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Mastering SAP BW Reporting

Expert Level  
User Guide



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## **Mastering SAP BW Reporting**

# **Expert Level User Guide**

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## **SAP CORPORATE CONSULTING**

### **CUSTOM BW TRAINING!**

Achieve the maximum ROI on your BW implementation investment.

A successful Data Warehouse is measured by how *often* and to what *extent* your business community is using BW for reporting.

### **1 Week Customized BW Reporting Course Onsite!**

Available exclusively through Research Summary Consulting, this class is taught by an Expert Level BW Consultant onsite, at your location.

We provide a proven Business Explorer (BEx) reporting curriculum and *customize* this training based on your specific requirements. Save time and money by receiving training unique to your business on your own BW system.

This course offers your employees the knowledge they need to create interactive web-based portals plus highly customized workbooks with drilldown functionality.

### **BRIEF SUMMARY OF REPORTING TOPICS:**

- Efficient Query Design
- BEx Analyzer
- BEx Browser
- BEx Web Application Designer
- Query Designer
- Reporting Agent
- Report Scheduling
- Custom Template Creation
- Best Practices and Standards for Reporting
- Data Security Considerations
- Hands-on Exercises catered to your data
- Post-training Support
- ...and Much More....

### **ABOUT RESEARCH SUMMARY CONSULTING**

Research Summary Consulting has a long and successful track record of teaching Business Information Warehouse (BW) to Fortune 500 companies throughout North America. We employ highly experienced classroom instructors with a passion to transfer in-depth knowledge of BW to our clients.

**For more information on this or any of our other Corporate Consulting Services please contact our Sales Team at [esolutions@researchsummary.ca](mailto:esolutions@researchsummary.ca)**

# **BEx Training - Beginner Topics**

## **Overview of Data Warehouses**

## **Basic Data Structure in SAP BW**

## **Introduction to the Business Explorer Tools**

## **Browser vs. Analyzer**

## **Logging into the System**

## **BEx Browser Components**

- Create/Rename/Delete Folders
- Move and Organize Workbooks
- Add Websites, R/3 Transactions and Application shortcuts

## **BEx Analyzer Features**

- Tools available from BEx Toolbar
- Using Excel Functionality in parallel
- Roles vs. History vs. Favourites
- Screen layout

## **Browser vs. Analyzer**

## **Relationship of Technical Queries to Workbook files**

## **BW-specific terminology**

- Glossary

## **Changing Queries - Local Views vs. Global Views**

## **Selection Criteria**

- Multiple Selections
- Selection Options
- Wildcards

## **Using Text Elements**

- Data Relevance
- Variables and Filters

## **Modifying Workbooks with OLAP functionality**

- Drilldown/across
- Results Rows
- Swap columns
- Single value filters
- Free Characteristics
- Key Figures
- Multiple value filters
- Characteristic display options
- Sorting
- Hierarchies
- Undo options
- Properties

## **Exceptions**

- Defining and using Exceptions
- Exception Variable Creation

## **Conditions**

- Defining and using Conditions
- Condition Operands
- Condition Variable Creation

## **Exceptions vs. Conditions**

## **Saving Workbooks**

- Best practices
- Detaching Reports
- Emailing Results

## **Practical Exercises & Review**

# **BEx Training - Advanced Topics**

## **Review of Beginner Course Topics**

### **Query Designer Screen**

### **Building Queries from Data Sources**

### **Infocubes vs. Multicubes**

### **Query Designer Settings**

- Report Titles
- Sequence of Entry Variables
- Display Options
- Columnar Queries
- Characteristic Restrictions
- Characteristic Properties
- Key Figure Properties
- Where-used feature

### **Restricted Key Figures**

- Business Content
- Cube level vs. Query Level

### **Calculated Key Figures**

- Cube level vs. Query Level
- Operands and Math Functions

### **Structures**

- Creation and Re-use

### **Variables**

- Variable Types
- Variable Processing
- Characteristic Variables
- Key Figure Variables
- Text Variables
- Variable Offsets

### **Advanced Workbook Formatting**

- Moving Filters
- Moving Text Elements
- Creating Templates
- Colour formatting
- Inserting Graphics
- Inserting Charts
- Removing Toolbars and Gridlines
- Single Workbook -- Multiple Queries
- Deleting Results
- External Excel Functions

### **Reporting Agent**

- Event Creation
- Batch Printing
- Exception Reporting
- Package Creation
- Package Scheduling
- Reporting Log
- Exception Log

### **Web Reporting**

- Template Creation
- Web Application Designer
- Web Objects (charts, navigation, results set, etc.)
- Additional Features

### **Practical Exercises & Review**



## **BW Reporting User Guide**

**A 200+ page practical resource teaching you how to use SAP's Business Warehouse**

Available exclusively through Research Summary, our **BW Reporting User Guide** is an essential resource for anyone using Business Warehouse.

Our text summarizes the functionality available in BW with practical explanations, frequently asked questions and detailed how-to's.

### **SAMPLE OF TOPICS COVERED:**

Overview of Data Warehousing	Overview of BW BEx Tools	OLAP Functionality
Logging into the System	Browser vs. Analyzer	Microsoft Excel Integration
BEx Browser Functionality	Report Scheduling	Report Roll-out Strategy
BEx Analyzer Features	Queries vs. Workbooks	Data Security Options
BW Terminology	Creating Query Definitions	Administrator Workbench
Modifying Queries	Variables and Filters	Web Objects
Global vs. Local Views	Selection Criteria	Exception Log
Web Application Designer	Using Hierarchies	Web Templates
Exception Reporting	Building Conditions	Scheduling Packages
Pre-calculating Web Templates	Saving Workbooks	Restricted Key Figures
Best Practices	Advanced Workbook Formatting	Graphs and Charts
Using the Query Designer	Query Designer Properties	Custom Templates
Characteristics and Structures	Key Figures and Structures	Practical Exercises
Creating Calculated Key Figures	Ad-hoc Web Application Designer	Variable Types

**...And Much More**

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# Mastering SAP BW Reporting

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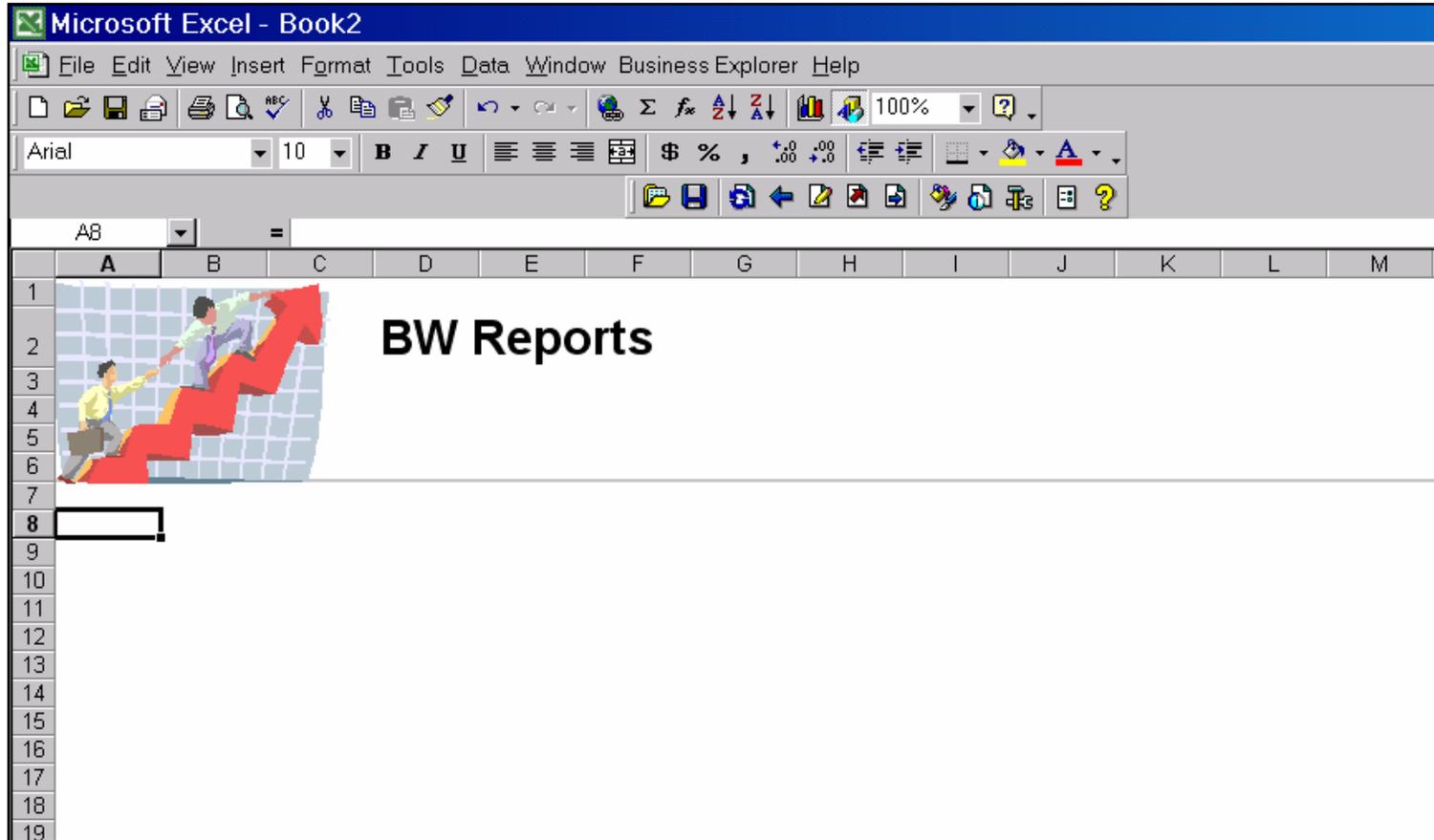
## **Creating Workbook Templates**

Standard templates can be assigned to workbooks upon execution. Color schemes, visible toolbars, gridlines, and graphics can be customized. A template is nothing more than an empty workbook with some formatting.

A template is saved as an Excel workbook and stored on the BW server. Each BW Workbook is then assigned a default template, or letterhead, which loads in advance of the query.

Using templates allows you to set a common look and feel to a series of reports and it's easy to accomplish.

## Templates



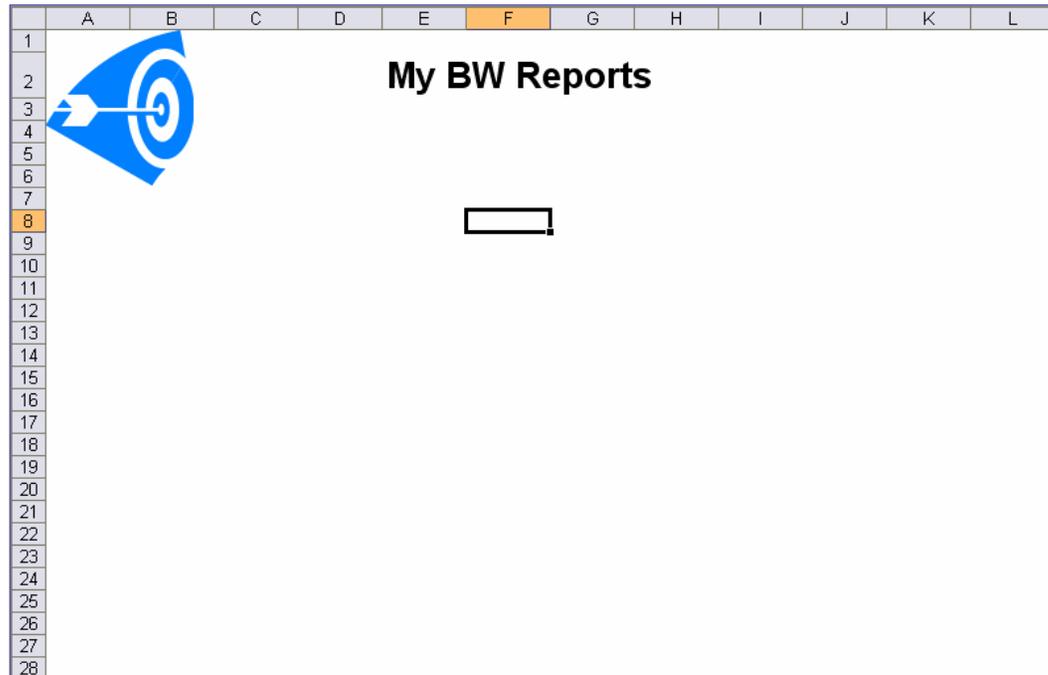
## Create a Workbook Template

### Practical Exercise:

1. Launch the BEx Analyzer.
2. Enable Macros if you receive a security warning.
3. Using the Excel toolbar open a NEW workbook.
4. Follow the Excel menu path and choose Insert → Picture → Clip Art...
5. From the available images double-click on one to choose it.
6. Use the handles to resize the picture so that it doesn't go below Row 8.
7. Click on cell **E2** and type "*My BW Reports*". Make the font bold and size 20.
8. Follow the Excel menu path and choose Tools → Options → View. Remove the checkbox for Gridlines.

## Create a Workbook Template

Your template should resemble the following:



## Create a Workbook Template

Continue to build on your template:

9. Highlight row 8.

10. Using the Borders icon found in the Excel toolbar choose a thick bottom border.

One of the tricks when creating formatted workbooks in BW is to position the cursor in the appropriate active cell before saving. The location of the active cell dictates the upper left corner where the BW data will start to load from.

11. Click on cell **A10** to make it active.

When you execute a BW query into this workbook the data will be displayed starting at cell A10 and work its way down the worksheet.

12. Using the BW BEx toolbar select the Save icon → Save as new workbook...

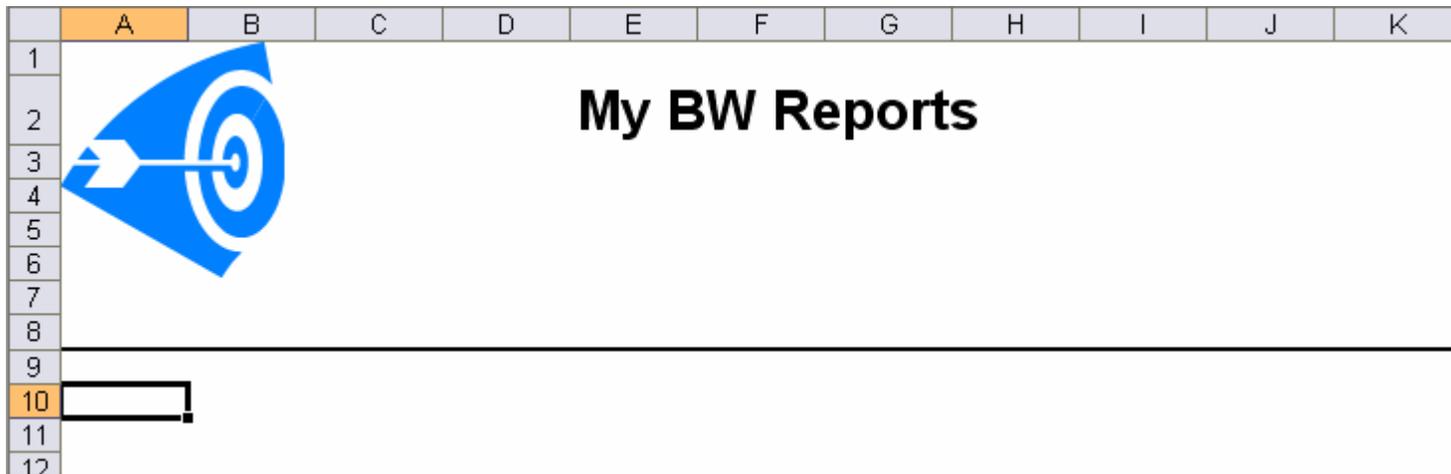
13. If required log in to the appropriate server. Give your workbook a Description.

14. Click Save.

## Create a Workbook Template

### Final Result:

Your template will act as a letterhead for reports that you execute. Data will start in cell A10 (as indicated by the active cell below) and run down and across the worksheet.



The image shows an Excel spreadsheet template. The columns are labeled A through K, and the rows are labeled 1 through 12. A blue target icon is positioned in the left margin, overlapping columns A and B. The text "My BW Reports" is centered in the upper part of the spreadsheet. A horizontal line is drawn across the spreadsheet at row 9. The cell A10 is highlighted in orange, indicating it is the active cell. A small black rectangle is visible in cell A10, suggesting a data entry point.

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

## Setting a Default Template

Once a template is created and saved to the BW server you must define certain settings within the BEx Analyzer so that your formatted letterhead is loaded before any reports you may execute.

To do so:

1. Using the BW BEx toolbar select the Settings icon → Permanent workbook template...
2. A pop-up window will allow you to choose your workbook template. Navigate to the one you saved earlier and select it. Click **Ok**.
3. Next go back to the BW BEx toolbar and select the Settings icon → New workbook on embed → is based on permanent template.

## **Setting a Default Template**

Now the system is all set. To test out how permanent templates work you will need to execute a Query.

Try the following:

1. Close any open workbooks within the BEx Analyzer.
2. Using the BW BEx toolbar select the Open icon → Queries.
3. A pop-up window will allow you to choose a query to execute. Navigate to any particular one and select it. Click **Ok**.
4. A new workbook will appear with your default template loaded. When the query finishes executing, the results will be displayed below the letterhead.

## Using a Workbook Template

Query output:

	A	B	C	D	E	F	G	H
1	 <p style="text-align: right;"><b>My BW Reports</b></p>							
2								
3								
4								
5								
6								
7								
8								
9								
10	<b>Truck Sales</b>							
11								
12	<b>Key Figures</b>							
13	<b>Controlling Area</b>							
14	<b>Truck Type</b>							
15	<b>Payment Type</b>							
16	<b>Billing Indicator</b>							
17								
18	<b>Cost Center</b>	<b>Truck Type</b>	<b>Payment Type</b>	<b>Billing Indicator</b>	<b>Amount</b>			
19	A100	CAB001	USD	X	315304.34			
20	B100	CAB001	EURO	#	84968.31			
21	C100	CAB001	USD	#	0.00			
22	D100	CAB001	USD	#	21938564.34			
23	D150	CAB002	EURO	X	1123945.35			
24	D200	CAB002	EURO	#	5700.00			

## **Sets of Reports**

Creating custom templates and inserting a query allows you to dictate the look and feel of your reports to match current corporate standards or to create a new style going forward.

Another key feature of workbooks is the ability to embed more than one query onto a single worksheet. This is usually best for small queries with known dimensions.

Inserting multiple queries onto a single worksheet or placing individual queries on separate worksheets allows a family or reports to be contained within a single Excel file.

## **Sets of Reports**

The process to insert an additional query is the same regardless of whether the intended destination is the same worksheet or a new one.

Try the following:

1. Follow the steps in the previous pages to embed a query onto the first worksheet in an open workbook.
2. To insert an additional query click on a worksheet and choose a cell location for this second query to start from. For the example choose a new worksheet and select cell **A1**.
3. Using the BW BEx toolbar select the Tools icon → Insert query...

## Sets of Reports

4. A pop-up window will allow you to choose a query to execute. Navigate to any particular one and select it. Click **Ok**.

5. When the query result has been retrieved it will be embedded into a different worksheet.

Very quickly you can build a family of reports by repeating these 5 steps and adding additional worksheets to your workbook. To add more worksheet follow the Excel menu path and choose Insert → Worksheet.

This workbook can be saved to either the BW server or your desktop. Upon opening you can have all the queries execute and refresh to ensure new data is always loaded.

## **Auto Refreshing Data**

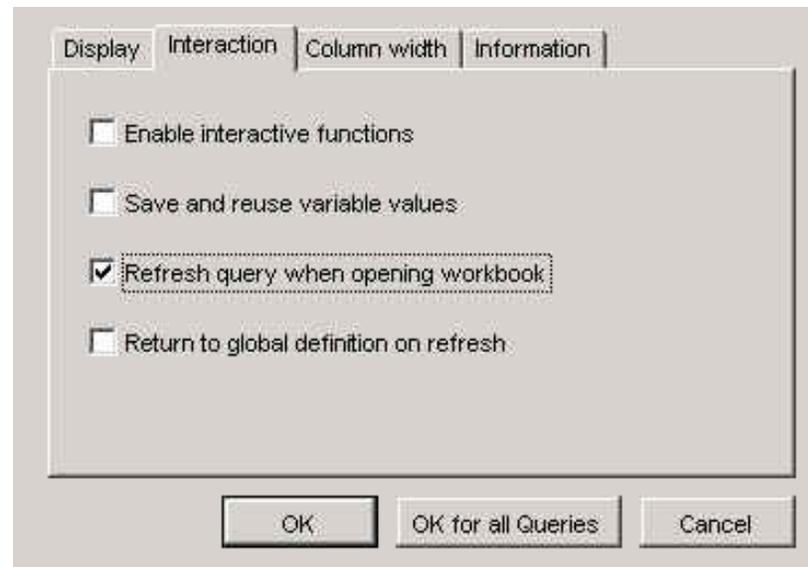
To ensure that all queries in your workbook are refreshed with the most recent data a query property must be checked.

In a workbook with one or more queries do the following:

1. Position the active cell to be within the results area of a query.
2. Using the BW BEx toolbar select the OLAP functions for active cell icon → Properties...
3. On the Interaction tab make sure that “Refresh query when opening workbook” is checked.
4. Repeat steps 1-3 for any additional queries.

### Auto Refreshing Data

The properties of a query allow you to auto refresh the data each time the workbook is opened:



## **Auto Refreshing Data**

Auto refreshing data can benefit a user community by always ensuring that the most recent data is displayed in the results. One downside of using this feature is load time. A family of queries within a workbook may take a long time to completely refresh.

The alternative is to allow your users to refresh queries themselves. Here is another tip to use when manually refreshing queries within a workbook.

1. Position the active cell to be within the results area of a query.
2. Using the BW BEx toolbar select the Refresh icon. The report will be regenerated.
3. Repeat for any additional queries.

## **Auto Refreshing Data**

### **TIP:**

To manually refresh all queries found in a workbook position the active cell outside the results area of a query.

Using the BW BEx toolbar select the Refresh icon.

You will be prompted with a message saying “No query is selected. Do you want to refresh all the queries in the workbook?”. Choose Yes.

The next page illustrates where to place the active cell.

## Auto Refreshing Data

TIP: Position the active cell outside the results area of a query.

	A	B	C	D	E	F	G	H	I
1	 <p style="text-align: center;"><b>My BW Reports</b></p>								
2									
3									
4									
5									
6									
7									
8									
9	<hr/>								
10	<b>Truck Sales</b>								
11									
12	<b>Key Figures</b>								
13	<b>Controlling Area</b>								
14	<b>Truck Type</b>								
15	<b>Payment Type</b>								
16	<b>Billing Indicator</b>								
17									
18	<b>Cost Center</b>	<b>Truck Type</b>	<b>Payment Type</b>	<b>Billing Indicator</b>	<b>Amount</b>				
19	A100	CAB001	USD	X	315304.34				
20	B100	CAB001	EURO	#	84968.31				
21	C100	CAB001	USD	#	0.00				
22	D100	CAB001	USD	#	21938564.34				
23	D150	CAB002	EURO	X	1123945.35				
24	D200	CAB003	EURO	#	5783.00				