later stage using actual activity prices.
- IDES Portugal – Company Code 2100
  Company code 2100 (Portugal) does not have any cost accounting strategy at all. IDES Portugal is used as a demonstration company code for ALE purposes. This company code contains cost center master data that is passed on to another system using ALE.

Cost center accounting for company code 1000

- Planning data
  Planning data for 1995, 1996 and 1997 has been entered in version 000 for the cost centers assigned to company code 1000. The data entered here is very detailed since this company code uses only iterative transfer prices for activity allocation. Planning is carried out on an annual basis. On cost centers 4275 and 4277, planning is carried out using different valuation approaches each month.

  Plan version 010 is used to demonstrate orders in integrated planning, and planned accounting on a cost center. A separate plan version has been used to demonstrate this, because otherwise it would affect the rest of cost center planning.

  Planning profile IDES-1560 has been created to show how the planning processor is set up in Customizing. Together with planning layout IDES-1560DE, this planning profile can be used to plan centrally for predefined cost centers and cost elements.
- Planned transfers
  A planned transfer of cost-accounting depreciations and imputed interest from Asset Accounting is performed. The same applies to the wages and salaries from Human Resources (HR).
- Planned results analysis
  Workers' compensation contributions are used to show how a results analysis is performed using the cost element percentage method.

- Plan cost splitting
  Using what is referred to as a splitting structure, the activity-independent plan costs are distributed to their activity types on the basis of the key figures that were planned and posted to activity types. Cost elements that are not defined in the splitting structure are split to the appropriate activity types using the equivalence numbers of these activity types.
- Plan activity price determination
  The transfer prices of the activity types are determined on the basis of the planned activity. These prices are determined iteratively. Cost centers 4275 and 4276 have the capacity to determine transfer prices. The transfer prices on cost centers 4275 and 4277 are different every month.
- Actual data
  Actual data has been entered for May 1995, January through December 1996, and January through April 1997. In addition to the actual costs transferred from Asset Accounting and Human Resources, further primary costs, results analyses, various types of secondary costs, and statistical key figures have also been entered.
- Cost accrual
  Actual accrued costs are determined by the system and posted. Costing sheet ID-EU1 is used for the cost element percentage method. The target / actual method is also available.
- Indirect activity allocation
  You can use indirect activity allocation to create secondary relationships regarding planned and actual activity allocation. This is used to replace the assessment – thus enabling you to include assessment costs in the transfer prices of the activity prices. An additional advantage of this is that, unlike in the assessment, you can assign costs to specific activity types, but at the same time these assignments are activity type independent.
- Allocating target costs as actual costs
  This type of allocation is used for cost center 1230 “Energy”, activity type 1232 “Energy consumption in kWh (target / actual)”. The receiving cost center obtains an actual activity that has been derived from planning. This planned value is, however, changed on the basis of the operating rate of the receiver.

- Actual cost splitting
  Actual costs are split in the same way as planned costs. Splitting structures 11 and 12 are used for this.
- Determining actual activity prices
  Actual activity prices have been determined for all cost centers. These actual activity prices are not used for allocation, though. They are used for the purposes of analysis.
- Variance calculation
  Variance calculation is used to identify the variances for cost centers, production orders, and cost object hierarchies in the course of period-end closing.

  Variance calculation has been performed for all the cost centers in the IDES system. Cost centers 4276 and 4278 have been set up so that you can look at the calculation results. Unlike cost center 4278, cost center 4276 has a transfer price variance – this is because the activity type prices were determined using the capacity, and not using the planned activity.

Cost center accounting in company code 2000

- Planning data
  Planning data for 1995, 1996 and 1997 has been entered in version 000 for the cost centers assigned to company code 2000. This planning data is not very detailed because the transfer prices used for activity allocation are always entered manually. No cost planning has been performed for cost center 2-1230 ("Energy") so that the activity allocation functions for actual costs can be demonstrated.
- Actual data
  Actual data has been defined for May 1995, January through December 1996, and January through April 1997. The controlling area currency is DEM, and the object currency is GBP. This allows you to report in both currencies.
- Cost accrual
  The system has determined and posted planned and actual accrued costs. Costing sheet ID-EU1 was used for this.
- Cost distribution
  Cost center 2-1210 has distributed the planned and actual cost of telephone units using the statistical key figure "Telephone units". This statistical key figure is planned for the receiving cost centers, and posted as an actual value. It specifies the number of telephone units used by each cost center.

  Distribution cycle I-DP-2 was used for planning, and distribution cycle I-DA-2 for the actual values.
- Assessment
  All activity type prices are entered manually so that costs can be assessed. This applies, for example, to the costs of the "Cafeteria staff" cost center, and to the costs of the "Telephone" cost center that were not allocated during distribution. The assessment cycle for planned costs is I-AP-2, and I-AA-2 for actual costs.
- Determining actual activity prices
  Actual activity prices have been determined for all cost centers. These actual activity prices are not used for allocation, though. They are used for the purposes of analysis. Cost center 2-1230 (Energy) is an exception to this rule – this cost center allocates actual prices.
- Valuating actual prices
  Only activity types have been planned for cost center 2-1230 (Energy). However, a planned price has not been set for this activity type. No plans have been made to have the activity accepted by receiving cost centers, either. First, only the actual quantity is allocated to the receiving cost centers. These quantity flows are valuated at the end of the period when the actual price is valuated. The actual costs of this cost center are divided by the actual activity, and then the quantity flows are valuated again using this price.

Cross-company code allocations

The reconciliation ledger is used to reconcile with Financial Accounting any value flows within cost accounting that affect a company's balance sheet, and profit and loss statement. The company codes of account assignments from an external to an internal accounting system are checked to make sure that they are correct. Postings from FI can only be made to CO objects in the same company code. Cross-company code allocations are made in CO. The cost center "DP Germany" provides DP services for the DP cost centers in Great Britain. These services (activities) are settled between the two cost centers using internal activity allocation. The expenses in Financial Accounting are rectified for the cost centers using the reconciliation ledger. Data from this ledger is used to generate adjustment postings in Financial Accounting.

Cross-business area allocations

Since business area balance sheets are created, the cost centers and orders have to be assigned to business areas. This will mean that when account assignments pass from the external to the internal accounting system, the business areas are automatically derived from the CO target account assignments.

There are a large number of cross-business area allocations in Overhead Cost Controlling. These cross-business area allocations are mainly the result of internal activity allocations for cost centers that are active company-wide (Cafeteria, Human resources, Telephone, for example). The reconciliation ledger is used to generate reconciliation postings in Financial Accounting so that cross-business area allocations can be taken into account there.

Internal orders in company code 1000

- Order types
  In the IDES system, order types have been created on the basis of functions.
- Manual collective processing
  Manual collective processing is a simple way to maintain order master data using lists. The orders of order type 0450 can be used to demonstrate this.
- Automatic collective processing
  If you choose this type of collective processing, the system maintains order master data automatically. Status changes for a substitution can be demonstrated in the IDES system using orders of order type 0450.
- Planning data
  Planning data has been entered in version 000 for 1997. The main purpose of this data is to show how planning is integrated for orders relating to cost centers. To show this, integration has been activated in the order type and in version maintenance. This means, that if a cost center's activity is consumed, this activity is saved as a scheduled activity on the cost center. During planned order settlement, the receiving cost center is debited correspondingly. These quantity flows are valuated when the activity prices are calculated. This means that the activity flow from the sending cost center to the receiving cost center (via the order) is fully integrated in activity price calculation.
- Budgets
  Some orders have been assigned budgets to demonstrate the budget functions and the active availability check. Order type 0100 can be used to show budget management functions (budget allocation, supplements and returns).

- Active availability check
  In the IDES system, the budgeted orders of order type 0100 (order 100002 in particular) can be used to demonstrate the active availability check. If an FI posting is made and this posting causes the budget to be exceeded, the person defined in Customizing as being responsible for the budget is informed of this by e-mail.
- Commitment functions
  The term “commitment” refers to a contractual or scheduled commitment which is not yet reflected in Financial Accounting, but which will lead to actual expenditures in the future. In the IDES system, order 100002 of order type 0100 is used to demonstrate commitment functions. It is possible to show a purchase requisition commitment and a manual funds reservation.
- Actual costs
  Actual data has been entered for May 1995, January through December 1996, and January through April 1997. Primary costs and activity input from cost centers were entered.
- Overhead calculation
  You calculate overhead as a percentage value or as a quantity. This can prove useful if it is the number of pieces of a material (and not the value of the material) that affects overhead costs. In the IDES system, order 100005 of order type 0100 can be used to demonstrate quantity-based overhead calculation.
- Order settlement (using percentage values or fixed amounts)
  Very often, orders are divided among several receivers when they are settled, and each receiver is assigned a specific percentage value. When you are editing the settlement rule during a settlement by amount, you can specify a fixed amount for the order rule. This amount is settled once, or periodically, for the receivers specified.
  Order 100001 of order type 0150 has been set up in the IDES system to demonstrate settlement by amount. This order settles a predefined amount for cost center 3110.
- Settlement with source assignment
  Settlement with source assignment enables you to settle the costs incurred in the sender order for different receivers, on the basis of the cost element and cost element group. This means that, on the basis of the source cost element of the order debit, costs which can be capitalized are settled using the asset, and costs which cannot be capitalized are settled using the cost center. In the IDES system, order 100000 of order type 0150 and source structure U1 is used to demonstrate this functionality.
- Hierarchical order settlement

  It is possible that the settlement receiver of an order is another order. An order settlement hierarchy should be used here to ensure that all orders are credited correctly. In the IDES system, the orders of order type 0800 are used to demonstrate how the sequence in which the orders are processed is determined.

Settings and Special Features in CO-PC

Product Cost Planning is used to plan the costs of a product before an order to commence manufacturing is placed. If a quantity structure from the R/3 Logistics components exists, the cost estimate is carried out in the form of a product costing. If there is no quantity structure, you can use unit costing to enter the costing items manually or with batch processing.

Cost Object Controlling comprises preliminary costing (these are the planned costs of the cost object), simultaneous costing (i.e. the valuation of all actual quantity flows), and final costing (this is usually performed as a period-end closing).

Depending on the production type involved, you can compare the planned, target and actual costs of the products with each other, and perform variance calculations.

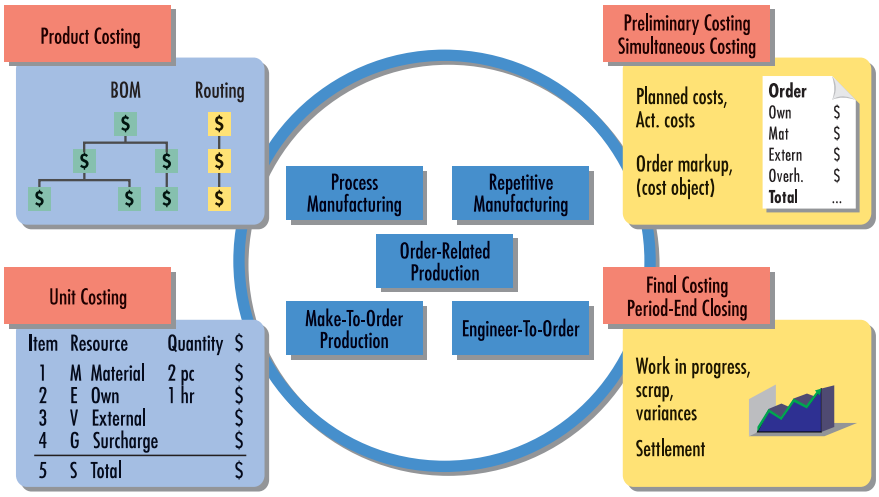

Fig. 2-2: Tasks Involved in Product Cost Controlling

The following manufacturing processes can be shown using the IDES corporate group:

- ❑ Order-related production (pumps, automobiles)
- ❑ Repetitive manufacturing (PCs, lamps)
- ❑ Process manufacturing (paints, solvents, tablets)
- ❑ Make-to-order production (motorcycles, PCs)
- ❑ Engineer-to-order production (elevators)

Information System

The Information System for Product Cost Controlling allows you to organize clearly the information gained from product costing and from the various applications of Cost Object Controlling. The IDES system provides you with a range of flexible options for selecting and analyzing production orders and costing data.

Settings and Special Features in CO-PA

Characteristics and value fields

Characteristics in Profitability Analysis represent the criteria according to which you can analyze operating results and a sales and profit plan. Valid values of these characteristics are combined to form profitability segments.

The transaction data of costing-based Profitability Analysis is entered in value fields. A value field is basically a grouping together of cost elements or revenue elements (sales, for example, or costs of goods manufactured). By linking the value fields, you can draw up key figures (contribution margins, for example) which you can then use for reporting. The value fields in the IDES system have been defined so that you can carry out very detailed evaluations and analyses. For example, the IDES system contains a contribution margin structure that can handle all of the value flows of the other R/3 components, and allows you to perform variance analyses (production variances, for example).

Derivation of characteristics

The transactions that transfer data to Profitability Analysis do not always pass on enough values to fill all the relevant fields in CO-PA. However, since most characteristics are inextricably linked with others, it is possible to derive initial values for these fields. In other words, the system finds missing characteristic values on the basis of the values already known. You could, for example, define that a plant be assigned to a particular company code. The system could then use this information and still be able to trace the company code in question even if only the plant is specified in a certain document.

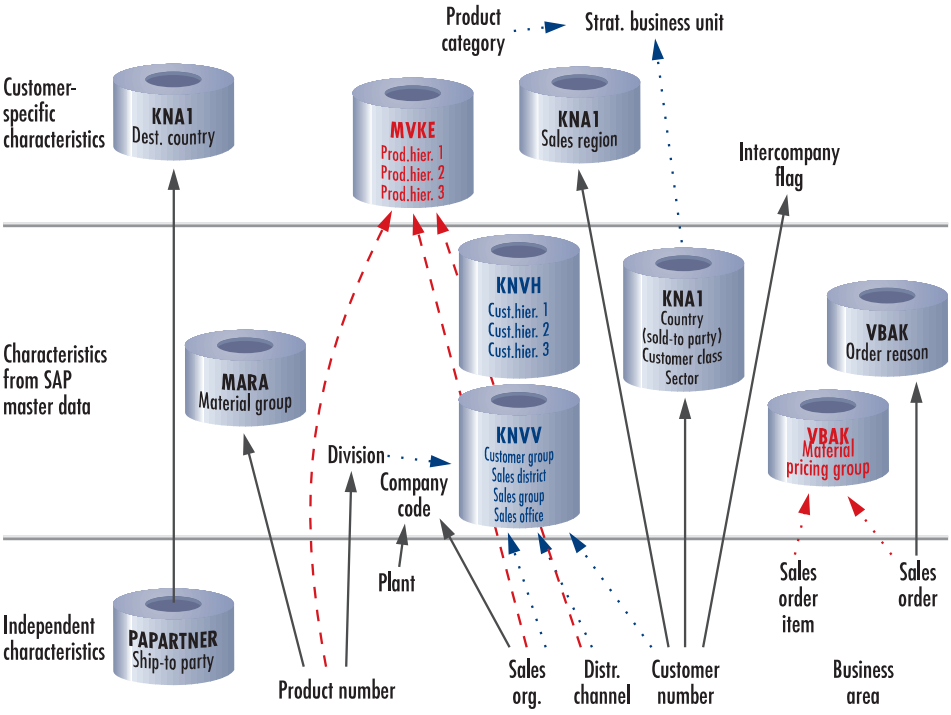

Fig. 2-3: Derivation of IDES Operating Concern

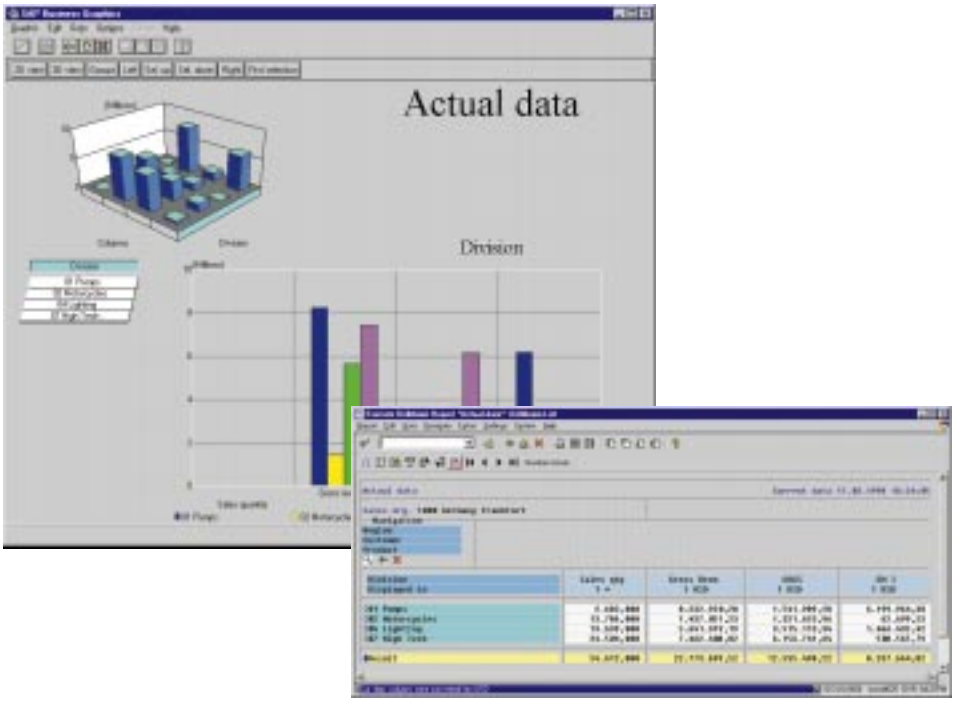

Fig. 2-4: Reporting in Profitability Analysis

Figure 2-3 gives you an overview of how characteristics are derived in IDES. The unbroken black lines represent a one-to-one relationship; the broken lines represent a one-to-many relationship. The system derives independent characteristics automatically. These are then used as a basis for assigning further characteristics. Tables of origin are also named.

Planning

The IDES system contains a clearly laid out planning procedure for certain product lines. This procedure includes Sales and Operations Planning, Overhead Cost Controlling, Product Cost Controlling, and Profitability Analysis. Contribution margins are analyzed during planning to estimate what the various sales volumes will be.

Reporting

You can use characteristics and value fields to create reports that meet your own individual needs. Reporting is an extremely flexible, interactive process. IDES contains a range of areas, each one fulfilling a specific business task. Reporting options include the comparison of planned and actual data, a contribution margin analysis extending from the sales organization level, through the customer level right down to the product level, and an analysis of estimated sales.

Enterprise Controlling (EC)

Overview

Enterprise Controlling is subdivided into three areas:

- Executive Information System (EIS)
- Profit Center Accounting (PCA)[4]

Executive Information System (EIS)

The Executive Information System provides information on all of the factors that influence an organization's business activities. The Executive Information System gathers relevant data from internal and external sources, and provides users with important, up-to-date information that is easy to analyze.

EC-EIS collects and evaluates information from a range of areas within – and outside of – an organization. You can set up an SAP EIS data pool to suit an organization's individual needs. You can then supply this data pool with data from the other information systems (Financial Information System, Human Resource Information System, Logistics Information System, Cost Accounting, and so on), or with data from outside the organization.

Since this data is structured consistently, you can subdivide the EIS data pool into self-contained data areas. In the system, these data areas are referred to as EIS "aspects". You can define aspects to meet your organization's individual requirements – aspects containing information on the financial status, logistics, human resources, or on current market factors and stock prices. For each of these aspects you can create reports which will evaluate this data.

The analysis tools available in EC-EIS include:

- Report portfolio
- Drilldown report
- Data mining

Report portfolios contain information for specific persons, and present this information graphically. Particular emphasis is placed on presenting this information as simply and clearly as possible.

Reports enable you to look at info aspects from a number of perspectives, and provide drill-down, drill-up, drill-through, and traffic light functionality.

Data mining enables you to search through large amounts of data and complex data structures to see if there are any unexpected relationships or irregularities. You can then use the information obtained to set up hypotheses so that you can make well-informed decisions.

---

[4] As of Release 4.0, also EC-CS (Consolidation).

The table below gives an overview of the various aspects that have been set up in the IDES system:

Aspect	Name	Function	Version	Dates
500	IDES Investment	IM Reporting	2	1995-2000
700	IDES View Forecast	View of several aspects	1/2	01-08/96 01-05/96 01/97 10/90-10/96
701	IDES Marketing	Includes external data	1	01-12/95 01-12/96
703	IDES Profitability	Profitability Analysis	1/2	01-08/96 01-05/96 01/97
704	IDES Sales Info Sys.	LIS reporting	1	10/90-10/96
705	IDES Personnel Info	HR reporting	41	09-11/96
706	IDES Legal Cons.	LI-LC/CS reporting	14	01-12/96
720	IDES Cross Reporting	Links several aspects	1	01/95-12/96

Profit Center Accounting (PCA)[4]

Profit Center Accounting sets out to create an enterprise structure on the basis of earnings. The enterprise structure can be organized on the basis of a range of factors (product, location, or function, for example). All transactions that affect sales and costs, or stock changes regarding products and assets created in-house, and work in process are stored in PCA. This means that you can draw up an operating profit for a profit center. Both the cost-of-sales approach and the period accounting approach can be used. Profit centers are not part of the "real" value flow – they are calculated parallel to this value flow, but are merely statistical values. The profit center account assignment is derived from other account assignment objects (cost centers, orders, or projects, for example): users do not need to enter any further data.

By assigning individual balance sheet items, you can extend a profit center so that it becomes an investment center (i.e. besides the transactions affecting earnings, stock is also included). This extends the profit center's area of responsibility, and enables you to obtain additional key figures such as the return on investment, cash flow, and profit-sales ratios. To do this, you flag the profit centers so that balance sheet items can be assigned to them.

The period accounting approach is used in the IDES system. At the cost element and revenue element level, the costs of the period are compared with the sales per period and profit center. The American and European controlling areas each have their own (practically identical) profit center hierarchy. The individual profit centers are product-based (with the exception of Administration and Services).

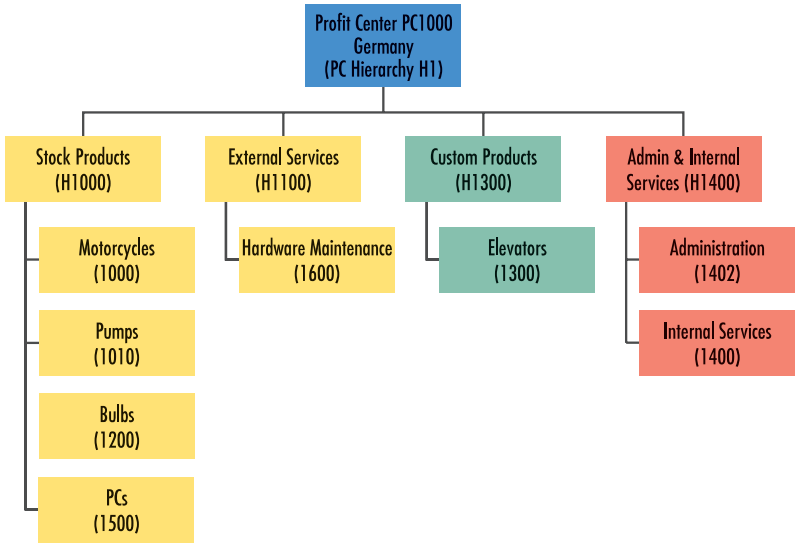

Fig. 2-5: Profit Center Hierarchy (Germany)