

# How to create a counter

How to count the occurrences of a characteristic relative to one or more other characteristics.

## Business Scenario

In a report you want to count the occurrences of a characteristic relative to one or more other characteristics. For example, in an InfoCube that contains the number of ordered items per order, order item, material, and customer you would like to know how many different materials were ordered by one customer, or how many different materials were ordered by one customer with a specific order.

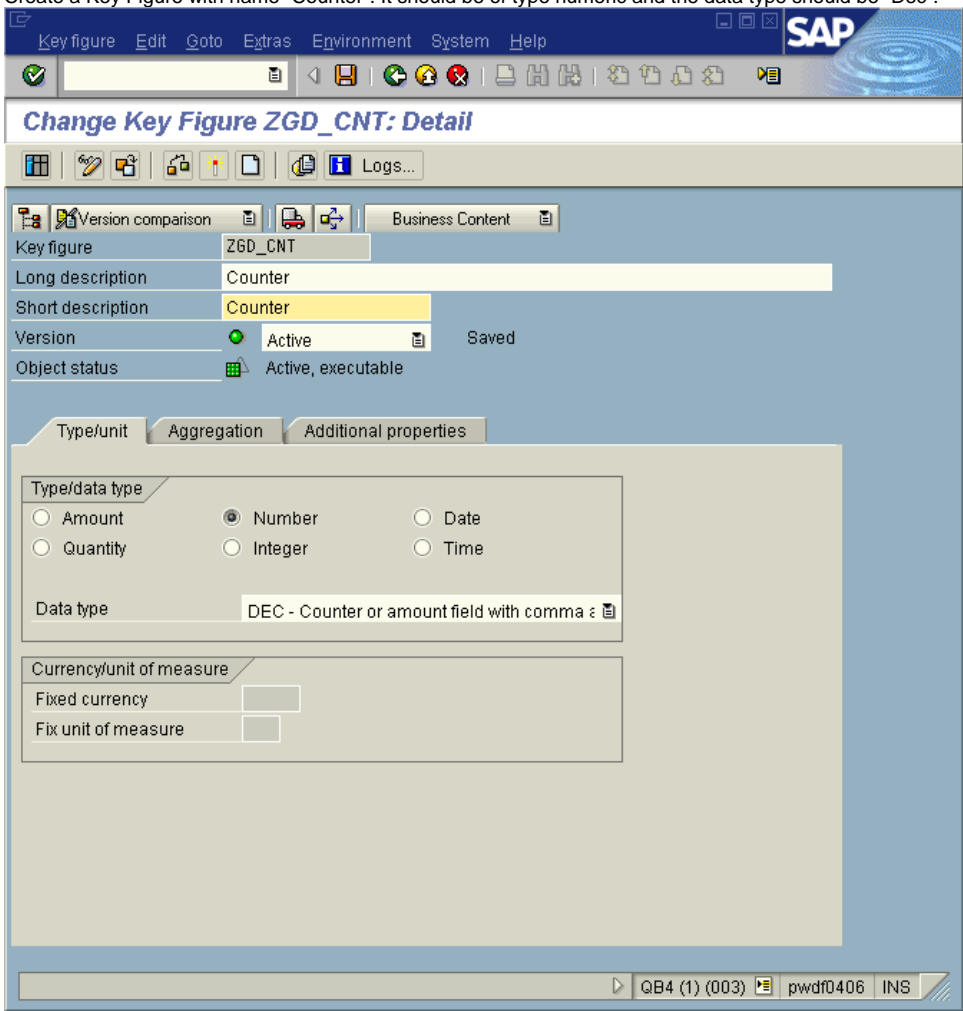
## The Result

We will create a calculated key figure that counts the number of different materials per any other characteristic. This key figure can be used in your report.

	A	B	C
1	Material per any other Char.		
2			
3	Material		
4	Item no.		
5	Order		
6	Key figures	Counter (Material per any other Char.)	
7	Customer		
8			
9	Customer		Counter (Material per any other Char.)
10	2	Kaufland	2
11	31	Parcel Express	4
12	32	AfriCo	3
13			
14			

## The Step By Step Solution

1. Create a Key Figure with name "Counter". It should be of type numeric and the data type should be "Dec".



2. Insert this InfoObject into your InfoCube.

The screenshot shows the SAP InfoCube Editor interface. The title bar reads "Edit InfoCube: Key Figures". The main window is divided into several sections:

- InfoCube:** ZGD\_SALES
- Business Content:** Sales Example
- Version:** active
- ObjStatus:** Active, executable
- Characteristics:** Time Characteristics
- Key Figures:** This tab is active, showing two tables: "Structure" and "Template".

The **Structure** table contains the following data:

Key figure	Long description
QQUANTITY	Quantity
ZGD_CNT	Counter

The **Template** table contains the following data:

Key figure	Long description	Status
/SAPAPO/M...		
QABSNC...	Absence hours	
QACCMPLR...	durchgesetzte Miete	
QACCP..._Q...	Accepted quantity	
QACCRDFR...	Accrued Freight Costs	
QACC_QTY	Accepted quantity	
QACC_VAL...	Accepted value in local curr...	
QACQ_VAL...	Equipment acquisition value	
QACQ_VAL...	Acquisition value for transa...	
QACTDELD...	Actual Delivery/Finish Date ...	

The "ZGD\_CNT" key figure in the Template table is highlighted in blue, indicating it is selected for insertion into the InfoCube.

3. Add the InfoObject to the Communication Structure and re-create the Update Rules of the InfoCube

The screenshot shows the SAP InfoSource 'ZGD\_SALES' configuration screen. The title bar reads 'InfoSource ZGD\_SALES (Transaction dat) Change'. Below the title bar, there are buttons for 'Create characteristic ...' and 'Create key figure ...'. The main area displays the 'Communication Structure' table, which lists various InfoObjects and their properties. A new entry, 'ZGD\_CNT', has been added to the table, highlighted in yellow. The status of the communication structure is 'Active'.

InfoObject	Descriptn	S.	Type	Length	Dec.p...	Unit	Field	Conve	P
0CALDAY	Calendar day	🕒	DATS8	0			CALDAY		1
0COORDER	Order	📄	CH...12	0			COORDER	ALPHA2	2
0CUSTOMER	Customer	👤	CH...10	0			CUSTOMER	ALPHA3	3
0MATERIAL	Material	📦	CH...18	0			MATERIAL		4
0ORDERITEM	Item no.	📄	NU...4	0			ORDERITEM		5
0QUANTITY	Quantity	📊	QU...17	3		UNIT	QUANTITY		6
0UNIT	Unit of measure	📏	UNIT3	0			UNIT	CUNIT7	7
ZGD_CNT	Zunter	📊	DEC 17	3			/BIC/ZGD_CNT		8

4. In the transfer rules set the key figure counter to a constant value of 1.

The screenshot shows the SAP configuration interface for the InfoSource ZGD\_SALES. The 'Transfer rules' tab is selected, displaying two tables:

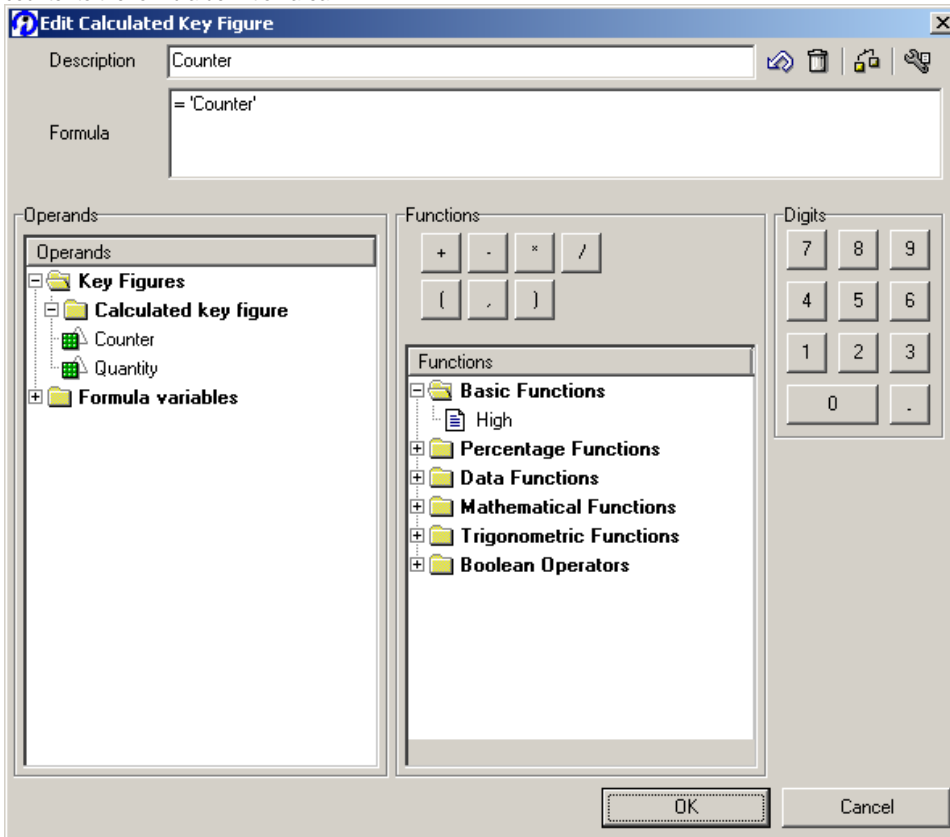
InfoObject	Descriptn	Tp	Rule
@CALDAY	Calendar d...		@CALDAY
@COORDER	Order		@COORDER
@CUSTOMER	Customer		@CUSTOMEI
@MATERIAL	Material		@MATERIAL
@ORDERITEM	Item no.		@ORDERITI
@QUANTITY	Quantity		@QUANTIT'
@UNIT	Unit of mea...		@UNIT
ZGD_CNT	Counter		1,00000

InfoObject	Descriptn	Field
@COORDER	Order	COOR
@ORDERITEM	Item no.	ORDE
@MATERIAL	Material	MATEF
@CUSTOMER	Customer	CUSTI
@CALDAY	Calendar d...	CALD#
@QUANTITY	Quantity	QUAN#
@UNIT	Unit of mea...	UNIT

At the bottom of the screen, a status bar indicates: "Transfer rules ZGD\_SALES\_PH activated" and "QB4 (1) (003) pdf0406 INS".

5. In the BEx Query Builder create a new calculated key figure for the InfoCube. The formula should be “=Counter” i.e. simply drag the key figure counter to the formula definition area.



6. When you save the calculated key figure you have to provide a technical name and a description “Counter (Average per Material)”. Additionally, you have to define the exceptional aggregation behavior of the calculated key figure. On the popup window press the button “Enhance >>”. For

Exception Aggregation choose "Average of all values". The reference characteristic should be set to the characteristic that you want to count. This is material in our case.

**Properties of the calculated key figure**

Technical name  
ZGD\_CKYF01

Description  
Counter (Average per Material)

Number format

Scaling factor: (nothing defined) | Number of decimal places: (nothing defined)

Calculations (includes only the displayed data)

Calculate result as...: (nothing defined) | Calculate single values as...: (nothing defined)

Cumulated  
 Also apply to results

Currency translation

Currency translation key: (nothing defined) | Target currency: (nothing defined)

Entry of variables

Last changed  
Owner: DANNER; Last changed by: DANNER; Date/time: 14.05.2001 14:57:42

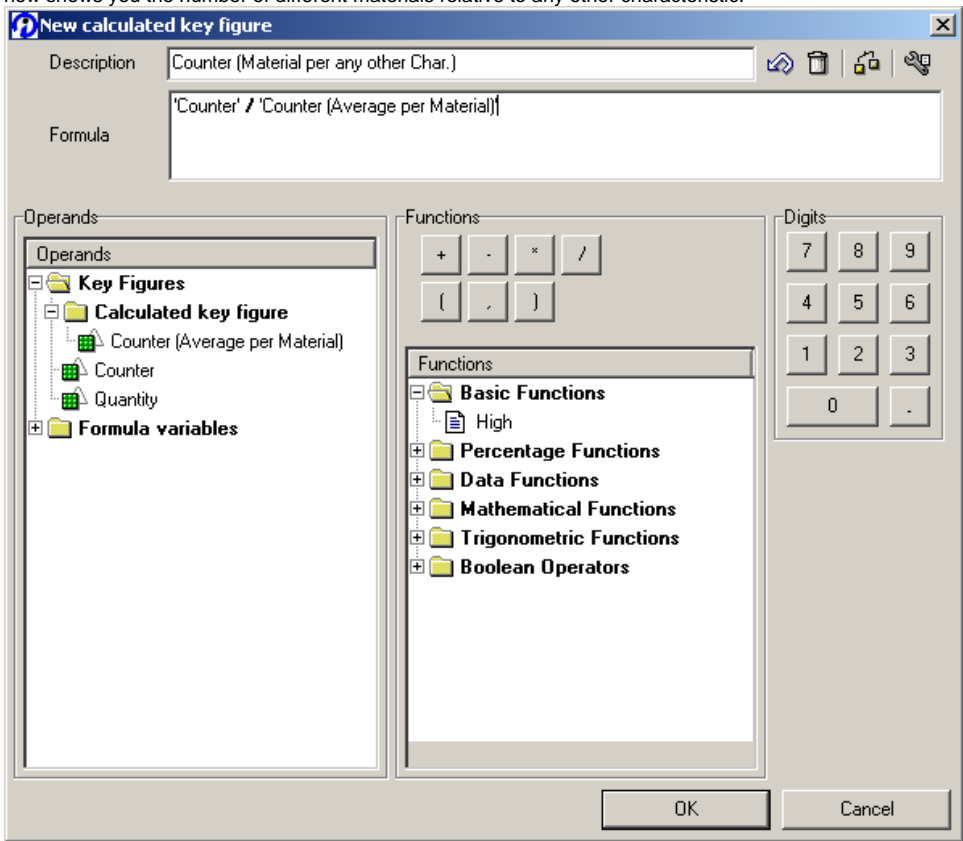
Aggregation

Aggregation: Summation

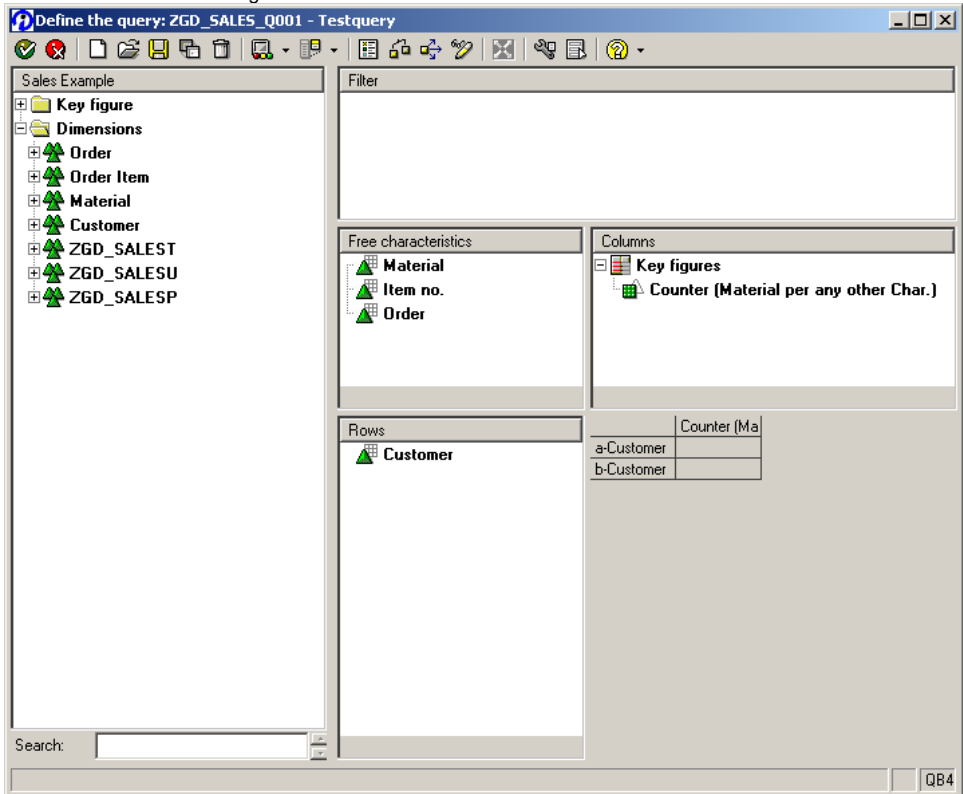
Exception aggregation: Average of all values | Ref.char. fr excptn agggrtn: Material

OK | Cancel

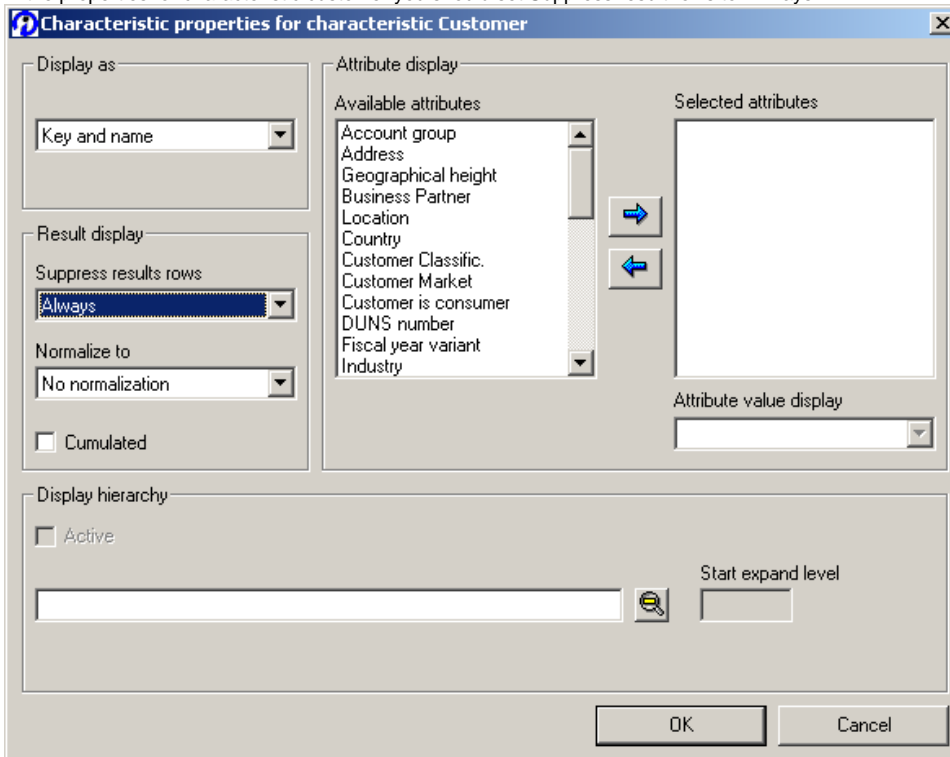
7. Create a second calculated key figure. Here you define the formula to be "Counter/Counter (Average per Material)". This calculated key figure now shows you the number of different materials relative to any other characteristic.



8. In the properties set the number of decimal places to 0.
9. Define a new Query. In the columns use the key figure "Counter (Material per any other Char.)". In the rows insert a drill down with characteristic customer. Add the remaining characteristics to the free characteristics.



10. In the properties for characteristic customer you should set Suppress result rows to "Always".



11. Run the query. The result will be the number of different materials per customer.

Material	Order	Key figures	Customer
<b>Counter (Material per any other Char.)</b>			
Customer			<b>Counter (Material per any other Char.)</b>
2	Kaufland		2
31	Parcel Express		4
32	AfriCo		3

12. By setting a filter on order you now get the number of different materials per customer and order.

Material	Order	Key figures	Customer
<b>Counter (Material per any other Char.)</b>			
Customer			<b>Counter (Material per any other Char.)</b>
2	Kaufland		2
31	Parcel Express		1
32	AfriCo		3