

**Volume**

**2**

INTERACTIVE REPORTING

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**Sales Analysis and Reporting Products**

**INTERACTIVE REPORTING**

**VERSION 3.3**

**USERS' MANUAL**

INTERACTIVE REPORTING USER'S GUIDE

INTERACTIVE REPORTING

# Interactive Reporting User's Guide

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**Overview**INTERACTIVE  
REPORTING  
Version**3.3**

## Overview

### *What All the Excitement is About...*

**M**aking the right decisions based on the best information obtainable is critical to the survival of every enterprise. **INTERACTIVE REPORTING** is a revolutionary new and powerful set of tools, designed to enable managers obtain the best data to support their business decisions. **INTERACTIVE REPORTING** applications can generate versatile data reports covering all your company's activities and can be readily exported into other systems.

This manual documents how to get started with **INTERACTIVE REPORTING** and produce precision targeted sales reports within minutes.

The software outlined in this manual will enable you to select the data you want to see and the format in which you want to see it presented. You will be able to drill down into your organisation's data to review all aspects of performance; make comparisons; generate detailed visual displays and reports; compare fields, dates, costs, margins and much, much more.

**INTERACTIVE REPORTING** Version 3.3 has been designed to provide managers with the versatility to look at their organisation's performance in new ways, enabling them to make the absolutely best informed decisions at all times. Whether you want to interpret your sales, stocks, costs, margins, revenues, staff performances or trends, **INTERACTIVE REPORTING** will enable you to make direct and instant comparisons using up to five separate fields which you can select by day, week, month, quarter or year and compare with any period you choose, enabling you to instantly identify every possible trend effecting your organisation's performance.

The following pages will show you how to select, filter, display, report and drill into your organisation's data. We think you will find it surprisingly easy to use, and surprisingly helpful in running your business in the future.

**Steve Collins**

**CEO** INTERACTIVE REPORTING

## Getting started

### *Your Journey Begins...*

To start using INTERACTIVE REPORTING, you'll need to have a **Login Name** and **Password** assigned to you by your system administrator. These will give you access to INTERACTIVE REPORTING and the sales data appropriate to your needs.

**Figure 1**

Simply open your favourite web browser (i.e. Explorer, Firefox etc) and navigate to the INTERACTIVE REPORTING **Login Screen** (your system administrator will give you the URL web address), Figure 1.

Enter the **Login Name** and **Password** that your system administrator has given you, and click '**Login**' (in the above example, user *jbloggs* is signing-in).<sup>1</sup>

<sup>1</sup> [Please note that for the remainder of this Manual our examples will be drawn from an enhanced version of the Microsoft's Northwind Traders sample database.]

Once you have signed-in, you will be taken straight to one of two screens. If you have more than one report available you will be directed to the **'Choose Report'** page, otherwise you will be directed straight to the **'Report Type'** page.

The Company name will be seen on the bottom right corner of the page. This will be present at the same position in every page of INTERACTIVE REPORTING.

The **'IR Links'** sidebar menu provides a list of related links associated with the general use of INTERACTIVE REPORTING:

- The **'IR Website'** link redirects to the INTERACTIVE REPORTING web page.
- The **'User Manual'** link provides access to the online documentation.
- The **'Administration'** link redirects to the administration part of INTERACTIVE REPORTING.

### 1.1 Choose Report

In the **'Choose Report'** section, Figure 2, there is a list of reports for the user to select from. Each report has two links associated with it. This first link is the **Report Name**, for example *Northwind Demo*, which when clicked it directs the user to the wizard pages to generate less complex reports. The second link is the **'Advanced'** text, which directs the user to the advanced report generation page. This step is intended for users who are quite familiar with INTERACTIVE REPORTING and computer systems.

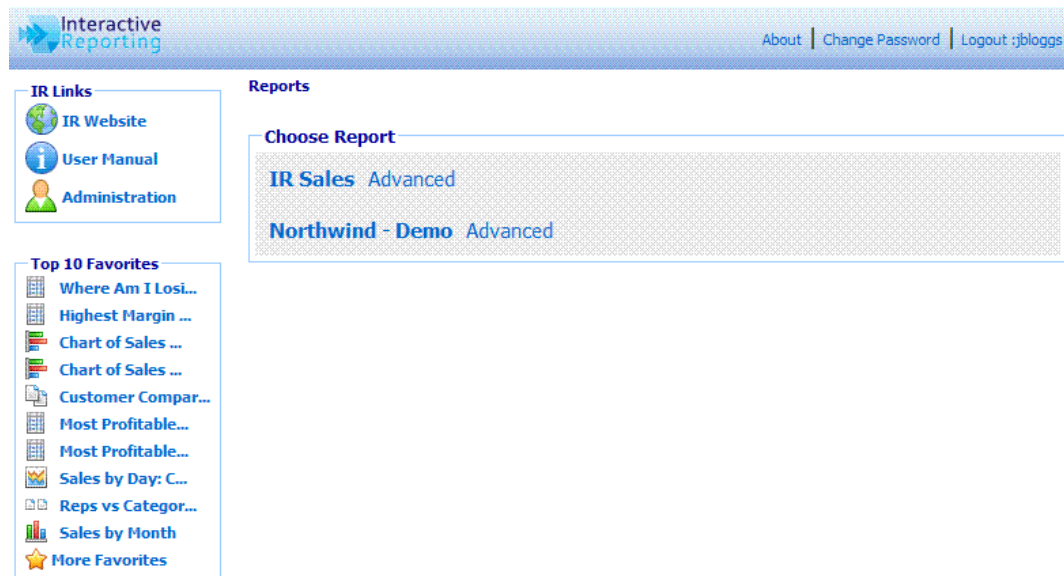


Figure 2

### 1.2 Top 10 Favorites

The **'Top 10 Favorites'** task bar at the left side of the **'Choose Report'** page, Figure 2, allows the user to view directly one of the 10 most popular previously saved reports. More favorites

can be viewed by clicking the **'More Favorites'** link at the bottom of the task bar. This task bar is also available at the wizard and advanced report pages.

### 1.3 About

When the **'About'** link of the upper right corner of the **'Choose Report'** page, Figure 2, is clicked, a popup box appears. This contains two pieces of information, the version of the current INTERACTIVE REPORTING and the date at which this version was created.



Figure 3

### 1.4 Change Password

INTERACTIVE REPORTING provides the facility for a user to change their password without having to contact the System Administrator. To change a password the user must click on the **'Change Password'** link at the top of the **'Choose Report'** page. The user will be then directed to the screen of Figure 4. To change Password, type the current password into the **'Current Password'** box and the new password into the other two boxes. Then press **'Update'**. If the password is incorrect a message will appear with details about which part of the process was not performed properly. Once the procedure has been completed correctly the user is returned to the **'Choose Report'** page, if a selection of reports is available. Otherwise, they are returned to the **'Report Type'** Page.

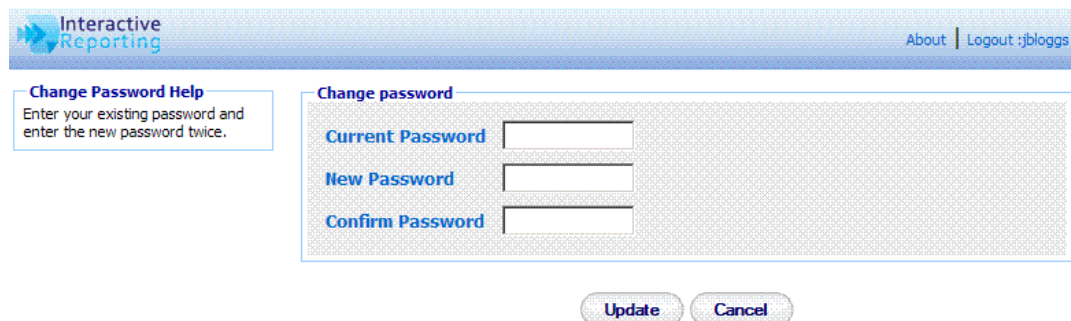


Figure 4



## 1.5 Logout

The **'Logout'** link logs out the current user, whose user name is shown after the semi-colon. In Figure 2 the user's name is *jbloggs*, as can be seen in the top right corner. Once the logout link is pressed the user is directed to the main login screen, Figure 1.

## Generating Wizard Reports

### *Putting Interactive Reporting to Work...*

**I**NTERACTIVE REPORTING provides a simple and easy-to-use *Wizard* interface to access your company's data. It provides a point-and-click means of specifying the sales data you wish to analyse.

#### 2.1 Report Type

The **'Report Type'** page, Figure 5, allows the user to choose from one of six options in generating a report.

- **'Standard Report'** to generate *Analyze by* reports by using the wizard interface.
- **'Chart Report'** to generate *Chart* reports by using the wizard interface.
- **'Visualize Report'** to generate *Google Visualization Gallery* reports by using the wizard interface.
- **'Pivot Report'** to generate *Pivot* reports by using the wizard interface.
- **'Comparison Report'** to generate *Comparison* reports by using the wizard interface.
- **'Advanced Reporting'** to use the more complex INTERACTIVE REPORTING interface for the generation of reports.
- **'View Favorites'** to view and select reports from previously saved favorites.
- **'View Dashboards'** to view and select reports from previously saved dashboards.

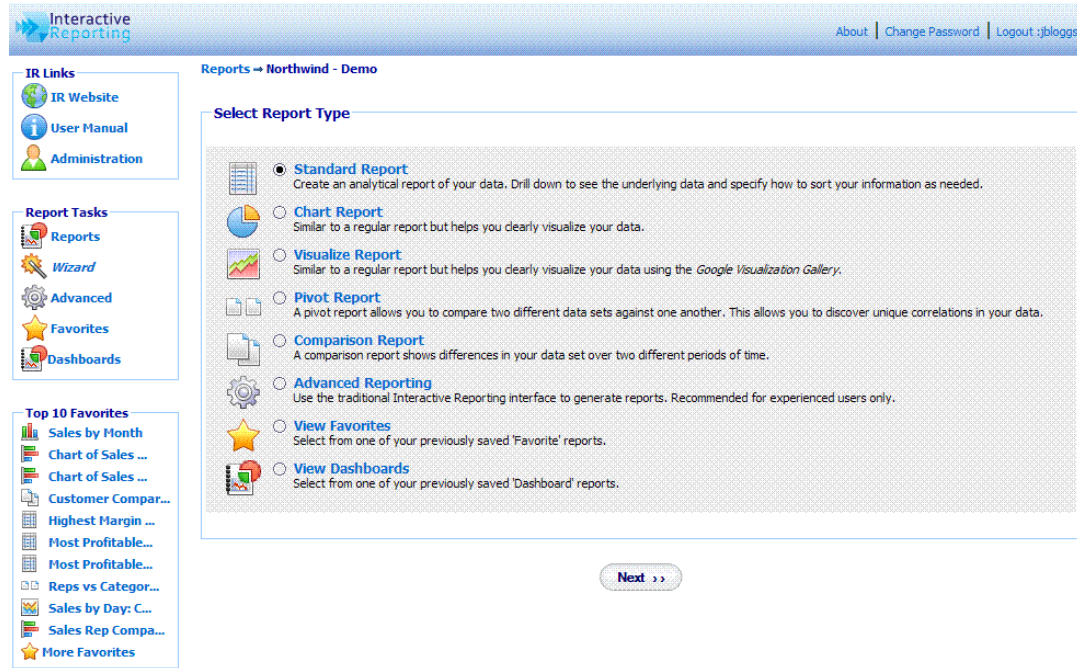


Figure 5

## 2.2 Standard Report

When the ‘Standard Report’ option is selected and the ‘Next’ button clicked the user is directed to the ‘Choose Analysis Report Parameters’ page. As can be seen from Figure 6, a number of options must be selected at this time.

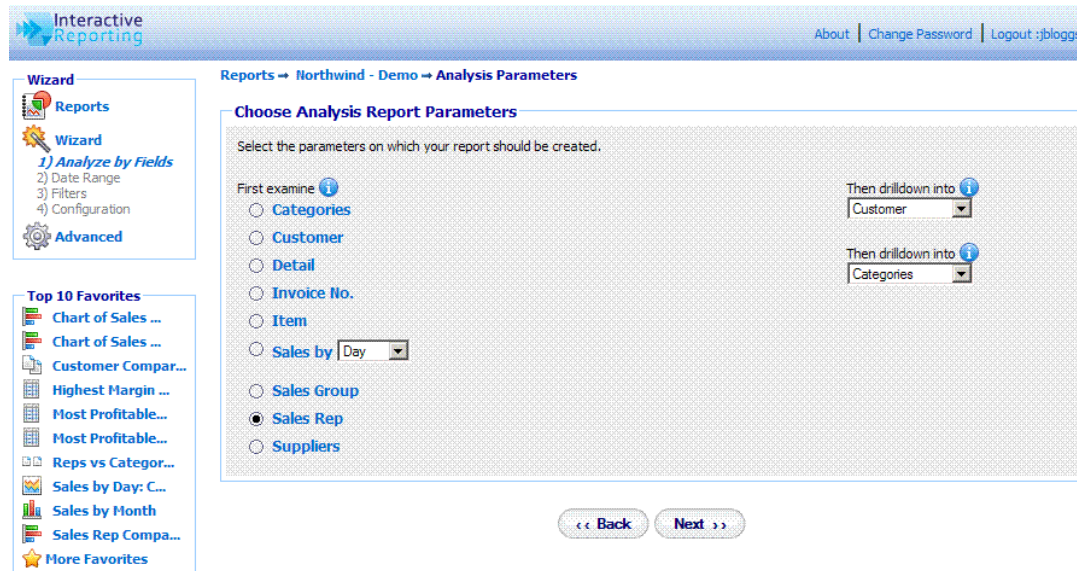


Figure 6

The first option to select is the list on the left side of the screen under the ‘First Examine’ title. This is the value upon which the first level of data is shown when the report is generated. In the above example of Figure 6 the *Sales Rep* has been chosen. This will result in a report on *Sales Rep* data being generated.

The next options to select correspond to the deeper levels of the report. These can be seen on the right side of the page under the heading **'Then drilldown into'**. There will be a list of these dropdown boxes to select from, their level within the report being reflected by their position from the top of the page. In the above example the second Level option is set to *Customer* and the third level option is set to *Categories*. When the report is generated the data presented will be for *Sales Rep*. When a specific Sales Rep is selected, say *Davolio*, the data generated will be the customers specific to this Sales Rep. When a specific customer is then selected, such as *Ernst Handel*, the data generated for the next level of the report will be the data for the categories supported by the customer *Ernst Handel* whose sales rep is *Davolio*. The customer may have other sales reps but their information will not be included in the report.

The **'Wizard'** sidebar menu offers a list of options to enable the user to navigate between general pages of **INTERACTIVE REPORTING** when setting up the report.

- The **'Report'** link redirects the user to the **'Choose Report'** page of Figure 2.
- The **'Wizard'** list links allows the user to navigate between the various wizard pages. Only links to previously visited wizard pages are activated with all other links being greyed out until the pages are visited.
- The **'Advanced'** link redirects the user to the advanced interface for the report generation.

### 2.3 Choosing the Date Range

The next step in the wizard report generation is to choose the date range from which the data will be extracted, as shown in Figure 7. **INTERACTIVE REPORTING** provides a number of predetermined date ranges that may be chosen from the drop down menu of **'Date Range'**. These include: *Last Year*, *YTD (Year to Date)*, *Last Quarter*, *Yesterday* and many more. If the user would prefer to enter their own specific date range then there are two options available to them. The first is to type the initial and final dates into the **'Start Sales Date'** and **'End Sales Date'** fields, respectively. The second option is to click on the calendar next to the date box and select the dates from there. From this point the user may generate the report by clicking the **'Finish'** button. However, if the user wishes to place more restrictions on the data they wish to view they should click on the **'Next'** button. If the user wishes to make amendments to some of the settings they have already chosen, this may be achieved by either pressing the **'Back'** button or navigating through the **'Wizard'** sidebar menu links.

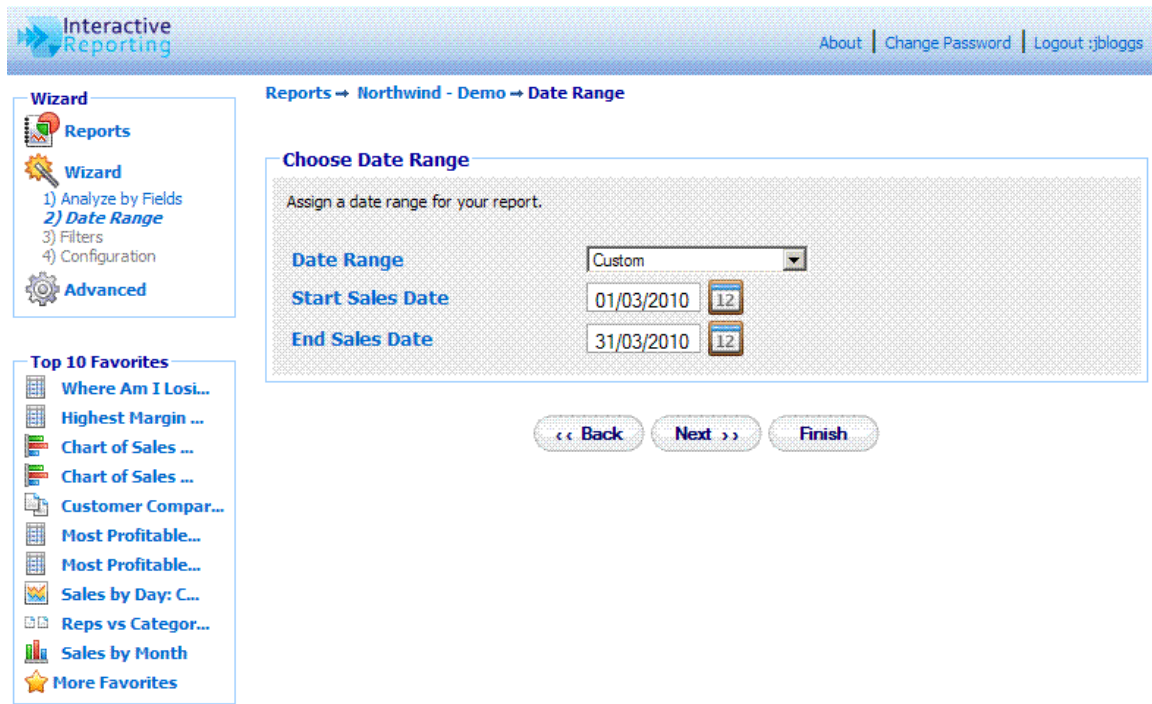


Figure 7

## 2.4 Filtering Data

The next level for the generation of a report is the application of specific filters if required. In Figure 8 the three main types of data selection boxes can be seen: the **multi-select combo box**, the **single-select combo box** and the **text box**. The **Item** filter is a multi-select combo box, which allows the user to select multiple items from the scrollable item list. To select multiple filter values hold down the **CTRL** key when making the selections. The second option available is the single select combo-box. An example of this is the **Customer** dropdown list. Only one filter value (i.e. how you choose to select or **'Filter'** the data) may be selected from this list at a time. The final option is the text box, e.g. the **Invoice No.** Filter. To make a selection from this option simply type the filter value of request into the text box. If this box is left blank then all the values of this field will be included in the report. To reset any filter selections the user can click the **'Reset'** link at the top right corner of the filters page.

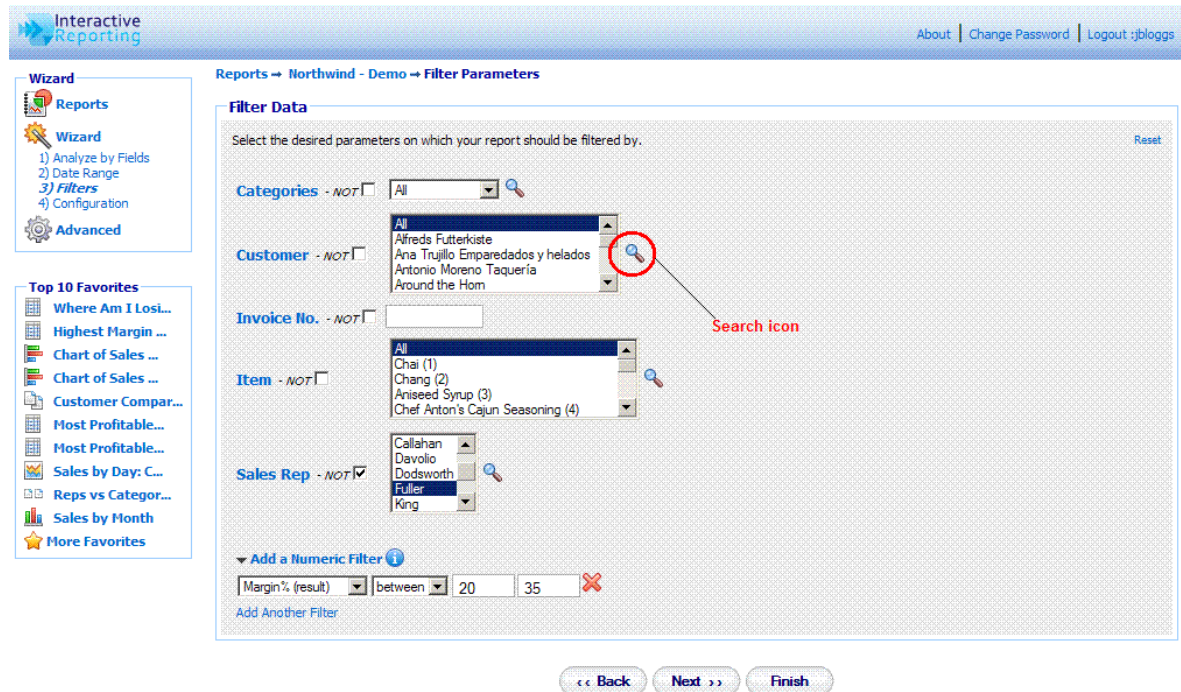


Figure 8

## 2.5 Not Filter

The **'Not Filter'** allows the user to conduct an analysis excluding specific elements of a filter. In Figure 8 we can see that Sales Rep *Fuller* will be excluded from any report generated.

## 2.6 Search

Another method for selecting which data to place in the reports is to click on the **Magnifying Glass** next to the filter types, or **'Search Icon'**, as can be seen in Figure 8. Then a new window appears shown on Figure 9. In this example the search box for the *Item* is shown. As *Item* is a multi-select box the **'>>'** and **'<<'** buttons are present, in addition to the single selection **'>'** and **'<'** ones, which allow for multi selections and removals. To order the filter values click double click the column headings. To select a filter value that should be included

in the report, either highlight it in the **'Search Results'** section and click the relevant arrow button, or double click it. For example, highlight *Aniseed Syrup* and then click the **'>'** button. The filter values displayed in the **'Search Results'** or in the **'Selection'** section are ordered by **'First Column'**, **'Code'**, or **'Description'** depending on the choice made for the filter ordering in the Administration system settings or mapping preferences. **'First Column'** means that the filter values will be sorted by the first column of the tables. By **'Code'** or by **'Description'** means that the filter values present will be sorted by the mapped key or mapped description values, respectively. Clicking on the column headings will also allow the user to change the order of the filter values in the search popup window.

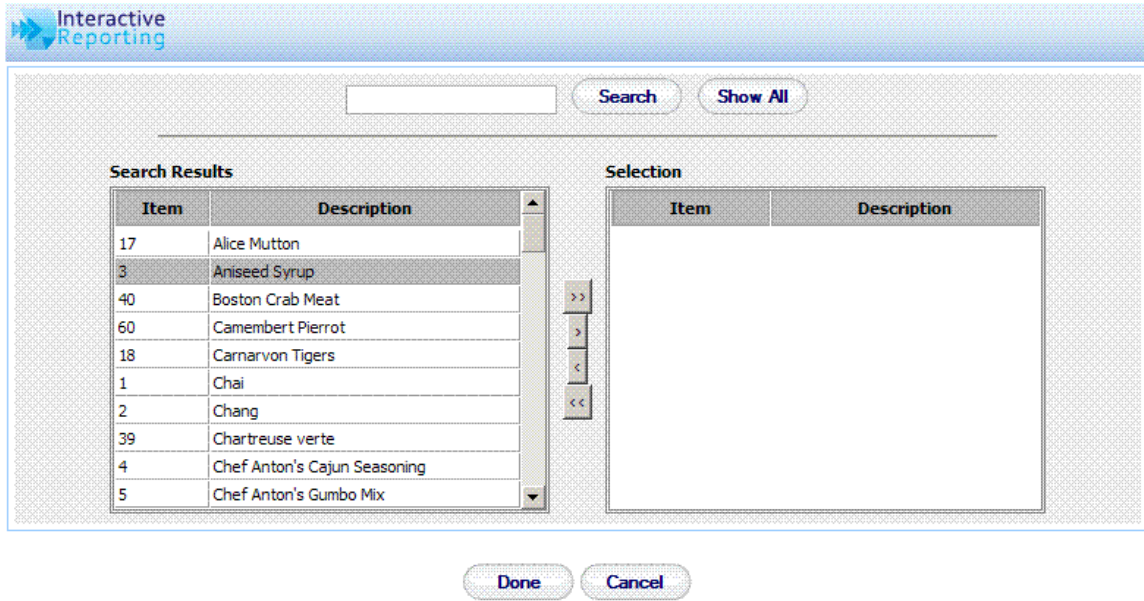


Figure 9

If the search results list contains more than 1000 values, then a paging option is enabled in the filter popup page, as shown in Figure 10. To navigate between the different Search Results pages the user must click the Left/Right paging buttons to move up and down by one page or to go to the first or last page. A message displaying which numbers of rows are currently viewed will be displayed at the top of the filter tables. Note, however, that the filters paging option is not supported by all databases.

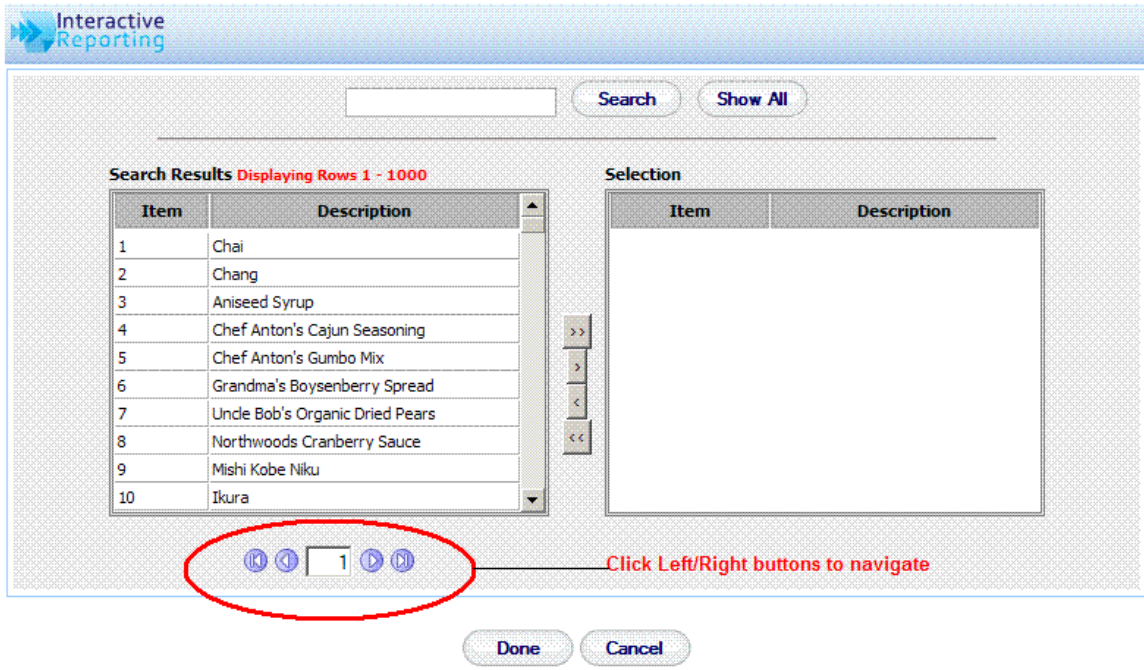


Figure 10

Another option for the case when the search results list contains a large amount of data is to use the search box at the top of the search popup page, as shown in Figures 9 and 10. The user may enter part or all of the value they want into the box and press **'Search'**. For example, typing 'ob' in the search box of *Items* would result in the following appearing in the **'Search Results'** section: *Uncle Bob's Organic Dried Pears* and *Mishi Kobe Nikku*. To view the full range of values again click the **'Show All'** button. Once the selection has been made, click the **'Done'** button. When the user returns to the filter page they will see the selected values highlighted.

### 2.7 Add Numeric Filter

By clicking the **'Add a Numeric Filter'** link, as shown in the bottom part of the filters page, Figure 8, another section for filter selection appears, which corresponds to filtering any numeric fields that are relevant to the reports. This section contains a select list with all the source and result numeric fields that are used to generate the reports. Next to it there is a select list of options such as '>', '>=', '=' etc. Finally there is a text box in which the user can enter the value of the filter they wish. If the *between* option is chosen from the second list, two text boxes appear, one should hold the first value and the other the second value of the range that the user wishes to see data for. For example, a user can select to view only data with margin between 20% and 35%. In this case only data whose margin value corresponds to this range appear at the report. The user has the option to add more numeric fields by clicking the **'Add Another Link'**. Up to 5 numeric filters can be added for a report generation. If the user wishes to remove any of these filters, they can click the delete icon next to the filter options.



## 2.8 Choose Report Configuration

The final section of the report wizard is choosing the report configuration, Figure 11. This contains four segments: 'Order By', 'Group By', 'View By', 'Properties' and 'Customize Look and Feel'.

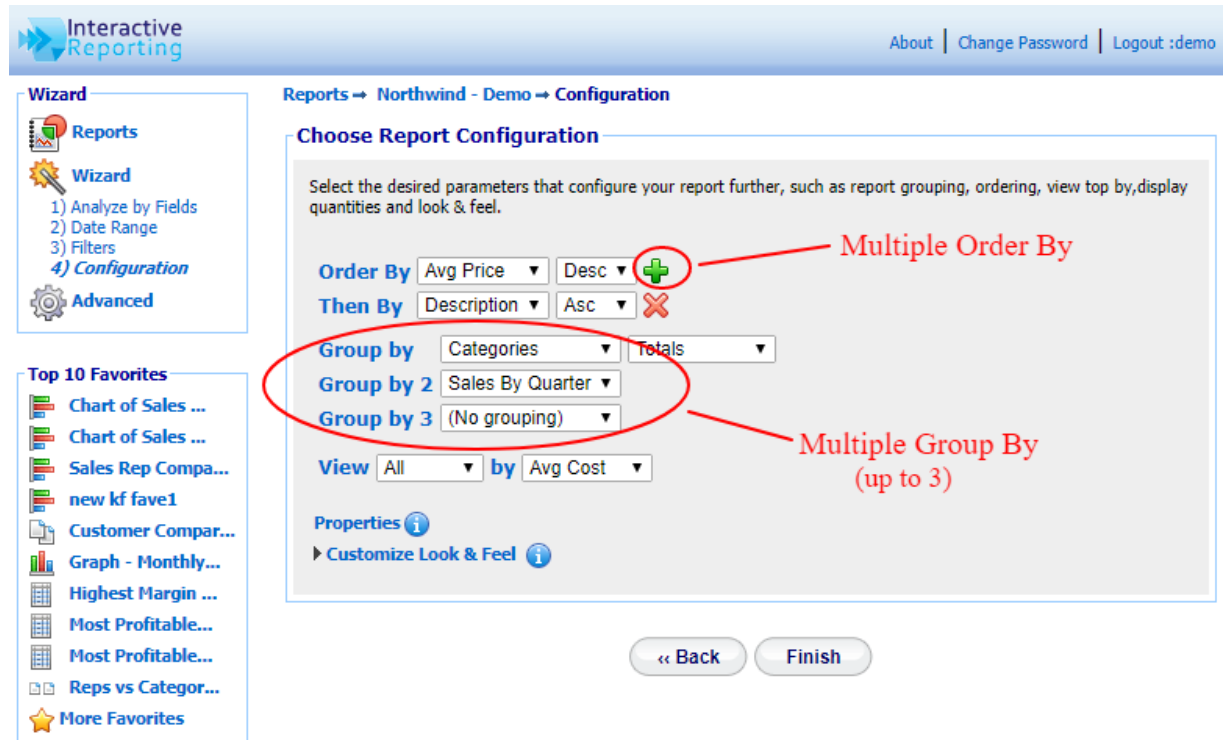


Figure 11

The 'Order By' option specifies the manner in which a report should be ordered. For example, the sales data for *Sales Reps* can be ordered on *Avg Price*. When the report is generated the *Sales Reps* will be listed in order of the highest *Avg Price*. Please note that this does not apply to grouped charts, pivot or comparison charts. The user can have up to 3 'Order by' fields, by clicking the plus icon next to the 'Order by' options. Then a new order by field appears. To remove the extra order by options the user must click the delete icon next to the additional order by field.

Using the 'Group By' option, up to three variables can be selected by which a report is to be grouped. For example, the sales data for *Sales Reps* can show totals per Category, then further divided into quarterly segments by selecting *Sales by Quarter* from the second Group By drop down menu.

Also, the way the grouped report data should be displayed can be selected. Data can be viewed with either the group values shown in individual columns by selecting the 'Cols' option, or with subgroups separated by the group totals by selecting the option 'Totals'. Alternatively, totals can be displayed above each Grouping (rather than below) by selecting 'Totals on Top'.

The **'View By'** option specifies a selection of data to be visible at a report. The **'View'** list contains several options,

- **All** - to select all the data
- **Top 5-100** - to select the top 5-100 results
- **Bottom 5-100** - to select the bottom 5-100 results

The associate **'By'** field is the value upon which the Top/Bottom option is chosen.

The **'Properties'** link when clicked opens a new window with more options that can be applied to the way the data are displayed, see Figure 12. The user can select how the data should be displayed in the table, horizontally with the labels shown in rows and the data in columns or vertically with the labels in columns and the data in rows. The user can select whether to show/hide the **'Grand Total'** row, or whether they would only like to view only totals by hiding the **'Report Rows'**. They can select to show/hide the **'Group Subtotals'** in grouped reports. They can select to show/hide the **'Other Row'** when viewing a Top/Bottom report, and select whether to show/hide rows which contain only zeros. And they can select to **'Suppress'** the report headers when printing or exporting to Excel. Clicking the **'Reset to Current'** link will reset the properties selection to whatever choices were present when the properties popup window opened. Clicking the **'Reset to Default'** link will reset the properties to their default values as set in the system preferences on the administration side.

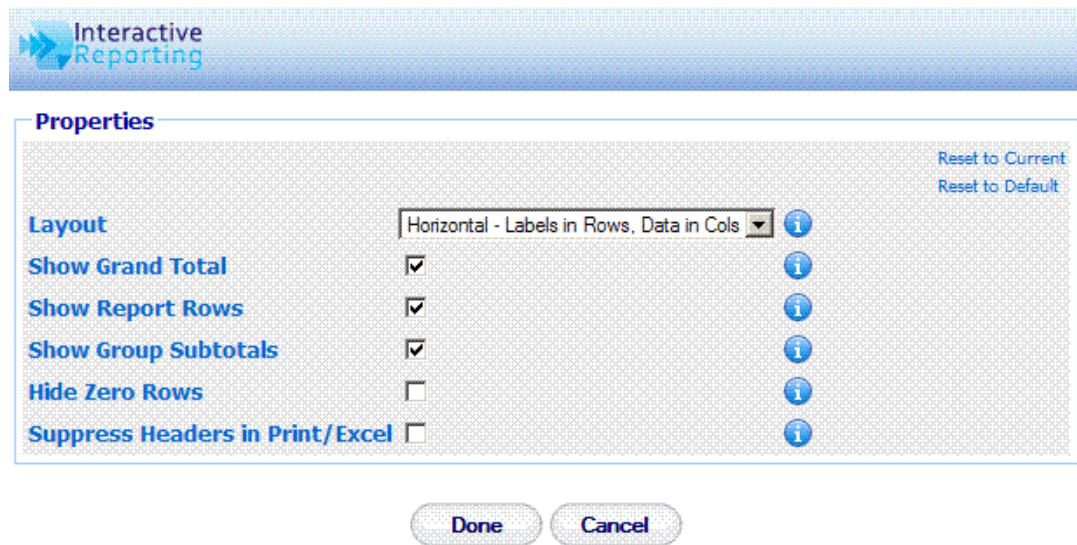


Figure 12

The **'Customize Look and Feel'** link in Figure 11 when clicked, allows the user to format the appearance of the report, by selecting the Font family, the Font size and colour. The width of the table can also be selected. The **'Show in Page'** setting provides a selection of options with respect to how many data should appear on a report page. There are four numeric options, 50, 100, 200 and 500, and two non-numeric options, **'All with scrolling'** and **'All w/o scrolling'**. The numeric options correspond to how many records will appear at a report page. If the report contains more records than this selection, the remaining ones will be shown at subsequent pages, holding the same amount of data. For example, if a user selects to show 100 results per page, a report that contains 360 records will be shown in 4 pages. If the

option 'All with scrolling' is selected the whole set of data will be shown at a scrollable table within the borders of the browser screen. Otherwise, if the 'All w/o scrolling' option is chosen the whole range of data will be shown on the browser window, extending as long as it takes without additional scroll bars.

Figure 13 shows the first level of a report after following a set of selections from the wizard pages, as described above. The following settings have been used to generate this example report:

- **Select Report Type:** Standard Report
- **Choose Analysis Report Parameters:** *First Examine* is set to SalesRep, the top *Then drilldown into* is set to Customer and the final *Then drilldown into* is set to Categories.
- **Choose Date Ranges:** This was set to *Last Year*.
- **Filter Data:** All fields in the filter data were set to *All*, except for *Sales Rep* for which the value *Fuller* has been filter excluded from the report with a NOT filter.
- **Choose Report Configuration:** Group By was set to *Sales by Quarter* while Order By was set to *Avg. Price*.

Rep #	Name	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
8	Callahan	547	€23.08	€28.26	€12,625.50	€15,459.80	€2,834.30	18.33%
4	Peacock	826	€23.19	€24.50	€19,152.45	€20,234.50	€1,082.05	5.35%
1	Davolio	623	€20.67	€23.93	€12,878.15	€14,909.40	€2,031.25	13.62%
6	Suyama	478	€19.80	€20.19	€9,463.10	€9,648.90	€185.80	1.93%
3	Leverling	485	€14.94	€17.15	€7,245.10	€8,317.40	€1,072.30	12.89%
9	Dodsworth	294	€16.53	€16.85	€4,899.90	€4,955.30	€95.80	1.93%
7	King	130	€11.17	€13.92	€1,451.55	€1,810.20	€358.65	19.81%
5	Buchanan	244	€12.66	€12.96	€3,087.90	€3,161.20	€73.30	2.32%
<b>Total(8) Q1 2010</b>		<b>3,627</b>	<b>€19.51</b>	<b>€21.64</b>	<b>€70,763.25</b>	<b>€78,496.70</b>	<b>€7,733.45</b>	<b>9.85%</b>
7	King	355	€44.64	€45.90	€15,845.80	€16,294.60	€448.80	2.75%
5	Buchanan	534	€35.03	€35.21	€18,704.60	€18,804.00	€99.40	0.53%
3	Leverling	455	€20.34	€23.99	€9,256.90	€10,914.40	€1,657.50	15.19%
1	Davolio	997	€22.80	€23.95	€22,728.90	€23,879.60	€1,150.70	4.82%
4	Peacock	1,386	€20.20	€23.72	€27,991.35	€32,880.30	€4,888.95	14.87%
9	Dodsworth	281	€20.04	€22.81	€5,631.60	€6,410.40	€778.80	12.15%
8	Callahan	376	€16.53	€20.48	€6,214.35	€7,701.60	€1,487.25	19.31%
6	Suyama	485	€15.41	€16.66	€7,473.90	€8,082.20	€608.30	7.53%
<b>Total(8) Q2 2010</b>		<b>4,869</b>	<b>€23.38</b>	<b>€25.67</b>	<b>€113,847.40</b>	<b>€124,967.10</b>	<b>€11,119.70</b>	<b>8.90%</b>
7	King	584	€36.56	€36.75	€21,353.80	€21,461.60	€107.80	0.50%
3	Leverling	1,136	€23.28	€26.11	€26,445.60	€29,658.60	€3,213.00	10.83%
4	Peacock	1,754	€22.56	€25.54	€39,567.15	€44,795.20	€5,228.05	11.67%
1	Davolio	747	€17.39	€20.52	€12,993.55	€15,330.10	€2,336.55	15.24%
8	Callahan	1,010	€16.31	€19.08	€16,471.15	€19,271.60	€2,800.45	14.53%

Figure 13

### 2.9 Chart Report

The generation of a Chart report is very similar to that of a Standard report with only two variations. The first is the extra wizard 'Choose Chart Format' page that allows the user to select the type of chart they wish the data to be displayed, as shown in Figure 14. This page

appears after selecting the 'Chart' option from the 'Choose Analysis Report Parameters' page, Figure 6, and contains four charting types. The user simply clicks the chart type they wish for their report display.



Figure 14

The second variation appears at the 'Choose Report Configuration' page, and it is mainly the existence of an extra criterion for selecting the 'Chart Quantity', see Figure 15. This sets the value they wish the data to reflect in their chosen chart. Again the user simply clicks on the desired option to make their selection.

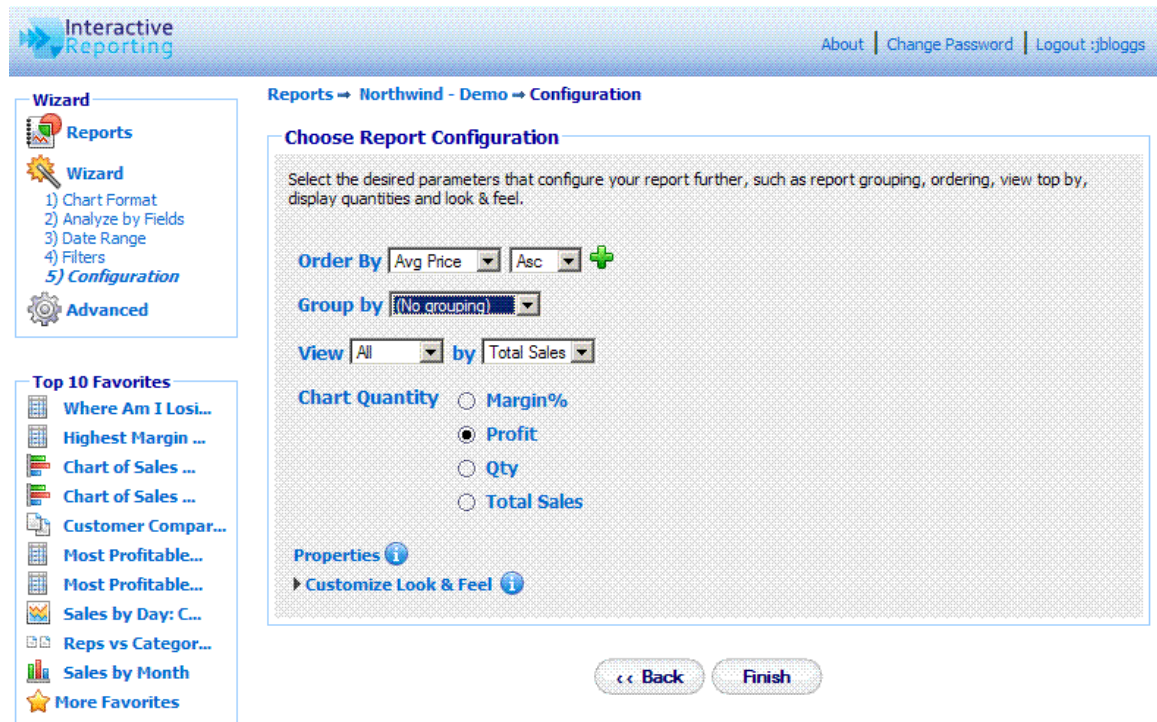


Figure 15

When generating chart reports the **'Properties'** window displays a different set of properties, as shown in Figures 16 and 17. Note that different types of chart reports will have a different set of properties, for example Figure 16 shows the properties associated with a *Pie* chart, and Figure 17 those associated with a *Horizontal* or *Vertical* chart. These sets of properties can greatly enhance the performance of chart reports, as they can allow the user to set the Look & Feel of charts, assign **'Constant'** and **'Average'** lines, adjust **'Min'** and **'Max'** values of the axes and many more. A list of all the chart properties with their description is shown in the Administration Manual.

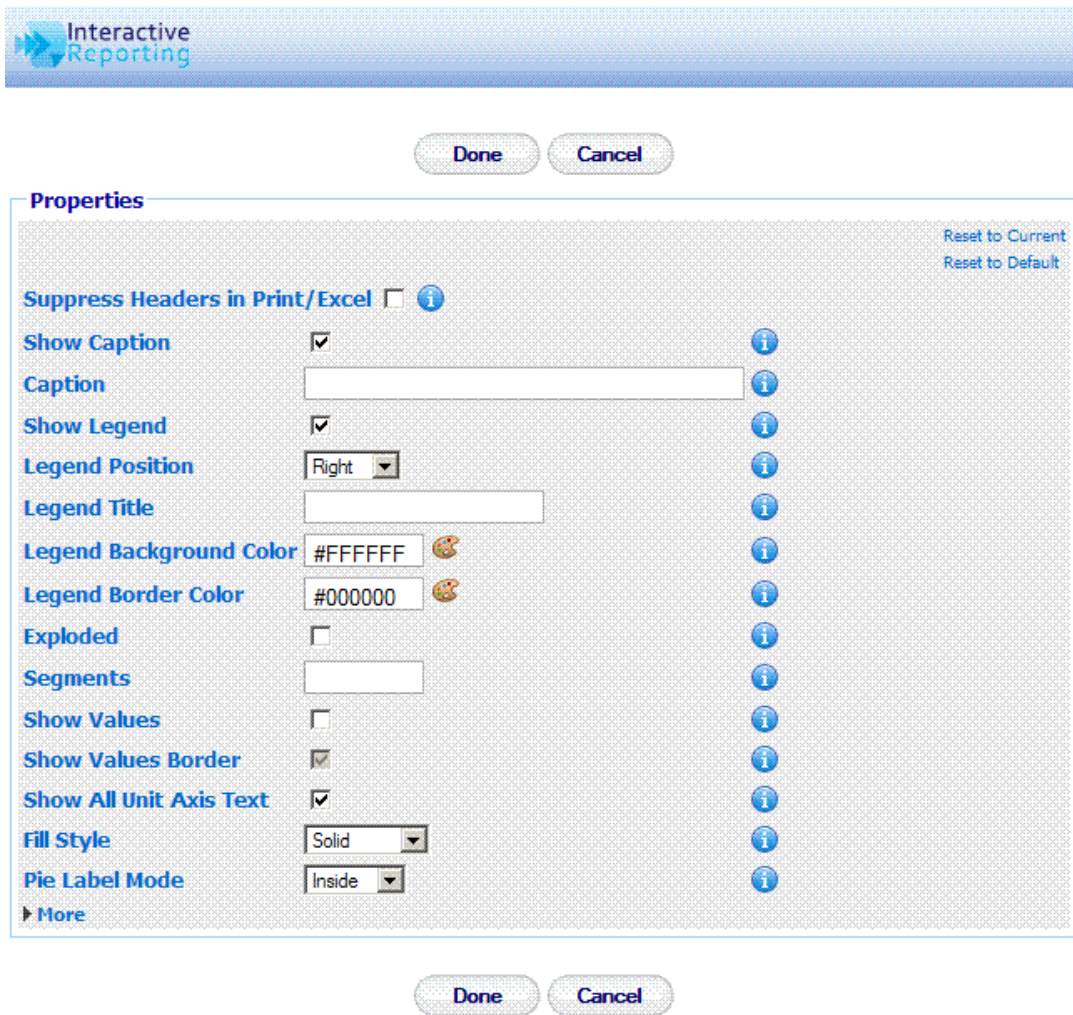


Figure 16

[Reset to Current](#)  
[Reset to Default](#)

<b>Suppress Headers in Print/Excel</b>	<input type="checkbox"/>	
<b>Show Caption</b>	<input checked="" type="checkbox"/>	
<b>Caption</b>	<input type="text"/>	
<b>Show Legend</b>	<input checked="" type="checkbox"/>	
<b>Legend Position</b>	Right	
<b>Legend Title</b>	<input type="text"/>	
<b>Legend Background Color</b>	#FFFFFF	
<b>Legend Border Color</b>	#000000	
<b>Show Values</b>	<input type="checkbox"/>	
<b>Show Values Border</b>	<input checked="" type="checkbox"/>	
<b>Show Constant Line</b>	<input type="checkbox"/>	
<b>Constant Line Value</b>	0	
<b>Constant Line Label</b>	<input type="text"/>	
<b>Constant Line Color</b>	#FF0000	
<b>Constant Line Thickness</b>	3	
<b>Constant Line Style</b>	Solid	
<b>Show Average</b>	<input type="checkbox"/>	
<b>Line Style</b>	Solid	
<b>Line Symbol Type</b>	Circle Filled	
<b>Line Symbol Width</b>	8	
<b>Line Thickness</b>	2	
<b>Show All Unit Axis Text</b>	<input checked="" type="checkbox"/>	
<b>Unit Axis Scale Mode</b>	Auto	
<b>Unit Axis Min Value</b>	0	
<b>Unit Axis Max Value</b>	100	
<b>Axis Label Visibility</b>	Show All	
<b>Series Bar Spacing</b>	10%	
<b>Fill Style</b>	Solid	
<b>Unit Axis Label</b>	<input type="text"/>	

Figure 17

Figure 18 shows a Pie chart report with the Chart quantity set to *Profit*.

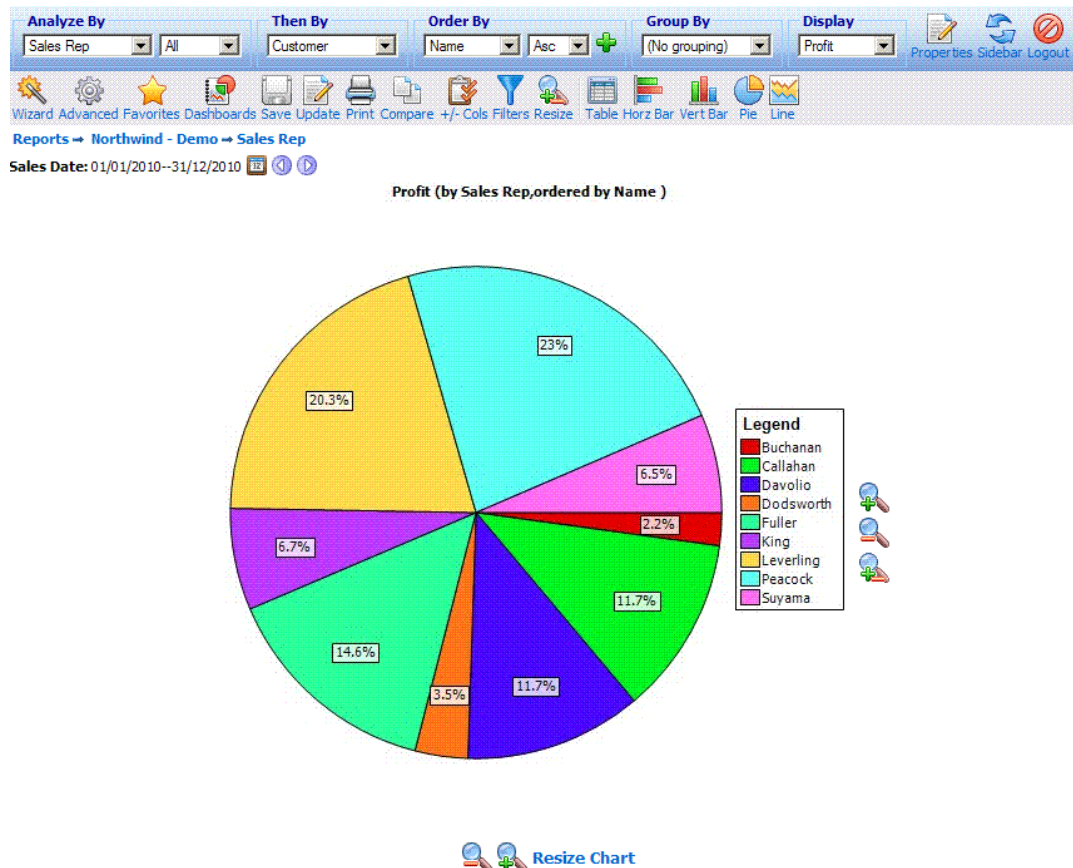


Figure 18

## 2.10 Visualization Report

A Visualization Report provides an alternative and more dynamic way to view graphical representations of data. It is based on the *Google Visualization API*, and can be used to view more complicated charts within the same report page. To generate a Visualization Report the user must first select the **'Visualization'** option in the **'Choose Analysis Report Parameters'** page, Figure 6. In the second page of the wizard for generating Visualization Reports, Figure 19, the user must select which type of Visualization they would like to view. There are 10 different Visualizations that can be generated:

- **'Annotated Time Line'** – this is interactive time series line visualization. It can be used in standard Date reports, or in Date Grouped reports.
- **'Area'** – an area chart visualization. It displays tips when hovering over points. It cannot be used in grouped reports.
- **'Gauge'** – each numeric value of the report is represented as a gauge.
- **'Horizontal'** – a horizontal chart visualization. It displays tips when hovering over bars.
- **'Line'** – a line chart visualization. It displays tips when hovering over points.



- **'Motion'** – a dynamic chart that explores several indicators over time. It can be used only in Date Grouped reports.
- **'Pie'** – a pie chart visualization. It displays tips when hovering over slices. It cannot be used in grouped reports.
- **'Scatter'** – a scatter chart visualization that is used to map correlation between sets of numbers. It cannot be used in grouped reports.
- **'Table'** – a tabular visualization of the data. It can be enhanced by the use of data formatters, like *Arrows*, *Bars*, or *Colours*. It cannot be used in grouped reports.
- **'Vertical'** – a vertical chart visualization. It displays tips when hovering over bars.

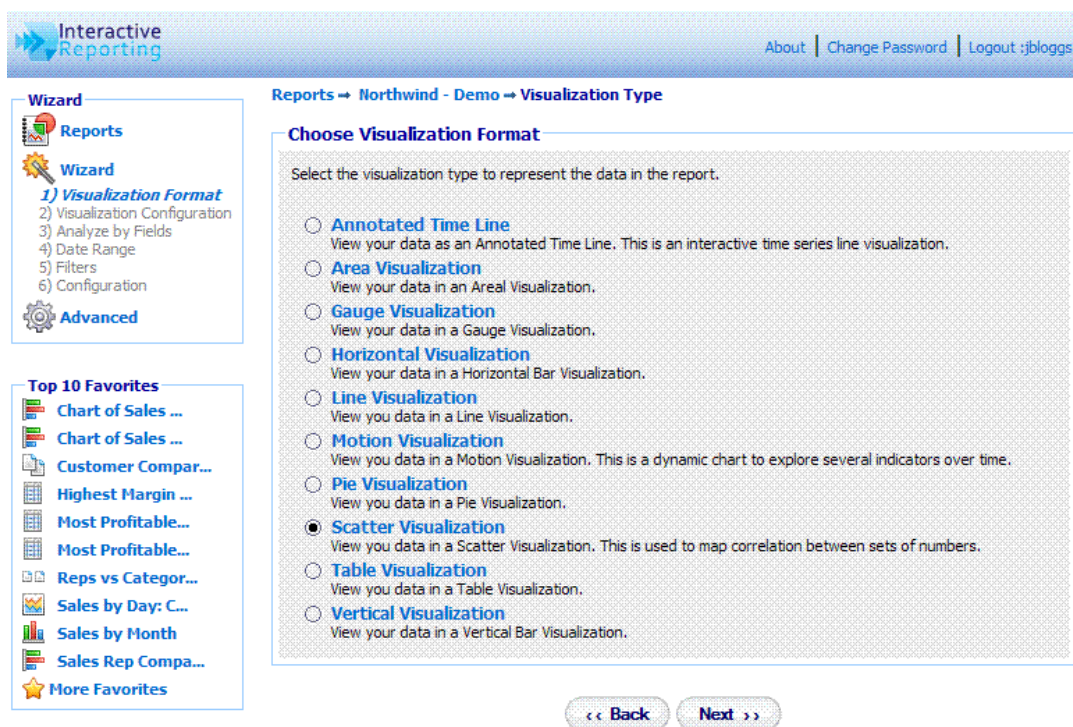


Figure 19

Once the user has selected the type of Visualization Report, they then proceed to the **'Choose Visualization Configuration'** page, Figure 20, to configure the selected Visualization. The user can choose the quantities they would like to view for each visualization, set the horizontal axis quantity for visualizations like *Scatter* and *Motion*, and set the minimum and maximum values required in *Gauges*. The latter can either be a constant value set by the user or it can be arranged by selecting one of the available quantities in the reports. This page offers the option to add additional Visualizations to be viewed within the same report, by clicking the **'Add Another Visualization'** link to include up to 9 Visualizations in a single report. Once the desired set of Visualizations has been selected the user can decide whether they wish to view 1, 2 or 3 Visualizations per Row.

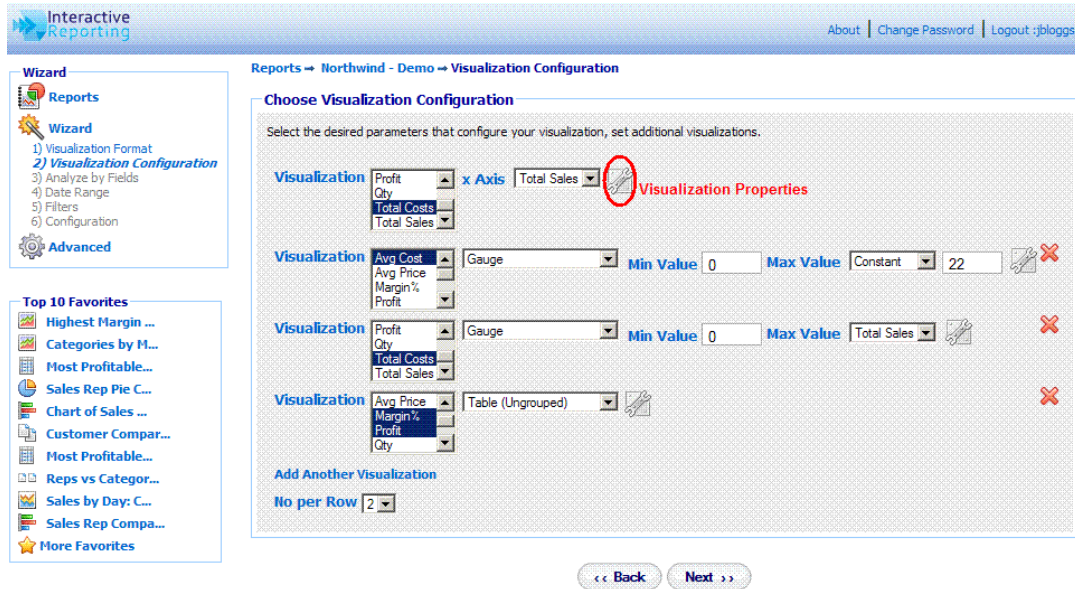


Figure 20

The 'Choose Visualization Configuration' page also allows the user to adjust additional settings for the selected visualization(s), by clicking the 'Visualization Properties' icon., which opens an additional popup window, Figure 21. Each visualization type will display its own set of properties, allowing for additional customisation of the visualization. An extensive list of all the visualization properties is described in the Administration manual. When the user finishes with the configuration of the visualization report, they can then proceed to setting the remaining options of the report as described in Sections 2.2-2.8.

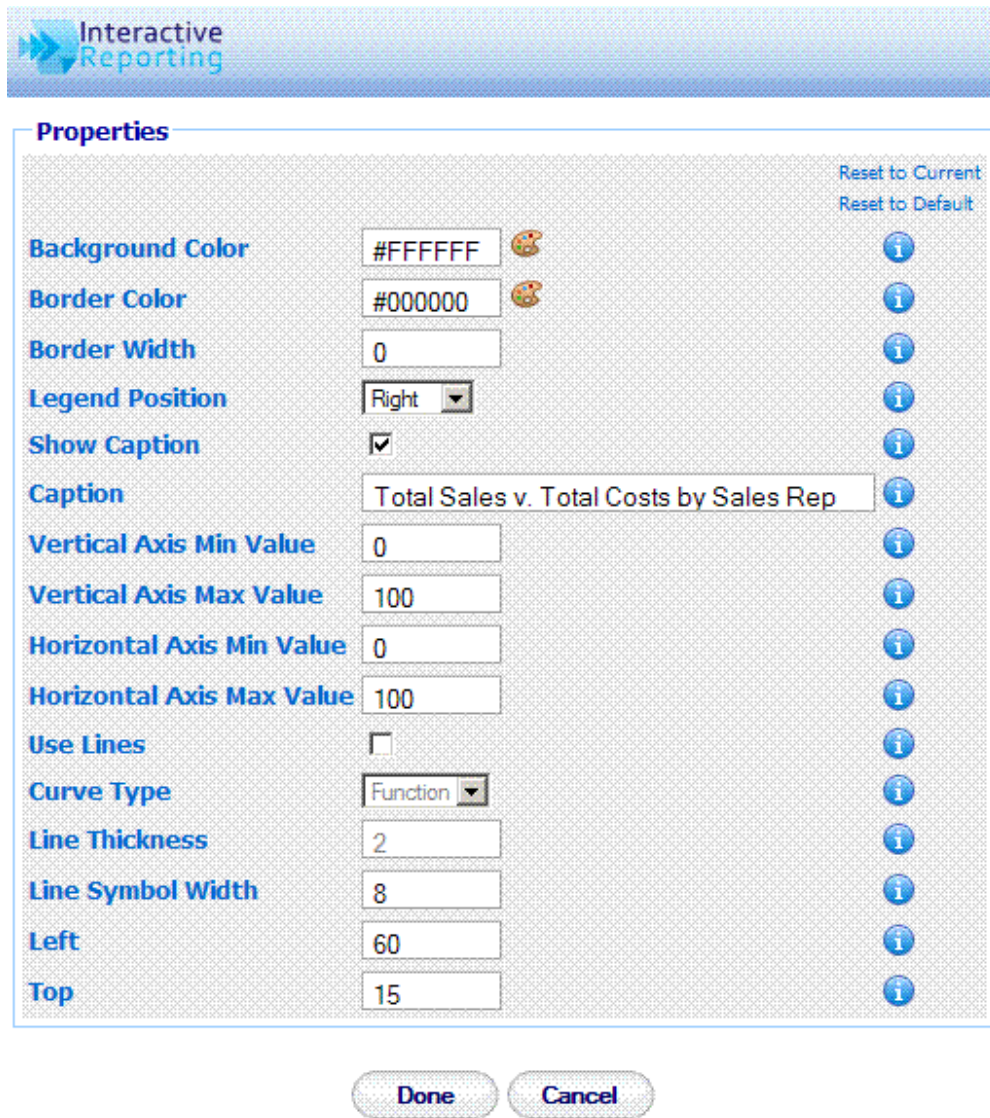


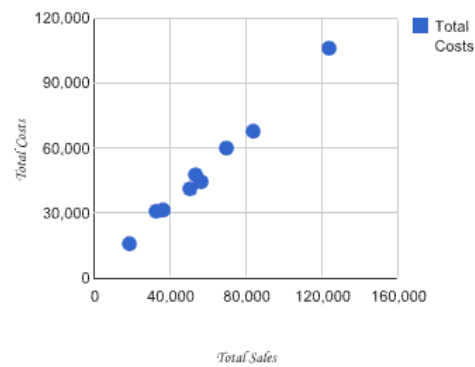
Figure 21

Figure 22 displays a multiple visualization report with 4 visualizations, *Scatter*, *Gauge*, *Area* and *Table*, showing 2 Visualizations per Row, in a report Analyzing by *Sales Rep*.

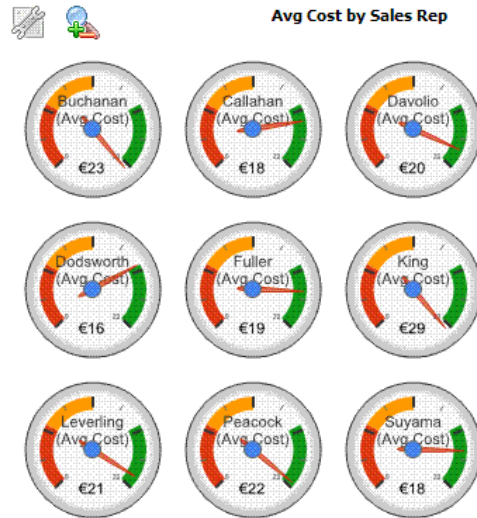
Reports → Northwind - Demo → Sales Rep

Sales Date: 01/01/2010--31/12/2010

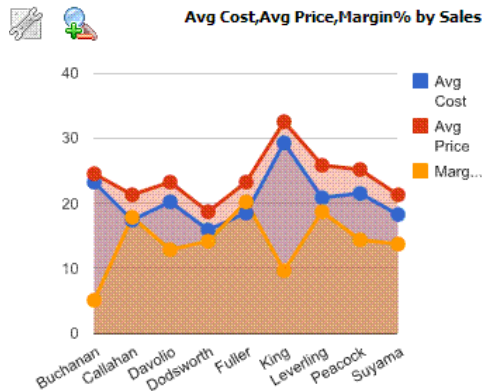
Total Sales v. Total Costs by Sales Rep



Avg Cost by Sales Rep



Avg Cost, Avg Price, Margin% by Sales Rep



Rep #	Sales Rep	Profit	Margin%
5	Buchanan	€1,691.85	5.15%
8	Callahan	€9,133.95	18.04%
1	Davolio	€9,092.55	13.06%
9	Dodsworth	€2,709.70	14.37%
2	Fuller	€11,378.55	20.27%
7	King	€5,217.75	9.77%
3	Leverling	€15,806.30	18.88%
4	Peacock	€17,941.80	14.46%
6	Suyama	€5,046.04	13.82%

Figure 22

### 2.11 Pivot Report

A Pivot Report allows the user to compare two sets of data against one another. This differs from a comparison report where the same set of data is compared over different time periods. To generate a Pivot report the user must first select the 'Pivot' option in the 'Choose Analysis Report Parameters' page, Figure 6. In the second page of the wizard for generating Pivot Reports, Figure 23, the user must decide on the layout for the report, which value shall be displayed along the horizontal and which along the vertical direction. The 'Then drilldown into' option determines the second level of report after a report value is clicked. For example, if the 'Then drilldown into' value is set to *Categories*, when clicking *Buchanan* in the pivot report, all *Categories* for Sales Rep *Buchanan* will be displayed.

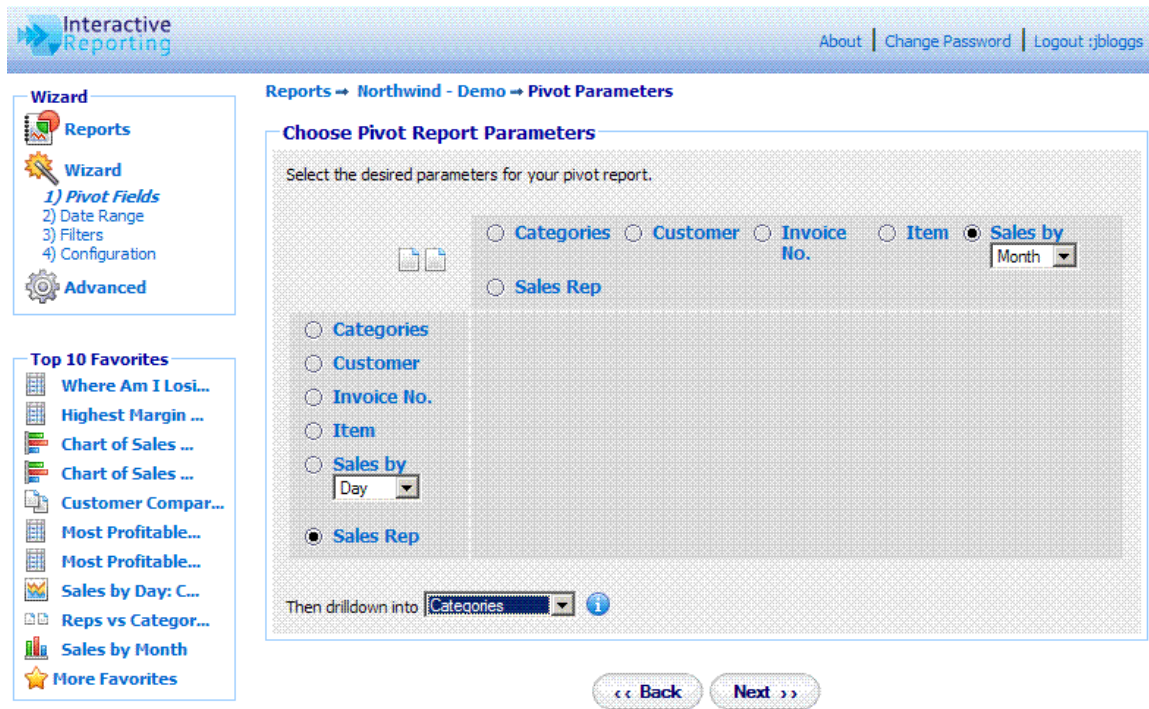


Figure 23

In a similar fashion to the Chart reports, the **'Choose Report Configuration'** page differs from that of the Standard report, in that it contains the option to select for which quantity to view the pivot report, Figure 24. The extra options **'All (H)'** and **'All (V)'** allow the pivot report to be performed on all quantities that are contained in the **'Pivots Quantity'** list. The former option will display each pivot quantity in a separate column, whereas the latter will show all pivot quantities within the same table cell.



Figure 24

Figure 25, shows a pivot report for *Sales Rep vs Sales by Quarter* with all the pivot quantities shown at the report.

Analyze By		Order By	Group By	Display					
Sales Rep	All	Rep #	(No grouping)	All (V)					
Reports → Northwind - Demo → Sales Rep v. Quarter									
Sales Date: 01/01/2010--31/12/2010									
Display: Total Sales, Profit, Margin%									
		Q1 2010	Q2 2010	Q3 2010	Q4 2010	Total			
5	Buchanan	€3,161.20 €73.30 2.32%	€18,804.00 €99.40 0.53%	€2,634.40 -€47.25 -1.79%	€8,252.40 €1,566.40 18.98%	€32,852.00 €1,691.85 5.15%			
8	Callahan	€15,459.80 €2,834.30 18.33%	€7,701.60 €1,487.25 19.31%	€19,271.60 €2,800.45 14.53%	€8,209.15 €2,011.95 24.51%	€50,642.15 €9,133.95 18.04%			
1	Davolio	€14,909.40 €2,031.25 13.62%	€23,879.60 €1,150.70 4.82%	€15,330.10 €2,336.55 15.24%	€15,520.90 €3,574.05 23.03%	€69,640.00 €9,092.55 13.06%			
9	Dodsworth	€4,955.30 €95.80 1.93%	€6,410.40 €778.80 12.15%	€2,979.30 €569.30 19.11%	€4,512.30 €1,265.80 28.05%	€18,857.30 €2,709.70 14.37%			
2	Fuller	€5,940.80 €576.85 9.71%	€16,893.90 €2,908.90 17.22%	€7,639.30 €745.30 9.76%	€25,667.50 €7,147.50 27.85%	€56,141.50 €11,378.55 20.27%			
7	King	€1,810.20 €358.65 19.81%	€16,294.60 €448.80 2.75%	€21,461.60 €107.80 0.50%	€13,830.60 €4,302.50 31.11%	€53,397.00 €5,217.75 9.77%			
3	Leverling	€8,317.40 €1,072.30 12.89%	€10,914.40 €1,657.50 15.19%	€29,658.60 €3,213.00 10.83%	€34,808.75 €9,863.50 28.34%	€83,699.15 €15,806.30 18.88%			
4	Peacock	€20,234.50 €1,082.05 5.35%	€32,880.30 €4,888.95 14.87%	€44,795.20 €5,228.05 11.67%	€26,138.75 €6,742.75 25.80%	€124,048.75 €17,941.80 14.46%			
6	Suyama	€9,648.90 €185.80 1.93%	€8,082.20 €608.30 7.53%	€4,109.80 -€34.60 -0.84%	€14,670.74 €4,286.54 29.22%	€36,511.64 €5,046.04 13.82%			
<b>Grand Total</b>		<b>€84,437.50</b> <b>€8,310.30</b> <b>9.84%</b>	<b>€141,861.00</b> <b>€14,028.60</b> <b>9.89%</b>	<b>€147,879.90</b> <b>€14,918.60</b> <b>10.09%</b>	<b>€151,611.09</b> <b>€40,760.99</b> <b>26.89%</b>	<b>€525,789.49</b> <b>€78,018.49</b> <b>14.84%</b>			

Figure 25

## 2.12 Comparison Report

The Comparison Report is the final report wizard option. This report allows the user to compare data over two (or four) date ranges. To generate a comparison report the user selects the 'Comparison' option from the 'Choose Analysis Report Parameters' page, Figure 6. The user then follows the same set-up format as the standard report with one difference. The 'Choose Date Range' page of Standard report has been replaced by the 'Choose Comparison' page, as can be seen in Figure 26. Here the user is provided with a number of options. First, the user must select the date type for which they wish to create the comparison report. Some reports may offer more than one type of date, e.g. *invoice dates*, *sales date* and *delivery dates*, which can be selected from the 'Compare' list. Second, the user must decide whether they want to compare two or four date ranges. To compare data over four date ranges, the user must click on the 'Advanced' link. The display will change to that of Figure 27. Once the date type and the complexity levels have been decided the user must then enter the desired date ranges. This can be done in exactly the same way as it was described in the date range selection of standard reports, Figure 7.

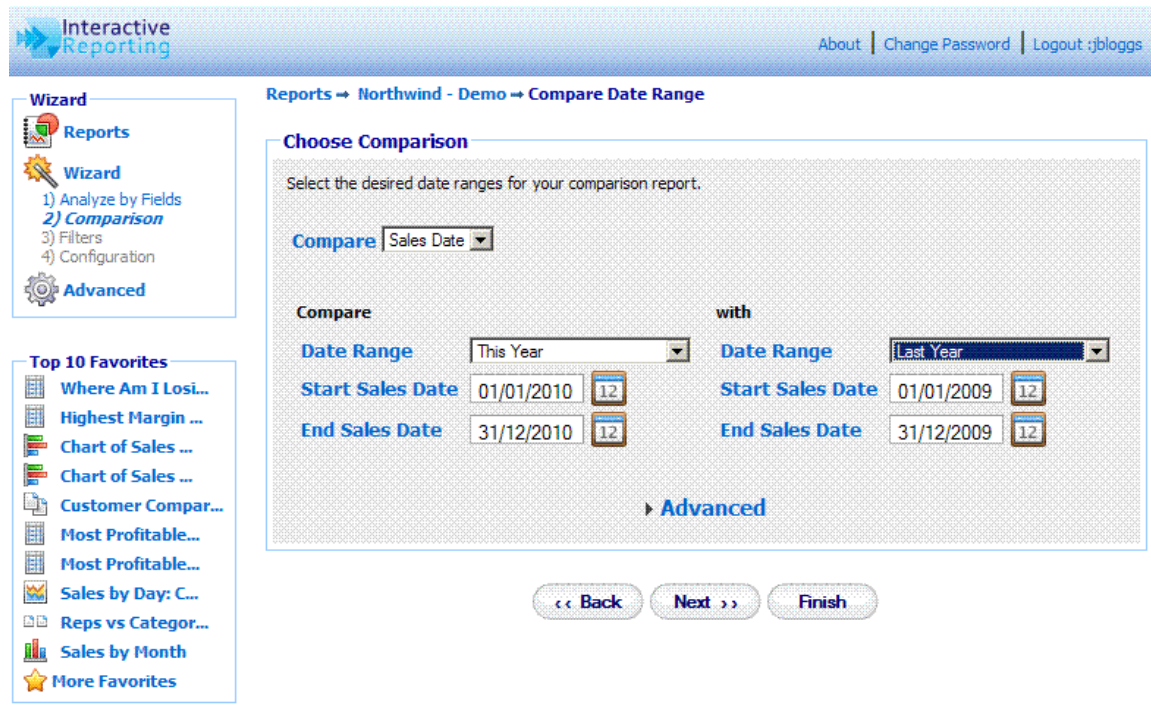


Figure 26

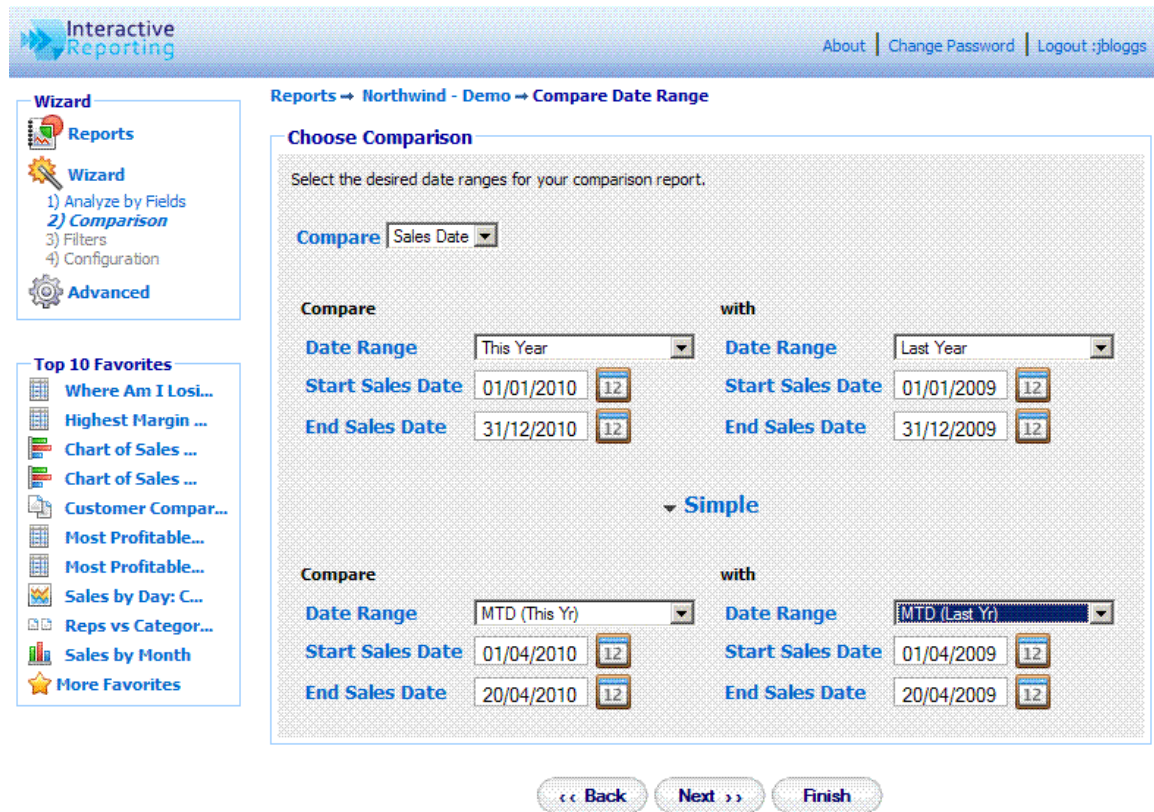


Figure 27

An example of a comparison report is presented in Figure 28. The following report compares the sales figures from each *Sales Rep* between the first and second quarter of 2010.

Rep #	Name	Qty	01/04/2010 -- 30/06/2010			01/01/2010 -- 31/3/2010			Total Sales Var.	Profit Var.	
			Total Sales	Profit	Margin%	Qty	Total Sales	Profit			Margin%
4	Peacock	1,386	€32,880.30	€4,888.95	14.87%	826	€20,234.50	€1,082.05	5.35%	€12,645.80	€3,806.90
1	Davolio	997	€23,879.60	€1,150.70	4.82%	623	€14,909.40	€2,031.25	13.62%	€8,970.20	-€80.55
2	Fuller	804	€16,893.90	€2,908.90	17.22%	281	€5,940.80	€576.85	9.71%	€10,953.10	€2,332.05
5	Buchanan	534	€18,804.00	€99.40	0.53%	244	€3,161.20	€73.30	2.32%	€15,642.80	€26.10
6	Suyama	485	€5,082.20	€608.30	7.53%	478	€9,648.90	€185.80	1.93%	-€1,566.70	€422.50
3	Leverling	455	€10,914.40	€1,657.50	15.19%	485	€8,317.40	€1,072.30	12.89%	€2,597.00	€585.20
8	Callahan	376	€7,701.60	€1,487.25	19.31%	547	€15,459.80	€2,834.30	18.33%	-€7,758.20	-€1,347.05
7	King	355	€16,294.60	€448.80	2.75%	130	€1,810.20	€358.65	19.81%	€14,484.40	€90.15
9	Dodsworth	281	€6,410.40	€778.80	12.15%	294	€4,955.30	€95.80	1.93%	€1,455.10	€683.00
<b>Grand Total (9)</b>		<b>5,673</b>	<b>€141,861.00</b>	<b>€14,028.60</b>	<b>9.89%</b>	<b>3,908</b>	<b>€84,437.50</b>	<b>€8,310.30</b>	<b>9.84%</b>	<b>€57,423.50</b>	<b>€5,718.30</b>

Figure 28

### 2.13 Advanced Reporting

The 'Advanced Reporting' option directs the user to the advanced reporting interface for generating reports. This option refers mainly to users that have greatly familiarized themselves with INTERACTIVE REPORTING and can create their reports from a more compact page than the simple wizard pages. The Advanced Reporting tool is explained in more detail in Chapter 4.



### 2.14 View Favorites

The 'View Favorites' option directs the user to a list of predefined reports, as shown in Figure 29. The list contains all previously saved reports that the user has generated. Any favorite reports that other users have created can also be shown, if they have given access to their favorites to be shared with the current user, for example the favorite *Top Selling Reps* of Figure 29. The current user may choose not to view any shared favorites by clicking on the 'Hide Shared' Link at the top of the Favorites List. When a favorite report is scheduled for emails, a mail icon appears next to the favorite's title. By clicking the 'Edit' icon the user can modify the favorite's options. The current user cannot edit and/or delete any shared favorites from other users. The favorite reports are being displayed according to the categories that have been created, which are listed on the left-hand-side panel called 'Category'. To view which favorite reports belong to each category, the user must click on the category's name. Those saved reports that belong to no category appear in the 'Main' option of the list.

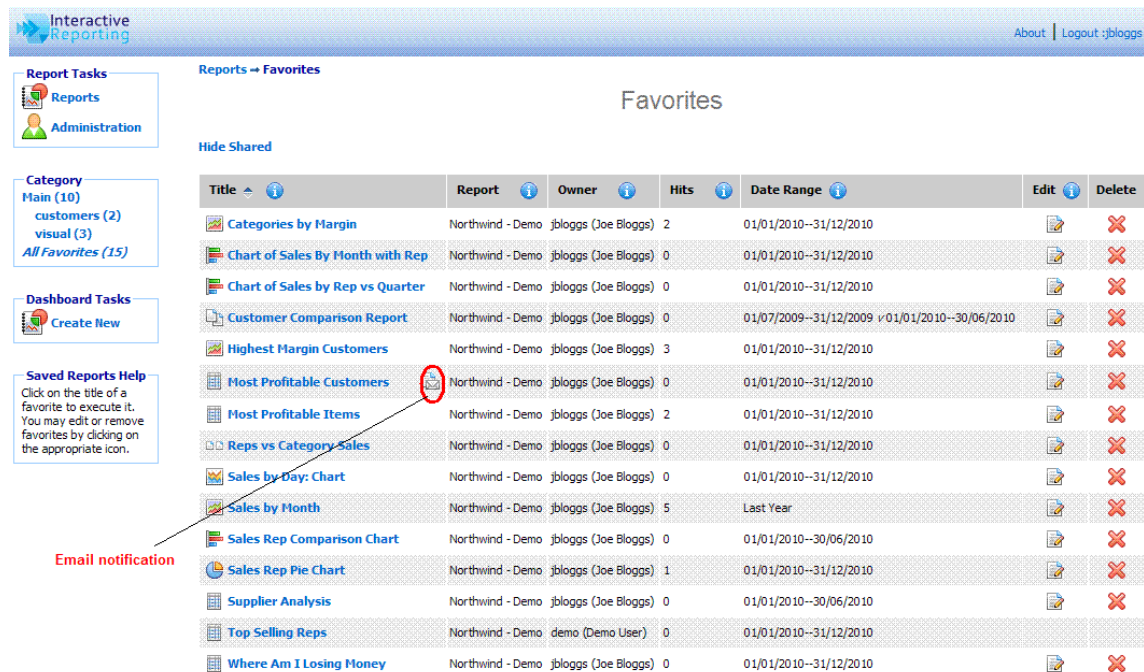


Figure 29

When clicking on the 'Edit' icon the user is directed to a screen as the one shown in Figure 30. When on this page, the user can change the title of the favorite report, schedule it for emails, share the favorite with other user(s) and/or groups, modify its definitions and apply some deeplinking. To schedule emails to be sent to specific email addresses the 'Schedule Email' checkbox must be clicked, and the page changes to the one shown in Figure 31. The user can select how frequently they wish the favorite to be emailed, which can be daily, weekly and which days of the week, monthly and which day of the month. The email address should be typed at the provided text box, with multiple recipients addresses separated by commas. To share a favorite with any other user or groups of users, the user must click the 'Share Favorite' link to see a screen like that of Figure 32. To select the users to share the favorite with, highlight the users of choice and use the appropriate buttons to move them to the 'Shared with' box (multiple and single selections are permitted), or double click on the choices of interest. To modify the favorites definitions the user must click the 'Modify

**Favorite Definitions** link, which directs to an advanced interface page. That page allows the user to change any of the reports variables they wish, such as first, second, etc. levels of drilldown, date ranges, type of report and many more. To apply some deeplinking functionality to the favorite, so that the user can link to **INTERACTIVE REPORTING** from an external page, and provide the required report parameters to be replaced by external values (optional), the user must click on the **'Link'** link to see a screen like that of Figure 33.

By clicking the **'Save'** button the new settings are saved for the favorite and the user is redirected to the **'Favorites'** page.

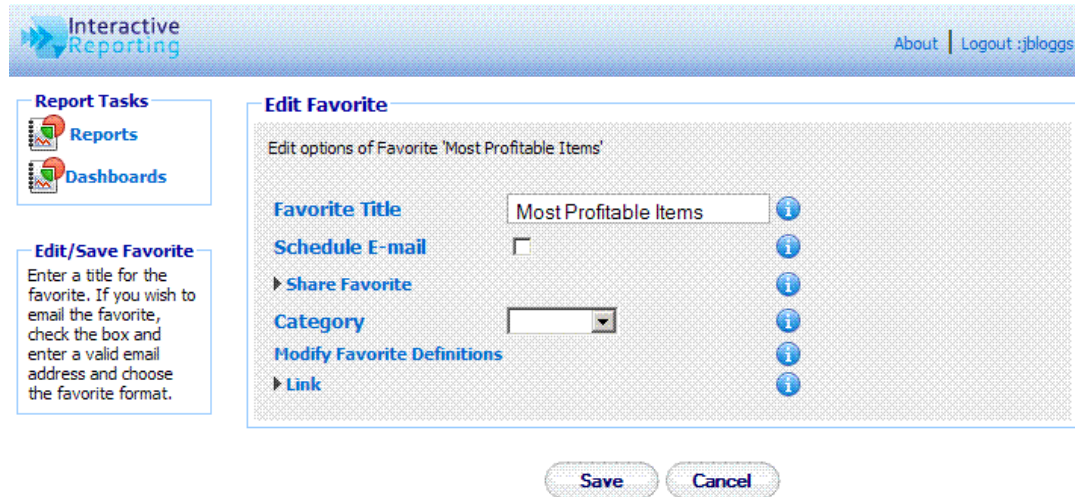


Figure 30

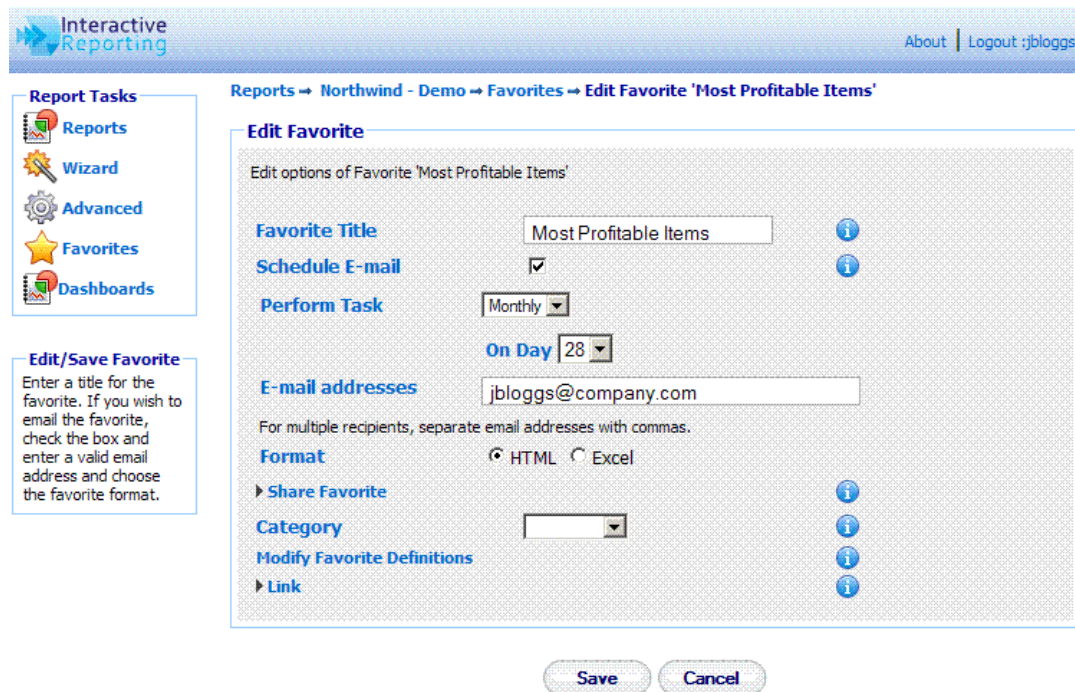


Figure 31

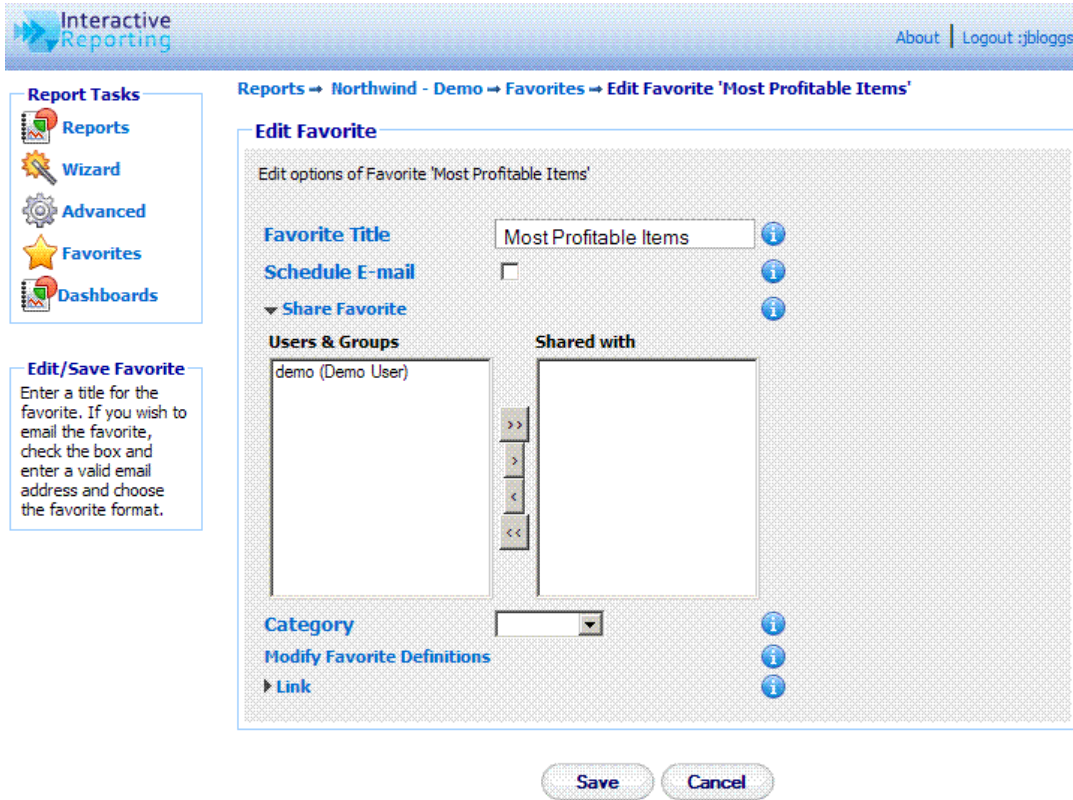


Figure 32

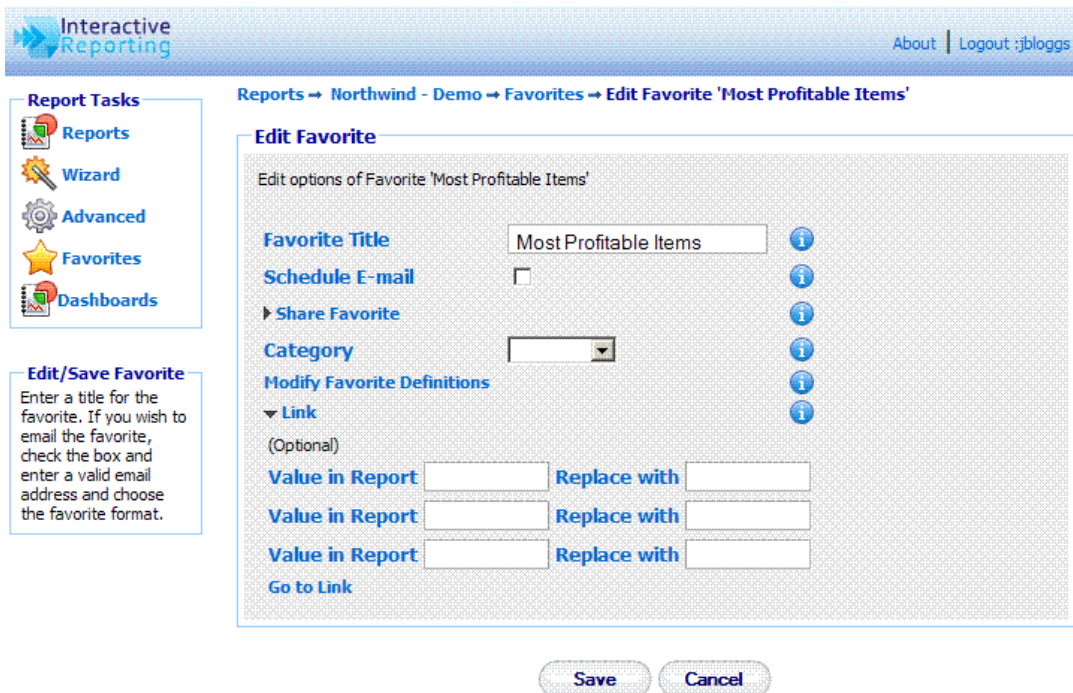


Figure 33

### 2.15 View Dashboards

The **'View Dashboards'** option directs the user to a list of predefined dashboards, as shown in Figure 34, which are located underneath the list of the Favorites. The list contains all previously saved dashboards that the user has generated. Any dashboards that other users have created can also be shown, if they have given access to their dashboards to be shared with the current user, for example the dashboard *Reps Details* of Figure 34. . The current user may choose not to view any shared dashboards by clicking on the **'Hide Shared'** Link at the top of the Dashboards List.

To create a new dashboard or to edit an existing one, the user must click the **'Create a Dashboard'** link of the Dashboard Tasks menu in the left-hand-side panel of the page or the **'Edit'** icon next to the specific dashboard, respectively. The user is then directed to a screen as the one shown in Figure 35. When on this page the user can edit the **'Dashboard Title'**. Then the user must select the dashboard **'Layout'**, to set how the report page should be divided. Each layout type corresponds to a fixed number of reports that can be used for the dashboard. The user can then select which of the Favorite reports they would like to use, by selecting one report from each dropdown list available for the selected layout. To share a dashboard with any other user or groups of users, the user must click the **'Share Dashboard'** link, and continue in a similar fashion as when sharing a favorite. By clicking the **'Save'** button the new dashboard is saved and the user is redirected to the **'Dashboards'** page.

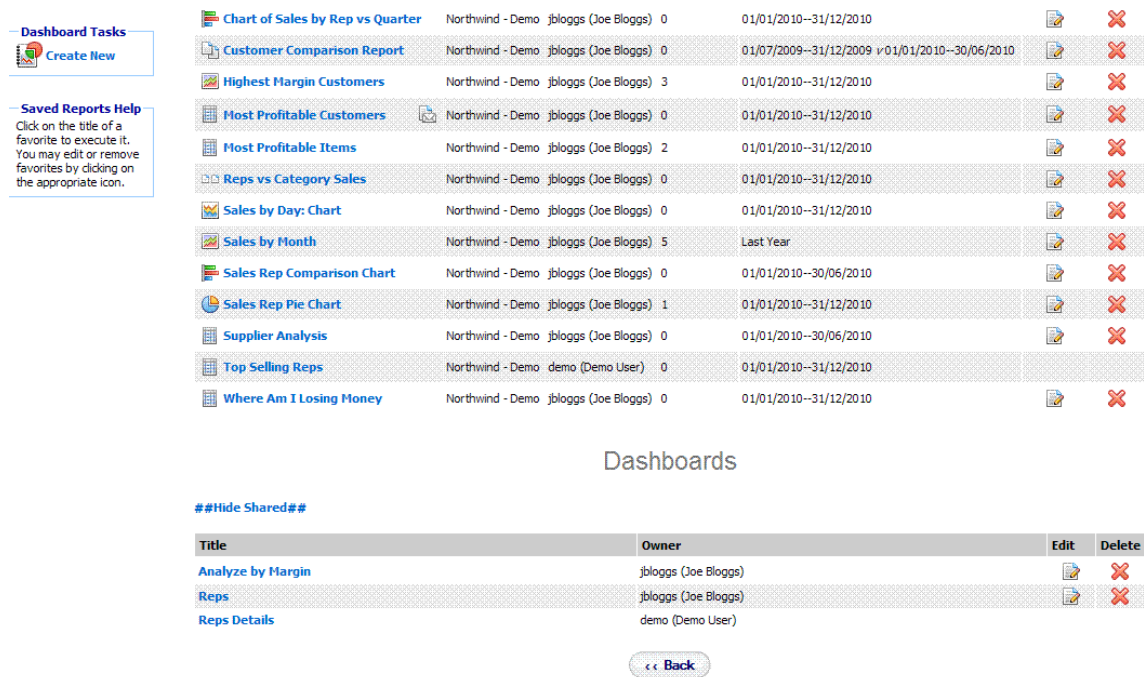


Figure 34

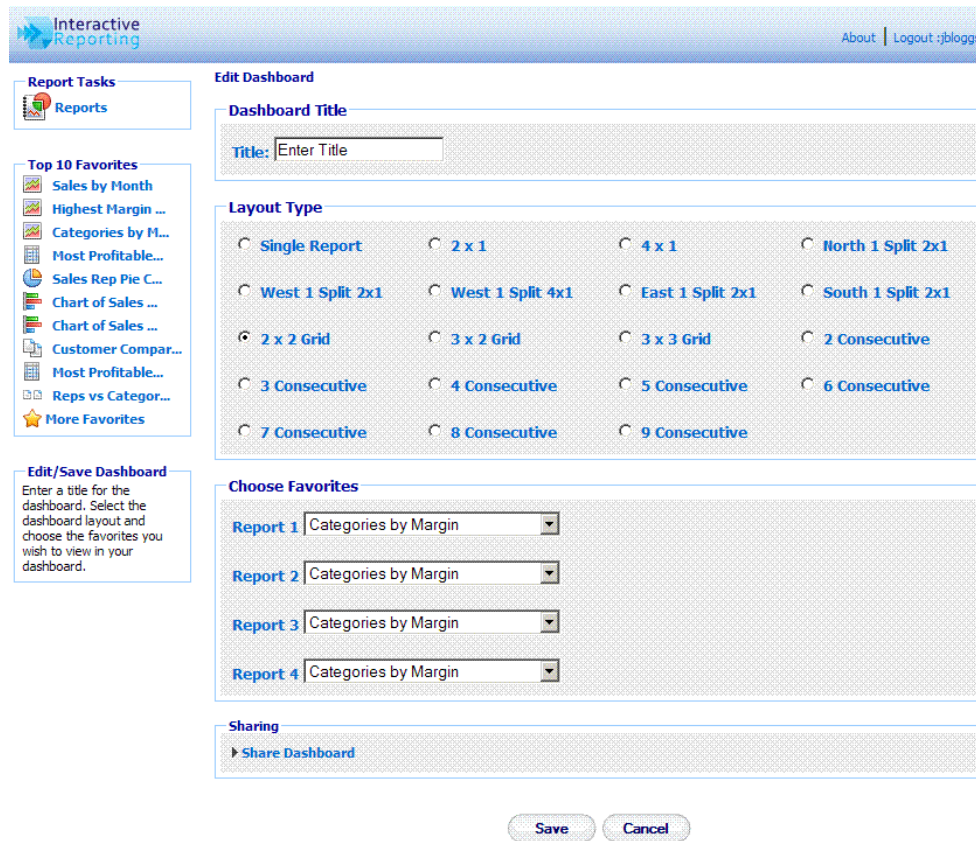


Figure 35

An example of a dashboard report is presented in Figure 36. The dashboard combines information about *Margin%* in different representations, combining visual and tabular reports. Note, also, that the user can switch between different dashboards, by clicking on the required dashboard name, on the tab panel on the top of the page. To return to the main Dashboards list, the user must click the *Back* tab.

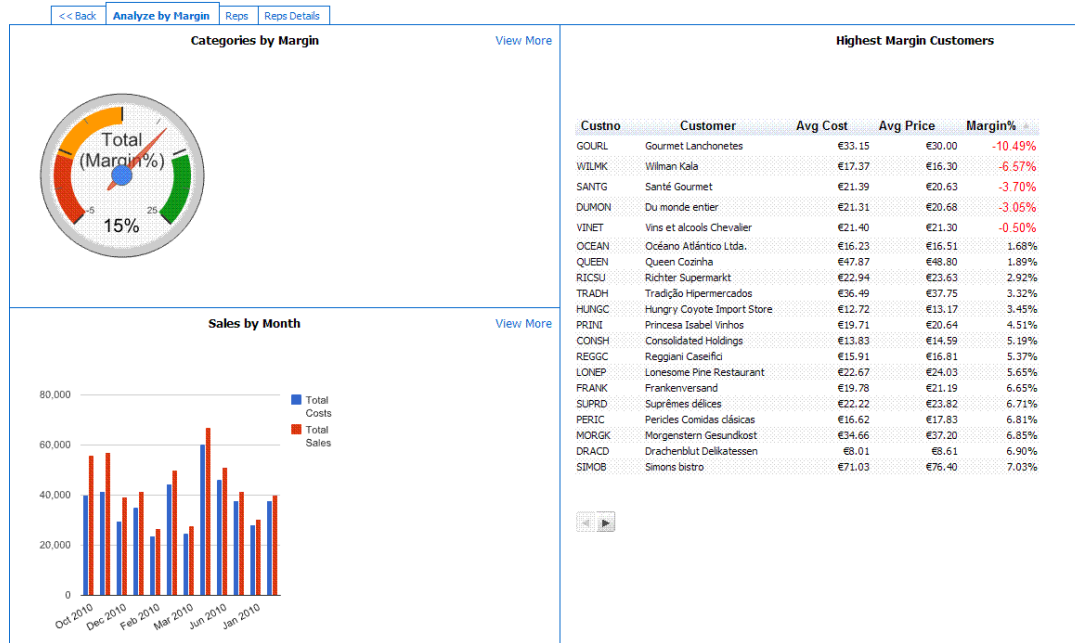
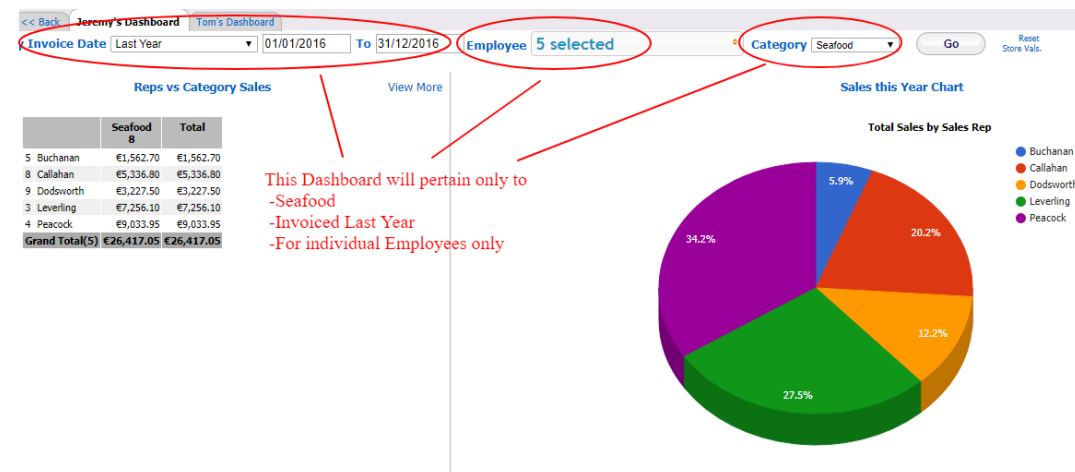


Figure 36

### 2.16 Dashboard Filters

With Dashboard Filters enabled (and set up for user-selection by the Administrator), it is possible to add filters that can redefine data to be displayed in a dashboard. These filters can overwrite those pre-set in the Favorite.

For instance, you may wish to be able to select a date-range for which the Dashboard is applicable –or to be able to alter which group of Employees is being displayed. Or to select an alternative relevant Category that is applicable to data in the Dashboard.



# INTERACTIVE REPORTING USER'S GUIDE

To select which filters can be used in a particular Dashboard, edit an existing Dashboard or create a new one.

**Report Tasks**

- Reports
- Wizard
- Advanced
- Favorites
- Administration

**Dashboard Tasks**

- Create New

**Saved Reports Help**

Click on the title of a favorite to execute it. You may edit or remove favorites by clicking on the appropriate icon.

Reports → Northwind - Demo → Favorites

### Dashboards

Hide Shared

Title	Owner	Edit	Delete
Jeremy's Dashboard	demo (Demo User)		
Tom's Dashboard	demo (Demo User)		

**Favorites**

Hide Shared

Title	Report	Owner	Hits	Date Range	Edit	Delete
Chart of Sales By Month with Rep	Northwind - Demo	demo (Demo User)	7	This Year		
Chart of Sales by Rep vs Quarter	Northwind - Demo	demo (Demo User)	2	This Year		
Customer Comparison Report	Northwind - Demo	demo (Demo User)	0	Last Year v This Year		
Graph - Monthly Sales by Category	Northwind - Demo	demo (Demo User)	0	This Year		
Highest Margin Customers	Northwind - Demo	demo (Demo User)	0	This Year		
Most Profitable Customers	Northwind - Demo	demo (Demo User)	0	This Year		
Most Profitable Items	Northwind - Demo	demo (Demo User)	0	This Year		
Reps vs Category Sales	Northwind - Demo	demo (Demo User)	0	This Year		
Sales by Categories This Year vs Last	Northwind - Demo	demo (Demo User)	0	This Year v Last Year		
Sales by Day: Chart	Northwind - Demo	demo (Demo User)	0	This Year		
Sales by Month	Northwind - Demo	demo (Demo User)	0	This Year		
Sales Rep Comparison Chart	Northwind - Demo	demo (Demo User)	2	Last Year		
Sales Rep Pie Chart	Northwind - Demo	demo (Demo User)	0	This Year		
Sales this Year Chart	Northwind - Demo	demo (Demo User)	3	01/01/1900-01/01/2100		
Supplier Analysis	Northwind - Demo	demo (Demo User)	0	This Year		
Top Selling Reps	Northwind - Demo	demo (Demo User)	0	This Year		
Where Am I Losing Money	Northwind - Demo	demo (Demo User)	0	This Year		

Now choose which filters should be available to users of this Dashboard.

**Interactive Reporting**

About | Logout: dem

**Report Tasks**

- Reports
- Wizard
- Advanced
- Favorites

**Top 10 Favorites**

- Chart of Sales ...
- Sales this Year ...
- Chart of Sales ...
- Sales Rep Compa...
- Customer Compa...
- Graph - Monthly...
- Highest Margin ...
- Most Profitable...
- Most Profitable...
- Reps vs Categor...
- More Favorites

**Edit/Save Dashboard**

Enter a title for the dashboard. Select the dashboard layout and choose the favorites you wish to view in your dashboard.

### Edit Dashboard

**Dashboard Title**

Title:

**Layout Type**

- Single Report
- 2 x 1
- 3 x 1
- 4 x 1
- North 1 Split 2x1
- North 1 Split 2x1 Split 4x1
- West 1 Split 2x1
- West 1 Split 4x1
- East 1 Split 2x1
- South 1 Split 2x1
- 2 x 2 Grid
- 3 x 2 Grid
- 3 x 3 Grid
- 2 Consecutive
- 3 Consecutive
- 4 Consecutive
- 5 Consecutive
- 6 Consecutive
- 7 Consecutive
- 8 Consecutive
- 9 Consecutive
- Freeform

**Choose your Favorites**

Report 1:

Report 2:

Report 3:

Report 4:

**Choose Filters**

Filter 1:

Filter 2:

Filter 3:

Select up to 10 Filters to be available to each Dashboard

**Note:** For Dashboard Filters to be available, they must first be set up. Dashboard Filter setup is an Admin task. Contact your Admin to request specific filters be made available.

## Generating Advanced Reports

### *Putting Interactive Reporting to Work...*

**I**NTERACTIVE REPORTING provides a more advanced but easy-to-use interface to your company's performance data. It provides a point-and-click means of specifying the sales data you wish to analyse. The initial screen varies according to how many reports are available to the user. If there is more than one report, after login the user will be directed to the screen displayed in Figure 2. To generate an advanced report the user must click the **'Advanced'** link next to the name of the desired report. If there is only one report available to the user, the initial screen that is displayed can be seen in Figure 5. To generate an advanced report the user simply clicks the **'Advanced'** link and they will automatically be directed to the advanced screen. The **'Advanced'** page, Figure 37, is a culmination of all options available to the user in the wizard report-generating tool. Once all the parameters of the report have been set, such as the variable by which to analyse, the ordering of the data, the filters to restrict the data the report will analyse, the report can be generated in an instant by pressing the **'Go'** button (either at the top or at the bottom of the page).



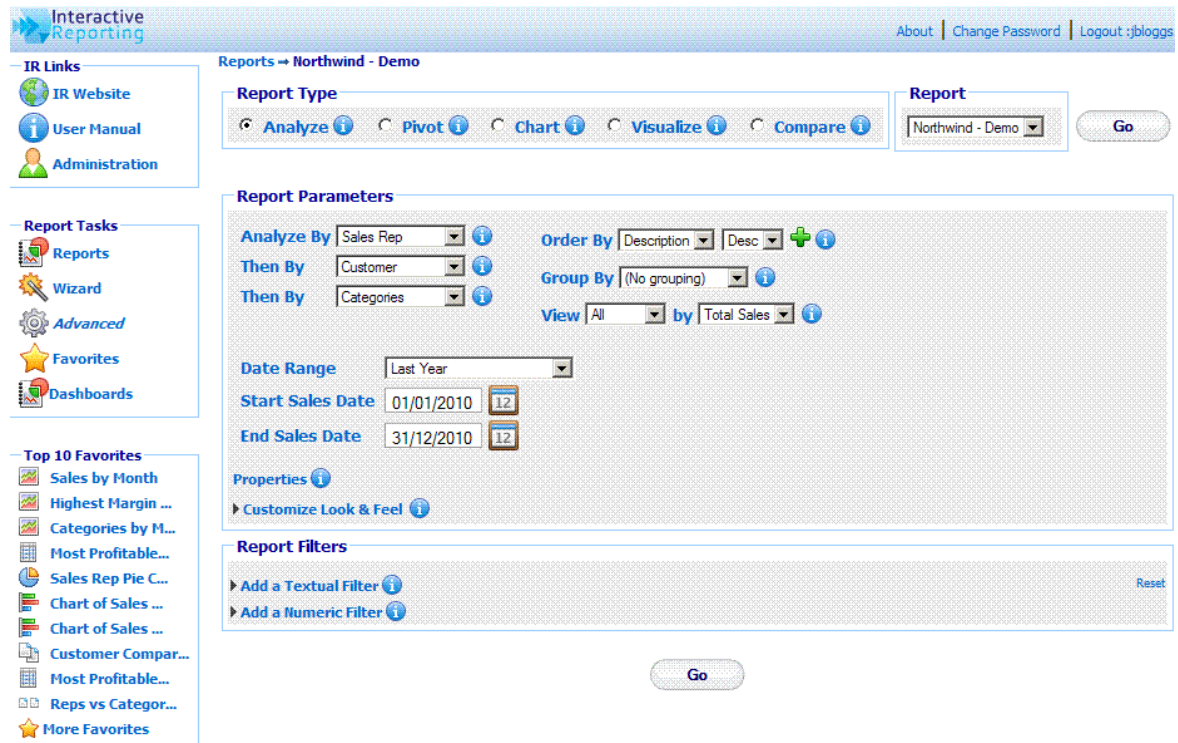


Figure 37

### 3.1 Report Types

There are five available types of reports. The user can select the report type they wish to view by selecting one of the radio button options of the 'Report Type' section of the page.

- **'Analyze'** – a standard (one-dimensional) report, which may be grouped and is suitable for producing simple tables.
- **'Pivot'** – a two-dimensional report which provides a table of results – a user may choose to display a number of quantities such as *Margin*, *Profit*, *Total Sales* or a combined report with all the pivot quantities.
- **'Chart'** – a one-dimensional report, containing the desired quantity, e.g. *quantity*, *margin*, in the form of a horizontal/vertical bar, pie or line chart. Grouping by a certain variable results in a grouped or stacked chart.
- **'Visualize'** – a dynamic way to view more complicated graphical representations of data. The user can select to view multiple quantities within the same plot, as well as investigate dynamically their development over time.
- **'Compare'** – allows the user to compare data across different time periods.

### 3.2 Report Selection

The **'Report'** select list that appears at the top of the advanced page, allows the user to select a different report. The select list contains the same reports that appear at the **'Choose Report'** page, Figure 2, when logging in. If the user has access to only one report, the **'Report'** selection list will contain only that report. By changing the report, the user is directed to the advanced page specific to the new report.

### 3.3 Report Parameters

The **'Report Parameters'** section allows the user to select the specific information they wish to see at the report, and to select how to format the report.

### 3.4 Report Variables

The report variables are the fields by which the user wishes to analyse their data. They may specify the following (using the drop-down list boxes):

- **'Analyze By'** – the main variable for which to display data. In the example above, it is *Sales Reps*. If an analysis is performed the first level of the report will display the *Sales Reps* data.
- **'Then By'** – the variable by which the user wishes to perform further analysis when going to secondary levels of the report. In the example above there are two **'Then By'** options, *Customer* and *Categories*. Let's assume that an analysis report is generated for *Sales Reps*. If a particular sales representative is selected, the customers of this sales representative are then displayed. If a particular customer is selected, the report will show all the categories used by this customer for the specific Sales Rep.

### 3.5 Report Ordering – Order By

This indicates how to sort the results of the report. Choices may consist of **'Description'** which sorts data alphabetically by description, **'Code'** which sorts data by alphanumeric code, a list of numeric quantities that appear at the report, e.g. *Margin, Avg Cost, Total Sales* etc., which sort the data numerically. Depending on how the system administrator has configured the system, the **'Order by'** list may differ. The user can have up to 3 order by fields, as described in section 2.8.

### 3.6 Report Grouping – Group By

This optional setting indicates whether and how the user wishes to have the results of the report grouped. The user may select **'No Grouping'** or specify a particular quantity by which to group. The latter option provides a breakdown according to the grouping specified. The user can also select whether they wish to view the group values at separate columns in the table or view the group subtotals.

### 3.7 Report Grouping – Multiple Group Bys

In some cases, one level of grouping is not enough.

What if we'd like to see a subtotal (say) by Month within data grouped by Category?

The most straightforward way to do this from the report screen is to click on the green plus sign in the Group By box.

Click to add another Group Level

Rep #	Name	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit
5	Buchanan	220	€45.23	€49.02	€9,951.25	€10,784.00	€832.75

From here you can add up to three different groupings.

A second or third Grouping may be added here.

Done Cancel

Note, default method shows “Totals”. Group totals can also be displayed in

### 3.8 Quantity of Data Displayed – View By

The ‘View’ option lets the user choose how much of the data should be displayed. It consists of five values:

- **All:** all the resulting data are shown.
- **Top 5-100:** displays the Top 5-100 values in the resulting report, sorted by the value selected from the select list next to the ‘By’ option. For example, an analysis by customers with *Top 20* by *Total Sales* results in the twenty customers with the highest total sales.
- **Bottom 5-100:** displays the Bottom 5-100 values in the resulting report.

### 3.9 Report Dates

The next set of options provides the date range from which the data will be extracted. The user can select a predetermined date range that may be chosen from the drop down menu of 'Date Range'. These include: *Last Year*, *YTD (Year to Date)*, *Last Quarter*, *Yesterday* and many more. If the user would prefer to enter their own specific date range then there are two options available to them. The first is to type the initial and final dates into the '**Start Sales Date**' and '**End Sales Date**' fields, respectively. The second option is to click on the calendar next to each date box and select the dates from there.

### 3.10 Properties

The user can customise the reports further by selecting to show/hide specific rows, and/or select the table layouts.

### 3.11 Customise Look and Feel

If the user wishes to customize the way their reports look, they can click the '**Customize Look and Feel**' link to reveal the options that format the appearance of the report, by selecting the Font family, the Font size and colour, as well as the table width. The '**Show in Page**' setting provides a selection of options with respect to how many data should appear on a report page or whether the results should appear within a scrollable table or not.

### 3.12 Report Filters

When generating reports, it is often desirable to restrict the analysed data to just a subset of what is available. Perhaps you are only interested in a particular category of goods, or the revenue generated by an individual member of the sales team. **INTERACTIVE REPORTING** filter mechanism allows restriction of data through text boxes. Simply enter the code/title (as appropriate) upon which you wish to restrict the report, and combo boxes; and then choose from a drop-down list of the codes/title for each particular category of information. The list of filters appear when the '**Add a Textual Filter**' link is clicked, and the advanced page now displays all the existing filters, as shown in Figure 38. In addition, numeric filters can be applied to the data, when the '**Add a Numeric Filter**' link is clicked, to add restrictions to the source or result fields that are employed at the reports.

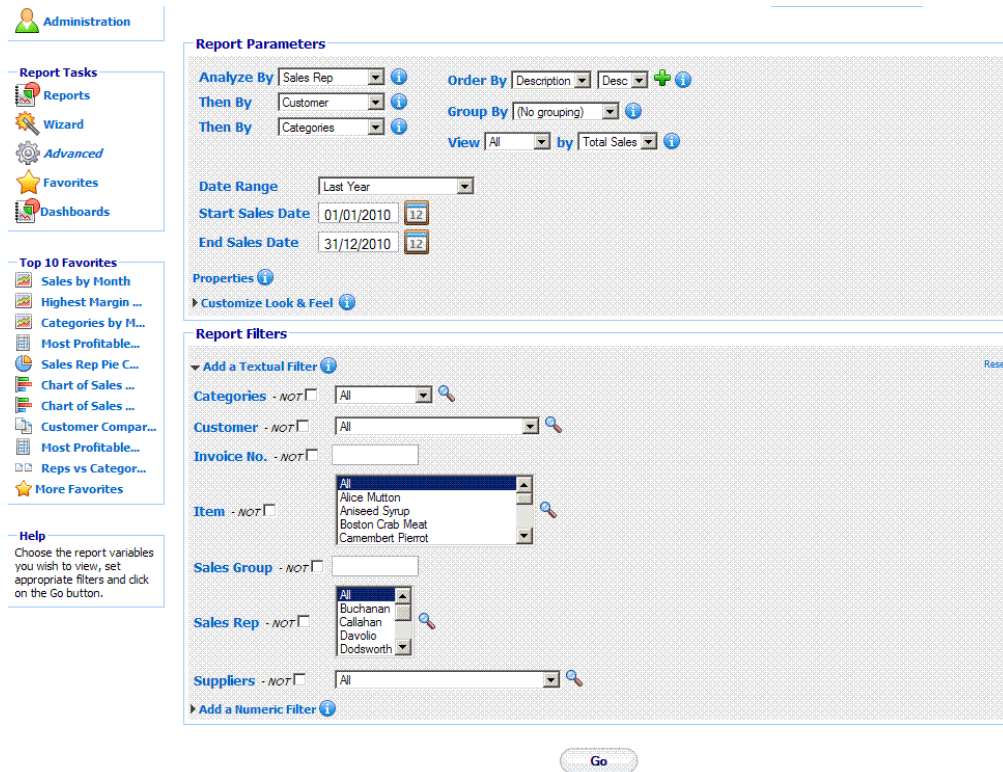


Figure 38

### 3.13 Search Icon

The 'Search' icon (represented by the magnifying glass next to the filter values) allows the user to select specific fields from the filter categories. This is especially useful if a filter has a large quantity of values or if the user wishes to select more than one value from a multi-select combo-box. Clicking on the magnifying glass opens a new page as the one shown in Figure 9.

To select a filter value that should be included in the report, either highlight it in the 'Search Results' section and click the relevant arrow button, or double click it. If the search results list contains a large amount of data, it may be easier to use the search box. The user may enter part or all of the value they want into the box and press 'Search'. To view the full range of values again click the 'Show All' button. Once the selection has been made, click the 'Done' button. When the user returns to the filter page they will see the values chosen highlighted.

### 3.14 Range Selection

INTERACTIVE REPORTING supports ranged selection in text box filter fields such as the *Invoice* field seen in Figure 38. The character ":" is used as the range indicator. Please note that the selection range is inclusive, i.e. -5:3 is all records including -5 and 3. Examples:

- -5:3 (from -5 to 3 inclusive)
- :5 (everything less than or equal to 5)
- 8: (everything greater than or equal to 8).

**E:G** This also works in a case-insensitive fashion for characters - e.g. E:G will select E, F and G)

## Viewing Reports

### *Interactive Reporting in Action...*

To demonstrate the flexibility and easy-to-use functionality of **INTERACTIVE REPORTING** we utilize the Northwind Traders database to generate reports. In a similar fashion to our example reports, **INTERACTIVE REPORTING** can analyse your company's data within minutes.

#### **4.1 Standard Report**

A typical '**Standard**' report looks like the one shown in Figure 39. To generate this report you can use either the wizard or the advanced interfaces, as described in the previous chapters, to set '**Analyze by**' to *Customer*, '**Then by**' to *Item*, order the results by *Profit*, view the '**Top 10**' records by *Total Sales*, set the initial and final dates to the beginning and end of 2010, respectively, and filter the data by *Sales Rep Davolio*.

The report page contains five parts: the report variables section on the page header, the Interactive Reporting functionality buttons, the Breadcrumbs, the date and non-date Navigation Filters, and the Report Results.



Figure 39

## 4.2 Report Variables

The report variables section at the header of the report page allows the user to modify their report without the need to return to the wizard or advanced interfaces. The user can change any of the report variable options to generate new reports.

- **Analyze by** – determines the first level of data for the report
- **Then by** – allows the change of the secondary level of report
- **Order by** – determines the ordering of the data. Clicking the + icon next to the Order by dropdown list opens a popup window, like the one shown in Figure 40, which enables the user to add multiple order by options when generating the report. A report can be created with a maximum of 3 Order by fields.
- **Group by** – determines how to group the results following a particular categorization.
- **View by** – determines the value upon which the Top/Bottom option is chosen.
- **Properties** – determines various options for showing/hiding specific rows from the reports and for selecting different table layouts.
- **Sidebar** – allows the user to switch from the toolbar view to the sidebar view, which is shown at Figure 41. In this layout the INTERACTIVE REPORTING buttons that appear underneath the header section of Figure 39 have now moved to the sidebar menu that appears at the left side of the page. To switch back to the previous layout with the toolbar buttons, the user must click the 'Toolbar' button, as shown in Figure 41.
- **Logout** – logs the user out of INTERACTIVE REPORTING.

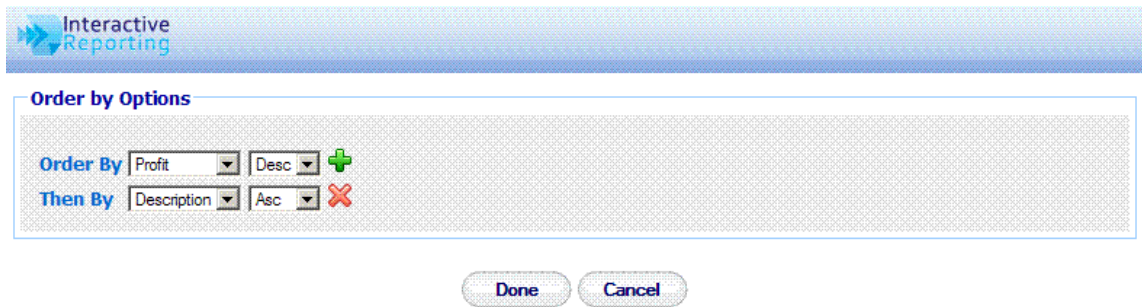


Figure 40

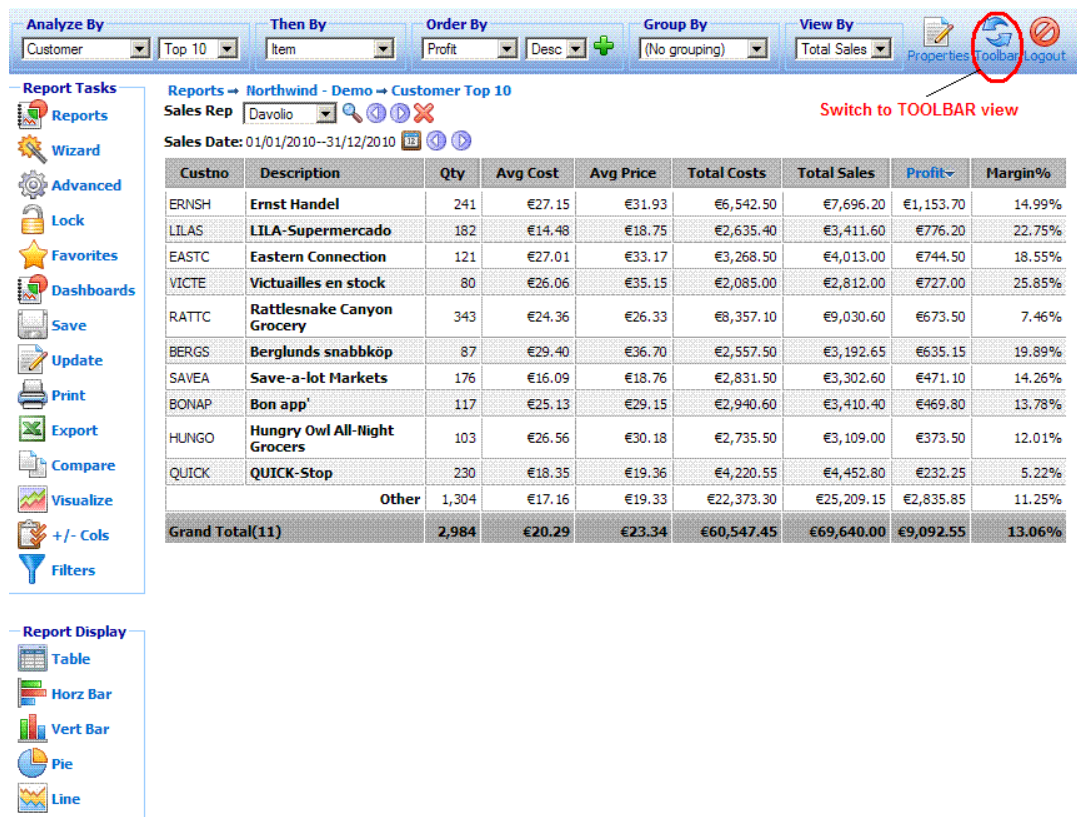


Figure 41

### 4.3 Interactive Reporting Buttons

INTERACTIVE REPORTING provides a set of buttons that perform various actions to the generated reports. Each type of report contains its own list of buttons. The buttons that appear at a standard report are the following:

- **Wizard** – directs the user to the wizard interface for the generation of a new report.
- **Advanced** – directs the user to the advanced interface for the generation of a new report.
- **Lock** – allows the user to lock some of the textual columns of a report. This button is only available to the Internet Explorer users.



- **Favorites** – directs the user to the **'Favorites'** page that contains all the predefined reports, see Figure 29.
- **Dashboards** – directs the user to the **'Dashboards'** page that contains all the predefined dashboard reports, see Figure 34.
- **Save** – allows the user to save a new report as a favorite. When clicking this button the user is redirected to the page of Figure 42. The user can set the title of the new favorite, schedule it for emails, share it with other users, and assign it to a specific category of saved reports. Clicking the **'Save'** button returns the user to the report page.
- **Update** – allows the user to update an existing favorite report. When clicking this button the user is redirected to the page of Figure 43. The user can then select from the list which existing favorite report they wish to update. Clicking the **'Update'** button redirects the user to a page similar to that of Figure 42, so that the user can then edit the favorites options if they wish before finalising the update procedure. Clicking the **'Update'** button returns the user to the report page.
- **Print** – enables the user to print the current report. In the standard grouped report format, there is the additional option to print each subgroup at a separate page, as well as print the whole report as a total.
- **Export** – enables the user to view the report in Excel.
- **Compare** – allows the user to produce a comparison report from the one currently in view. Clicking this button directs the user to the comparison date range selection page, as shown in Figure 44. After selecting the desired date ranges for the report, click **'Compare'** and the new comparison report appears.
- **Visualize** – allows the user to produce a visualization report from the one currently in view. Clicking this button directs the user to visualization configuration page, as shown in Figure 45. After configuring one or more visualization graphs for the report, click **'Visualize'** and the new visualization report appears.
- **+/- Cols** – allows the user to modify the report configuration by adding/removing columns that appear at the report. When this button is clicked a new window opens, as the one shown in Figure 46. The user can then select which textual and/or numeric fields wishes to hide or show at the report. Moreover, the order with which the numeric fields can appear in the table can also be modified by selecting the field of interest and clicking the up/down arrows that exist next to the **Show** header of the right panel. When the user is finished with their selection, the **'Done'** button must be clicked to return to the report page, which will now contain the new collection of fields.
- **Filters** – allows the user to apply new filters or modify existing filter values. When this button is clicked a new window opens, as the one shown in Figure 47. The user can then select which textual and/or numeric filters to apply to the report. When the user is finished with their selection, the **'Done'** button must be clicked to return to the report page.

- **Table** – displays the report at a table format, as shown in Figure 39.
- **Horz bar** – displays the report as a horizontal bar chart.
- **Vert bar** – displays the report as a vertical bar chart.
- **Pie** – displays the report as a pie chart.
- **Line** – displays the report as a line chart.
- **Fonts** – allows the user to select the font family, size and colour they prefer for viewing the report.
- **Width** – allows the user to set the width of the table.
- **Paging** – allows the user to select how many data to view at a page or select whether to view data with or without scrollbars.

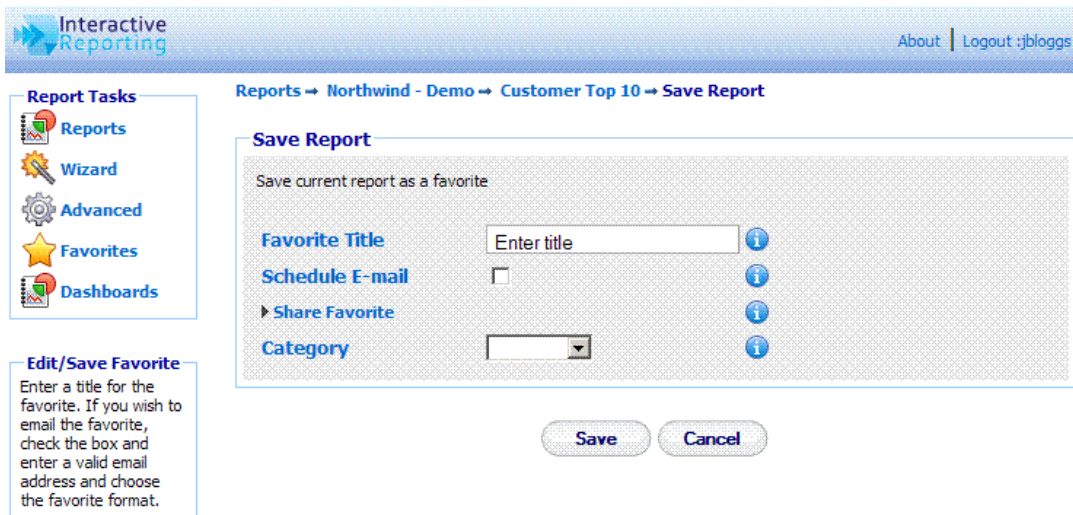


Figure 42

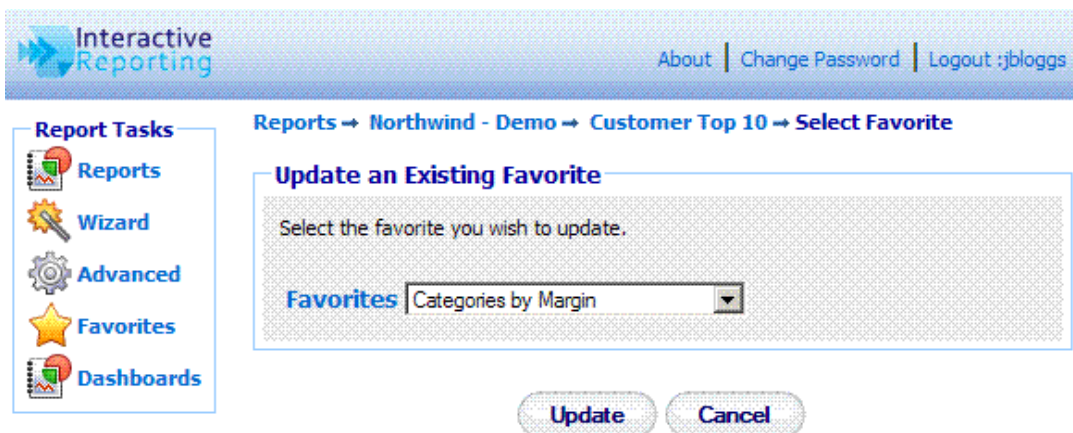


Figure 43

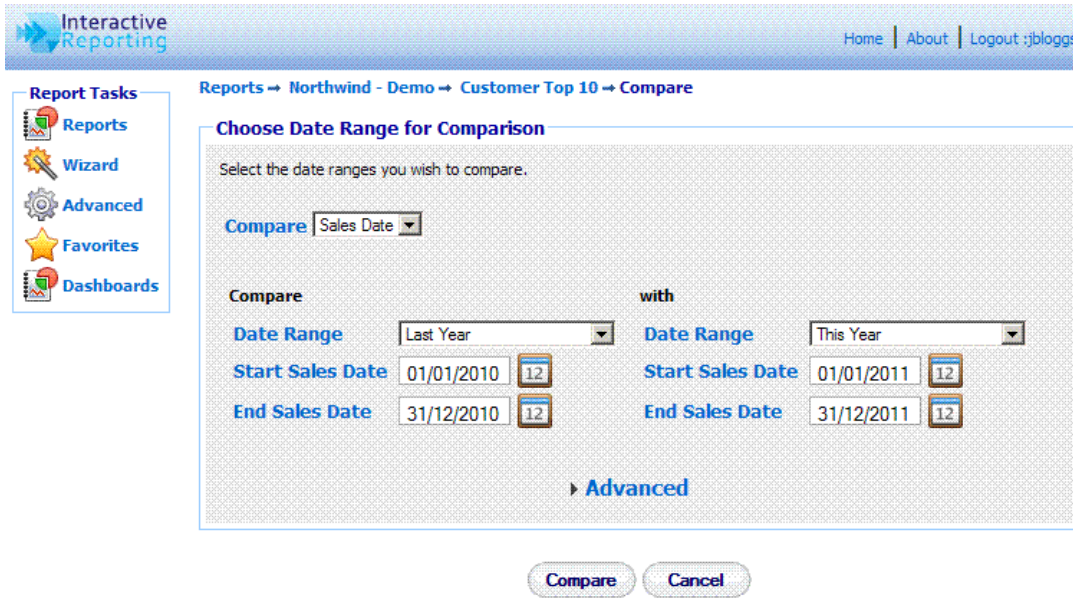


Figure 44

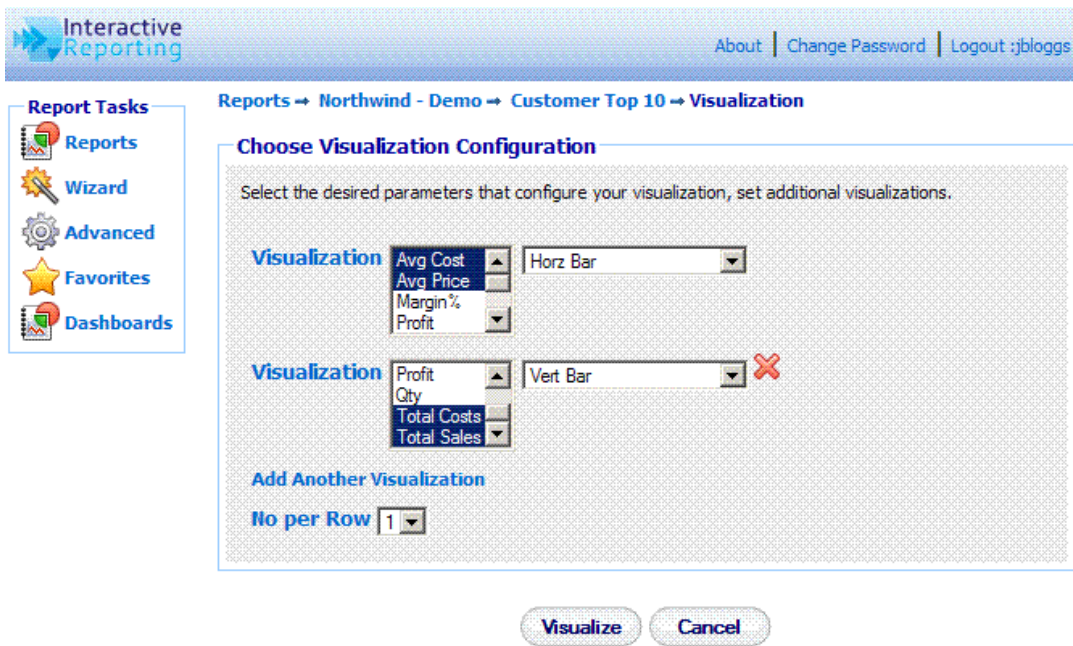


Figure 45

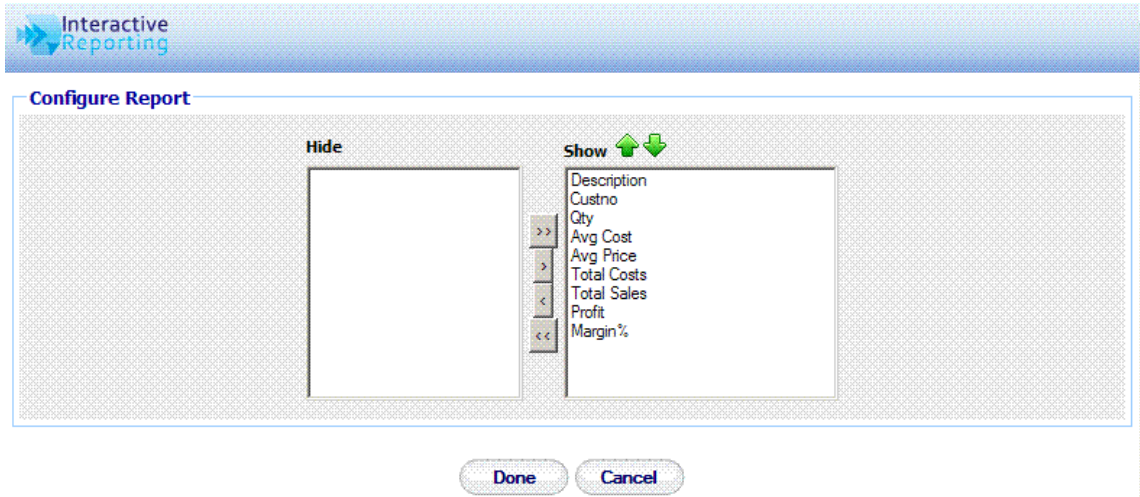


Figure 46

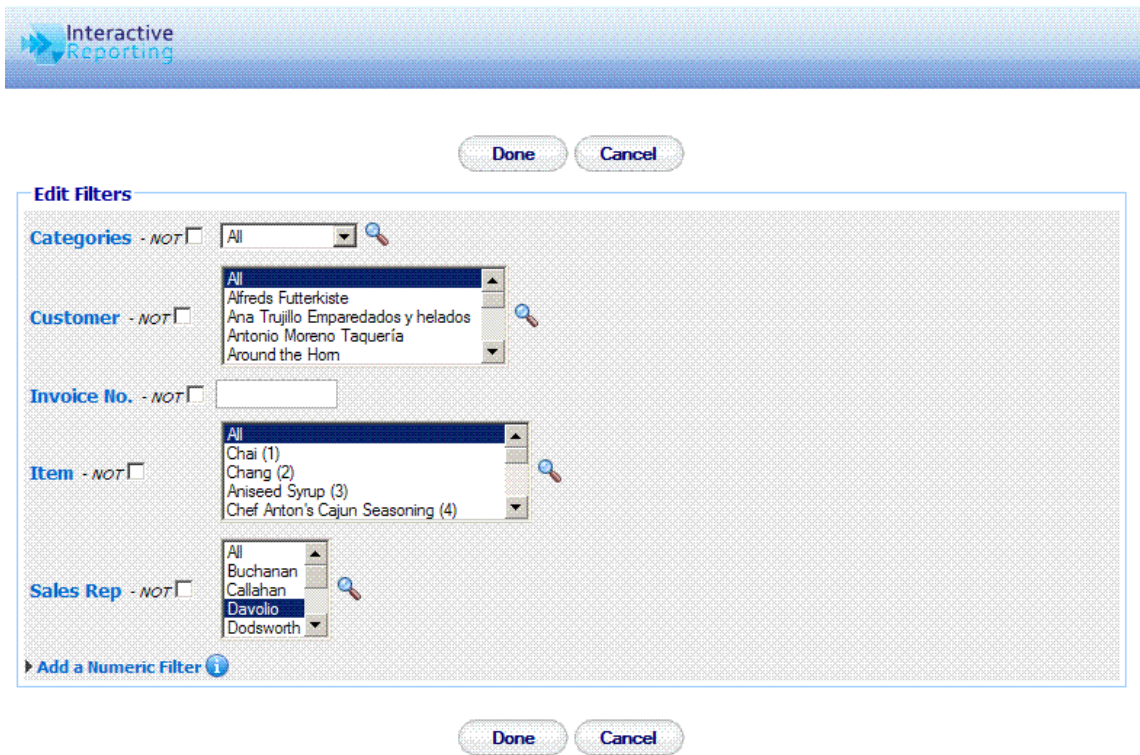


Figure 47

#### 4.4 Breadcrumbs

The breadcrumbs indicate all the steps taken by the user to reach the current page/level of the report. To return to an earlier page the user simply clicks the relevant section of the breadcrumb link. The start of every breadcrumb is **'Reports'** which redirects to the **'Choose Report'** page, Figure 2. The second step of the breadcrumb sequence is the name of the report, which returns the user to the wizard or advanced interface depending on which one they used to create the particular report they view. Subsequent steps of the breadcrumbs

return to previously visited INTERACTIVE REPORTING pages or reports. The last breadcrumb link allows the user to edit the last report query via the advanced or wizard pages.

### 4.5 Navigation Filters

The navigation filters part of the report page contains all the non-date and date filters that have been applied to the report. Apart from displaying useful information, the user also has the option to modify these filter values from the report page itself.

For non-date filters, a new filter value can be selected by changing the value of the select list that appears next to the filter name, for example in Figure 39 by changing the value of *Davolio* to *Buchanan*. Another way is to click on the search icon next to the select list to make a single or multiple filter selection. The '<<' and '>>' buttons navigate to the previous and next values in the select list, respectively. When a large number of filter values are selected only the first 20 values are displayed on the report page, but a '+' appears next to the list of filter values, which when clicked shows all the filter values selected, as seen in Figure 48. Finally, a filter can be removed by clicking the delete icon next to its value. If a filter is of the text format, the select list that enables navigation does not appear, and the user can choose a new value by clicking the search icon.

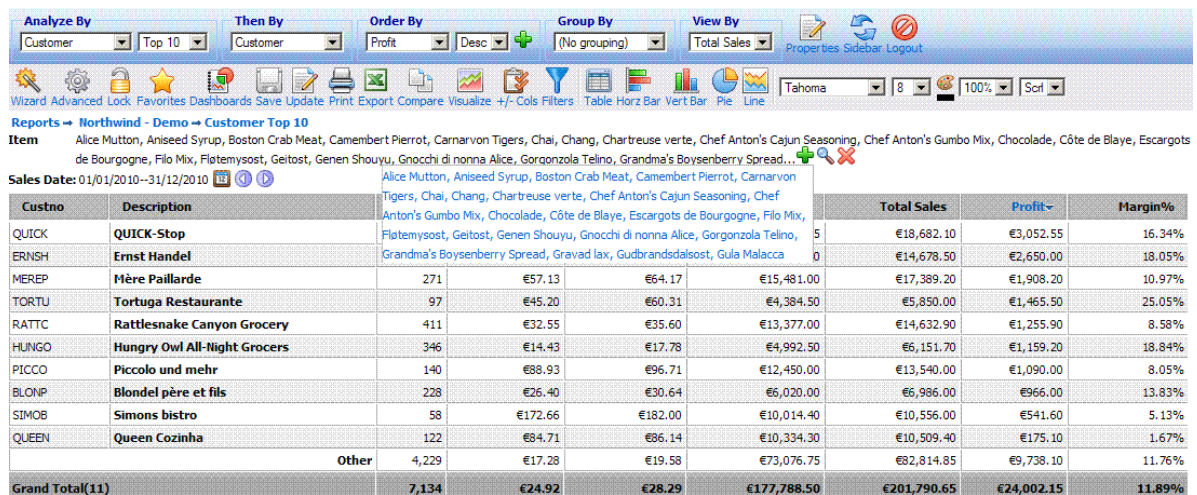


Figure 48

The date range that determines a report can be modified more interactively from the same report page, by clicking the calendar icon next to the date range. A page like the one shown in Figure 49 enables the user to select a new date range for their report. The '<<' and '>>' buttons change the date range backwards and forwards by the same amount of time as the one used to generate the report. In the example report of Figure 39, clicking the '<<' button would have generated reports for the year 2009, or clicking the '>>' button would have generated reports for the year 2011. As another example, if a user had generated a report for April 2005, the '<<' and '<<' buttons would have created reports for March 2005 and May 2005, respectively.

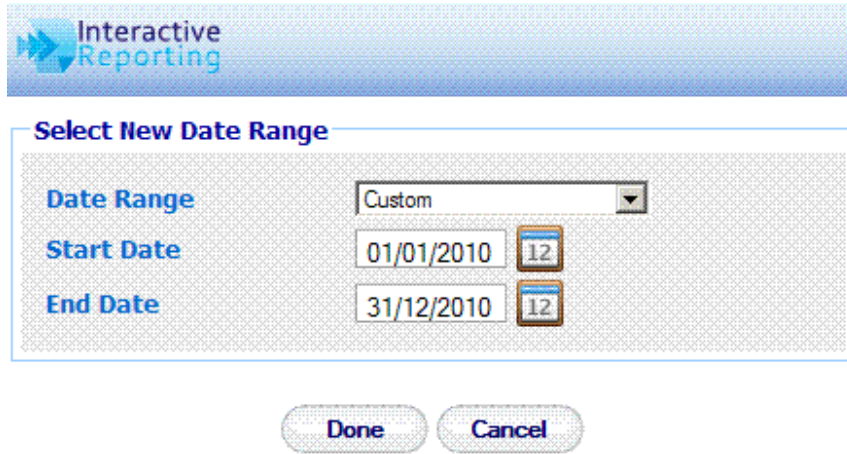


Figure 49

### 4.6 Report Results

The final and more important part of the page contains the data that the user wishes to view. In a standard report, these are displayed within a table, but they can readily be represented by a chart or visualization format. The data can be seen within a scrollable table or not, and they can be sorted in ascending or descending order, from within the table itself. This can be done by clicking on the table column header of the field the user wishes to order by. In this case, a blue arrow appears next to the column heading, to indicate the sort order, as shown in Figure 39. In addition if a table contains too many columns the user can lock the textual columns, so that when scrolling horizontally there is always a point of reference as to which data the user sees. This locking of the textual columns can be retained in subsequent levels of reports.

Another feature is the possibility to highlight a specific row and/or column, as shown in Figure 50. Highlighting occurs by double clicking on the cell of interest. Double clicking the upper first left cell of the table removes highlighting from everywhere.

Rep #	Name	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
7	King	1,640	€29.38	€32.56	€48,179.25	€53,397.00	€5,217.75	9.77%
3	Leverling	3,237	€20.97	€25.86	€67,892.85	€83,699.15	€15,806.30	18.88%
4	Peacock	4,917	€21.58	€25.23	€106,106.95	€124,048.75	€17,941.80	14.46%
5	Buchanan	1,336	€23.32	€24.59	€31,160.15	€32,852.00	€1,691.85	5.15%
1	Davolio	2,984	€20.29	€23.34	€60,547.45	€69,640.00	€9,092.55	13.06%
2	Fuller	2,414	€18.54	€23.26	€44,762.95	€56,141.50	€11,378.55	20.27%
8	Callahan	2,356	€17.62	€21.49	€41,508.20	€50,642.15	€9,133.95	18.04%
6	Suyama	1,704	€18.47	€21.43	€31,465.60	€36,511.64	€5,046.04	13.82%
9	Dodsworth	1,007	€16.04	€18.73	€16,147.60	€18,857.30	€2,709.70	14.37%
<b>Grand Total(9)</b>		<b>21,595</b>	<b>€20.73</b>	<b>€24.35</b>	<b>€447,771.00</b>	<b>€525,789.49</b>	<b>€78,018.49</b>	<b>14.84%</b>

Figure 50

The way the report results are displayed can also be modified from within the 'Properties' options, which appear on a new popup window when clicking the relative button of the report variables, as shown in Figure 51. By selecting the 'Vertical' layout the data table can then be displayed in a vertical layout, with the labels appearing in rows and the data in

columns, as displayed in Figure 52. By unselecting the option to 'Show Grand Total' the report is shown without the grand total row in horizontal/column in vertical layout see Figure 53. When a Top/Bottom selection is applied, selecting to view the 'Show Other Data' the results will include a row with the sum of the remaining data, as shown in Figure 39. By unselecting the option to view the 'Show Report Rows' only the totals of a report can be displayed, see Figure 54. By selecting to 'Suppress Headers' from Excel and printout reports, all the information displayed by the filters and date ranges data is not shown.

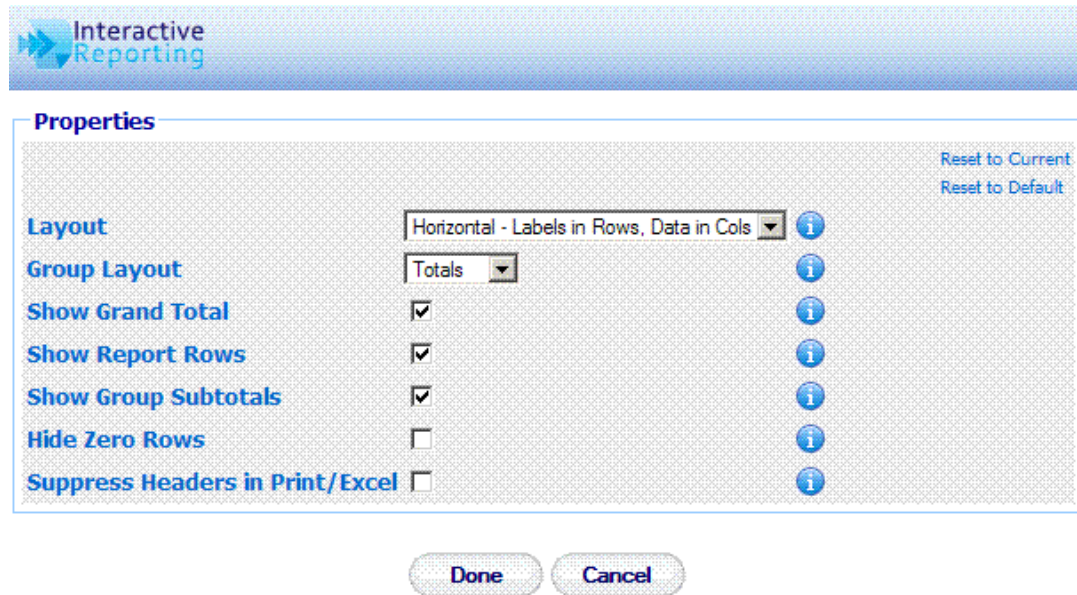


Figure 51

Category	6	1	7	4	3	5	2	8	Grand Total (8)
Description	Meat/Poultry	Beverages	Produce	Dairy Products	Confections	Grains/Cereals	Condiments	Seafood	
Qty	2,010	3,766	1,304	4,223	3,462	1,852	2,430	2,548	21,595
Avg Cost	€22.10	€28.35	€34.59	€23.60	€15.49	€18.76	€12.38	€13.08	€20.73
Avg Price	€32.43	€31.56	€30.87	€23.11	€21.39	€20.93	€19.42	€17.23	€24.35
Total Costs	€44,419.20	€106,784.00	€45,103.50	€99,644.00	€53,638.60	€34,751.50	€30,095.00	€33,335.20	€447,771.00
Total Sales	€65,183.09	€118,854.70	€40,254.10	€97,594.40	€74,038.85	€38,770.80	€47,200.05	€43,893.50	€525,789.49
Profit	€20,763.89	€12,070.70	-€4,849.40	-€2,049.60	€20,400.25	€4,019.30	€17,105.05	€10,558.30	€78,018.49
Margin%	31.85%	10.16%	-12.05%	-2.10%	27.55%	10.37%	36.24%	24.05%	14.84%

Figure 52



Figure 53

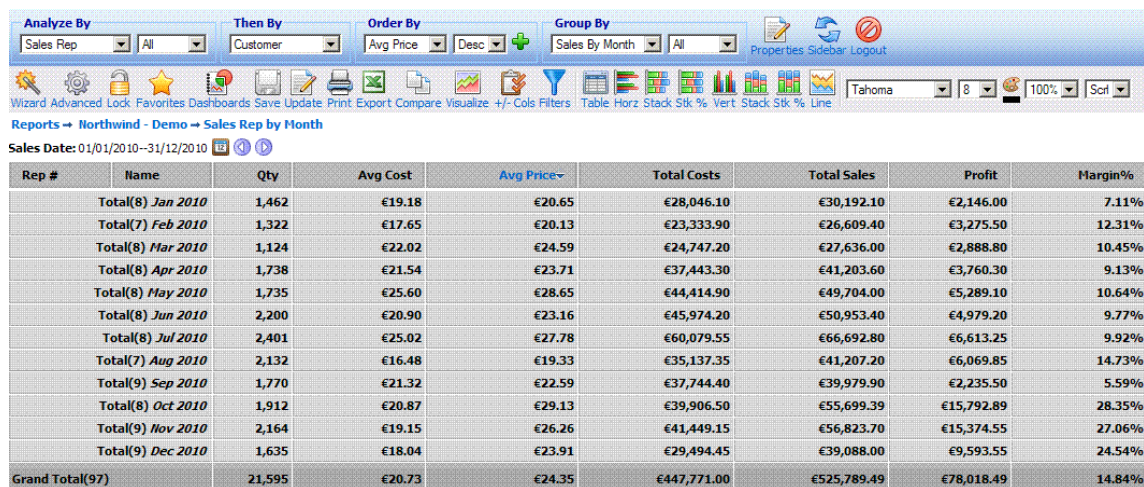


Figure 54

### 4.7 Grouping

When looking at a particular report, one can choose to group the results following a particular categorization. As an example, Figure 55 shows a report on *Sales by Quarter* grouped by *Sales Rep*. We can see that a grouped report produces subtotals of the quantities of interest for each of the sales representatives. One may change the grouping variable or revert to the simpler analysis given earlier by selecting as appropriate from the 'Group by' dropdown. From the 'Properties' options, Figure 51, the user can select to hide the group subtotals and view only the report results, Figure 56. An alternative table structure can also be used for the grouped reports, by selecting the 'Columns' option from the 'Group Layout' option of the 'Properties', in which the group values are shown in separate columns in the left part of the table, as shown in Figure 57.

To create multiple groupings, see section 3.7 Report Grouping – Multiple Group Bys.



INTERACTIVE REPORTING USER'S GUIDE

Analyze By: Sales By Quarter | All | Then By: Customer | Order By: Quarter | Asc | Group By: Sales Rep | All | Properties Sidebar | Logout

Wizard Advanced Lock Favorites Dashboards Save Update Print Export Compare Visualize +/- Cols Filters Table Horiz Stack Stk % Vert Stack Stk % Line | Tahoma | 8 | 100% | Scrf

Reports → Northwind - Demo → Quarter by Sales Rep

Sales Date: 01/01/2010--31/12/2010

Quarter	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
Q1 2010	244	€12.66	€12.96	€3,087.90	€3,161.20	€73.30	2.32%
Q2 2010	534	€35.03	€35.21	€18,704.60	€18,804.00	€99.40	0.53%
Q3 2010	188	€14.26	€14.01	€2,681.65	€2,634.40	-€47.25	-1.79%
Q4 2010	370	€18.07	€22.30	€5,686.00	€8,252.40	€1,566.40	18.98%
<b>Total(4) Buchanan - 5</b>	<b>1,336</b>	<b>€23.32</b>	<b>€24.59</b>	<b>€31,160.15</b>	<b>€32,852.00</b>	<b>€1,691.85</b>	<b>5.15%</b>
Q1 2010	547	€23.08	€28.26	€12,625.50	€15,459.80	€2,834.30	18.33%
Q2 2010	376	€16.53	€20.48	€6,214.35	€7,701.60	€1,487.25	19.31%
Q3 2010	1,010	€16.31	€19.08	€16,471.15	€19,271.60	€2,800.45	14.53%
Q4 2010	423	€14.65	€19.41	€6,197.20	€8,209.15	€2,011.95	24.51%
<b>Total(4) Callahan - 8</b>	<b>2,356</b>	<b>€17.62</b>	<b>€21.49</b>	<b>€41,508.20</b>	<b>€50,642.15</b>	<b>€9,133.95</b>	<b>18.04%</b>
Q1 2010	623	€20.67	€23.93	€12,878.15	€14,909.40	€2,031.25	13.62%
Q2 2010	997	€22.80	€23.95	€22,728.90	€23,879.60	€1,150.70	4.82%
Q3 2010	747	€17.39	€20.52	€12,993.55	€15,330.10	€2,336.55	15.24%
Q4 2010	617	€19.36	€25.16	€11,946.85	€15,520.90	€3,574.05	23.03%
<b>Total(4) Davolio - 1</b>	<b>2,984</b>	<b>€20.29</b>	<b>€23.34</b>	<b>€60,547.45</b>	<b>€69,640.00</b>	<b>€9,092.55</b>	<b>13.06%</b>
Q1 2010	294	€16.53	€16.85	€4,859.50	€4,955.30	€95.80	1.93%
Q2 2010	281	€20.04	€22.81	€5,631.60	€6,410.40	€778.80	12.15%
Q3 2010	211	€11.42	€14.12	€2,410.00	€2,979.30	€569.30	19.11%
Q4 2010	221	€14.69	€20.42	€3,246.50	€4,512.30	€1,265.80	28.05%
<b>Total(4) Dodsworth - 9</b>	<b>1,007</b>	<b>€16.04</b>	<b>€18.73</b>	<b>€16,147.60</b>	<b>€18,857.30</b>	<b>€2,709.70</b>	<b>14.37%</b>
Q1 2010	281	€19.09	€21.14	€5,363.95	€5,940.80	€576.85	9.71%
Q2 2010	804	€17.39	€21.01	€13,985.00	€16,893.90	€2,908.90	17.22%
Q3 2010	417	€16.53	€18.32	€6,894.00	€7,639.30	€745.30	9.76%
Q4 2010	912	€20.31	€28.14	€18,520.00	€25,667.50	€7,147.50	27.85%
<b>Total(4) Fuller - 2</b>	<b>2,414</b>	<b>€18.54</b>	<b>€23.26</b>	<b>€44,762.95</b>	<b>€56,141.50</b>	<b>€11,378.55</b>	<b>20.27%</b>
Q1 2010	130	€11.17	€13.92	€1,451.55	€1,810.20	€358.65	19.81%
Q2 2010	355	€44.64	€45.90	€15,845.80	€16,294.60	€448.80	2.75%
Q3 2010	584	€36.56	€36.75	€21,353.80	€21,461.60	€107.80	0.50%

Figure 55

# INTERACTIVE REPORTING USER'S GUIDE

Analyze By: Sales By Quarter | All | Then By: Customer | Order By: Quarter | Asc | Group By: Sales Rep | All | Properties Sidebar | Logout

Wizard Advanced Lock Favorites Dashboards Save Update Print Export Compare Visualize +/- Cols Filters Table Horiz Stack Stk % Vert Stack Stk % Line

Reports → Northwind - Demo → Quarter by Sales Rep

Sales Date: 01/01/2010--31/12/2010

Quarter	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
Q1 2010	244	€12.66	€12.96	€3,087.90	€3,161.20	€73.30	2.32%
Q1 2010	281	€19.09	€21.14	€5,363.95	€5,940.80	€576.85	9.71%
Q1 2010	294	€16.53	€16.85	€4,859.50	€4,955.30	€95.80	1.93%
Q1 2010	485	€14.94	€17.15	€7,245.10	€8,317.40	€1,072.30	12.89%
Q1 2010	547	€23.08	€28.26	€12,625.50	€15,459.80	€2,834.30	18.33%
Q1 2010	826	€23.19	€24.50	€19,152.45	€20,234.50	€1,082.05	5.35%
Q1 2010	623	€20.67	€23.93	€12,878.15	€14,909.40	€2,031.25	13.62%
Q1 2010	130	€11.17	€13.92	€1,451.55	€1,810.20	€358.65	19.81%
Q1 2010	478	€19.80	€20.19	€9,463.10	€9,648.90	€185.80	1.93%
Q2 2010	997	€22.80	€23.95	€22,728.90	€23,879.60	€1,150.70	4.82%
Q2 2010	804	€17.39	€21.01	€13,985.00	€16,893.90	€2,908.90	17.22%
Q2 2010	455	€20.34	€23.99	€9,256.90	€10,914.40	€1,657.50	15.19%
Q2 2010	1,386	€20.20	€23.72	€27,991.35	€32,880.30	€4,888.95	14.87%
Q2 2010	534	€35.03	€35.21	€18,704.60	€18,804.00	€99.40	0.53%
Q2 2010	376	€16.53	€20.48	€6,214.35	€7,701.60	€1,487.25	19.31%
Q2 2010	281	€20.04	€22.81	€5,631.60	€6,410.40	€778.80	12.15%
Q2 2010	355	€44.64	€45.90	€15,845.80	€16,294.60	€448.80	2.75%
Q2 2010	485	€15.41	€16.66	€7,473.90	€8,082.20	€608.30	7.53%
Q3 2010	211	€11.42	€14.12	€2,410.00	€2,979.30	€569.30	19.11%
Q3 2010	747	€17.39	€20.52	€12,993.55	€15,330.10	€2,336.55	15.24%
Q3 2010	417	€16.53	€18.32	€6,894.00	€7,639.30	€745.30	9.76%
Q3 2010	1,010	€16.31	€19.08	€16,471.15	€19,271.60	€2,800.45	14.53%
Q3 2010	188	€14.26	€14.01	€2,681.65	€2,634.40	€-47.25	-1.79%
Q3 2010	1,136	€23.28	€26.11	€26,445.60	€29,658.60	€3,213.00	10.83%
Q3 2010	584	€36.56	€36.75	€21,353.80	€21,461.60	€107.80	0.50%
Q3 2010	1,754	€22.56	€25.54	€39,567.15	€44,795.20	€5,228.05	11.67%
Q3 2010	256	€16.19	€16.05	€4,144.40	€4,109.80	€-34.60	-0.84%
Q4 2010	571	€16.69	€24.22	€9,528.10	€13,830.60	€4,302.50	31.11%

Figure 56

# INTERACTIVE REPORTING USER'S GUIDE

Analyze By: Sales By Quarter | All | Then By: Customer | Order By: Rep # (Group by) | Asc | Group By: Sales Rep | All | Properties Sidebar Logout

Wizard Advanced Lock Favorites Dashboards Save Update Print Export Compare Visualize +/- Cols Filters Table Horz Stack Stk % Vert Stack Stk % Line

Reports → Northwind - Demo → Quarter by Sales Rep

Sales Date: 01/01/2010--31/12/2010

Rep #	Name	Quarter	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
1	Davolio	Q1 2010	623	€20.67	€23.93	€12,878.15	€14,909.40	€2,031.25	13.62%
1	Davolio	Q2 2010	997	€22.80	€23.95	€22,728.90	€23,879.60	€1,150.70	4.82%
1	Davolio	Q4 2010	617	€19.36	€25.16	€11,946.85	€15,520.90	€3,574.05	23.03%
1	Davolio	Q3 2010	747	€17.39	€20.52	€12,993.55	€15,330.10	€2,336.55	15.24%
2	Fuller	Q3 2010	417	€16.53	€18.32	€6,894.00	€7,639.30	€745.30	9.76%
2	Fuller	Q4 2010	912	€20.31	€28.14	€18,520.00	€25,667.50	€7,147.50	27.85%
2	Fuller	Q1 2010	281	€19.09	€21.14	€5,363.95	€5,940.80	€576.85	9.71%
2	Fuller	Q2 2010	804	€17.39	€21.01	€13,985.00	€16,893.90	€2,908.90	17.22%
3	Leverling	Q3 2010	1,136	€23.28	€26.11	€26,445.60	€29,658.60	€3,213.00	10.83%
3	Leverling	Q1 2010	485	€14.94	€17.15	€7,245.10	€8,317.40	€1,072.30	12.89%
3	Leverling	Q4 2010	1,161	€21.49	€29.98	€24,945.25	€34,808.75	€9,863.50	28.34%
3	Leverling	Q2 2010	455	€20.34	€23.99	€9,256.90	€10,914.40	€1,657.50	15.19%
4	Peacock	Q3 2010	1,754	€22.56	€25.54	€39,567.15	€44,795.20	€5,228.05	11.67%
4	Peacock	Q4 2010	951	€20.40	€27.49	€19,396.00	€26,138.75	€6,742.75	25.80%
4	Peacock	Q2 2010	1,386	€20.20	€23.72	€27,991.35	€32,880.30	€4,888.95	14.87%
4	Peacock	Q1 2010	826	€23.19	€24.50	€19,152.45	€20,234.50	€1,082.05	5.35%
5	Buchanan	Q2 2010	534	€35.03	€35.21	€18,704.60	€18,804.00	€99.40	0.53%
5	Buchanan	Q3 2010	188	€14.26	€14.01	€2,681.65	€2,634.40	-€47.25	-1.79%
5	Buchanan	Q4 2010	370	€18.07	€22.30	€6,686.00	€8,252.40	€1,566.40	18.98%
5	Buchanan	Q1 2010	244	€12.66	€12.96	€3,087.90	€3,161.20	€73.30	2.32%
6	Suyama	Q4 2010	485	€21.41	€30.25	€10,384.20	€14,670.74	€4,286.54	29.22%
6	Suyama	Q3 2010	256	€16.19	€16.05	€4,144.40	€4,109.80	-€34.60	-0.84%
6	Suyama	Q1 2010	478	€19.80	€20.19	€9,463.10	€9,648.90	€185.80	1.93%
6	Suyama	Q2 2010	485	€15.41	€16.66	€7,473.90	€8,082.20	€608.30	7.53%
7	King	Q4 2010	571	€16.69	€24.22	€9,528.10	€13,830.60	€4,302.50	31.11%
7	King	Q1 2010	130	€11.17	€13.92	€1,451.55	€1,810.20	€358.65	19.81%
7	King	Q2 2010	355	€44.64	€45.90	€15,845.80	€16,294.60	€448.80	2.75%
7	King	Q3 2010	584	€36.56	€36.75	€21,353.80	€21,461.60	€107.80	0.50%

Figure 57

### 4.8 Pivot Report

A typical 'Pivot' report looks like the one shown in Figure 58. To generate this report you can use either the wizard or the advanced interfaces, as described in the previous chapters, to view *Sales Rep vs Sales by Quarter* for the year 2010, and select to view all pivot quantities. The values for *Sales Rep* specify the rows of the pivot report, and the values of *Sales by Month* specify its columns. The rows and columns may be interchanged by clicking the 'Switch' icon at the top left cell of the table.

		Q1 2010	Q2 2010	Q3 2010	Q4 2010
5	Buchanan	€3,161.20 €73.30 2.32%	€18,804.00 €99.40 0.53%	€2,634.40 -€47.25 -1.79%	€8,252.40 €1,566.40 18.98%
8	Callahan	€15,459.80 €2,834.30 18.33%	€7,701.60 €1,487.25 19.31%	€19,271.60 €2,800.45 14.53%	€8,209.15 €2,011.95 24.51%
1	Davolio	€14,909.40 €2,031.25 13.62%	€23,879.60 €1,150.70 4.82%	€15,330.10 €2,336.55 15.24%	€15,520.90 €3,574.05 23.03%
9	Dodsworth	€4,955.30 €95.80 1.93%	€6,410.40 €778.80 12.15%	€2,979.30 €569.30 19.11%	€4,512.30 €1,265.80 28.05%
2	Fuller	€5,940.80 €576.85 9.71%	€16,893.90 €2,908.90 17.22%	€7,639.30 €745.30 9.76%	€25,667.50 €7,147.50 27.85%
7	King	€1,810.20 €358.65 19.81%	€16,294.60 €448.80 2.75%	€21,461.60 €107.80 0.50%	€13,830.60 €4,302.50 31.11%
3	Leverling	€8,317.40 €1,072.30 12.89%	€10,914.40 €1,657.50 15.19%	€29,658.60 €3,213.00 10.83%	€34,808.75 €9,863.50 28.34%
4	Peacock	€20,234.50 €1,082.05 5.35%	€32,880.30 €4,888.95 14.87%	€44,795.20 €5,228.05 11.67%	€26,138.75 €6,742.75 25.80%
6	Suyama	€9,648.90 €185.80 1.93%	€8,082.20 €608.30 7.53%	€4,109.80 -€34.60 -0.84%	€14,670.74 €4,286.54 29.22%
<b>Grand Total</b>		<b>€84,437.50</b> <b>€8,310.30</b> <b>9.84%</b>	<b>€141,861.00</b> <b>€14,028.60</b> <b>9.89%</b>	<b>€147,879.90</b> <b>€14,918.60</b> <b>10.09%</b>	<b>€151,611.09</b> <b>€40,760.99</b> <b>26.89%</b>

Figure 58

Buttons for pivot reports are similar to the ones for a standard report, with the only difference appearing at which charting options are available for the pivot reports. Data may be horizontally and vertically charted and displayed in both stacked and group format. Pie charts are not available on pivots. Note, also, that the charting options are not available in grouped pivot reports.

The navigation filters section of the report now displays the list of variables that have been selected for the pivot report. In the report of Figure 58, the display shows **Total Sales**, **Profit**, and **Margin%**, since all pivot quantities have been selected for this particular report. The colour and size of the display fields matches the one used within a table as an indicator of which number in the table represents which variable. If only one pivot variable is selected, this formatting is dropped. The switch table format icon next to the pivot display quantities changes the layout of the pivot table between the one shown in Figure 58 in which the pivot data are shown vertically in one cell, and the one in which the data are displayed horizontally with each data value shown in its own individual cell, Figure 59.

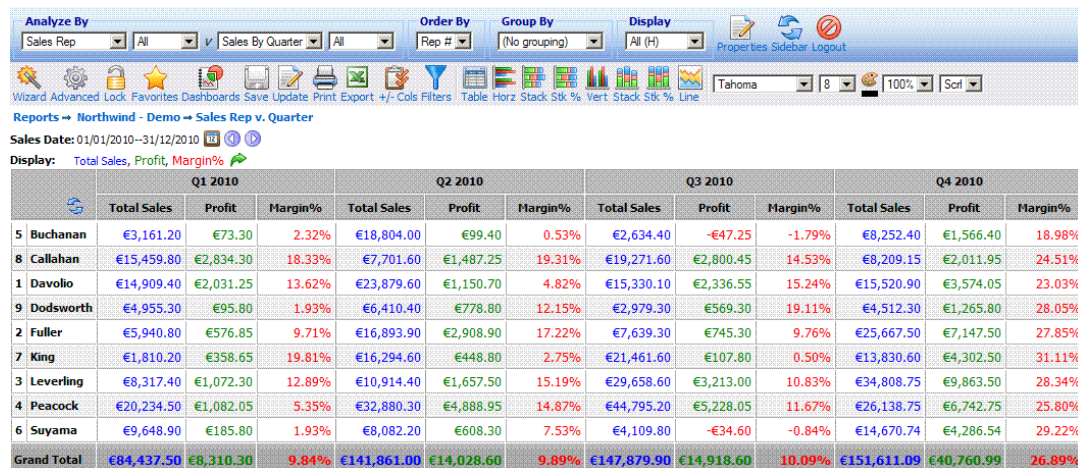


Figure 59

From a pivot report, one may zoom-in to a greater level of detail in two different ways. You may click on a:

- **Row heading** – this will produce a simple report, which has been filtered to only include data from the row clicked. For example, clicking the row heading *King* of Figure 58 generates the standard report of Figure 60.
- **Data figure** – this will produce a simple report filtered to include only those data that contribute to this particular figure, i.e. filtered to include data from both the relevant row and column. Clicking a data value from within the table results produces such a report. For example, clicking the *Total Sales* data number for *Callahan* and *Q3 2010* of the report of Figure 58 generates the standard report of Figure 61.

## INTERACTIVE REPORTING USER'S GUIDE

**Analyze By**: Sales By Quarter | All  
**Then By**: Categories  
**Order By**: Quarter | Asc  
**Group By**: (No grouping)

Reports → Northwind - Demo → Sales Rep v. Quarter → Quarter  
 Sales Rep: King  
 Sales Date: 01/01/2010--31/12/2010

Quarter	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
Q1 2010	130	€11.17	€13.92	€1,451.55	€1,810.20	€358.65	19.81%
Q2 2010	355	€44.64	€45.90	€15,845.80	€16,294.60	€448.80	2.75%
Q3 2010	584	€36.56	€36.75	€21,353.80	€21,461.60	€107.80	0.50%
Q4 2010	571	€16.69	€24.22	€9,528.10	€13,830.60	€4,302.50	31.11%
<b>Grand Total(4)</b>	<b>1,640</b>	<b>€29.38</b>	<b>€32.56</b>	<b>€48,179.25</b>	<b>€53,397.00</b>	<b>€5,217.75</b>	<b>9.77%</b>

Figure 60

**Analyze By**: Categories | All  
**Then By**: Detail  
**Order By**: Category | Asc  
**Group By**: (No grouping)

Reports → Northwind - Demo → Sales Rep v. Quarter → Categories  
 Sales Rep: Buchanan  
 Sales Date: 01/07/2010--30/09/2010

Category	Description	Qty	Avg Cost	Avg Price	Total Costs	Total Sales	Profit	Margin%
1	Beverages	45	€11.47	€12.58	€516.25	€566.00	€49.75	8.79%
3	Confections	42	€4.00	€7.65	€168.00	€321.30	€153.30	47.71%
5	Grains/Cereals	50	€11.40	€11.20	€570.00	€560.00	-€10.00	-1.79%
7	Produce	30	€38.20	€29.28	€1,146.00	€878.40	-€267.60	-30.46%
8	Seafood	21	€13.40	€14.70	€281.40	€308.70	€27.30	8.84%
<b>Grand Total(5)</b>		<b>188</b>	<b>€14.26</b>	<b>€14.01</b>	<b>€2,681.65</b>	<b>€2,634.40</b>	<b>-€47.25</b>	<b>-1.79%</b>

Figure 61

### 4.9 Chart Report

One of INTERACTIVE REPORTING most powerful features is its ability to provide interactive charts of data. When performing straightforward 1-D analyses (as described earlier), one may zoom-in to the next level of detail by clicking on a link. This unique feature is also available through charts.

A typical 'Chart' report looks like the one shown in Figure 62. To generate this report you can use either the wizard or the advanced interfaces, as described in the previous chapters, to view *Sales by Month* as a horizontal chart bar for the year 2010, and select to view *Total Sales*.

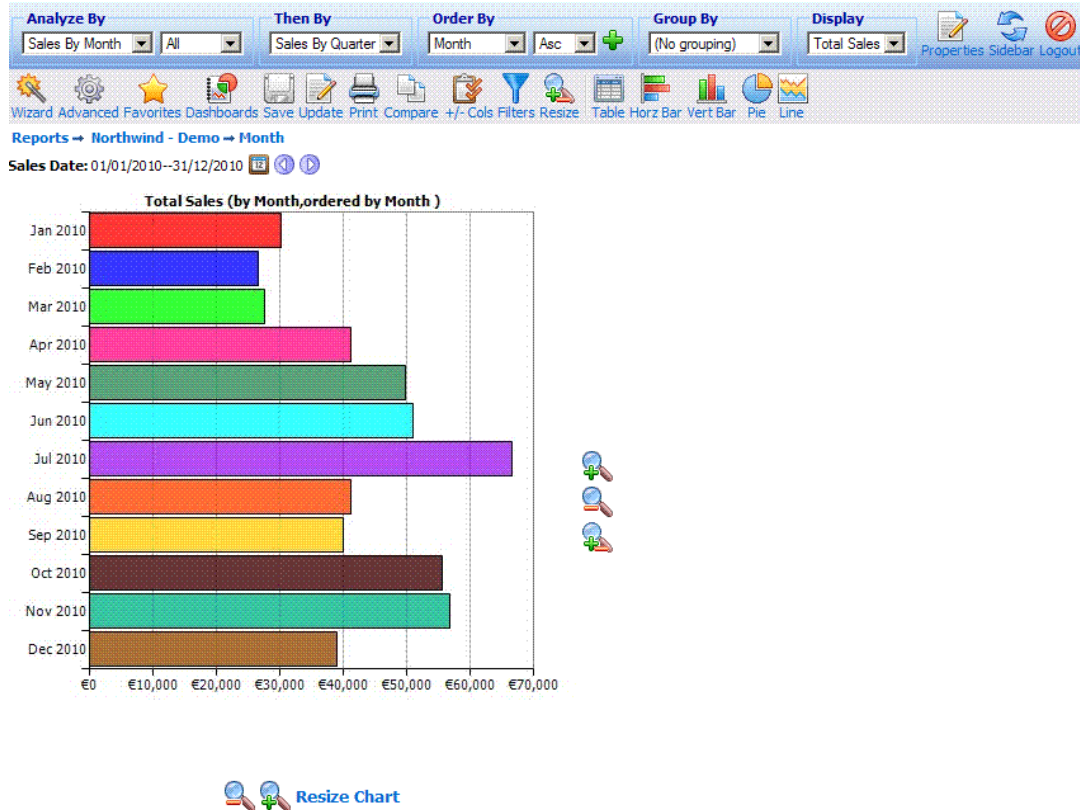


Figure 62

The chart reports functionality buttons provide one more configuration option, mainly the ability to modify the size of the chart to adjust it to the browser's dimensions. To achieve this click the 'Resize' button. A new page, Figure 63, opens and the user can then select the width and/or height of their choice. Or they can simply select to fit the chart into their browser's screen size. When finished with the size adjustment simply click the 'Done' button to return to the report page where the chart with the new dimensions is displayed. Similar options are available at the side and bottom of the chart reports, which enlarge/reduce the size of the chart by a predefined amount along a specific dimension or resize the chart according to the user's will.

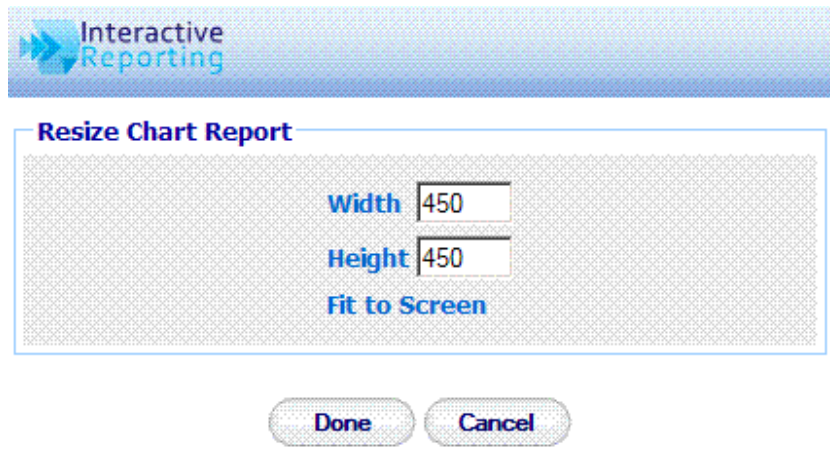


Figure 63

Just as tables allow drill-down, so do charts. For example, clicking on the bar associated with the *May 2010* volume, will give a bar-chart of the performance during that quarter (similarly to zooming-in with the tabular **'Analyze'** report). As before, one may recursively drill-down until the greatest level of granularity is attained.

Just as one can group the results of a simple tabular analysis, one can also produce corresponding grouped charts. One simply changes the **'Group by'** dropdown from **'No Grouping'** to the desired grouping option. There are several ways in which the data may be grouped within the chart. One may produce grouped, stacked or stacked -% versions of the bar charts. Clicking on the **'Switch'** icon alternates the displayed and the grouping by fields. A grouped chart looks like the one shown in Figure 64. The stacked version of the same report appears at Figure 65.



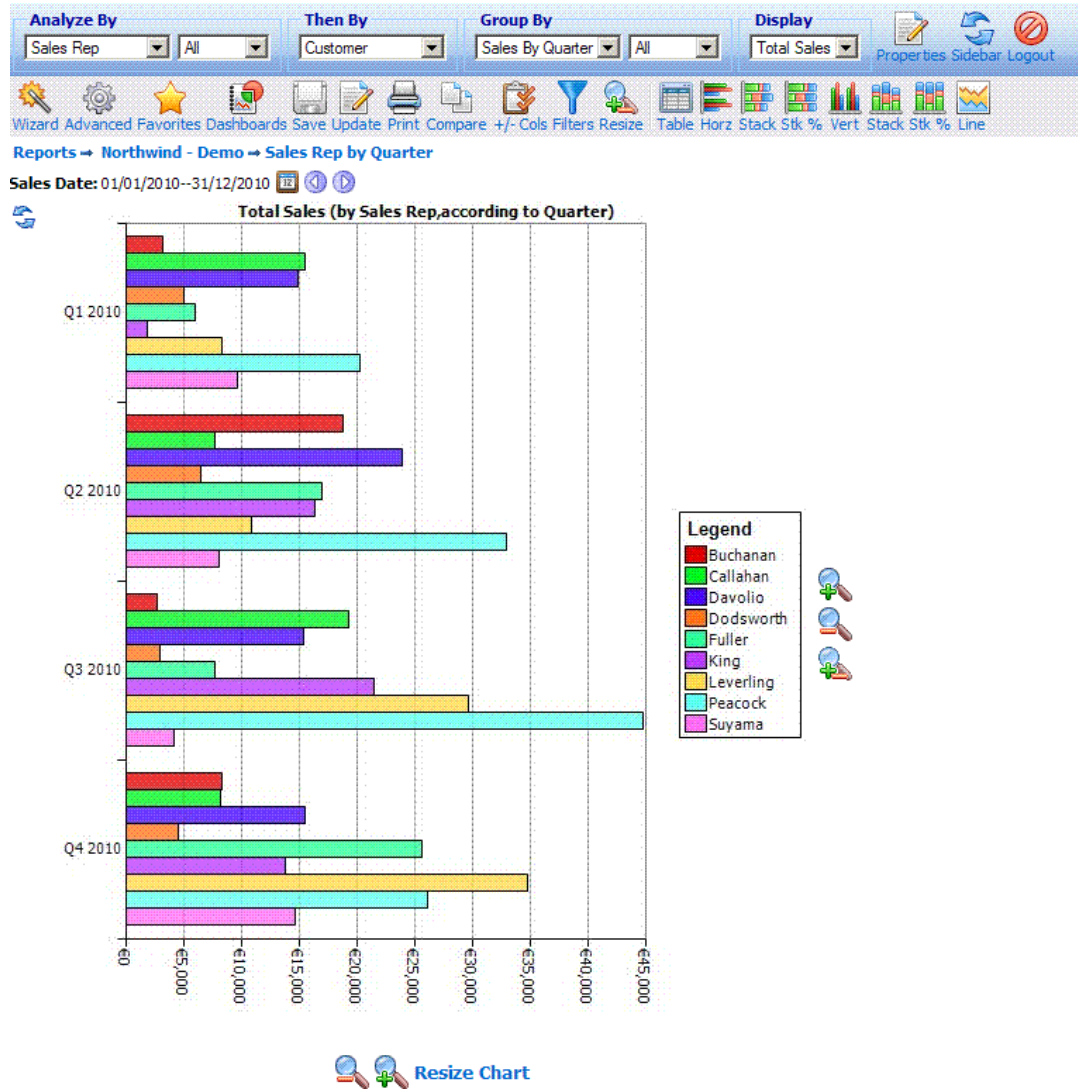


Figure 64

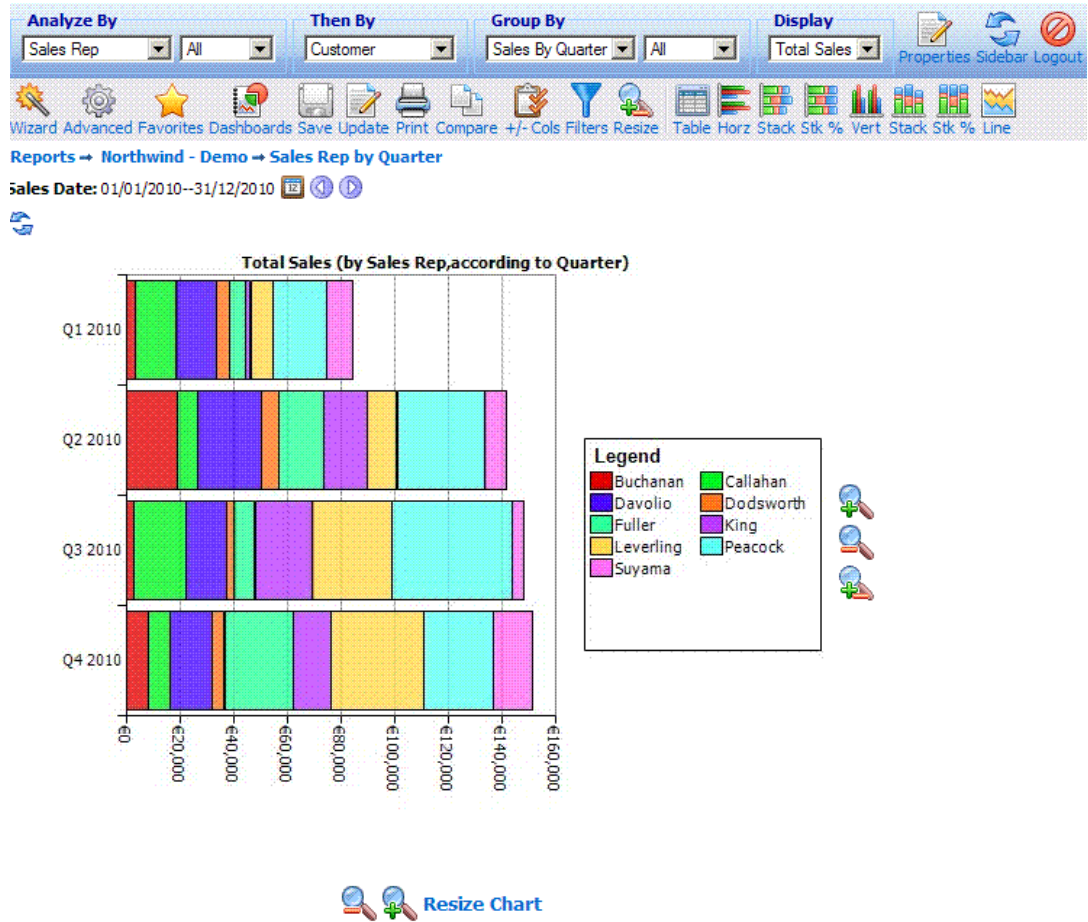


Figure 65

Chart reports can be greatly enhanced by applying an extensive set of properties, as shown in the **'Properties'** options, which appear on a new popup window when clicking the relative button of the report variables. Figure 66 shows the properties that can be applied to a pie chart. The effect of some of the properties on a pie chart can be viewed on Figure 67.

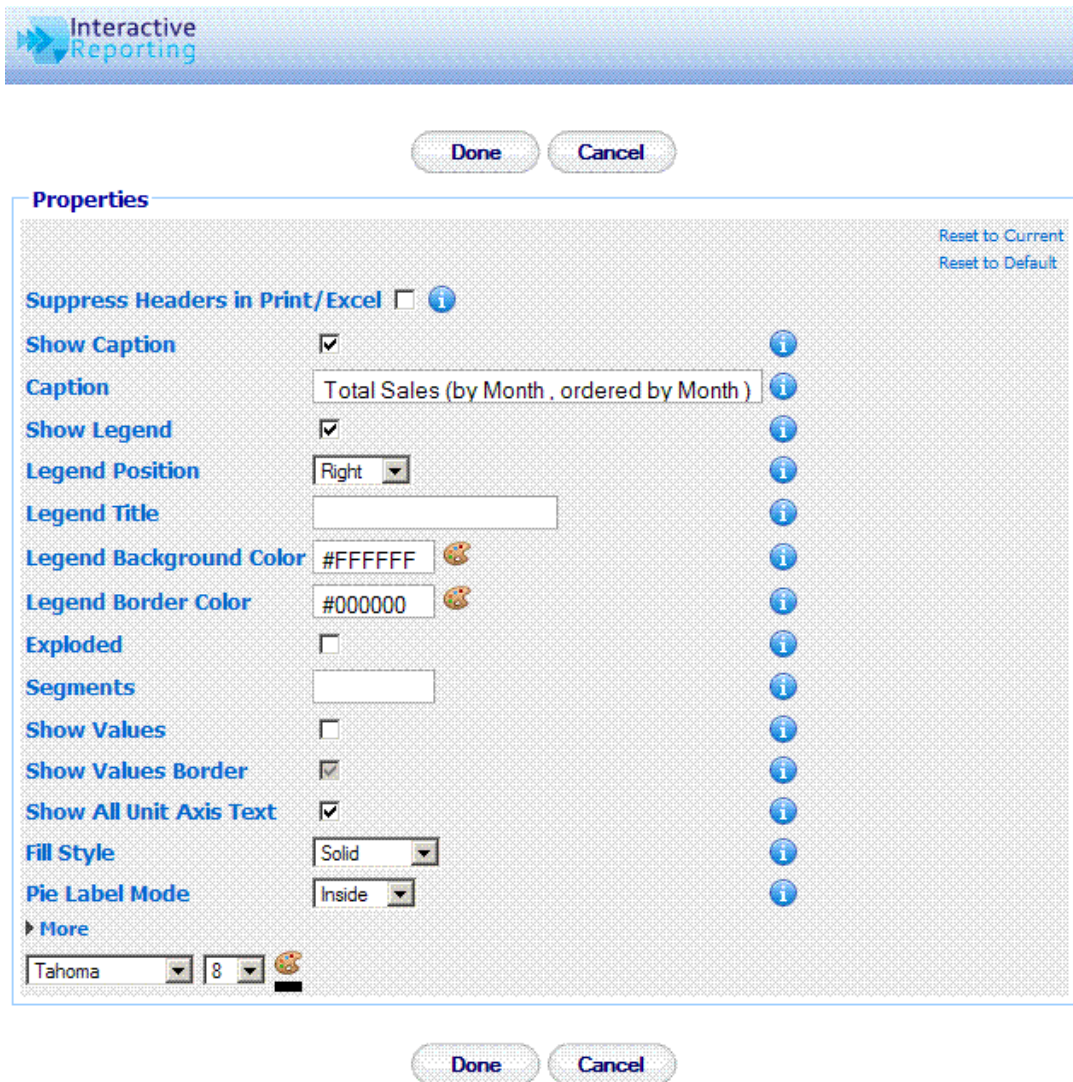


Figure 66

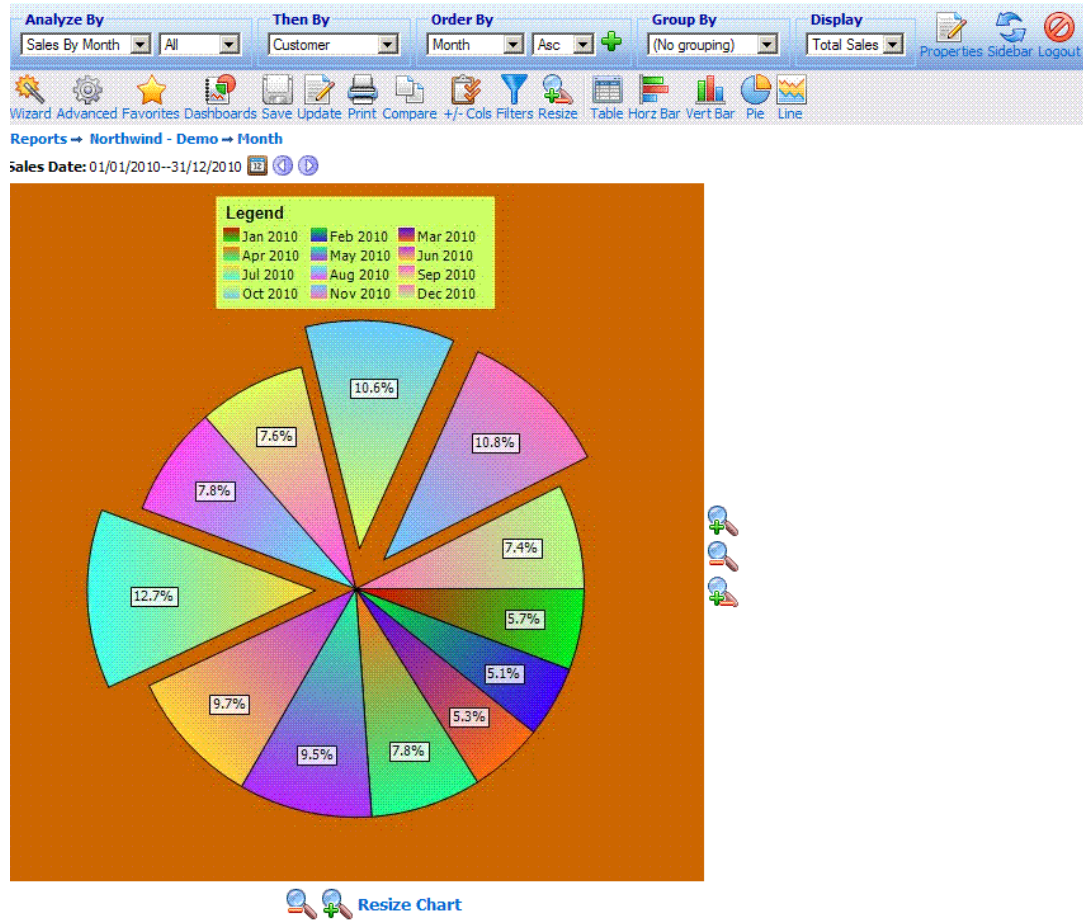


Figure 67

The **'Properties'** options in charts can also enhance the information displayed in some of the charts by allowing the user to display **'Constant'** lines and/or **'Averages'** on top of the chart data. These options are available for *Horz*, *Vert* and *Line* charts, and can be set from their properties options as shown in Figure 68. Figure 69 shows a *Vert* Chart on which a constant line for *Target Sales* is shown, as well as the average *Total Sales* for the year 2010.

Show Legend	<input checked="" type="checkbox"/>	
Legend Position	Top	
Legend Title		
Legend Background Color	#FFFFFF	
Legend Border Color	#000000	
Show Values	<input type="checkbox"/>	
Show Values Border	<input type="checkbox"/>	
Show Constant Line	<input checked="" type="checkbox"/>	
Constant Line Value	15000	
Constant Line Label	Target Sales	CONSTANT LINE
Constant Line Color	#FF0000	
Constant Line Thickness	3	
Constant Line Style	Solid	
Show Average	<input checked="" type="checkbox"/>	
Line Style	Dash	
Line Symbol Type	Triangle Filled	AVERAGE
Line Symbol Width	10	
Line Thickness	3	
Show All Unit Axis Text	<input checked="" type="checkbox"/>	
Unit Axis Scale Mode	Auto	
Unit Axis Min Value	0	
Unit Axis Max Value	100	
Axis Label Visibility	Show All	
Series Bar Spacing	10%	
Fill Style	Solid	
Unit Axis Label		
Item Axis Label		
More		
Tahoma	8	

Figure 68

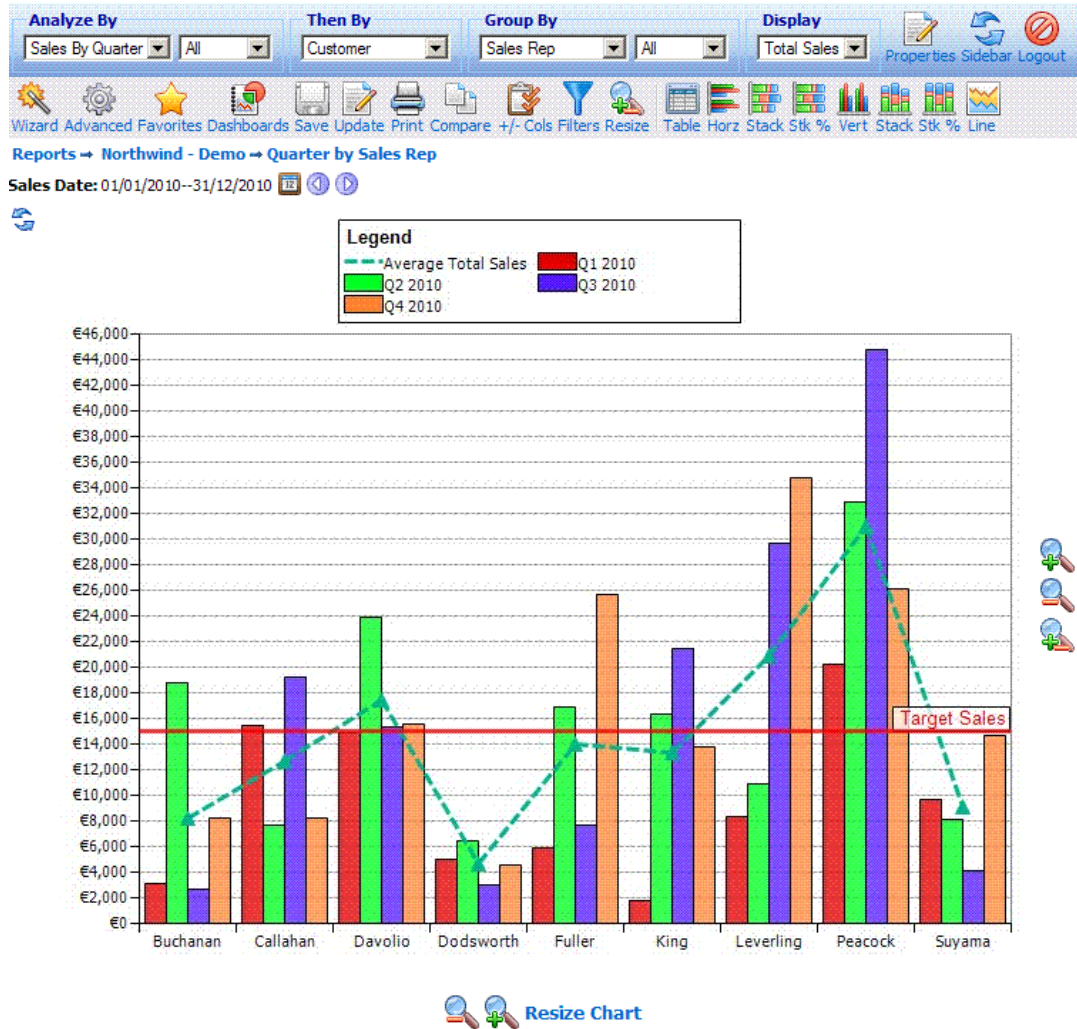


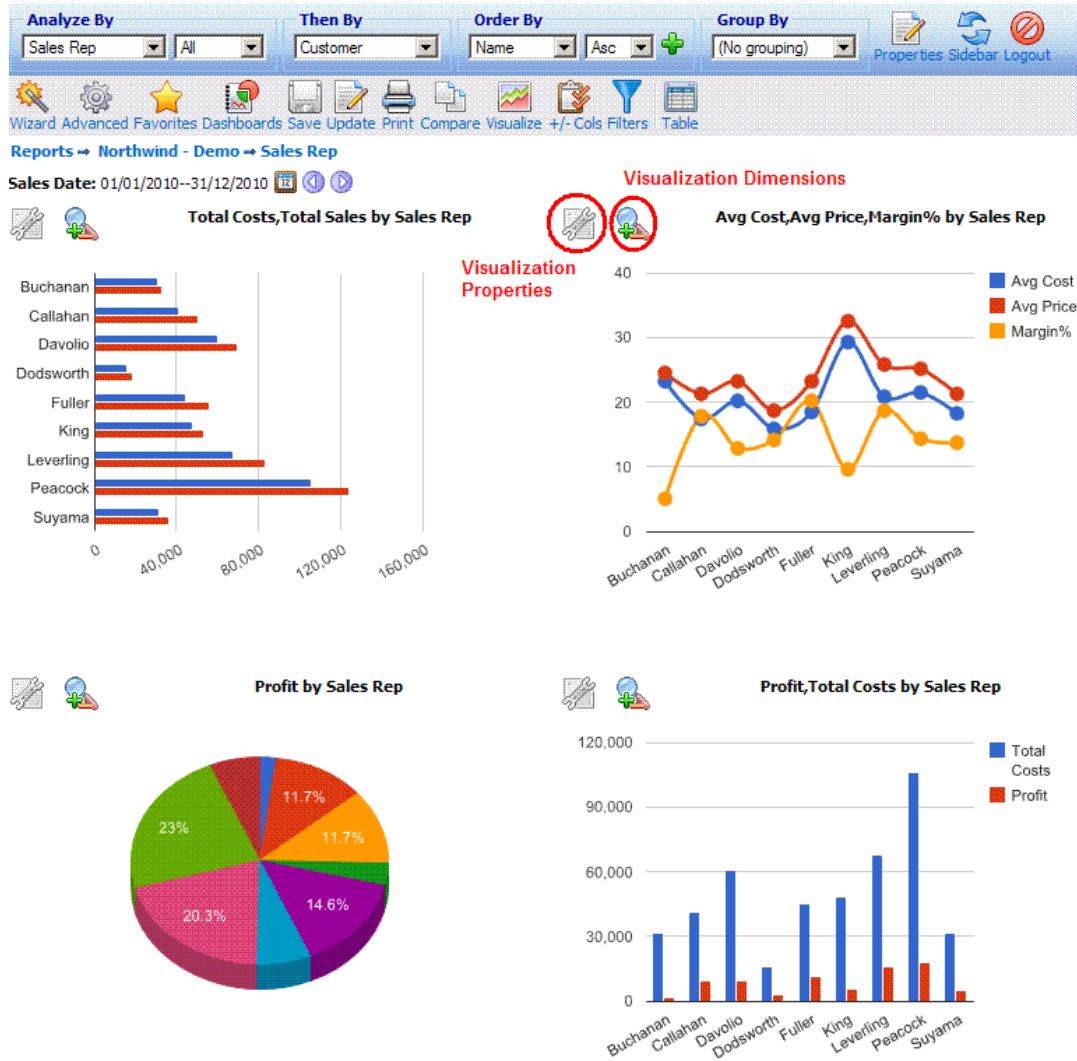
Figure 69

#### 4.10 Visualization Report

INTERACTIVE REPORTING now offers an alternative and powerful way to visualize data and generate more complicated reports that dissect the requested information in different graphical and tabular representations.

A 'Visualize' report may look like the one shown in Figure 70. To generate this report you can use either the wizard or the advanced interfaces, as described in the previous chapters, to view different data for *Sales Reps* on graphical representations similar to those described in the previous section.

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**Figure 70**

Additional visualizations can be seen in the Figure 71, which shows different parts of data, in a *tabular*, *gauge* and *scatter* representations.

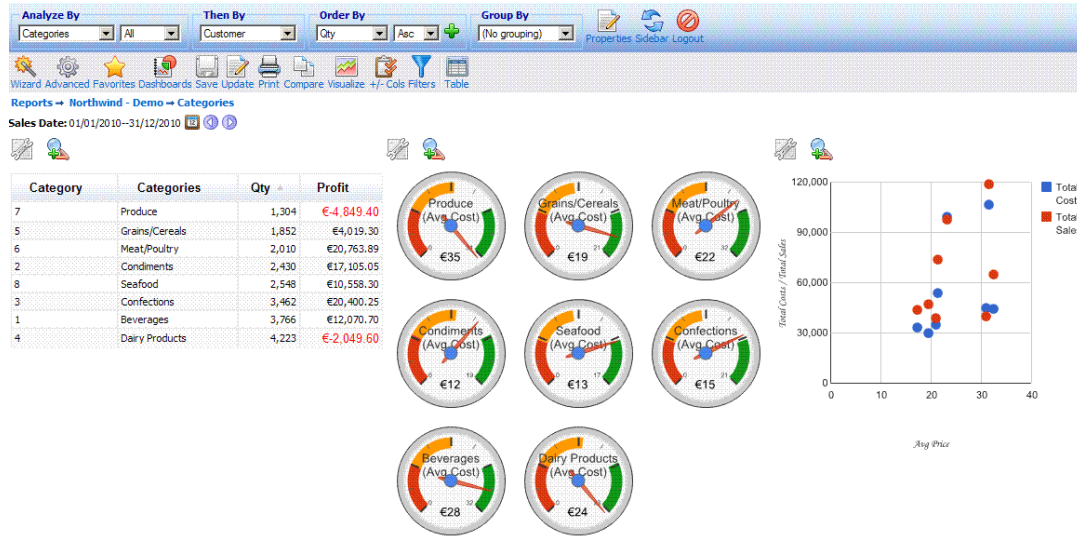


Figure 71

The user has the option to format the visualizations in the report according to their needs, by selecting to set specific properties to each visualization by clicking the 'Properties' icon adjacent to each visualization. In addition, the user can set the dimensions of each individual visualization by clicking the dimensions icon next to the graph. A popup window shown in Figure 72 will then open. The user can set the width and the height of the visualization selected. By clicking the 'Apply All' option the user can then apply the selected dimensions to all the visualizations present in the report.



Figure 72

The tabular visualization can be enhanced by choosing to present data formatted based on a selection of threshold values. There are three ways to format the data: by *arrows*, *bars* and *colours*. The type of formatter can be set by clicking the tabular visualization properties button, to open a new window as shown in Figure 73. In order to add any formatter to the quantities visible to the table, the 'Custom Layout' property must be selected, and then a table with all the quantities and the various options for the formatters is shown. The *arrows* option only needs to set a threshold value. When a data value is above this threshold value a green upward arrow precedes it, and when it is below the threshold value a red downward arrow precedes it. The *bars* option requires a threshold value to which each cell value is compared, the width of



the bar, and the colours to indicate whether a data value is below, 'Color Negative', or above, 'Color Positive', this threshold value. The *colors* option requires a threshold value to which each cell value is compared, the colour of the data value when below this threshold, as well as the background colour of the specific cell. The results of applying such formatters in a table visualisation are shown in Figure 74.

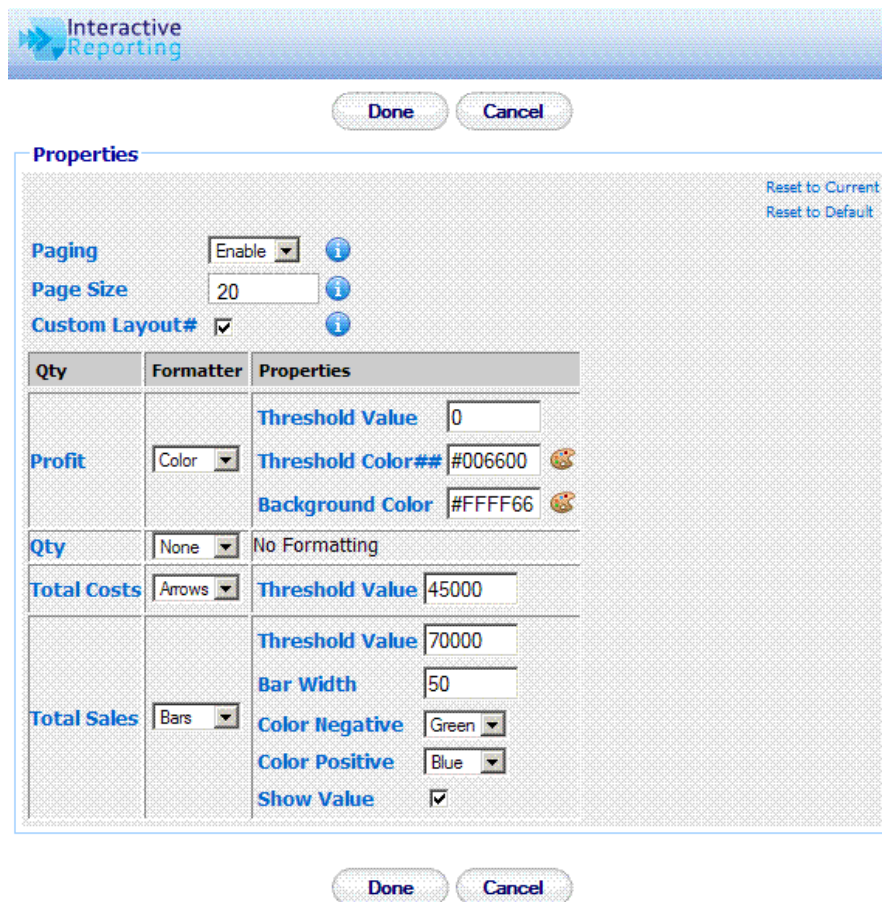


Figure 73

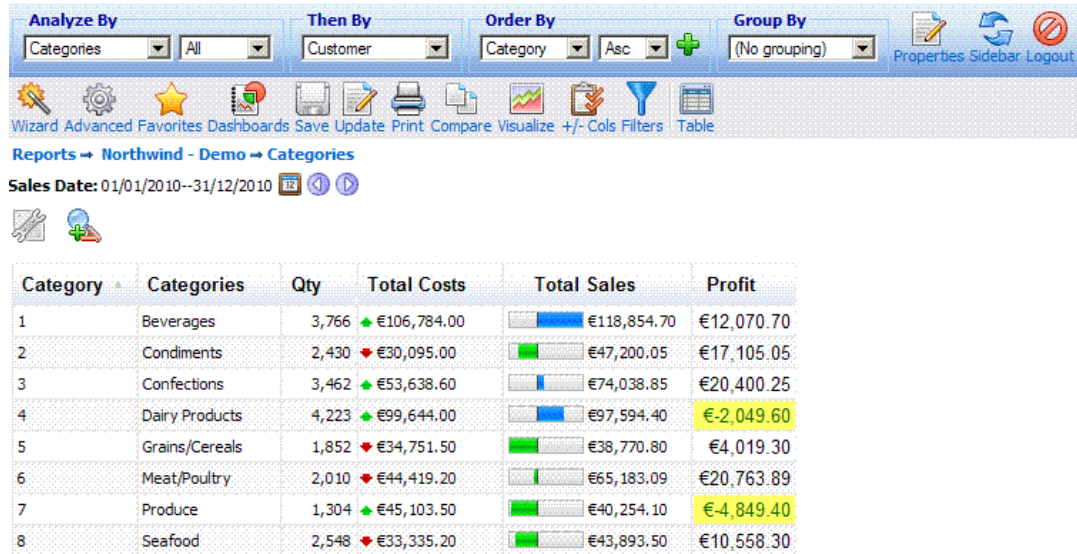


Figure 74

The gauge visualization also allows the user to view either a set of gauges for all the results returned for the selected *Analyze by* option or to select only a single gauge to display, associated with one of the *Analyze by* results or with the *Total*. To select which gauge(s) to view, the user must click the properties button for the gauge visualization to open a new window, Figure 75, and select which value to show.

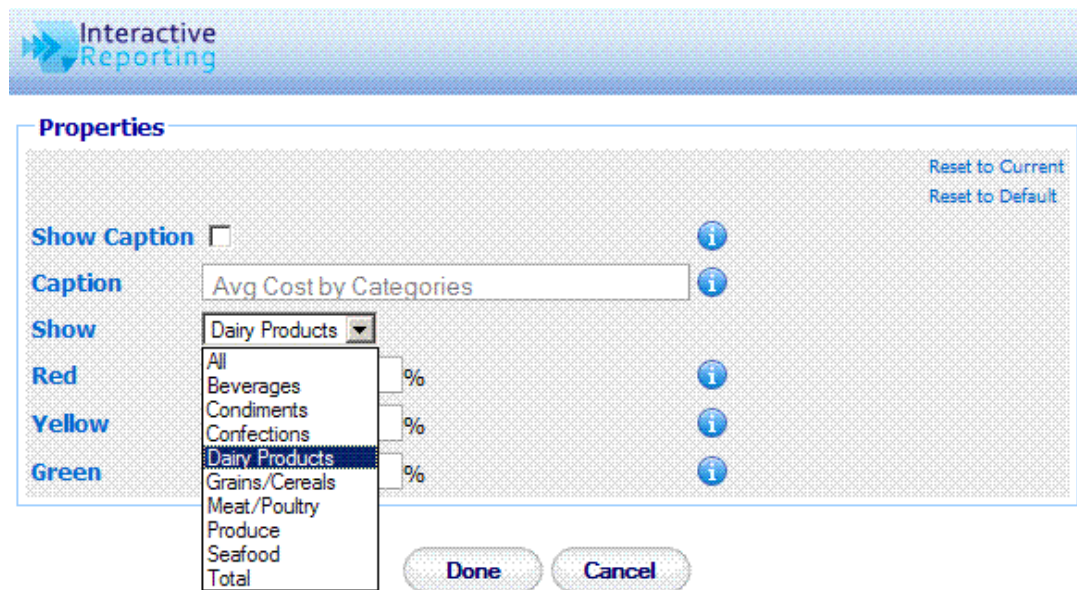


Figure 75

Figure 76 shows different gauge visualizations, one with all the *Categories* displayed, one with only the *Dairy Products* gauge, and one with the *Total* gauge only.

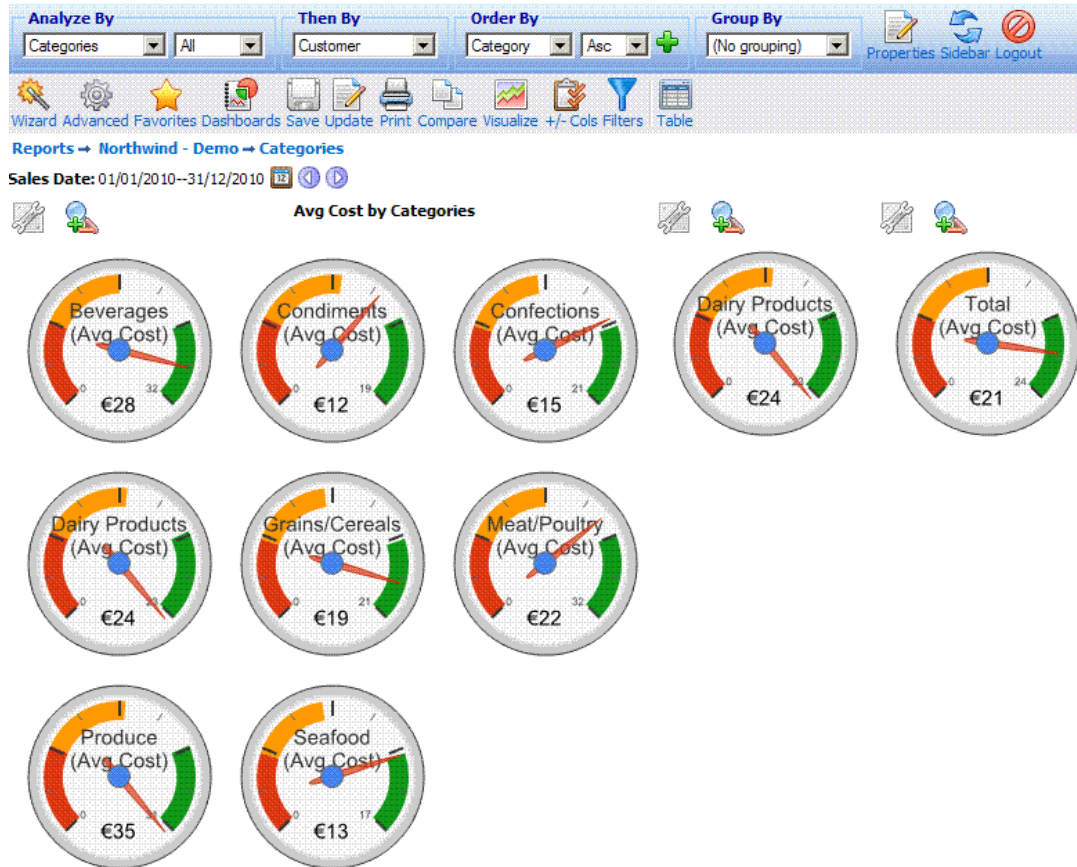


Figure 76

The 'Visualize' report also allows for the generation of an animated time series chart, as shown in Figure 77. This type of visualization report is best to follow a time series line of data, with the ability to zoom into the data on time ranges of days, months or years, and with annotated text to display the data as scrolling through time.

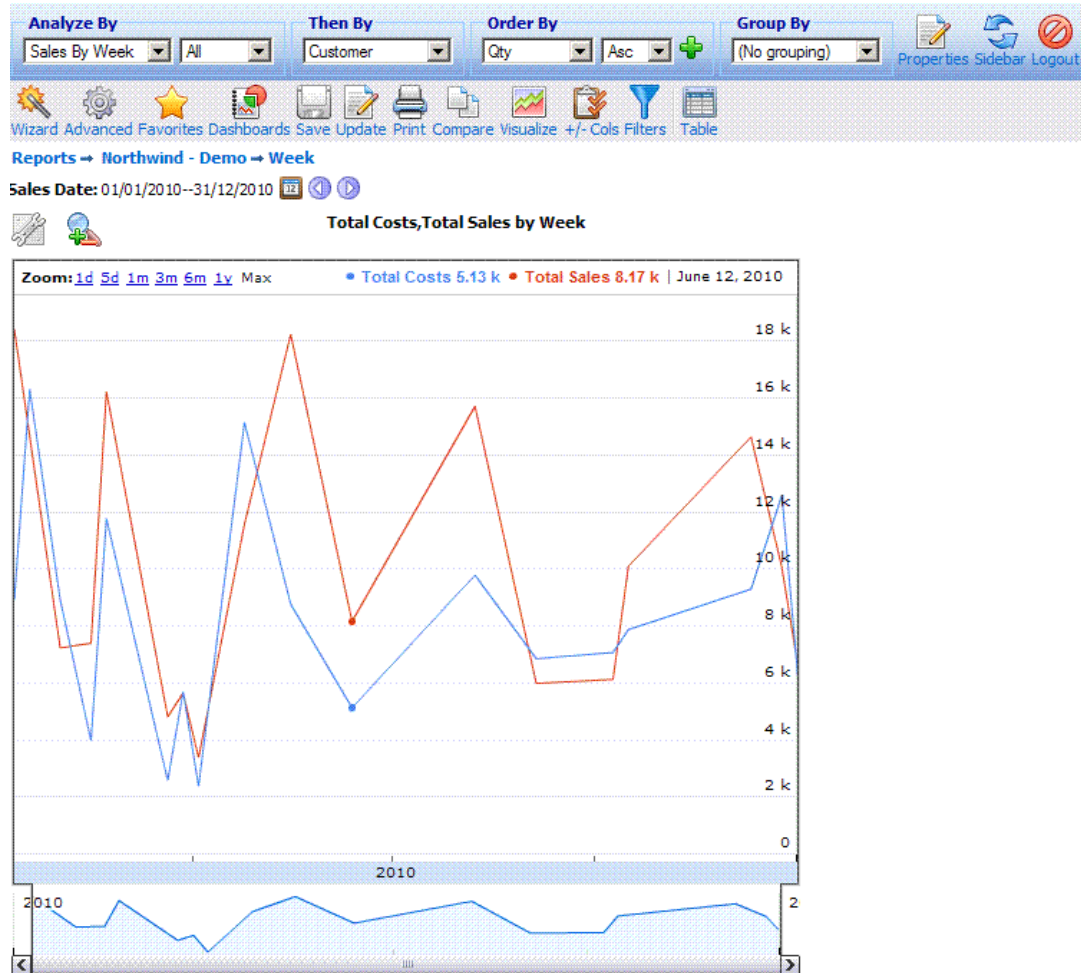


Figure 77

Another powerful 'Visualize' report that explores several indicators over time is the *Motion* visualization, which applies only to reports grouped by a Date field, Figure 78. This is a complicated report, containing a number of options to view the data. The play option at the bottom of the graph can demonstrate the development of data over the selected period of time. The chart type of the data can be adjusted to bubble/columns/lines. And specific data points can be explicitly trailed and be followed in time.

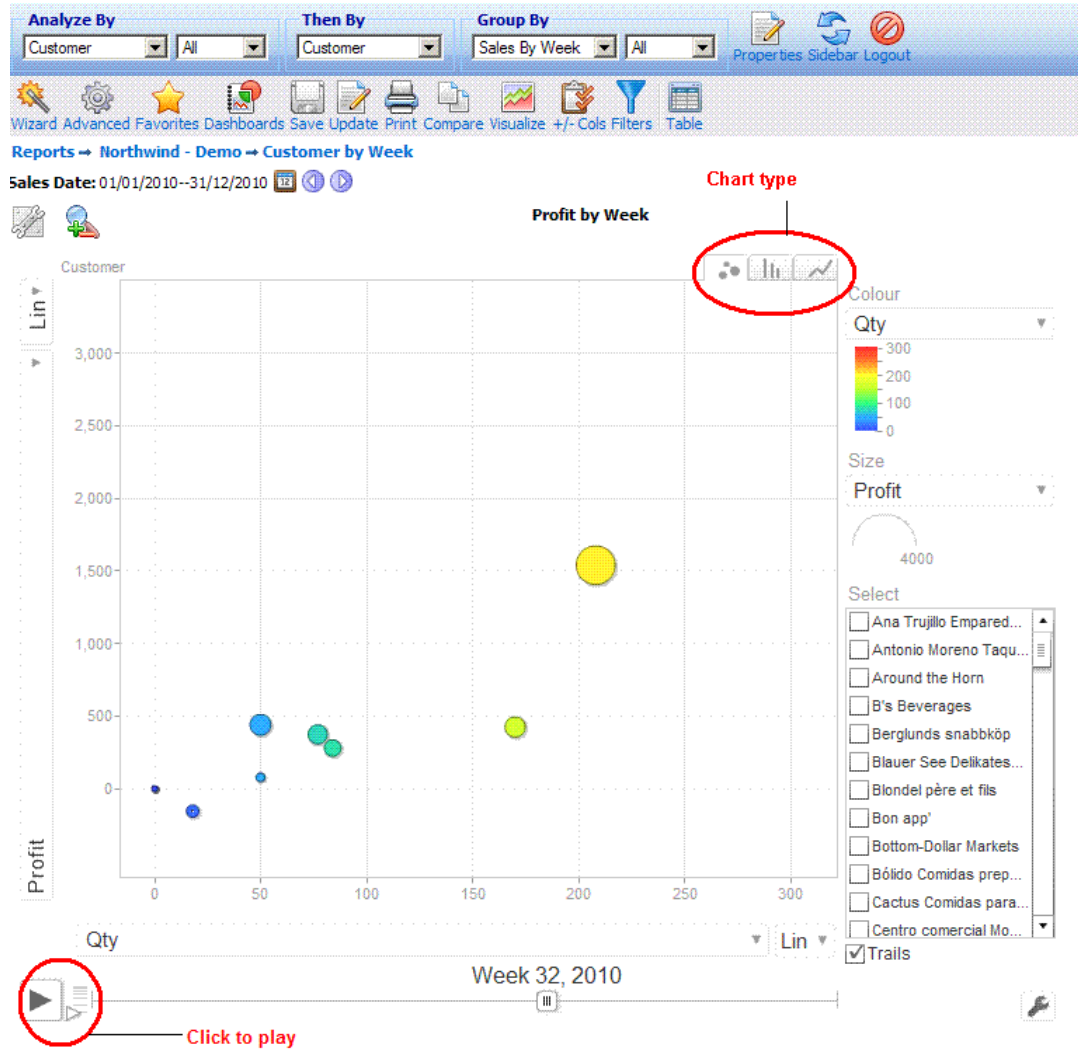


Figure 78

### 4.11 Comparison Report

Another potent option that INTERACTIVE REPORTING offers is its ability to compare data across different time periods. A typical 'Comparison' report looks like the one shown in Figure 79. To generate this report you can use either the wizard or the advanced interfaces, as described in the previous chapters, to compare Sales Rep data between the first and the second quarter of 2010. The comparison report can also viewed in the vertical layout, Figure 80, with the labels appearing in rows and the data in columns, by modifying the 'Layout' property, as shown in Figure 51.

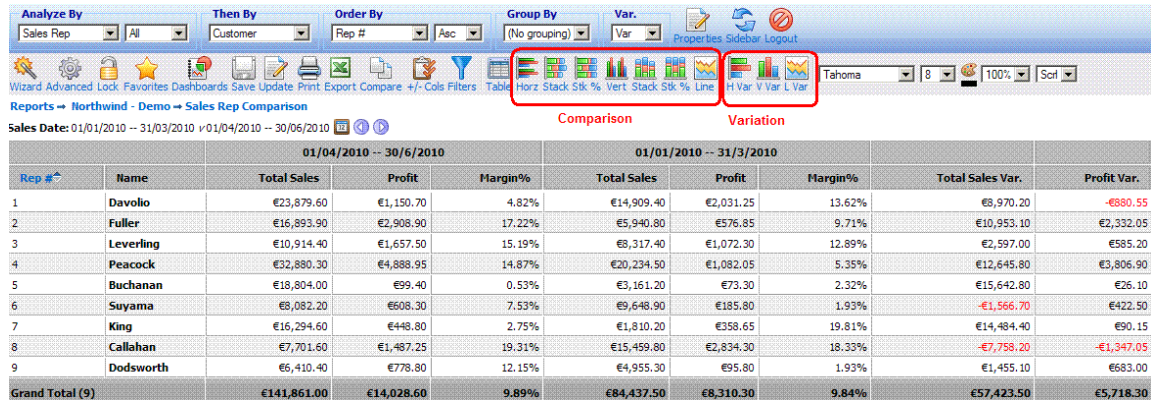


Figure 79

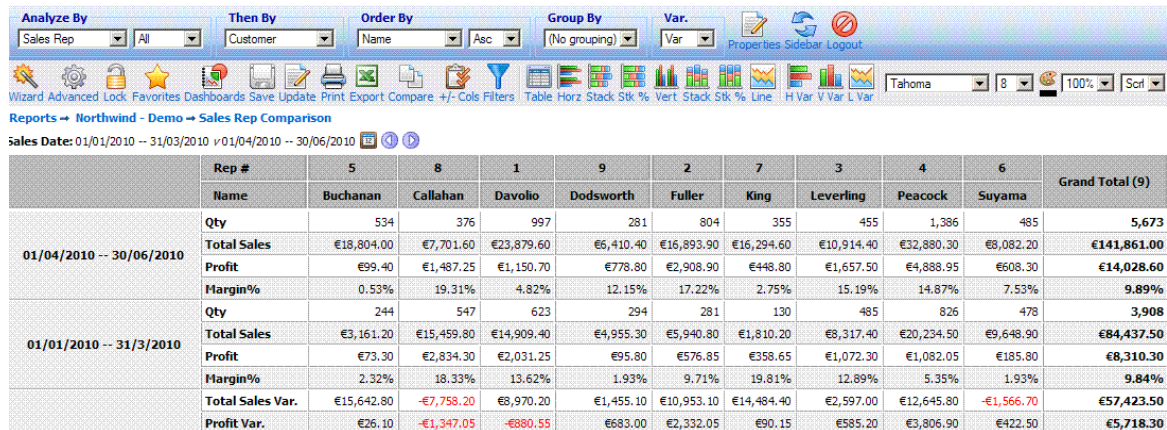
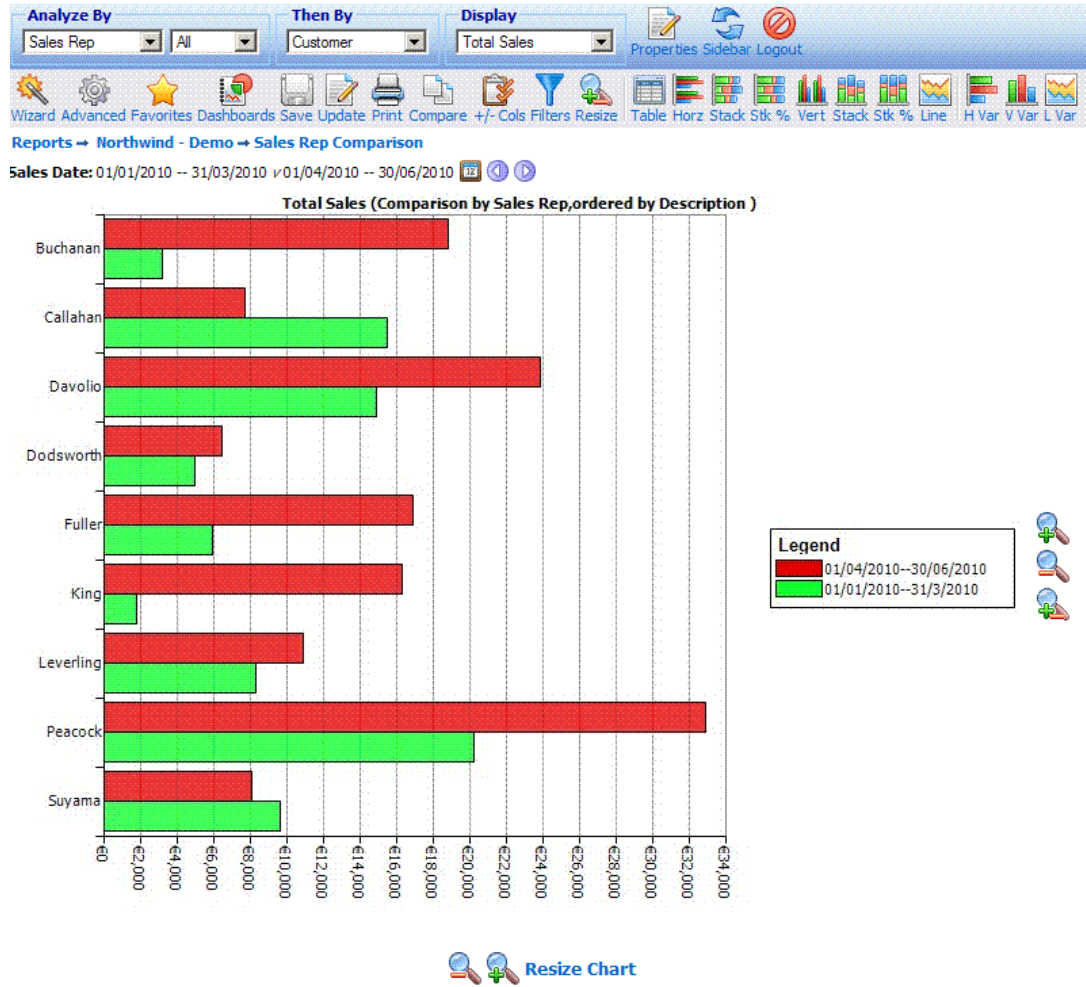


Figure 80

To view a comparison report as a chart the user must click on any of the comparison chart buttons. Changing the format of the comparison report of Figure 79 to chart will generate Figure 81. It is also possible to view chart reports of any variation field present, for example Total Sales Var. of Figure 79, by clicking any variation chart button. Such a report is shown in Figure 82. Pie charts are not available on comparisons. Note, also, that the charting options are not available in grouped comparison reports.

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**Figure 81**

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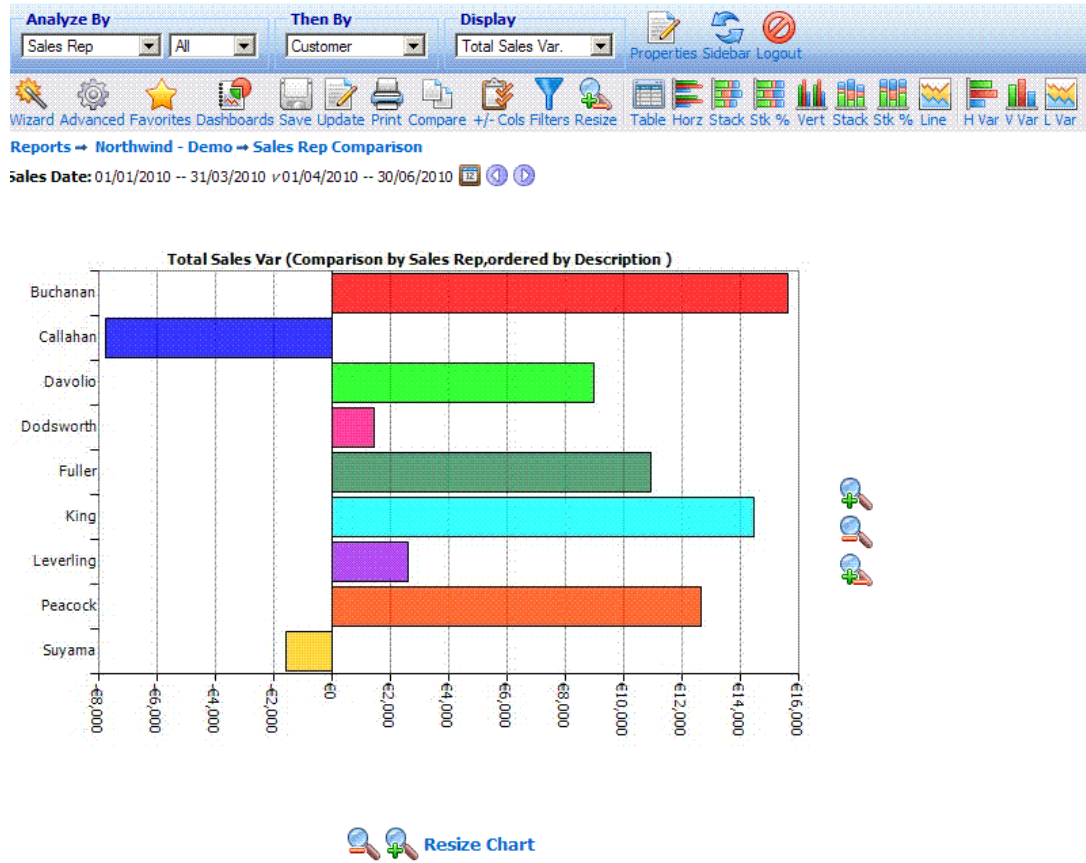


Figure 82