



Trends and Concepts of Business Application Architecture

Michael Perscheid, Ralf Teusner, Stefan Halfpap, Werner Sinzig
Enterprise Platform and Integration Concepts
Hasso-Plattner-Institut

Course Overview

Trends and Concepts of Business Application Architecture

- Digitalization of Business Processes
- Enterprise Resource Planning
 - Sales and Distribution
 - **Finance, Accounting, and Controlling**
 - Human Resources
 - Material Management and Production Planning
- In-Memory Databases for Business Applications
- Customer Relationship Management
- Enterprise Cloud Platforms for Integration and Extensions
- Block Week: Architecture Deep Dives



Finance, Accounting, and Controlling
- **Basic Concepts**
- Implementation in SAP S/4 HANA Finance

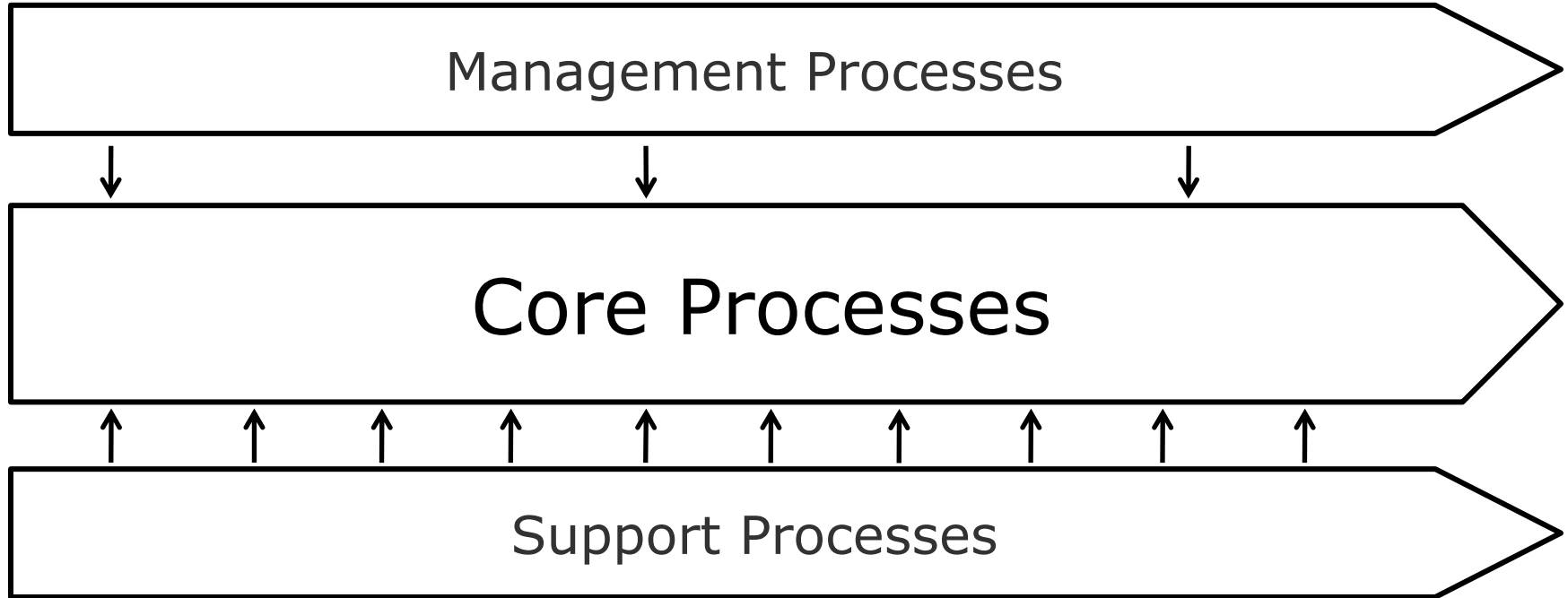
Werner Sinzig

May 2022

Agenda

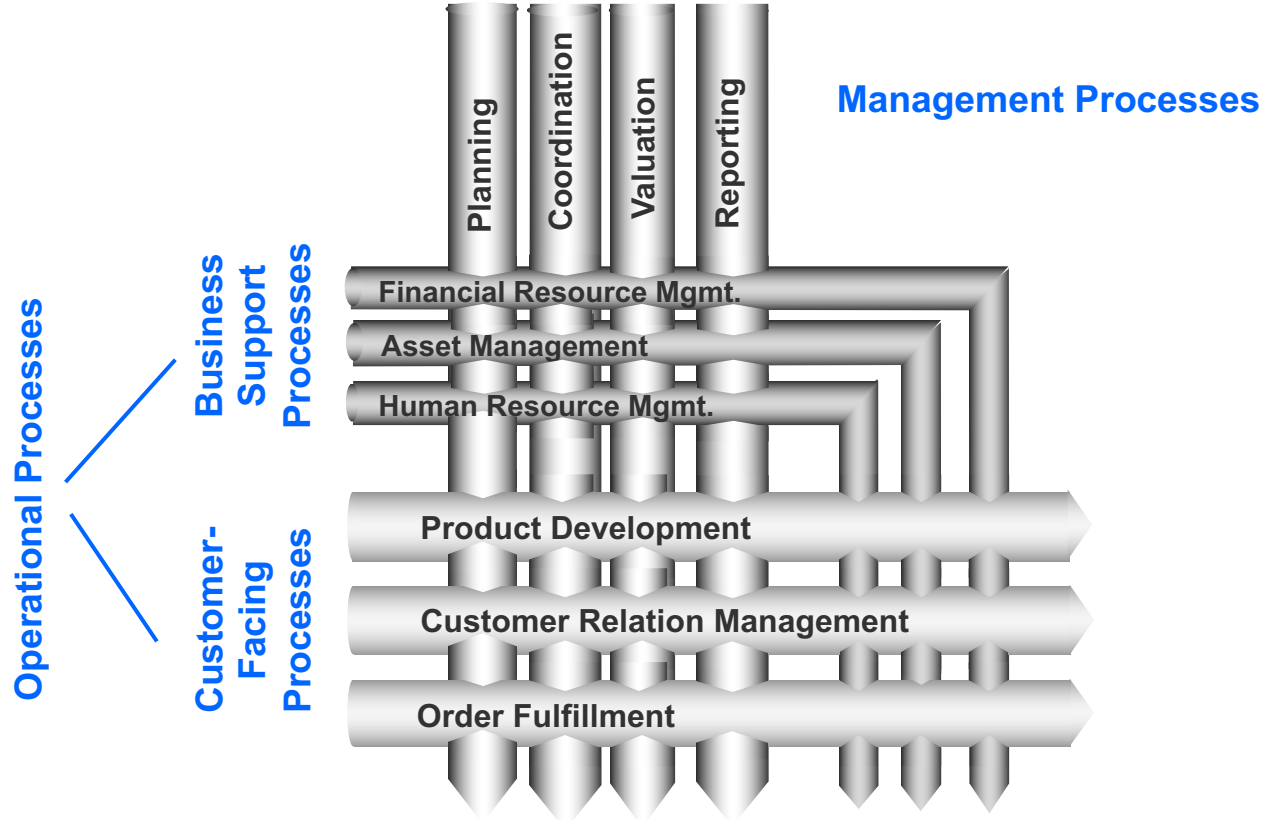
- 1. Accounting**
Organization, Tasks, Concepts
2. Financial Accounting: External Addressees
Business Processes and External Financial Reporting
3. Controlling: Internal Addressees
Allocation Process
 - a. Management Accounting
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model
4. Reporting and Planning
Formatted Reporting, Analytical Reporting, Business Planning

- ◆ Legal structure: Registered Merchant, Company, Group
- ◆ Management structure: Divided up according to
 - Functional viewpoints: Purchasing, Manufacturing (Plants), Sales (Sales Offices), Accounting & Controlling (Finance Department)
 - Product-related viewpoints: Business Units, Divisions
 - Regional viewpoints: Countries, Territories



Accounting

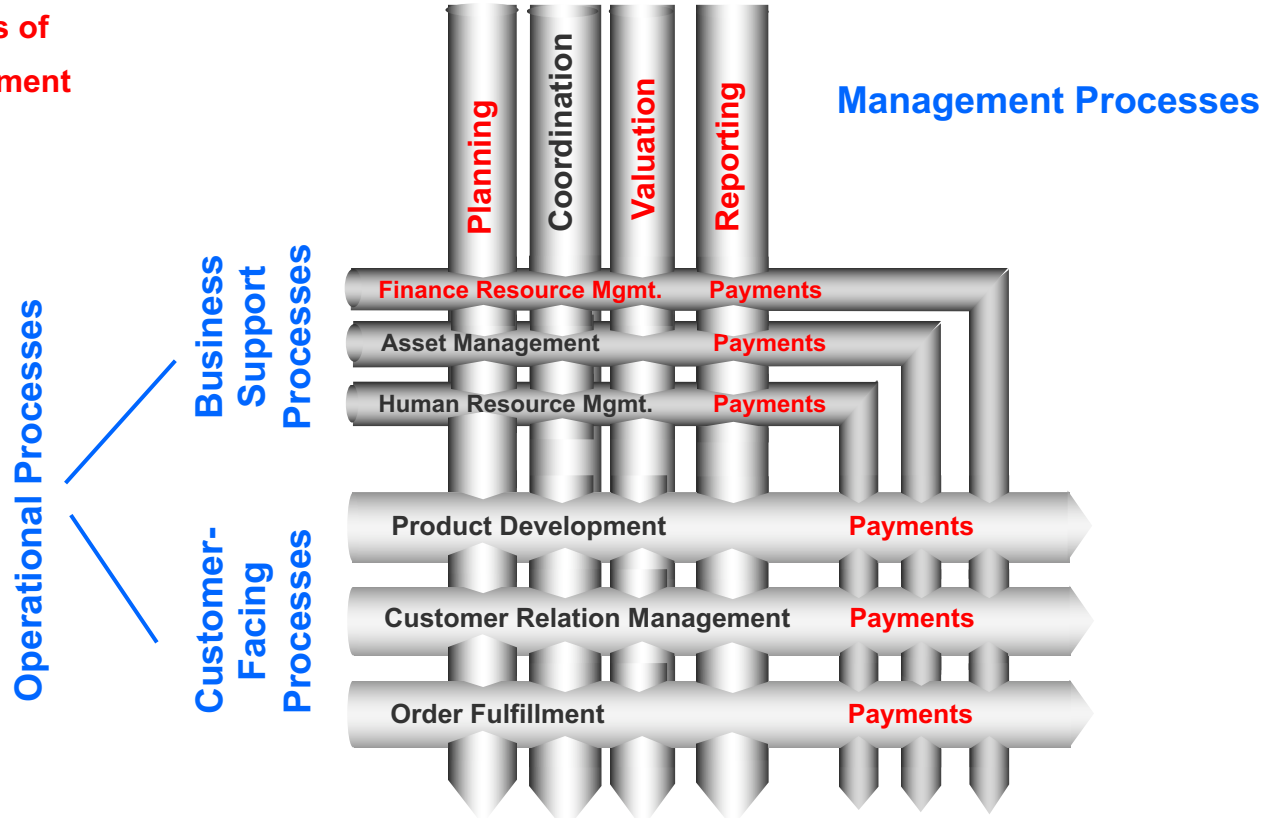
Position in the Process Structure (Business Processes)



Accounting

Position in the Process Structure (Business Processes)

Responsibilities of Finance Department



Division of accounting tasks according to addressees into **external accounting** (shareholders, customers, vendors, creditors, public) and **internal accounting** (management, employees)

◆ **External Accounting** Tasks

- Execution of business transactions with external parties
 - Continuation of logistical business transactions, for example, payment, dunning
 - Execution of non-logistical business transactions, for example, financing
- Documentation of business transactions with external parties in the accounting taxonomy
 - Logistical business transactions, for example, goods receipt, goods issue, invoice receipt, invoice issue
 - Non-logistical business transactions, for example, pay in and out, asset purchase, payroll calculation

- Reporting externally (Financial Reporting)
 - For shareholders and the public in accordance with commercial law
 - For the tax office in accordance with tax law
- ◆ **Internal Accounting** Tasks
 - Execution of business transactions, for example, business planning
 - Documentation of business transactions in the accounting taxonomy
 - Extended documentation of business transactions with externals
 - Documentation of internal business transactions, for example, activities of service units
 - Decision support for management
 - Reporting actuals, for example travel expenses on cost centers
 - Evaluating alternative decisions, for example impact of product design changes on profitability

Double-Entry Accounting: The Account Model

To be able to fulfill reporting tasks, operational business transactions in accounting are described in a taxonomy of their own.

- ◆ The business transactions – derived from logistical documents such as delivery notes and invoices – are described in the form of journal entries. The journal entry refers to the logistical document.
- ◆ A journal entry consists of a header and multiple items. The items carry the values
- ◆ The values are described in the form of accounts.
- ◆ In a journal entry, a business transaction is classified twice (double-entry accounting). It contains records with a value in the first classification (Debit) and other records with a value in the second classification (Credit). The total value of debit records is the same as the total value of credit records (zero balance principle).
- ◆ The structure of the journal entries and the respective amounts result from the GAAP.

Financial Accounting

Company Pumps Ltd			
Doc No. 0815		Doc. Date 03.04.2022	Ref. 4711
Item #	DR/CR	Account	Value
1	DR	Cost of Sales	440
2	CR	Inventory	440

Example: Goods Delivery

Logistics

Company Pumps Ltd				
Delivery Note 4711				
Company Heating Ltd				
We delivered to you on 03.04.2022				
Item	Product	Sales Order	SO Pos.	Quantity
1	Standard Pump	12345	010	10 PC
2	High-Performance Pump	12340	040	15 PC

Real World



S/4 HANA Finance

Presentation: G/L Account, Journal Entry, Document Flow (1/2)

SAP GL Account Master Data

13400000
Inventory FinishedGd

General | Company Code Data | Controlling Data | Where Used

Basic Information

Control
 Chart of Accounts: YCOA (Standard Chart of Accounts)
 GL Account Type: Balance Sheet Account
 Account Group: MAF (Materials management accounts)

Administration
 Created On: -
 Created by: -
 Group Chart of Accounts: YGR1 (Consolidation Chart of Accounts)
 GL Account Not Used: -

Description in Maintenance List
 Short Text: Inventory F
 GL Account Long Text: Inventory -

Others
 Blocked for Creation: No
 Blocked for Posting: No
 Blocked for Planning: No
 GL Account Not Used: No

Translation

Language Key	Short Text	GL Account Long Text
AR (Arabic)	مخزون منتجات نهائية	المخزون - منتجات نهائية

SAP Manage Journal Entries

Journal Entry (490000005) - Entry View

Header | Attachments | Notes | Related Documents

Journal Entry Date: 12.05.2022
 Company Code: 1710 (Company Code 1710)
 Reference: 0080006248

Posting Date: 12.05.2022
 Transaction Currency: USD
 Reference Document: MKPF (Material Document)

Posting Period: 5 / 2022
 Header Text: -
 Created by: _SAP0058611 at

Journal Entry Type: WL (Goods Issue/Delivery)

Line Items (2) Standard

Posting View L.	GL Account	Profit Center	Debit
000001	13400000 (Inventory FinishedGd)	YB110 (Product A)	0.00 USD
000002	54083000 (Inv Chg COGS w/CE)	YB110 (Product A)	461.90 USD

Tax Standard

Tax Code	GL Account	Tax Base Amount	Debit

Edit | Create Correspondence | Reverse

SAP Display Document Flow

Operational Document Flow | GL Document Flow

Operational Document Flow

Sales | Delivery | Logistics | Billing

Standard Order (11421) → Outbound Delivery (8000248) → Goods Issue/Delivery (4900007665) → Invoice (90002213)

Document: Shipping (1710) → Document: PalletReceiving (1710) → Document: Pallet (1710) → Document: Bill & Invoice (1710)

Company Code: 1710
 Sold-to Party: 001100001
 Customer: 001100001
 Amount: 1,000.00 USD

Document Date: 12.05.2022
 Delivery Date: 12.05.2022
 Document Date: 12.05.2022
 Amount: 1,000.00 USD

Document Date: 12.05.2022
 Document Date: 12.05.2022
 Amount: 1,000.00 USD

Document Date: 12.05.2022
 Document Date: 12.05.2022
 Amount: 1,000.00 USD

GL Document Flow

Displayed Dimension: Fiscal Year | Fiscal Year: 2022 X | Display as T-Accounts

Fiscal Year 2022

Journal Entry 100000192 → Journal Entry 490000090 → Journal Entry 490000091 → Journal Entry 700000054

Journal Entry	Fiscal Year	Company Code	Posting Date	Journal Entry	Fiscal Year	Company Code	Posting Date	Journal Entry	Fiscal Year	Company Code	Posting Date	Journal Entry	Fiscal Year	Company Code	Posting Date
100000192	2022	1710	12.05.2022	490000090	2022	1710	12.05.2022	490000091	2022	1710	12.05.2022	700000054	2022	1710	12.05.2022
Date: 12.05.2022				Date: 12.05.2022				Date: 12.05.2022				Date: 12.05.2022			
JE Type: 21.14.05 SA				JE Type: 21.14.05 WL				JE Type: 21.14.05 WL				JE Type: 21.14.05 SA			

Access to system HC6

<https://hc6-715.wdf.sap.corp/ui>

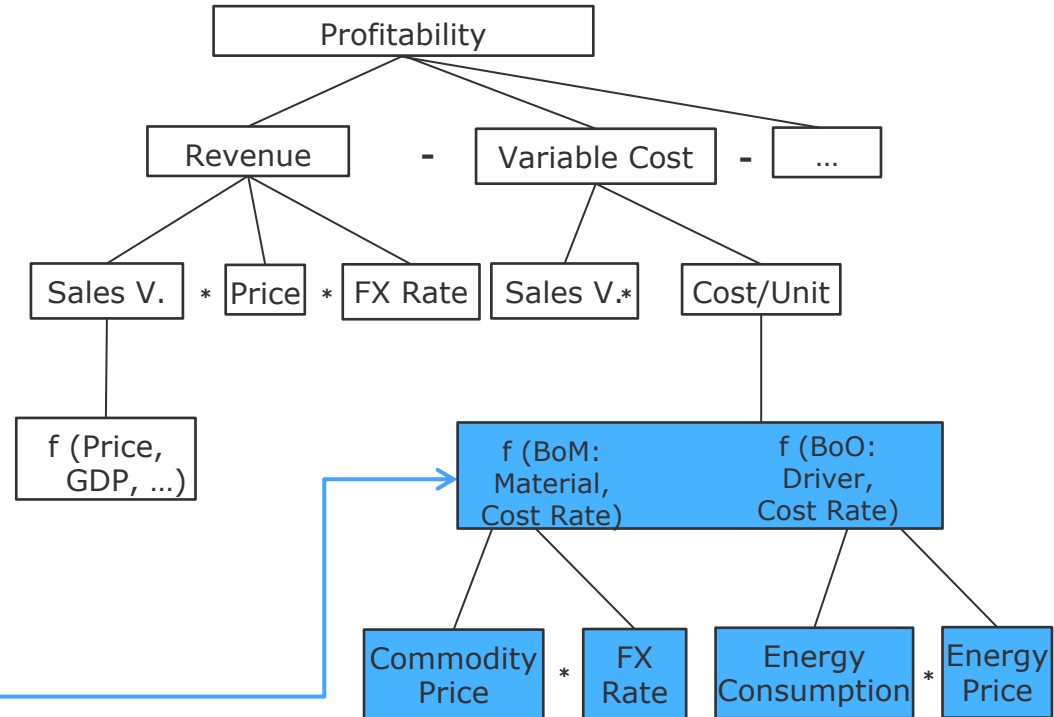
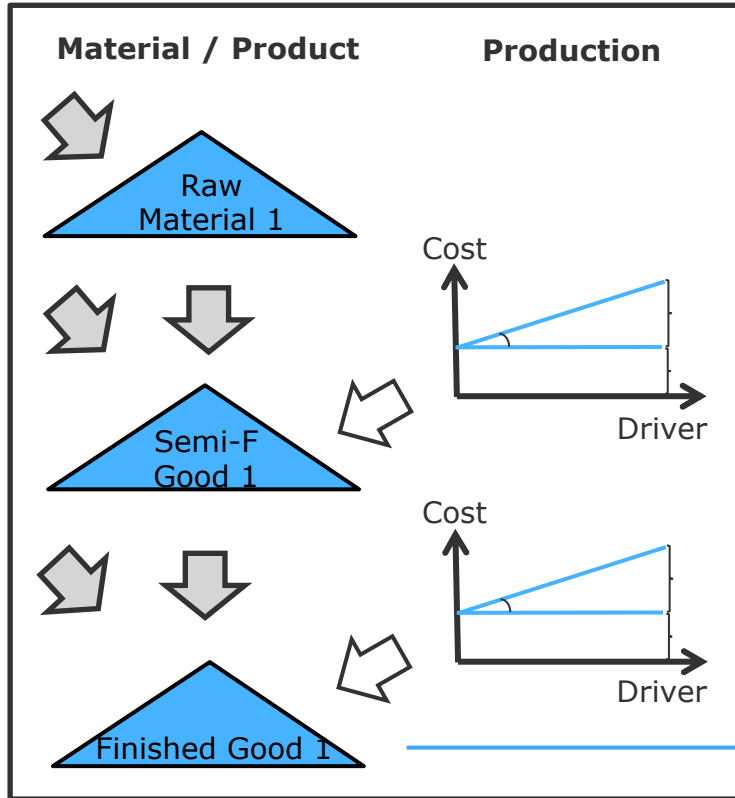
Functional Dependencies: The Driver Model

To be able to fulfill tasks supporting decisions, cause-and-effect relationships have to be representable. Therefore, a system of functional dependencies has to be built.

- ◆ The logistical business processes, but miscellaneous real-world events too, constitute the independent variables (called drivers or activities).
- ◆ Dependent variables are, as a rule, value sizes.
- ◆ The connection between the drivers and value sizes are made by coefficients that result from technical standards, legal agreements, business conditions, empirical values, business planning, and so on.

Accounting

Descriptive Models



◆ Journal

All journal entries together comprise the journal, sometimes called General Journal or Universal Journal.

◆ Subledgers

Subledgers are made for special tasks

- Accounts receivable accounting: Dunning of open items, taxes
- Accounts payable accounting: Payment of open items, taxes
- Inventory accounting: Goods receipts, goods issued, valuations, inventory
- Payroll accounting: Salaries, social security contributions, taxes
- Asset accounting: Purchases, sales, write-offs
- Cash-based accounting: Cash deposits and cash payments
- Bank (current account-) accounting: Account monitoring, liquidity

The subledgers contain those line items belonging to their constitutive object as well as additional information required to fulfill their tasks; for example, dunning transactions need redundant information from operational documents.

Subledgers are disjoint. A line of a journal entry fits exactly in a one subledger.

Sometimes, in the domain of Financials the objects that constitute the subledger are called accounts. Customer account / accounts receivable = customer number, vendor account / accounts payable = vendor number, inventory account = material number, asset account = equipment number, bank account = bank account number. There is a distinction between personal accounts and impersonal accounts.

◆ General Ledger

General Ledger is made for the following accounting tasks

- Statutory financial statements: Balance Sheet, Profit and Loss Statement, Cash Flow Statement
- Management Reporting: Responsibility Accounting (cost centers, projects), Profitability Accounting (market segments), Working Capital Accounting (claims, liabilities, materials inventory)

Accounting

Management of Journal Entries

General ledger objects are the values to be managed separately to build the line structure of the balance sheet and the income statement. These objects are also called an account. To distinguish them clearly from the accounts defining the subledgers, they are called G/L accounts.

In G/L accounts, you can distinguish between balance sheet accounts and P&L accounts. No special accounts are required for the cash flow statement because they are calculated from the balance sheet and income statement.

G/L accounts are impersonal type of accounts.

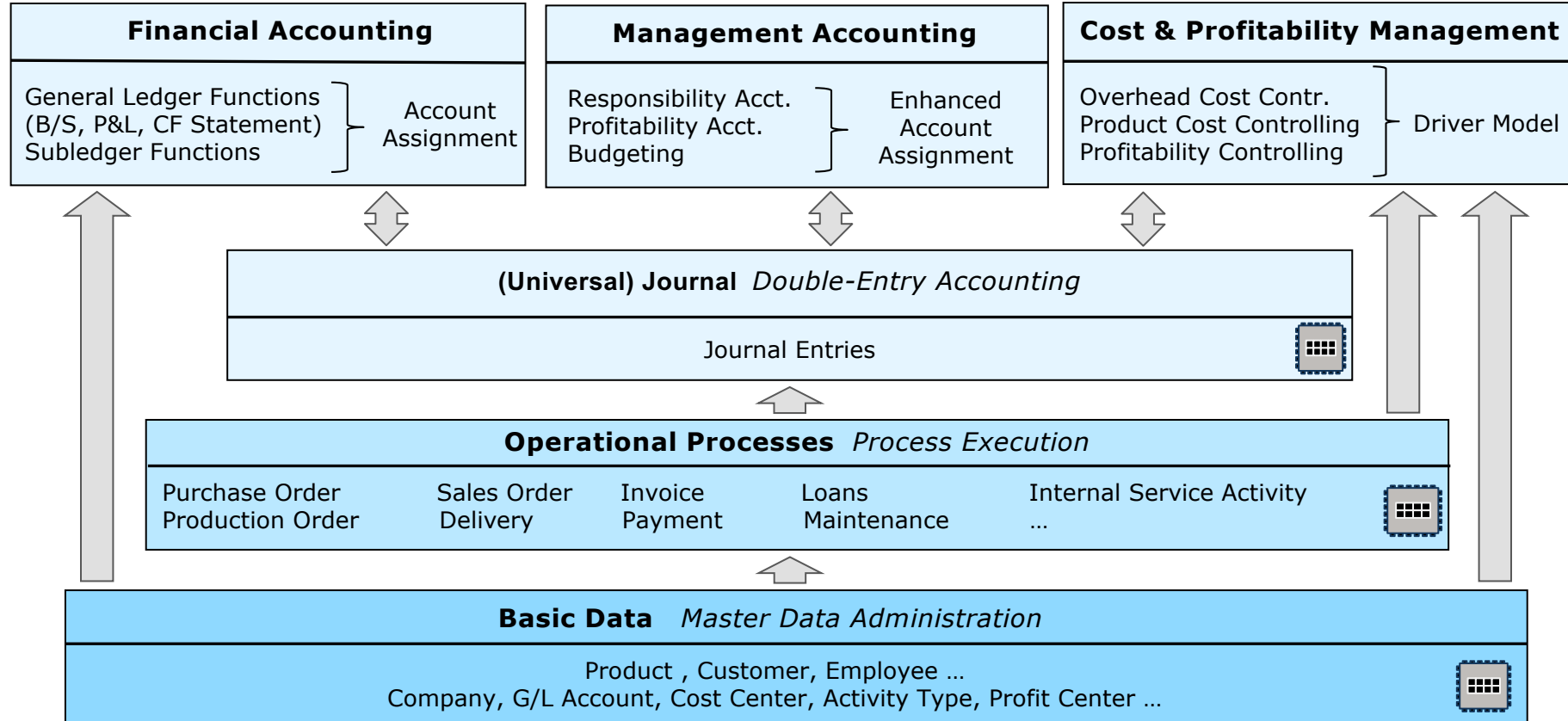
Industry associations as well as academia have proposed various systems of accounts called standard chart of accounts. In the context of a specific enterprise, it is called a chart of accounts.

In those line items of a journal entry for which a subledger exists, the G/L account is called a reconciliation account.

The general ledger contains the aggregated amounts from the line items of a journal entry by account. The difference between the credit and debit values in an account is called the balance.

Accounting

SAP S/4 HANA Finance System



Agenda

1. Accounting.
Organization, Tasks, Concepts
2. **Financial Accounting: External Addressees**
Business Processes and External Financial Reporting
3. Controlling: Internal Addressees
Allocation Process
 - a. Management Accounting
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model
4. Reporting and Planning
Formatted Reporting, Analytical Reporting, Business Planning

Financial Accounting: External Addressees

General Ledger Accounting

The financial situation is depicted in the balance sheet (B/S).

- ◆ Liabilities: Where do the financial resources come from?
 - Equity capital
 - Debt capital, incl. payables
- ◆ Assets: What are the financial resources used for?
 - Fixed assets, incl. real estate, machines
 - Current assets, incl. material inventories, claims, cash

Cash transactions are called incoming and outgoing payments.

Claim- and liability transactions are called payables and receivables.

At the beginning of a fiscal year balance of balance accounts equals to values of the end of the previous fiscal year; they develop over time.

Financial Accounting: External Addressees

General Ledger Accounting

Assets		Balance Sheet of AB Ltd for 12/31/2020		Liabilities	
A	Fixed Assets	A	Equity	I	Capital Stock
	I Intangible Assets		II Retained Earnings	III	Annual Net Profit
	II Tangible Assets		B Provisions	I	Pension Reserves
	1. Real Estate and Buildings		II	Provisions for Taxation	
	2. Technical Assets and Machines		III	Other Reserves	
	3. Factory and Office Equipment		C Liabilities	I	Bank Loans and Overdrafts
	III Financial Assets		II	Trade Liabilities	
B	Current Assets		III	Other Liabilities	
	I Inventory		D Deferred Income/Accrued Expenses		
	1. Raw Materials				
	2. Finished Products				
	II Receivables				
	1. Trade Receivables				
	2. Other Financial Assets				
	III Fixed Asset Securities				
	IV Liquid Assets (Petty Cash, Credit)				
C	Accrued Income/Deferred Expenses				

Financial Accounting: External Addressees

General Ledger Accounting

Earnings are depicted in the profit & loss statement (P&L).

- ◆ Expenses
- ◆ Income

How expenses are divided up depends on the calculation of profits method.

- ◆ Cost of sales method
Revenues – cost of sales – expenses of functional areas
- ◆ Total period cost method
Revenues +/- change in inventory +/- capitalized services on own account – total expenses for period

Calculated profit / loss is identical for both methods (see appendix).

At the beginning of a fiscal year balance of P&L accounts is zero.

Financial Accounting: External Addressees

General Ledger Accounting

P&L of AB Ltd.			
	Position	2020	2019
	Euro (in Thousands)		
1	Income	€ 636.558,00	€ 623.221,00
2	Deductions	€ (1.000,00)	€ (1.000,00)
3	Cost of Sales	€ (326.666,00)	€ (311.254,00)
4	Net Income (1) + (2) + (3)	€ 308.892,00	€ 310.967,00
5	Production: Surplus / Deficit	€ (5.000,00)	€ (6.000,00)
6	Sales and Marketing Expenses	€ (42.554,00)	€ (38.554,00)
7	Research and Development Expenses	€ (122.552,00)	€ (125.224,00)
8	Administrative Expenses	€ (29.255,00)	€ (28.774,00)
9	Other Operating Revenues	€ 5.588,00	€ 5.788,00
10	Other Operating Expenses	€ (12.558,00)	€ (23.669,00)
11	Operating Result (EBIT) (4) + (5) ... (10)	€ 102.561,00	€ 54.534,00
12	Interest Revenue	€ 2.236,00	€ 1.225,00
13	Interest Costs	€ (25.114,00)	€ (26.474,00)
14	Interest Results (12) + (13)	€ (22.878,00)	€ (25.249,00)
15	Investment Results	€ 3.369,00	€ 2.252,00
16	Financial Results (14) + (15)	€ (19.509,00)	€ (22.997,00)
17	Earnings Before Taxes (EBT) (11) + (16)	€ 83.052,00	€ 71.537,00
18	Taxes on Income and Profit	€ (26.716,00)	€ (23.561,00)
19	Annual Net Profit (17) + (18)	€ 56.336,00	€ 47.976,00
20	- Attributable to Non-Controlling Interests	€ 2.114,00	€ 3.665,00
21	- Attributable to AB Ltd Shareholders	€ 54.222,00	€ 44.311,00

Note 1: According to Cost-of Sales method. Note 2: For special terminology see Appendix

Financial Accounting: External Addressees

General Ledger Accounting

Changes of cash and cash equivalents are depicted in the cash flow statement (CF).

Determination uses the direct method (journal entries of all cash accounts of B/S) or the indirect method (P&L and journal entries of all non-cash accounts of B/S).

Earnings according to P&L

- + Expenses that are not outgoing payments (for example, depreciations)
- Revenues that are not incoming payments (for example, interest with later payments)
- Outgoing payments that are not expenses (for example, investments)
- + Incoming payments that are not revenue (for example, upfront payments for product sales)
- = Cash Flow

Because of the concept of Double Entry Accounting calculated Cash Flow is identical for both methods. The indirect method enables to calculate Cash Flow by business categories.

Financial Accounting: External Addressees

General Ledger Accounting

Cash Flow Statement of AB Ltd.

	€ Millions	2019	2020	Change
1	Company Net Income	€ 904,00	€ 1.019,00	€ 115,00
2	Write-Offs	€ 1.516,00	€ 2.198,00	€ 682,00
3	Other Adjustments	€ 139,00	€ (1.034,00)	€ (1.173,00)
4	Cash Flow from Current Business Activities (1) + (2) + (3)	€ 2.559,00	€ 2.183,00	€ (376,00)
5	Investments	€ (1.734,00)	€ (1.858,00)	€ (124,00)
6	Divestments	€ 756,00	€ 2.488,00	€ 1.732,00
7	Sold/Acquired Liquid Funds	€ (1,00)	€ 333,00	€ 334,00
8	Cash Flow from Investments (5) + (6) + (7)	€ (979,00)	€ 963,00	€ 1.942,00
9	Net-(Payments Out)/Payments In Financial Liabilities	€ (648,00)	€ 509,00	€ 1.157,00
10	Dividends (Incl. Dividend Payments to External Entities)	€ (271,00)	€ (335,00)	€ (64,00)
11	Issue of Own Shares	€ 12,00	€ 12,00	€ -
12	Miscellaneous Financial Transactions	€ 42,00	€ (63,00)	€ (105,00)
13	Cash Flow from Financial Activities (9) + (10) + (11) + (12)	€ (865,00)	€ 123,00	€ 988,00
14	Changes in Exchange Rate	€ (13,00)	€ 51,00	€ 64,00
15	Change in Liquid Funds (4) + (8) + (13) + (14)	€ 702,00	€ 3.320,00	€ 2.618,00

Financial Accounting: External Addressees

Business Transactions and Journal Entries

1. Founding the Company

Deposit: 500,000 €

DR cash	500,000 €
CR equity	500,000 €

2. Purchasing a Machine

Procurement value: €100,000 plus VAT

DR fixed assets A1	100,000 €
DR VAT*	20,000 €
CR cash	120,000 €

3. Purchasing Raw Material

Purchase of 20 tones of raw material R1 at a price of 90 €/tone plus VAT

Standard purchasing price of raw material R1: 100 €/tone

DR raw material R1	2,000 €
DR VAT*	360 €
CR cash	2,160 €
CR price differences	200 €

* VAT according to German Tax Law

Financial Accounting: External Addressees

Business Transactions and Journal Entries

4. Taking On 2 Employees

5. Production of a Finished Product

Production of 40,000 liters of finished product F1

Consumption of 2 tones of raw material R1 for each 10,000 liters of finished product F1

Material- and production overheads: 120%

DR finished product	F1	1,760 €
CR raw material	R1	800 €
CR factory output	CContr1	960 €

Product cost rate:

$$\frac{(200 \text{ €} + 240 \text{ €})}{10.000 \text{ l}} = 440 \text{ €} / 10.000 \text{ l}$$

6. Payment of Salaries

4.000 €

DR salaries	CContr1	4,000 €
CR cash		4,000 €

7. Acceptance of a Sales Order

Customer K1 orders 10,000 liters of finished product F1

Financial Accounting: External Addressees

Business Transactions and Journal Entries

8. Delivery of a Finished Product to a Customer

Delivery of 10.000 l of finished product F1 to Customer C1. Standard manufacturing costs of F1 (see step 5): 440 € /10,000 l

DR cost of sales	C1	F1	440 €
CR finished products	F1		440 €

9. Invoicing a Customer

Sales price of finished product F1: 500 € /10,000 l plus VAT

DR receivables	C1		600 €
CR revenues	C1	F1	500 €
CR VAT*			100 €

10. Dunning

11. Incoming Payment from a Customer

Cash discount deducted by customer C1: 3%

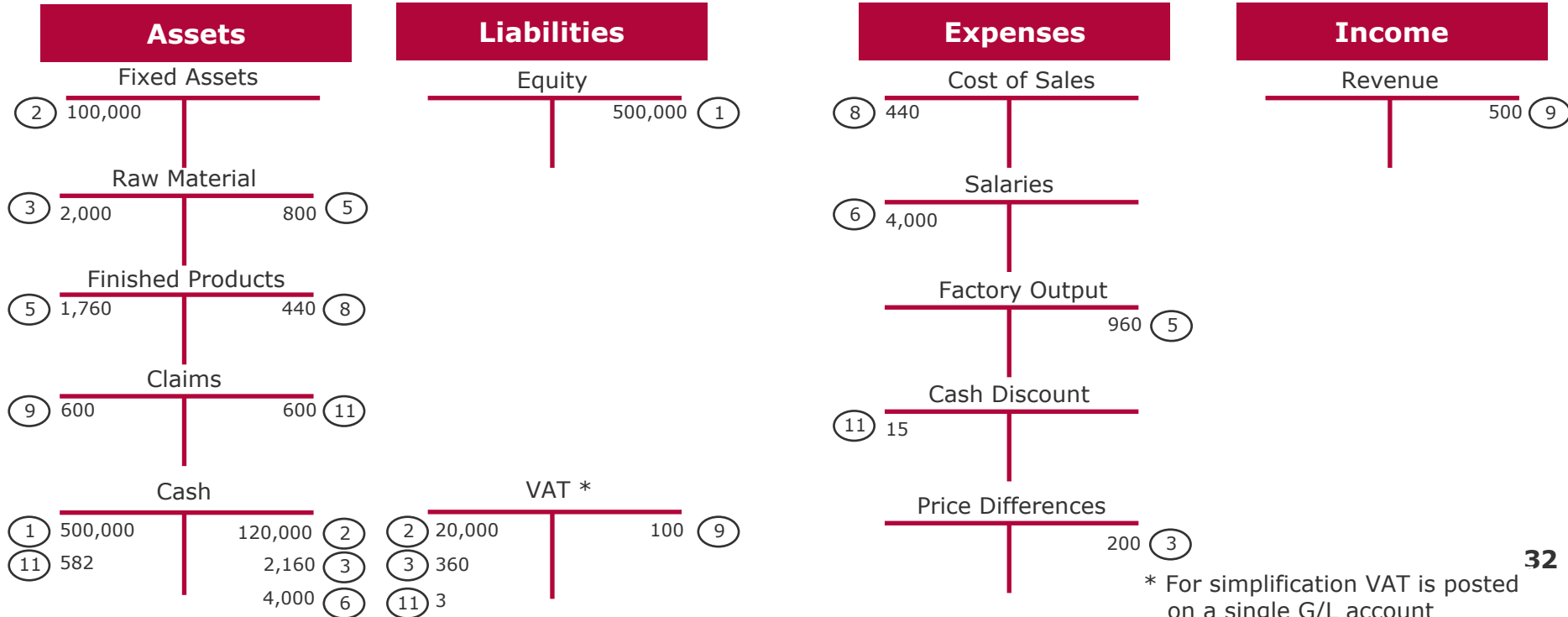
DR cash	C1		582 €
DR cash discount	C1		15 €
DR VAT*			3 €
CR receivables			600 €

* VAT according to German Tax Law

Financial Accounting: External Addressees

Business Transactions and Journal Entries

Business Transactions in G/L Accounts (Trial Balance)



* For simplification VAT is posted on a single G/L account

Financial Accounting: External Addressees

Business Transactions and Journal Entries

Assets				Balance Sheet of AB Ltd. for 12/31/2020				Liabilities				
A	Fixed Assets							A	Equity			
	I	Intangible Assets							I	Capital Stock		500.000 €
	II	Tangible Assets							II	Retained Earnings		
		1.	Real Estates and Buildings						III	Annual Net Profit		-2.795 €
		2.	Technical Assets and Machines	100.000 €				B	Provisions			
		3.	Factory and Office Equipment						I	Pension Reserves		
	III	Financial Assets							II	Provisions for Taxation		
B	Current Assets								III	Other Reserves		
	I	Inventory						C	Liabilities			
		1.	Raw Materials	1.200 €					I	Bank Loans and Overdrafts		
		2.	Finished Products	1.320 €					II	Trade Liabilities		
	II	Receivables							III	Other Liabilities		
		1.	Trade Receivables					D	Deferred Income / Accrued Expenses			
		2.	Other Financial Assets	20.263 €								
	III	Fixed Assets Securities										
	IV	Liquid Assets (Petty Cash, Credit)		374.422 €								
C	Accrued Income / Deferred Expenses											
Balance Sheet Total				497.205 €				Balance Sheet Total				497.205 €

Note: Numbers in B/S are identical with journal entry numbers of the fiscal period as the company was newly founded (no opening balances)

P&L for AB Ltd.	
Position	2020
in Euro	
1 Income	€ 500
2 Deductions	-€ 15
3 Cost of Sales	-€ 440
4 Net Income (1) + (2) + (3)	€ 45
5 Production: Surplus / Deficit	-€ 3.040
6 Sales and Marketing Expenses	
7 Research and Development Expenses	
8 Administrative Expenses	
9 Other Operating Revenues	€ 200
10 Other Operating Expenses	
11 Operating Result (EBIT) (4) + (5) ... (10)	-€ 2.795
12 Interest Revenue	
13 Interest Cost	
14 Interest Results (12) + (13)	
15 Investment Results	
16 Financial Results (14) + (15)	
17 Earnings Before Taxes (EBT) (11) + (16)	-€ 2.795
18 Taxes on Income and Profit	
19 Annual Net Profit (17) + (18)	-€ 2.795
20 - Attributable to Non-Controlling Interests	
21 - Attributable to AB Ltd Shareholders	

Note: According to Cost-of Sales method **33**

Financial Accounting: External Addressees

Business Transactions and Journal Entries

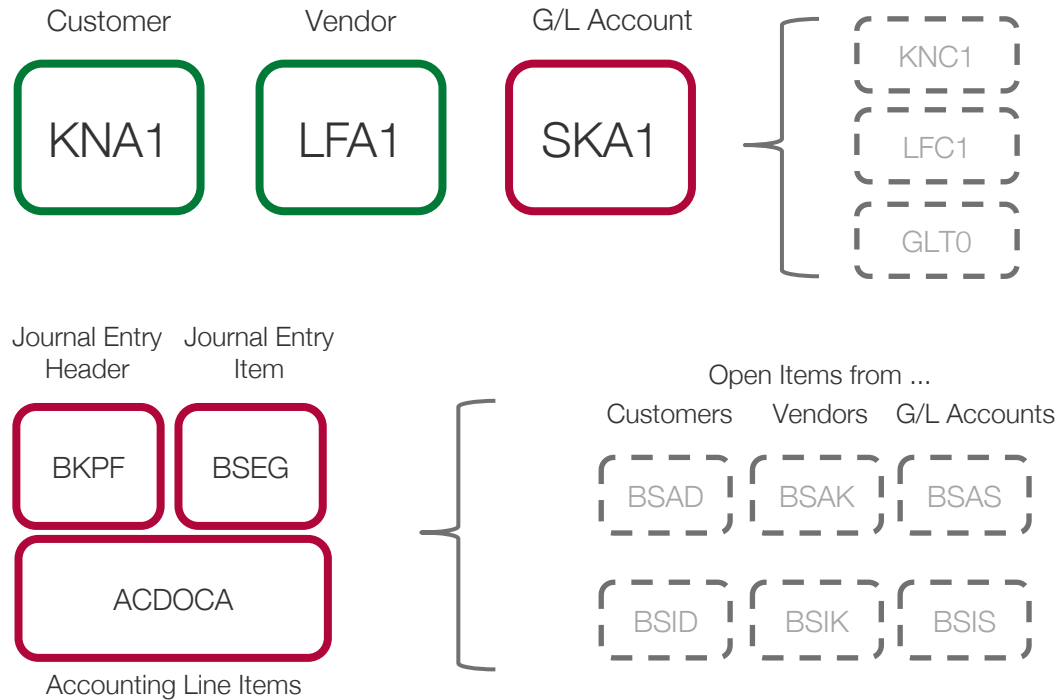
Cash Flow Statement of AB Ltd.		
	in Euro	2020
1	Company Net Income	-€ 2.795,00
2	Write-Offs	€ 0,00
3	Other Adjustments	-€ 22.783,00
4	Cash Flow from Current Business Activities (1) + (2) + (3)	-€ 25.578,00
5	Investments	-€ 100.000,00
6	Divestments	€ 0,00
7	Sold/Acquired Liquid Funds	€ 0,00
8	Cash Flow from Investments (5) + (6) + (7)	-€ 100.000,00
9	Net-(Payments Out)/Payments In Financial Liabilities	€ 500.000,00
10	Dividends (Incl. Dividend Payments to External Entities)	€ 0,00
11	Issue of Own Shares	€ 0,00
12	Miscellaneous Financial Transactions	€ 0,00
13	Cash Flow from Financial Activities (9) + (10) + (11) + (12)	€ 500.000,00
14	Changes in Exchange Rate	€ 0,00
15	Change in Liquid Funds (4) + (8) + (13) + (14)	€ 374.422,00

*

* Raw Material, Finished Products, and VAT

Financial Accounting: External Addressees

Data Model: SAP S/4 HANA Finance with In-Memory Architecture



Agenda

1. Accounting.
Organization, Tasks, Concepts
2. Financial Accounting: External Addressees
Business Processes and External Financial Reporting
3. **Controlling: Internal Addressees**
Allocation Process
 - a. Management Accounting
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model
4. Reporting and Planning
Formatted Reporting, Analytical Reporting, Business Planning

Controlling: Internal Addressees

Account Assignment

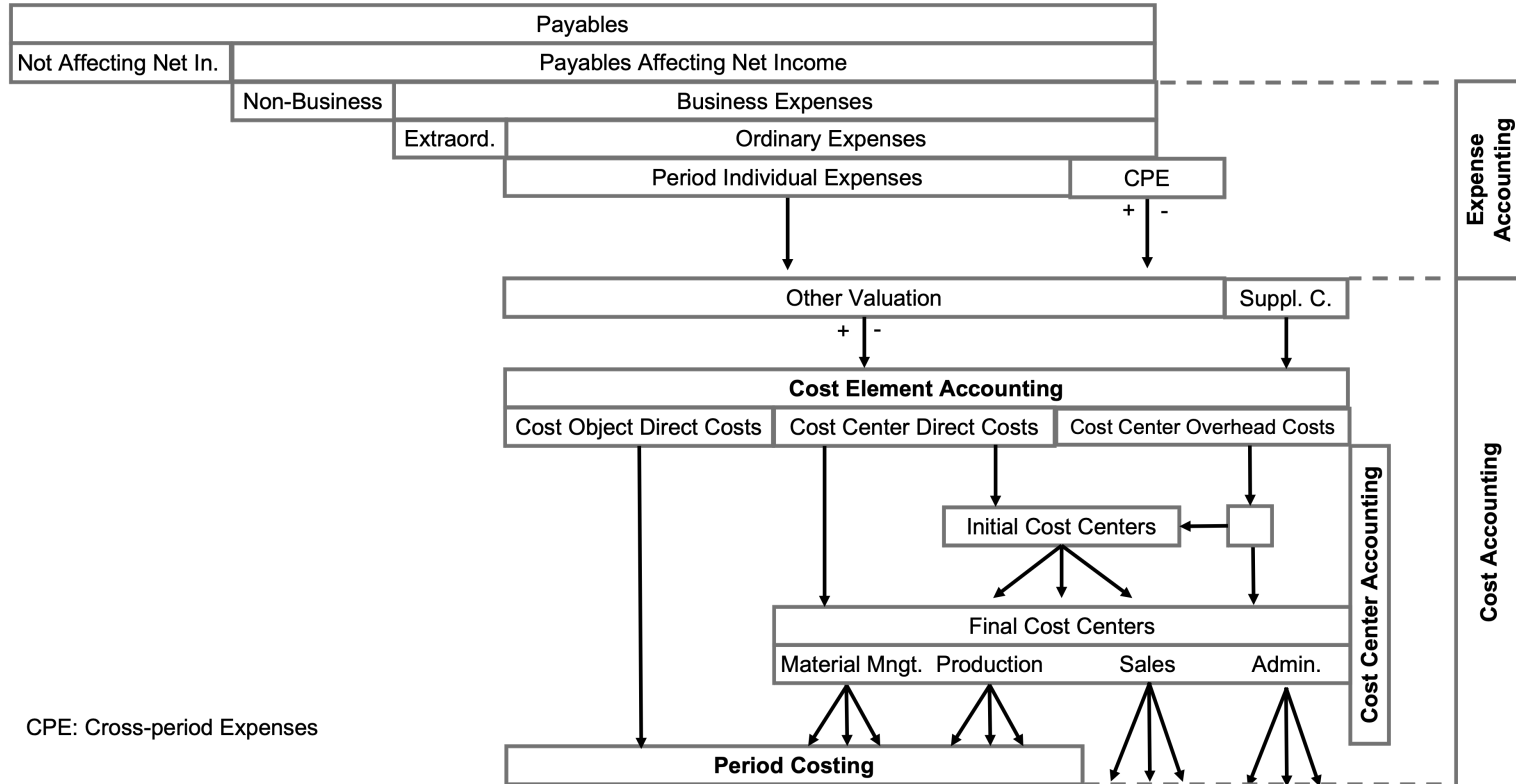
To fulfill the internal accounting tasks above, the following functions need to be supported:

- ◆ **Costs / revenues** are reported differently from expenses and income in P&L; this is called valuation differences, and additional costs
- ◆ Infrastructure costs are assigned to areas of responsibility; these are called **cost centers, internal orders and internal projects**
- ◆ Material costs as well as costs for utilizing the infrastructure are assigned to production orders; these are called **cost objects**
- ◆ Revenues / deductions are differentiated by market segments; these are called **profitability objects**

This all takes place on the basis of actual business transactions (actual data) as well as planned ones (plan data)

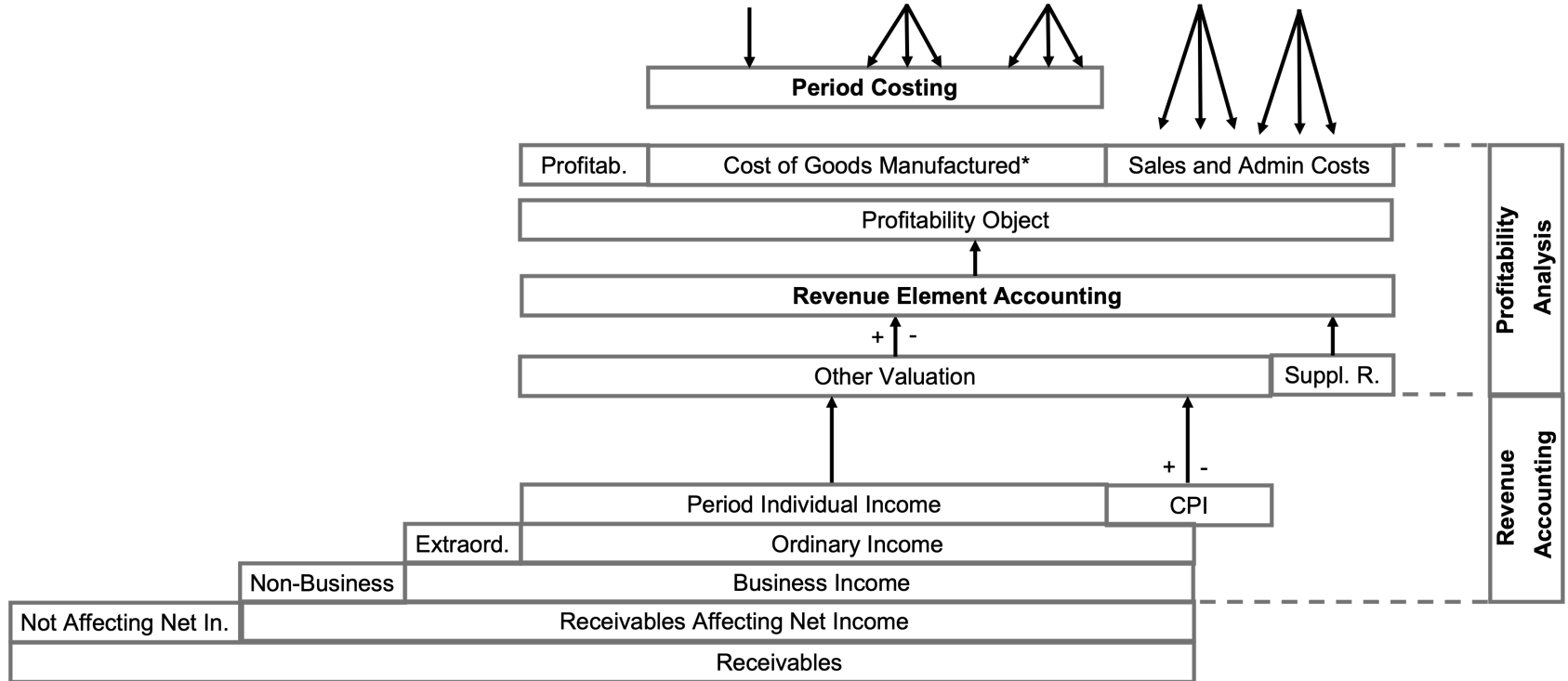
Controlling: Internal Addressees

Cost Allocation Process (1/2)



Controlling: Internal Addressees

Cost Allocation Process (2/2)

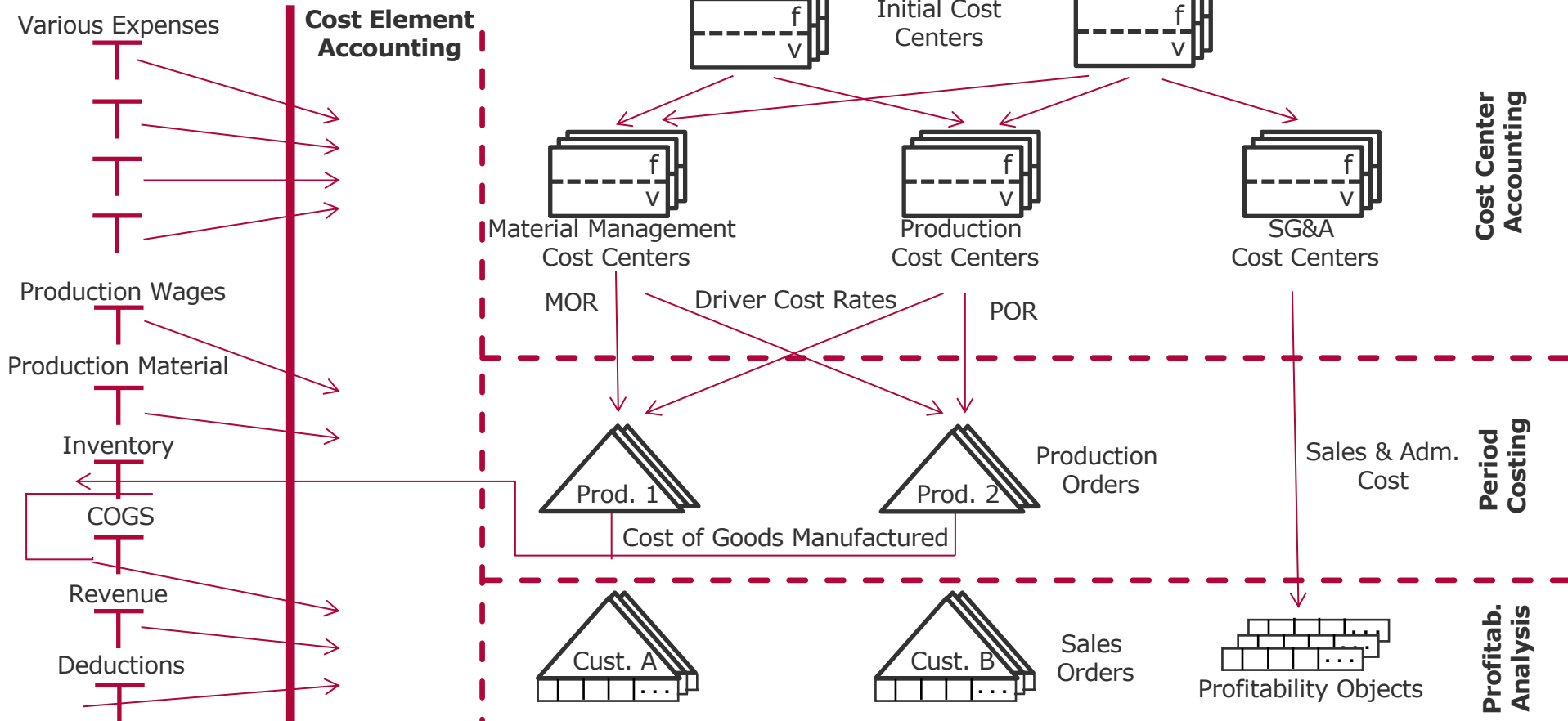


CPI: Cross-period Income

* Cost of Goods Manufactured equal to Period Cost, that is, no changes in inventory
 Cost of Goods Manufactured + Sales and Admin Costs = Cost of Sales

Controlling Cost Allocation Process

Fin. Acc. ↔ **Mngt. Accounting**

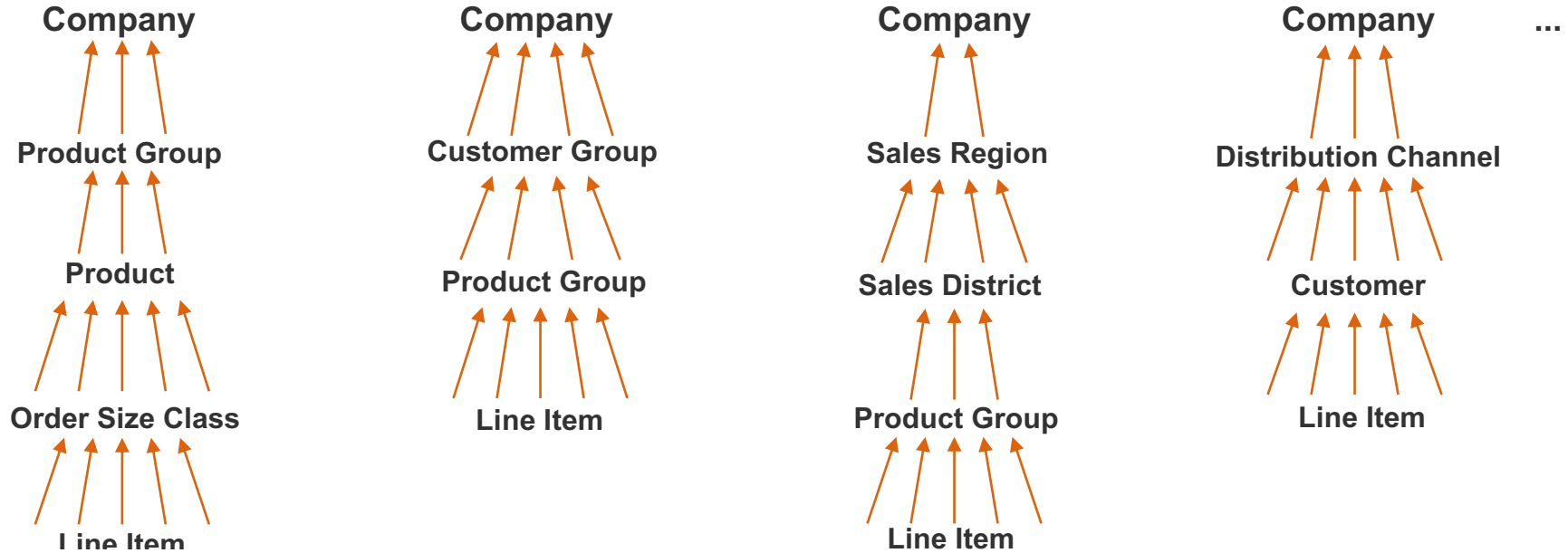


Agenda

1. Accounting.
Organization, Tasks, Concepts
2. Financial Accounting: External Addressees
Business Processes and External Financial Reporting
3. Controlling: Internal Addressees
Allocation Process
 - a. **Management Accounting**
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model
4. Reporting and Planning
Formatted Reporting, Analytical Reporting, Business Planning

Management Accounting

Cost Element Accounting



Doc. No.	Line Item	Date	Product	Product Group	Order Lot Size Class	Customer	Customer Group	Sales Region	Sales District	Distribution Channel	...	G/L Account	D/C	Amount
----------	-----------	------	---------	---------------	----------------------	----------	----------------	--------------	----------------	----------------------	-----	-------------	-----	--------

Enhanced Account Assignment

Management Accounting

Cost Element Accounting

Example: Goods Delivery

Management Accounting	Company Pumps Ltd							
	Doc. No. 0815			Doc. Date 03.04.2022		Reference 4711		
	Item	DR/CR	Account	Sales Order	SO Pos.	Customer	Product	Value
	1	DR	Cost of Sales	12345	010	Heating Ltd.	Pump S	120
	2	DR	Cost of Sales	12340	040	Heating Ltd.	Pump H	320
3	CR	Inventory					440	

Logistics	Company Pumps Ltd				
	Delivery Note 4711				
	Company Heating Ltd				
	We delivered to you on 03.04.2022				
	Item	Product	Sales Order	SO Pos.	Quantity
1	Standard Pump	12345	010	10 PC	
2	High-Performance Pump	12340	040	15 PC	

Real World	
-------------------	--

Management Accounting

Cost Center Accounting: Cost Allocation Sheet

Columns →		1	2	3	4	5	6	7	8	9
Lines ↓	G/L Accounts (Expenses) ↓	Cost Element Accounting Numbers	Initial Cost Centers			Final Cost Centers				
			General (Support) Cost Center		Prodn Support Cost Centers	Material Management Cost Centers	Main Production Cost Centers		Admin. Cost Centers	Sales Cost Centers
			I	II			A	B		
				I. Journal Entries (Expenses) (Lines 1 - 10)						
1	Wages	4 000	400	500	1 000	800	200	200	600	300
2	Salaries	7 500	400	300	300	1 200	500	300	2 500	2 000
3	Statutory Social Benefits	1 150	80	80	130	200	70	50	310	230
4	Indirect Material	3 000	400	200	400	200	500	600	400	300
5	Maintenance	250	10	20	40	20	60	70	20	10
6	External Electricity Supply	180	20	10	20	20	40	40	20	10
7	Rent	400	20	30	30	40	60	50	100	70
8	Insurances	140	10	10	20	10	30	40	10	10
9	Accrued Depreciation	500	30	50	60	60	100	110	50	40
10	Accrued Interest	130	10	20	20	10	30	20	10	10
11	Total: (Lines 1 - 10)	17 250	1 380	1 220	2 020	2 560	1 590	1 480	4 020	2 980
	II. Allocation of General (Support) Cost Centers (Lines 12 - 15)									
12	Allocation of Cost Center I (Column 2)		1 380							
13				+100	+300	+400	+200	+200	+100	+80
14	Allocation of Cost Center II (Column 3)			1 320						
15					+200	+300	+200	+220	+300	+100
16	Subtotal	17 520	0	0	2 520	3 260	1 990	1 990	4 420	3 160
	III. Allocation of Production Support Center (Lines 17 - 18)									
17					2 520					
18							+1 550	+1 020		
19	Total Cost of Final Cost Centers	17 250			0	3 260	3 490	2 920	4 420	3 160

Management Accounting

Cost Center Accounting: Overhead Rates Calculation

	Determination of Overhead Cost Rates	Material Management Cost Centers	Main Production Cost Centers A	Main Production Cost Centers B	Administration Cost Centers	Sales Cost Centers
	Allocation Base:					
20	a) Direct Material Costs	20 000				
21	b) Labour Costs		3 000	5 000		
22	c) Production Costs				37 670	37 670
23	Actual Overhead Cost Rates:	16.3%	116.3%	58.4%	11.7%	8.4%

Material overhead rate: Material management cost center costs / production program material costs

$$\rightarrow 3.260/20.000 = 16.3\%$$

Production overhead rate: Production cost center costs / production program labour costs

$$\rightarrow 3.490/3.000 = 116,3\% \text{ and } 2.920/5.000 = 58,4\%$$

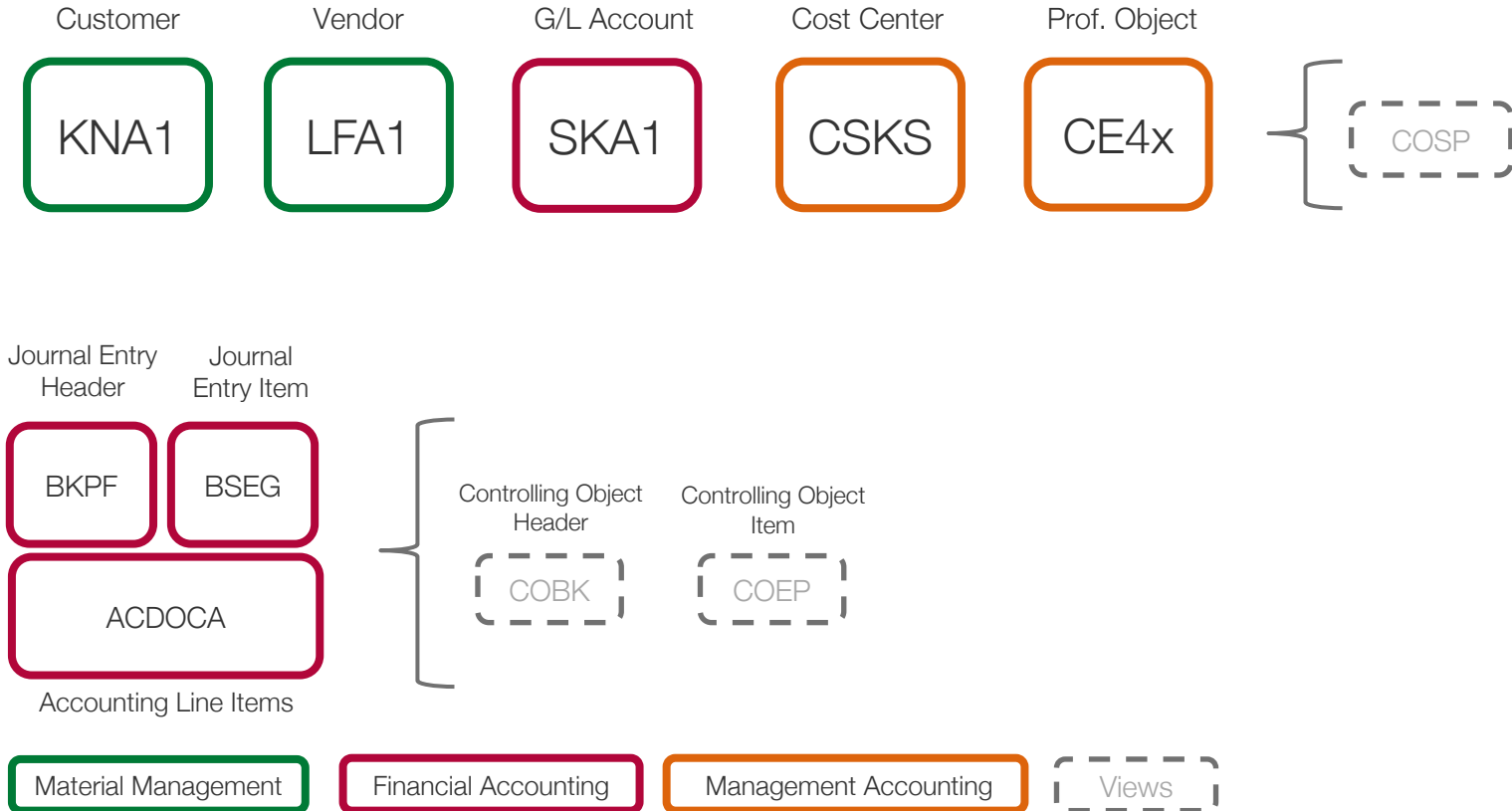
Sales and administration overhead rate: Sales and administration cost center costs / production program production costs

$$\rightarrow 4.420/(20.000 * 1,163 + 3.000 * 2,163 + 5.000 * 1,584) = 11,7\% \text{ and}$$

$$3.160/(20.000 * 1,163 + 3.000 * 2,163 + 5.000 * 1,584) = 8,4\%$$

Management Accounting

Data Model: SAP S/4 HANA Finance with In-Memory Architecture

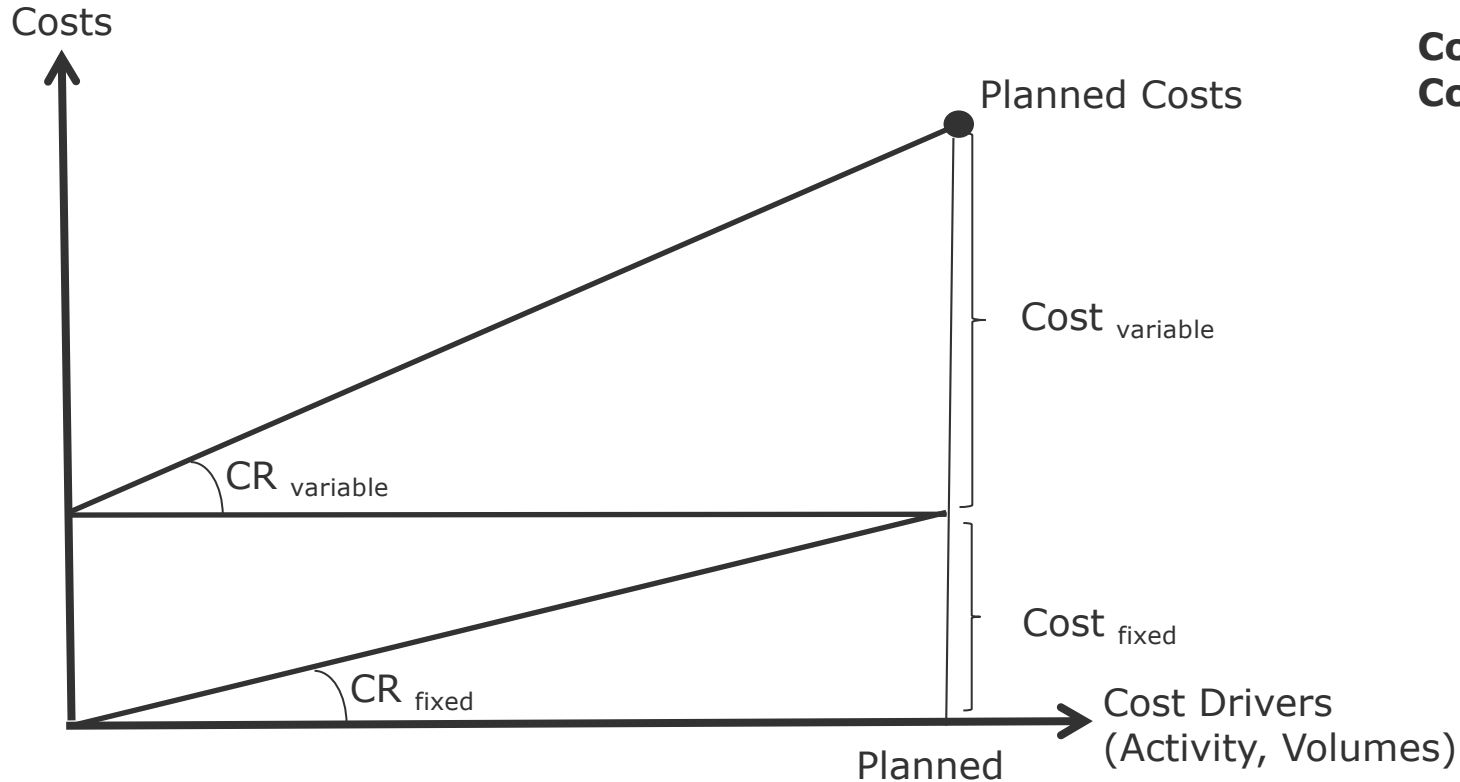


Agenda

1. Accounting.
Organization, Tasks, Concepts
2. Financial Accounting: External Addressees
Business Processes and External Financial Reporting
3. Controlling: Internal Addressees
Allocation Process
 - a. Management Accounting
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model**
4. Reporting and Planning
Formatted Reporting, Analytical Reporting, Business Planning

Cost and Profitability Management

Cost Center Costs

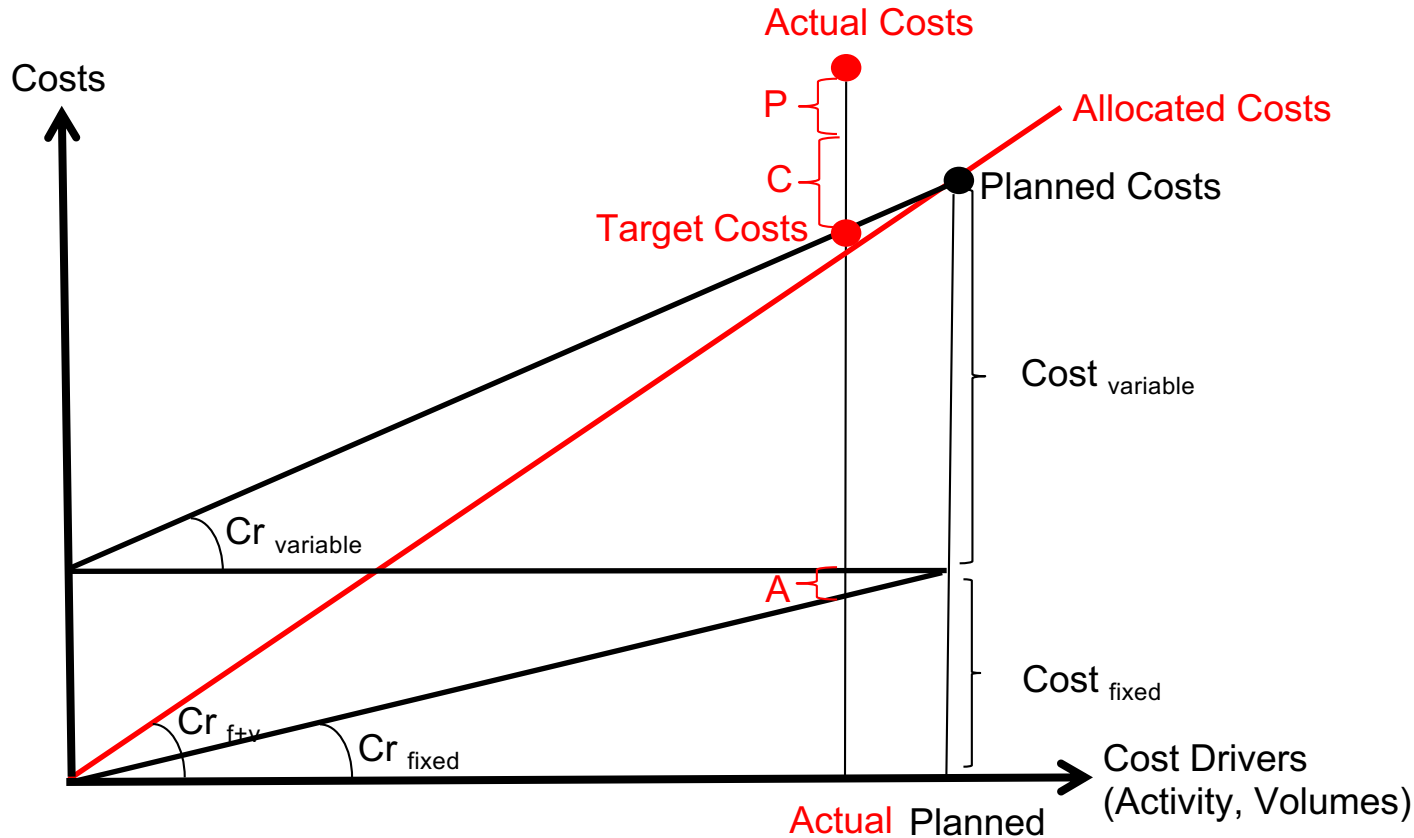


Cost Function and Cost Rates

CR: Cost Rate

Cost & Profitability Management

Cost Center Costs



Variance Analysis

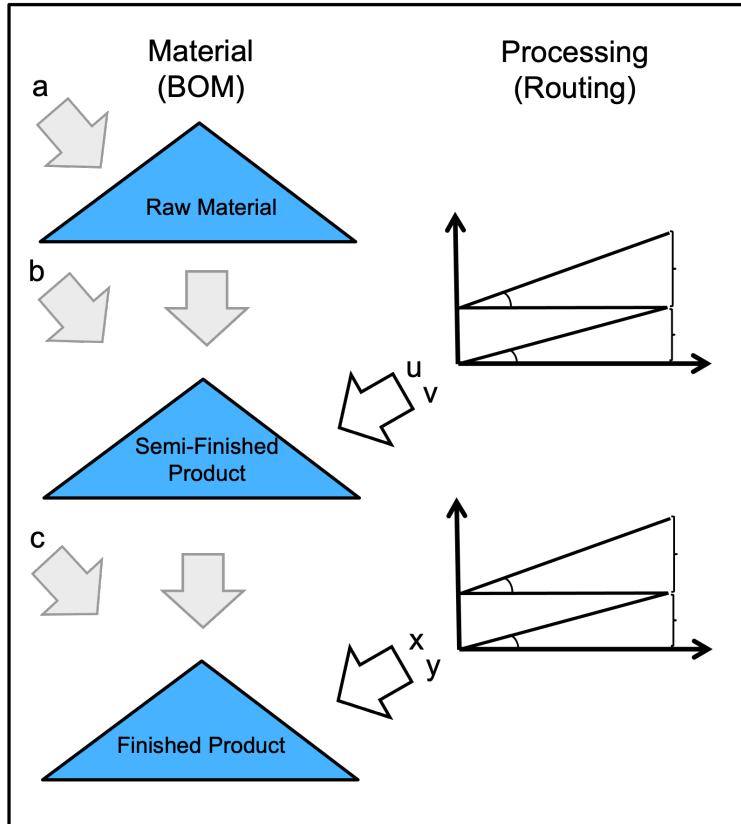
Variance Types

- P = Price Variance
- C = Consumption Variance
- A = Activity Variance

Cr: Cost Rate

Cost and Profitability Management

Product Costing: Product Cost Calculation



Manufacturing Cost Split

Material Category 1	Material Category 2	Processing var	Processing fix
a			

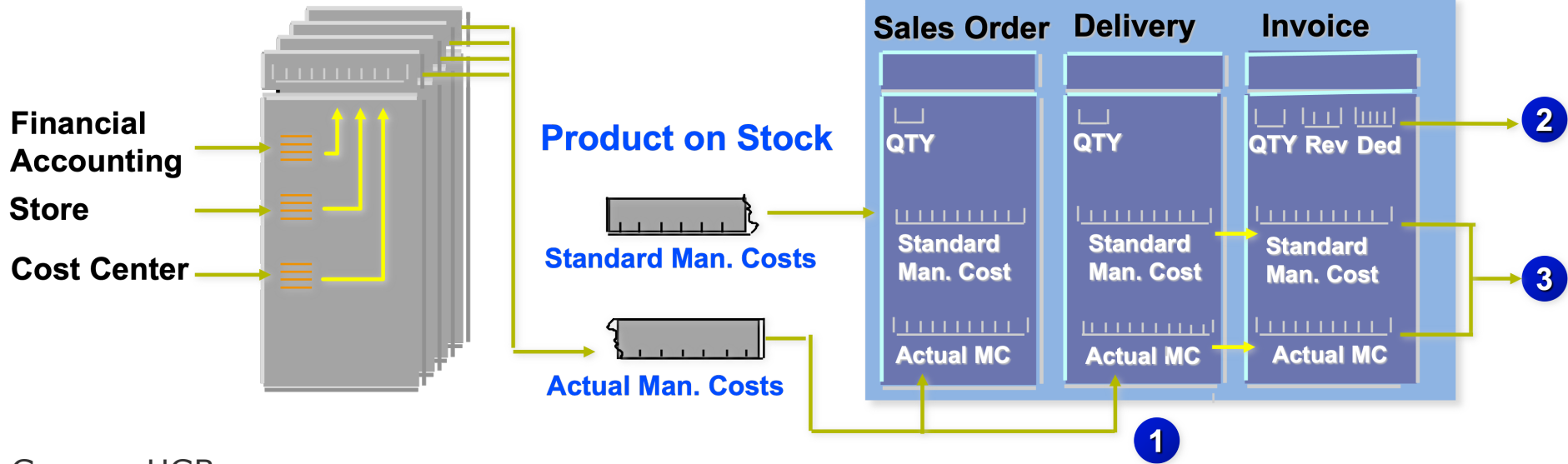
Material Category 1	Material Category 2	Processing var	Processing fix
a + b		u	v

Material Category 1	Material Category 2	Processing var	Processing fix
a + b + c		u + x	v + y

Cost and Profitability Management

Profitability Analysis: Make-to-Stock Production

Production Order

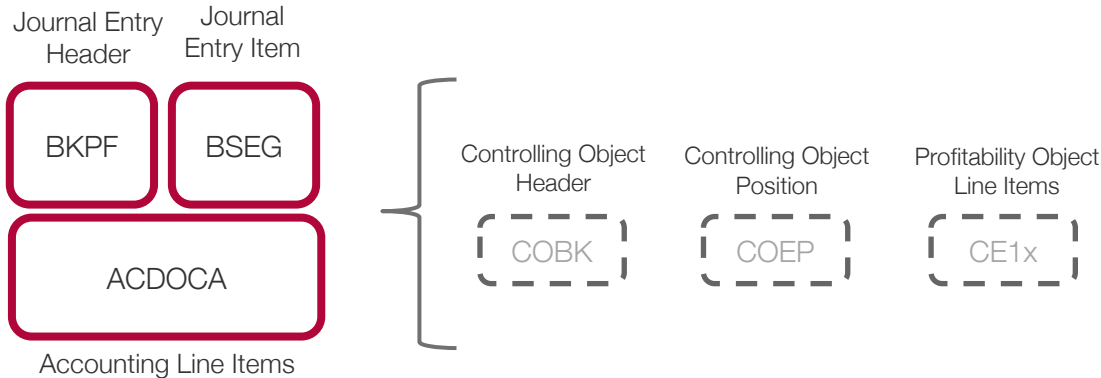


German HGB

GI/II Clearing (Sales Order)		Stock Fin. Goods		Receivables		Revenues (Prof. Obj.)		Deductions (Prof. Obj.)		CoGS 1...n (Prof. Obj.)		VAT	
1	3	1		2		2		2		3		2	

Cost and Profitability Management

Data Model: SAP sFIN Cost and Profitability Management with In-Memory Architecture



Agenda

1. Accounting.
Organization, Tasks, Concepts
2. Financial Accounting: External Addressees
Business Processes and External Financial Reporting
3. Controlling: Internal Addressees
Allocation Process
 - a. Management Accounting
Decision support based on the account Model
 - b. Cost and Profitability Management
Decision support based on the driver model
4. **Reporting and Planning**
Formatted Reporting, Analytical Reporting, Business Planning

Reporting

User Types and Tasks

Tasks \ User Type	Parametric User (in LoB)	Business Analyst (in LoB)	Report Developer (in BI)	Data Analyst (in BI)	Application Developer (in IT)
with Reference to Methods	Report Selection	Report Selection	Method Selection (Business)	Method Selection (Statistics)	Tool Development
with Reference to Data	Parameter Entry	Parameter Entry	Data Provision	Data Provision	Tool Development
With Reference to Interaction	„Next Page“	Analytical Functions	Result Tests	Modell Tests	Function Tests



 Bericht zum Plan-Ist-Kostenvergleich				Periode per Dezember 1985 Kostenstelle Öffentlichkeitsarbeit Währung in DM				
 im November				per November				
Ist	Plan	Abw. (abs.)	Abw. (%)	Kostenarten	Ist	Plan	Abw. (abs.)	Abw. (%)
114,600	135,600	-21,000	-12	Personalkosten	417,000	542,300	-125,300	-20
71,000	77,500	-6,500	-8	Gemeinkostengehalt	258,500	309,900	-51,400	-17
-5,500	0	-5,500		Zulagen/ Zuschläge Gehalt	-20,200	0	-20,200	
49,100	58,100	-9,000	-15	Kalk. Gehaltskosten	178,700	232,400	-53,700	-23
9,200	500	8,700	725	Gemeinkostenmaterial	9,800	2,000	7,800	144
5,900	100	5,800		Hilfs-/ Betriebsstoffe/Werkz.	5,900	400	5,500	
3,300	400	2,900	725	Büromaterial	3,900	1,600	2,300	144
20,700	17,200	3,500	13	Sonst. Sachgemeinkosten	76,700	69,400	7,300	98
9,200	2,400	6,800	283	Reise/Repräs./Geschenke	19,700	9,700	10,000	103
6,600	6,000	600	10	Mieten	23,000	24,200	-1,200	-5
900	4,400	-3,500	-80	Steuern/Versicherungen	6,400	17,500	-11,100	-63
3,600	3,300	300	9	Telefon/F.S. Porto	11,900	13,400	-1,500	-11
200	500	-300	-60	Beratungskosten	15,100	2,000	13,100	655
100	600	-500	-83	Beiträge/Gebühren	300	2,600	-2,300	-88
100	0	100		Versch. Sachgem einkosten	300	0	300	
694,100	641,600	52,500	7	Erhaltene innerbetr. Leistg.	1,930,000	2,566,300	-636,300	-12
0	300	-300	-100	Inst. Betriebs-/G. gesch. ausst.	500	1,100	-600	-55
3,300	1,500	1,800	120	EDV/Organisation	7,300	6,000	1,300	22
8,500	8,800	-300	-3	Fuhrpark	28,100	35,100	-7,000	-20
9,900	8,900	1,000	11	Sonst. Erhalt. Innerb. Leist.	42,300	35,800	6,500	18
672,400	622,100	50,300	8	Marketing/Öffentlichkeitsarbe	1,851,800	2,488,300	-636,500	-26
72,500	72,500	0	0	Kalkulatorische Kosten	289,700	289,700	0	0
13,900	13,900	0	0	Kalk. Abschreibung	55,400	55,400	0	0
4,500	4,500	0	0	Kalk. Zinsen	18,000	18,000	0	0
32,500	32,500	0	0	Kalk. Raumkosten	129,900	129,900	0	0
6,400	6,400	0	0	Kalk. Energie	25,500	25,500	0	0
15,200	15,200	0	0	Sonstige kalk. Kosten	60,900	60,900	0	0
911,100	867,400	43,700	43	Gesamtkosten	2,723,200	3,469,700	-746,500	33

Example: Cost Center Report

Reporting

Presentation Analytical Reporting

PL_DRILLDOWN_ACTUALS.xlsx - Microsoft Excel

Profitability Reporting
 1. P&L Corp. - Actual Data
 2. P&L by Market Segments - Actual Data
 Candy US Corp. 01/2013 to 12/2013

G/L Account	Category	Amount	Bonbons	Bubblegums	Lollipops	Popcorn	#
200000000	Gross Sales	129.384.263,00	123.413.757,02	5.784.639,40	89.564.781,38	27,4	
[-] 1-1-1-1-1	Gross sales before returns and taxes	129.384.263,00	123.413.757,02	5.784.639,40	89.564.781,38	27,4	
200002002	Sales Returns Purchased					2.268,1	
200002000	Sales Returns					5.866,3	
[-] 1-1-1-1-2	Sales returns, damages and unsalesables					8.134,5	
[-] 1-1-1-1-1	Gross Sales	129.384.263,00	123.413.757,02	5.784.639,40	89.564.781,38	8.161,9	
200460000	Temporary Price Reduction	-8.976.935,00	-6.284.353,62	-248.406,57	-3.998.031,64	-661,2	
200451000	Price Reduction (Perm)	-3.030.314,17	-3.345.909,62	-155.795,88	-2.499.119,86		
[-] 1-1-1-2	Total consumer price reductions	-12.007.249,17	-9.630.263,24	-404.202,46	-6.496.151,50	-661,2	
220800160	COGS Duties	-19.561,61	-63.570,62	-18.241,03	-135.395,97		
220800140	COGS Freight (& Replenishment)	-260.616,49	-1.517.642,11	-44.581,39	-436.919,17		
220800114	COGS Plant Whse Fix				-1.118,33		
220800112	COGS Plant Whse Variable Cost				-262,33		
220800080	COGS Support & Structure Exp/Depr	-3.813.605,08	-3.223.322,40	-573.385,87	-3.019.237,41		
220800070	COGS Conversion Expense	-2.866.330,18	-3.582.821,86	-247.279,74	-1.540.130,04		
220800060	COGS Conversion Labor	-3.480.102,67	-4.070.259,84	-443.571,95	-3.240.198,83		
220800050	COGS Sourcing Depreciation	-435.018,42	-1.199.646,68	-135.005,17	-614.073,14		
220800016	COGS Packback Conversion		-242.718,24				

Example: Profitability Analysis

Safari | File | Edit | View | History | Bookmarks | Window | Help

hc6-715.wdf.sap.corp

SAP P&L - Actuals

Show Filter Bar Filters (1) Go

To show filters here, add them to the filter bar in Filters

DIMENSIONS	COLUMNS	G/L Account	G/L Account	Amount in Trans Cry	Amount in CC Cry	Amount in Glob. Cry
Measures	Measures	016	Operating Income	*	\$ 204.546,64	\$ 204.546,64
Activity Type		017	Gross Margin	*	\$ 674,00	\$ 674,00
Base Unit of Meas...		013	Net Revenue	*	\$ 674,00	\$ 674,00
Bus. Transac. Type		022	Gross Revenue	\$ -200,00	\$ -200,00	\$ -200,00
Calendar Month		41000400	Sales Revenue w/ CE	\$ -100,00	\$ -100,00	\$ -100,00
Calendar Quarter		41910000	Billed Rev Dom	\$ -100,00	\$ -100,00	\$ -100,00
Calendar Week		023	Sales Deductions	*	\$ 874,00	\$ 874,00
Calendar Year		44000000	Over/UnderpmtDed	*	\$ 874,00	\$ 874,00
Chart of Accounts		018	Operating Expense	*	\$ 203.872,64	\$ 203.872,64
Company Code		015	Employee Expense	\$ 50.306,00	\$ 50.306,00	\$ 50.306,00
Company Code Cr...	ROWS	025	Payroll and Benefits	\$ 50.306,00	\$ 50.306,00	\$ 50.306,00
Cost Center	G/L Account	038	Payroll Salary & Wag	\$ 50.000,00	\$ 50.000,00	\$ 50.000,00
Customer		61100000	Payroll Exp Salaries	\$ 50.000,00	\$ 50.000,00	\$ 50.000,00
Customer Group		039	Payroll Benefits	\$ 306,00	\$ 306,00	\$ 306,00
Debit/Credit Code		61061000	Payroll Benefits	\$ 306,00	\$ 306,00	\$ 306,00
Distribution Channel		020	Building Payroll Benefits	*	\$ 133.566,64	\$ 133.566,64
Division		028	Periodic Building Ex	*	\$ 123.566,64	\$ 123.566,64
Fiscal Period		63004000	Insurance	*	\$ 112.566,64	\$ 112.566,64
Fiscal Quarter		63009000	Leasing Expense	\$ 11.000,00	\$ 11.000,00	\$ 11.000,00
Fiscal Week		029	Utilities Expense	\$ 10.000,00	\$ 10.000,00	\$ 10.000,00
		63002000	Water	\$ 10.000,00	\$ 10.000,00	\$ 10.000,00
		076	Other Operating Expe	\$ 20.000,00	\$ 20.000,00	\$ 20.000,00

Access to system HC6

<https://hc6-715.wdf.sap.corp/ui>

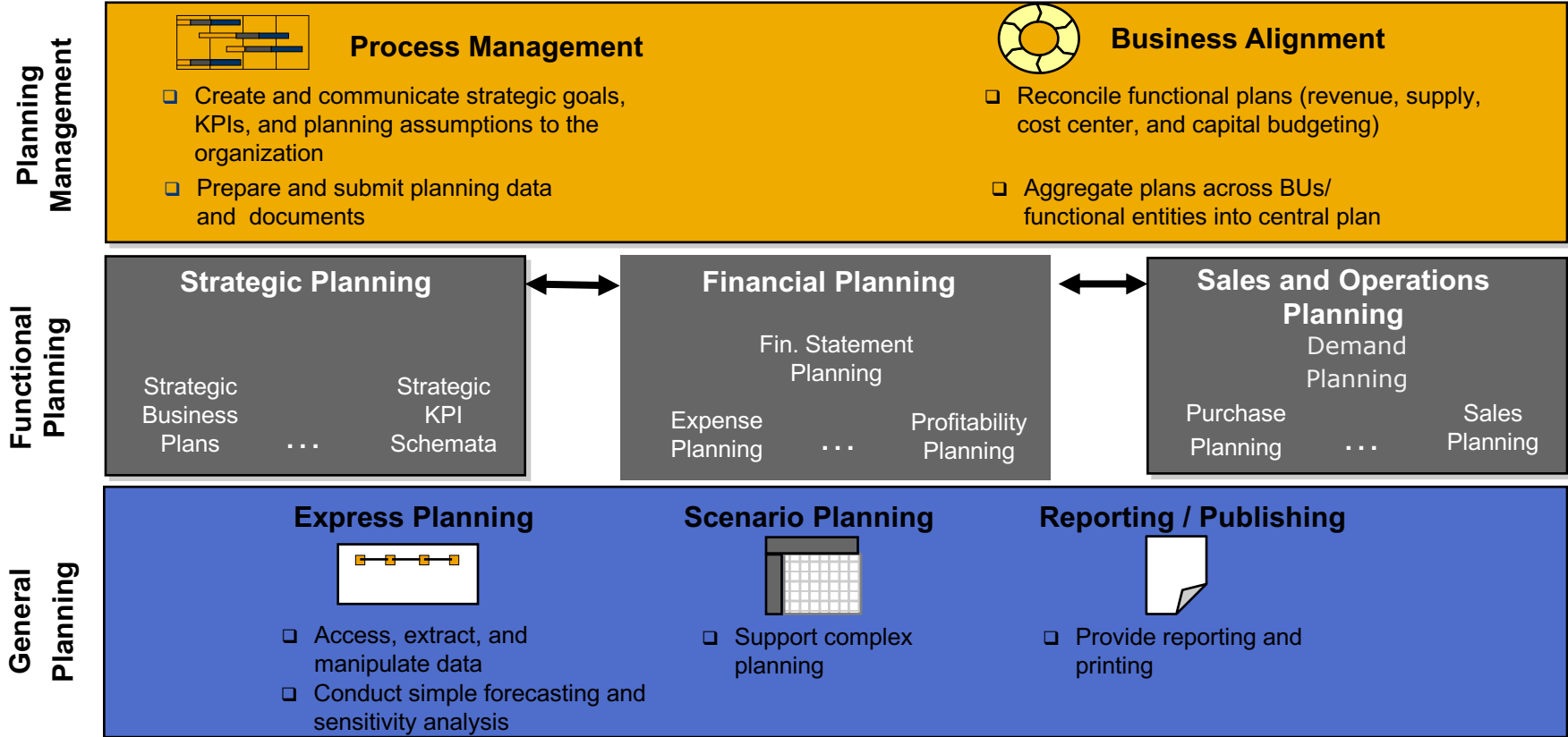
Planning and Simulation

Planning Practices

Today's Practices	Best / Next Practices	Customer Value Proposition
<ul style="list-style-type: none"> ❑ Bottom-up planning 	<ul style="list-style-type: none"> ❑ Strategy based planning 	<ul style="list-style-type: none"> ❑ Results in an aligned budget (effectiveness) ❑ Reduces time consuming iterations (efficiency)
<ul style="list-style-type: none"> ❑ Fixed Budgets 	<ul style="list-style-type: none"> ❑ Performance Budgets: planned resources / costs related to targeted performance ❑ Revised Budgets 	<ul style="list-style-type: none"> ❑ Integrates financial plans with operational plans ❑ Enables for 'tougher' analyses ❑ Enables for faster actions
<ul style="list-style-type: none"> ❑ Detailed planning 	<ul style="list-style-type: none"> ❑ KPI Planning based on benchmarks ❑ KPI related HR compensation ❑ Scenario planning 	<ul style="list-style-type: none"> ❑ Avoids irrelevant number crunching ❑ Eliminates the last 'Zentralkomitee' ❑ Provides better committed figures ❑ Provides deeper insights
<ul style="list-style-type: none"> ❑ Historical view (monthly plan / actual comparison) 	<ul style="list-style-type: none"> ❑ Predictive view (Rolling forecast) 	<ul style="list-style-type: none"> ❑ Leads to a continuous entrepreneurship and a greater agility ❑ Enables for smoother analyses
<ul style="list-style-type: none"> ❑ Lagging indicators 	<ul style="list-style-type: none"> ❑ Leading indicators 	<ul style="list-style-type: none"> ❑ Enables for early warnings by disclosing existing information
<ul style="list-style-type: none"> ❑ Assuming ongoing business 	<ul style="list-style-type: none"> ❑ Focus on impact of initiatives 	<ul style="list-style-type: none"> ❑ Allows different planning approaches for ongoing business and new business ❑ Provides a complete view on a BU

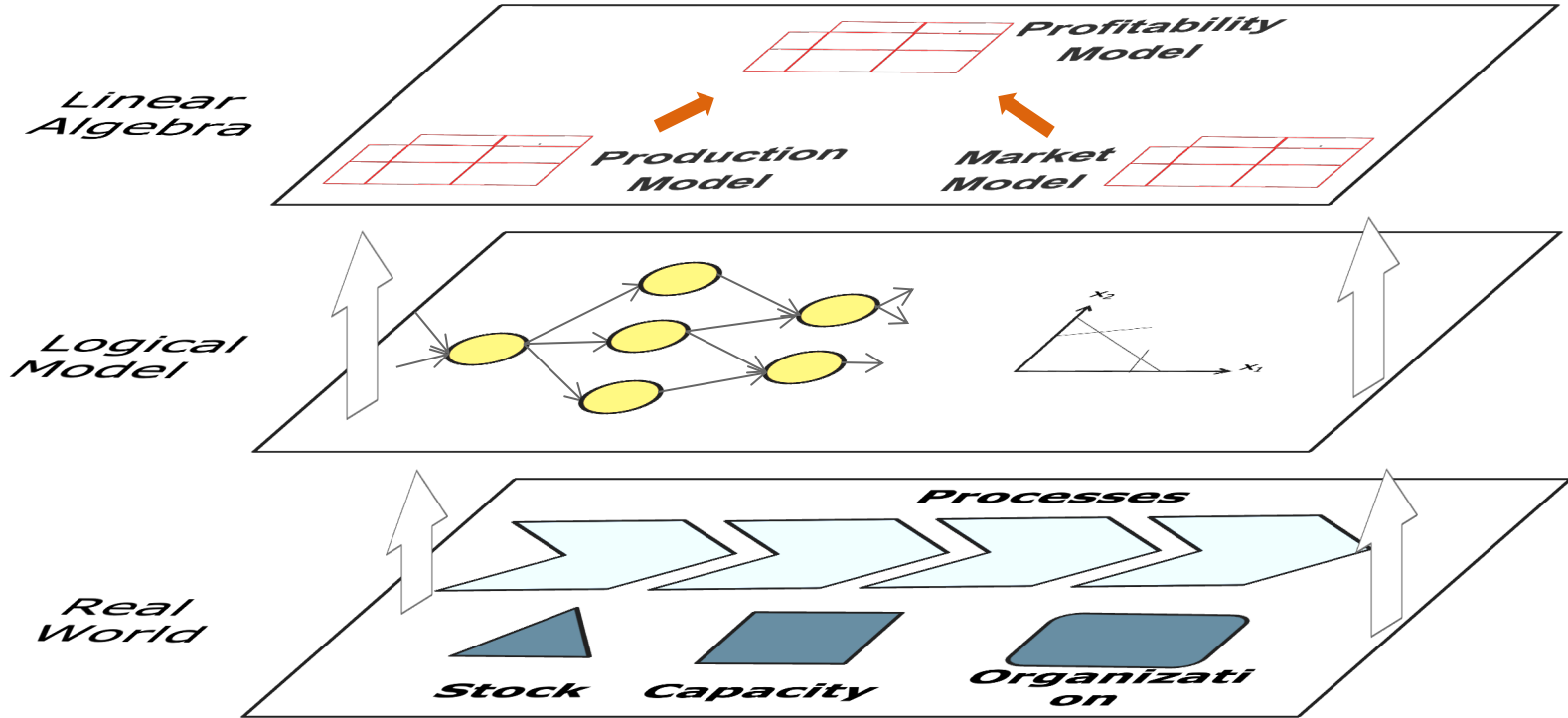
Planning and Simulation

Business Planning Framework



Planning and Simulation

Model Integration, Data Integration



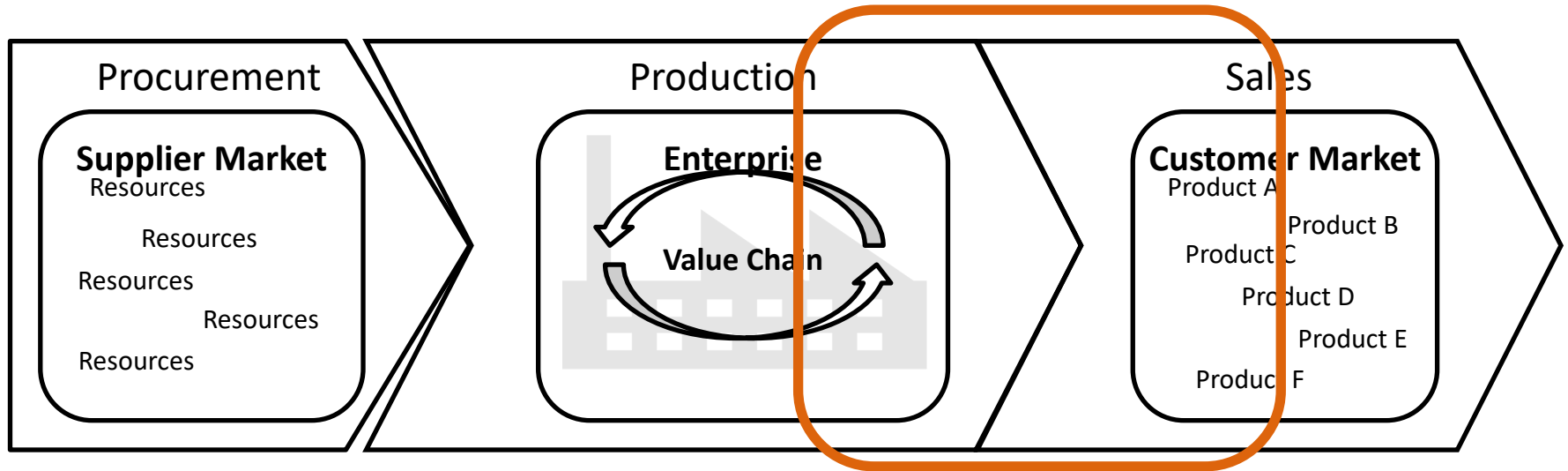


Finance, Accounting and Controlling
- Basic Concepts
- **Implementation in SAP S/4 HANA Finance**

Werner Sinzig

May 2022

Sell-from-Stock Context



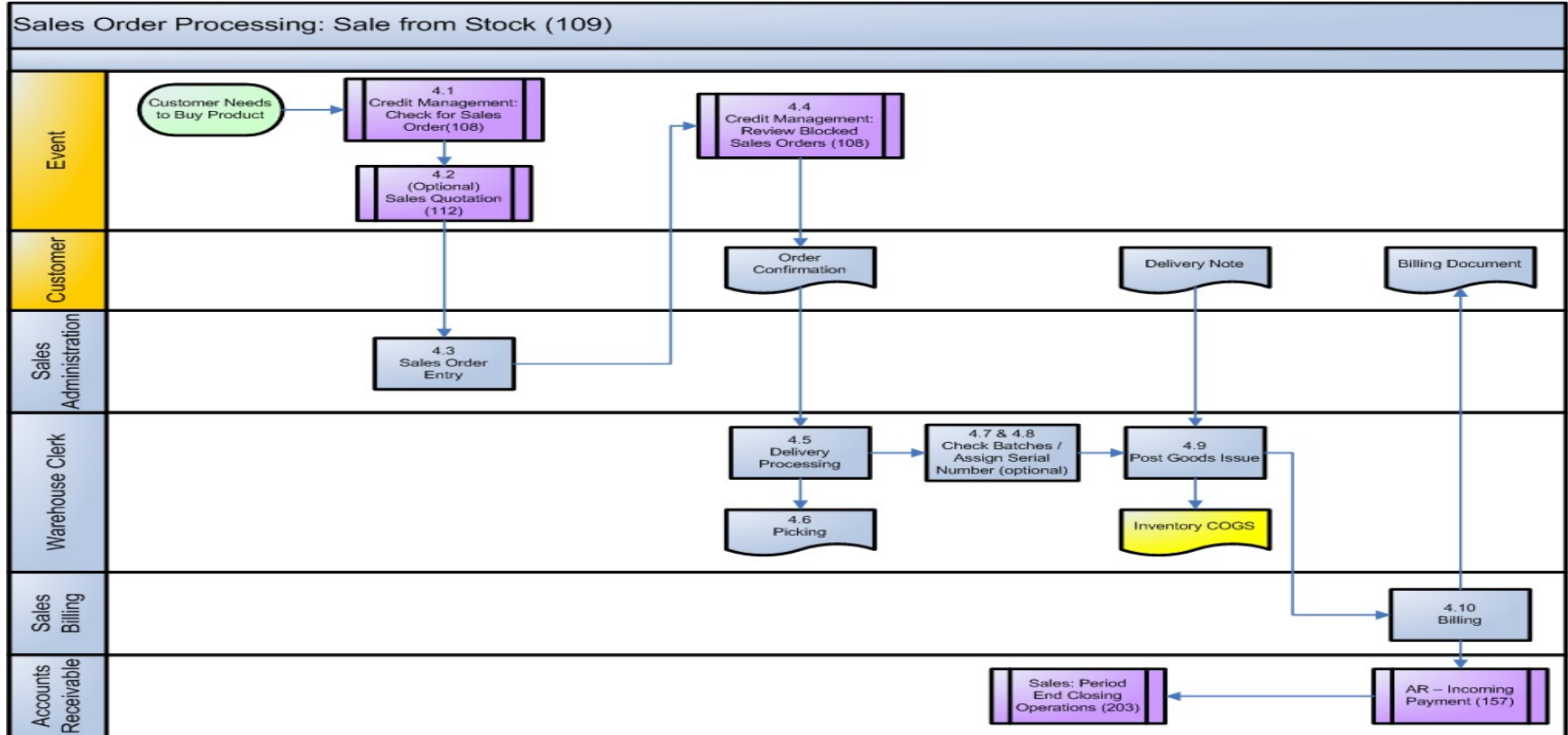
Sell-from-Stock scenario is a standard process for sales activities between an enterprise and its customers.

It covers all steps from sales quotations, credit checks, calculation of alternative discounts, availability checks for promised goods, delivery notes, billing, and payments.

The example illustrates the following steps:

- Create customer order
- Deliver from stock to shipping
- Create goods issue for delivery to customer site
- Billing
- Create journal entry of incoming payment

Sell-from-Stock Workflow



Stammdaten

Kundenstamm

Produktstamm

KNA1

KNR	1000
Zahler	1050
Adresse	...

MARA

MATNR	P-100
Kosten	706,62 €
Preis	2600,00 €

Stammdaten

Kundenstamm

Produktstamm

KNA1

KNR 1000
Zahler 1050
Adresse ...

MARA

MATNR P-100
Kosten 706,62 €
Preis 2600,00 €

Prozessschritte

Kundenauftrag
anlegen

VBAK/VBAP

15459
KNR 1000

P-100 5 Stk.
100-100 3 Stk.

Logistics

Financials

BKPF/BSEG

Controlling

CE1x

Stammdaten

Kundenstamm

Produktstamm

KNA1

KNR 1000
Zahler 1050
Adresse

MARA

MATNR P-100
Kosten 706,62 €
Preis 2600,00 €

Prozessschritte

Kundenauftrag
anlegen



Lieferung

Logistics

VBAK/VBAP

15459
KNR 1000

P-100 5 Stk.
100-100 3 Stk.

LIKP/LIPS

80017552
KNR 1000

15459|01 2 St

Financials

BKPF/BSEG

Controlling

CE1X

Stammdaten

Kundenstamm

Produktstamm

KNA1	
KNR	1000
Zahler	1050
Adresse	...

MARA	
MATNR	P-100
Kosten	706,62 €
Preis	2600,00 €

Prozessschritte

Kundenauftrag anlegen



Lieferung



Warenausgang

Logistics

VBAK/VBAP	
#	26542
KNR	1000
P-100	5 Stk
100-100	3 Stk

LIKP/LIPS	
#	80017552
KNR	1000
15459 01	2 Stk

MKPF/MSEG	
#	4900002650
KNR	1000
80017552 01	2 Stk

Financials
BKPF/BSEG

#	4900000005	
WA #	4900002650	
COGS	S	1413,24 €
Bestände	H	1413,14 €

Controlling
CE1X

Stammdaten

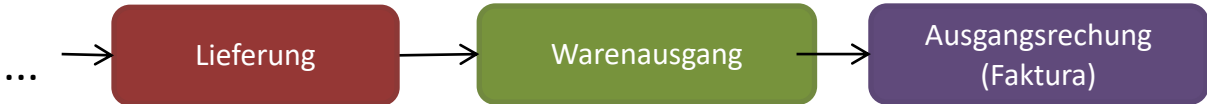
Kundenstamm

Produktstamm

KNA1
 KNR 1000
 Zahler 1050
 Adresse ...

MARA
 MATNR P-100
 Kosten 706,62 €
 Preis 2600,00 €

Prozessschritte



Logistics

LIKP/LIPS
 # 80017552
 KNR 1000
 15459|01 2 Stk

MKPF/MSEG
 # 4900002650
 KNR 1000
 80017552|01 2 Stk

VBRK/VBRP
 # 0090039362
 KNR 1000
 4900002650|01 5.200,00 €
 MwSt. 780,00 €

Financials BKPF/BSEG

4900000005
 WA # 4900002650
 COGS S 1413,24 €
 Bestände H 1413,14 €

1400000002
 Erlöse H 5.200,00 €
 MwSt. H 780,00 €
 Forderungen S 5.980,00 €

Controlling CE1X

100070845 | 1000 P-100 ...
 Erlöse 5.200,00 € Material
 3.534,00 € Arbeit 3.868,00 €
 Maschinen 4.222,00 € ...

Stammdaten

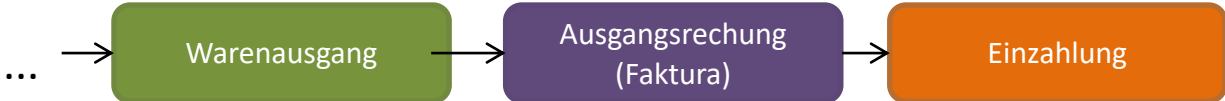
Kundenstamm

Produktstamm

KNA1
 KNR 1000
 Zahler 1050
 Adresse ...

MARA
 MATNR P-100
 Kosten 706,62 €
 Preis 2600,00 €

Prozessschritte



Logistics

MKPF/MSEG
 # 4900002650
 KNR 1000
 80017552|01 2 Stk

VBRK/VBRP
 # 0090039362
 KNR 1000
 4900002650|01 5.200,00 €
 MwSt. 780,00 €

Financials

BKPF/BSEG

4900000005
 WA # 4900002650
 COGS S 1413,24 €
 Bestände H 1413,14 €

1400000002
 Erlöse H 5.200,00 €
 MwSt. H 780,00 €
 Forderungen S 5.980,00 €

1400000003
 KNR 1050 (Zahler)
 Kasse S 5.000,00 €
 Forderungen H 5.000,00 €

Controlling

CE1X

100070845 | 1000 P-100 ...
 Erlöse 5.200,00 € Material
 3.534,00 € Arbeit 3.868,00 €
 Maschinen 4.222,00 € ...

Stammdaten

Kundenstamm

Produktstamm

KNA1

KNR	USCU-S01
Adresse

MARA

MATNR	MZ-FG-C950
Kosten	519,92 \$

Kalkulation

KEKO / KEPH

MATNR	MZ-FG-C950
Material	189,78 \$
Arbeit	33,97 \$
...	
Summe	519,92 \$

Stammdaten

Kundenstamm

Produktstamm

KNA1	
KNR	USCU_S01
Adresse

MARA	
MATNR	MZ-FG-C950
Kosten	519,92 \$

Kalkulation

KEKO / KEPH	
MATNR	MZ-FG-C950
Material	189,78 \$
Arbeit	33,97 \$
...	
Summe	519,92 \$

Prozessschritte

Kundenauftrag

Logistics

VBAK/VBAP	
#	32157
KNR	USCU_S01
MZ-FG-C950	2 Stk
TG11	2 Stk

Financials

ACDOCA BKPF/BSEG

Stammdaten

Kundenstamm

Produktstamm

KNA1	
KNR	USCU_S01
Adresse

MARA	
MATNR	MZ-FG-C950
Kosten	519,92 \$

Kalkulation

KEKO / KEPH	
MATNR	MZ-FG-C950
Material	189,78 \$
Arbeit	33,97 \$
...	
Summe	519,92 \$

Prozessschritte

Kundenauftrag



Lieferung

Logistics

VBAK/VBAP	
#	32157
KNR	USCU_S01
MZ-FG-C950	2 Stk
TG11	2 Stk

LIKP/LIPS	
#	80020874
KNR	USCU_S01
32157 01	2 Stk
32157 02	2 Stk

Financials

ACDOCA BKPF/BSEG

Stammdaten

Kundenstamm

Produktstamm

KNA1

KNR USCUS01
Adresse

MARA

MATNR MZ-FG-C950
Kosten 519,92 \$

Kalkulation

KEKO / KEPH

MATNR MZ-FG-C950
Material 189,78 \$
Arbeit 33,97 \$
...
Summe 519,92 \$

Prozessschritte



Logistics

VBAK/VBAP

#	32157				
KNR	USCU_S01				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td>MZ-FG-C950</td> <td style="text-align: right;">2 Stk</td> </tr> <tr> <td>TG11</td> <td style="text-align: right;">2 Stk</td> </tr> </table>		MZ-FG-C950	2 Stk	TG11	2 Stk
MZ-FG-C950	2 Stk				
TG11	2 Stk				

LIKP/LIPS

#	80020874				
KNR	USCU_S01				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td>32157 01</td> <td style="text-align: right;">2 Stk</td> </tr> <tr> <td>32157 02</td> <td style="text-align: right;">2 Stk</td> </tr> </table>		32157 01	2 Stk	32157 02	2 Stk
32157 01	2 Stk				
32157 02	2 Stk				

MKPF/MSEG

#	4900025691				
KNR	USCU_S01				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td>80020874 01</td> <td style="text-align: right;">2 Stk</td> </tr> <tr> <td>80020874 02</td> <td style="text-align: right;">2 Stk</td> </tr> </table>		80020874 01	2 Stk	80020874 02	2 Stk
80020874 01	2 Stk				
80020874 02	2 Stk				

Financials

ACDOCA BKPF/BSEG

#	4900029870						
WA #	4900025691						
<table style="width: 100%; border-collapse: collapse;"> <tr> <td>COGS</td> <td>S</td> <td style="text-align: right;">1.039,84 \$</td> </tr> <tr> <td>Bestände</td> <td>H</td> <td style="text-align: right;">1.039,84 \$</td> </tr> </table>		COGS	S	1.039,84 \$	Bestände	H	1.039,84 \$
COGS	S	1.039,84 \$					
Bestände	H	1.039,84 \$					

4900029870|01 COGS-Material
690,10 \$ USCUS01 MZ-FG-C950

49000029870|01 COGS-Arbeit
142,50 \$ USCUS01 MZ-FG-C950 ...

49000029870|01

Stammdaten

Kundenstamm

KNR USCUS_01
Adresse

Produktstamm

MATNR MZ-FG-C950
Kosten 519,92 \$

Kalkulation

KEKO / KEPH

MATNR MZ-FG-C950
Material 189,78 \$
Arbeit 33,97 \$
...
Summe 519,92 \$

Prozessschritte



Logistics

LIKP/LIPS

80020874
KNR USCUS_01

32157|01 2 Stk
32157|02 2 Stk

MKPF/MSEG

4900025691
KNR USCUS_01

80020874|01 2 Stk
80020874|02 2 Stk

VBRK/VBRP

0090017434
KNR USCUS_01

4900025691|01 1.350,00 \$
Mwst. xxx,xx \$

Financials

BKPF/BSEG

4900029870
WA # 4900025691

COGS S 1.039,84 \$
Bestände H 1.039,84 \$

ACDOCA

90017434

Erlöse H 1.350,00 \$
Mwst. H xxx,xx \$
Forderungen S y.yyy,yy \$

4900029870|01 COGS-Material
690,10 \$ USCUS_01 MZ-FG-C950

49000029870|01 COGS-Arbeit
142,50 \$ USCUS_01 MZ-FG-C950 ...

49000029870|01

90017434|01 Erlöse 1.350,00 \$
USCUS_01 MZ-FG-C950 ...

Stammdaten



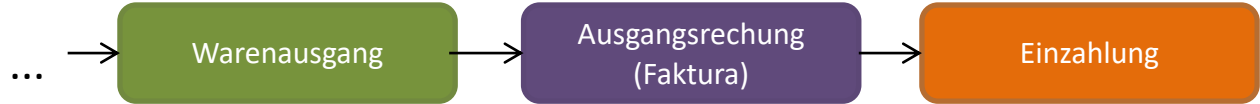
KNA1	
KNR	USCU_S01
Adresse

MARA	
MATNR	MZ-FG-C950
Kosten	519,92 \$

Kalkulation	
-------------	--

KEKO / KEPH	
MATNR	MZ-FG-C950
Material	189,78 \$
Arbeit	33,97 \$
...	
Summe	519,92 \$

Prozessschritte



Logistics

MKPF/MSEG	
#	4900025691
KNR	USCU_S01
80020874 01 2 Stk	
80020874 02 2 Stk	

VBRK/VBRP	
#	0090017434
KNR	USCU_S01
4900025691 01 1.350,00 \$	
Mwst.	xxx,xx \$

Financials

BKPF/BSEG

#	4900029870
WA #	4900025691
COGS S 1.039,84 \$	
Bestände H 1.039,84 \$	

90017434	
Erlöse	H 1.350,00 \$
Mwst.	H xxx,xx \$
Forderungen	S y.yyy,yy \$

#	1400000003
KNR	USCU_S01
Kasse	S 34.437,00 \$
Forderungen	H 34.473,00 \$

ACDOCA

- # 4900029870|01 COGS-Material 690,10 \$ USCU_S01 MZ-FG-C950
- # 49000029870|01 COGS-Arbeit 142,50 \$ USCU_S01 MZ-FG-C950 ...
- # 49000029870|01

- # 90017434|01 Erlöse 1.350,00 \$ USCU_S01 MZ-FG-C950 ...

- # 1400000003|01Kasse 34.437,00 \$ USCU_S01 ...



Appendix

Werner Sinzig

April 2022

S/4 HANA Finance

Präsentation *Sachkonto, Buchhaltungsbeleg und Reporting (1/2)*

Buchung einer Eingangsrechnung für ein geleastes Auto

Belegkopf	{	Buchungskreis	1710		
		Buchungsdatum	27.04.2021		
		Belegnummer	100000123		
Belegzeilen	{	63009000	Leasing Aufwand	Soll	1.250,00 \$
		29110000	Verbindlichkeiten	Haben	1.250,00 \$

Zugang zum System OC6

<https://oc6-715.wdf.sap.corp/ui>

Umsatzkostenverfahren

$$BE = M_a \cdot p - M_a \cdot k_{\text{Fert}} - K_{\text{VtVw}}$$

Gesamtkostenverfahren

ohne Bestandsveränderungen $(M_a = M_p)$

$$BE = M_a \cdot p - K_{\text{Fert}} - K_{\text{VtVw}} \quad \text{mit} \quad k_{\text{Fert}} = \frac{K_{\text{Fert}}}{M_p} = \frac{K_{\text{Fert}}}{M_a}$$
$$= M_a \cdot p - M_a \cdot k_{\text{Fert}} - K_{\text{VtVw}}$$

mit Bestandsveränderungen $(M_a \neq M_p)$

$$BE = M_a \cdot p - (M_a - M_p) k_{\text{Fert}} - K_{\text{Fert}} - K_{\text{VtVw}}$$
$$= M_a \cdot p - M_a \cdot k_{\text{Fert}} + M_p \frac{K_{\text{Fert}}}{M_p} - K_{\text{Fert}} - K_{\text{VtVw}}$$
$$= M_a \cdot p - M_a \cdot k_{\text{Fert}} - K_{\text{VtVw}}$$

BE: Betriebsergebnis

$M_{a/p}$: Absatzmenge / Produktionsmenge p: Verkaufspreis

k_{Fert} : Fertigungskostensatz

K_{Fert} : Fertigungskosten

K_{VtVw} : Vertriebs- und Verwaltungskosten

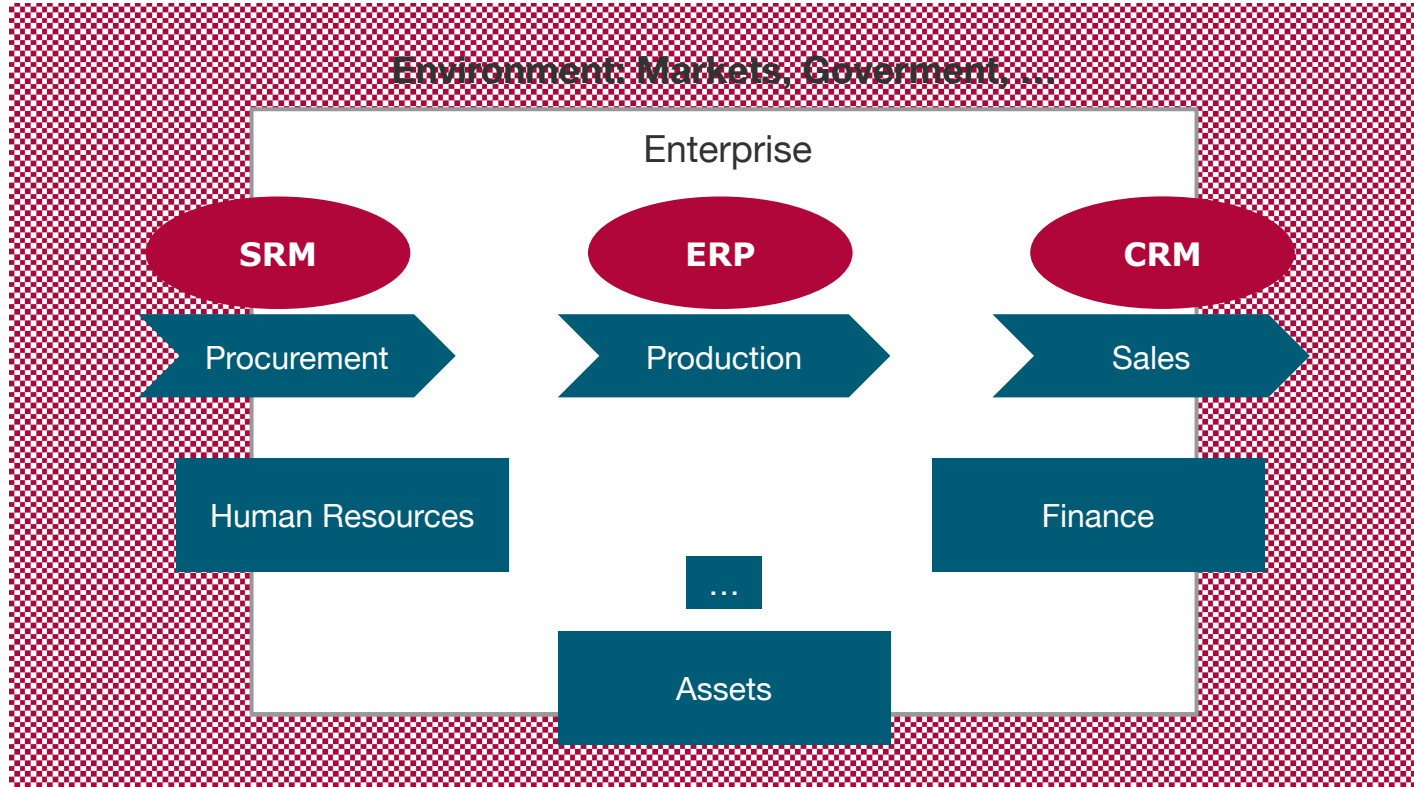
Externes Rechnungswesen / Financial Accounting

Positionen in der GuV in deutsch und in englisch

Financial Accounting			Management Accounting	
Income	Erträge		(Umsatz-)Erlöse	(Sales) Revenue
Net Income	Bruttoergebnis		Bruttoergebnis	Gross Margin
Earnings / EBIT (Operating Profit)	Betriebsergebnis		Nettoergebnis	Profitability
Earnings / EBT				
Annual Net Profit	Jahresüberschuss			

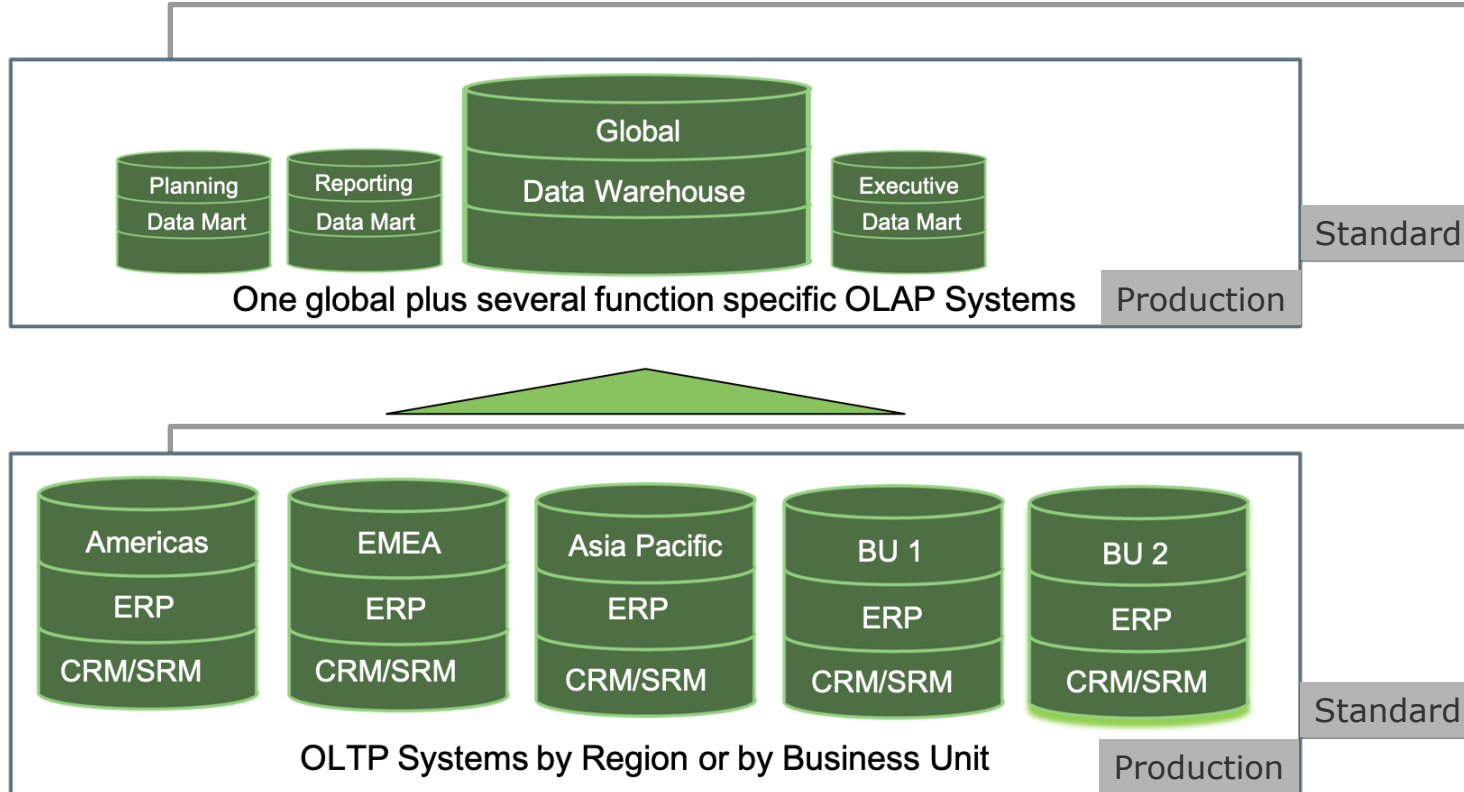
IT Systems in Enterprises

Enterprise Applications



IT Systems in Enterprises

Typical System Landscape



IT Systems in Enterprises

SAP Products (1/2)

Category	Selected Functions
ERP and Digital Core	
	Finance
	Procurement
	Supply Chain (and Material Management)
	Sales (and Distribution)
	Research and Development
	+ Industrie Solutions e.g.....
	+ Solutions for Small and Midsize Business (SAP B1, SAP ByDesing)
CRM and Customer Experience	
	Sales
	Service
	Marketing
Network and Spend Management (SRM)	
	Strategic Sourcing
	Procurement
	Extended Workforce
Digital Supply Chain (SCM)	
	Supply Chain Planning
	Supply Chain Logistics
	Manufacturing

Source: <https://www.sap.com/products> (Access: April 2019)

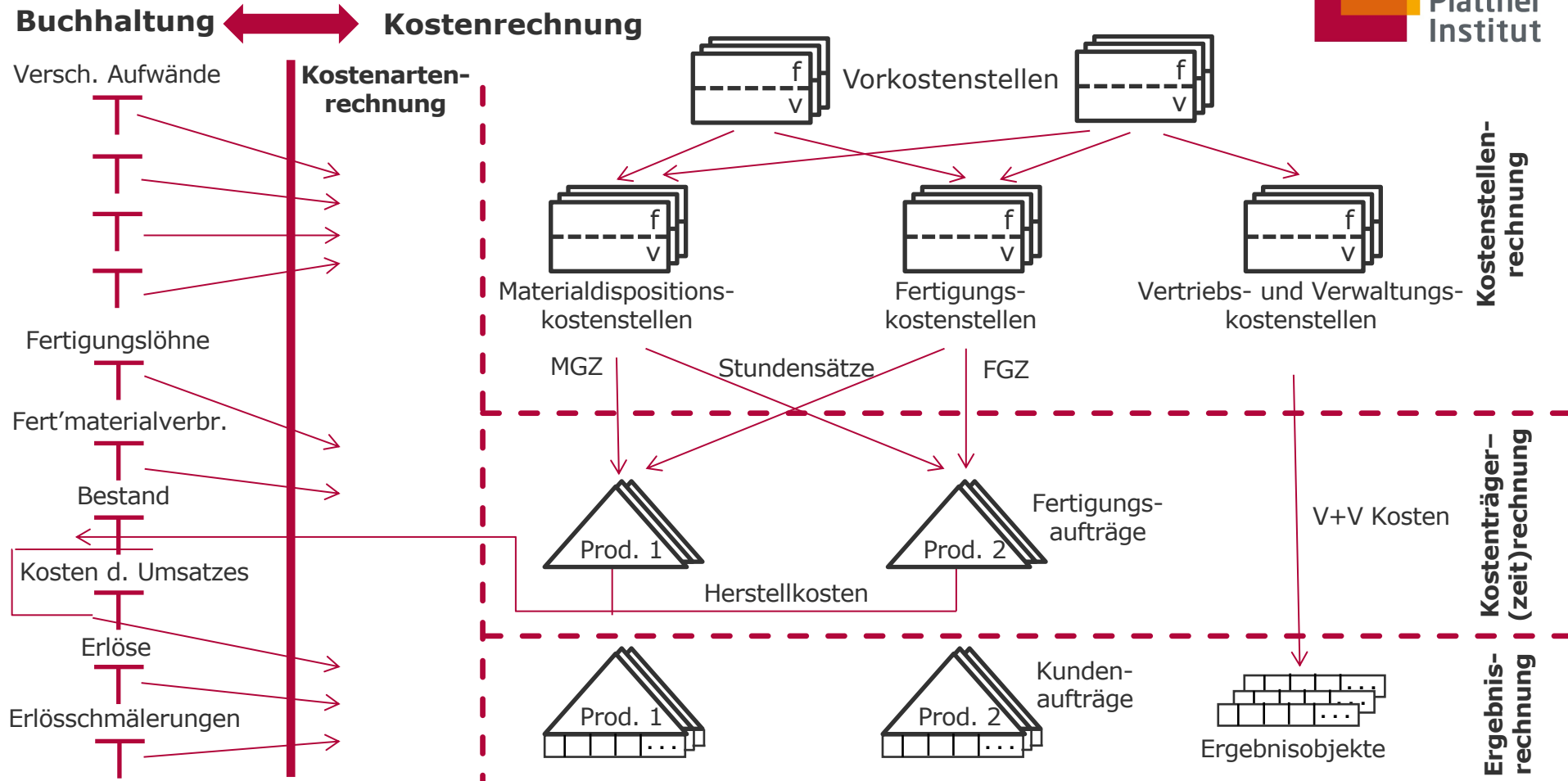
IT Systeme in Enterprises

SAP Products (2/2)

Category	Selected Functions
HR and People Engagement	Employee Central
	Payroll
	Recruiting
	Performance and Compensation
Digital Platform	Cloud Platform
	HANA
	Enterprise Information Systems
	Security
Analytics	Analytics Cloud
	Business Intelligence (BI)
	Enterprise Planning
	Predictive Analytics
Intelligent Technologies	Internet of Things (IoT)
	Machine Learning
	Block Chain

All Products as On-Demand and as On-Premise Version

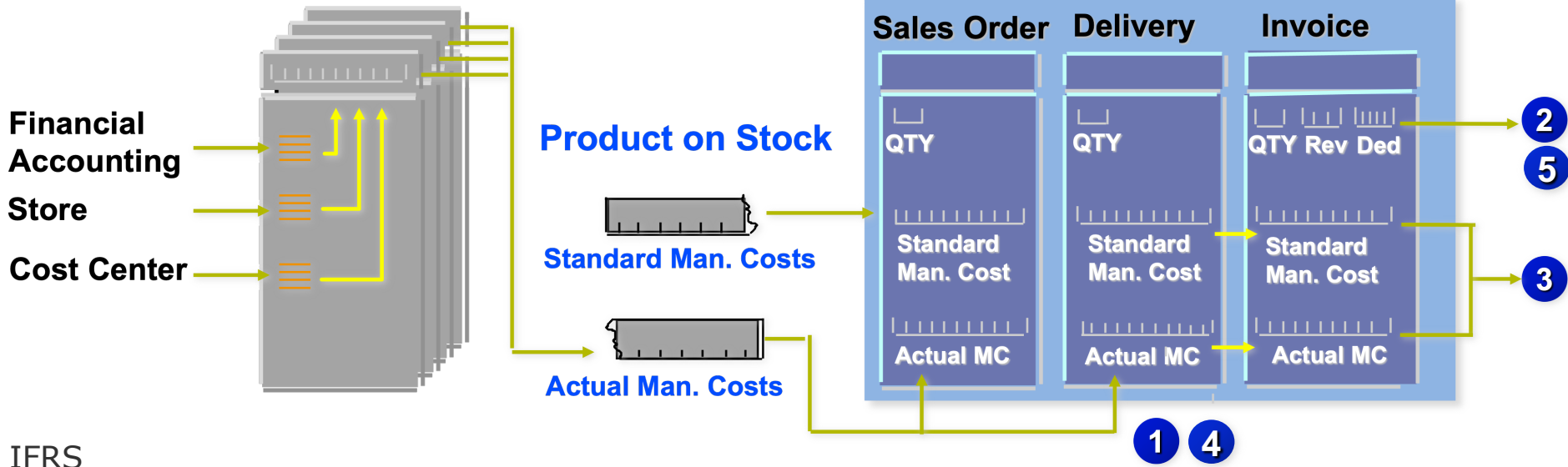
Internes Rechnungswesen: Abrechnungsgang



Cost and Profitability Management

Profitability Analysis: Make-to-Stock Production

Production Order

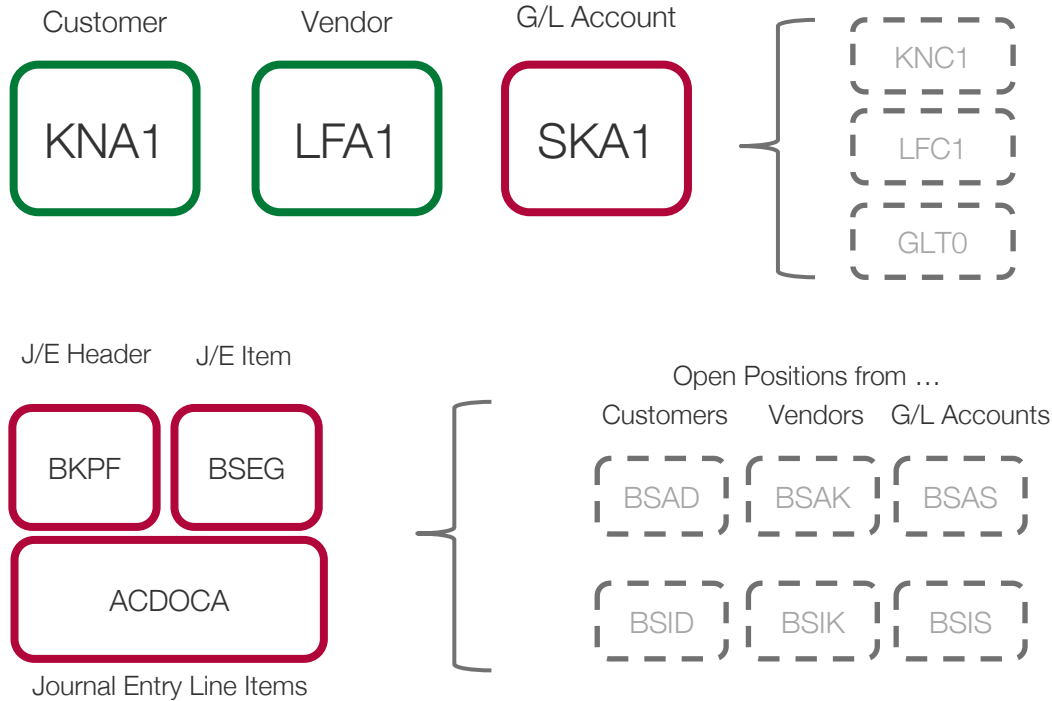


IFRS

WIP Accr. Rev. (Sales Order)	Stock Fin. Goods	Receivables	Rev. adjusted (Prof. Obj.)	Revenues (Prof. Obj.)	Deductions (Prof. Obj.)	CoGS 1...n (Prof. Obj.)	VAT
4 5	1	2	5 4	2	2	1	2

Financial Accounting

Datamodel S/4 HANA Finance: Financial Accounting with In-memory Architecture



Accounting

Datamodel S/4 HANA Finance: Financial & Management Accounting with In-memory Architecture

