



The Global Value Chain at TRUMPF – prerequisite for Strategic Cost Management

SAP Finance Best Practice workshop

Basel, February 12-13, 2009

Klaus Siegmund
Leiter Finanzen und Controlling
TRUMPF Werkzeugmaschinen
Ditzingen
13.02.2009

A photograph of a modern, multi-story building with a glass facade and concrete panels, set against a twilight sky with scattered clouds. The building is illuminated from within, and the foreground shows a paved area. Overlaid on the center of the image is a white rectangular box containing the word "TRUMPF" in large, bold, black capital letters. Below the text is a solid blue square, also within the white box.

TRUMPF

A photograph of a modern, multi-story building with a large glass facade, captured at dusk. The sky is a deep blue with scattered white clouds. The building's glass reflects the sky and the surrounding environment. The text "TRUMPF Group" is overlaid in white, sans-serif font across the upper portion of the glass facade. The building's base features a series of vertical columns and a recessed entrance area. The foreground is a paved plaza with some low-lying greenery and small lights.

TRUMPF Group



About us



We are a high-tech company that focuses on manufacturing and medical technology.

We offer our customers both innovative and high-quality products.

We are represented in all world markets, close to our customers with 57 subsidiaries.

We are a family business established in 1923 and our goal is to stay economically independent.



Company Management



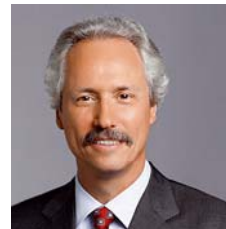
Dr. phil. Nicola Leibinger-Kammüller
President and
Chairwoman of the
Managing Board



Dipl.-Ing. Friedrich Kilian
Responsible for Central
Purchasing, Research
and Development of
Machine Tools



Dipl.-Ing. Peter Leibinger
Vice-Chairman of the
Managing Board, Head
of the Laser Technology
and Electronics Division



Dr. rer. soc. Gerhard Rübling
Responsible for
Human Resources
and Services Machine
Tools



Dr.-Ing. Mathias Kammüller
Head of the Machine
Tool and Power Tool
Division



Dipl.-Ök. Harald Völker
CFO
Head of the Medical
Technology Division



Prof. Dr.-Ing. Berthold Leibinger
Chairman of the
Supervisory Board



At a glance

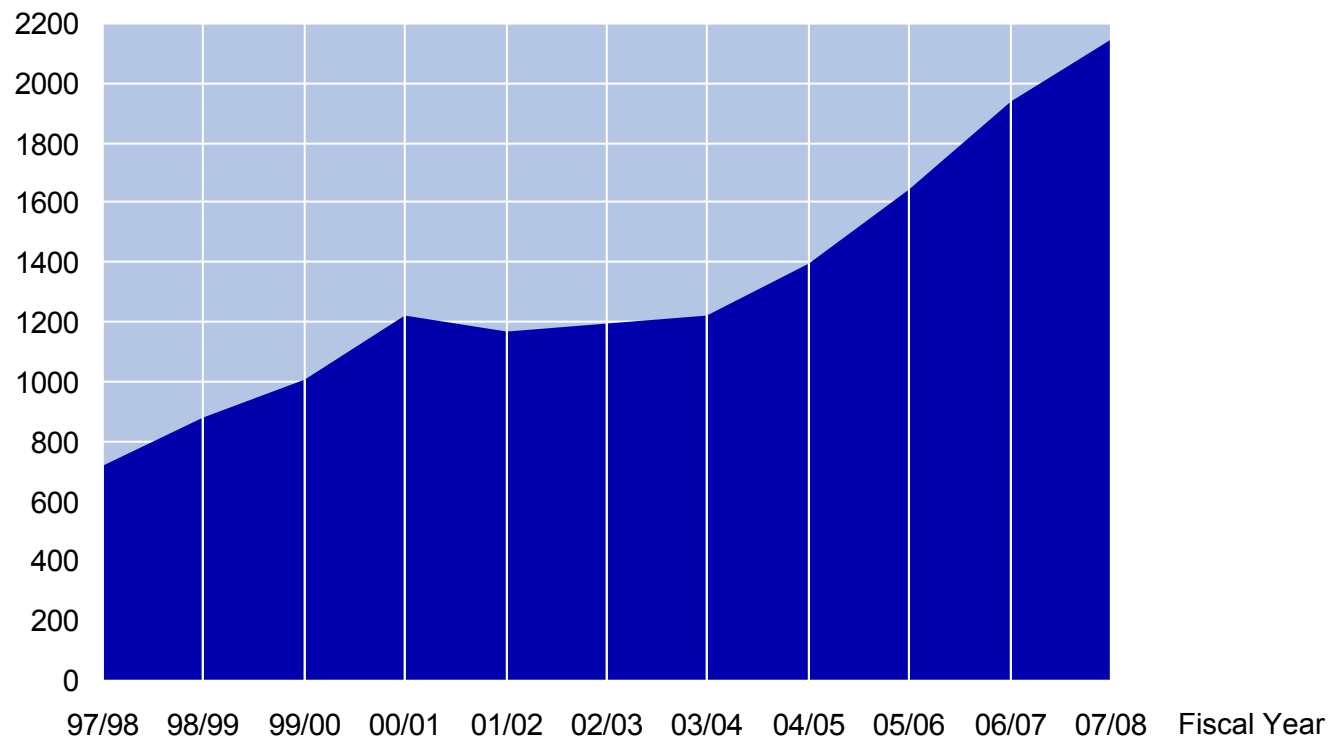
		2007/08	Change in percent
Sales	mil. EUR	2,144	+ 10.6
Income before Taxes	mil. EUR	301.4	+ 13.3
Expenditure on Fixed Assets	mil. EUR	139.0	+ 10.3
R+D Expenditures	mil. EUR	150.6	+ 11.2
Employees as of June 30	number	7,955	+ 9.6



TRUMPF Group Total Sales






Since 1950 Average Annual Sales Increase + 15%

million €





TRUMPF Group Business Divisions

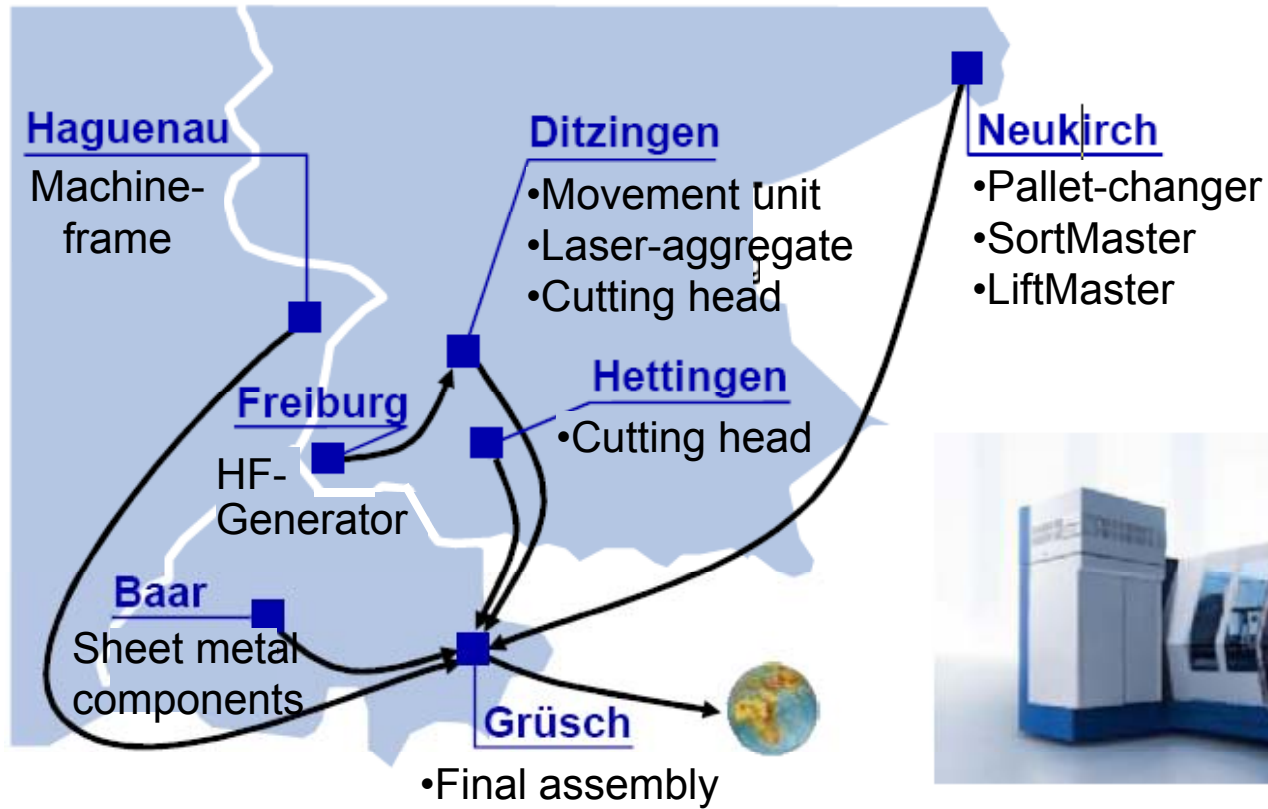
Machine Tools/ Power Tools		Laser Technology/ Electronics		Medical Technology
Machine Tools	Power Tools	Laser Technology	Electronics	Medical Technology
				
Machine tools for flexible sheet metal processing	Power tools for sheet metal processing	Lasers for production technology	Power supplies for induction heating, plasma and CO ₂ laser excitation	Operating tables, surgical lights, ceiling pendants
Sales (mil €) Employees	1,874.8 5,469	Sales (mil €) Employees	551.7 1,805	Sales (mil €) 126.8 Employees 513

End of fiscal year: June 30, 2008; consolidated within the business division; figures rounded



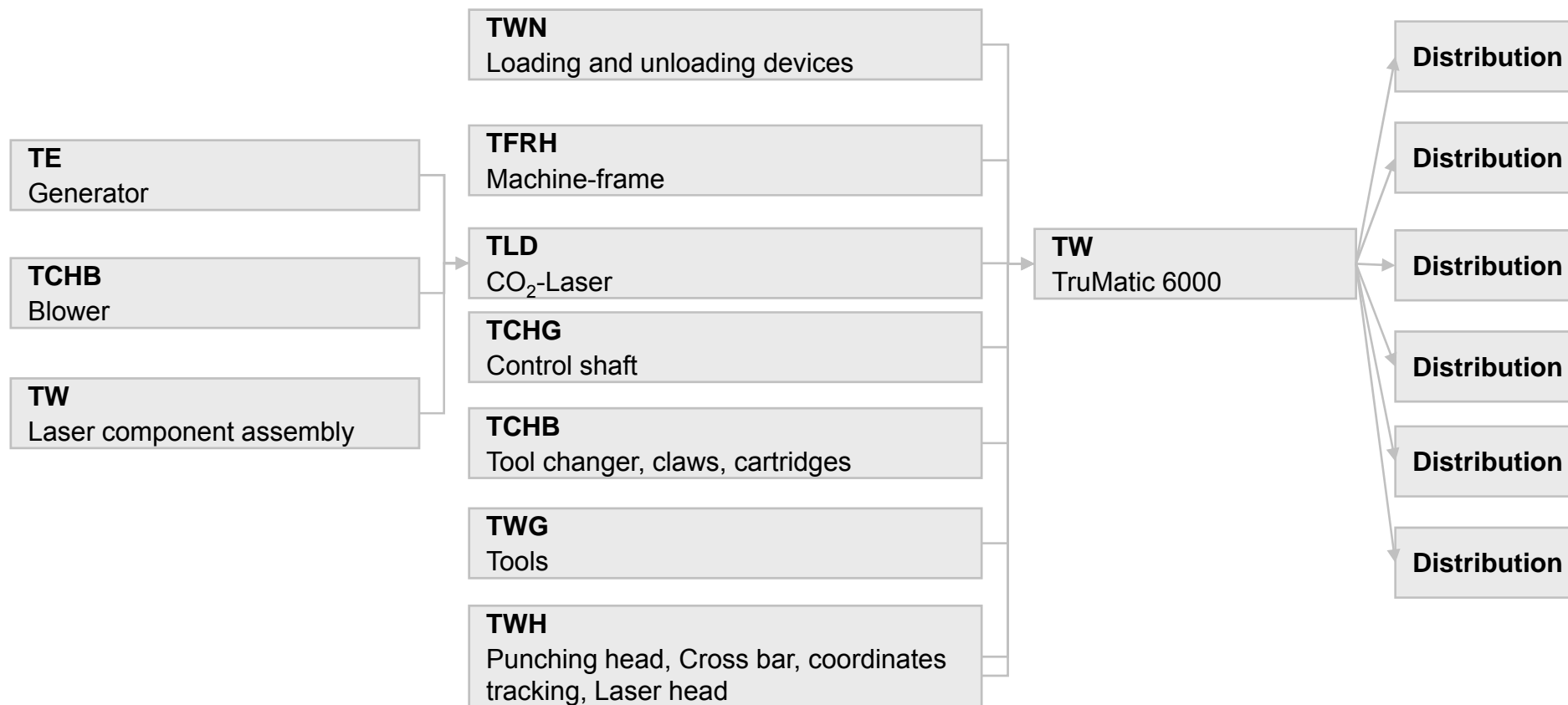
TRUMPF Manufacturing Network

Supply Chain Assembly TruLaser 5030 in Grüşch, CH





Supply Chain TruMatic 6000





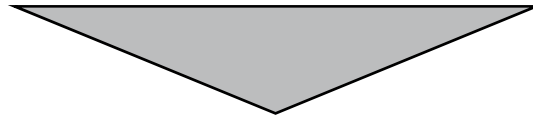
Strategic cost management at TRUMPF:

- Keeping the fix&variable split and transfer price system across countries and systems
- Keeping cost component split at material & plant level at any link of the value chain in local AND group currency level
- Utilization of all above not only by material but customer order item
- xPERT as source for the key figures for planning on group level, currency and raw material simulations
- xPERT for easy analysis about product options being more profitable than others
- xPERT will support actual versus plan comparisons



Questions we are not able to answer precisely – yet:

- What does the TRUMPF Group earn by product?
- Which products do not have a sufficient contribution margin?



- Which products can get a price reduction?
- Which products have to reduce the manufacturing costs?
- Which products should be eliminated from the product range?
- ...



Gross Margins and COGS-method

Total revenues
./. Direct Production
./. Service – Installation
./. SDC* Sales
./. SDC* Development
= Gross Margin / M I
./. Special production costs
= Margin II
./. Service After Sales
= Margin III
./. Sales, R&D, Admin.
= Margin IV (operating income.)
Transition., other cost
= Result before taxes.

* Special direct cost

General:

- All direct allocable costs are shown **independently** from functional areas in the gross margin (Margin I)

Advantage:

- All cost of sales are shown in the gross margin (Margin I)
- It's equivalent to the cost of sales method acc. to HGB, IFRS
- Gross Margin (M I) is equal to COGS (Cost of Goods Sold)

Disadvantage

- No information about functional areas
- Partly not according to the current management structure



PER: Challenges in the Realization

- Complex multinational manufacturing network
- Non-uniform software landscape
- Different data- and reporting approaches (also in SAP-companies)
- Valid Procurement keys and mixed costings
- Missing partner information and broken links
- Presentation of results within our Management Information System (MIS)



SAP Architecture at TRUMPF

- One client including all productions sites and major sales sites
- Different CO-PA definitions by country
- Use of configurable materials and costing of configured materials
 - configuration is used for machines as well as for machine components
- Use of valuated and non-valuated customer order stock in parallel
- Widely harmonized master data and business processes
- Complex products and engineering
- Use of dummy materials, vendors and customers



Why did TRUMPF not use CC- Costing and ML

- Not all the TRUMPF sites use SAP
- TRUMPF did not want to change the system configuration (new account set for ML, IDOC activation, etc.)
- TRUMPF uses multiple controlling areas and operating concerns
- TRUMPF did not want to test their complete set of business processes with ML activated again
- We found it difficult to map cost of sales (like sales and administration cost, freight etc.) not to be activated locally and being activated for the group
- TRUMPF liked the way GCP pulls the data rather than updating realtime
- The concept of pulling the data in a parallel set of books gave TRUMPF more freedom and flexibility to customize the solution to their needs



Challenges for the Global Value Chain - procurement key and mixed costings -

- Many clients have not completely maintained the special procurement key. Without this information the value chain is broken between companies
- The situation is even worse in case of mixed costings. The maintenance effort leads to missing quotations or outdated proportions of procurement alternatives
- GCP offers an automated update on special procurement key and mixed costing using actual data
- Other sources of data may be used for updating special procurement key and mixed costings
- GCP offers warnings, if the special procurement key changes over time or proportions of procurement alternatives change significantly
- Both may be changed manually from the user in order to start a new run



Challenges for the Global Value Chain - missing partner information -

- Very often order entry at the supplying plant does not care about filling an appropriate code representing the receiving plant, address information is manually overwritten without using a partner code
- The same happens for the ordering plant, that means order entry just cares about the supplying company, not about proper partner information regarding the supplying plant. Thus the value chain is broken, if there are more plants within one company
- Sometimes it is the plan for the goods to be received in plant 4 but due to some other requirement the plan might be changed during transport or at arrival to receive them in plant 5 instead



Challenges for the Global Value Chain - broken links for other reasons -

- For make-to-order production and configured materials the chain is broken between the ordering and supplying party
- There is simplified order entry at some sales sites using a dummy material whereas the producing sites use accurate material numbers
- Supply chain different from value chain because of third party orders. Third party orders may also happen combined with deliveries free of charge
- Spare part packs may be handled as many individual materials at the supplying plant and received using only one material (material number for the bundle) at the ordering plant
- One (or several) value chain(s) leave the group as the material(s) is (are) sold outside, then external processing is taking place and a value added material is bought back from the group

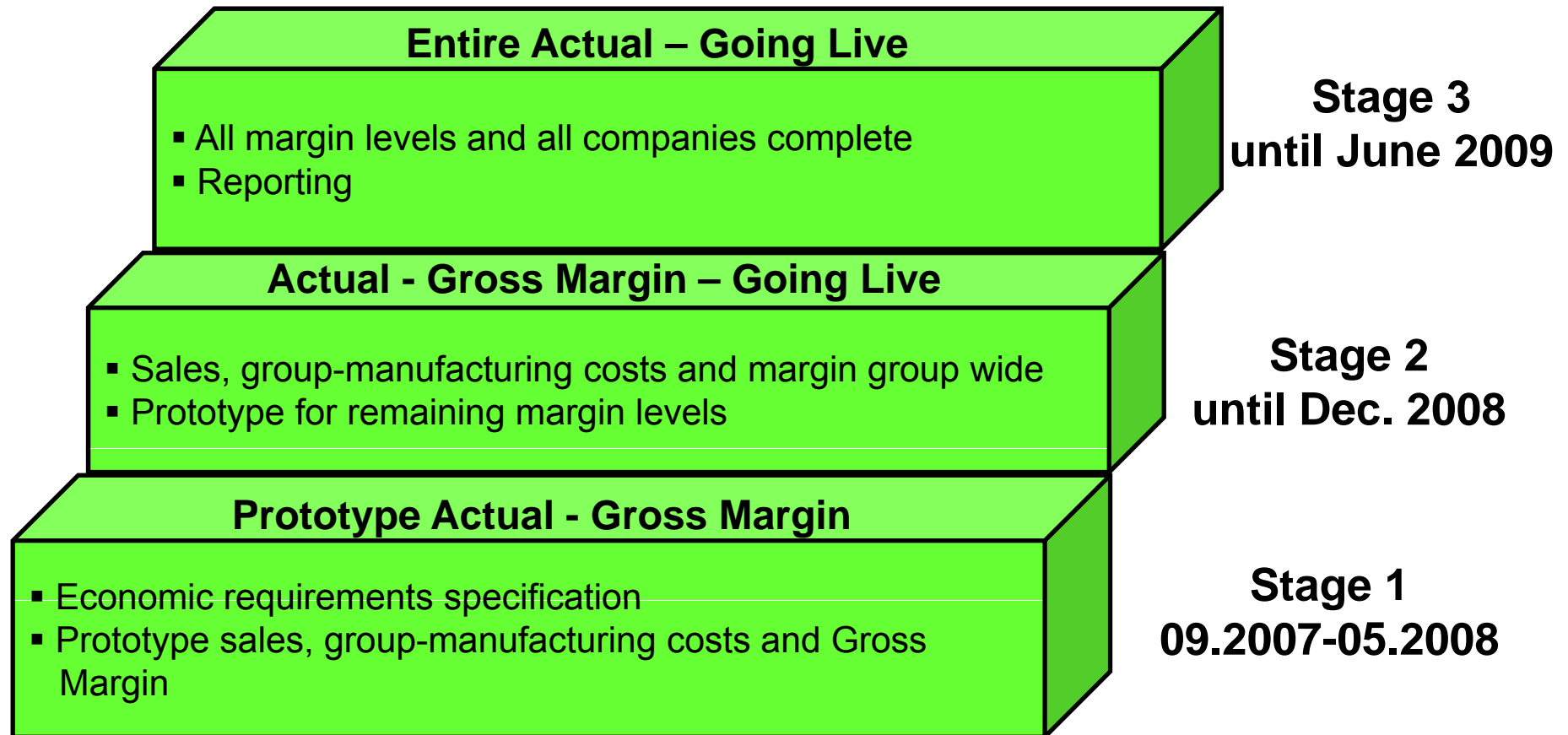


Reporting & Information on all management levels:

- Quick response time (≤ 5 sec.)
- Easy to handle standard reports, ad hoc expert reports
- Each management level can choose his respective view
- Worldwide access via WEB-portal



Project-Stages





Stage 1

	TWP	TLD	TJP		
Product group	TruPunch	TruMatic	TruLaser (2D)	TruLaser Tube 5000	TruBend Serie 5000
Sales (incl. Sales to THS)	8.000.000	6.000.000,00	15.000.000,00	5.000.000,00	8.000.000
Commission exp. / income	-150.000	-500.000	-1.200.000	-450.000	-1.000.000
Cost of goods sold	-6.000.000	-4.500.000	-11.000.000	-3.000.000	-5.500.000
Profit margin I	1.850.000	1.000.000	2.800.000	1.550.000	1.500.000
Service Expenses	-450.000	-500.000	-1.200.000	-60.000	-200.000
Service Expenses directly allocated	-450.000	-500.000	-1.200.000	-60.000	-200.000
Service Expenses allocated via key	0	0	0	0	0
Profit margin II	1.400.000	500.000	1.600.000	1.490.000	1.300.000
Selling Expenses	-600.000	-400.000	-1.000.000	-200.000	-350.000
Selling Expenses directly allocated					
Selling Expenses allocated via key	-600.000	-400.000	-1.000.000	-200.000	-350.000
Profit margin III	800.000	100.000	600.000	1.290.000	950.000



Stage 2

	TW				
	TFR				
	TLD				
	TJP				
Produktgruppe	TruPunch	TruMatic	TruLaser (2D)	TruLaser Tube 5000	TruBend Serie 5000
Umsatz	8.000.000	6.000.000,00	15.000.000,00	5.000.000,00	8.000.000
Provisionsaufwand / ertrag	-150.000	-500.000	-1.200.000	-450.000	-1.000.000
Einkaufs-/Herstellkosten	-6.000.000	-4.500.000	-11.000.000	-3.000.000	-5.500.000
DB I	1.850.000	1.000.000	2.800.000	1.550.000	1.500.000
Servicekosten	-450.000	-500.000	-1.200.000	-60.000	-200.000
Servicekosten direkt zugeordnet	-450.000	-500.000	-1.200.000	-60.000	-200.000
Servicekosten geschlüsselt	0	0	0	0	0
DB II	1.400.000	500.000	1.600.000	1.490.000	1.300.000
Vertriebskosten	-600.000	-400.000	-1.000.000	-200.000	-350.000
Vertriebskosten direkt zugeordnet					
Vertriebskosten geschlüsselt	-600.000	-400.000	-1.000.000	-200.000	-350.000
DB III	800.000	100.000	600.000	1.290.000	950.000



Stage 3

	<div style="display: flex; justify-content: space-between;"> TW TFR TLD TJP </div>				
Produktgruppe	TruPunch	TruMatic	TruLaser (2D)	TruLaser Tube 5000	TruBend Serie 5000
Umsatz	8.000.000	6.000.000,00	15.000.000,00	5.000.000,00	8.000.000
Provisionsaufwand / ertrag	-150.000	-500.000	-1.200.000	-450.000	-1.000.000
Einkaufs-/Herstellkosten	-6.000.000	-4.500.000	-11.000.000	-3.000.000	-5.500.000
DB I	1.850.000	1.000.000	2.800.000	1.550.000	1.500.000
Servicekosten	-450.000	-500.000	-1.200.000	-60.000	-200.000
Servicekosten direkt zugeordnet	-450.000	-500.000	-1.200.000	-60.000	-200.000
Servicekosten geschlüsselt	0	0	0	0	0
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DB III	800.000	100.000	600.000	1.290.000	950.000

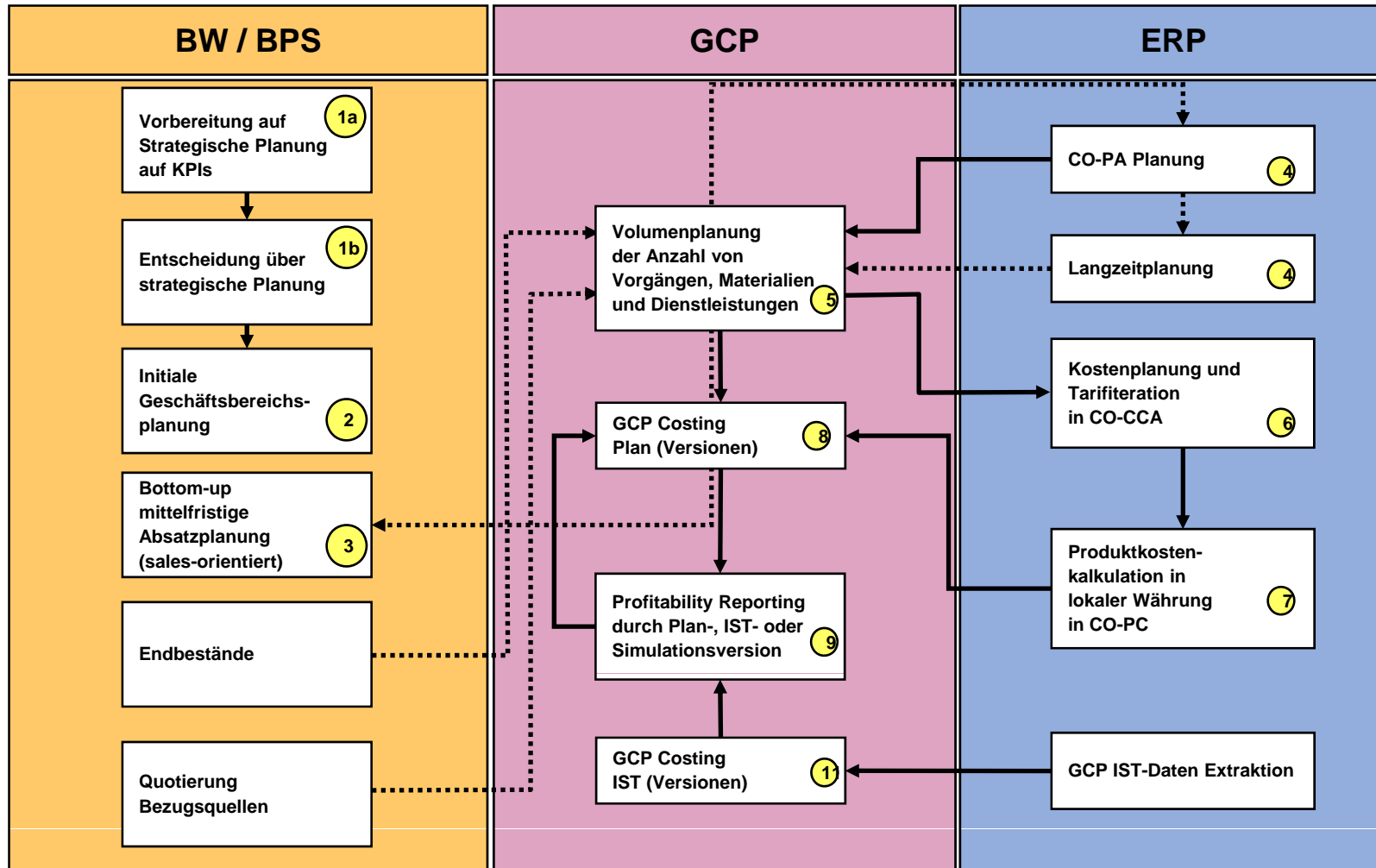


New Consultant + New Software

- Consultant **IM&C**: Informations Management & Consulting GmbH, Wiesloch
 - IM&C Software in use: **GCP** Group Costing and Profitability – Engine
 - Why did TRUMPF choose IM&C ?
 - IM&C seems to focus on improving their software continuously
 - Our impression: very good IT, business and SAP background
 - Good reference visit
 - IM&C was keen to implement make-to-order functionality in standard GCP
- **TRUMPF found GCP as the only standard software giving the answers to our questions without the need to change our ERP configuration**

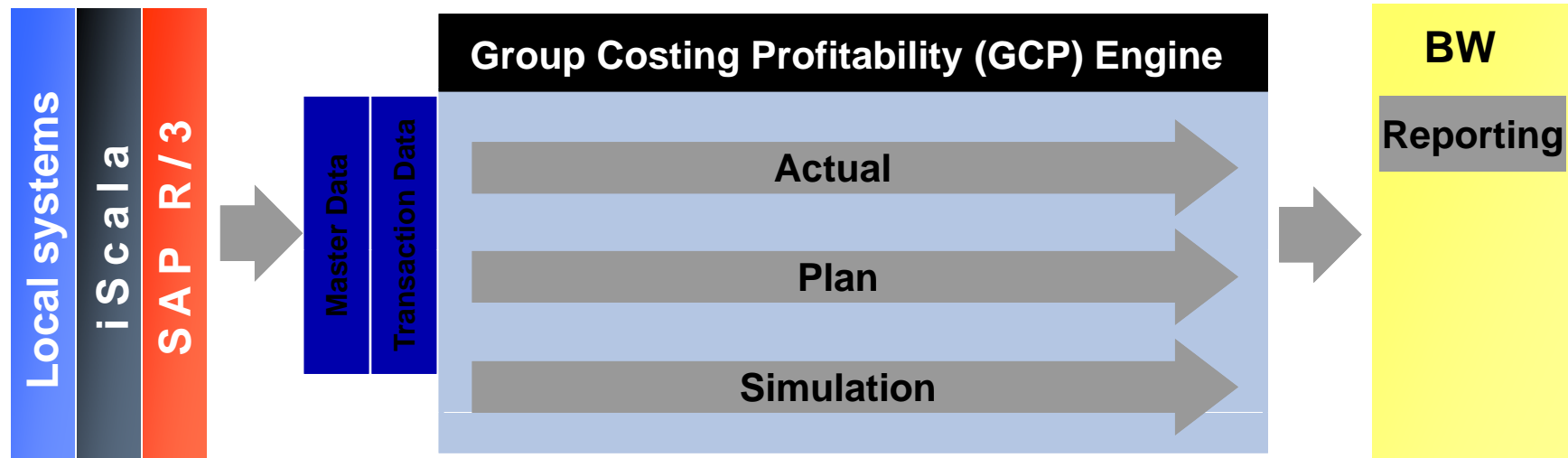


Planungsintegration mit BI/ERP





Group controlling & system architecture with GCP

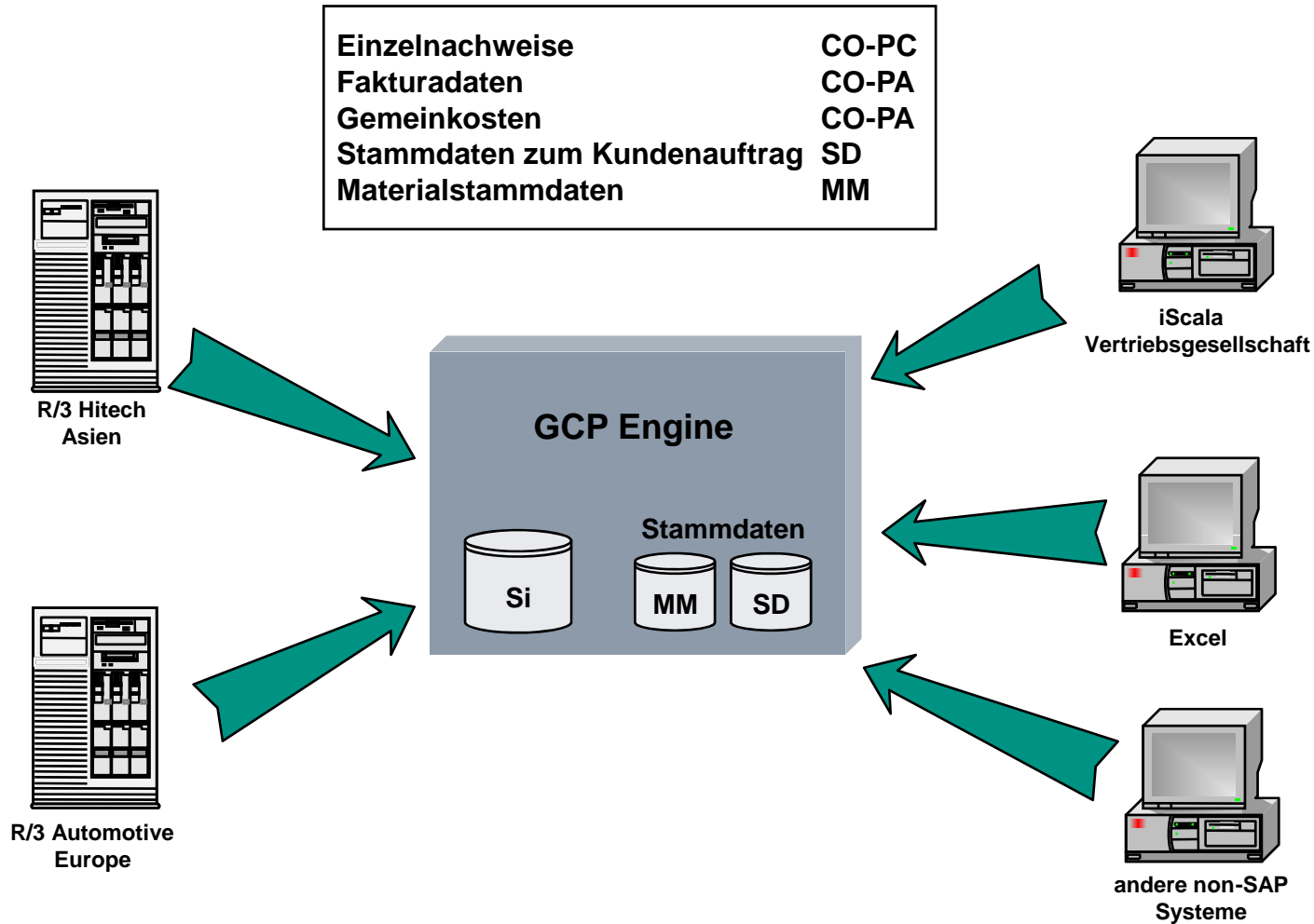




Backup- not commented on



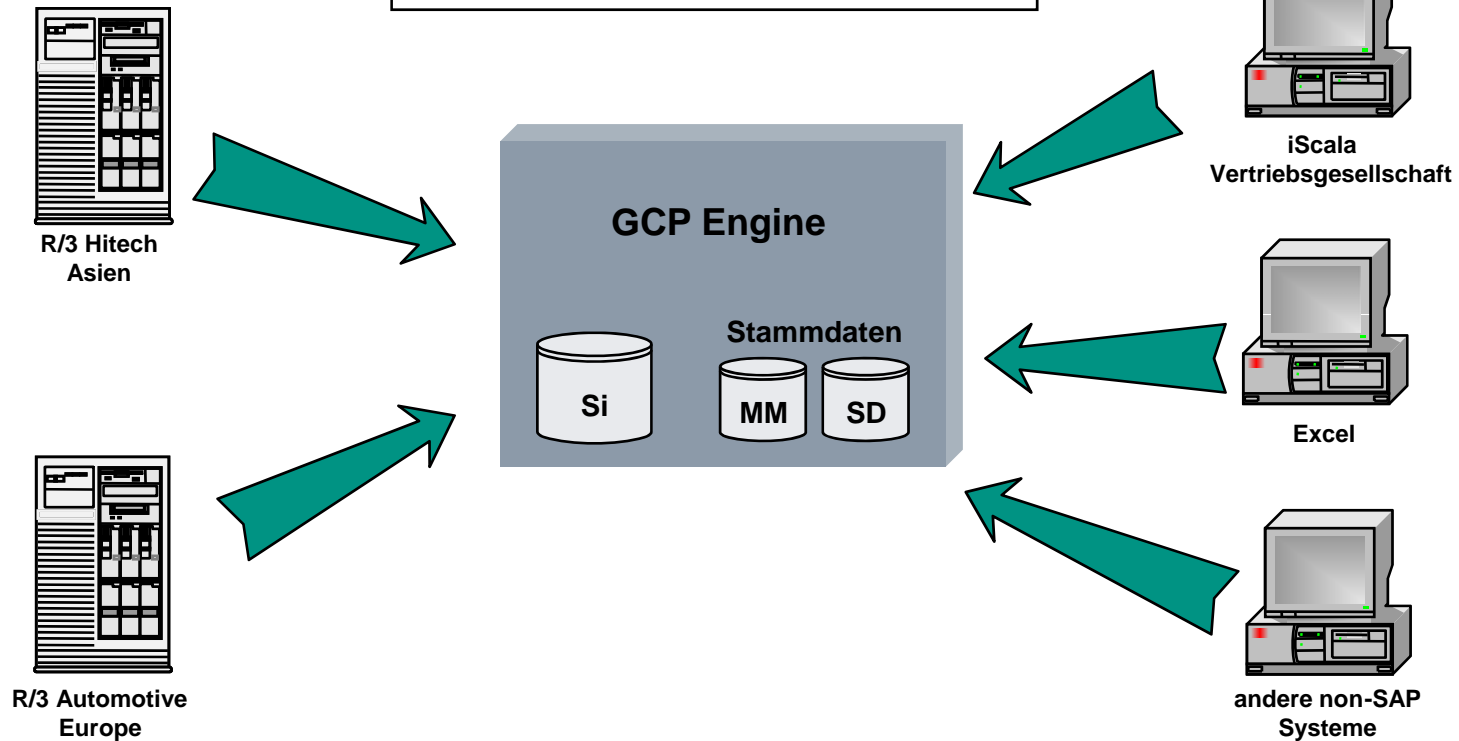
Datenquellen der Planergebnisrechnung

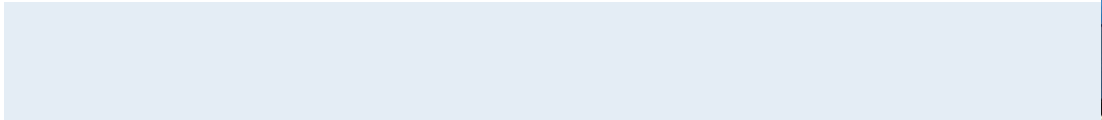




Datenquellen der IST-Ergebnisrechnung

Warenbewegung	MM
Eingangsrechnungen	MM
Auftragsabrechnungen	CO
Fakturadaten	CO-PA
Stammdaten zu Kundenauftrag	SD
Materialstammdaten	MM





GCP Cost Component Split

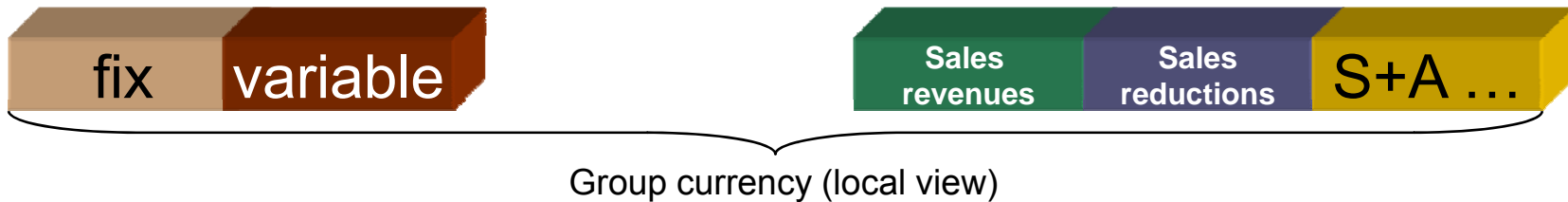
Manufacturing costs structure (rolled up)

Revenues structure (of level)

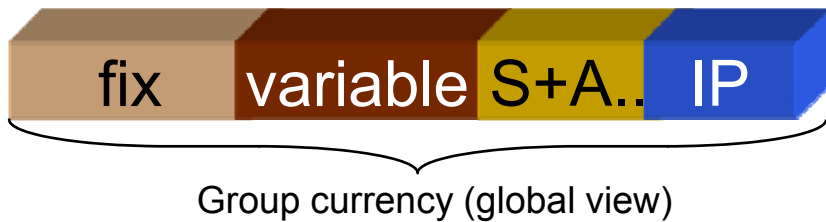
LOCAL



HISTORIC



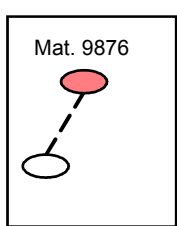
GLOBAL





Broken Links without Special Procurement Key

Company 1 (CHF)

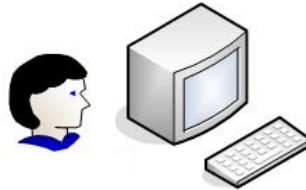


currency rate:
(CHF: EUR: 1,7143 : 1)

Sale IC
120 CHF = 70 EUR

1

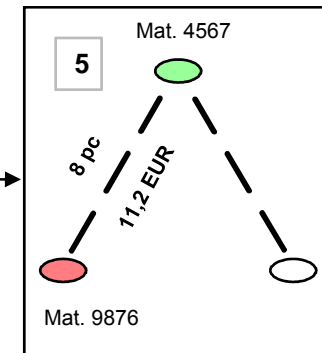
50 pc



manual changes trough user

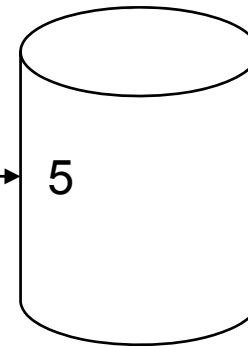
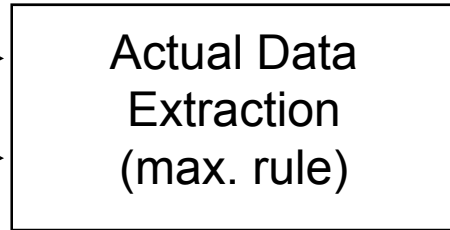
max. procurement alternatives (SOBSL)

Company 3 (EUR)

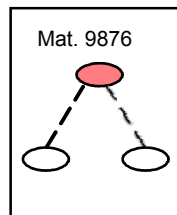


3 Purchase IC
70 EUR

4 Purchase IC
40 EUR



Company 2 (USD)



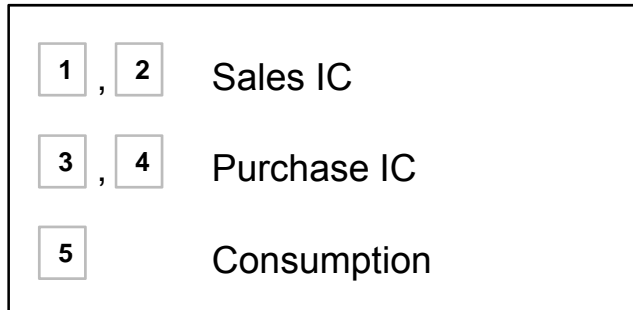
currency rate:
(USD : EUR: 1,5 : 1)

Sale IC
60 USD = 40 EUR

2

30 pc

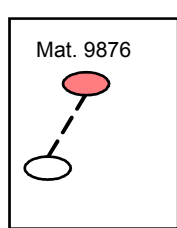
Legend





Outdated/missing Quotation of Procurement data

Company 1 (CHF)



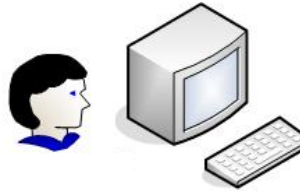
currency rate:
(CHF: EUR: 1,7143 : 1)

Sale IC

120 CHF = 70 EUR

1

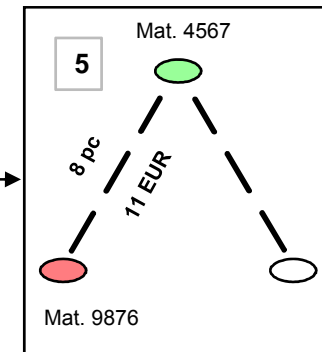
50 pc



manual changes trough user

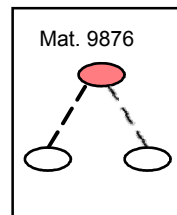
procurement alternatives

Company 3 (EUR)



30 pc

Company 2 (USD)

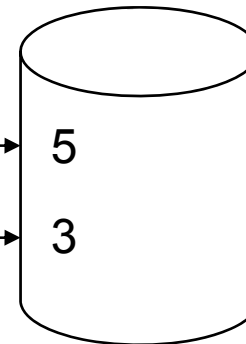
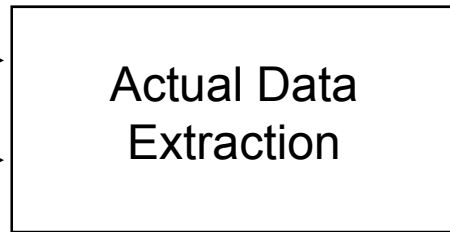


currency rate:
(USD : EUR: 1,5 : 1)

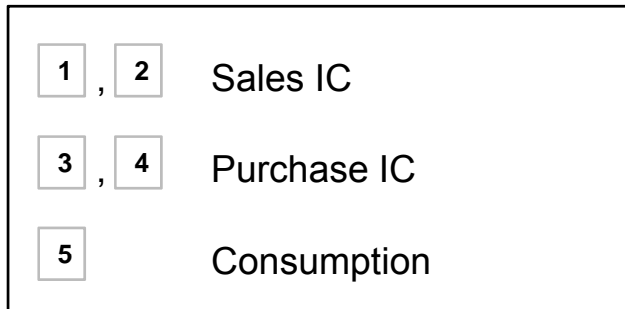
Sale IC

60 USD = 40 EUR

2



Legend



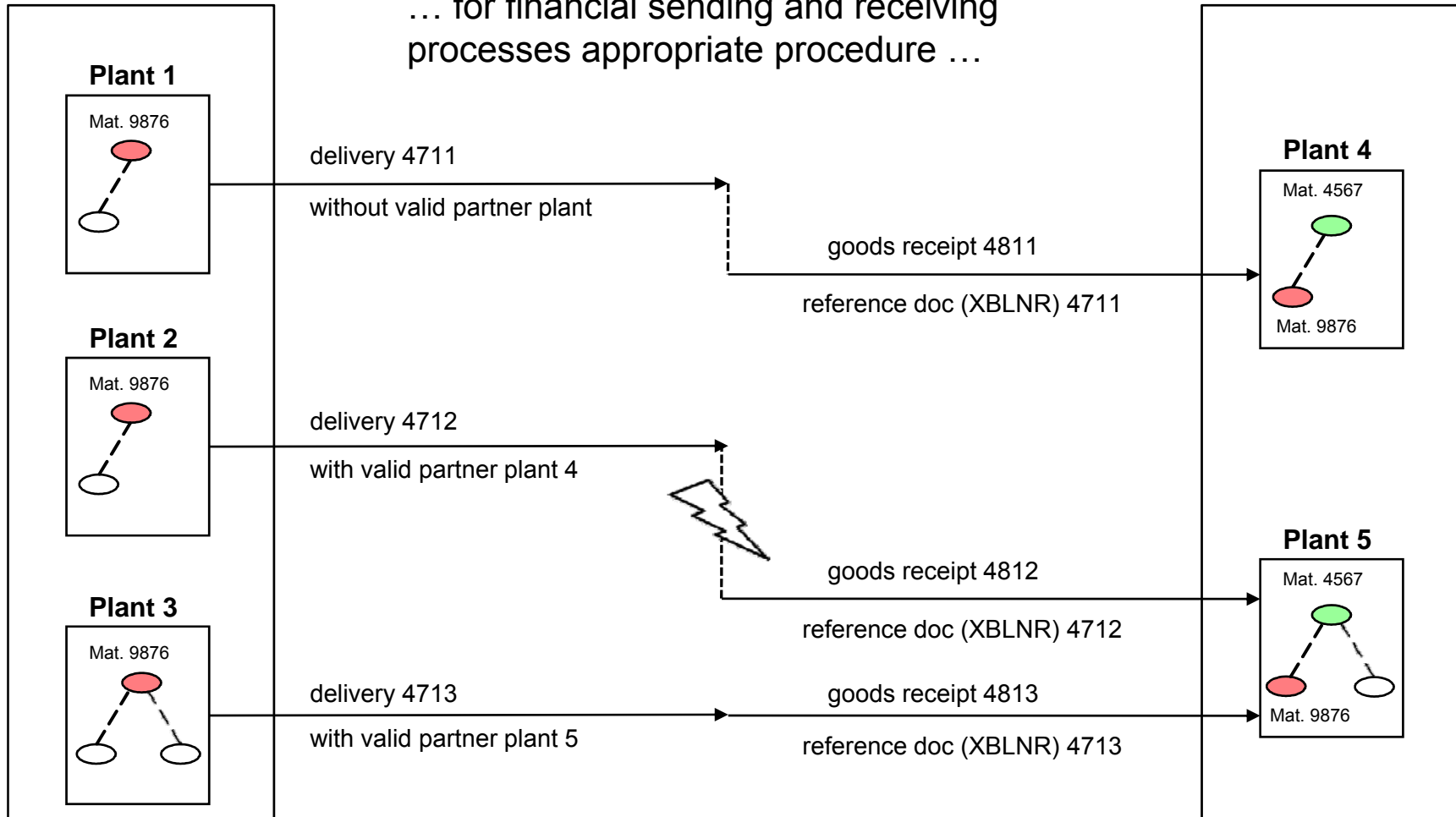


Missing or wrong Identification of Partner Plant

Company 1 USD

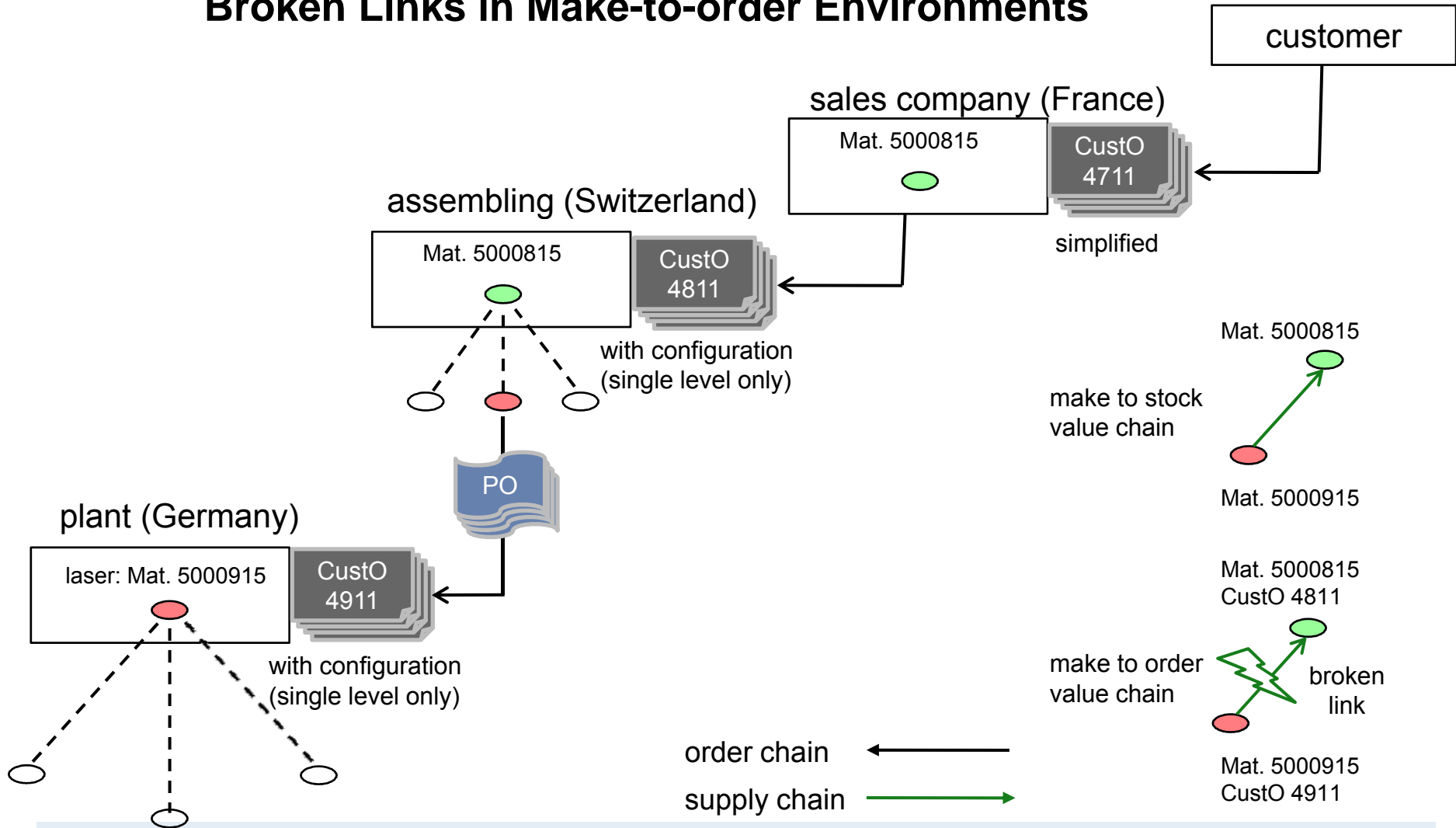
Company 2 EUR

... for financial sending and receiving processes appropriate procedure ...



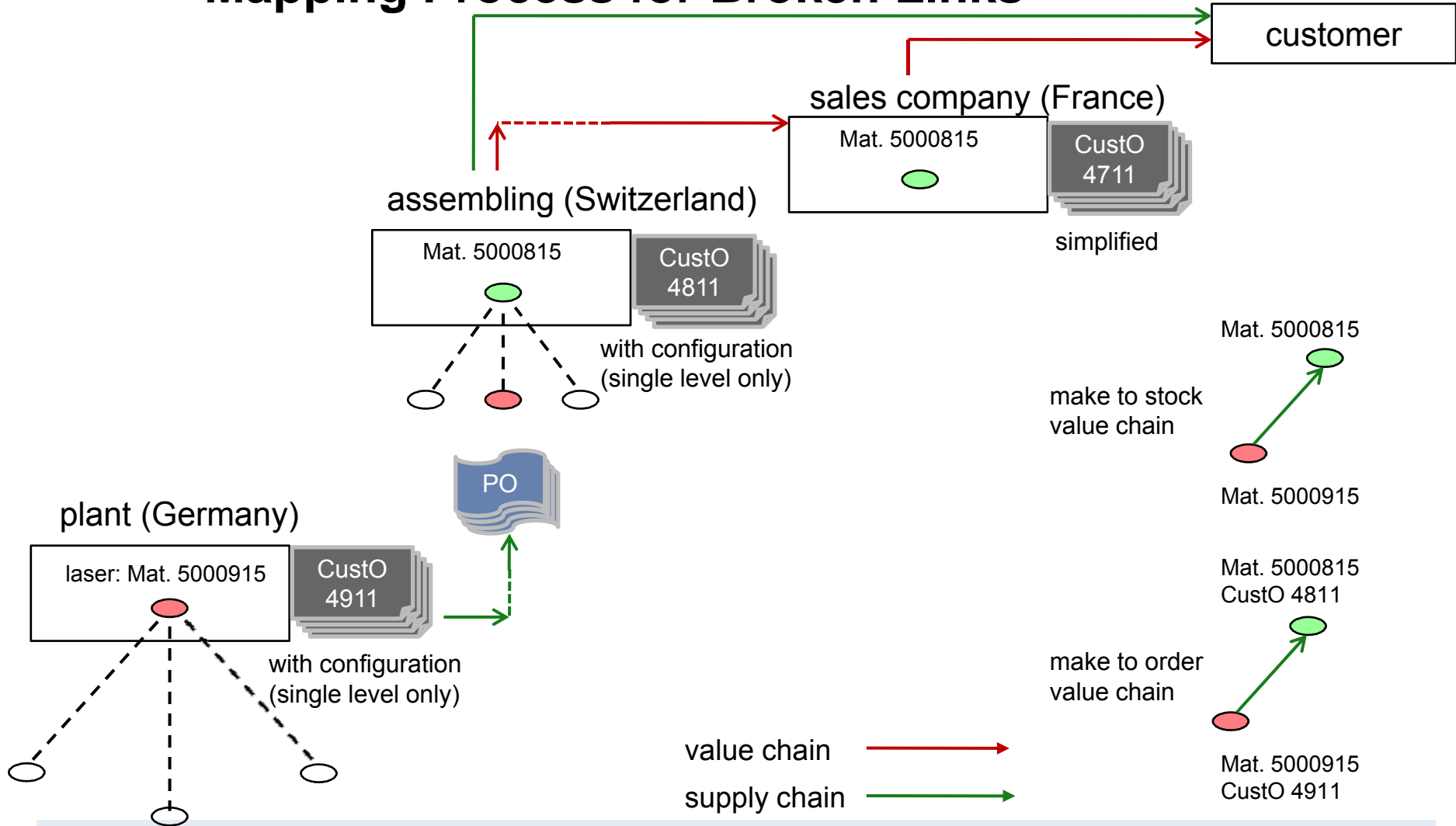


Broken Links in Make-to-order Environments





Mapping Process for Broken Links





Trennung Maschinenoptionen - Prinzip

	1. Ist-Plan Ermittlung über Kundenauftragskalkulation				Umsatz =	3. IST-IST Ermittlung über Belegfluss
	2. Kalkulation <u>ausgesuchter</u> Bestandteile				Plan-HK Δ	
	Grund- maschine	Andere Laserstärke	Auto- matisierung	Restliche Optionen	Preis/Mengen- abweichung	IST / Summe
Umsatz	409	25	111	1094	0	1.639
HK	200	10	70	400	50	730
Basis:	Materialkalkulation lagerh. Typen			Δ Kundenauftragskalk.		IST-HK
DB I abs.	209	15	41	694	-50	909
DB I rel.	+51%	+60%	+37%	63%	-100%	+55%



Trennung Maschinenoptionen **HK-Seite**

- am Beispiel TruMatic 6000 mit KAUF 28038144

	TruMatic 6000	Laserstärke 2700	Sheetmaster incl. Optionen	Restliche Optionen	Preis-/Mengenabweichung	IST / Summe
KAUF-Pos.	2000	3000	17000	alle anderen		
Material-Nr.	0351110	0990363	0415060	alle anderen		
Umsatz	409	25	111	1094		1.639
HK	200	10	70	400	50	730

Aus GCP

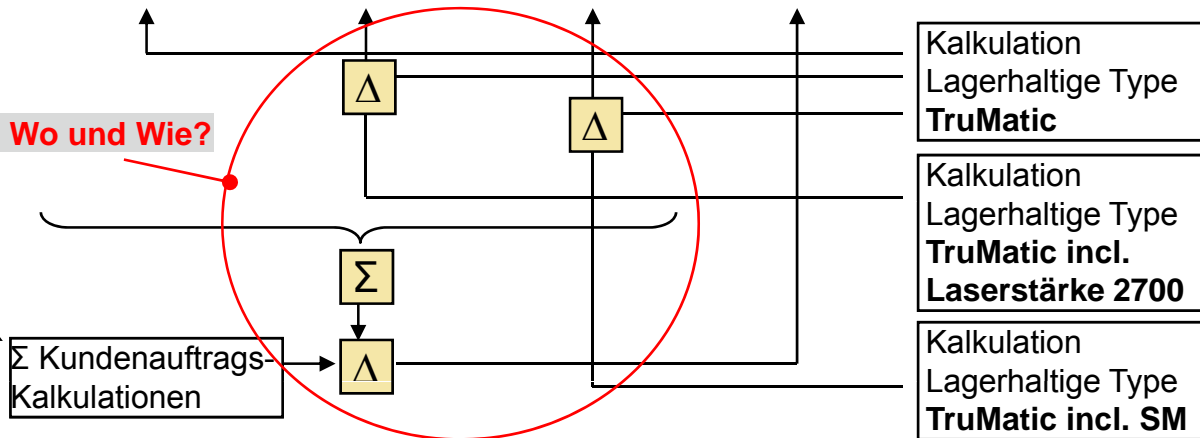
Z- bzw. /IMG-Tabelle

Werk	Mat-Nr. KAUF	Mat-Nr. Lag. Type
1101	0351110	4711
1101	0990363	4712
1101	0415060	4713
...

Vorberechnet in GCP

Berechnung Wo und Wie?

Aus GCP





Trennung Maschinenoptionen Umsatz-Seite

- am Beispiel TruMatic 6000 mit KAUF 28038144

	TruMatic 6000	Laserstärke 2700	Sheetmaster incl. Optionen	Restliche Optionen	Preis-/Mengenabweichung	IST / Summe
KAUF-Pos.	2000	3000	17000	alle anderen		
Material-Nr.	0351110	0990363	0415060	alle anderen		
Master-Verkaufspreis	499	30	135	1336		2.000
Echter Rabatt	90	5	24	242		361
Netto-Umsatz	409	25	111	1094		1.639
HK	200	10	70	400	50	730

Aus GCP (points to IST / Summe)

Rabatt: 81,95 % (points to 2.000 and 1.639)

Netto-Verkaufspreis letzte TG (points to 1.639)

Berechnung Wo und Wie? (points to the calculation logic)

Master-Verkaufspreis im R/3 (points to 499)

Jede Pos. wird mit 81,95 % vom Master-Verkaufspreis bewertet; unabhängig vom tatsächlichen Netto-Verkaufspreis! (summary box)