

**How-to Guide
SAP NetWeaver '04**



How To... Create and Maintain UI Patterns of BI Content

Version 2.00 – September 2004

**Applicable Releases:
SAP NetWeaver '04
(BW 3.5)
BI Content 3.5.2 Add-On (for some features SP03 is
required)**

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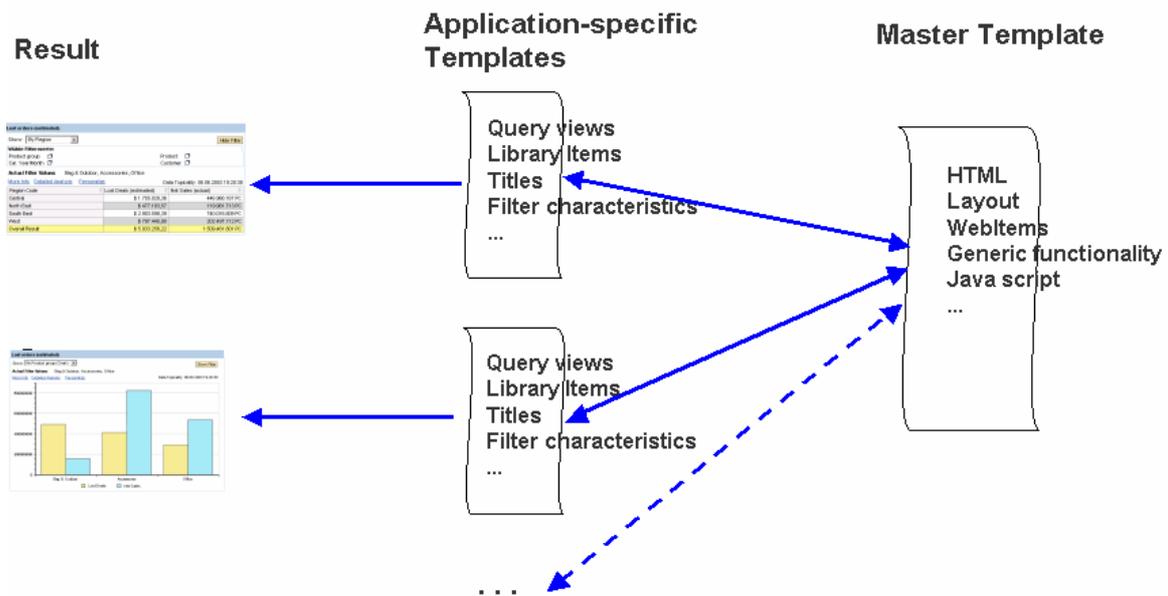
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1 Scenario

With BI Content 3.5.2 Add-On more than 250 Web Applications are delivered, which are based on a new User Interface (UI) Pattern, the Information Consumer Pattern (ICP). Layout and functionality of this UI Pattern is described in the Online-Documentation (SAP NetWeaver -> Information Integration -> BI Content -> Cross-Application Business Content-> User Interface Pattern). See also the screenshot of Information Consumer Pattern example at the end of the appendix. The Template Wizard described here, generates such UI Pattern based Web Templates. This templates require BW 3.5 technology.

All Web Applications which are based on one UI Pattern have the same layout and use the same functionality. Only the content as data provider (Query Views), filter characteristics and presentation of data (Table- or Chart-Item) differ from Web Application to Web Application. All the generic, UI Pattern-related objects are contained in one central Web Template, which plays the role of the Master (Master-Template). The application specific information (Data Provider, Web Items, texts, etc.) are contained in application-specific Web Templates. See screenshot below:

Master Template Concept



Both Master-Template and application-specific template are technically usual BW Web Templates. During runtime the Master-Template is included in the application-specific template and gets parameterized by the specific data provider, texts and Web Items.

The Template Wizard can be used to create and maintain the UI Pattern based Web Templates. Especially for users without any HTML and Web-API knowledge the BI Template Wizard is very helpful. With the BI Template Wizard users are guided and need only to fill out the given input fields. On the last step a UI Pattern based Web Templates can be generated and stored to the BW-Repository. The Wizard can reopen templates, detect the pattern and (re)-edit templates. With the Web Application Designer the UI Pattern based Web Templates can be opened only in text mode (not in the layout mode). See Appendix for an explanation.

2 Introduction

2.1 Target

The BI Template Wizard is currently an inhouse SAP tool. The SDN availability does not indicate any commitment on development in future releases whatsoever.

However, the inhouse tool is provided to the public via SDN to facilitate creation and maintenance of UI Pattern based Web Templates, which are delivered with BI Content 3.5.2 Add-On. General availability of BI Content 3.5.2 Add-On is in the third quarter 2004. Before, the wizard is only for Ramp-up customers.

Users are encouraged to give their feedback via SDN or directly to Thomas Paulus (mailto:thomas.paulus@sap.com).

2.2 Versioning

This Paper describes the second version of the BI Template Wizard. All pattern-based Web Templates which were created with the first version can also be maintained with the second version of the Wizard. But vice versa, Templates which were created with this second version should no longer be maintained with the first version – new functionality will be lost then.

2.3 Installation and Technical information

2.3.1 Client Prerequisites

Software Resources

- Microsoft .Net 1.1 Runtime (can be obtained from <http://www.microsoft.com> if not provided with Operating system)
- SAPGUI 620 or 640 (Logon Control, Icon Resources)
- Internet Explorer 5.5 or higher
- msxml4 (for WizardConfiguration only, not for simple execution) (can be obtained from www.microsoft.com).

Resources Accessed:

- During execution files are copied from the program directories to the %TEMP% directory (Version-based timestamping) to avoid file locks.
- In addition, user preferences are persisted to HKCU/Software/SAP/....

2.3.2 SAP Server Prerequisites

The UI Patterns are only operational with a BW 3.5 Release. Further, the provided UI Patterns use library Items delivered with BI Content 3.5.2 Add-On or later. You may need to activate the corresponding content to operate the generated patterns. Especially the role SAP_BW_BCT_GENERIC_TEMPLATES need to be activated (Transaction RSOR; grouping use “In data flow before”). See Note 732311 (Procedure when activating Information Consumer) for a detailed description.

2.3.3 Installation of the Template Wizard

Execute the MSI-File or start Setup.exe .

The MSI-File creates a directory in the given path (Default [Program files]SDN\BITemplateWizard) with executables , documentation and files.

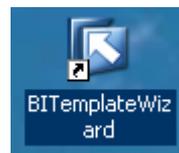
It also creates a program entry SDN BITempalteWizard and a Desktop shortcut.

3 The Step By Step Solution

The BI Template Wizard is a framework which can host different wizards for generating Web Templates. At the moment three different UI Patterns / Wizards are available: Casual User Pattern (CUP), Information Consumer Pattern (ICP) and the Analyst Pattern (AP) are available. In future further wizards may be added.

3.1 Opening the Template Wizard and selecting a pattern

1. After installation of the BI Template Wizard a shortcut should be available on your desktop.



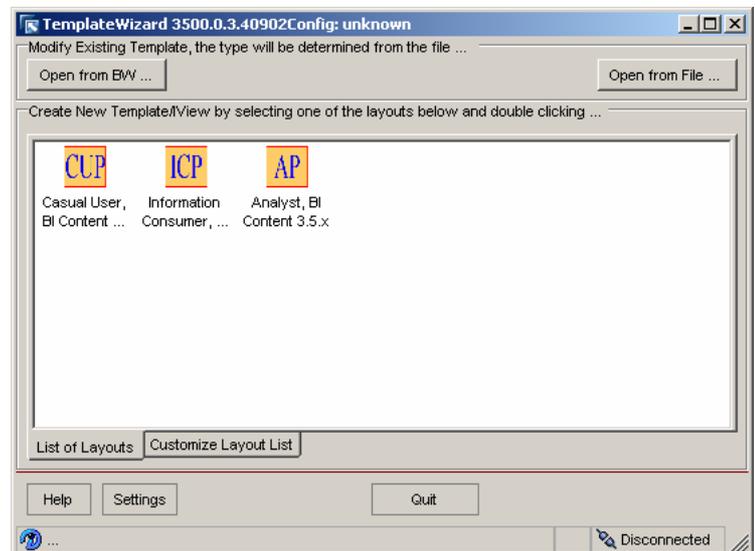
Further, the BI Template Wizard can be called via the Start menu (see screenshot on the right).



2. The first screen offers the available patterns. Currently, the Casual User Pattern (CUP), Information Consumer Pattern (ICP) and the Analyst Pattern (AP) are available. A double click on one of the Pattern Icons starts the wizard for this UI Pattern, either with empty fields or with some fields filled by the registry with user entries from previous sessions.

An already with this wizard created UI Pattern based Web Template can be maintained by loading it either from a BW system (Button "Open from BW ...") or from a file system (Button "Open from file ...").

When opening a template from the BW System, you will be prompted for a logon and a BW Open Dialog will be presented to select a present template. The Wizard will then download the file, analyze whether it is a recognized pattern file (by applying the input filters) and directly jump into the

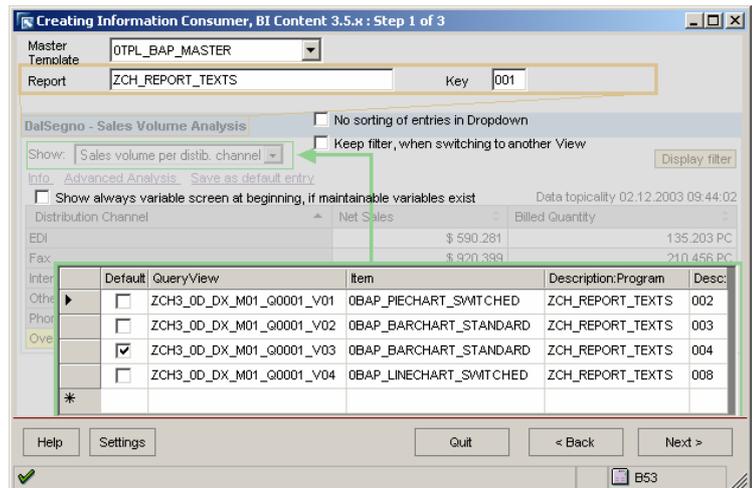


first suitable pattern dialogue.

3.2 Template Wizard for the Information Consumer Pattern (ICP)

3. At the first step of the Information Consumer Pattern the user has the following options:
 - a. Select the master template (cannot be changed at the moment).
 - b. Texts and titles have to be stored in an ABAP-report as text elements. In the second line the ABAP-report name and the key of the text element has to be inserted for the overall title.

The lower half of the first wizard step contains a grid. Here the entries for the dropdown box (upper left dropdown box of the ICP, see appendix B) will be determined. Each row of the grid represents one entry in the dropdown box. One entry of the dropdown box contains the technical name of a Query View (as Data Provider), the technical name of a Web Item from a Library (as visualization component, e.g. a table or chart item) and the description for the dropdown box (as ABAP-report text element). All views should be based on one query. The technical names of the views can be entered manually or be selected by a F4 value help. As Web Item only an entry from the combo box can be selected.



Further options are three checkboxes

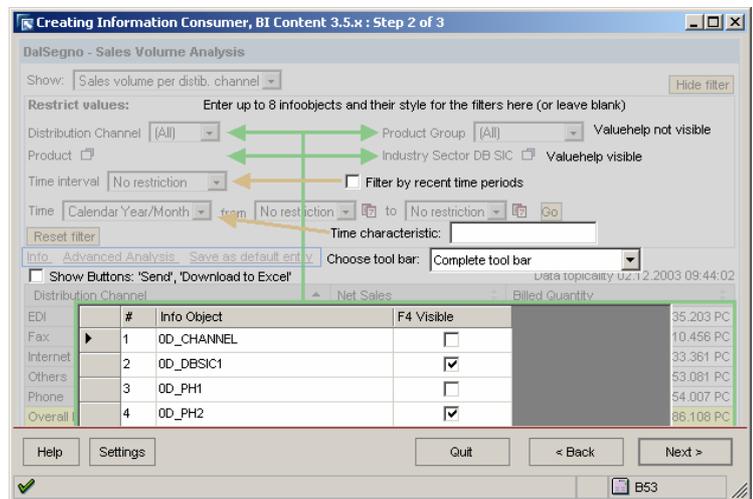
- a. "No sorting of entries in Dropdown"
The ICP has in the upper left area a dropdown box for selecting Query Views. If the checkbox is checked the entries are listed in the order they are maintained on the first step of this wizard. Default is that the entries are sorted alphabetically.
- b. "Keep filter, when switching to another query view"
If another view is selected from the dropdown box, all filter settings will be kept (this corresponds to RRI navigation)
- c. "Show always variable screen..."
Default is, to always suppress the variable screen, if possible (e.g. no mandatory variable exists, which is initial). By checking this box, the variable screen will always be offered to the end user.

Press the Next button, if all entries are made.

4. On the second step the filter area of the Information Consumer Pattern can be designed. In the lower part of the screen is a grid. Here characteristics can be inserted which will appear in the filter area of the ICP. You have to type in the technical name of the characteristic (no value help is available). The filter characteristics need either to be in the free characteristics area or in the drill down of the query.

In the second column of the grid are checkboxes. For each filter characteristic it can be chosen, whether the values can be selected from a dropdown box (unchecked) or whether they are provided via a F4 value help dialog (checked).

The ICP has two options for time filtering. The first is activated by checking the checkbox "Filter by recent time periods". In this case a predefined dropdown box is provided, which contains the two entries "actual ..." and "previous ..." for each time characteristic (0CALYEAR, 0CALMONTH, 0CAL...) in the query. E.g. if you take 0CALMONTH in the free



characteristics area, then the two entries “actual month” and “previous month” will appear in the dropdown box for easy and direct time filtering.

The second option is to insert a time characteristic in the corresponding field on the wizard screen. The characteristic has to be in the query definition in the free characteristic area or in drill down. In this case the data displayed in the ICP can be restricted by a time interval for all available time characteristics in the query.

Further, the toolbar can be selected. From a dropdown box the available set of functions can be chosen.

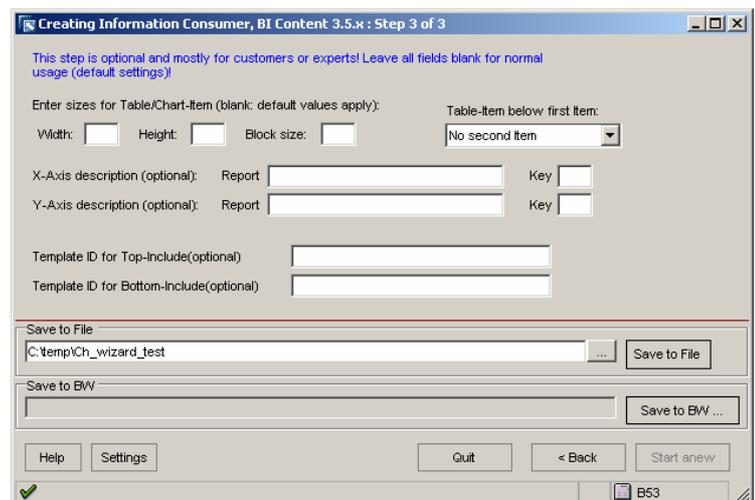
The last option on the second wizard step is the checkbox “Show Buttons ...”. If it is checked, a button row appears below the ICP with currently two buttons: Send, Download to Excel.

5. On the third wizard step some optional parameters can be changed. In the upper area the sizes of the chart or table item can be overwritten. The default in the ICP is width=600 pixel, height=300 pixel (only for charts) and block size=14 (only for tables; block size is the number of data rows that are displayed after which an area for scrolling is inserted).

If a table item is selected from the dropdown on the right side the data are shown additionally in a table below the standard item. This makes only sense, if the standard target item (selected at the first step for each view) is always a chart. By this a chart and a table can be shown on top of each other for the same data.

Axis description is done automatically, if only one characteristic and one key figure is given. In complex drilldowns no axis description is available automatically. With the fields X- and Y-Axis description ABAP report text elements can be inserted to get an axis description which is constant for all views. Prerequisite for this feature is NW04 Stack 9.

The ICP’s are delivered without top- or bottom includes. A customer can insert in the corresponding fields the technical

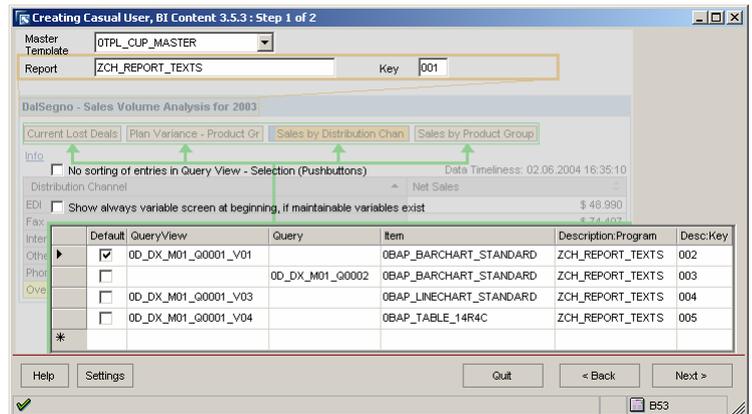


name of a Web Template. With such a customer defined template logos, banners or even other Web Applications can be added on top or at the bottom of the ICP.

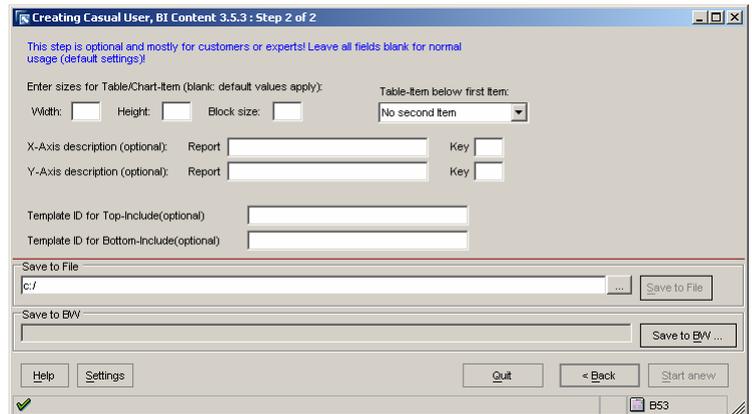
- When all wizard steps are completed the ICP based Web Template can be generated and saved either as a file (button “Save to File”) and uploaded later with the Web Application Designer or saved to BW directly (button “Save to BW”).

3.3 Template Wizard for the Casual User Pattern (CUP)

- On the first step of the Casual User Pattern the functionality is as for the ICP, except for two differences. Keep filter settings (RRI) is not possible and beside Query Views also Queries can be selected as data providers.



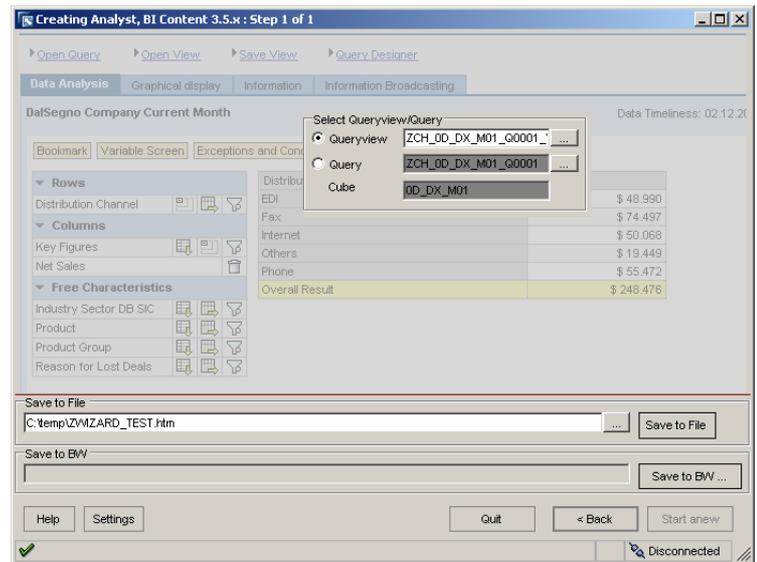
- The second step of the CUP is as the third step of the ICP.



3.4 Template Wizard for the Analyst Pattern (AP)

9. The Analyst Pattern has only one step, where the data provider can be selected. The data provider can be a query view or a query.

Currently, no further parameterization is possible. The AP is identical with the BEx Web Analyzer (BW 3.5), with preselected data provider.



Appendix

A. Maintain Pattern Templates with WAD

The BI Template Wizard described above generates specific UI Pattern based Web Templates. This Web Templates contain in general some basic HTML code, an <object>-tag for the template properties and an <object>-tag for the Web Item “Web Template”. Such Pattern templates should be maintained by the BI Template Wizard only. However, in certain situations (e.g. the Template Wizard is not available) an administrator may want to edit the templates with the Web Application Designer (WAD). Pattern templates can be maintained by the WAD only in textmode, because this Web Templates (application-specific templates) contain specific objects, which can not be interpreted by the Web Application Designer. A simple text editor in the WAD is opened, which contain the HTML code of the template. A presentation in Layout- or in overview mode of the WAD is not possible for such UI Pattern based Templates. See notes 693940 and 668666 for a more detailed explanation. However, be aware that any changes directly in the UI Pattern template can be lost once the same template is loaded and saved with the BI Template Wizard.

Below is an example of the HTML code of an ICP based Web Template. Only the section of the master template parameterization is shown, which is in fact one extended Object-Tag of the Template-Item. Do only changes in this section. Do not change other parts of the template.

```
1 <object>
2 <param name="OWNER" value="SAP_BW" />
3 <param name="CMD" value="GET_ITEM" />
4 <param name="name" value="BAP_DP1" />
5 <param name="ITEM_CLASS" value="CL_RSR_WWW_ITEM_TEMPLATE" />
6 <param name="GENERATE_CAPTION" value="" />
7 <param name="TEMPLATE_ID" value="OTPL_BAP_MASTER" />
8 <param name="STYLE_SHEET" value="/sap/bw/mime/BEX/StyleSheets/BWReports.css" />
9 <param name="USE_ONLY_BODY" value="X" />
10 <param name="USE_TEMPLATE_PROPERTIES" value="X" />
11 <param name="SET_DATA_PROVIDER_1" value="DP1" />
12 <param name="DATA_PROVIDER_ID_1" value="0D_DX_M01_Q0001_V01" />
13 <param name="SET_ITEM_2" value="DP1_dataviews" />
14 <param name="ITEM_CLASS_2" value="CL_RSR_WWW_ITEM_VIEW_DROP_DOWN" />
15 <param name="HIDDEN_2" value="" />
16 <param name="CAPTION_2" value="SAP_BW_TEXT?PROGRAM=ZCH_REPORT_TEXTS&KEY=001" />
17 <param name="VIEW_DD_DATA_PROVIDER_ID_1_2" value="0D_DX_M01_Q0001_V01" />
18 <param name="VIEW_DD_ITEM_ID_1_2" value="OBAP_TABLE_14R4C" />
19 <param name="VIEW_DD_DESCRIPTION_1_2" value="SAP_BW_TEXT?PROGRAM=ZCH_REPORT_TEXTS&KEY=002" />
20 <param name="VIEW_DD_DATA_PROVIDER_ID_2_2" value="0D_DX_M01_Q0001_V02" />
21 <param name="VIEW_DD_ITEM_ID_2_2" value="OBAP_BARCHART_STANDARD" />
22 <param name="VIEW_DD_DESCRIPTION_2_2" value="SAP_BW_TEXT?PROGRAM=ZCH_REPORT_TEXTS&KEY=003" />
23 <param name="VIEW_DD_DATA_PROVIDER_ID_3_2" value="0D_DX_M01_Q0001_V03" />
24 <param name="VIEW_DD_ITEM_ID_3_2" value="OBAP_BARCHART_STANDARD" />
25 <param name="VIEW_DD_DESCRIPTION_3_2" value="SAP_BW_TEXT?PROGRAM=ZCH_REPORT_TEXTS&KEY=004" />
26 <param name="VIEW_DD_DATA_PROVIDER_ID_4_2" value="0D_DX_M01_Q0001_V04" />
27 <param name="VIEW_DD_ITEM_ID_4_2" value="OBAP_TABLE_14R4C" />
28 <param name="VIEW_DD_DESCRIPTION_4_2" value="SAP_BW_TEXT?PROGRAM=ZCH_REPORT_TEXTS&KEY=005" />
29 <param name="SET_ITEM_3" value="MENUBAR" />
30 <param name="ITEM_CLASS_3" value="CL_RSR_WWW_ITEM_TEMPLATE" />
31 <param name="TEMPLATE_ID_3" value="OTPL_BAP_MENUBAR_ALL" />
32 <param name="HIDDEN_3" value="" />
33 <param name="SET_ITEM_4" value="DP1_item" />
34 <param name="ITEM_ID_4" value="OBAP_TABLE_14R4C" />
35 <param name="SET_ITEM_30" value="DP1_FILTER1_LABEL" />
36 <param name="ITEM_CLASS_30" value="CL_RSR_WWW_ITEM_LABEL" />
37 <param name="IOBJNM_30" value="OD_CHANNEL" />
38 <param name="HIDDEN_30" value="" />
39 <param name="SET_ITEM_31" value="DP1_FILTER1_ITEM" />
40 <param name="ITEM_CLASS_31" value="CL_RSR_WWW_ITEM_FILTER_DDOWN" />
41 <param name="IOBJNM_31" value="OD_CHANNEL" />
42 <param name="HIDDEN_31" value="" />
43 <param name="SET_ITEM_32" value="DP1_FILTER2_LABEL" />
44 <param name="ITEM_CLASS_32" value="CL_RSR_WWW_ITEM_LABEL" />
45 <param name="IOBJNM_32" value="OD_DBSIC1" />
46 <param name="HIDDEN_32" value="" />
47 <param name="SET_ITEM_33" value="DP1_FILTER2_ITEM" />
48 <param name="ITEM_CLASS_33" value="CL_RSR_WWW_ITEM_FILTER_DDOWN" />
49 <param name="IOBJNM_33" value="OD_DBSIC1" />
50 <param name="HIDDEN_33" value="" />
51 <param name="SET_ITEM_34" value="DP1_FILTER3_LABEL" />
52 <param name="ITEM_CLASS_34" value="CL_RSR_WWW_ITEM_LABEL" />
53 <param name="IOBJNM_34" value="OD_PH1" />
54 <param name="HIDDEN_34" value="" />
```

```

55 <param name="SET_ITEM_35" value="DP1_FILTER3_ITEM" />
56 <param name="ITEM_CLASS_35" value="CL_RSR_WWW_ITEM_FILTER_DDOWN" />
57 <param name="IOBJNM_35" value="OD_PH1" />
58 <param name="HIDDEN_35" value="" />
59 <param name="SET_ITEM_36" value="DP1_FILTER4_LABEL" />
60 <param name="ITEM_CLASS_36" value="CL_RSR_WWW_ITEM_LABEL" />
61 <param name="IOBJNM_36" value="OD_PH2" />
62 <param name="HIDDEN_36" value="" />
63 <param name="SET_ITEM_37" value="DP1_FILTER4_ITEM" />
64 <param name="ITEM_CLASS_37" value="CL_RSR_WWW_ITEM_FILTER_DDOWN" />
65 <param name="IOBJNM_37" value="OD_PH2" />
66 <param name="HIDDEN_37" value="" />
67 <param name="SET_ITEM_38" value="DP1_FILTER_TIME" />
68 <param name="ITEM_CLASS_38" value="CL_RSR_WWW_ITEM_LABEL" />
69 <param name="IOBJNM_38" value="OCALQUARTER" />
70 <param name="HIDDEN_38" value="" />
71 ITEM: BAP_DP1
72 </object>

```

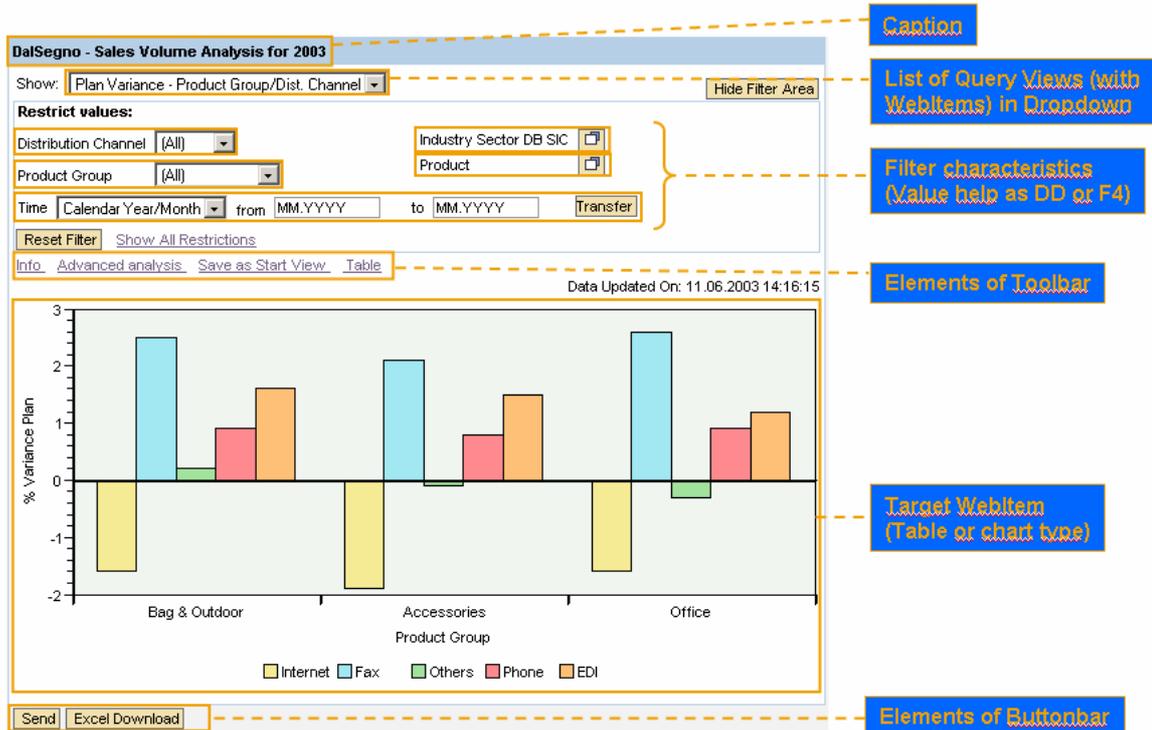
The following parameters can be changed:

Technical name of master template (line 7); technical name of initial query view (line 12); caption of the web application (line 16) [insert a text element from an ABAP report here]; entries in the dropdown box for query view selection (line 17 - 28); technical name of the template containing the menu bar (line 31); technical name of the library item for the initial Web Item (line 34); technical name of the first filter characteristic (line 37 and 41 (both!)) [the value help can be a dropdown box (line 42: HIDDEN="") or a F4 – popup window (line 42: HIDDEN="X"). In note 693941 (Parameterization of an Information Consumer Master Template) a more detailed description is given.

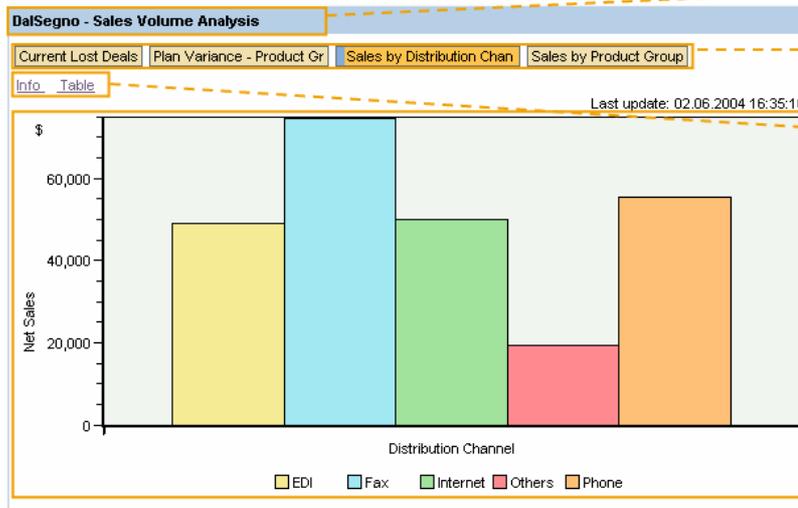
B. Screenshots of ICP, CUP and AP

Below see screenshots of examples of the Information Consumer Pattern (ICP), Casual User Pattern (CUP) and Analyst Pattern (AP) together with indication which fields are editable by the BI Template Wizard.

Information Consumer Pattern (all features)



Casual User Pattern



Caution

List of Query Views (with Webitems) as Pushbuttons

Toolbar

Target Webitem (Table or chart type)

Analyst Pattern

Data Analysis Graphical display | Information | Information Broadcasting

DalSegno Company Current Month Validity of Data: 02.06.2004 16:35:10

Bookmark | Variable Screen | Exceptions and Conditions | Notes | Export to Excel | Export to CSV

Distribution Channel	Net Sales
EDI	\$ 272.389
Fax	\$ 408.226
Internet	\$ 274.066
Others	\$ 106.291
Phone	\$ 304.067
Overall Result	\$ 1.365.040

Rows

- Distribution Channel

Columns

- Key Figures
- Net Sales

Free Characteristics

- Industry Sector DB SIC
- Product
- Product Group
- Reason for Lost Deals

<http://www.sdn.sap.com/irj/sdn/howtoguides>