Create Key Performance Indicators
SAP Business One, version for SAP HANA, 9.1

July 2014

Welcome to the topic on creating key performance indicators in SAP Business One, release 9.1 version for SAP HANA.

Objectives

At the end of this topic, you will be able to:
- Use Key Performance Indicators (KPIs) in your cockpit
- Design a KPI in the Pervasive Analytics Designer

In this topic, you will learn how to:
- Use Key Performance Indicators (also known as KPIs) in your cockpit
- Design a KPI in the Pervasive Analytics Designer

Key Performance Indicators (KPIs)

Enhancements:

- Predefined KPI widgets for tracking performance objectives
- Ability to easily create your own KPIs in the Pervasive Analytics Designer

Benefits:

- Easily and quickly check progress towards your company's strategic goals and objectives
- Design financial and operational KPIs that reflect your unique business needs

Motivation: Evaluate business performance at a glance

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In this course we introduce key performance indicators or KPIs. KPIs are quantifiable measurements that reflect critical success factors in a company such as targets for revenue or profit margin.

Several predefined KPI cockpit widgets are available for tracking performance objectives. In addition, the ability to easily create your own KPIs has been added to the Pervasive Analytics Designer.

There are two main benefits to using KPIs. KPIs allow you to easily and quickly check progress towards achieving your company's strategic goals and objectives. The ability to create your own KPIs gives you the option to design financial and operational KPIs that reflect your own unique business needs.

Using KPIs, you can evaluate your business performance at a glance in your role-based cockpit or in advanced dashboards.

Business Example

The manager at OEC Computers wants to set up KPIs to measure corporate goals.

This year the company has a performance goal of less than 2 overdue deliveries per month. He would like to set up a key performance indicator (KPI) to measure the company progress towards this operational goal.

He would also like to design a KPI that measures the percentage of sales that are returned to the warehouse and company progress towards reducing that number.

He also needs to understand how to set up financial KPIs for corporate financial targets for sales revenue.

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He also needs to understand how to set up financial KPIs for corporate financial targets for sales revenue.

Key Performance Indicators (KPI)

- Key performance indicator widgets allow you to visually evaluate the status of your business.

- SAP provides prebuilt KPIs but you can also design your own.

- You can base your KPIs on:
  - Analytic Views
  - Calculation Views
  - User-Defined Queries

Total Assets	Net Sales Revenue
▲4.26 M GBP	▲14.86 K GBP
2014-06-19 ↗24%	2014-06-19 ↗131998%

Receivables Overdue	Gross Profit Margin
▲292.08 K GBP	▼-8.93 %
2014-06-19 ↘-4%	↘-109%

Key performance indicator widgets allow you to visually evaluate the status of your business.

SAP provides a large number of prebuilt KPIs but you can also design your own.

You can base your KPIs on:
- Analytic Views
- Calculation Views
- User Defined Queries

How KPIs are displayed

Total Assets

$\blacktriangle$ **4.26 M**GBP

2014-06-19 $\nearrow$ 24%

- A cockpit or advanced dashboard can display multiple KPI widgets.

- Here we see a KPI displayed in the widget.

At the top left, you see the name.

The KPI value appears in the center. The color indicates that this KPI has reached its goal.

This KPI shows an upward trend. The arrow's color indicates a positive trend.

In the bottom left, you see the data range.

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As of release 9.1, a new HTML5 cockpit is available that can display multiple KPI widgets. Additionally you can display KPI widgets inside an advanced dashboard.

Here we see a KPI displayed in the widget. Predefined and user-defined KPIs have the same structure.
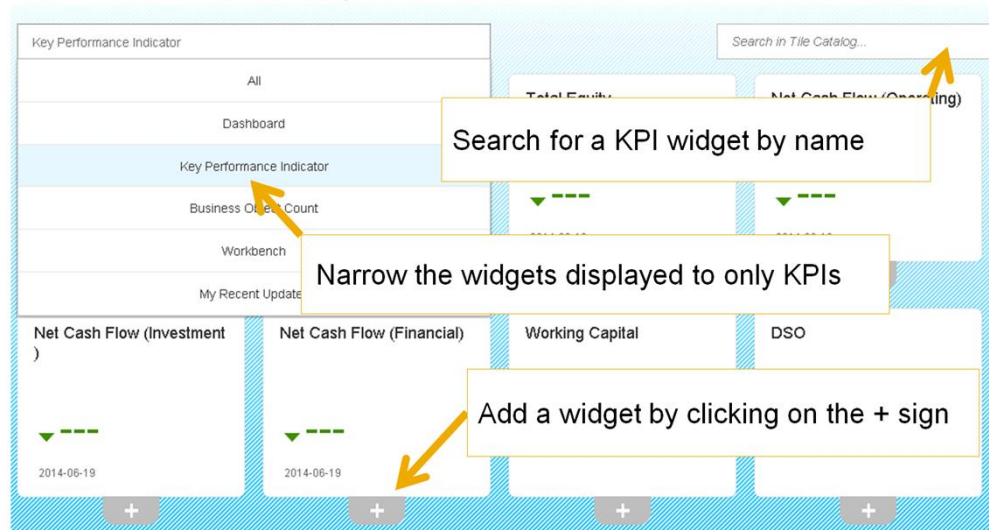At the top left, you see the name given to the KPI.

The KPI value appears in the center. Colors can be used to show if the KPI is meeting its goal. In this KPI, the green color indicates that this KPI has reached its goal.

In the bottom right, you can see how the KPI is trending. This KPI shows an upward trend. Once again, you can choose colors to indicate whether the trend is good or bad.

In the bottom left, you see the date range for the KPI.

Adding KPI Widgets to the cockpit

A user can browse for KPI widgets in the Widget Gallery.
Users see all KPIs that they have authorization for.

Key Performance Indicator

Search in Tile Catalog...

All

Dashboard

Search for a KPI widget by name

Key Performance Indicator

Business Object Count

Workbench

Narrow the widgets displayed to only KPIs

My Recent Update

Net Cash Flow (Investment)

Net Cash Flow (Financial)

Working Capital

DSO

Add a widget by clicking on the + sign

2014-06-19

2014-06-19

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A user can choose the appropriate KPI widgets in the Widget Gallery. Users see all KPIs that they have authorization for.

A user can:

• Search for a KPI widget by name
• Narrow the widgets displayed to only KPIs
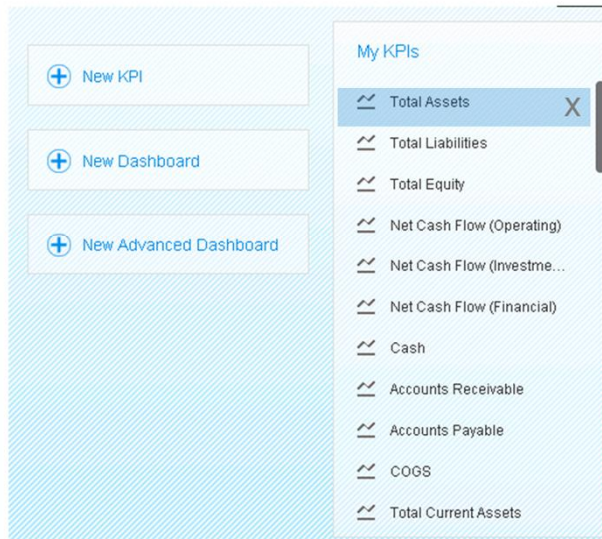• Add a widget by clicking on the plus sign.

Predefined KPIs

You can view the full list of available predefined KPIs in the Pervasive Analytics Designer.

Initially with version 9.1, predefined KPIs are available for the charts of accounts used in four localizations:

- the United States,
- Germany
- Great Britain, and
- China.

Predefined KPIs that are not based on charts of accounts are available for all localizations.

Managing existing KPIs

	My KPIs
⊕ New KPI	∼ Total Assets X
	∼ Total Liabilities
⊕ New Dashboard	∼ Total Equity
	∼ Net Cash Flow (Operating)
⊕ New Advanced Dashboard	∼ Net Cash Flow (Investme...
	∼ Net Cash Flow (Financial)
	∼ Cash
	∼ Accounts Receivable
	∼ Accounts Payable
	∼ COGS
	∼ Total Current Assets

Authorized users can edit or create KPIs using the Pervasive Analytics Designer.

You can:

- **Create a new KPI**
- **Scroll to view KPIs**
- **Delete a KPI by choosing the X**
- **Choose a KPI to open its definition**

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Authorized users can edit or create KPIs using the Pervasive Analytics Designer. You can create a new KPI by choosing the button on the left. You can use the scroll bar to scroll through the list of KPIs. You can delete a KPI by hovering over the KPI and selecting the X. You can choose a KPI to open its definition.

New options in creating dashboards and how to design an advanced dashboard are discussed in other delta courses for the 9.1 release.

KPI definition

The KPI definition in the *Pervasive Analytics Designer* has four areas.

1. In the top left, there are two icons for saving the KPI definition. The first icon is *Save* and the second is *Save As*.

2. The area on the left lists all available queries, analytic views and calculation views that can be the base for a KPI. When creating a new KPI, you can choose a query or view from these lists.

3. The third area is the main definition for the KPI. The window opens initially on the *Value Settings* tab for the KPI. The two other tabs are the *Filter and Parameter* tab and the *Composite KPI* tab.

4. The last area displays a graphical view of the KPI as it would appear in a widget. This allows a user to see how the final KPI will appear as they create or change a KPI. This area also has links to a window for changing the display colors and for adding an action to open additional analytics in an advanced dashboard.

Value Settings Tab

Value Settings   Filter and Parameter   Composite KPI

KPI Name → Outbound Inventory Value   Outbound Inventory Value ← **Description**

Set KPI Value

Measure → �", #[948.177]   ✕   ⏱ #[948.7]   ✕ ← **Date Dimension**
          Sum ▾   This Month ▾

Unit   Currency ▾

Data source → From Data Source   *Outbound Inventory Value*
(Query or View)

Set KPI Goal   Advanced Goal

The target value of this month

0

Set KPI Trend   Advanced Trend

Month-On-Month Basis ▾

Mark if KPI
not for use in → ☐ Interim
cockpit   ☐ Smaller Value is Better ← **Mark if trend should**
                    head downward

The *Value Settings* tab is the main tab for the query definition. We will focus on this tab now and come back to the other two tabs later in the course. The *Value Settings* tab has a section at the top for name and description.

The *Set KPI Value* section contains the information on how the KPI is calculated. On the left we see a measure from a query. This particular measure is the sum of outbound inventory that will be displayed in currency units. The data source that contains this measure is listed below. In this example, the data source is a system query for determining the Outbound Inventory Value. Optionally, this section may also contain a date dimension. In this case, the KPI calculates the KPI by month. The next two sections are where you set KPI goals and trends. We will talk more on this in a moment.

At the bottom there are two checkboxes. The interim checkbox is used to indicate that this KPI is used to calculate a more complicated KPI and is not meant to be used in a widget. Therefore, you mark this checkbox, if you do not wish this KPI to be available in the cockpit. The *Smaller Value is Better* checkbox is used when you have a trend that should be heading downwards instead of upwards. Most KPIs use trends that are expected to increase in value, such as this KPI for outbound delivery amounts or KPIs for revenue or cash. This checkbox is used for KPIs such as overdue receivables where we prefer to see the amount as small as possible.

Setting KPI target values

- **The Set KPI Goal section is where you adjust KPI targets**

- **Target initially set to zero**

- **Adjust the setting to corporate goal**

Value Settings   Filter and Parameter   Composite KPI

Outbound Inventory Value   Outbound Inventory Value

Set KPI Value

#[948.177] ✕   #[948.7] ✕

Sum   This Month

Unit Currency

From Data Source *Outbound Inventory Value*

Set KPI Goal   Advanced Goal

The target value of this month

0

Set KPI Trend   Advanced Trend

Month-On-Month Basis

☐ Interim
☐ Smaller Value is Better

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The *Set KPI Goal* section is where you adjust your KPI targets.

A predefined KPI is delivered with the target set at zero, therefore a valid target needs to be set before a KPI is ready for end users. An authorized user should set the target value to match the company's needs.

In our business example, the manager would like to see a target value for outbound inventory at 15000 per month. So the manager would enter that value here.

Even if you have a KPI where smaller values are better, you will want to set a value that is not equal to zero.

Setting trends for KPIs

Set KPI Trend section:

- **Choose how to calculate performance improvement**

- **Compare months, quarters, years or days**

- **Month-on-Month compares this month to last month**

- **Month-over-Month compares this month to the same month last year**

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In the *KPI Trend* section, you can choose how to calculate whether performance is improving when compared to a prior period.

In this graphic we are viewing a KPI for Total Cash. Unlike the previous KPI we viewed for outbound delivery, this KPI does not have a date dimension specified. Therefore, you can choose to compare months, quarters, years or days.

When choosing a time period such as *Month*. You have the option to compare to the previous month this year or to compare to the same month in the prior year. *Month-on-Month* means comparing this month to last month, for example comparing February to January. *Month-over-Month* compares this February 2014 to February 2013.

Note that if the time dimension is specified in the *Set KPI Value* area then you only have the choice of that time period. For example, the outbound inventory KPI was set to be calculated by month so the only two possibilities for setting a trend are *Month-On-Month* and *Month-Over-Month.*

KPI Base Query

Tools > Queries > Query Manager

Outbound Inventory Value

Select T0."DocDate" as "Posting Date", ifnull(-T1."TransValue", 0) "Outbound Amount" from OIVL T0 INNER
JOIN IVL1 T1 on T0."TransSeq" = T1."TransSeq" where T0."OutQty" > 0

#	Posting Date	Outbound Amount
1	15.01.06	3,765.06
2	15.01.06	1,224.80
3	15.01.06	326.17
4	15.01.06	566.63
5	15.01.06	138.20
6	15.01.06	4,728.03
7	15.01.06	1,882.66
8	15.01.06	188.78
9	15.01.06	188.66

Query Manager

Query Name
Outbound Inventory Value
Query Category
System   Manage Categories

▼ System
  Vendors by Purchase Amount
  Customers by Sales Amount
  Inventory Turnover (By Warehouse)
  Inventory Turnover (By Item Group)
  Inventory Turnover for Last 6 Months
  Item Groups by Inventory Value
  My Open Inventory Transfer Requests
  Inventory Turnover
  Outbound Inventory Value
  Inbound Inventory Value
  Inventory Value
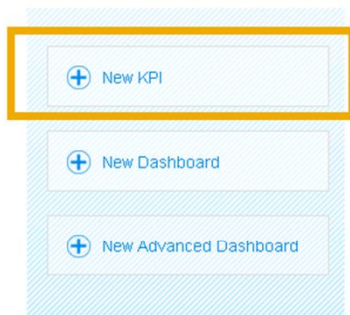 Total Purchase vs. Goods Return for Last 6 Months

OK   Cancel   Schedule   Create Report   New Stored Procedure   Remove

Execute   Cancel   Reverse Tab

When looking at a delivered KPI or a KPI that was designed by someone else, you may want to understand better what lies behind the calculation of the measure. In these cases, it is helpful to look at the definition of the data source.

In the case of queries, this is quite easy. The name of the data source is listed in the *Value Settings* tab.

Open the Query Manager using the menu path shown in the graphic. In the *Query Manager*, open the appropriate category. In this case, the Outbound Inventory Value is a System Query. When you open the query, you immediately see the query results, but you can also open the area above the results to see the query definition.

Creating a new KPI

New KPI

New Dashboard

New Advanced Dashboard

Process Steps for creating a simple KPI:

1. Choose *New KPI* in the Pervasive Analytics Designer.

2. Choose a query or view as the data source for the KPI.

3. Set the value settings for the KPI.

4. Define the display settings.

5. Save the KPI.
   Then authorized users can add the KPI to their cockpits.

Here are the process steps for creating a simple KPI.

You begin in the *Pervasive Analytics Designer* and choose the object you wish to create, in this case, you choose *New KPI*.

You choose a query or view as the data source for the KPI.

Set the value settings for the KPI.

Define the display settings.

Once you have saved the KPI, authorized users can add it to their cockpits.

There are additional options you can add to creating a KPI, such as adding filters or parameters, basing a KPI on another KPI or adding the ability to open an advanced dashboard from the KPI widget. We will discuss them later in this course.

Example A – Create Simple KPI

- **The manager wants a KPI to measure the number of overdue deliveries each month.**

- **A full bonus will be based on achieving 1 or fewer overdue deliveries per month.**

- **A partial bonus will be based on achieving a range of 2 to 5 overdue deliveries.**

For our first example, we will look at a simple KPI that measures how many overdue deliveries occur each month.

The manager at OEC Computers wants a KPI to measure the number of overdue deliveries each month. Employees will receive a full bonus based on achieving 1 or fewer overdue deliveries per month. Employees receive a partial bonus if the company achieves a total of 2 to 5 overdue deliveries.

We will go through the steps to create the KPI to fulfill this business need.

Choose Query or View for KPI Basis

- Once you determine the statistic to measure, choose a query or view.
- In our example, we use a query that compares actual delivery dates to expected delivery dates.
- Although the query does not specify a count or a month, these will be available in the Pervasive Analytics Designer.

```
SELECT DAYS_BETWEEN (T2."DocDueDate",
 T3."DocDueDate") "DAYS OVER",
T2."DocNum" AS "Sales Ord",
T2."DocDueDate" AS "Exp Del Date",
T3."DocNum" AS "Del Num",
T3."DocDueDate" AS "Del Date"
FROM RDR1 T0 LEFT OUTER JOIN DLN1 T1
ON T1."BaseType" = 17
AND T0."DocEntry" = T1."BaseEntry"
AND T0."LineNum" = T1."BaseLine"
AND T0."ItemCode" = T1."ItemCode"
LEFT OUTER JOIN ORDR T2 ON T0."DocEntry" =
 T2."DocEntry"
LEFT OUTER JOIN ODLN T3 ON T1."DocEntry" =
 T3."DocEntry"
WHERE (T2."DocType" = 'I' and DAYS_BETWEEN
(T2."DocDueDate", T3."DocDueDate") >=2)
```

Once you have determined what business statistic you wish to measure, you need to find or create a query or view that allows you to measure the business statistic.

For our business example, we will use a query that compares delivery dates on Delivery Notes to the base Sales Order's original expected delivery date.

This query contains more information than we need for our KPI. All we will need from this query is a count of the number of sales orders that were not delivered on time and the ability to determine the month in which we originally expected the delivery.

Although the query does not specify a measure for count and a value for month, these will be available in the *Pervasive Analytics Designer*. The count will be determined from the number of sales orders returned and the month will be extracted from the expected due date on the sales orders.

Value Settings – Set KPI Value

After giving your KPI a name and description, the first step is to set the KPI value by choosing the base measure and dimension from your query.

Find your query or view in the list of queries and views. When you open a query, you will see all the measures and dimensions available from that query.

Drag a measure over to the *Set KPI Value* area. In this business example, we have chosen a count for the number of overdue deliveries. The next step is to define the appropriate unit for that measure. In this case, the count is not a currency, percent or day so we choose none. The display area then shows up all the overdue deliveries in our database regardless of time period. That is why we see 422 on the right.

To narrow down the time period for the KPI, we choose a date dimension. In this business example, we want to measure the number of overdue deliveries per month based on the expected delivery date of the sales order. We drag over that time dimension and then choose This Month from the dropdown. Now the display on the right shows us the number 2, reflecting the total for this month so far.

Value Settings – Set Goal and Trend

Value Settings Filter and Parameter Composite KPI

Overdue Deliveries | Overdue Deliveries This Mo

Set KPI Value

Count ✕ | Exp Del Date ✕
| This Month ▾

Unit None ▾
From Data Source *Delivery_Status*

Set KPI Goal Advanced Goal
Number of Overdue Deliveries This Month
1

Set KPI Trend Advanced Trend
Month-On-Month Basis ▾

☐ Interim
☑ Smaller Value is Better

Next step is to specify:

- when we reach the goal, and
- how we know if values are trending toward the goal.

Goals and Trends:

1 or fewer overdue deliveries

Compare to last month

Smaller is better

As we set values, the display changes

Overdue Deliveries

▲ 2

06/2014 ↘ -60%

Status Displaying Action (0)

Once we have made settings to determine how the KPI value is determined, we need to specify when we reach our goal and how we know if we are making progress towards our goal.
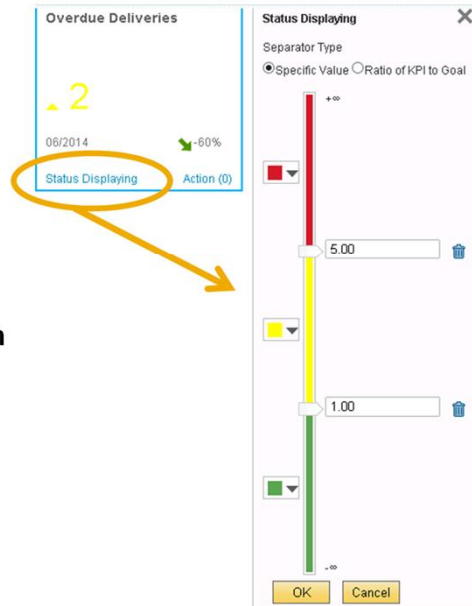
In this business example, we want to achieve a goal of 1 or fewer overdue deliveries each month. Therefore, we enter a description for this goal and a value of 1. Because the number of overdue deliveries this month is already higher than 1, we see the value of 2 appear in red in the display.

We could measure the monthly goal in relationship to last year, but in our case, we want to measure progress as compared to last month. Therefore we choose *Month-On-Month Basis* in the *Set KPI Trend* area. The trend shows a 60% reduction in overdue deliveries compared to last month.

In most cases, a larger value is positive, but since our goal is reduce overdue deliveries, we flag the checkbox *Smaller Value is Better*. After we mark this checkbox, we now see that the trend arrow is green instead of red.

Define Display Color Settings

- **We can control display colors in the Status Displaying window.**

- **Click on Status Displaying in the KPI display to open the window.**

- **Use the dropdown boxes to change colors for each range.**

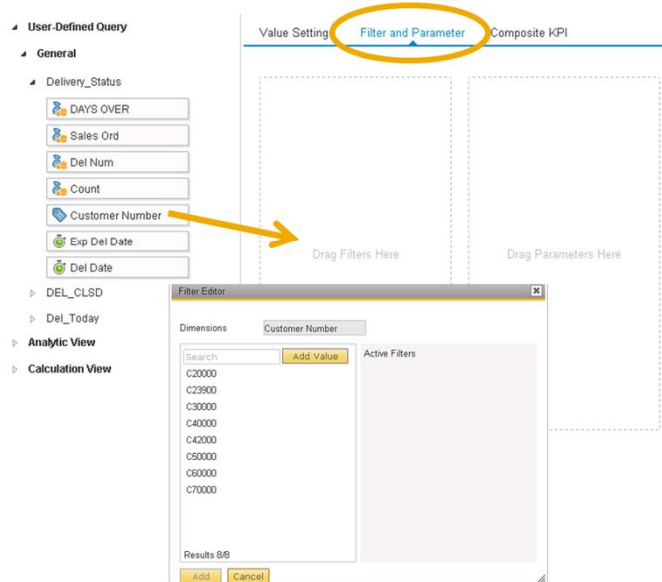- **Enter a value for the threshold of each range.**

We saw how the choices made in the KPI definition change the display of the KPI. We can control the display colors in the *Status Displaying* window.

Previously, the value "2" appeared in red. Our target for the KPI is 1, but we have stated employees will receive a partial bonus as long our company does not exceed 5 overdue deliveries per month. Therefore, we would like the values for 1 or less to appear in green, 2-5 to appear in yellow and 6 and above to appear in red.

We click on the words *Status Displaying* to open the window shown here on the right. We can use the color dropdowns to change the colors. The numbers entered on the boundaries of colors determine the threshold for each colored range shown in the display.

Option: Filters

- **You can filter on a dimension in your query or view**

- **For example, if we wanted to track only overdue deliveries for a top customer…**
  - We add customer code to our query
  - Then drag the customer number dimension to the filter
  - Choose the value in the *Filter Editor*

There are additional options available for KPIs. One of these is the ability to filter.

For example, we might wish to design a KPI that tracks if overdue deliveries occur for one of our top customers.

If the customer dimension is in our query, then we can create a filter for a specific customer.

To filter, open the *Filter and Parameter* tab in the KPI. Drag a dimension to the filter box. The *Filter Editor* window appears so that you can choose a value for your filter.

In this window, you can also add parameters and specify a default value for each parameter. We will see how parameters can be used to set a date range later in the course when we discuss a financial KPI that calculates a value accumulated from the beginning of the month to the current date.

Example B – Create Composite KPI

- **A KPI that is based on another KPI is called a Composite KPI.**
- **In our second example, we create a composite KPI to measure progress towards reducing the percentage of sales returns.**

A KPI that is based on another KPI is called a Composite KPI.

This type of KPI can be used to reverse the value of KPI (for example displaying a negative expense value as a positive value) or for calculating the difference between two KPIs such as Sales Amount and Sales Returns.

In our second business example, we will see how to create a composite KPI to calculate and measure company progress towards reducing the percentage of sales that are returned.

Composite KPIs

On the *Composite KPI* tab, you can choose one or more base KPIs and write an expression to calculate the value you wish to measure.

No need to specify a measure on the *Value Settings* tab.

1. Drag a base KPI from the list into the *Variables* box.

2. Then write an expression to calculate the value you wish to measure.

| | Value Settings | Filter and Parameter | Composite KPI |

Gross Profit
Operating Cost
Expense 1
Expense 2
Operating Income
Net Profit
Net Profit Margin
Operating Margin
Cash Ratio (By Pro...
ROE
Net Cash Flow
Payables Overdue
Total Sales Amount
Sales Return Amoun...
Total Receivable A

Variables

Total Sales Amount   as   K01   ✕
Sales Return Amoun... as   K02   ✕

1

The first KPI we drag over is K01, the second K02, and so on.

2

Expression = K02/K01

Composite KPIs are easy to create.

On the *Composite KPI* tab, you can choose one or more base KPIs and then write an expression to calculate the value you wish to measure.

Unlike regular KPIs, there is no need to specify a measure on the *Value Settings* tab. Instead, you open the *Composite KPI* tab and choose a base KPI to drag into the variables box. Then you write an expression that calculates the value you wish to measure in your KPI.

For example, to create a KPI that measures the percentage of sales that are returned, we choose the predefined KPI for Total Sales Amount and the predefined KPI for Sales Returns Amount and drag them both into the *Variables* box. The first KPI we drag over is labeled by the system as K01. The second interim KPI becomes K02. We see this in step 1 in the graphic.

Then in step 2, we divide the Sales Returns Amount KPI by the Total Sales Amount KPI to get the percentage. We write the expression as K02 over K01.

Value Settings for Composite KPIs

Value Settings	Filter and Parameter	Composite KPI

Returns Percentage | Percentage of Sales that a

Set KPI Value

Drag Value Here | ⏱ #[948.7] ✕
This Year ▾

1 Unit Percent ▾ **2**
From Data Source *Sales Return Amount*

Set KPI Goal Advanced Goal
3 Returns Percentage of 1%
1

Set KPI Trend Advanced Trend
4 Year-Over-Year Basis ▾

☐ Interim **5**
☑ Smaller Value is Better

For our Composite KPI example:

1. **We set the KPI unit to percent.**

2. **We set the Time Dimension to This Year.**

3. **We set a target of 1% for this year.**

4. **We set the KPI Trend to compare this year to last year.**

5. **We could set the original KPI as interim so that it is not available in a cockpit.**

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After adding the KPI and expression on the *Composite* tab, we still have all the usual options for value settings, filters and displays.

Since we created a composite KPI to calculate a percentage, we need to set the unit to percentage on the *Value Settings* tab because the default is currency.

We set our KPI to measure returns for this year as compared to last year by choosing the time dimension and the KPI trend value.

We set a target of 1% for this year.

We set the KPI trend to compare this year to last year.

In our example, we will still be using the two base KPIs. However, if the original KPI was only created as a step towards building the final KPI, you have the option on the *Value Settings* tab to mark the original KPI as an interim KPI if you no longer wish the base KPI to be available for use in the cockpit.

Example C – Financial KPIs

- **The sales manager has set a target of 25000 in net sales each month**

- **He would like to use the predefined KPI for net sales revenue to monitor progress**

- **The KPI for net sales revenue looks like it will meet his needs because the KPI:**
    - Uses the current values in the profit and loss accounts for gross sales and sales discounts
    - Calculates net sales revenue for the month to date
    - Compares the revenue to the previous month

Net Sales Revenue

▲ 29.95K GBP

07/08/2014 ↗ 729%

Status Displaying   Action (0)

In this business example we will look at financial KPIs.

The sales manager has set a target for sales revenue each month. He would like to use the predefined KPI for net sales revenue to monitor his company's progress.

The KPI for net sales revenue looks like it will meet his needs because it uses the current values in the profit and loss accounts for gross sales and sales discounts to calculate net sales revenue for the month to date and compares the revenue to the previous month.

Financial KPI Definition

Value Settings   Filter and Parameter   Composite KPI

Net Sales Revenue   The Total Net Sales Reven

Set KPI Value

Amount (Local C... ✕   Drag Date Dimension Here

Sum

Unit   Currency

From Data Source: *KPI Profit and Loss Query*

Set KPI Goal   Advanced Goal

The target value of this month

25000

Set KPI Trend   Advanced Trend

Month-on-Month Basis

☐ Interim
☐ Smaller Value is Better

- The KPI for Net Sales Revenue (shown here) is based on a calculation view called *KPI Profit and Loss Query*

- This calculation view is used as the data source for multiple financial KPIs

- Because of this, financial KPIs use additional elements to specify the accounts used for each KPI.

In this example, we will look at the predefined Net Sales Revenue KPI to understand how financial KPIs are structured.
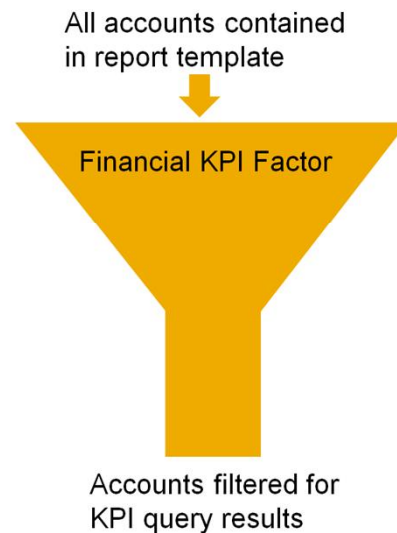
To explain how this works we will use the example of a predefined KPI for Net Sales Revenue. The KPI for Net Sales Revenue is based on the calculation view called *KPI Profit and Loss Query.*

This calculation view is used as the data source for multiple financial KPIs. Because of this financial KPIs use additional elements to specify the accounts used to calculate the results of each KPI.

Elements in Financial KPIs

A financial KPI definition includes:

- **A parameter that specifies a financial report template**

- **A filter to specify the accounts used to calculate the results. This filter is called a KPI Factor.**

All accounts contained in report template

Financial KPI Factor

Accounts filtered for KPI query results

Because of a financial KPI's connection to the general ledger, the KPI definition must include some additional elements we have not discussed previously.

A financial KPI definition always includes a parameter that links the KPI to a specific financial report template and a filter to specify the accounts used to calculate the results. The filter is called a Financial KPI factor.

In the following graphics we will see where KPI factors are set up and how they are used to specify the subset of accounts needed for a KPI.

Financial KPI Factors

- **28 predefined financial KPI factors**

- **Menu path:** *Administration > Setup > Financials > Financial KPI Factors*

#	Code	Name	Template Name	Template Item
11	011	(----)	Predefined BS Template for KPI	Capital and Reserves
12	012	(----)	Predefined PL Template for KPI	Turnover
13	013	(----)	Predefined PL Template for KPI	Gross Sales Revenue
14	014	(----)	Predefined PL Template for KPI	Sales Discounts
15	015	(----)	Predefined PL Template for KPI	Cost of Sales
16	016	(----)		
17	017	(----)	Predefined PL Template for KPI	Operating Costs
18	018	(----)		
19	019	(----)		
20	020	(----)		
21	021	(----)	Predefined PL Template for KPI	Tax on Profit/Loss on C
22	022	(----)	Predefined PL Template for KPI	Other Interest Receival
23	023	(----)	Predefined PL Template for KPI	Non-Operating Income
24	024	(----)	Predefined PL Template for KPI	Taxation and Extraordi
25	025	(----)	Predefined CF Template for KPI	Net Cash Flow from Op
26	026	(----)	Predefined CF Template for KPI	Net Cashflow from Inv
27	027	(----)	Predefined CF Template for KPI	Net Cashflow from Fina
28	028	(----)	Predefined CF Template for KPI	Net Cashflow
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- **Financial KPIs are used to specify which accounts will be used as the filters for the data source for the KPI values.**

- **Here we see the KPI factor number 12 that is used in the Net Sales Revenue KPI to specify the accounts that will provide the data for the KPI value.**

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Just as we have predefined KPIs, we also have predefined financial KPI factors to associate the KPIs with related accounts in the general ledger.

There are 28 predefined financial KPI factors and you can view them in the *Administration module*.

Financial KPIs are used to specify which accounts will be used as the filters on the calculation view data source for KPI values.

In this list we see the KPI factor number 12 that is used in the Net Sales Revenue KPI to specify the accounts in the report template that will provide the data for the KPI value.

You also have the option to create new financial KPI factors in this window.

Linking a KPI Factor to a Template

- The financial KPI factor is linked to an item in a financial report template
- KPI Factor 17 is linked to Operating Costs accounts in the template.

The financial KPI factor is linked to an item (an account or a level representing a group of accounts) in a financial report template.

Here we see the configuration behind the Net Sales Revenue KPI. In this predefined KPI, the KPI Factor number 12 is linked to a level representing the Turnover accounts in the predefined report template for Profit and Loss for KPI for the British chart of accounts. This level includes all the accounts needed to calculate net sales revenue. It includes gross sales revenue accounts and sales discount accounts.

If you create your own financial KPI, you would need to create these links yourself. You have the ability to use these elements to customize your own financial KPIs.

KPI Factor and Template in KPI Definition

- **Here we see the *Filter and Parameter* tab for the Net Sales Revenue KPI**

- **The KPI Factor dimension is set as a filter to enable the KPI to retrieve data from the report template**

- **Parameters tell the KPI the data range and financial report template to use**

Value Settings   Filter and Parameter   Composite KPI

KPI Factor Internal ... ✕
012

KPI Factor Internal Key dimension as a filter

P_FromDate ✕
From Beginning of This Month

P_ToDate ✕
Current Date

P_TemplateInternalKe... ✕
Default -97

Parameters to set the date range and template internal key

From Data Source: *KPI Profit and Loss Query*

Here we see how the KPI factor and the report template are linked to the definition of the KPI.

This is *Filter and Parameter* tab for the Net Sales Revenue KPI.

When you use predefined financial KPIs, you will see a filter called either *KPI Factor Internal Key* or *KPI Factor Name* already set up in the *Filter and Parameter* tab. In this example, a KPI Factor Internal Key called KPI Factor 012 has already been set as the filter. The filter is used in conjunction with the parameter specifying the report template to tell the query exactly which accounts to use. In this case, they narrow the results to those for net sales revenue.

On the right we also see two parameters that tell the KPI to calculate the results for the current month up to the current date. The first parameter specifies that the beginning date of the date range will be the beginning of the month. And the second parameter specifies the current date to be the end of the date range.

When you create a new financial KPI, you will need to set up the filters and parameters that enable the KPI to pull the data from the financial report template item that is linked to the KPI.

Steps for Creating New Financial KPIs

1. Add a new KPI factor to link to source accounts.

2. Open the appropriate Financial Report template.

3. Choose the account or account group that will be the source for data in the KPI.

4. Enter the KPI factor in the *Factor* field in the report template.

5. Create your new KPI in the Pervasive Analytics Designer. Choose the financial calculation view associated with the Financial Report template as the source.

6. Enter the KPI factor name as a filter and choose the appropriate KPI factor.

7. Set Start and End dates by dragging these measures from the view to the parameters box.

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If you wish to create a new financial KPI based on your own selection of accounts rather than using the predefined KPI factors, here are the steps.

1. Add a new KPI factor to link to source accounts in the *Financial KPI Factor – Setup* window.

2. Open the appropriate Financial Report template.

3. Choose the account or account group that will be the source for data in the KPI.

4. Enter the KPI factor in the *Factor* field in the report template.

5. Create your new KPI in the Pervasive Analytics Designer. Choose the financial calculation view or query associated with the Financial Report template as the source.

6. Enter the KPI factor name as a filter and choose the appropriate KPI factor.

7. Set Start and End dates by dragging these measures from the view to the parameters box.

Summary

- KPIs measure progress towards a goal with quantifiable measures and trend analysis.
- SAP provides prebuilt KPIs but you can design your own in the Pervasive Analytics Designer.
- You can base KPIs on three types of data sources: analytic views, calculation views or user-defined queries.
- You can choose a measure and dimension from a data source as the basis of the query.
- In the KPI definition, you can set goals, trends, filters, parameters, and display colors.
- A composite KPI is a KPI based on an expression containing one or more KPIs.
- Financial KPIs use KPI factors to specify the financial accounts used in calculating KPIs.

Here are some key points about this topic:

- KPIs measure progress towards a goal with quantifiable measures and trend analysis.
- SAP provides prebuilt KPIs but you can design your own in the Pervasive Analytics Designer.
- You can base KPIs on three types of data sources: analytic views, calculation views or user-defined queries.
- You can choose a measure and dimension from a data source as the basis of the query.
- In the KPI definition, you can set goals, trends, filters, parameters, and display colors.
- A composite KPI is a KPI based on an expression containing one or more KPIs.
- Financial KPIs use KPI factors to specify the financial accounts used in calculating KPIs.

Related Information

For more information on creating KPIs:
- How to Work with Pervasive Analytics

For information using KPI widgets in a cockpit:
- Role-Based Cockpit
- How to Guide: Working with the Fiori-style Cockpit

To learn how to create an advanced dashboard that contains KPI widgets:
- Create an Advanced Dashboard

For more information on KPIs, see the section on key performance indicators in the how-to-guide *How to Work with Pervasive Analytics.*
More information on adding widgets to a cockpit is available in the delta course topic for the *Role-Based Cockpit* and in the how-to-guide *Working with the Fiori-style Cockpit.*
To learn how to create an advanced dashboard that contains KPI widgets, view the delta course topic: *Create an Advanced Dashboard.*

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Thank you

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Thank you for your time.