

# How to...

## Enhance the Standard Web Query Template

BUSINESS INFORMATION WAREHOUSE



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### ASAP “How to...” Paper



**Applicable Releases: BW 3.0B SP 14**

**BW 3.0B Frontend Patch 8**

**June 2003**

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# 1 Business Scenario

When you display a query on the Web, the query is embedded automatically into a standard web query template. The query is displayed on the web in a table with a navigation block. The name of the query appears as the title. The most commonly used functions are accessed from a toolbar that is embedded automatically. The navigation options are also available in the navigation block and in the context menu.

Your reporting end users would like to have the toolbar included in their web templates as well.

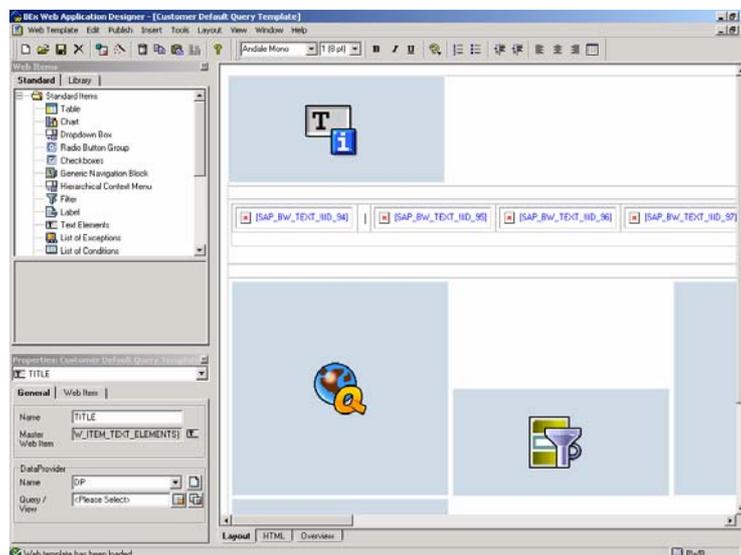


They would like to modify the standard web query template to include customer-specific graphics and toolbar functions, and then set this template as the new default web query template.

Additionally, you would like to customize the general template properties as well as the context menu of a web template, and then use these settings as the default web template attributes.

# 2 The Result

In this "How to..." paper we will show how you can upload a new web template (ZQUERY\_TEMPLATE.htm) to the BEx Web Application Designer. This file contains the same features delivered in the standard web template (OQuery\_Template) including the toolbar, however the code has been modified to enable it to be opened and modified in the BEx Web Application Designer.

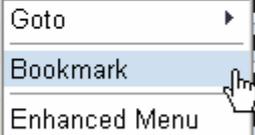


Examples of enhancing the web template include adding pictures, changing chart types, and modifying the toolbar. This new customized web template then can be set as the standard web template in place of (OQuery\_Template), and we explain how this can be implemented.

Next, we will explain how you can maintain the general template properties as well as the context menu of a web template, and then use these settings as the default web template attributes. The steps necessary to set this up are also provided including how to use Libraries. For example, the context menu by default does not display the property Bookmark with Data, however you would like that to be in the basic menu by default for all web templates.

**Standard Context Menu**

Number of ordered items	Incoming orders quantity	SU - Cost
6.000	205 PC	489,779.00 CAD
2.000	49 PC	123,480.00 CAD
5.000	352 PC	808,139.00 CAD
5.000	101 PC	254,520.00 CAD
30.000		
14.000		
9.000	1	
34.000	1	
7.000	5,223 PC	5,518,859.00 CAD
3.000	5,123 PC	5,292,899.00 CAD
5.000	346 PC	793,019.00 CAD



**Context Menu based on the default standard template attributes setting**

Number of ordered items	Incoming orders quantity	SU - Cost
6.000	205 PC	489,779.00 CAD
2.000	49 PC	123,480.00 CAD
5.000	352 PC	808,139.00 CAD
5.000		
30.000		
14.000		
9.000		
34.000		
7.000	5,223 PC	5,518,859.00 CAD
3.000	5,123 PC	5,292,899.00 CAD
5.000	346 PC	793,019.00 CAD



### 3 Background

When you display a query on the Web, this query is embedded automatically into a standard Web template. In this case, the query is the Data Provider for the standard Web template and is transferred as a parameter in the URL: myProtocol://myAppServer:myPort/sap/bw/BEx?sap-language=myLanguage&bsplanguage= myLanguage&CMD=LDOC&INFOCUBE= <InfoProvider Name>&QUERY=<Query Name>

In the Standard Web template, the query is displayed in a table with a navigation block. The name of the query appears as the title. You can access the most useful functions and other forms of display (including various diagram types) from a symbol bar.

You set up the standard Web template in the SAP Reference IMG → *Business Information Warehouse* → *Reporting-relevant Settings* → *Web-based Settings* → *Determine Standard Web Template*. The *0Query\_Template* is the default standard Web template.

You can use this Web template as the template, change the HTML and then set your new Web template as the standard Web template in the SAP Reference IMG.



The *0Query\_Template* is currently delivered as Technical Content and not Business Content. This means that there is only an 'A' version of this object delivered, and no 'D' version. Even though there are no plans to deliver another version of this template, any changes you make could be overwritten and there is no way to revert back to the original version. Additionally, if there are problems with Web Applications in your system and SAP Support needs to check your system, the *0Query\_Template* is used for debugging purposes. Therefore, customers **should never change 0Query\_Template**; instead you should make a copy of it and work with the copied version.

Note: Since the standard Web template contains highly dynamic parts, technical factors prevent you from being able to edit it in the Web Application Designer. You can use any HTML Editor instead.

This How-To provides a new template containing the *0Query\_Template* properties and features, which can be edited in the Web Application Designer.

## 4 Preliminary Steps

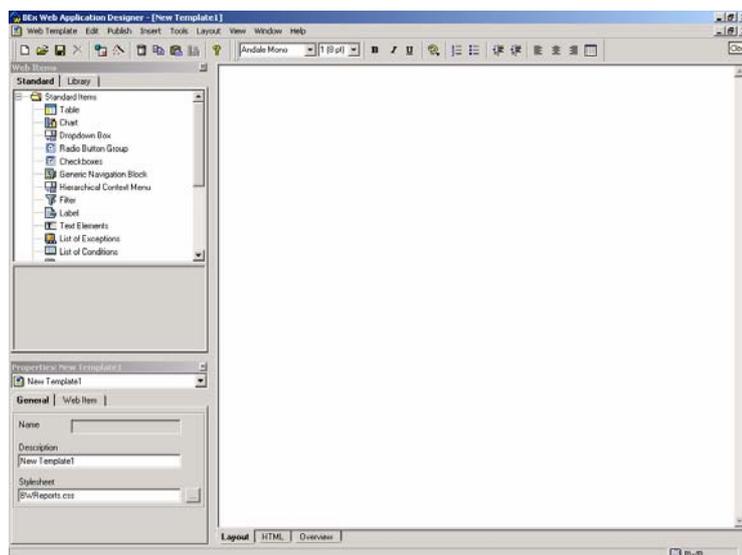
Before you can implement the solution described in section 5 you have to apply BW 3.0B Frontend Patch 8 (or higher) to the Web Application developer's pc. We recommend that you have the corresponding Support Package (BW 3.0B SP14 / BW 3.1 Content SP8) or higher applied to the BW system as well. Additionally, you have to export the file (*ZQUERY\_TEMPLATE.htm*) that is distributed with this "How To..." paper to the Web Application developer's pc, network directory, etc. in order for the BEx Web Application Designer to upload it to the BW server. This is a one-time configuration step, and is valid system-wide if needed.

## 5 The Step By Step Solution

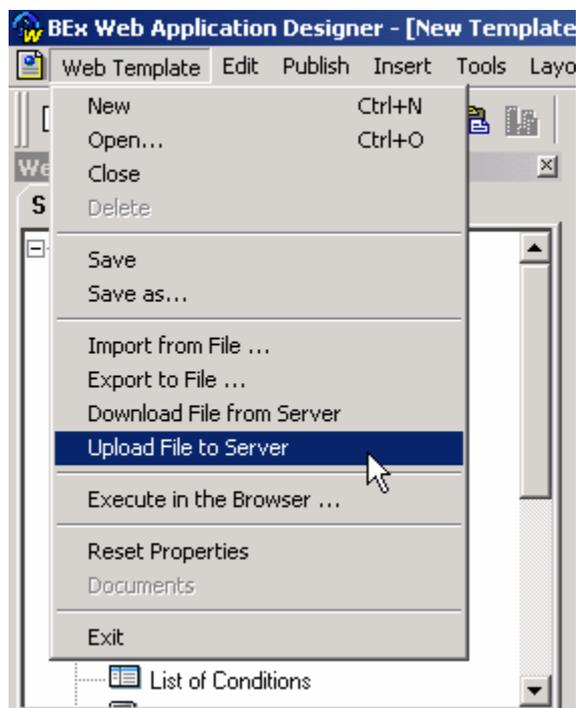
### 5.1 Upload the new web template (ZQUERY\_TEMPLATE.htm) to the BW server using the Web Application Designer

1. Load the new template to the BW server. Open the BEx Web Application Designer.

Note: This is typically done by choosing *Start -> Programs -> Business Explorer -> Web Application Designer*.



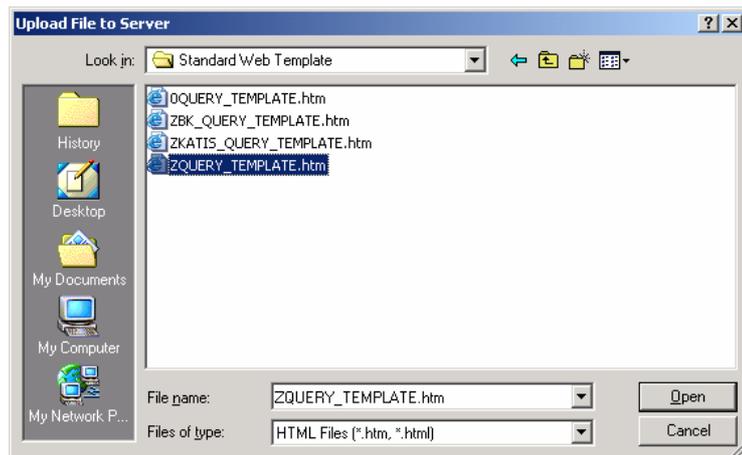
2. From the menu, select *Web Template -> Upload File to Server*.



3. Find the location of the file *ZQUERY\_TEMPLATE.htm*.

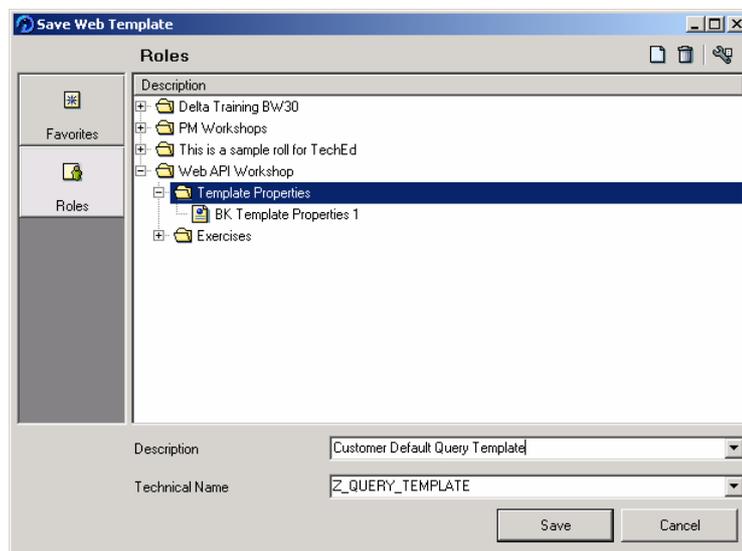
**See preliminary steps.**

Select the file and then choose Open.



4. Save the Web Template. Choose Favorites or Roles, and then select the location where you would like to save the web template. Give the web template a Description and Technical Name, for example *Customer Default Query Template (Z\_QUERY\_TEMPLATE)*. Then choose Save.

Note: In this example, we want to have the web template accessible by other Web Application developers, so we will include this in a Role rather than in Favorites.

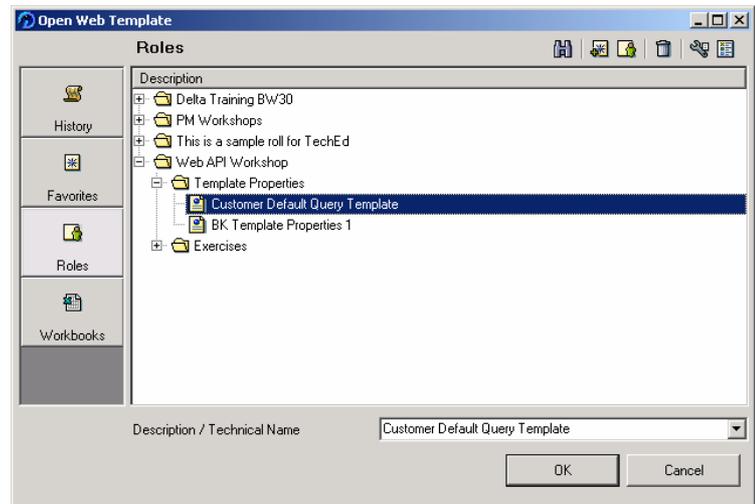


5. If the upload was successful, you will receive a message at the bottom of the screen in the Web Application Designer.

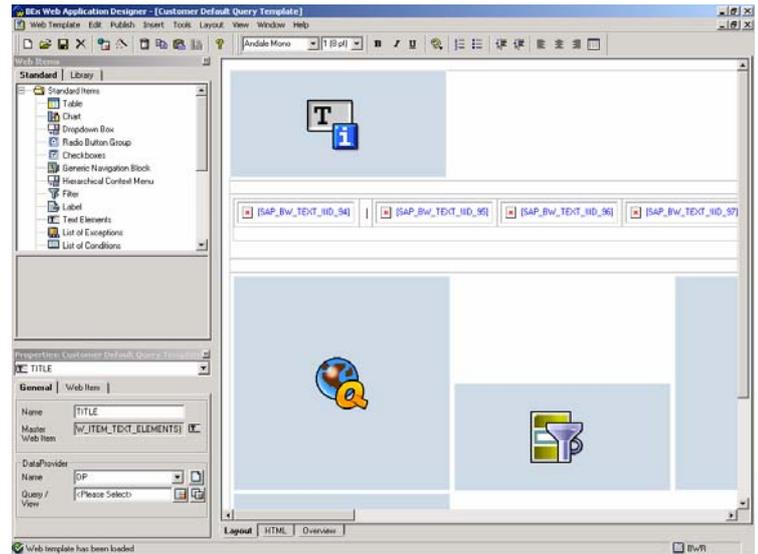
 Web template was loaded to the server as a file

### 5.2 Modifying the web template with the Web Application Designer

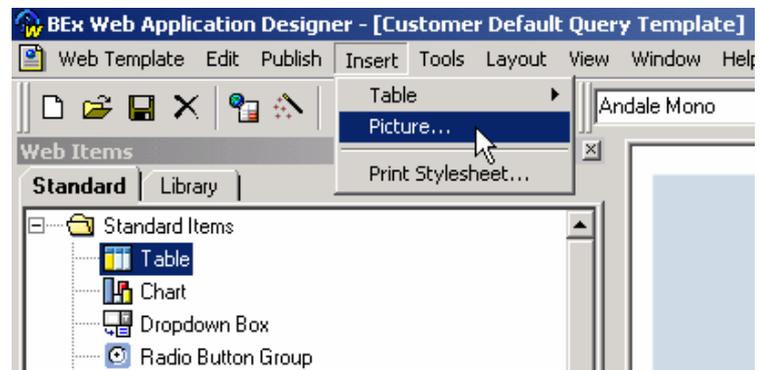
1. From the menu, select *Web Template - > Open*. Then choose Roles in the dialog box. Highlight the web template you uploaded to the server (*Customer Default Query Template*), and then choose OK.



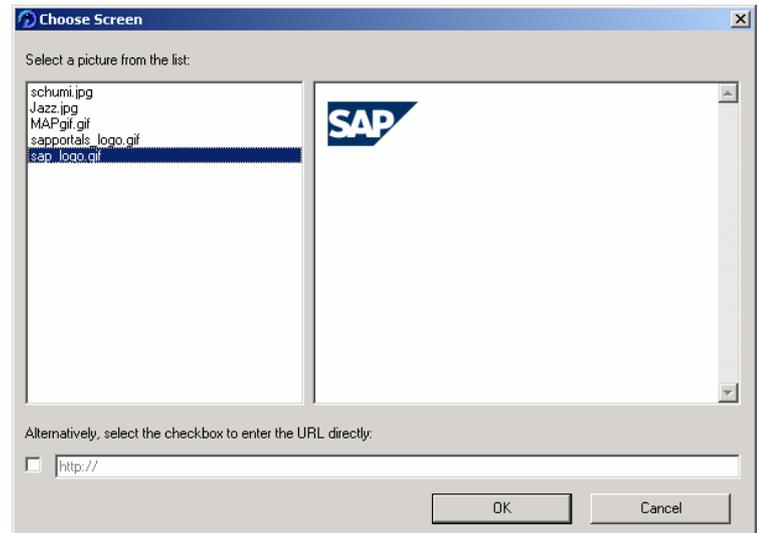
- The layout of the web template is now displayed.



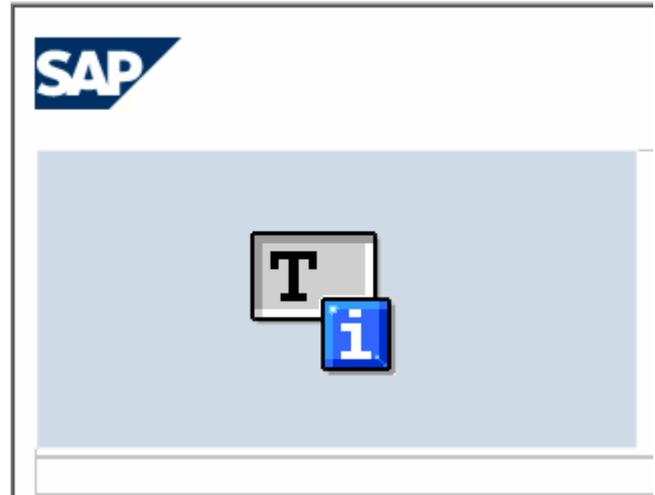
- Enhance the web template. Insert a picture at the top of the page. From the menu, choose Insert -> Picture...  
Note: For additional examples on enhancing the web template see the Appendix.



- Select a picture from the list. Then OK.

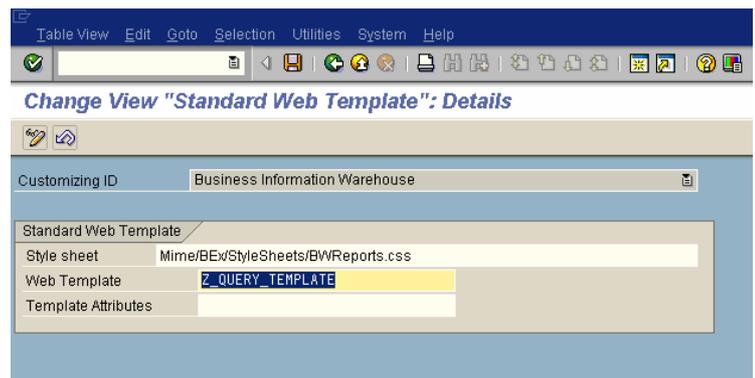


5. The picture that you selected should be visible on the Layout tab. Save the web template.

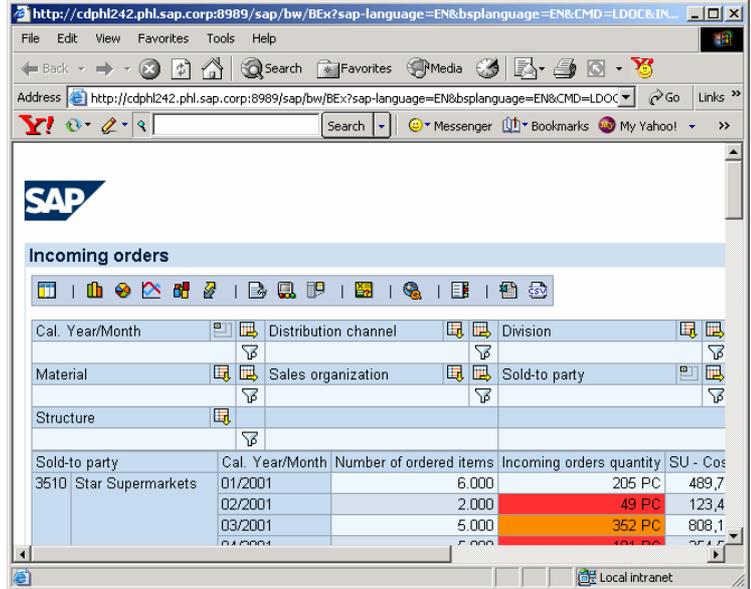


### 5.3 Set the new web template (Z\_QUERY\_TEMPLATE) as the standard web template

1. In the BW system, go to transaction SPRO -> SAP Reference IMG -> Business Information Warehouse -> Reporting-relevant Settings -> Web-Based Settings -> Determine Settings for Web Templates. Maintain the setting for Web Template. Enter the technical name for the web template that was created in the previous step (Z\_QUERY\_TEMPLATE). Save the change.



2. Create a new query or execute an existing query to verify that the Z\_QUERY\_TEMPLATE is being used.

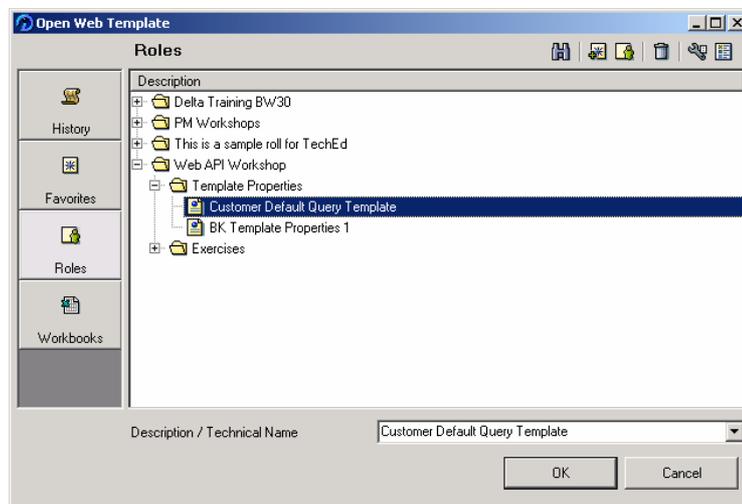


The screenshot shows a web browser window displaying the SAP Web Query interface. The browser's address bar shows the URL: <http://cdphl242.phl.sap.corp:8989/sap/bw/BEx?sap-language=EN&bsplanguage=EN&CMD=LDOC&IN...>. The page title is "Incoming orders". The interface includes a toolbar with various icons and a data table. The table has columns for "Sold-to party", "Cal. Year/Month", "Number of ordered items", "Incoming orders quantity", and "SU - Cos". The data is as follows:

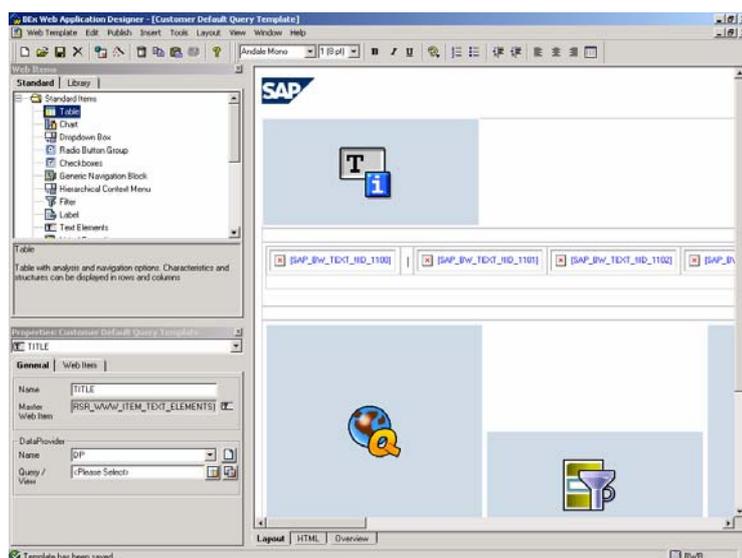
Sold-to party	Cal. Year/Month	Number of ordered items	Incoming orders quantity	SU - Cos
3510 Star Supermarkets	01/2001	6.000	205 PC	489,7
	02/2001	2.000	49 PC	123,4
	03/2001	5.000	352 PC	808,1
	04/2001	5.000	484 PC	251,7

## 5.4 Create a web template based on the new standard web template (Z\_QUERY\_TEMPLATE) in the Web Application Designer

1. From the menu, select *Web Template -> Open*. Then choose Roles in the dialog box. Highlight the web template you uploaded to the server, and then choose OK.

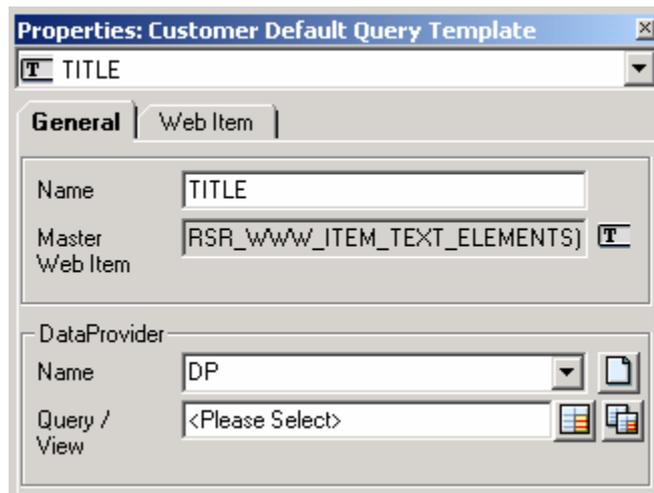


2. The layout of the updated web template is now displayed. You will need to assign a DataProvider, since one has not been assigned yet.

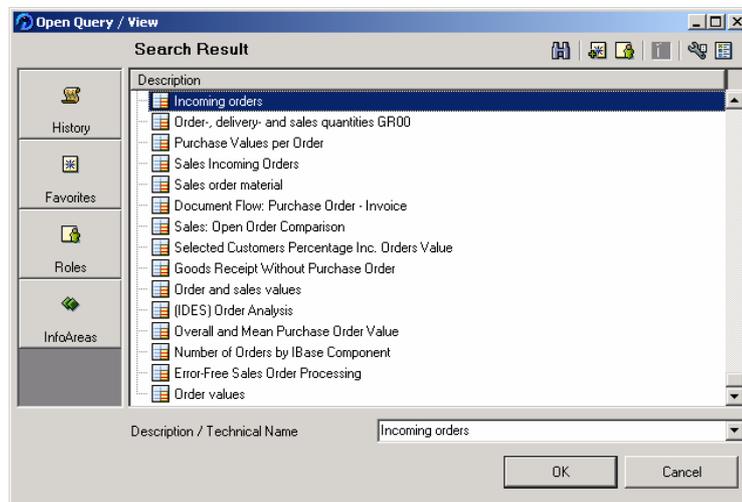


- In the Properties section, choose a web item, for example Text Elements (TITLE). On the General tab assign a DataProvider to the web item by selecting the icon for a Query or Query View.

Note: You only have to bind the DataProvider to one web item since all web items are bound to the DataProvider 'DP' by default. Do not change the name of the DataProvider unless you are very experienced with this tool.

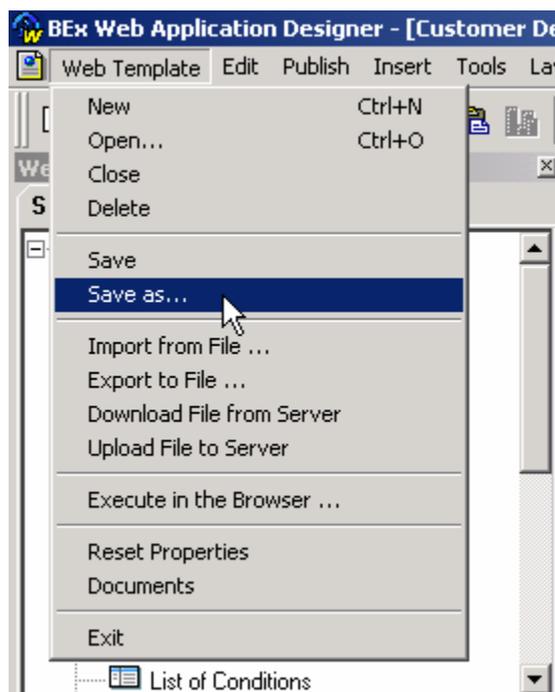


- Highlight the Query or Query View, and then OK.

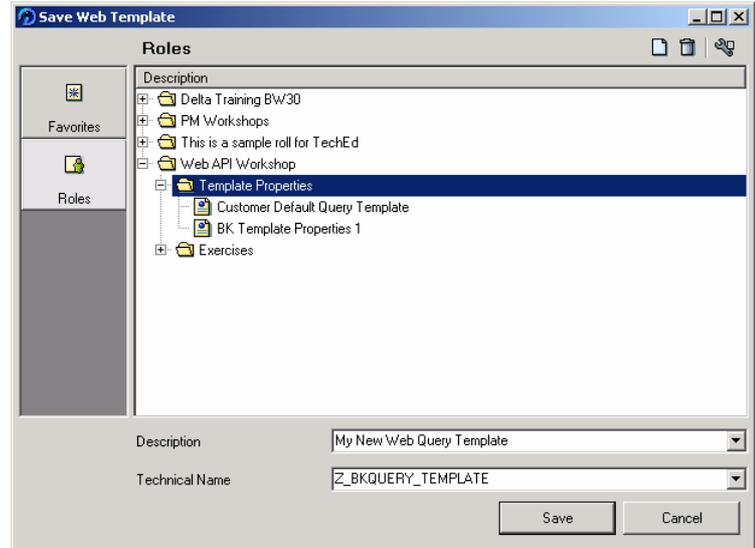


- Save this as a new web template. From the menu, select *Web Template -> Save as...*

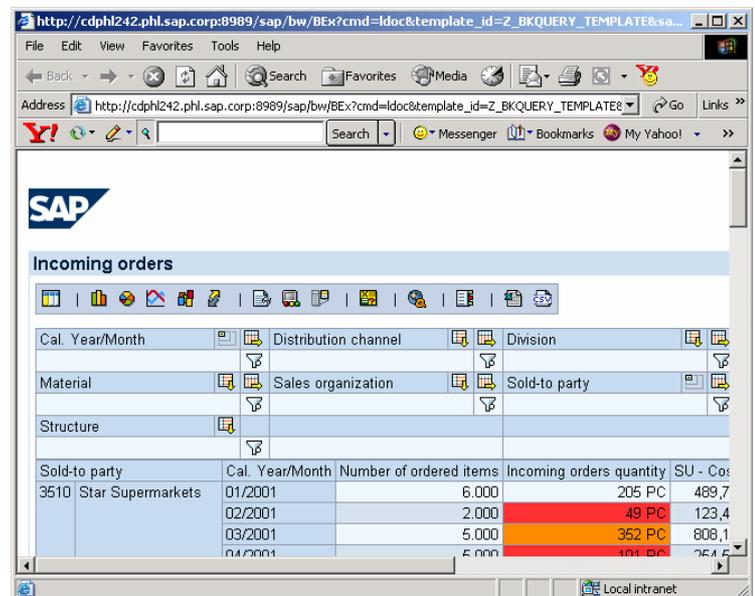
Note: The next section will discuss how to use Libraries, which is an option for inheriting web template properties by default for other web templates.



- Choose Favorites or Roles, and then select the location where you would like to save the web template. Give the web template a Description and Technical Name, for example *My New Web Query Template (Z\_BKQUERY\_TEMPLATE)*. Then choose Save.

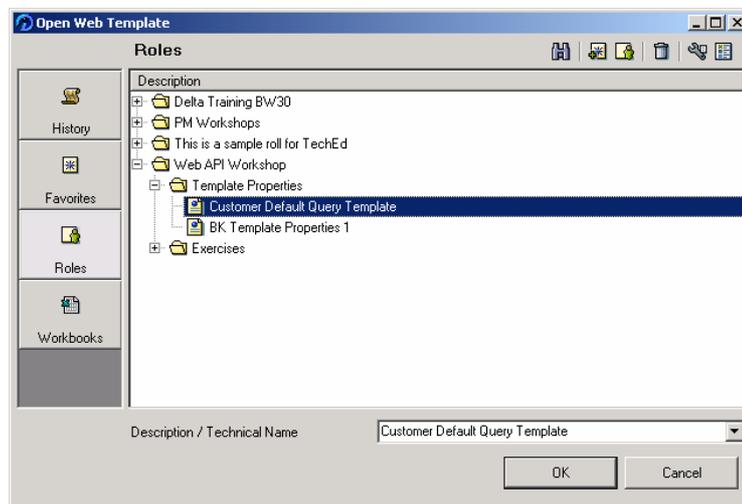


- Execute the web template in your browser. From the menu, select *Web Template -> Execute in the Browser...*

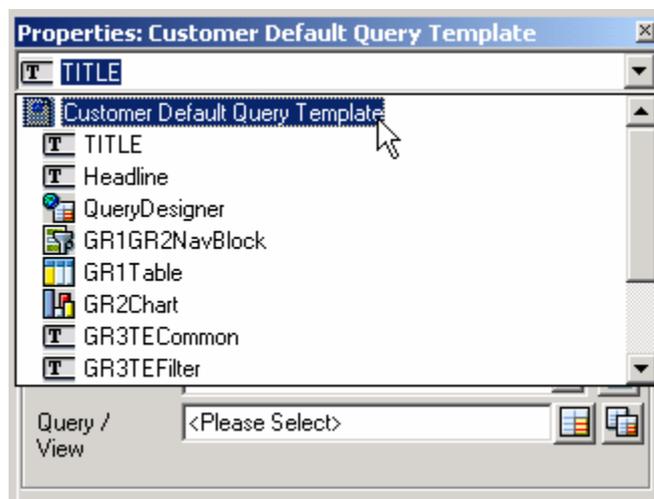


## 5.5 Using web template properties as the default standard template attributes

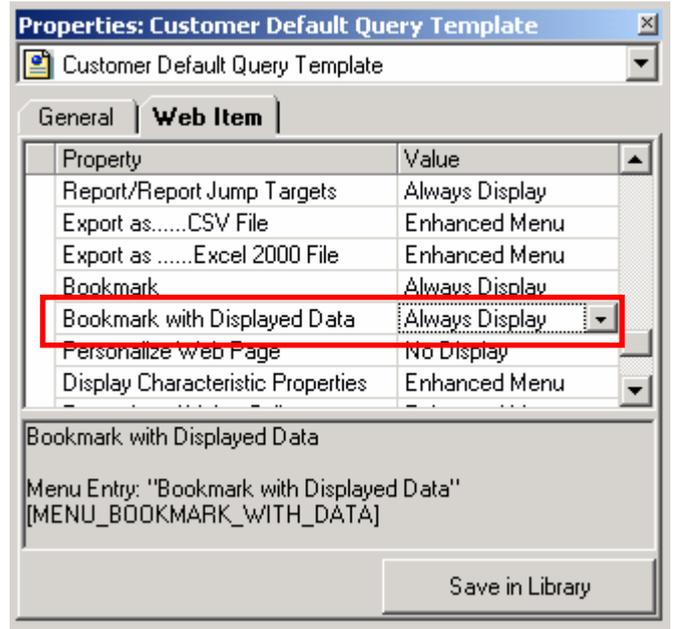
1. From the menu, select *Web Template - > Open*. Then choose *Roles* in the dialog box. Highlight the web template you uploaded to the server in section 5.1 step 4, *Customer Default Query Template (Z\_QUERY\_TEMPLATE)* and then choose *OK*.



2. In the Properties section, select the web template *Customer Default Query Template (Z\_QUERY\_TEMPLATE)*.

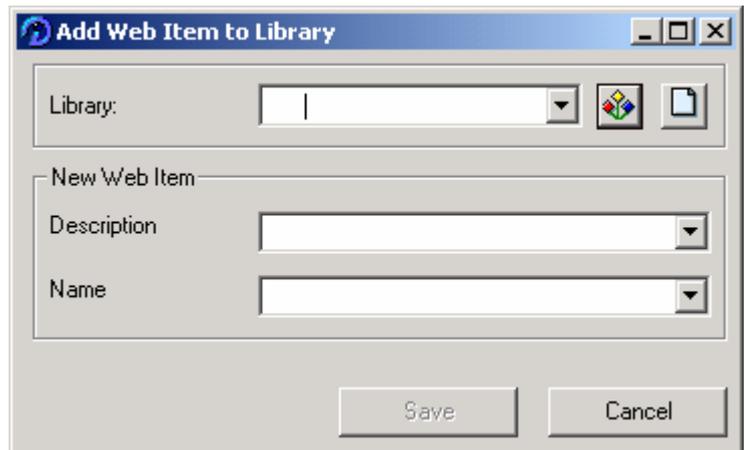


- Maintain the General Properties and Context Menu entries that you would like to use by default in your web templates. Choose the tab Web Item. Select the values for the various properties. For example, always display *Bookmark with Displayed Data*.

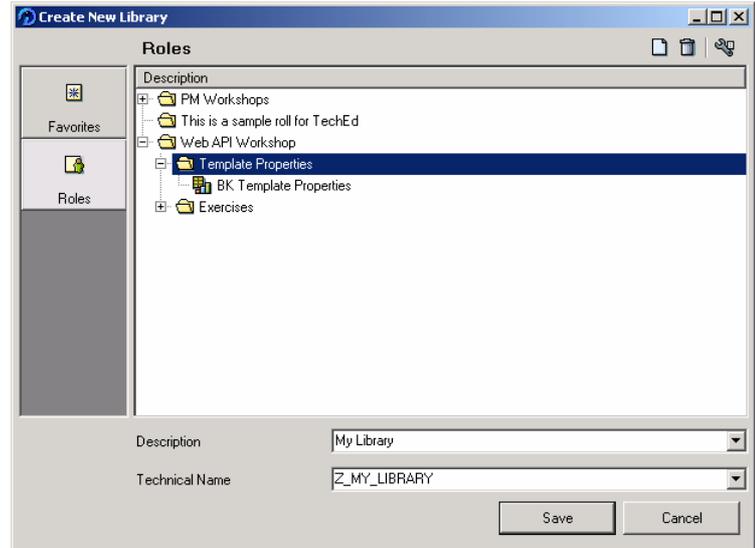


Then choose Save in Library.

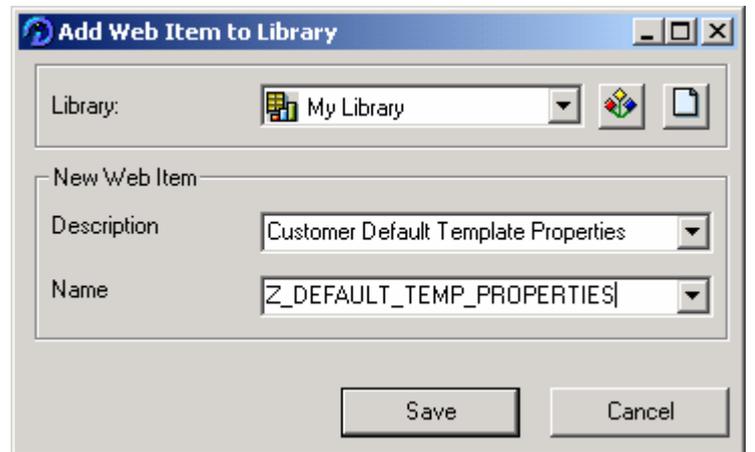
- Choose an existing Library or create a new one.



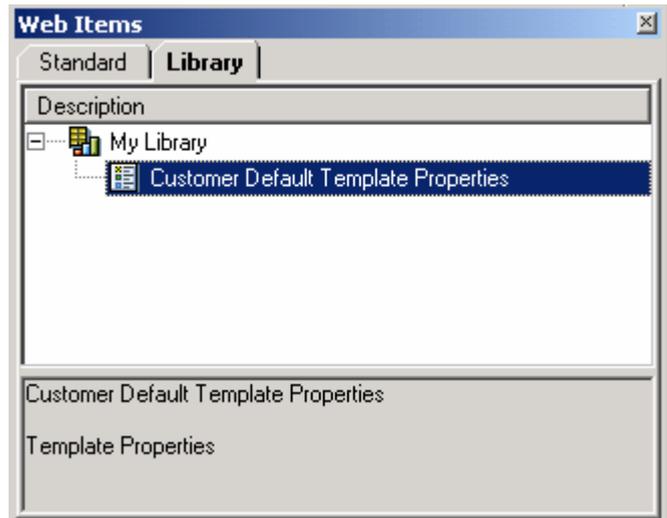
5. Choose Favorites or Roles, and then select the location where you would like to save the Library. Give the Library a Description and Technical Name, for example *My Library* (Z\_MY\_LIBRARY). Then choose Save.



6. Enter a Description and Technical Name for the Web Item, for example *Customer Default Template Properties* (Z\_DEFAULT\_TEMP\_PROPERTIES). Then Save.

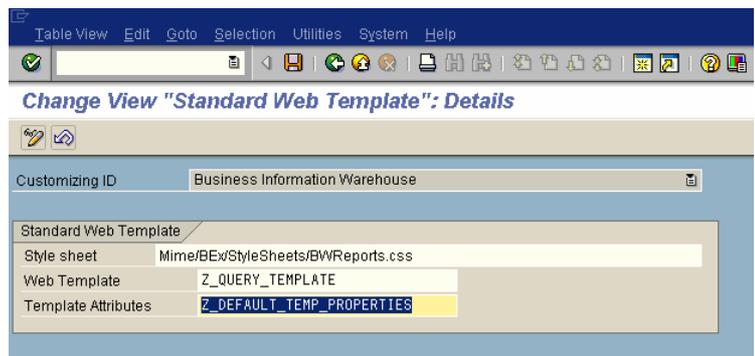


7. The new Library (My Library) and web item (Customer Default Template Properties) should be contained in the Library tab.



## 5.6 Set the standard template attributes

3. In the BW system, go to transaction RSCUSTV11. Maintain the setting for Template Attributes. Enter the technical name for the web item that was created for the template properties in the previous step. (`Z_DEFAULT_TEMP_PROPERTIES`)
  - . Save the change.



4. Check the Context Menu to validate that the changes have taken effect. Create a new web template or execute an existing web template that has not had the template properties maintained.

Number of ordered items	Incoming orders quantity	SU - Cost
6.000	205 PC	489,779.00 CAD
2.000	49 PC	123,480.00 CAD
5.000	352 PC	808,139.00 CAD
5.000	104 PC	251,520.00 CAD
30.000		,600.00 CAD
14.000		,160.00 CAD
9.000		,859.00 CAD
34.000		,419.00 CAD
7.000	5,223 PC	5,518,859.00 CAD
3.000	5,123 PC	5,292,899.00 CAD
5.000	346 PC	793,019.00 CAD

## 6 Appendix

### 6.1 Features

The standard Web template contains a record of Web items that you can display on a symbol toolbar as and when required.

Clicking on a Web item symbol on the symbol bar (such as a Chart, Table, Ad-hoc Query Designer and so on) sends a command via the URL that makes the Web Item visible and fills it with the pre-specified Data Provider.

You can enhance or modify the Standard Web template in the following way:

You can enhance this symbol bar by

- Inserting additional Web items (such as List of Documents) into the standard Web template and by adding new symbols and tool tips for them.
- Integrating additional functions (commands such as currency translation) into the symbol bar and adding new symbols and tooltips for them.
- Offering additional diagram types in the symbol toolbar, saving the corresponding Web items for them in the Web Application Designer library, and then make a reference to them in the Standard Web template.

### 6.2 Structure

The *0Query\_Template* is structured in the following way:

- The basic structure of *0Query\_Template* is an HTML table with the **name of the query as a title**. The Web item *Text Elements* is inserted to have the name of the query as a title. You can use the setting ONLY\_VALUES to make only the element containing the query name (REPTXTLG) visible.

```
<PARAM NAME="ONLY_VALUES" VALUE="X">
<PARAM NAME="ELEMENT_NAME" VALUE="REPTXTLG">
<PARAM NAME="ELEMENT_TYPE" VALUE="COMMON">
```

- In addition, the following **Web Items** are contained in the HTML table:

- *Navigation Block and Table*
- *4 Charts* (various diagram types)
- *Text Elements*
- *Filters*
- *List of Exceptions*
- *List of Conditions*
- *Ad-hoc Query Designer*

All Web items have the general property *Hide Object* activated (HIDDEN='X'). The two Web items *Navigation block* and *Table* are set to HIDDEN=''. In other words they are displayed by default.

The Standard Web template does not contain an explicit Data Provider. The DataProvider is not supplied with the URL and the Standard Web template filled with data until the query is displayed in the Web.

- The HTML table contains a **symbol bar**, which you can use to call up various functions.

For example, if you choose *Chart* on the standard Web template symbol bar, the Web item *Chart* is set to HIDDEN=''. The data is then displayed in the chart but not in the table.

You can display the data in the Standard Web template with various diagram types. Do so by choosing *Vertical Bar Chart*, *Pie Chart*, *Line Graph* or *3D Bar Chart* from the symbol bar. These diagram types are saved as Web items in the library 0QUERY\_TEMPLATE\_LIB in the Web Application Designer. In the Standard Web template, the system references these Web items via their technical names.



For example: If you want to have *Tachometer* instead of *Line Graph* on the symbol bar, you need to create a Web item *Chart* with the Chart type *Tachometer* in the Web Application Designer. Adjust the layout settings (color, legend) before saving it to your own library and then inserting it into the Standard Web template.

The symbol bar is comprised as follows in the Standard Web template:

- a. Insert the required command into the Web template, for example, *Switch Axes*: `<a href="<SAP_BW_URL CMD='SWITCH_AXES' DATA_PROVIDER='DP'>">...</a>`.
- b. Save the required symbol for it in the Mime Repository and insert the link to it in the Web template: ``.
- c. Insert the tooltip text after `alt=`. If you want the text to be translated into other languages in BW, insert this text as SAP\_BW\_TEXT and specify the name of the program in which texts are maintained and translated.



```
<!-- Display Switch Axes --->

<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='SWITCH_AXES'
DATA_PROVIDER='DP'>">"></a></td><td class="SAPBEXNavLine">&nbsp;&lt;/td>
```

### 6.3 Toolbar code

Please note that this code can be modified and enhanced, however it should not just be used alone as there are other dynamic pieces contained in the file (ZQUERY\_TEMPLATE.htm) that are missing, so this would not work correctly by itself.

```

<!-- Toolbar --->
<tr><td style="padding:5px;">
<table cellspacing="0" cellpadding="1" border="0" class="SAPBEXNavLineBorder" width="450"><tr><td
width="100%">
<table border=0 cellspacing=0 cellpadding=5 width="100%"><tr>
<!-- Display table and nav block --->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=*GR1*&MULTI=X&HIDDEN=">">"></a></td>
<td class="SAPBEXNavLine">&nbsp;</td>
<!-- Display Bar Chart--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=GR1GR2NavBlock&HIDDEN=
CMD_2='CMD=RESET_ITEM&ITEM=GR2Chart&WIDTH=600&HEIGHT=400&HIDDEN=&ITEM_ID=0QUER
Y_TEMPLATE_COLUMNSTACKED&GENERATE_CAPTION='>">"></a></td>
<!-- Display Pie Chart--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=GR1GR2NavBlock&HIDDEN=
CMD_2='CMD=RESET_ITEM&ITEM=GR2Chart&WIDTH=600&HEIGHT=400&HIDDEN=&ITEM_ID=0QUER
Y_TEMPLATE_PIES&GENERATE_CAPTION='>">"></a></td>
<!-- Display Line Chart--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=GR1GR2NavBlock&HIDDEN=
CMD_2='CMD=RESET_ITEM&ITEM=GR2Chart&WIDTH=600&HEIGHT=400&HIDDEN=&ITEM_ID=0QUER
Y_TEMPLATE_LINES&GENERATE_CAPTION='>">"></a></td>
<!-- Display 3D Bar Chart--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=GR1GR2NavBlock&HIDDEN=
CMD_2='CMD=RESET_ITEM&ITEM=GR2Chart&WIDTH=600&HEIGHT=400&HIDDEN=&ITEM_ID=0QUER
Y_TEMPLATE_3DCOLUMNS&GENERATE_CAPTION='>">"></a></td>
<!-- Display Switch Axes --->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='SWITCH_AXES'
DATA_PROVIDER=DP">">"></a></td>
<td class="SAPBEXNavLine">&nbsp;</td>
<!-- Display Infos --->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=*GR3*&MULTI=X&HIDDEN=">">"></a></td>
<!-- Display Exceptions--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=*GR4*&MULTI=X&HIDDEN=">">"></a></td>
<!-- Display Conditions--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM=*GR* MULTI=X' HIDDEN=X'
CMD_1=ITEM=*GR5*&MULTI=X&HIDDEN=">">"></a></td>
<td class="SAPBEXNavLine">&nbsp;</td>
<!-- Display Variable Input --->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='PROCESS_VARIABLES'
VARIABLE_SCREEN=X">">"></a></td>
<td class="SAPBEXNavLine">&nbsp;</td>
<!-- Query Definition --->

```

```
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL ITEM='QueryDesigner' HIDDEN=' '>">"></a></td>
<td class="SAPBEXNavLine">&nbsp;|</td>
<!-- Display Bookmark --->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='BOOKMARK'>">"></a></td>
<td class="SAPBEXNavLine">&nbsp;|</td>
<!-- Display Export Excel--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='EXPORT' FORMAT='XLS'
DATA_PROVIDER='DP'>">" <SAP_BW_TEXT program="SAPLRRSV" key="T72">"></a></td>
<!-- Display Export CSV--->
<td class="SAPBEXNavLine"><a href="<SAP_BW_URL CMD='EXPORT' FORMAT='CSV'
DATA_PROVIDER='DP'>">" <SAP_BW_TEXT program="SAPLRRSV" key="T73">"></a></td>
<!-- Display Print Preview--->
<!-- <td class="SAPBEXNavLine"><a href="">"></a></td> --->
</tr></table>
</td></tr></table></td></tr>
```

### 6.4 Accessing the Standard Web Template

You can call up queries on the Web using the following tools:

Query Designer: By clicking on the symbol for *Display Query on the Web*

BEx Analyzer: By choosing *Tools* → *Launch in Web Browser: Query (Default View)*

Ad-hoc Query Designer: If you do not specify the optional attributes `DISPLAY_DATA_PROVIDER`, `TARGET_FRAME` and `TARGET_TEMPLATE_ID`, the query results are displayed in a new browser window in the standard Web template.

#### 6.4.1 Features

In addition to navigating in the context menu and in the navigation block, Web applications that use the standard Web template also have a toolbar containing various functions.

##### Table

Once you have displayed your data using one of the functions described below, you can use the *Table* function to display the data as a table again.

##### Bar chart

This function displays the query data in a bar chart. If you want to return to the table display, click on the *Table* icon.

##### Pie Chart

This function displays the query data in a pie chart. If you want to return to the table display, click on the *Table* icon.

##### Line chart

This function displays the query data in a line chart. If you want to return to the table display, click on the *Table* icon.

### 3D Bar Chart

This function displays the query data in a 3D bar chart. If you want to return to the table display, click on the *Table* icon.

### Swap Axes

You use this function to swap the axes of the query. For example, if you have characteristics displayed in the rows and key figures in the columns and you choose the *Swap Axes* function, the key figures are moved to the rows and the characteristics are moved to the columns. If you want to undo this step and switch the axes back to how they were originally, click on *Swap Axes* again.

### Info

Information about the query key date, how up-to-date the query data is, who last changed the query, when the query was last changed and the last time the query was refreshed is displayed here. You can also see information about the values in the filter and the variable values with which the query is filled.

If you want to return to the table display, click on the *Table* icon.

### Exceptions

You can create new exceptions and change or delete existing exceptions. The existing exceptions are displayed along with their status (active, inactive). In the context menu of an exception, you can deactivate, change, or delete the exception. If you want to display the exception in the table, click on the *Table* icon.

### Conditions

You can create new conditions and change or delete existing conditions. The existing conditions are displayed along with their status (active, inactive, not applicable, not used). In the context menu of a condition, you can deactivate, change, or delete the condition. If you want to display the condition in the table, click on the *Table* icon.

### Display Variable Entries

If the query contains variables, you can use this function to display the screen for variables so that you can select additional variable values as required.

### Query Designer

You can call up the Ad-hoc Query Designer and define new queries or change an existing query on the Web.

### Bookmark

You can set a bookmark that enables you to call up a certain navigational state for the query at a later date. The system creates a URL for the bookmark. This URL is displayed in the address line of your Web browser.

To enable you to access the bookmark again later, you save the URL in your favorites or copy and paste it into other files.

### Export to MS Excel 2000

You can export query data to MS Excel 2000.

The query data is displayed in the same way as queries are displayed in the BEx Analyzer. You see the filter restrictions and the data in the table. Exceptions are highlighted in color in the same way as they are on the Web.

The formatting is transferred, but it is no longer possible to navigate using the BW functions. However, you can continue to edit the query using the MS Excel functions.

### **Export to CSV**

You can export the query data into a CSV (**c**omma **s**eparated **v**alue) file.

Unlike exporting to MS Excel 2000, you do not see the numbers in context and you cannot see the filter data. The query formatting (such as how the exceptions are displayed) is also not transferred to the CSV file.