Sage Enterprise Intelligence - User Guide Version 7.0.0.0

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Introduction

Growing businesses require the freshest option in Business Intelligence software products, to give them either the whole data tree at a glance, or a selected slice. Our personalized software solutions allow organization-wide information access and manipulation. **Sage Enterprise Intelligence (SEI)** provides increased productivity and efficiency at all levels of your enterprise, optimizing knowledge and participation from the ground up. For informed decision-making practices that move you into the market and keep you there, **SEI** is the preferred choice.

Features and Benefits
SEI can be used in a variety of decision-making and strategic planning business processes. Here are some typical examples:

- Financial Reporting & Analysis
- Sales Analysis
- Key Performance Indicators Analysis
- Budget Management and Control
- Inventory Control and Analysis
- Quality Control (Purchasing, Production, Customer Service)
- Productivity Analysis

SEI's key features and functions include:

- Intuitive Web, Mobile And Excel User Interface
- Multi Data Source Access (ERP, CRM, CSM, etc.)
- Business Process Management
- Spreadsheets, Charts, Gauges, Maps, Dashboards
- Data Entry/Editing
- Drill-down, Drill-through
- Security
- Centralized Deployment

What's new in this version

This section contains all the new features delivered in Version 7.0.0.0. Please refer to the corresponding sections in this document for additional information about these new features.

- Oracle Native Support
  - Data source definition can be done with the native Oracle Provider instead of using OLEDB.
  - The SEI database can be installed directly in Oracle.
  - Creation of Olap Cube can be done directly in an Oracle database.

- New Option in the SQL Data Source for "Read Uncommitted"
  - You can check the Transaction No-Lock option ("Read Uncommitted") option in the data source. This option will read the data without waiting for the record to be committed (also called "dirty read").

- New Option to Set the Position of the Pivot Total Field
  - You can now choose if you want the "Pivot Total" before or after the pivot.

- New Options in the Distribution Module
  - You can now filter the data that will be sent by the distribution module (ex: Year=@@CURYEAR) to send the current year data without having to create a specific view with that filter.
  - You can schedule a distribution to be run and sent every x minutes, it will only be sent if the condition is true (ex: stock < 5).
  - A new button "Run now" has been added to immediately execute the distribution.
  - A new export format for the Excel Add-In reports is now available to export the result including the Add-In formulas instead of just the values. The calculation mode will also be set to manual in order to not trigger the refresh automatically.

- New License System
  - Each individual server installation will require a unique serial number.
  - A new option in the administration tab will show the current license information.
  - An option in the license information window will let the customer update the license with a single click.

- New Security Module
  - The security is now maintained in the web interface, all the interfaces have been re-designed and the V5 Windows client is no longer required.
  - It is now possible to use the active directory user.
  - It is now possible to define restriction globally.
  - All the options (button in the toolbar, context menu, etc.) in SEI are now secured by roles.
  - You can now set the security for the Excel Add-In button.
  - It is now possible to set security by environments.

- Global Variables
  - A new option in the administration tab is now available to maintain the global variables. The old V5 Windows client is no longer required.
  - The global variable still supports the old VBScript, but all of the new global variables defined must be done in JavaScript.
  - Global variables can now be used in the definition of the application links (ex: language of the current user).

    - They can now be used in the definition of the measure calculated column and pivot calculated column (ex: necResult=(@@THISYEAR-Units)-(@@LASTYEAR-Units);).
    - They can now be used in the "selected values" properties of the dashboard controls (dynamic labels, filtering panels).
    - They can also be used in the distribution module to define the values of the parameters for the Excel Add-In.

- Option to Set Mandatory Field for Link-to
    - In some instances, you may want to force the user to select a specific value (ex: the company) to enable the "link-to" to specific processes to ensure index integrity (more useful for the databases of type DB2).

- Table Aliases are Now Supported in the Process Designer
    - You can now add the same table in the same process multiple times. Table aliases will be created automatically.

- Joins on Specific Values are Now Supported in the Process Designer
    - You can now create joins on values as well. You could hardcode a value or use a global variable to make that value dynamic. A good example would be to join to a description file to retrieve the product description (the join will be TABLEA.PRODUCT = TABLEB.PRODUCT AND TABLEB.LANGUAGE = @@CurLang). This will retrieve the description of the product in the user language dynamically.

- New Feature for Suggested Joins in the Process Designer
    - In the process designer a new option will give you a list of suggested joins for a specific table/view. You could as an example, add the table "STOCK" and ask for the suggested join that will give you the choice of adding joins on (site, product, lot, etc.), then select the joins you need and they will be added automatically.

- Redesign of the Template Import / Export Feature
    - The template process import/export feature has been entirely redesigned to allow the user to select what will be exported or imported in detail.

- New Field in the Languages Definition to Identify the External Language
    - This option links the SEI language with the ERP language in order to retrieve multi-lingual descriptions from the ERP base on the SEI language.

- New Feature to Re-calculate Columns on Data Entry
    - A new option in the process designer is available to define "Edit Calculation" in order to recalculate any columns when the data is changed in the worksheet. As an example, in a financial budget, if the user changes the budget amount value,,the %budget base can be recalculated in real time.
    -
- New Option to Define Selection Page with Global Parameters
    - In the administration tab we have a new option to define global selection pages that will use global parameters. These selection pages can be used by the dashboard.

- The Prompt and Selection Page are now Usable Within the Dashboard
    - In the dashboard we can now use the prompt and selection page to filter the content of the dashboard.

    - It is also possible to set the prompt and selection page in the "Prompt on open" property of the dashboard in order to prompt them automatically when the user opens a dashboard.

- Four New Languages are Available
    - The new languages are Spanish, German, Chinese simplified and Chinese traditional.

- Two New Special Variables are Available
    - We can now use two new special variables in the script or joins on specific value feature, CurrentLang (represents the language of the current user) and CurrentUser (represents the user id of the current user).

- Execution of the Dictionary Refresh Done in Batch
    - The execution of the dictionary refresh will be executed in batch. You will not need to wait anymore for the completion of the execution of the scripts.
    - You can execute multiple scripts at the same time.

- New Option to Copy a Process
    - A new option is available to copy a process and all the views that belong to the selected processes.

- Cascading Prompt in the Selection Page
    - It will be possible to filter the data that will be prompted from the selection page based on the other values entered in the selection page.

Symbols used in this document

This document will use the following Symbols:

	Menu Option or toolbar button to access the current feature
	Useful tip
	Miscellaneous notes

System Requirements

The SEI Software package consists of a web client application that is installed automatically on the PC, and an SEI server portion that needs to be installed and configured as a pre-requisite.

Client PC Software Prerequisites

- Microsoft Silverlight 5 (http://www.microsoft.com/silverlight)
- Microsoft Excel 2003 or later (for exported views or for SEI Add-in for Excel)

SEI Client installation

The latest version of SEI is automatically available to the client each time the user accesses SEI from his web browser. The only necessary requirement is a one-time installation of Microsoft Silverlight.

SEI Server and Central Point Configuration

All SEI clients share a common web server location to access resources such as definitions, views, business processes, and databases. This common location is the Central Point. The Central Point must be configured once by the administrator in order to allow all other users to connect and use SEI.

What's in this Guide?

Contents

Sage Enterprise Intelligence - User Guide Version 7.0.0.0 1

Introduction 2

What's new in this version 3

Symbols used in this document 6

System Requirements 6

SEI Client installation 6

What's in this Guide? 7

Login Window 11

SEI Main Window 12

The Command Center 13
Favorites 14
Dashboard 14
Context Menus 15
The Toolbar 16
File Menu 16
Navigation 16
Dashboard 18
Administration 18

End User Section 19

Worksheet Views 19

Creating Your First Worksheet View 20
Maintaining the View's Data Structure 20
Dimensions and Measures Window 21
Organizer Window 21
Adding Dimensions and Measures to a View 22
Removing Dimensions and Measures from a View 24
Adding User-Defined Measures or User Calculated Pivots in a View 25
Organizing Dimensions and Measures in a View 27
Sorting 28
Advanced Options 28
Grouping 30
Summarizing/Exploring Grouped Data 32
Navigation Links 34
Resizing and Hiding Columns 35
Freezing Columns 35
Changing Column Order 36
Cross-Tab Worksheets 37
Filters 40
Applying Instant Filters 40
Using the Advanced Filters 42
Comparison operators 43

Logical Operators 43
Expression Builder 44
Using Prompts 45
Using the Selection Page 47
Edit Selection Pages 48
Saving and Publishing Views / Filters 49
Column Formatting 51
Printing 53
Page Setup 53
Exporting documents 55
Editing Data 56
Info-Pages 58
Chart Views 59
Creating a new Chart 59
Chart Properties Window 60
Scatter and Bubble Charts Special Considerations 62
Navigation in the Chart 63
Drill-Down/Drill-Up 63
Paging 64
Zooming 65
Switching between Chart types 65
Pie Charts and Doughnut Special Considerations 66
Applying Instant Filters 67
Linking From One View To Another View 69
Gauge Views 70
Creating a new Gauge 70
Map Views 77
Creating a new Map 78
Dynamic Label Views 84
Creating a new Dynamic Label 84
Dynamic Label Properties Window 85
Navigation in the Dynamic Label 86
Dashboards 87
Creating A New Dashboard 87
Designing a Dashboard 88
Properties 89
Generic Text Controls 90
Filtering Panels 91
Filtering Dashboards 93
Selection Page 93
Prompt 93
Filtering On Click 93
Filtering With Context Menu 94
Clear Filter 94
Link To 94
Editing Comments 95
Search Views 96

Subscribing to a View 97
General 97
Email 98
Schedule 99

Administrator Functions ***100***

Distribution Scheduler 100
Main Window 100
Creating A New Job 101
General 101
Sage Enterprise Intelligence Views 102
Excel Addin Views 103
Users and Groups 104
Conditions 105
Email 106
Schedule 106

Manage Environments and Data Sources 107

Manage License 109

Global Parameters 110

Application Links 111

Global Scripts 113

Process Designer 116
Design Graph Section 118
Add a table/view 118
Fact Table 119
Join Tables Manually 119
Join Tables with "Suggested Joins" 120
Joins On Specific Values 121
Preview Data 122
Other Information 122
Process Fields Table Section 123
Add a field 123
Columns Properties 124
Where Clause Section 126
Process Properties 127
Process Scripts 130
Mandatory Parameters **Error! Bookmark not defined.**
Selection Page with Cascading Prompt **Error! Bookmark not defined.**

Editing Info Pages 130

Translating Processes 135

Templates 137
Create Custom Installation Templates 137
Manage Import Templates 138
Import Installation Template 139

Update Scripts 142

Manage Dictionary 143

Manage Languages 146
Global Variables 147
Manage Global Selection Pages 149
Manage Security 150
Users 150
Groups 153
Process Authorization 154
Restrictions 156
Roles 158
General Roles 158
Process Roles 159
Environments 160
Your Comments are Welcome ***161***

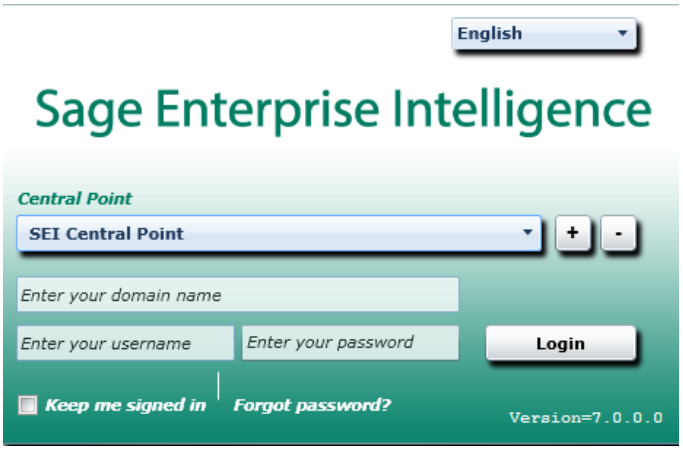
Start Using SEI

This section covers:

- Login window
- SEI main window (main menu, toolbar, command center and navigation area)

Login Window

When SEI is accessed, the login window is displayed. By default, it connects you to the pre-defined Central Point on the server. This is the Login Window that will be displayed when you access SEI.

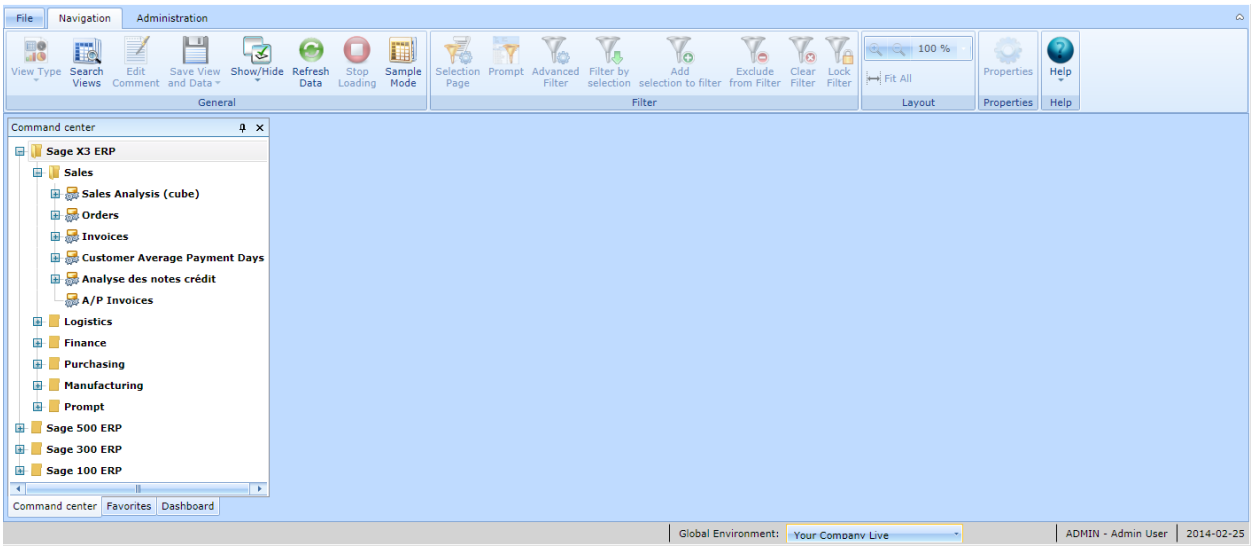


- The top portion of the login window shows the actual SEI Central Point where you are going to log in. You may select another Central Point by clicking the drop down arrow or add your own existing central point using the + sign.
- **Enter your domain name:** This should be a valid domain. This value is optional and should be used only if your SEI user has been created this way.
- **Enter your username:** This should be a valid user profile defined for SEI access.
- **Enter your password:** Enter the user's password. If the password is not correct, access to SEI is denied.
- Check **Keep me signed in** if you want this connection to remain active for a period of two weeks.
- Press **Login** after entering a valid User name and Password. You will then get the SEI main window.
- Click the language drop-down arrow if you want to change to your preferred language of the software.
- Click **Forgot password?** if you want SEI to email your password.

You may add or remove user-entered Central Points. Central Points are installed on a remote application server or even an http/ftp remote server.

SEI Main Window

After a successful login, the SEI main window is displayed. It has been designed to facilitate access to all the SEI tools and features. Here is an example of the main window.



The **main menu** supplies the main functions and options of SEI. However, options on this menu may be automatically disabled if they don't apply to the current context, or if the user does not have the authority to use the corresponding function.

There are three menu tabs, each giving access to different functionalities: **File**, **Navigation** and **Administration**.

The Toolbar is a very useful tool that helps to easily run the most common actions.

The Command Center is a multi-purpose control window that allows accessing and manipulating your corporate data. The following section provides more information about the command center.

The Navigation Area represents the main working framework in which you can open and navigate in different kinds of views. SEI supports multiple tab interfaces. This means that multiple views can be opened simultaneously.

Status Bar displays the current user, the environment and the current date.

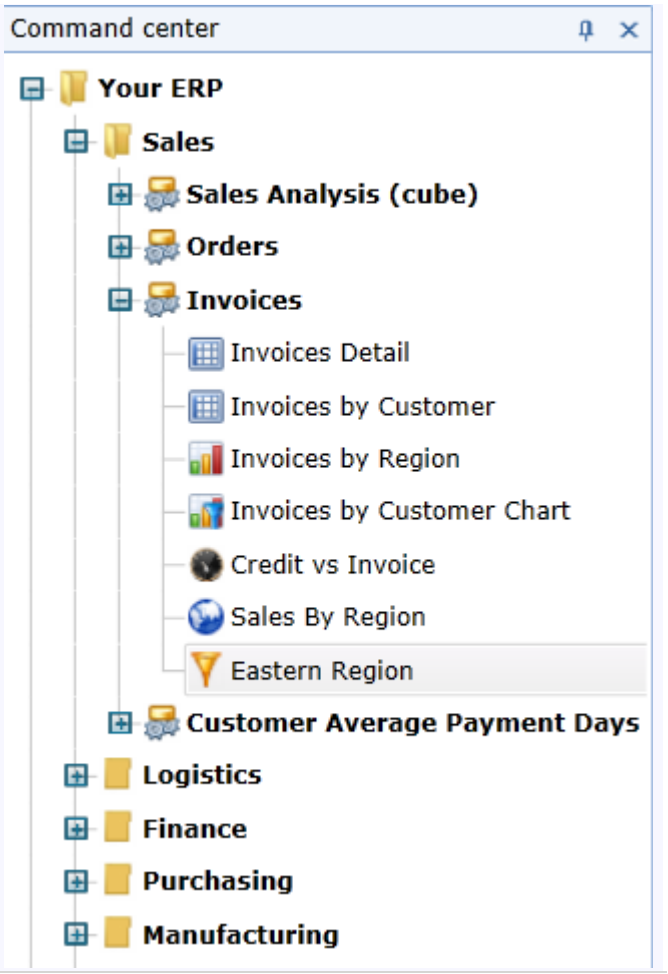
The **Administration** Tab contains administration functions such as the Scheduler and the Global Parameters.

The Command Center

The Command Center is a control window. It is very useful as it allows you to:

- Open all available views (worksheets, gauges, maps, charts and dashboards).
- Select and execute view-related operations.
- Organize processes and views in different folders.

Here is an example of the Command Center:



Legend:

	Folder
	Process
	Worksheet view
	Filtered worksheet view
	Chart view
	Filtered chart view
	Gauge view
	Filtered gauge view
	Map view
	Filtered map view
	Dashboard view
	Dynamic Label
	Filtered Dynamic Label
	Filter

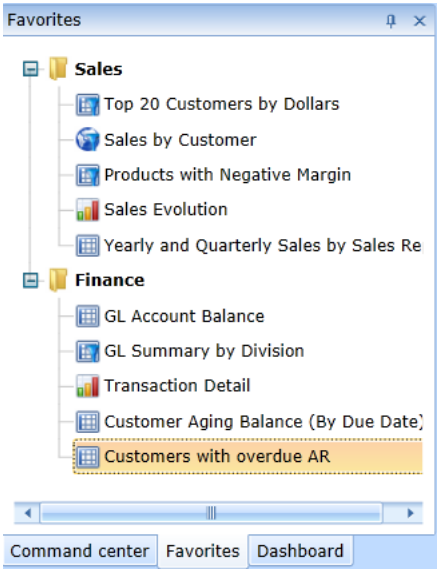
If the user double-clicks on a view from the command center, the navigation area displays the corresponding data in the appropriate layout (worksheet, chart, gauge, map or dashboard). When the user double-clicks on another view it opens in a new tab.

The content of the command center can vary from one user to another. In fact, it represents only the processes and views that a user is authorized to access.

It's possible for authorized users to create multiple folders within a single process. This allows them to better organize their views.

Favorites

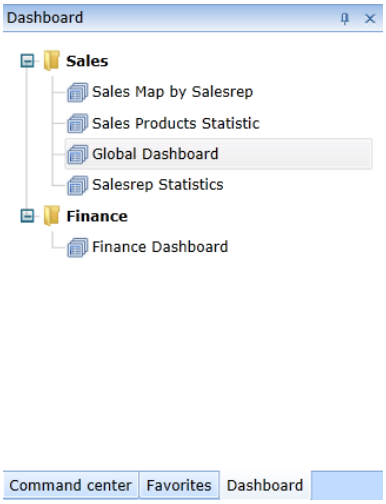
SEI allows users to create shortcuts for any view listed in the Command Center (Charts, Worksheets, Gauges, Maps and Dashboards). This feature allows users to quickly access frequently used views.



To create a shortcut, right-click on a view from the Command Center, then select "Add to Favorites".

Dashboard

SEI allows users to create and display dashboard views with many selected views displayed on a single page. The list of available dashboards is accessible from its own window similar to the command center. A section near the end of this document details how to use and manage Dashboard views.



Context Menus

A Context Menu is provided with the command center. It is another useful way to access most frequent actions. It can be accessed by performing a right-click on any element of the Command Center. Here is a summary of the options available in the Command Center's Context Menu:

Context Menu for Processes

Option	Description
New Folder	Creates a new Folder
New Worksheet	Creates a new Worksheet
New Chart	Creates a new Chart
New Gauge	Creates a new Gauge
New Map	Creates a new Map
New Dynamic Labels	Creates a new Dynamic Labels
Design Process	Creates a new process or changes an existing process
Copy Process	Creates a copy of the process
Edit Selection Pages	Displays a window to allow you to define selection pages
Translate Process	Displays a window to allow you to enter translations in various languages for the process name, views, fields, etc.
View Info-Page	Accesses and uses the process Info-Page
Edit Info-page Scripts	Creates and edits the process Info-Page
Delete Process	Deletes the process
Rename Process	Renames the process
Create Process Documentation	Points to the pdf or the Word file that contains the documentation for the process
Open Process documentation	Accesses and views the process documentation

Context Menu for Views, Favorites, Dashboards and Folders

Option	Description
Open in Current Tab	Opens a selected view in the current tab
Open in Current Tab (Keep current Filters)	Opens a selected view in the current tab while keeping the same filter as the active tab (if the active tab is from the same process)
Open in New Tab	Opens a selected view in a new tab (multiple views can be opened in different tabs)
Open in New Tab (Keep current Filters)	Opens a selected view in a new tab while keeping the same filter as the active tab (if the active tab is from the same process)
Open in Sample Mode	Opens a selected view with a maximum of 100 records
Add to Favorites	Creates a shortcut in the user's "Favorites"
Rename	Renames a selected element
Delete	Deletes a selected element
Properties	Displays/Changes view properties
Subscribe for Distribution	Displays a window to schedule the view for distribution
New Dashboard	Creates a new dashboard

New Folder	Create a new folder
Remove Favorites	Removes the selected item added in the Favorites
Design Dashboard	Opens the selected dashboard in design mode

Some options in this context menu may or may not be enabled depending on the user's authority and on the nature of the selection (Folder, Process or View).

The Toolbar

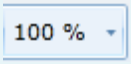
The toolbar gives quick access to the most frequently used features. Here is a brief definition of the functions available in the toolbar:

File Menu

	New: Creates a new Worksheet / Chart / Gauge / Map / Folder / Dashboard.
	Open: Designs an existing Worksheet / Chart / Gauge / Map / Dashboard.
	Save: Saves View Definition.
	Save As: Saves View Definition under a new name.
	Save Data: Saves the data changed by the user in a worksheet (ex: budget).
	Page Setup: Selects the parameters of the printing view.
	Print: Prints the content of the View.
	Export: Exports the view to a different format (PDF, Excel, Html).
	User Settings: Manages the settings of the current user. The language and the culture can be changed.
	Change Password: Allows you to change your current password.
	Properties: Displays the general properties of the view.
	Refresh Command Center: Reloads the content of the command center with the most current list of views.
	Disconnect: Closes the current connection and exits SEI.

Navigation

	View Type: Switches the current view from one view type to another.
	Search Views: Displays a window that permits you to search through all existing views based on search criteria. It also displays a preview of the views.
	Edit Comments: Takes a snapshot image of the current view and allows you to add comments to it and send it by email.
	Save View and Data: Allows you to select between Save, Save as and Save data.

	Show/Hide: Selects which parts of the main window you want to display or not.
	Refresh Data: Reloads the current view with the latest information.
	Stop Loading: Stops loading the current view from the server.
	Sample Mode: Allows you to activate/deactivate the sample mode where only a few records are going to be retrieved, for faster loading time.
	Selection Page: Displays the selection page in order to select filter criteria.
	Prompt: Opens the prompt window for the current view.
	Advanced Filter: Sets the advanced filter options on the filter or allows you to edit the filter manually.
	Filter by Selection: Filters the current view based on the current cursor selection values.
	Add Selection to Filter: Adds the current cursor selection values to the active view's filter.
	Exclude from Filter: Excludes the current cursor selection values from the active view's filter.
	Clear Filter: Empties the current filter of the active view.
	Lock Filter: Locks the current filter of the active view.
	Zooms in/Zooms out.
	Resizes all the columns in a grid.
	Zooms Percentage.
	Worksheet Properties: Maintains worksheet properties.
	Chart Properties: Maintains chart properties.
	Gauge Properties: Maintains gauge properties.
	Map Properties: Maintains map properties.
	Dynamic Labels Properties: Maintains dynamic labels properties.
	Help : Opens the current user guide

Dashboard

	Tools Accessories: Selects components to be placed on the dashboard while designing the dashboard.
	Show/Hide: Selects which parts of the main window you want to display or not.
	Close: Closes the current window.
	Help : Opens the current user guide.

Administration

	Scheduler: Schedules views, dashboards and Excel Add-In files for distribution.
	Manage License: Displays the current license status and allows you to update the license.
	Security: Manages all the security of the application.
	Manage Env. & D.S: Manages the Environments and the Data Sources.
	Templates: Manages the templates, importing and exporting any SEI Objects.
	Update Scripts: Updates the server components if required.
	Manage Dictionary: Manages the script to synchronize the SEI dictionary with the external ERP dictionary.
	Languages: Manages the list of languages supported for the content of SEI.
	Global Parameters: Manages the Global Parameters.
	Global Scripts: Manages the Global Scripts.
	Application Links: Manages the Application Links.
	Global Variables: Manages the Global Variables.
	Manage Global Selection Pages: Manages the Global Selection Pages.

More details are provided in the User Guide for the features above.

While using SEI, you will notice that the features above are not always available. In fact, related buttons are disabled in the following situations:

- The current user is not authorized to use the feature.
- The feature does not apply to the current context. For example, if a worksheet window is active, the button that allows maintaining chart properties would not be available.

End User Section

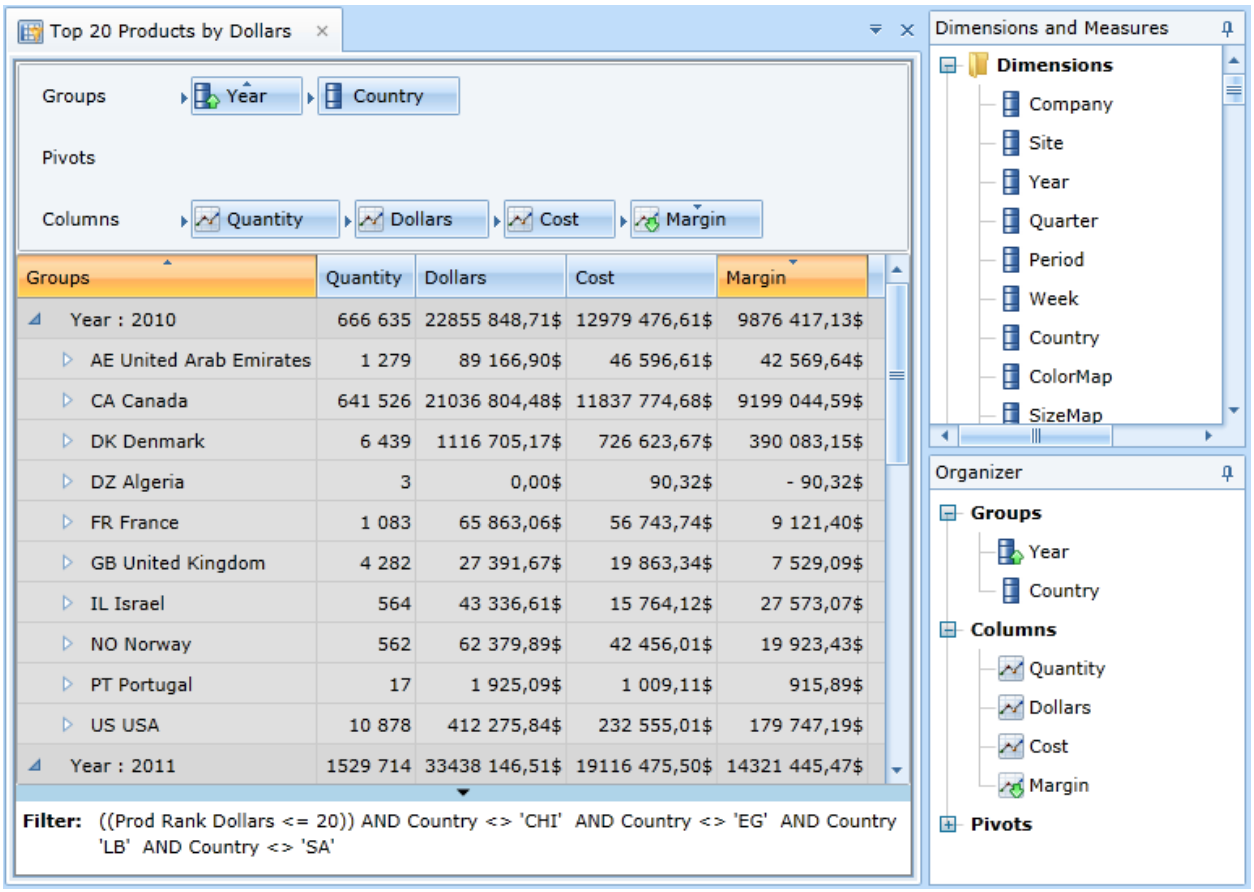
This section contains all the functionalities related to the end user interface.

Worksheet Views

This section covers the features and functions you could use when you are navigating within a worksheet view of a specific process. In this section you will learn:

- How to organize your data (by Grouping, Sorting, etc.)
- How to select a specific subset of data (using Prompts, Filters and Views)
- Other features (e.g. Printing, Exporting to a Microsoft Excel file or other formats)

Here is an example of a Worksheet View:



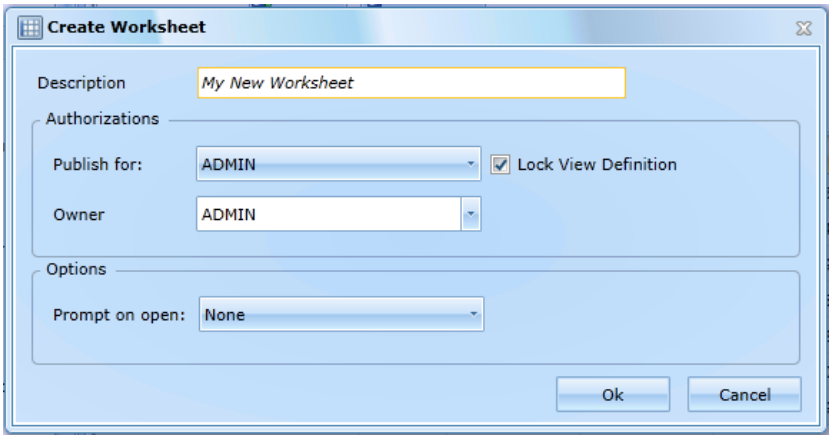
The Worksheet View contains four main parts: the Grouping and Pivot area, the Column Headers, the Data Sheet and the Filter Area. Each part will be described in detail later in this chapter.

Creating Your First Worksheet View

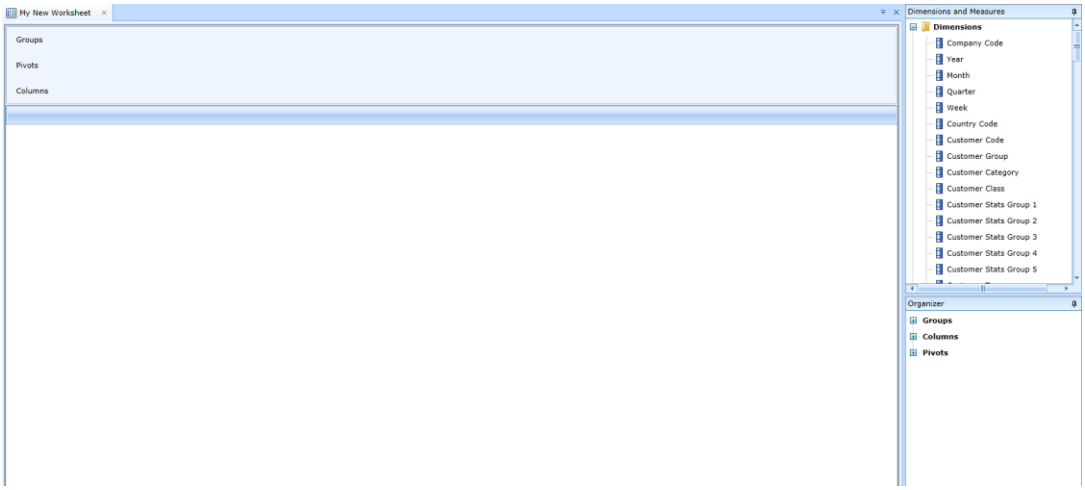
To create a new worksheet, select the process in which you want to create your view, and then do one of the following:

- Right click on the process, then select "New Worksheet" from the context menu
  OR
- From the main menu, select "File", "New" then "Worksheet"

You will then be asked to provide a name for your worksheet and specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Ok" button after providing this information.



You will now get an empty worksheet.



Maintaining the View's Data Structure

Views are based on the information of an existing process. When creating a new view, all fields of the related process are available in the Dimensions and Measures and can be included in the view. The list of the process fields, categorized as dimensions, measures or descriptions, is available at any time to be selected for the view when placed in the Organizer section or placed in any section at the top of the view (Groups, Pivots, Columns).

Dimensions and Measures Window

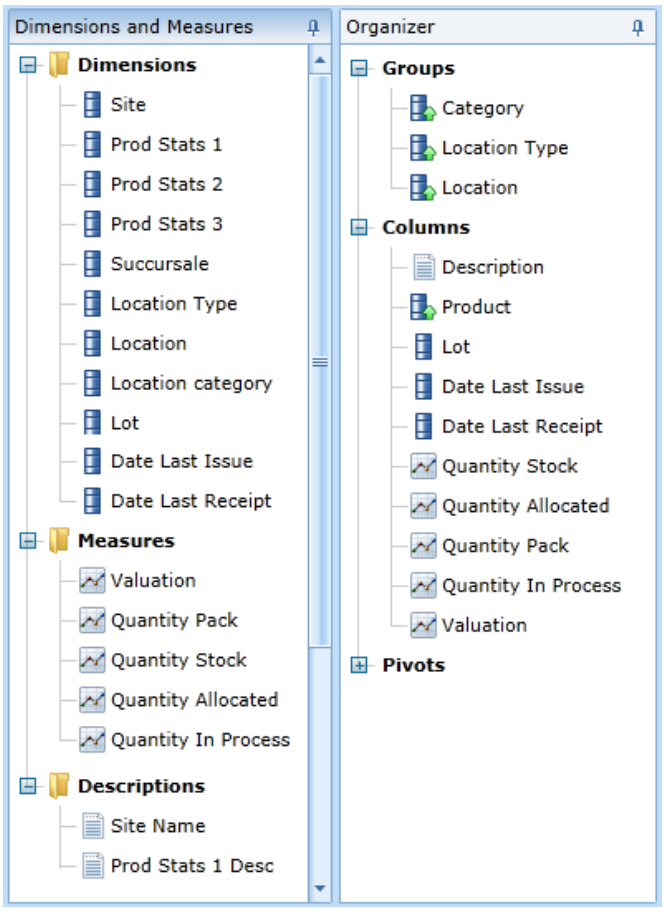
A list of available fields is provided in the "Dimensions and Measures" section of the window. All available fields are categorized in four types: Dimensions, Measures, Descriptions and User Calculation Columns. From the "Dimensions and Measures" section, you may select the fields you want in your worksheet by dragging them to the "Organizer" section, under Groups, Columns or Pivots. You may also select multiple fields and use the context menu to move them to the "Organizer" section.

Organizer Window

The content of this window displays how the data is currently organized in the view. The same structure is used for the Worksheets, Charts, Gauges and Maps. The "Organizer" window will appear by default on the bottom right side of the screen. All available fields that can be placed in your view are listed in the "Dimensions and Measures" section.

The Organizer is composed of three main sections, Groups, Columns and Pivots:

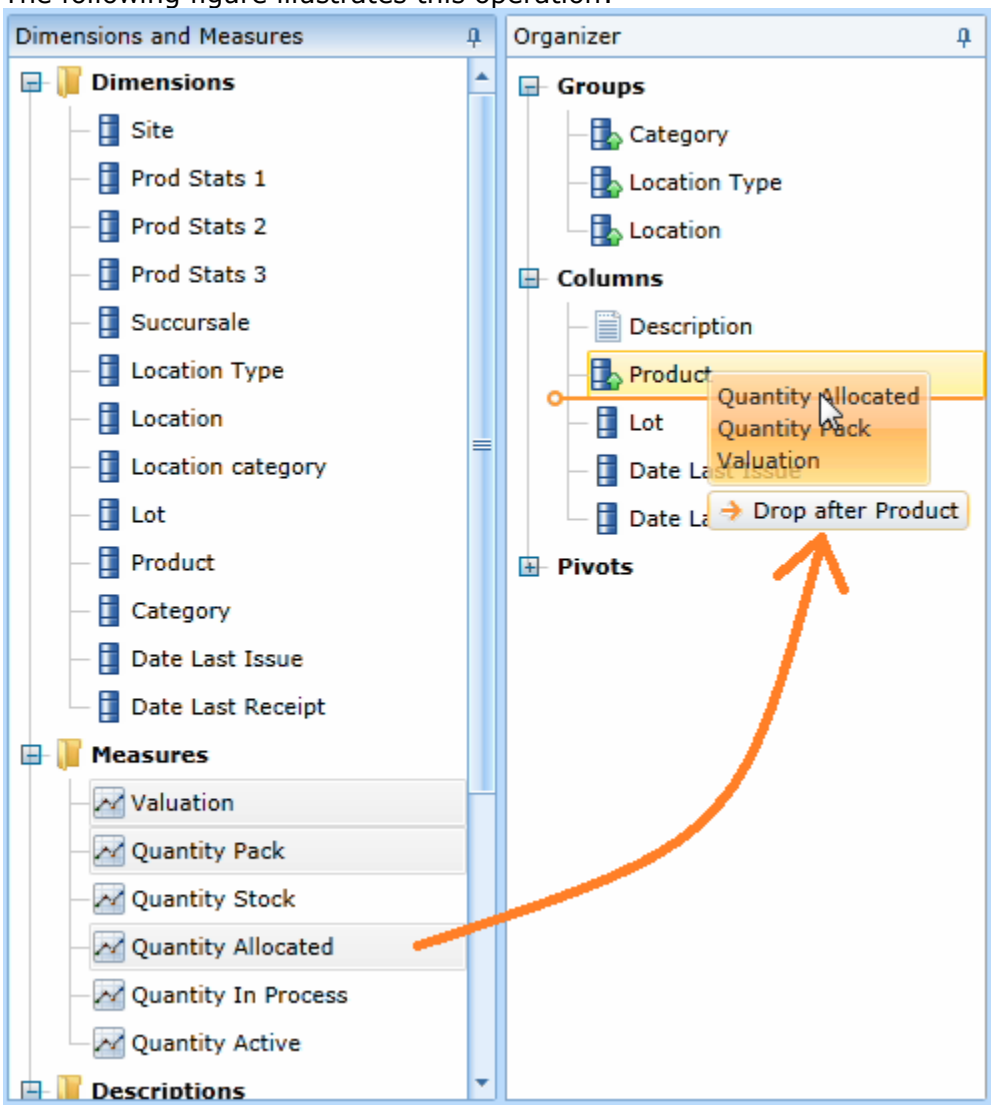
- The **Groups** section contains the drill-down structure of the view and the visual order of the fields.
- The **Columns** section contains the list of fields represented in the view that are not grouped.
- The **Pivots** section allows you to create a series of column values based on the selected fields placed under this section.



Adding Dimensions and Measures to a View

Changing the data structure of your view can be achieved by selecting available dimensions and measure fields and placing them in either the Groups, Columns or the Pivots section of the Organizer. From the list of dimension and measure fields, users can select multiple fields and drag them into the desired positions of the Organizer.

The following figure illustrates this operation:



When adding fields certain restrictions will apply depending on the view type:

- Dimension and Description fields are not considered when placed in Columns for a Chart view type.
- Measure fields can only go into the Columns section.

The Groups section of the Organizer not only represents the data structure of the view but also defines the drill-down structure for Worksheets and Charts.

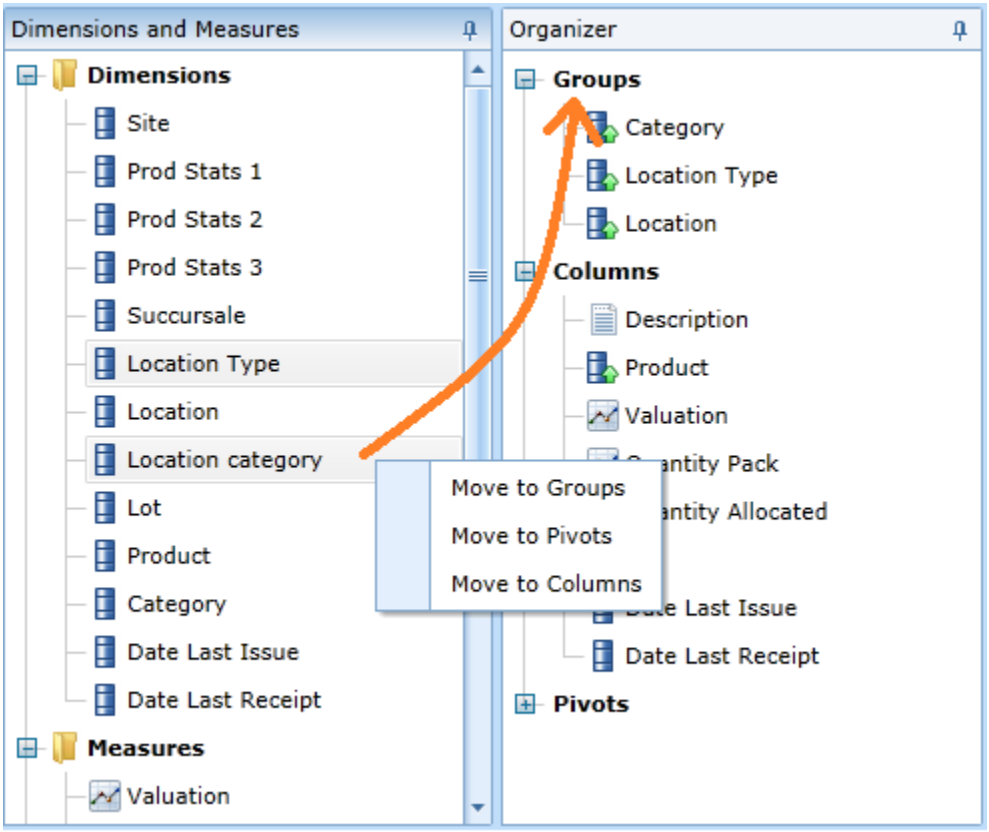
You can add a field to the view's Organizer by doing one of the following:

• Select dimensions or measures from the Dimensions and Measures section and then drag-and-drop them in the Organizer section in the desired position. This is the method illustrated in the previous example.

OR

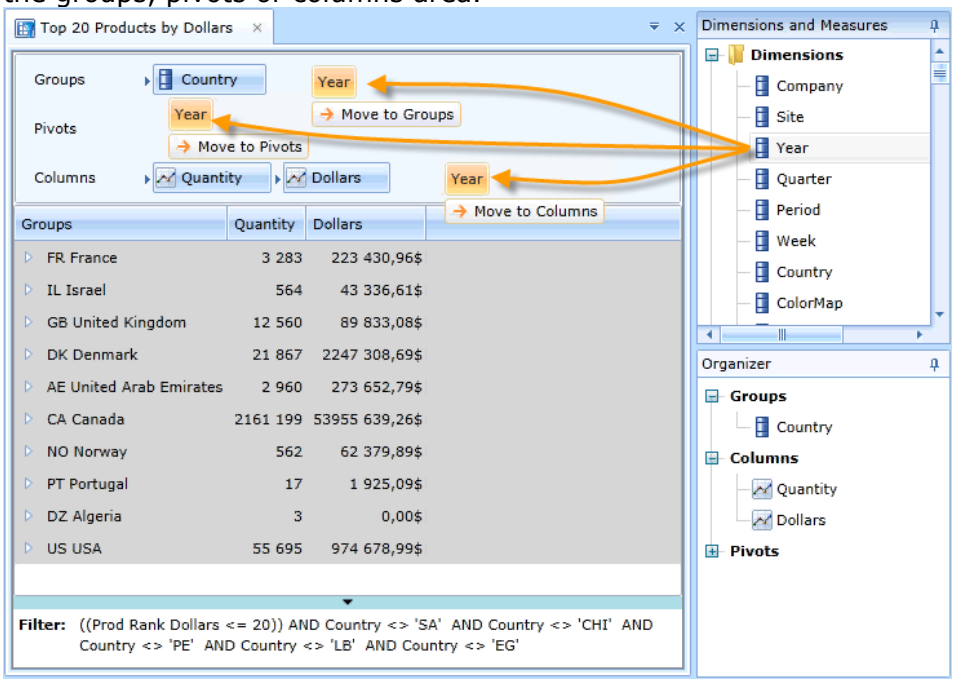
• Right-click on selected dimensions or measures from the Dimensions and Measures section. A context menu will appear offering three choices depending on the field type: Move to Groups, Move to Pivots or Move to Columns

The following example shows how to add the "Location Type" and "Location Category" dimension fields as Groups:



It is possible to add multiple fields at a time by selecting more than one field from the list using the Ctrl and Shift keys.

In the worksheet view, as demonstrated below, it is possible to move selected fields directly to the groups, pivots or columns area.



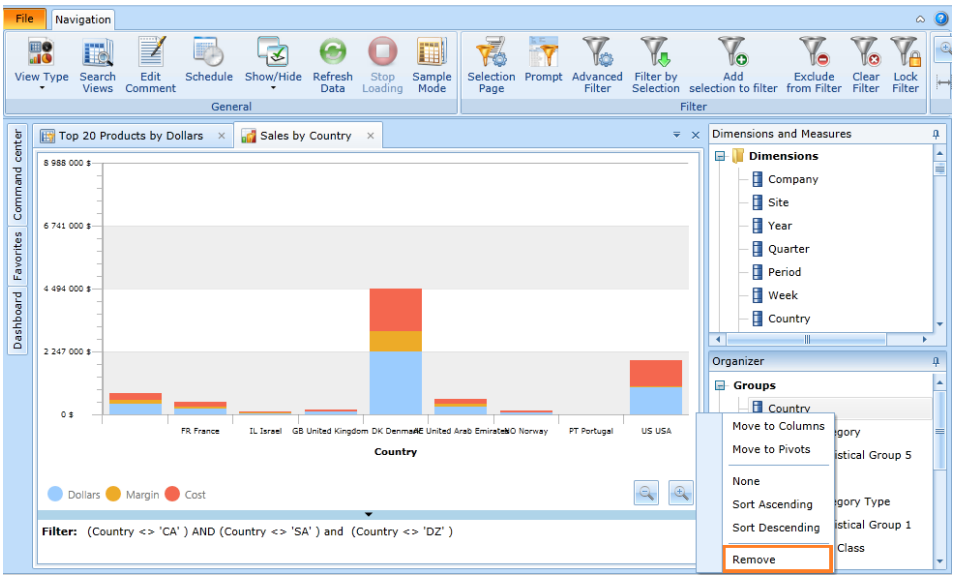
Removing *Dimensions and Measures from a View*

The Organizer allows users to select already chosen dimensions and measures in the Groups, Columns or Pivots and remove them.

To remove an element from the view, select the dimensions or measures from the Organizer section, then:

- Press the "Delete" key.
- Right-click on the element and select "Remove from the context menu".
- Click the "x" beside the field that appears in the grouping area of the worksheet.

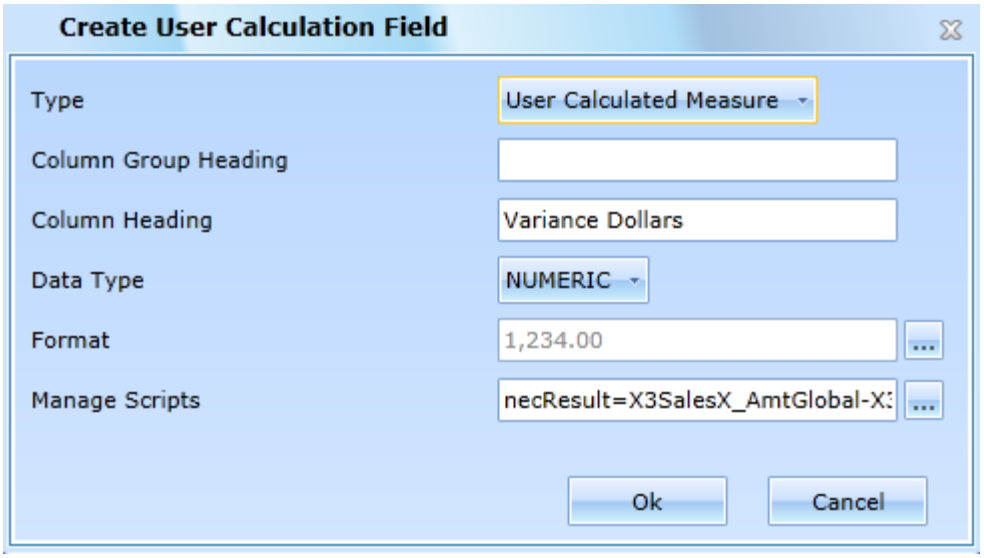
The following example shows how to remove the dimension "Country" from selected Groups:



Adding User-Defined Measures or User Calculated Pivots in a View

Users also have the option to create their own custom measures and use them in views. To define a measure, one should go to the Dimensions and Measures tab, scroll down to the bottom of the list and find the section labelled 'User Calculation Columns', after which one can right click on that section and select 'New User Measure Calculation':

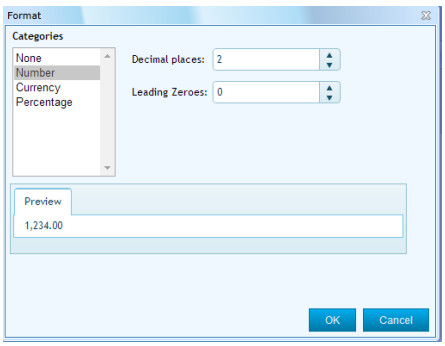
If the active view includes pivots, the user can also select the option 'New User Pivot Calculation'. Either option will bring up a calculation field wizard, where the properties of the user measure can be defined.



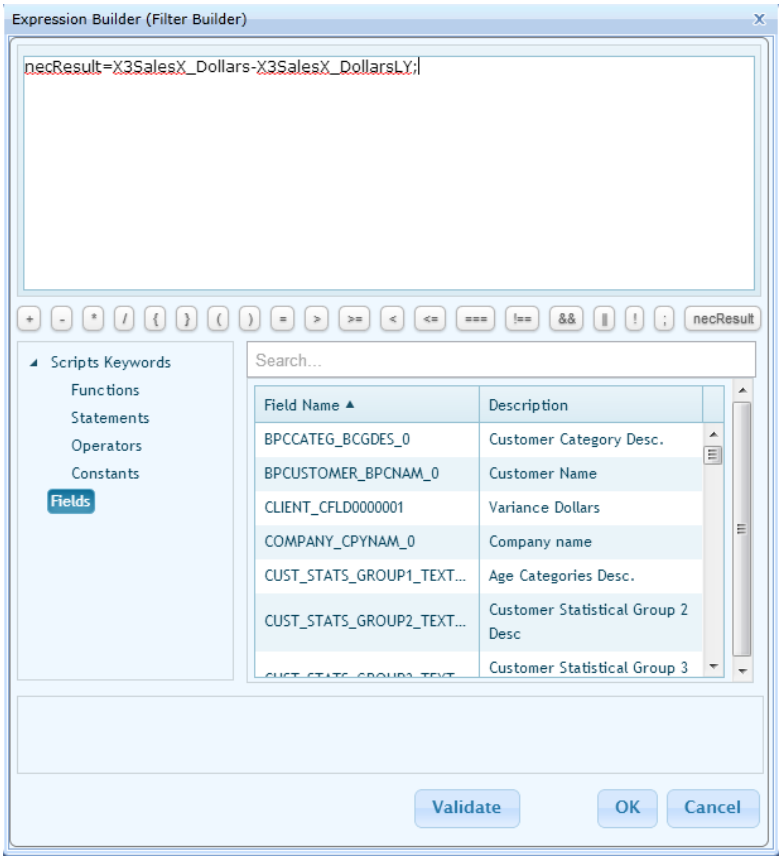
The Column Group Heading and the Column Heading determine the headings displayed for this new field.

The Data Type determines whether the field is numeric, character, date, etc.

The Format manages how the data will be displayed within this field and the option in the format window will be based on the data type.



The ellipsis button next to the Manage Scripts option will take the user to an Expression Builder wizard that will help create a Java script to calculate the value of the user-defined measure.



The wizard provides a list of all the fields available in the process (under Fields) and a variety of functions, statements, operators and constants to help with the script creation. Clicking on a field name or a specific function or statement, will enter the field or function name in the script where the cursor is currently placed.

The Java script created in the wizard has to start with 'necResult=' and has to finish with ';', for it to be valid. The example below shows an expression used to calculate a dollar variance.

User Calculated Pivots are very similar; the main difference being that instead of having a list of all the fields in the process a list of the distinct measure columns used in the view is available instead.

You can use global variable within the "User Calculated Pivots" to make them more dynamic. As an example, a calculation like this: (2014-Margin)/(2014-Margin)-(2013-Margin) could be changed by (@@THISYEAR-Margin)/(@@THISYEAR -Margin)-(@@LASTYEAR -Margin)

After defining a user calculated measure, this measure can be used in any view belonging to the process, by any users who have access to the process, provided that they also have access to the fields used to define the user calculated measure. User Calculated Pivots can only be used in the view where the data is pivoted the same way.

Organizing Dimensions and Measures in a View

The Organizer allows users to select already chosen dimensions and measures and to position them in any order.

When adding fields, certain restrictions will apply depending on the view type:

- Dimension and Description fields are not considered when placed in Columns for a Chart view type.
- Measure fields can only go into the Columns section.

To reposition a field you can do one of the following:

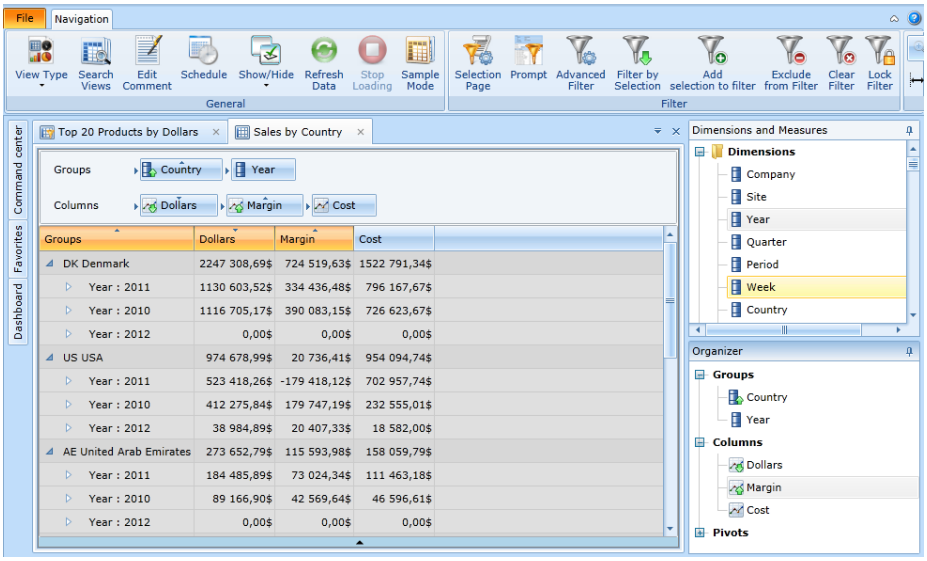
- Select the dimensions or measures from the Organizer section and then drag-and-drop them in the new desired position.

  OR
- Select the dimensions and measures from the Organizer section and right-click on them. A context menu appears offering choices to move them depending on the field type: Move to Groups, Move to Columns or Move to Pivots.

Sorting

Sorting rows can be achieved for a specific column by right clicking on the fields in the Organizer and selecting from the pop-up menu one of the following: 'Sort ascending', 'Sort descending' or 'No sort'. If Sort Ascending is selected, an up arrow appears beside the field. If Sort Descending is selected, a down arrow appears beside the field.

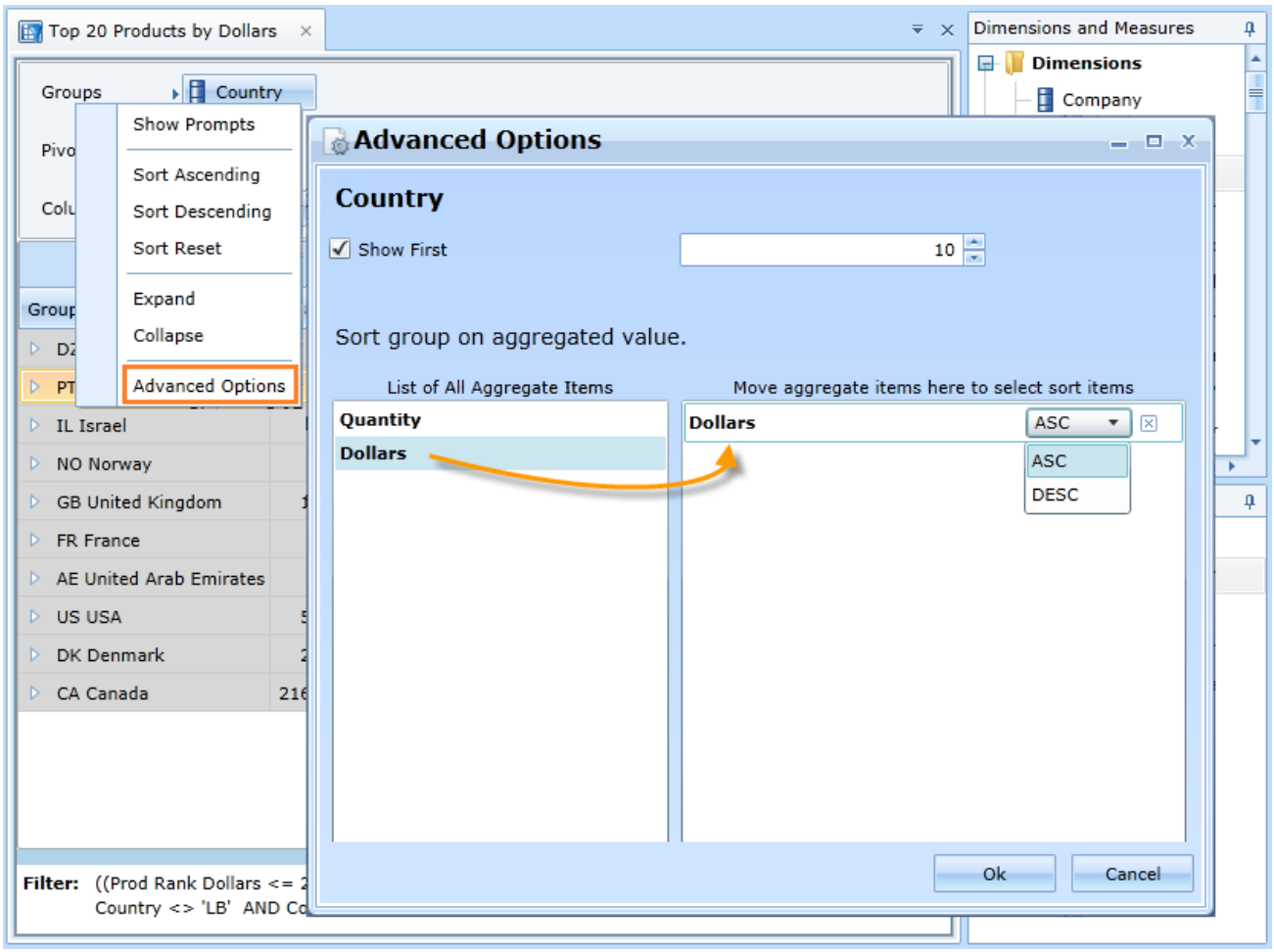
In the following illustration the rows are sorted by Country (ascending). The sort on the Dollars (descending) and the sort on the Margin (ascending) will affect only the last level of data (white rows):



If data is sorted by more than one column (on the last level of data) the sorting will be based on the order in which the columns appear on the screen (from left to right).

Advanced Options

You can set some advanced options for any grouped element of the view by selecting the context menu option “Advanced Options”. In the following example, advanced options are going to be defined for the grouped element “Country”.



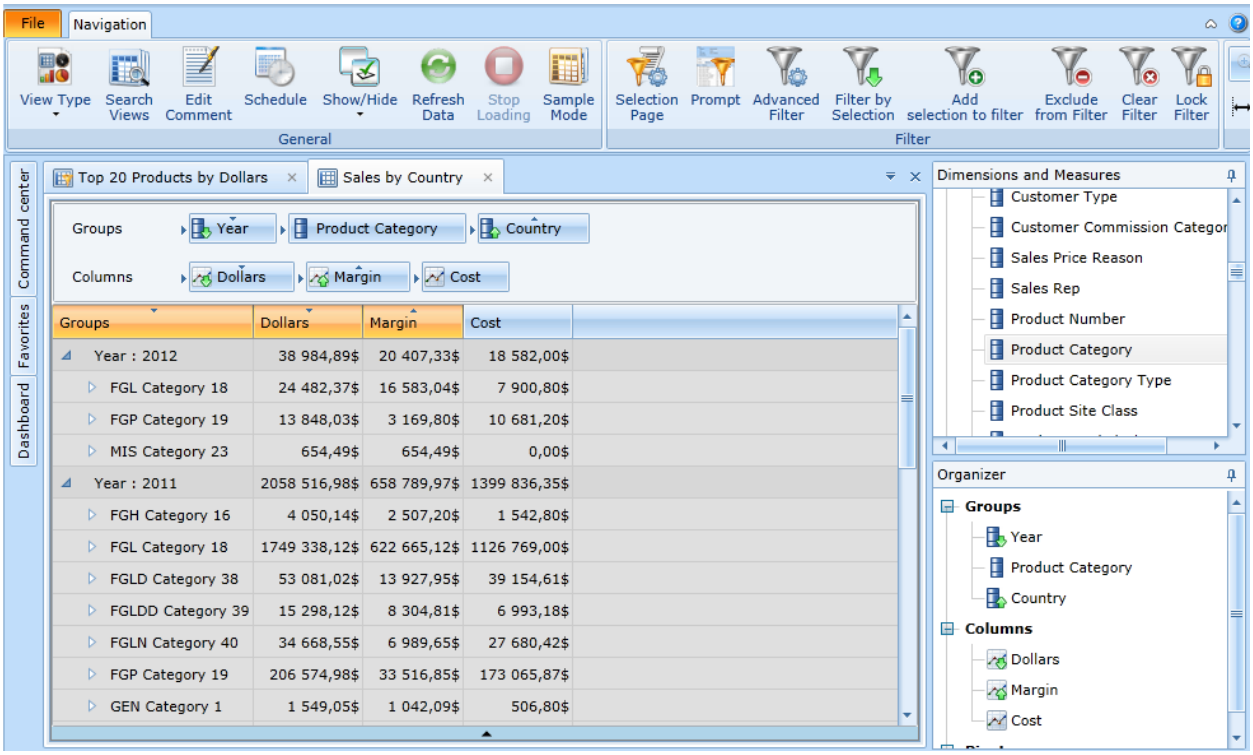
The **Show First** option allows you to retrieve only the specified amount of group records, based on the sort order. All the other groups will be aggregated together under the heading 'Others'.

The **Sort Group on Aggregated Value** lets you specify the sort order of the records based on some selected aggregated values. Drag and drop the columns you want to sort in the right section and specify the sort order (ascending or descending).

Grouping

Using the Grouping Area, you can group displayed data by one or more columns. For instance, drag the dimension you want to group by and move it into the grouping area. You can achieve the same operation by doing a right-click on any dimensions in the Dimensions and Measures section and selecting "Add to Groups" from the context menu.

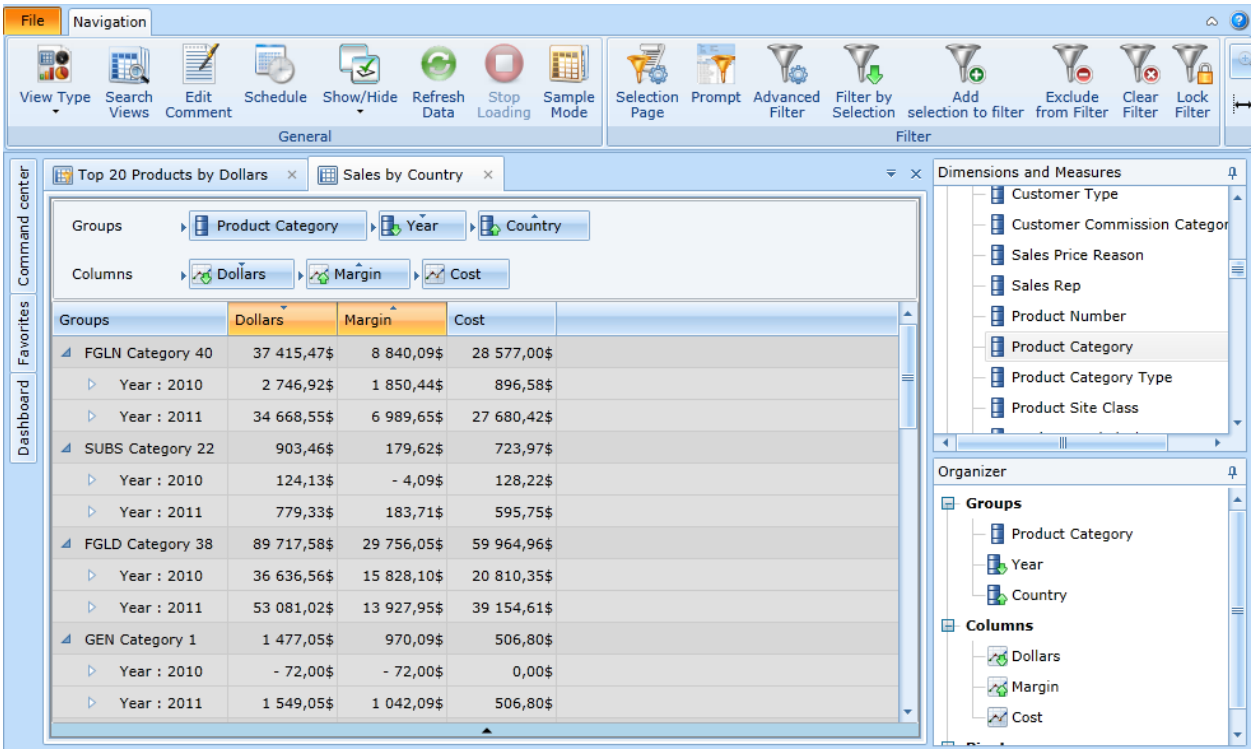
In the example below, the Worksheet is grouped by 'Year', 'Product Category' and 'Country':



Once grouped, a summary row is added for each value of each dimension in the grouping section. All grouped rows are printed with a gray back color (for more visibility) and include summary values of specific columns (i.e. totals of Dollars, Margin and Cost).

Grouping is not available for all columns, rather, only for those that have been configured within the process definition as dimensions.

If a worksheet is grouped by multiple columns, the grouping is based on the order in which related columns appear in the grouping area, beginning from left to right. For example, in order to group a Worksheet by "Product Category" and then by "Year", we should move the "Product Category" column header to the grouping area before the "Year" column. Here is the result of this operation:



To ungroup data for a specific column, move the column name from the grouping area back to the column header area.

Further information, please refer to the section on how to Summarize / Explore Grouped data.

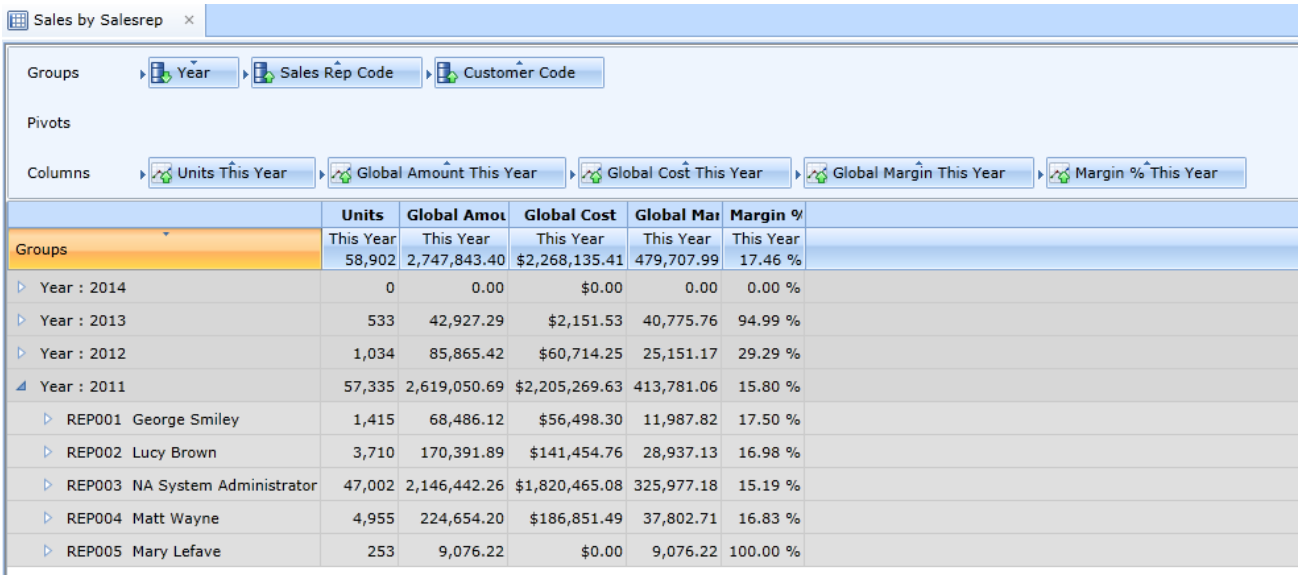
Summarizing/Exploring Grouped Data

When data is grouped by one or more columns, users have the ability to expand (view) or collapse (hide) group detail rows.

In order to expand/collapse detail rows, either click the arrow signs located to the left of the summary lines, or select the option Expand/Collapse from the context menu available from fields that appear in the Grouping section of the worksheet.

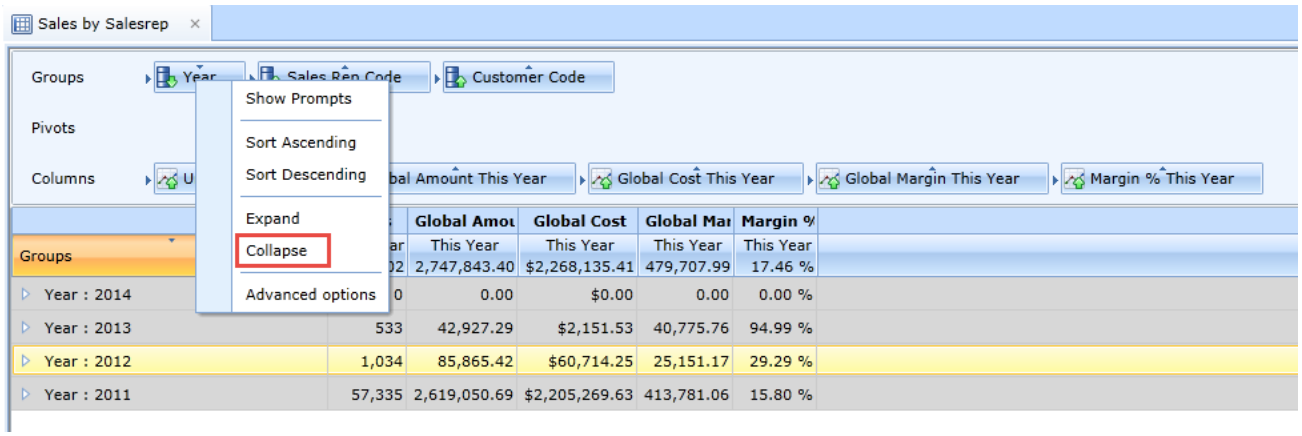
Example:

In the following view example, the user grouped the information by Years as follows:



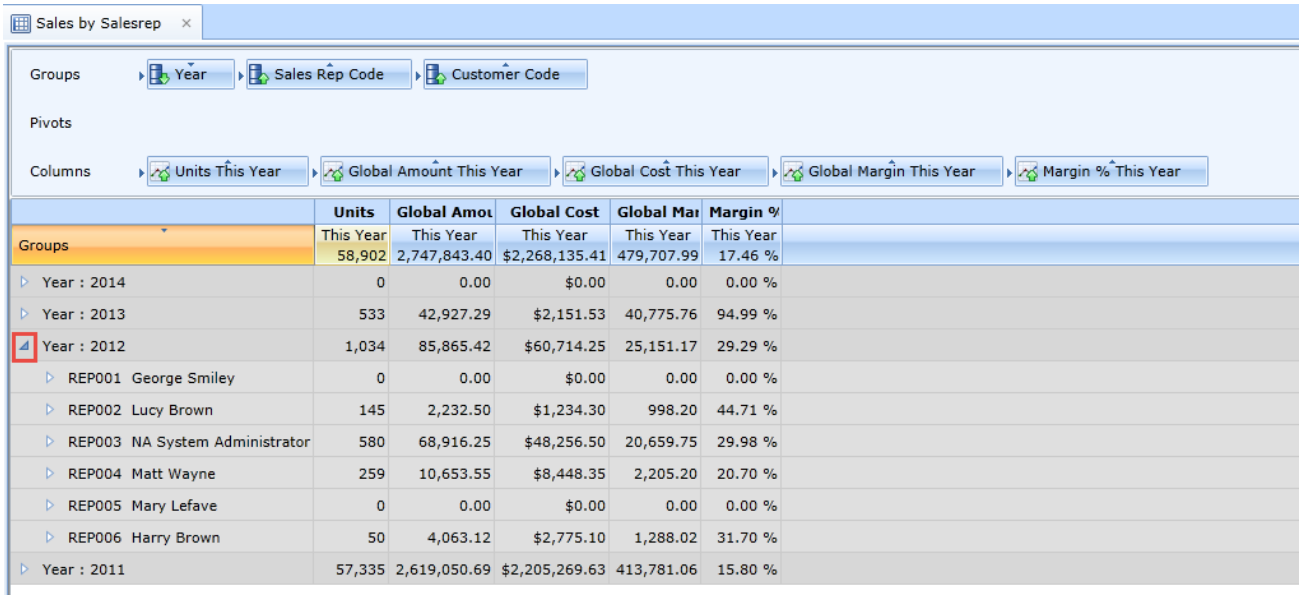
Groups	Units This Year	Global Amou This Year	Global Cost This Year	Global Mar This Year	Margin % This Year
	58,902	2,747,843.40	$2,268,135.41	479,707.99	17.46 %
Year : 2014	0	0.00	$0.00	0.00	0.00 %
Year : 2013	533	42,927.29	$2,151.53	40,775.76	94.99 %
Year : 2012	1,034	85,865.42	$60,714.25	25,151.17	29.29 %
Year : 2011	57,335	2,619,050.69	$2,205,269.63	413,781.06	15.80 %
REP001 George Smiley	1,415	68,486.12	$56,498.30	11,987.82	17.50 %
REP002 Lucy Brown	3,710	170,391.89	$141,454.76	28,937.13	16.98 %
REP003 NA System Administrator	47,002	2,146,442.26	$1,820,465.08	325,977.18	15.19 %
REP004 Matt Wayne	4,955	224,654.20	$186,851.49	37,802.71	16.83 %
REP005 Mary Lefave	253	9,076.22	$0.00	9,076.22	100.00 %

By selecting the option Collapse from the context menu on Years, all detail rows will collapse:



Groups	Global Amou This Year	Global Cost This Year	Global Mar This Year	Margin % This Year
	2,747,843.40	$2,268,135.41	479,707.99	17.46 %
Year : 2014	0.00	$0.00	0.00	0.00 %
Year : 2013	42,927.29	$2,151.53	40,775.76	94.99 %
Year : 2012	85,865.42	$60,714.25	25,151.17	29.29 %
Year : 2011	2,619,050.69	$2,205,269.63	413,781.06	15.80 %

By clicking on the sign ▷ of the Year 2012, only the detail rows for this selected Year will be displayed:



Groups	Units This Year	Global Amou This Year	Global Cost This Year	Global Mar This Year	Margin % This Year
	58,902	2,747,843.40	$2,268,135.41	479,707.99	17.46 %
Year : 2014	0	0.00	$0.00	0.00	0.00 %
Year : 2013	533	42,927.29	$2,151.53	40,775.76	94.99 %
Year : 2012	1,034	85,865.42	$60,714.25	25,151.17	29.29 %
REP001 George Smiley	0	0.00	$0.00	0.00	0.00 %
REP002 Lucy Brown	145	2,232.50	$1,234.30	998.20	44.71 %
REP003 NA System Administrator	580	68,916.25	$48,256.50	20,659.75	29.98 %
REP004 Matt Wayne	259	10,653.55	$8,448.35	2,205.20	20.70 %
REP005 Mary Lefave	0	0.00	$0.00	0.00	0.00 %
REP006 Harry Brown	50	4,063.12	$2,775.10	1,288.02	31.70 %
Year : 2011	57,335	2,619,050.69	$2,205,269.63	413,781.06	15.80 %

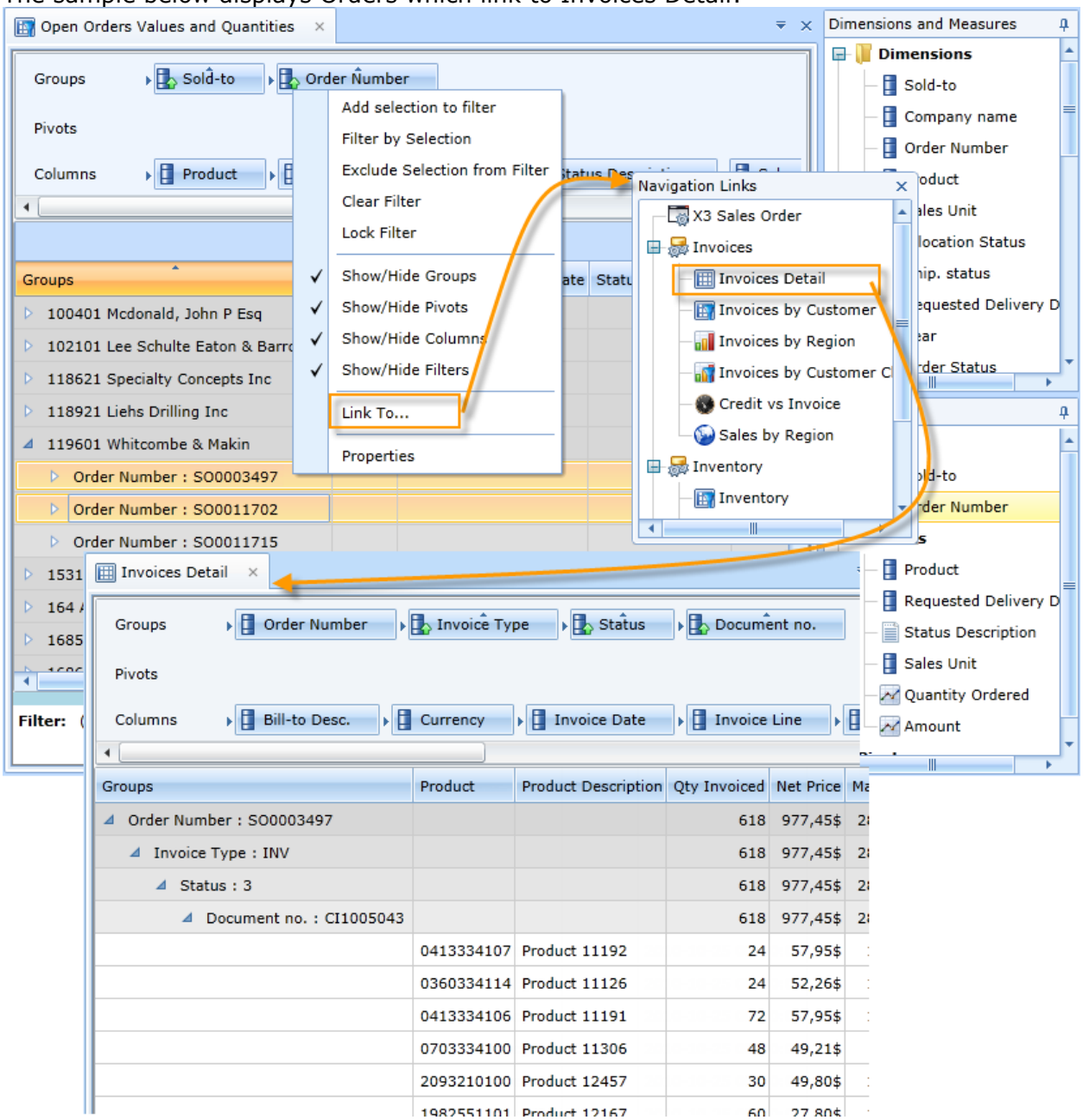
Navigation Links

This is a very useful function in the SEI navigator. It allows users to instantly navigate from one view to another by passing filters of the selected rows to the linked view.

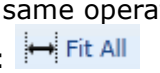
To open a linked view, select the rows containing the value on which you want to filter your data, do a right-click and select "Link To…". A Navigation Links popup window will appear with the predefined choices of the views that can be opened as a link.

Navigation links are created automatically by linking the fields of all the processes sharing the same global parameter (see the Process Design section for more information).

The sample below displays Orders which link to Invoices Detail:



Resizing and Hiding Columns

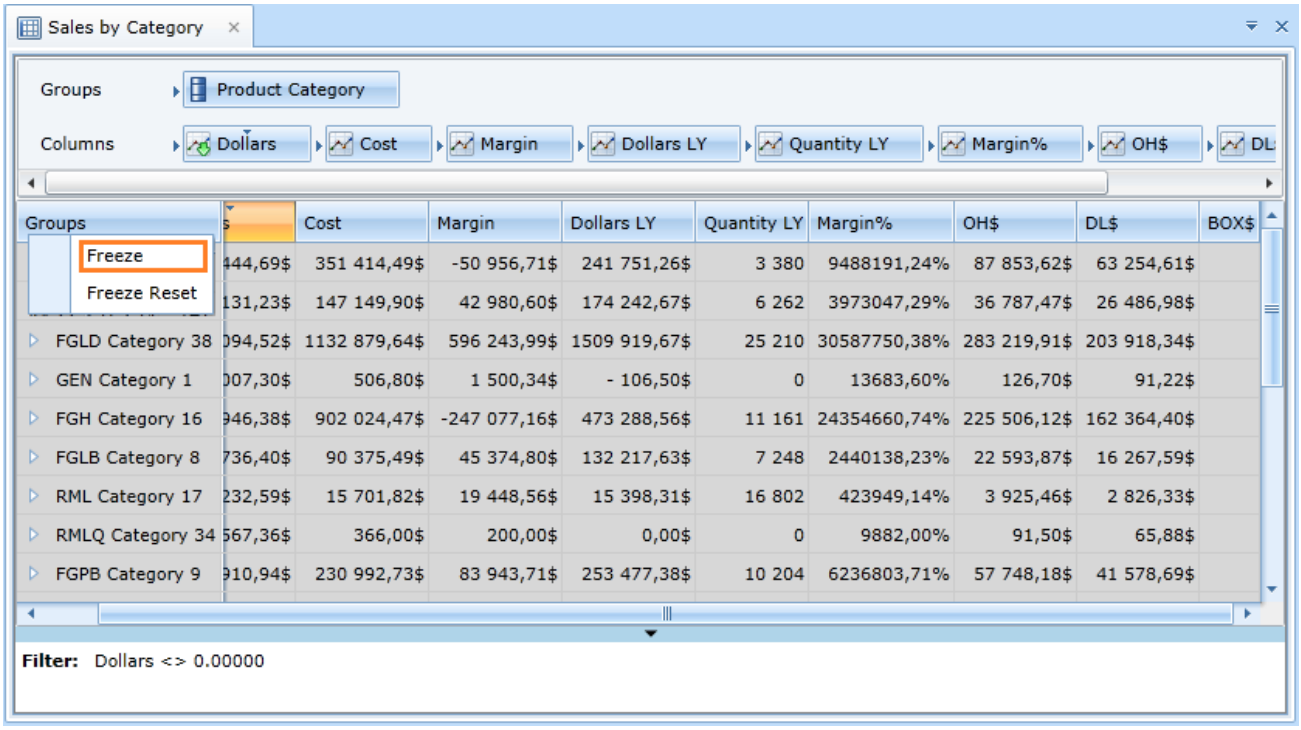
In order to change the width of a column, click on the right border of the column header and drag the pointer until you reach the desired size. In addition, you can double click on the same border in order to automatically resize the column to fit the largest value in the column (including the header). You can also perform the same operation for all columns by clicking on the following button from the Navigation Toolbar: 

To hide a column, right-click on its header and select 'Remove' from the pop-up menu.

To retrieve columns, move them back to the Organizer window.

Freezing Columns

It is possible to freeze the leading columns of a worksheet so that they will remain visible in the screen even when scrolling horizontally to the right. For example, in Sales by Product Category, it would be useful to always keep the "Category" column on the screen. To do so, right click on the header of the last column to freeze (in this case: "Groups"), then select "Freeze" from the popup menu. The following figure illustrates the resulting view:

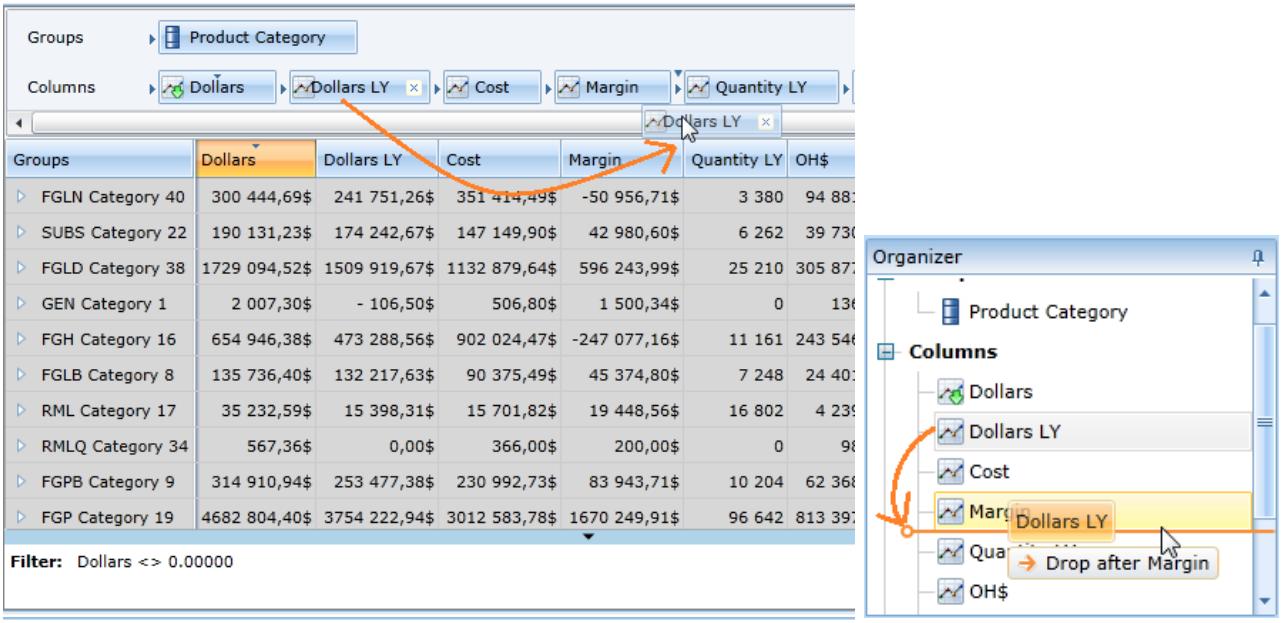


Notice that a black vertical line is displayed to distinguish frozen columns from other ones. When scrolling to the right, the three columns will always stay on the screen as shown in the example above.

Notice that after scrolling to the right, the Groups frozen column remained visible.

Changing Column Order

To change the position of a particular column, click on its header, then drag-and-drop it in the desired position. While you are moving the column header, an arrow will appear in order to indicate the target position. You may also move columns in the Organizer, where multiple columns may be moved at the same time. Here is an example of a worksheet view, during the re-positioning of the column "Dollars LY":



It is possible to move several columns at one time from the Organizer by using the **Shift** or **Ctrl** keys. Once you have selected all the columns that you want to move, apply the same drag-and-drop operation as previously mentioned.

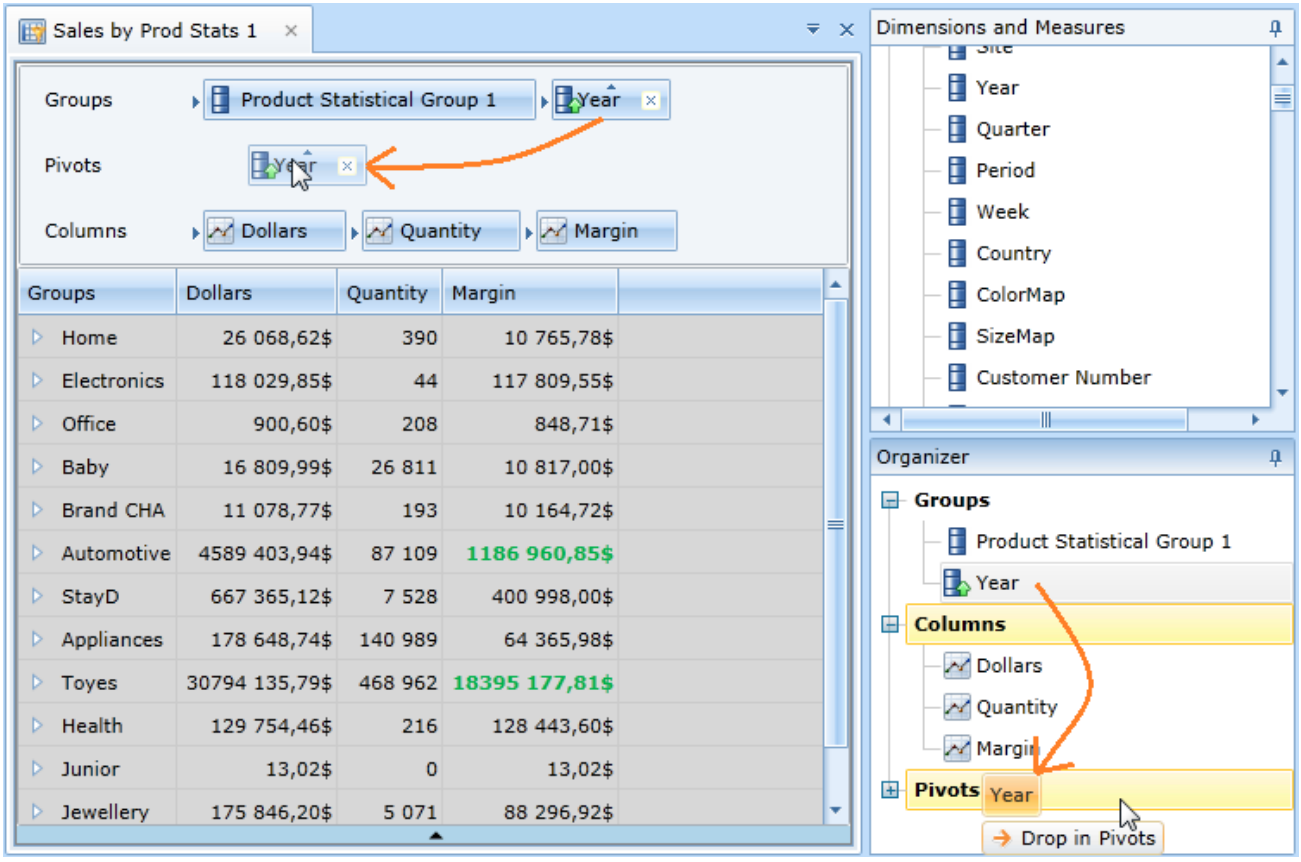
Cross-Tab Worksheets

Cross-tab worksheets are a special kind of worksheet view. They allow spreading different values of specific fields into columns. Cross-tab layout is very useful for comparing numeric data for different occurrences of one or several fields called "pivot fields".

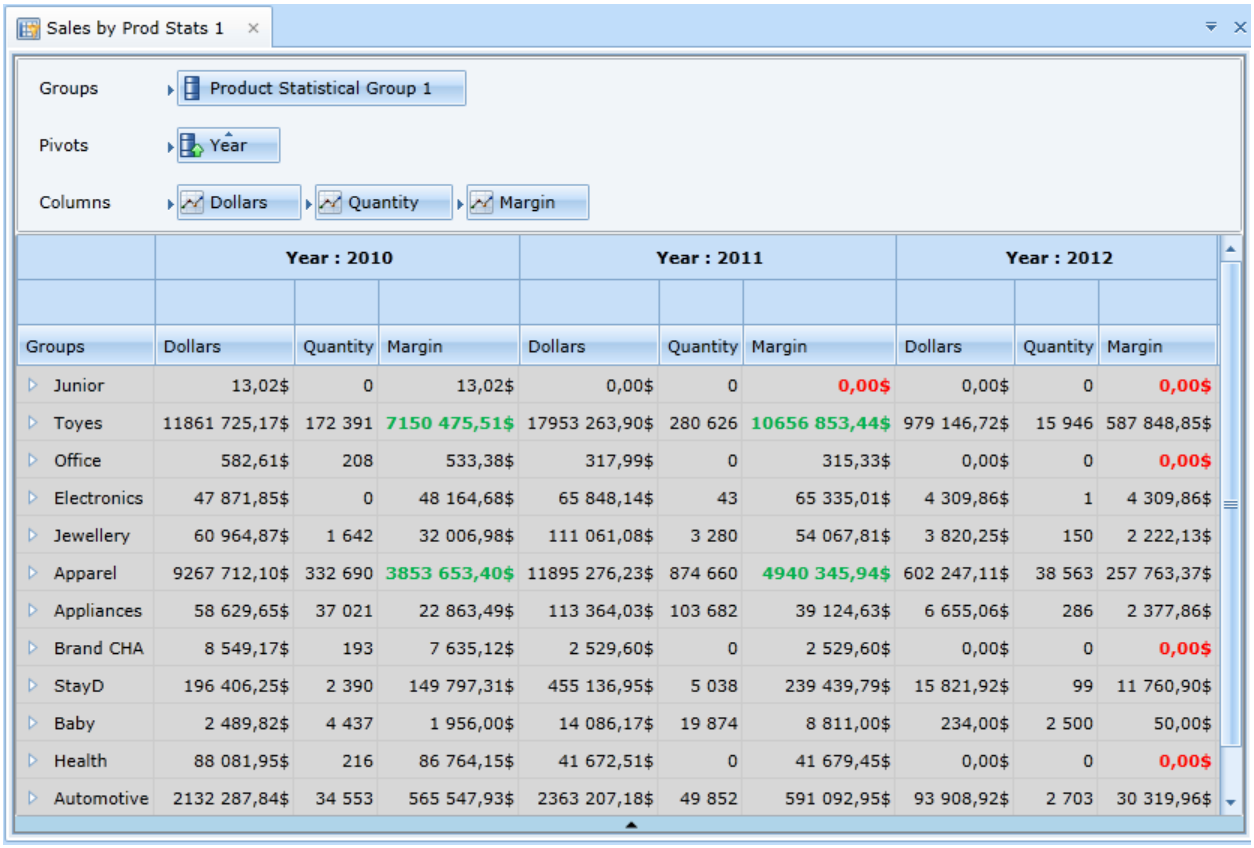
For example, the "Sales by Prod Stats 1" view contains sales history data by Product Statistical Group 1. A cross-tab worksheet could allow comparing sales for different years. Each year would be displayed as a column set and would contain, for example, three columns "Dollars", "Quantity" and "Margin". In this case, the pivot field is the year.

In order to create a cross-tab layout, start from an ordinary worksheet, select the field you want to assign as the pivot and drag the field in the Pivots location. Once satisfied with the pivot location, drop the dragged field.

This is an example that illustrates this operation:

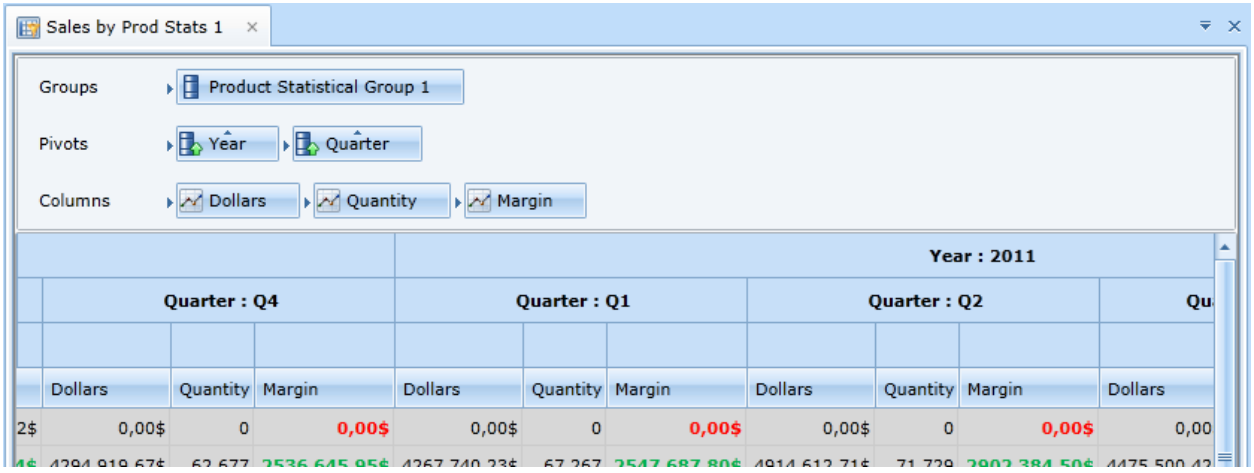


The illustration below demonstrates the resulting cross-tab worksheet:

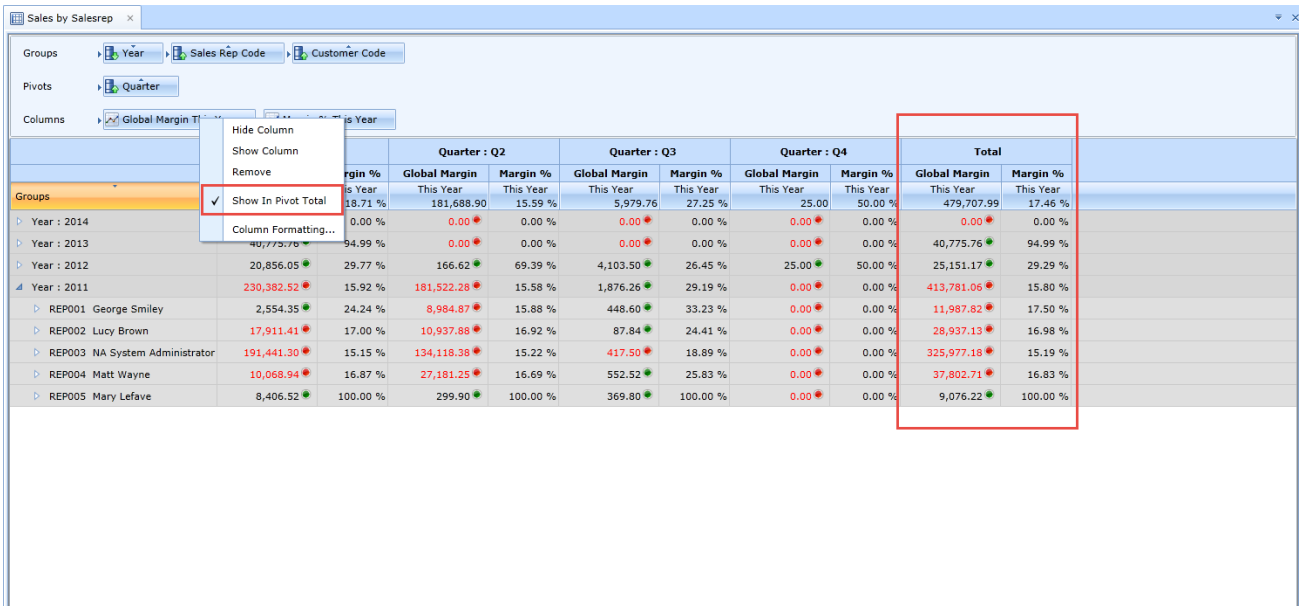


	Year : 2010			Year : 2011			Year : 2012		
Groups	Dollars	Quantity	Margin	Dollars	Quantity	Margin	Dollars	Quantity	Margin
Junior	13,02$	0	13,02$	0,00$	0	0,00$	0,00$	0	0,00$
Toyes	11861 725,17$	172 391	7150 475,51$	17953 263,90$	280 626	10656 853,44$	979 146,72$	15 946	587 848,85$
Office	582,61$	208	533,38$	317,99$	0	315,33$	0,00$	0	0,00$
Electronics	47 871,85$	0	48 164,68$	65 848,14$	43	65 335,01$	4 309,86$	1	4 309,86$
Jewellery	60 964,87$	1 642	32 006,98$	111 061,08$	3 280	54 067,81$	3 820,25$	150	2 222,13$
Apparel	9267 712,10$	332 690	3853 653,40$	11895 276,23$	874 660	4940 345,94$	602 247,11$	38 563	257 763,37$
Appliances	58 629,65$	37 021	22 863,49$	113 364,03$	103 682	39 124,63$	6 655,06$	286	2 377,86$
Brand CHA	8 549,17$	193	7 635,12$	2 529,60$	0	2 529,60$	0,00$	0	0,00$
StayD	196 406,25$	2 390	149 797,31$	455 136,95$	5 038	239 439,79$	15 821,92$	99	11 760,90$
Baby	2 489,82$	4 437	1 956,00$	14 086,17$	19 874	8 811,00$	234,00$	2 500	50,00$
Health	88 081,95$	216	86 764,15$	41 672,51$	0	41 679,45$	0,00$	0	0,00$
Automotive	2132 287,84$	34 553	565 547,93$	2363 207,18$	49 852	591 092,95$	93 908,92$	2 703	30 319,96$

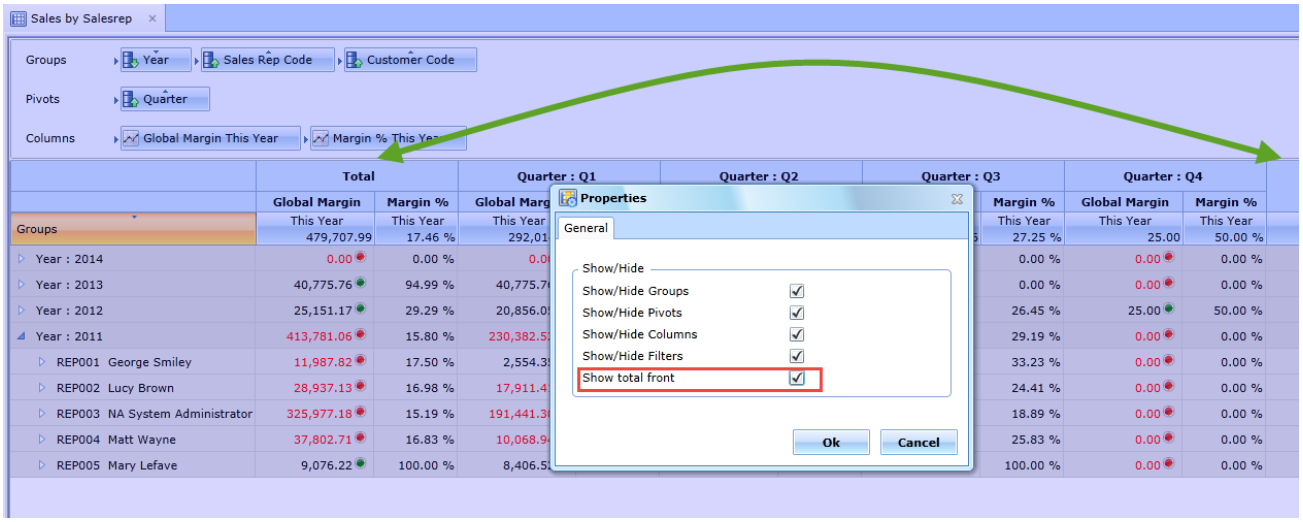
It is possible to include more than one field in the pivot area. In the example above, if we add the field "Quarter" to the pivot area, each value of the field "Year" would be combined with distinct values of "Quarter". As a result, the following example demonstrates how the header would look for a specific year:



If you wish to display a grand total for a particular column that is pivoted, you can right-click on the column (in the Columns section) and choose "Show in Pivot Total". This will display a new column at the far right of the screen by default. You can apply the "Show in Pivot Total" to multiple columns.



The total can be displayed at the beginning or at the end of the pivot section. To change the position, press the worksheet property button and change the value.



Filters

This section contains information about:

- Applying Instant Filters
- Working with the Advanced Filters dialog
- Using the Prompt dialog
- Using the Selection Page dialog

Applying Instant Filters

This is a very useful function in the SEI worksheet navigator. It allows users to instantly visualize a subset of data having specific common criteria.

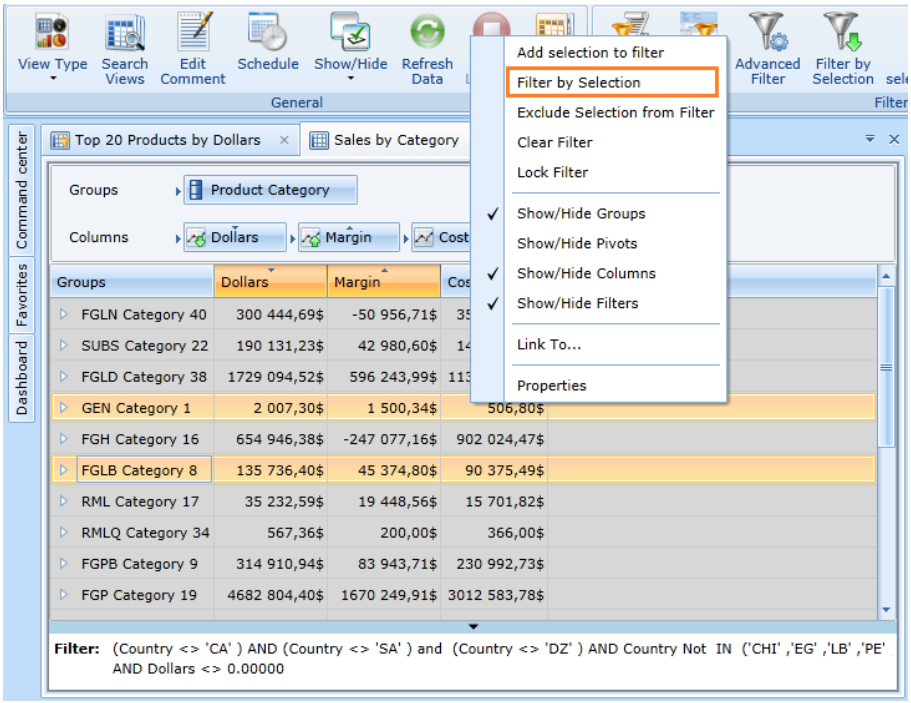
To apply an instant filter, select cells or ranges containing the values upon which you want to filter your data, do a right-click and select one of the following options:

- Add Selection to Filter: To add the selection to the current filter.
- Filter by Selection: To apply the selection to all data (the current filter will be replaced).
- Exclude Selection from Filter: To add the exclusion to the current filter.

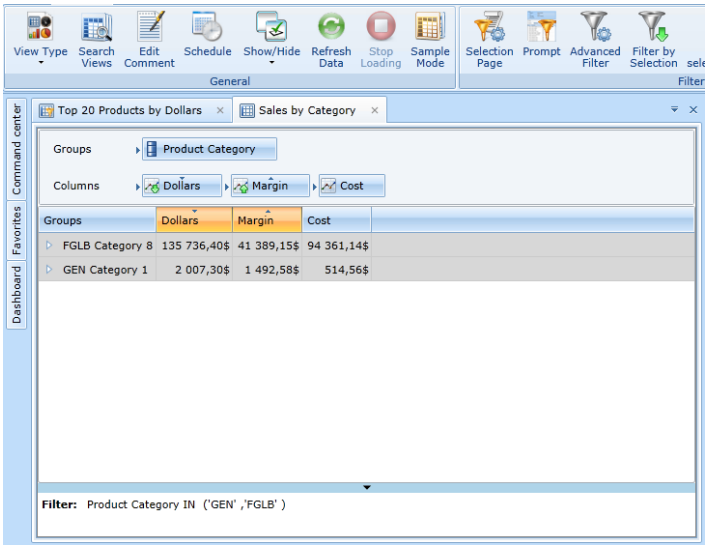
Instead of using the context menu you could also use the same options from the toolbar.

Example

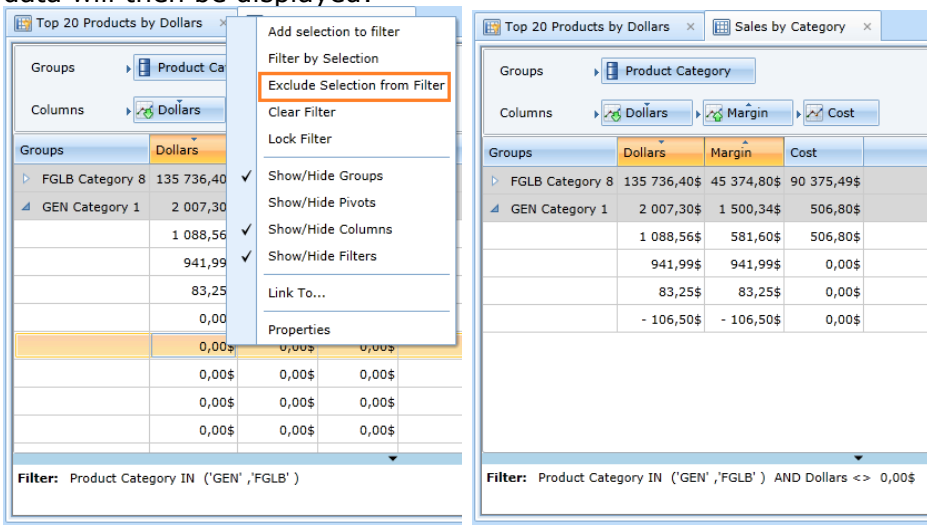
In the Sales by Category sample, we only want to display data for Category "GEN Category 1" and "FGLB Category 8". In order to achieve this, select a worksheet cell that contains "GEN Category 1", hold keyboard key <Ctrl> and select cell "FGLB Category 8" in the "Groups" Column, then right-click and select 'Filter by Selection' (You can also use the same option from the toolbar). The following example shows how to achieve this operation:



The Worksheet will then be refreshed to reflect the filter selected. As a result, only records with Categories "GEN Category 1" and “FGLB Category 8” are displayed:



In order to apply another filter to remove rows that have zero in the Dollars column, an additional filter could be applied over the previous selection. In order to apply this filter, right-click a Worksheet cell that contains "0" in the Dollars column, and select 'Exclude selection from filter' from the popup menu (You can also use the same option from the toolbar). The following data will then be displayed:



Notice that the current filter is always displayed at the bottom of the worksheet.

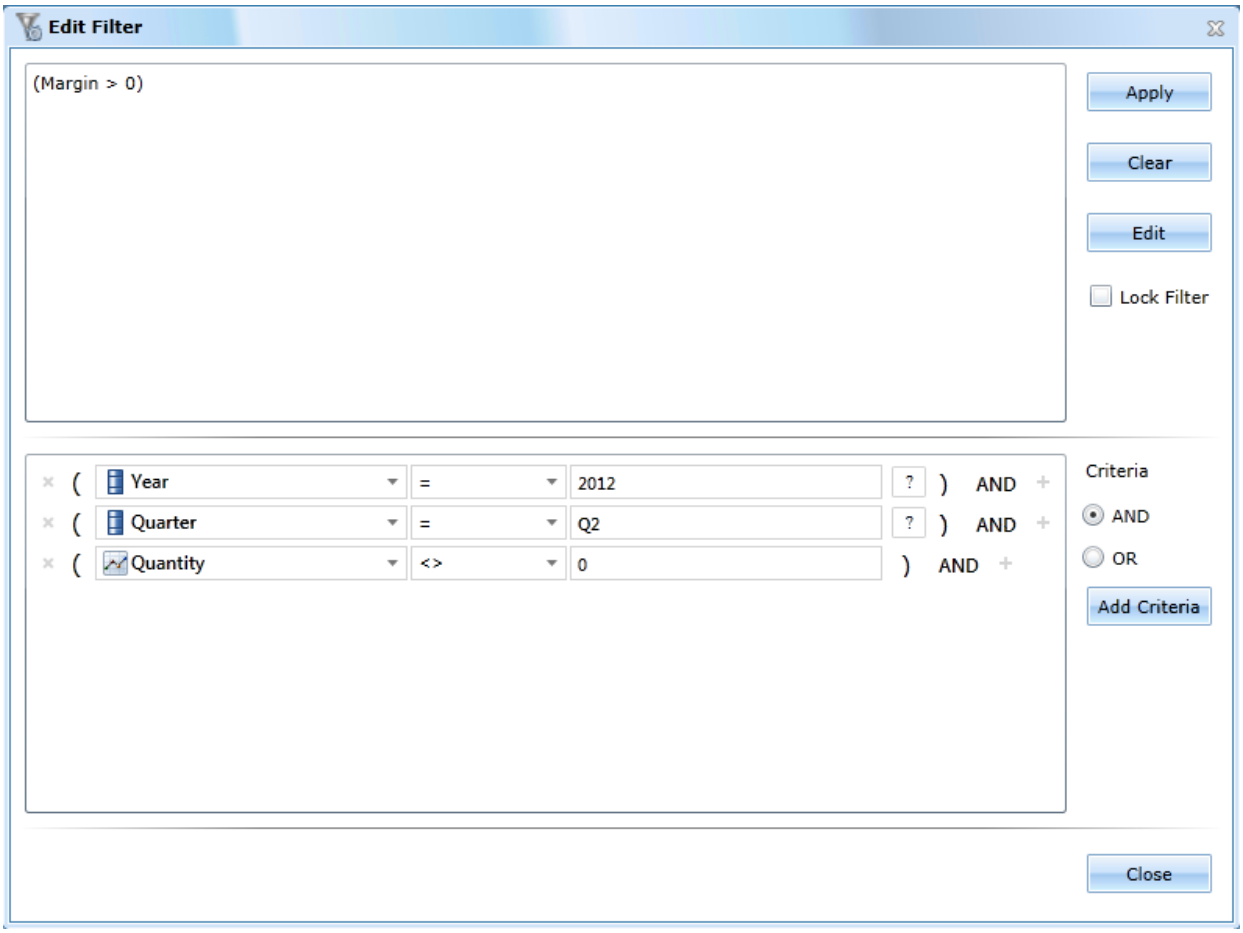
It is also possible to apply instant filters on multiple values: using the **Ctrl** or **Shift** key, select different values for a column, then apply your instant filter as previously described.

You can save your filter in order to apply it later, on any view of the process (worksheet, chart, gauge or map). Please refer to (Saving and Publishing Views / Filters) for more information.

Using the Advanced Filters

The Filters Dialog allows users to apply advanced filters on their data. In fact, comparison operators could be used as well as **AND**/**OR** logical operators. The Advanced Filters window can be use to create a new filter or to change an existing filter by using the Edit button.

The dialog consists of:



- **Filter Area (text box):** Located at the top of the dialog, this area is not editable unless you press the button "Edit". The content of the "Filter Area" is based on the existing filter of the current view or generated from the conditions specified in the field list section.
- **Field List (drop down):** Contains the list of available fields. The user can edit custom conditions (using comparison operators) in the text areas provided in front of each field.
- The following button ? is displayed in front of some fields when a prompt is defined for this specific field. This means that you can open a prompt dialog that will allow you to select existing values from a list instead of manually typing them in the Filters dialog.
- **Add Criteria (button)**: Attaches the conditions specified in the field list to the final *generated filter area.* If some conditions already exist in the *generated filter area,* the new condition is concatenated using the **AND** & **OR** operators as specified by the user.
- **Clear (button)**: Clears the conditions in the *generated filter area.*
- **Apply (button)**: By pressing this button, the filter displayed in the *generated filter area* is applied and the data is refreshed.

- **Edit (button)**: Shows the expression builder window where you may manually edit the filter in SQL format.

Comparison operators

The following table describes available comparison operators:

Operand	Condition Form	Description
=	Value	Equal
<>	<> value	Not equal
<	< value	Less than
<=	<= value	Less or equal
>	> value	Greater than
>=	>= value	Greater or equal
In	Value1,Value2,Value3...	In a set of values
Not In		
Between	Between Value1 and Value2	Between a lower value and upper value inclusively
Not Between	Not Between Value1 and Value2	
Like	*Value, or Value*...	Strings having the presented form (where * represents a string of 0 to n characters)
Contains	Value	Strings that contain the Value at any position inside the string
Not Contains	Value	Strings that do not contain the Value at any position
End With	Value	Strings that end with the value
Start With	Value	Strings that start with the value
Is Null	Not applicable	Where the value is null
Is Not Null	Not applicable	Where the value is not null

Logical Operators

Multiple conditions can be combined using the **AND**/**OR** operators. When both AND/OR operators are used, each OR separates groups of comparisons connected by ANDs. In this case, the final condition would have the following form:

(condition1 **AND** condition2 **AND**...)
OR
(condition3 **AND** condition4 **AND**...)
OR

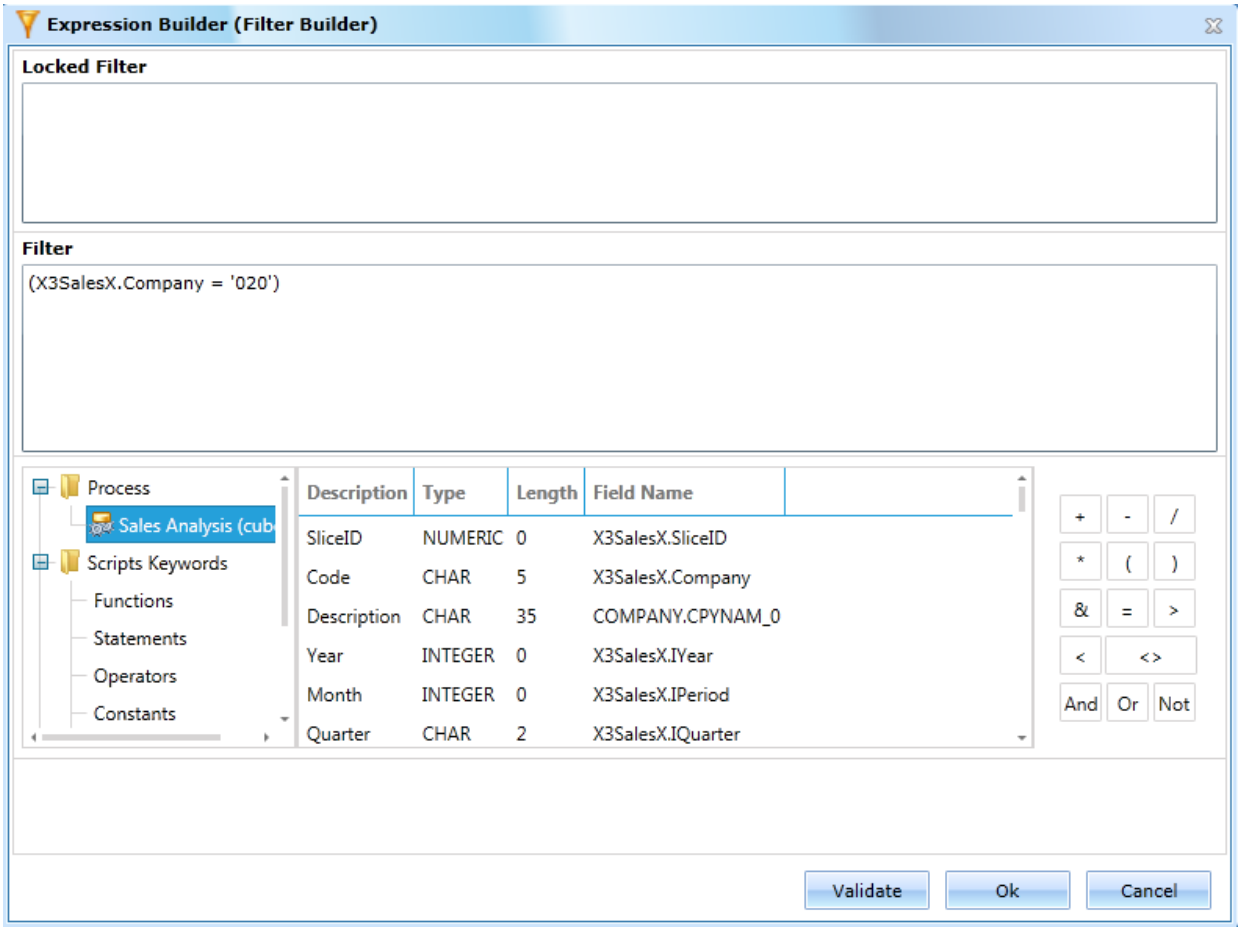
Simply click on the parenthesis or the AND/OR sign to toggle them when constructing the filter.

Expression Builder

The Expression Builder is a user-friendly tool used to manually edit your filter in the SQL Language. When the button "Edit" is pressed from the advanced filter window, various fields, functions and operators are available to build the filter expression. The following list provides examples of what can be used in the Expression Builder:

- Process Fields: grouped by the source files they belong to.
- Arithmetic Operators: +, -, /, *, %, (,).
- Logical Operators: AND, OR, NOT...
- Comparison Operators: <, <=, >, >=, <>...

Here is an example of an Expression Builder:



The upper part of the window contains the Locked Filter and the Filter editing boxes, where users may manually construct the SQL expression. However, keywords and operators can be inserted from the list provided in the lower part of the window.

When you click on a Process (from the "Process" folder), related process fields are displayed in the center. Field type, description and length are provided.

In order to add a keyword or a field to your script, simply double-click on the corresponding line in the center list. Operators can be added by clicking the buttons provided in the right side of the window.

The "**Validate**" button verifies if your expression is valid.

Using Prompts

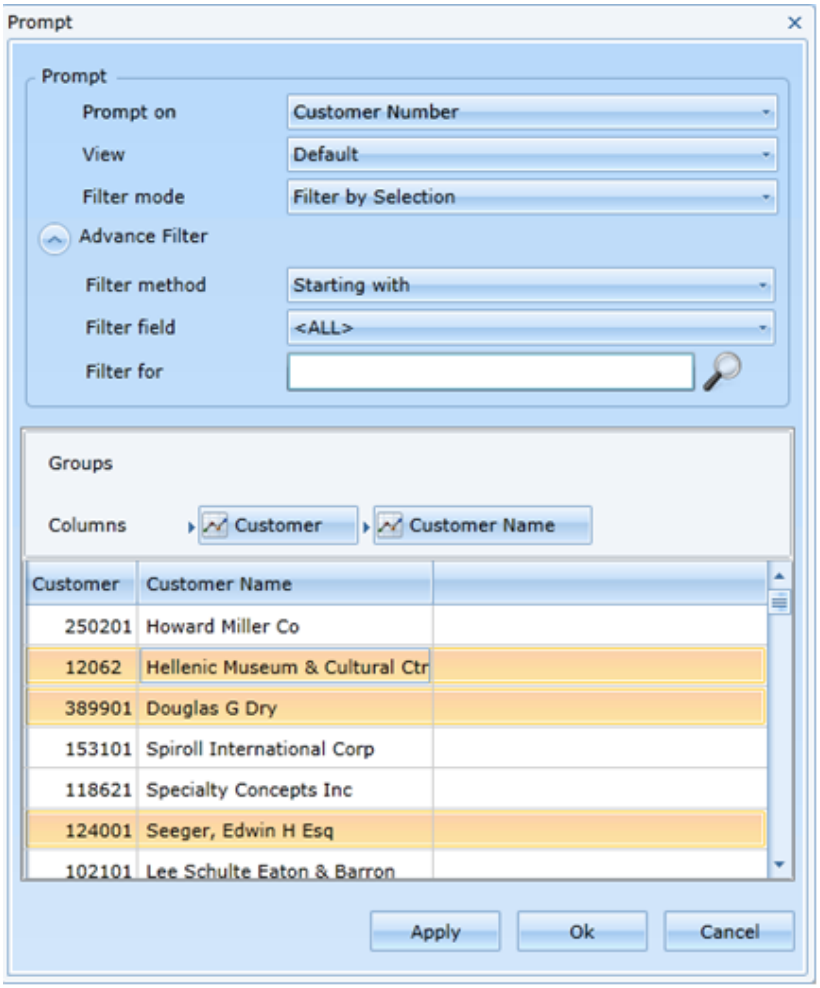
Using prompts is a powerful way of filtering and selecting specific subsets of data. Imagine for example that you want to analyze data for a specific customer in a sales forecast process. Using the prompt dialog, a list of all customers is displayed with codes and names. You can then select a customer and view only their corresponding data. Moreover, you can select and view data for more than one customer. In addition, the prompt window offers sorting and search tools to help quickly locate values in the list.

Prompts can be set for any column in the process definition. It is also possible to configure the process to automatically display the prompt window before loading the whole set of data.

To open the Prompt dialog, click the button from the Navigation Toolbar and select a column or right-click on any dimension of the existing Worksheet and select the "Show Prompts" from the context menu. The prompt dialog gives the list of all distinct values of the selected column.

Here is an example of the prompt dialog for the "Customer Number" column in the Sales Analysis process:

Users may select one or even several values from the list using the **Ctrl** or **Shift** keys.



Prompt On: Provides the user with the list of prompts associated with this process.

Filter Mode: Indicates whether the filter determined by the prompt should be added to the existing filter (**Add selection to filter**), should replace the existing filter (**Filter by selection**) or should add a clause to the existing filter that excludes the filter determined by the prompt (**Exclude selection from filter**).

Filter Method: Determines how the value in the **Filter for** is applied as a filter. The options available are Starting with, Anywhere, Exact Value and Use Wild Cards.

Filter Field: The specific field that will be used for the search (by default the search is done on all fields).

In order to apply the results of the filter, do one the following:

- Press **Ok** or, **Apply** button.
- Double-click on a single value.

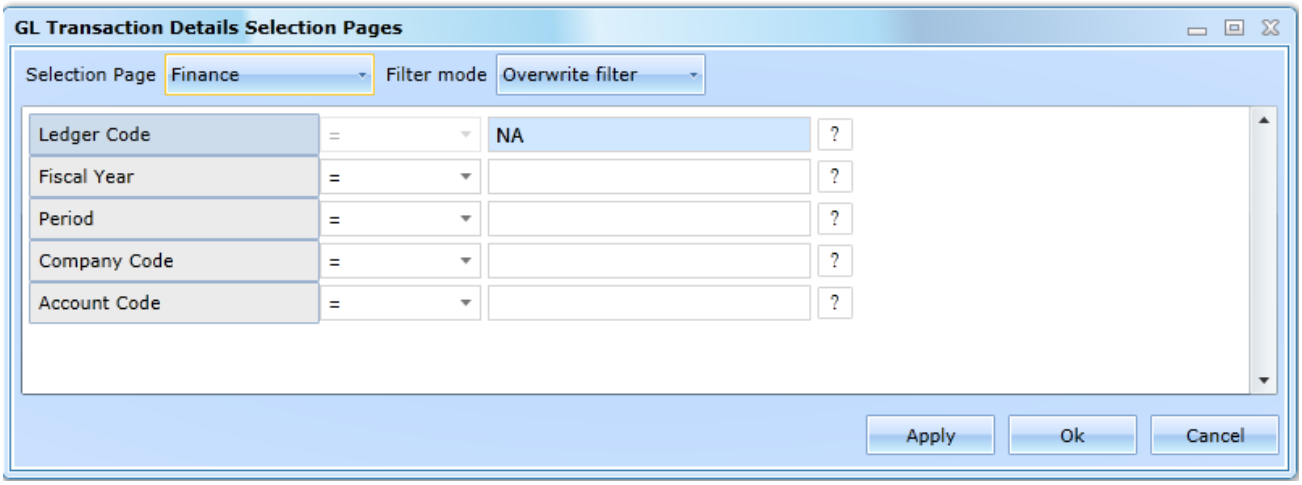
Filter For: Allows you to filter the prompt list to display only rows with specified values.

It is possible to sort the list by clicking on a column header (example "Customer Name").

To retrieve the whole list, erase the **Filter for** cell and press <Enter>.

Using the Selection Page

The Selection Page Dialog allows users to apply filters on their data by selecting criteria on a list of selected fields displayed on a page. All the filters entered will be combined with the "AND" operator in the result filter. Here is an example of a selection page:

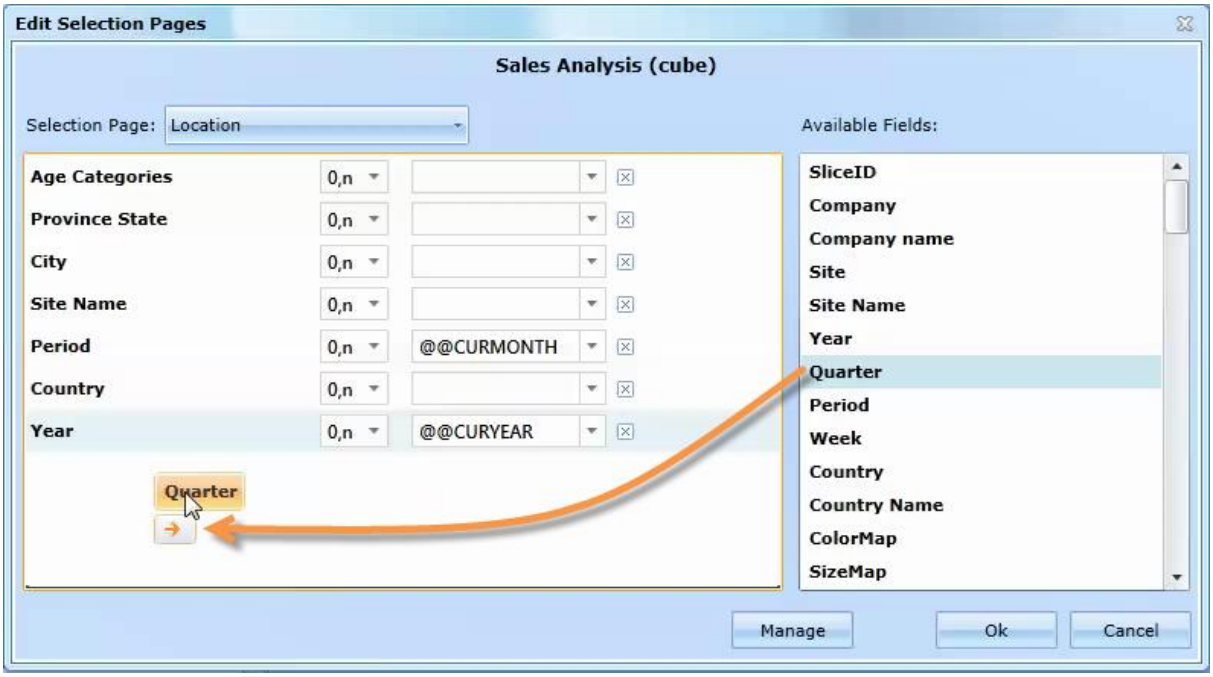


- **Comparison Operators:** please refer to the section Comparison operators .
- Fields with a blue background **MUST** have a value specified because they were defined as mandatory in the selection page definition.
- The following button ? is displayed in front of some fields. This means that you can open a prompt dialog that will allow you to select existing values instead of manually typing them in the Filters dialog.
- **Filter Mode**: The filter mode will define how the filter will be applied. The option "Overwrite filter" will overwrite the existing filter of the view by the filter of the Selection Page and the option "add to filter" will add the Selection Page filter to the existing filter.
- **Apply Button**: By pressing this button, the filter displayed in the *generated filter area* is applied, the data is refreshed and the Selection Page Window remains open.
- **Ok Button**: By pressing this button, the filter displayed in the *generated filter area* is applied, the data is refreshed and the Selection Page Window is closed.

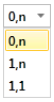
Edit Selection Pages

You can edit and create selection pages available for a specific process. In order to open the edit window for selection pages, open the context menu option on the process and select menu option "Edit Selection Pages".

This is the edit window:



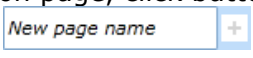
The left section of the window lists the fields contained in the selection page, and the right section lists all available fields from the process design. To add a field to the list, drag the field from the list of available fields in the right section to the list on the left. Fields selected on the left may be **moved** and reordered by dragging and dropping them on the list to the desired position.

Each selected field has an option to define if it is mandatory or not with 

. Option "0,n" means that a minimum of zero values can be entered for that field, and a maximum of "n" (any number). Option "1,1" means only one value MUST be entered, while option "1,n" means at least one or many values must be entered. "1,1" and "1,n" determine **mandatory** values for the selection page.

Each selected field can have a default value specified in the text box

. The default value can be a constant or a global parameter variable code. To **remove** a field from the list, just click the "x" button that appears beside the textbox of the field.

To create a new selection page, click button "Manage" and enter the **new** page name at the top in the creation textbox 

and then click the "+" button.

To **delete** a selection page, click the "x" button

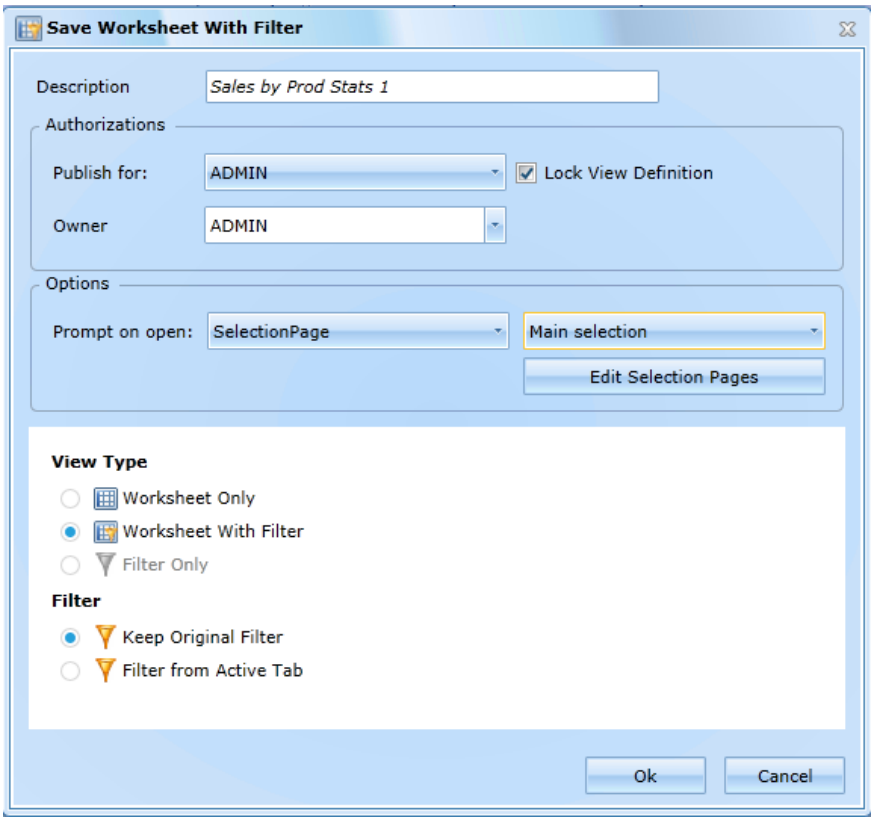
beside the listed selection pages.

Saving and Publishing Views / Filters

Saving Views/Filters is a very useful feature. It can be applied to any type of view (Worksheet, Chart, Report). It is also used to save stand-alone filters.

In order to save the current View/Filter, select "Save" or "Save As" from the File menu or click on the following button from the Navigation Toolbar:

The following dialog will then be displayed:



- **Description:** The name of the view. This is the minimum amount of information required to be able to save a View/Filter.

- **Published For: A** list box that allows you to publish the View/Filter for other users. The list contains all available users and groups including the special group ***PUBLIC**. This group automatically includes all users that have access to the current process. This means that when *PUBLIC is selected, the View/Filter will be published to all users.

- **Lock View Definition:** Only the owner of this view will have the ability to modify it. By default, the "Lock View Definition" is selected.

- **Owner:** The user profile that will own and have full access to this view.

Options

Prompt On Open

- **None:** When no prompt is applied.
- **Prompt:** To open a specific prompt window when opening this view.
- **Selection Page:** To open the selection page before opening this view. The data of the view could then only be retrieved once the criteria of the selection page are entered.

View Type

- **Worksheet Only**: Will only save the layout of the view, no filter will be included.
- **Worksheet With Filter**: Will save the layout of the view and the filter.
- **Filter only:** Will save the filter only, the filter can be used with all the existing views of the same process.

Filter

- **Keep Original Filter:** The filter of the view from when it was originally opened will be used.
- **Filter from Active Tab:** The current filter of the view will be used.

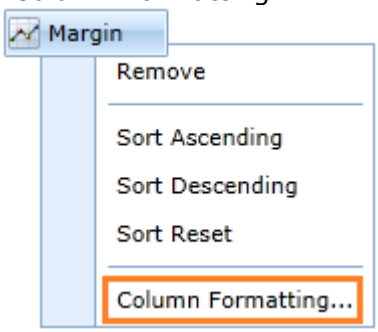
A "Save As" option is also available from the main menu "File/Save As".

Security and Authorization Rules with Respect to Views

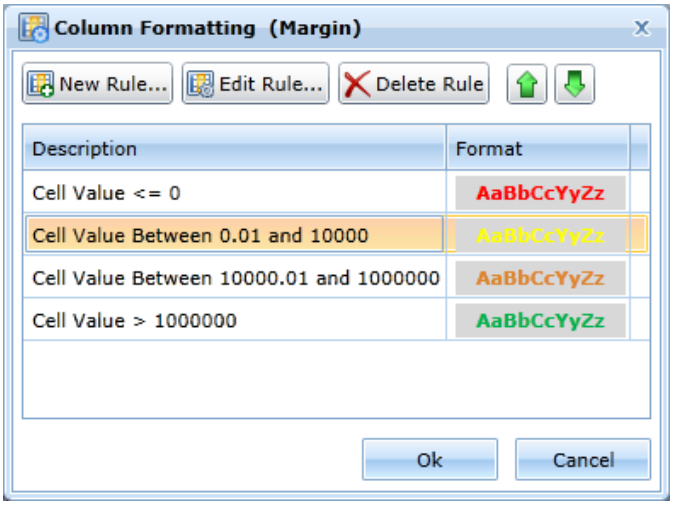
When the connected user is a security-level user (ie. the process owner, or the view owner), the user can perform all functions on the view. Other users for whom a view is published can access, use and make changes to a view, but cannot overwrite the view definition unless the view is not locked (they can still change the view under a new name in that case).

Column Formatting

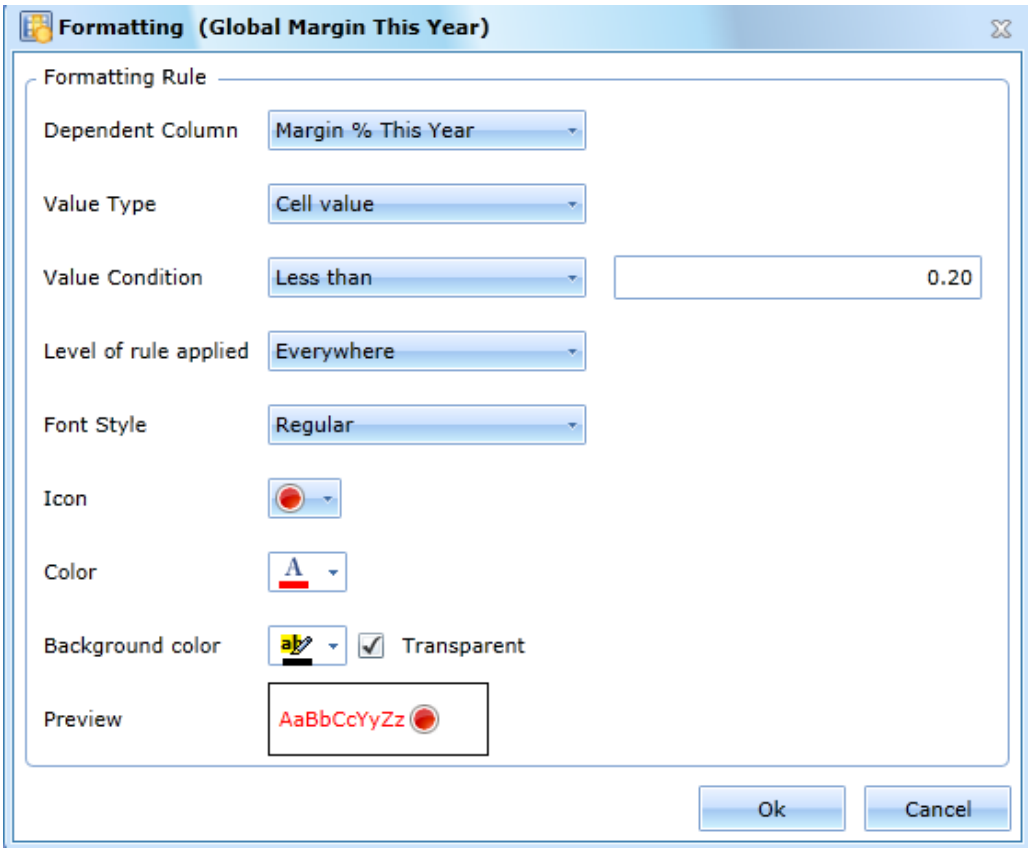
You may define rules for each column on how to format and display them. Select the context menu from the desired field in the Column section of the worksheet and select the menu option "Column Formatting":



The Column Formatting window will appear to let you define or maintain formatting rules. To add a new rule, click the button "New Rule…" The rules are prioritized in the order they appear, and you can move their order using the green arrows. When a rule meets the condition, it will be taken into consideration and the other rules will not be verified. In other words, only one formatting rule can be applied to a cell.



The "formatting rule" edit window lets you define the condition on how to format the value in the worksheet.



Dependent Column: Defines the column upon which the condition will be based.

Value Type: Offers a choice of 4 types of values. The type selected will change the "Value Condition" properties.

- Cell Value: You will be able to set a numeric condition (ex: Less than 20).
- Specific Text: You will be able to set a string condition (ex: containing ABC).
- Date: You will be able to select a date from a calendar.
- Global Variable: You will be able to compare with a global variable value.

Value Condition: The condition used to test if the format will be applied. The "Value Type" option will change the way the condition can be set.

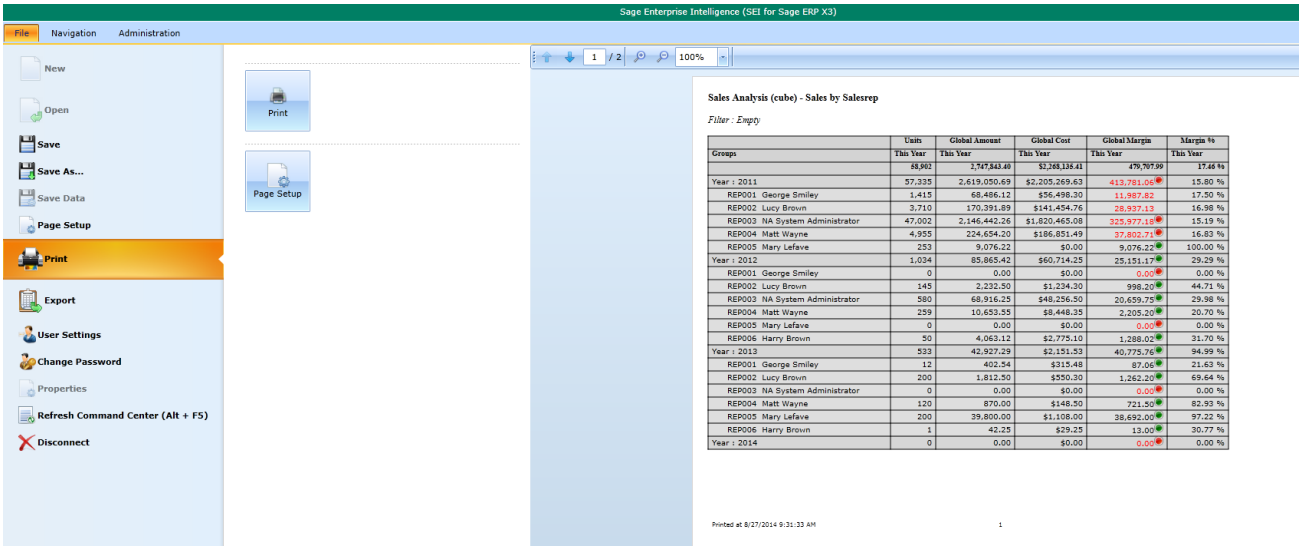
Level of rule applied: Select the total levels and the detail levels to which the formatting will be applied.

- Everywhere: Will be applied to all the levels of the grid.
- Last Level Only: Will be applied to the last level only (white rows).
- This Group Only: Will be applied to the specific selected group.
- Not This Group: Will be applied to all of the groups except the one selected.
- This Group and Lower Level: Will be applied to the specific group and also all the groups after this selected one in the grouping area.
- This Group and Higher Level: Will be applied to the specific group and also all the groups before this selected one in the grouping area.

You can select the visual appearance of the cell by selecting an **Icon** ,**Font Style**, **Color** and **Background color**.

Printing

It is possible to print copies of a view by selecting the 'Print' option in the File menu. The print preview will appear, the layout, header and footer section can be adjusted using the “Page Setup” button.

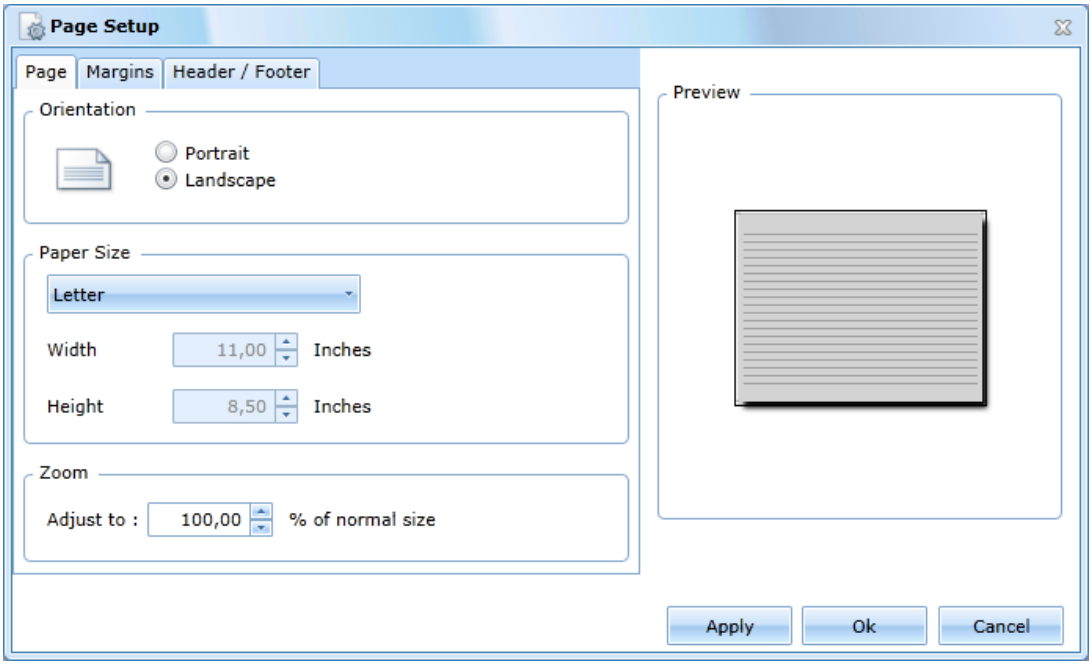


Page Setup

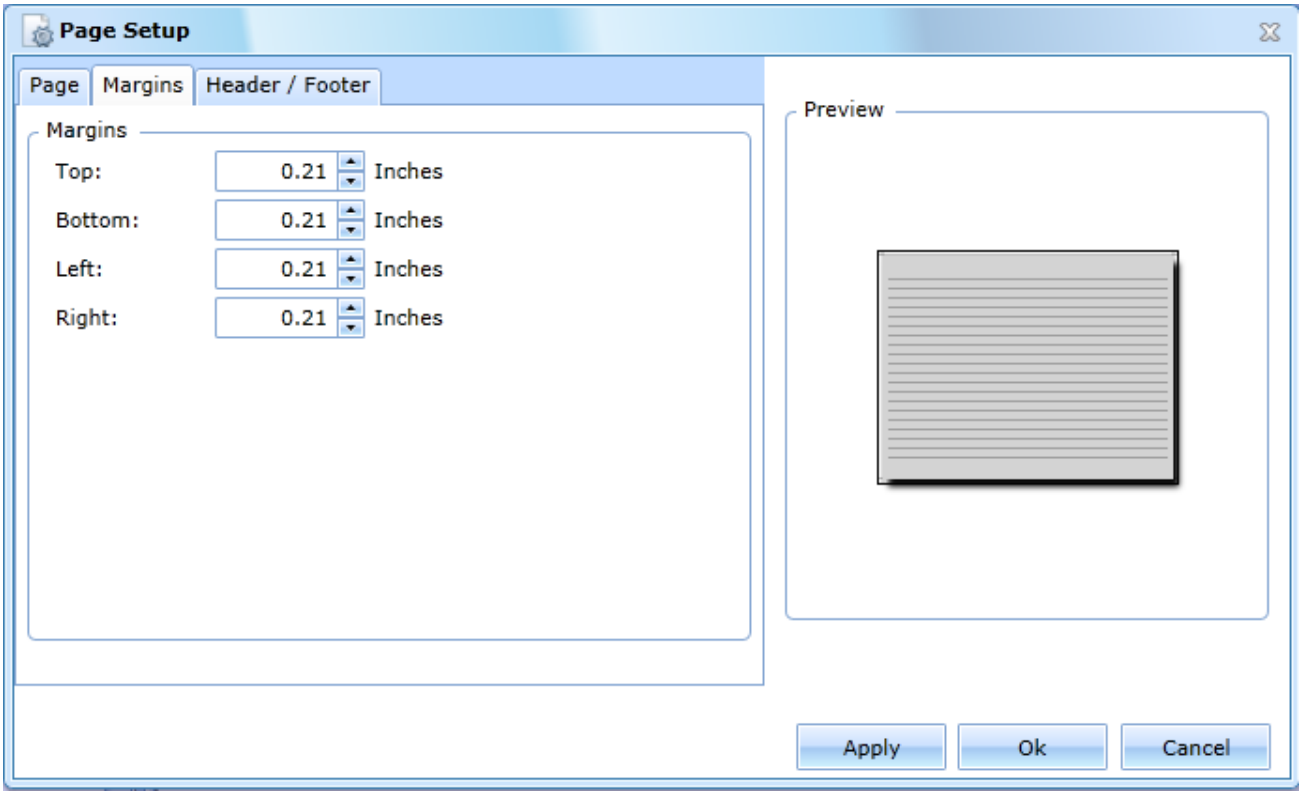
The Page Setup allows users to format and adjust various printing options.

To edit the Page Setup options, select the "Page Setup" option from the File menu or from the Print Preview.

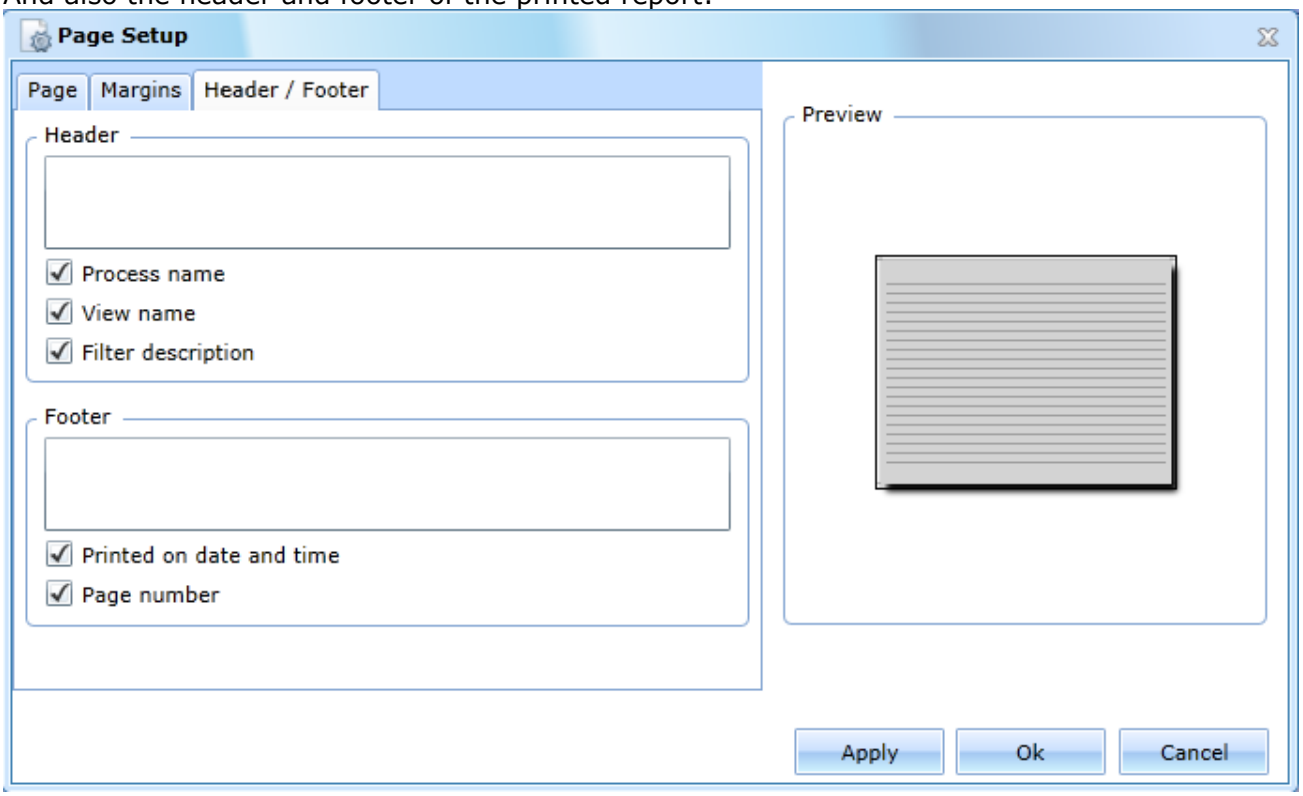
Here is an example of the Page Setup window. The 3 figures below show an example of each tab, starting with the **Page** tab:



The user can also set the margins:



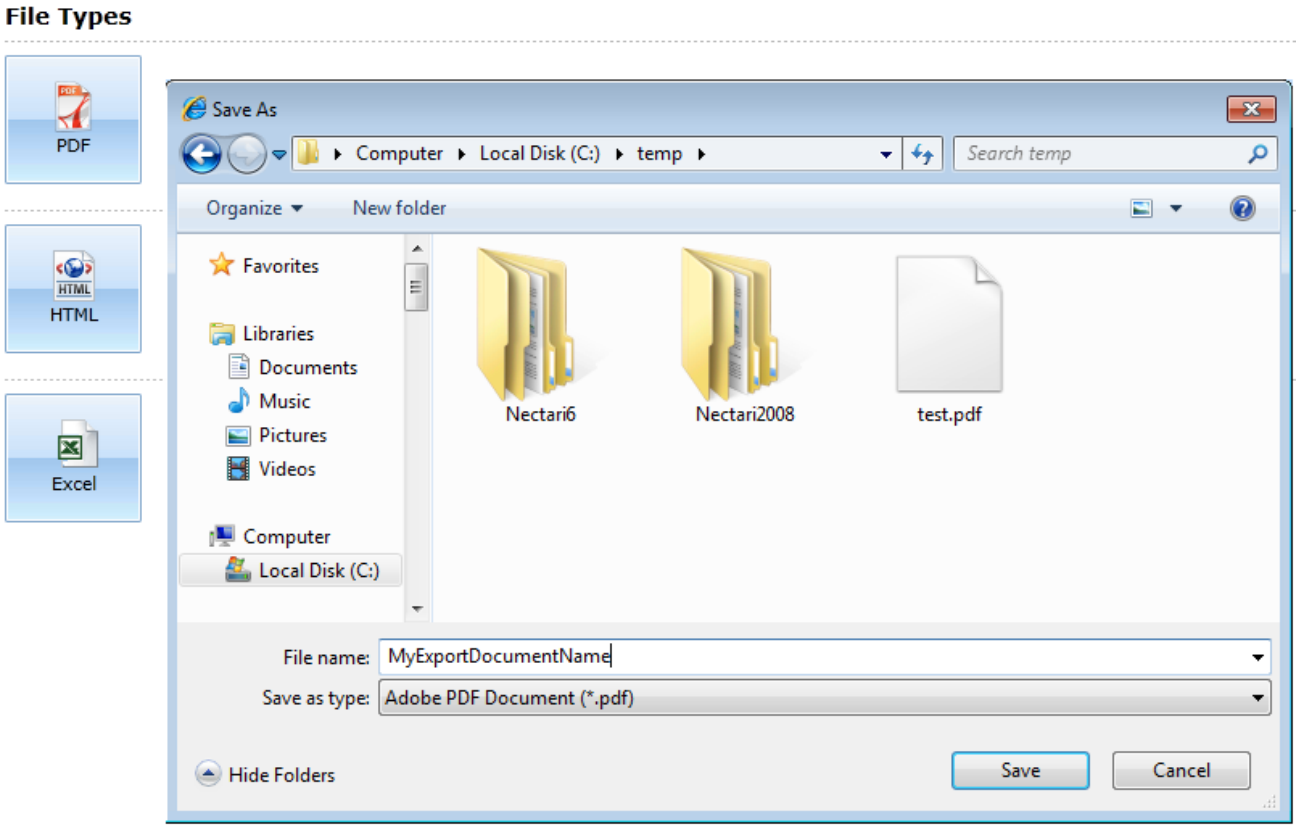
And also the header and footer of the printed report:



Exporting documents

It is possible to export all types of views (worksheets, charts, gauges, maps and dashboards) to different formats. This can be very useful for users who need to apply further data manipulations to a copy of the data.

The following figure shows an example of the export dialog window:



To export any displayed view, select the menu option File/Export to...

Select the proper export format in which you want the SEI document to be produced, by choosing:

- **PDF** (Adobe Acrobat)
- **HTML**, (Web browser)
- **EXCEL** (Microsoft Excel)

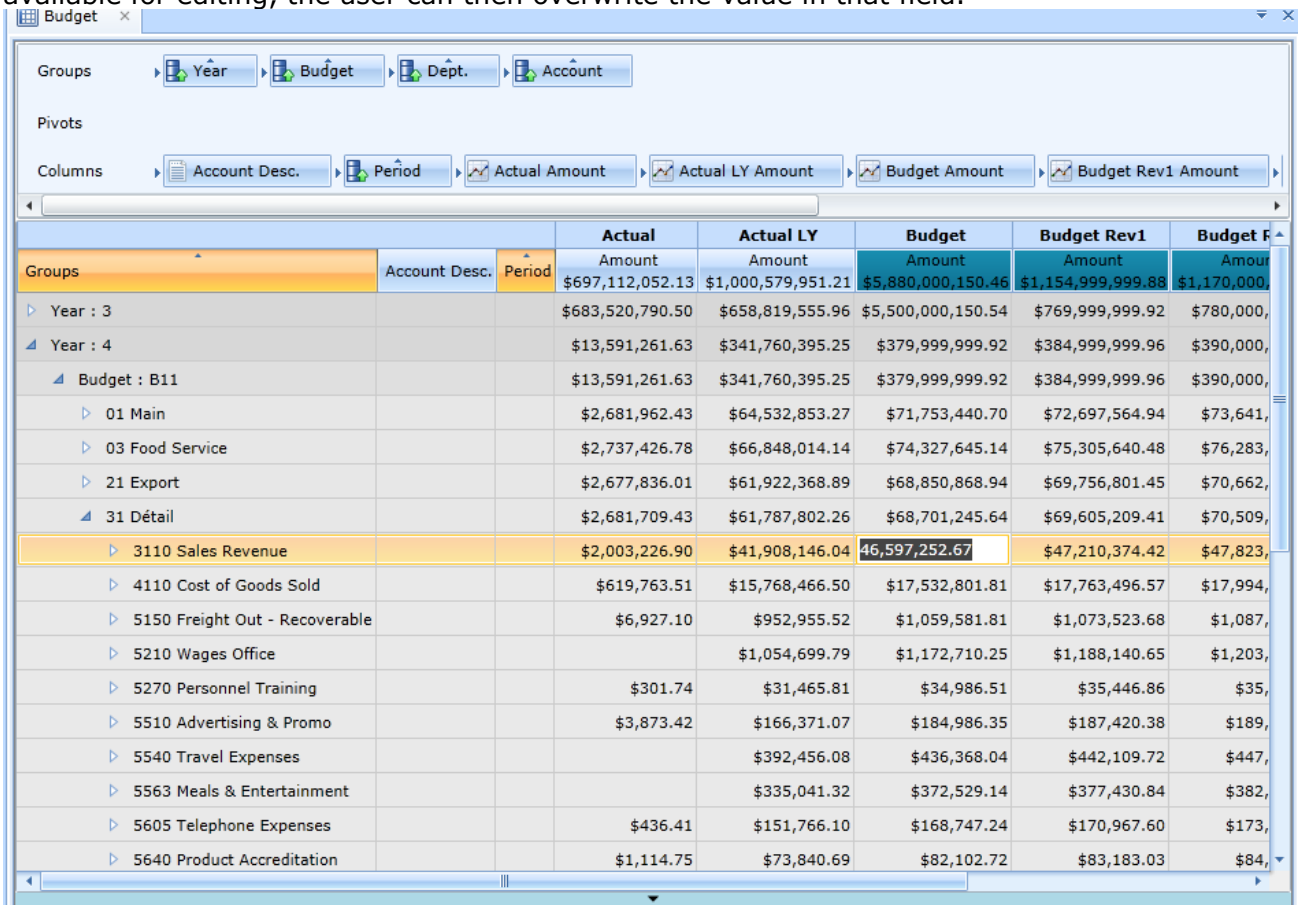
Then select a file name for this document.

When a user tries to export a view for the first time, a message will display indicating that SEI needs to run in privileged mode. This will start a one-time installation of a small enabler application, which allows for exports to be done. Restarting the browser is necessary after the installation of the enabler application.

Editing Data

Under certain circumstances (provided that the underlying process has been configured accordingly), SEI allows for data entry and editing. This can be very useful if one wants to manage budgets, forecasts, or other business areas where quick data entry is desired.

If a process has been configured to allow for data editing, upon first accessing a worksheet belonging to the process, and which contains fields available for editing, the user will be prompted as to whether or not the editing mode should be activated. If the user's answer to that question is affirmative, the data columns available for editing will have the color of the column headings change to blue (see screenshot below). When clicking into a field value that is available for editing, the user can then overwrite the value in that field.



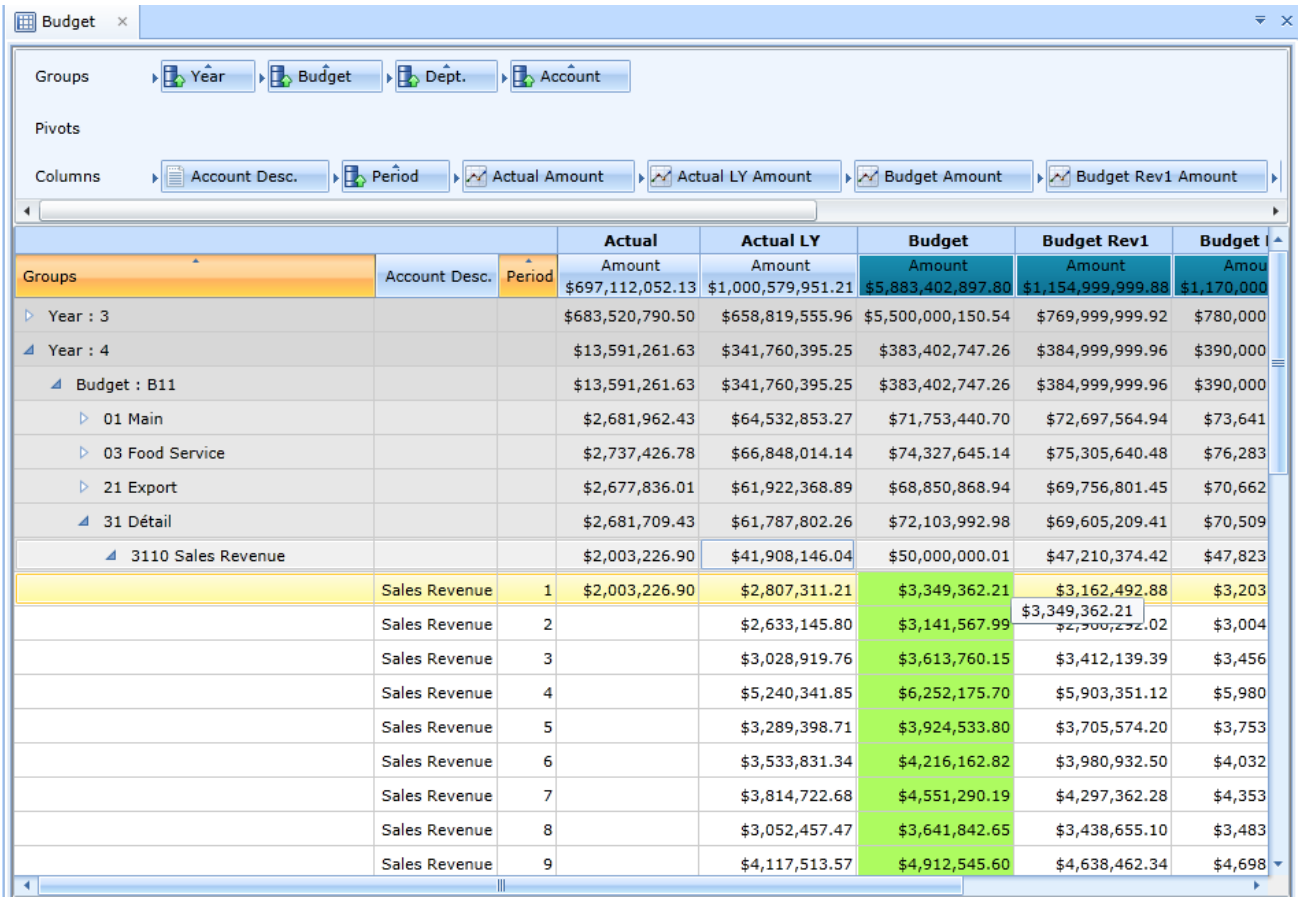
Groups	Account Desc.	Period	Actual Amount $697,112,052.13	Actual LY Amount $1,000,579,951.21	Budget Amount $5,880,000,150.46	Budget Rev1 Amount $1,154,999,999.88	Budget F Amou $1,170,000,
Year : 3			$683,520,790.50	$658,819,555.96	$5,500,000,150.54	$769,999,999.92	$780,000,
Year : 4			$13,591,261.63	$341,760,395.25	$379,999,999.92	$384,999,999.96	$390,000,
Budget : B11			$13,591,261.63	$341,760,395.25	$379,999,999.92	$384,999,999.96	$390,000,
01 Main			$2,681,962.43	$64,532,853.27	$71,753,440.70	$72,697,564.94	$73,641,
03 Food Service			$2,737,426.78	$66,848,014.14	$74,327,645.14	$75,305,640.48	$76,283,
21 Export			$2,677,836.01	$61,922,368.89	$68,850,868.94	$69,756,801.45	$70,662,
31 Détail			$2,681,709.43	$61,787,802.26	$68,701,245.64	$69,605,209.41	$70,509,
3110 Sales Revenue			$2,003,226.90	$41,908,146.04	46,597,252.67	$47,210,374.42	$47,823,
4110 Cost of Goods Sold			$619,763.51	$15,768,466.50	$17,532,801.81	$17,763,496.57	$17,994,
5150 Freight Out - Recoverable			$6,927.10	$952,955.52	$1,059,581.81	$1,073,523.68	$1,087,
5210 Wages Office				$1,054,699.79	$1,172,710.25	$1,188,140.65	$1,203,
5270 Personnel Training			$301.74	$31,465.81	$34,986.51	$35,446.86	$35,
5510 Advertising & Promo			$3,873.42	$166,371.07	$184,986.35	$187,420.38	$189,
5540 Travel Expenses				$392,456.08	$436,368.04	$442,109.72	$447,
5563 Meals & Entertainment				$335,041.32	$372,529.14	$377,430.84	$382,
5605 Telephone Expenses			$436.41	$151,766.10	$168,747.24	$170,967.60	$173,
5640 Product Accreditation			$1,114.75	$73,840.69	$82,102.72	$83,183.03	$84,

Data can be entered either at the detail level or at the group level. If the data has been entered at the group level, it will automatically be distributed (or split) across lower groups and across details. The way in which the distribution is done depends upon the 'split-by ratio' property of the field, as defined in the Process Designer.

If the 'split-by ratio' property was left blank and the user enters data at the group level, then SEI will split the total amount in accordance to the ratios given by the existing subtotal and detail values which make up the group total (in other words, SEI will calculate the ratios of each subgroup and detail entry to the total group value and then multiply the new user-entered group total by these ratios to obtain the values which will be automatically displayed in the subgroups and details).

If however, the 'split-by ratio' property was set to another field and the user enters data at the group level, then SEI will split the total amount in accordance to the ratios given by the subtotal and detail values which make up the group total of the other field. For example, if a process contains both budget and actual dollars, and the budget dollars field has its 'split-by ratio' property set to the actual dollars field, then the user can simply enter a grand total for the budget dollars, which means that the various values of the group, subgroup and detail of the budget dollars will be calculated using the ratios of the actual sales dollars and the user-entered grand total.

Once a field value has been modified, the field value or detail lines which make up the group total which was modified will have their background color change to light green, to indicate the change. This change is not yet applied to the database however: the user still needs to go under the File menu to the Save Data function in order to commit those changes to the database.



Groups	Account Desc.	Period	Actual Amount	Actual LY Amount	Budget Amount	Budget Rev1 Amount	Budget
			$697,112,052.13	$1,000,579,951.21	$5,883,402,897.80	$1,154,999,999.88	$1,170,000
Year : 3			$683,520,790.50	$658,819,555.96	$5,500,000,150.54	$769,999,999.92	$780,000
Year : 4			$13,591,261.63	$341,760,395.25	$383,402,747.26	$384,999,999.96	$390,000
Budget : B11			$13,591,261.63	$341,760,395.25	$383,402,747.26	$384,999,999.96	$390,000
01 Main			$2,681,962.43	$64,532,853.27	$71,753,440.70	$72,697,564.94	$73,641
03 Food Service			$2,737,426.78	$66,848,014.14	$74,327,645.14	$75,305,640.48	$76,283
21 Export			$2,677,836.01	$61,922,368.89	$68,850,868.94	$69,756,801.45	$70,662
31 Détail			$2,681,709.43	$61,787,802.26	$72,103,992.98	$69,605,209.41	$70,509
3110 Sales Revenue			$2,003,226.90	$41,908,146.04	$50,000,000.01	$47,210,374.42	$47,823
	Sales Revenue	1	$2,003,226.90	$2,807,311.21	$3,349,362.21	$3,162,492.88	$3,203
	Sales Revenue	2		$2,633,145.80	$3,141,567.99	[illegible].02	$3,004
	Sales Revenue	3		$3,028,919.76	$3,613,760.15	$3,412,139.39	$3,456
	Sales Revenue	4		$5,240,341.85	$6,252,175.70	$5,903,351.12	$5,980
	Sales Revenue	5		$3,289,398.71	$3,924,533.80	$3,705,574.20	$3,753
	Sales Revenue	6		$3,533,831.34	$4,216,162.82	$3,980,932.50	$4,032
	Sales Revenue	7		$3,814,722.68	$4,551,290.19	$4,297,362.28	$4,353
	Sales Revenue	8		$3,052,457.47	$3,641,842.65	$3,438,655.10	$3,483
	Sales Revenue	9		$4,117,513.57	$4,912,545.60	$4,638,462.34	$4,698

$3,349,362.21

Info-Pages

SEI offers more advanced users the option to extend the capabilities of the software, by allowing for the creation and use of **Info-Pages**, which can contain information about the process, and furthermore, can be used to launch scripts with given parameters.

To access an Info-Page, right-click on a process and select View Info-Page. The Info-Page will be displayed. Users can then fill in elements such as textboxes, checkboxes and drop-downs and then use buttons which launch SQL scripts that can use the information the users filled in as parameters.

By using Info-Pages in conjunction with SEI's ability to edit data, a company can greatly extend the capabilities of SEI. Processes can be created which can allow for editing custom tables, and Info-Pages can be used for example, to import or export information to these custom tables from the company's ERP system, or other databases, and back into the ERP system after the data has been edited. This can be useful for areas such as budgets, forecasts, price lists, etc.

Below is an example of an Info Page.

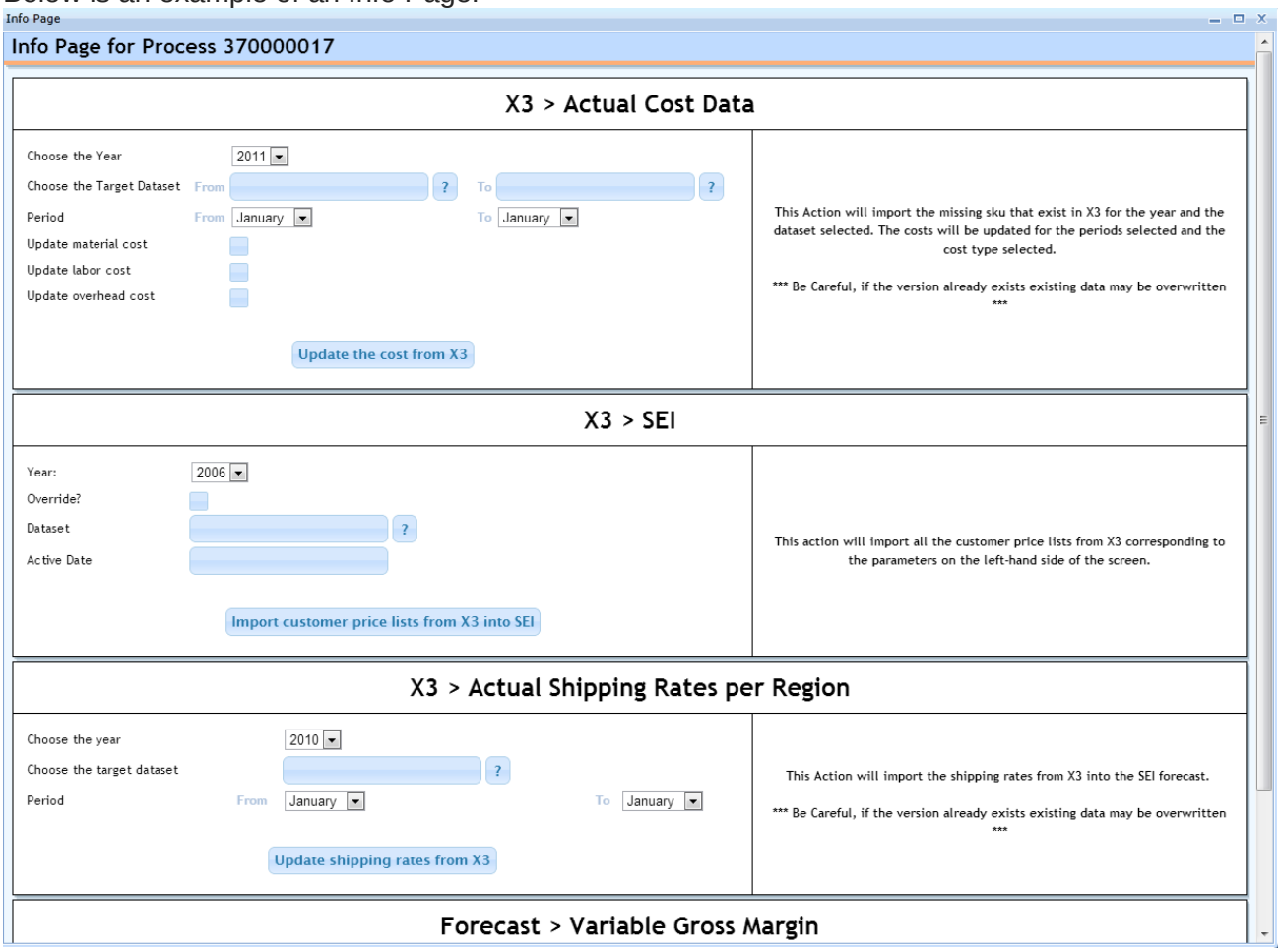


Chart Views

In many circumstances, a visual representation of data can be very useful and revealing. The SEI Chart Views give users the possibility to easily create customized and high quality charts. Moreover, it provides powerful drill-down features that allow you to dynamically navigate in your charts and analyze data in different levels of detail.

SEI allows applying **Filters** and using **Prompts** on charts like any other type of view. Please refer to "Filters and Views" for details about using filters and prompts as well as **Saving** and **Publishing** features.

The following is an example of the chart main window:

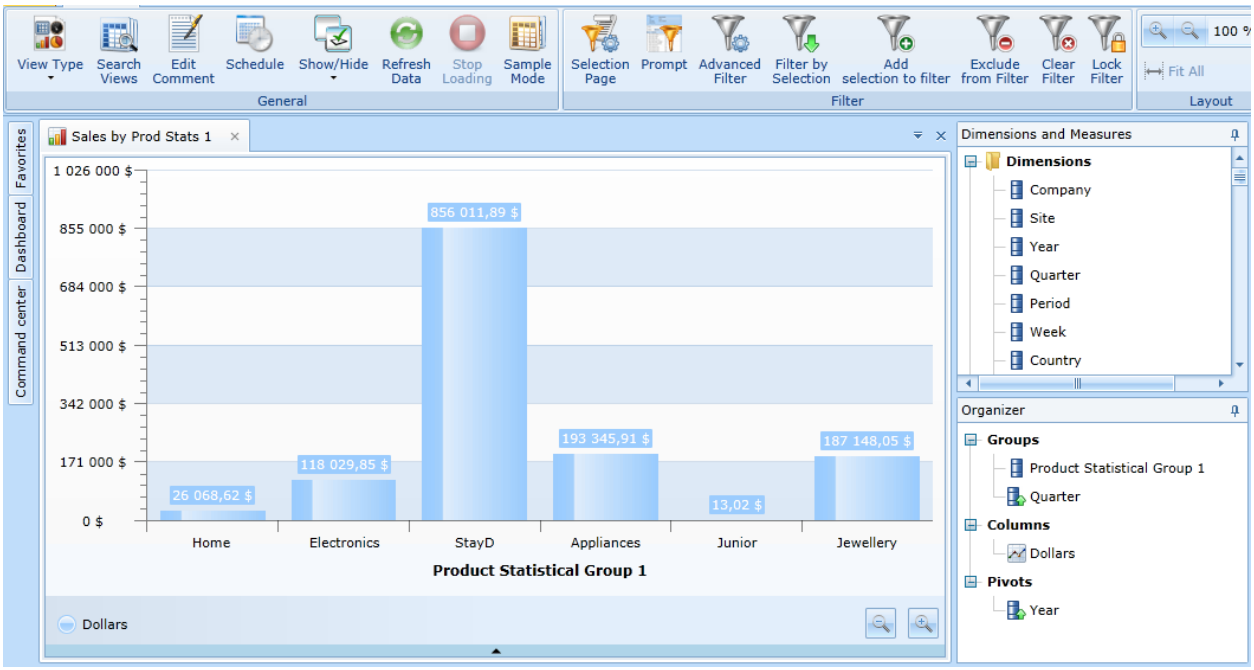


Chart definitions and options may be directly modified from the chart view. Two windows are used to maintain the chart layout (Chart Properties) and data options (Organizer).

Creating a new Chart

To create a new Chart, select the process in which you want to create it, and then do one of the following:

- Right click on the process, then select "New Chart" from the context menu
  OR
- From the main menu, select "File", "New", then "Chart"

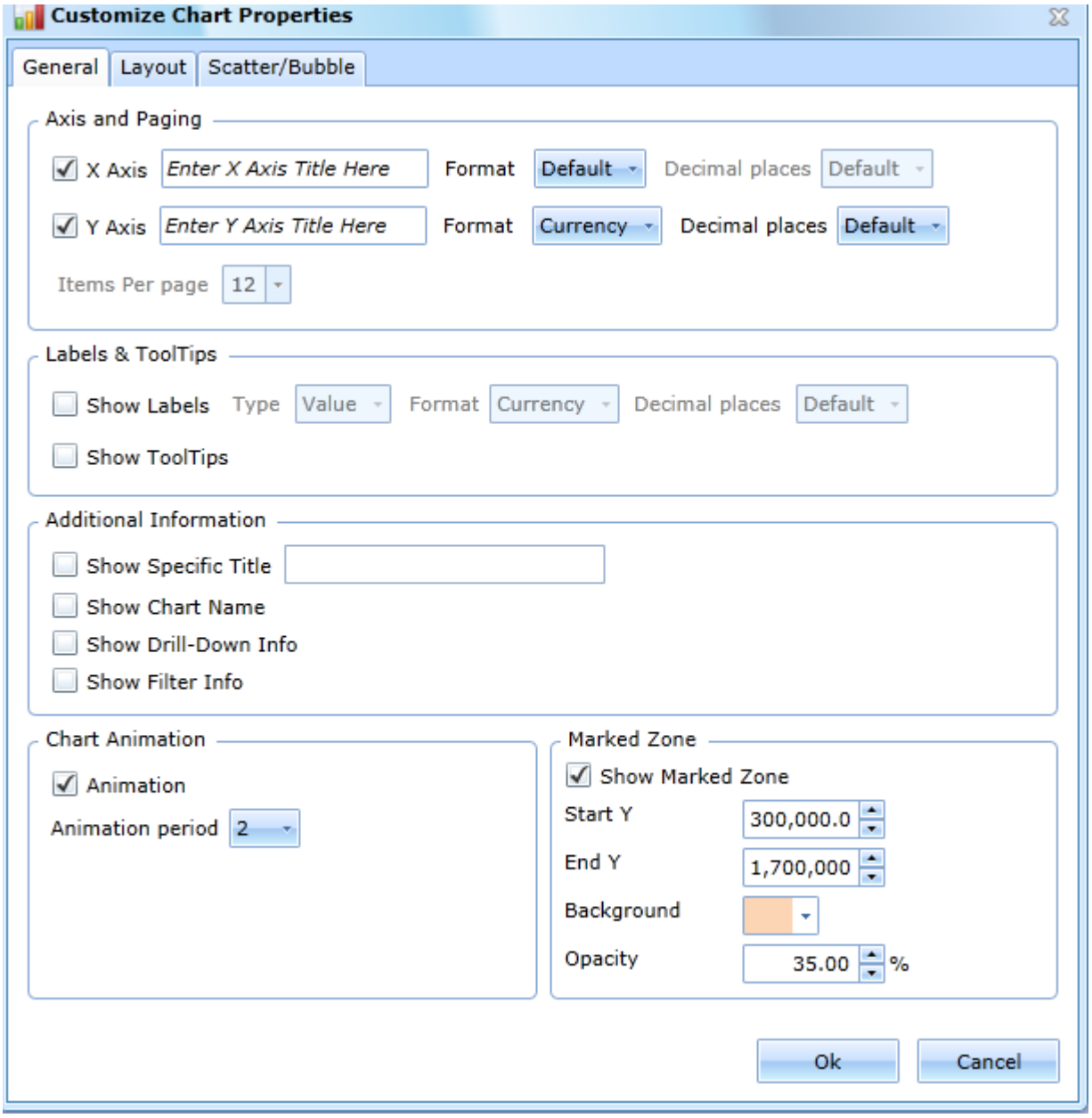
You will then be asked to provide a name for your Chart and specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Create New" button after providing this information. An empty chart will then be displayed.

Chart Properties Window

The Chart Properties Window allows users to customize the layout properties (e.g. legends, titles, etc.) of the rendered chart. These parameters are classified in two different categories: general and layout.

Press the toolbar button "Chart Properties" to edit properties.

Figures below illustrate the content of the "Chart Properties" window.



The window above allows the customization of the chart's general settings.

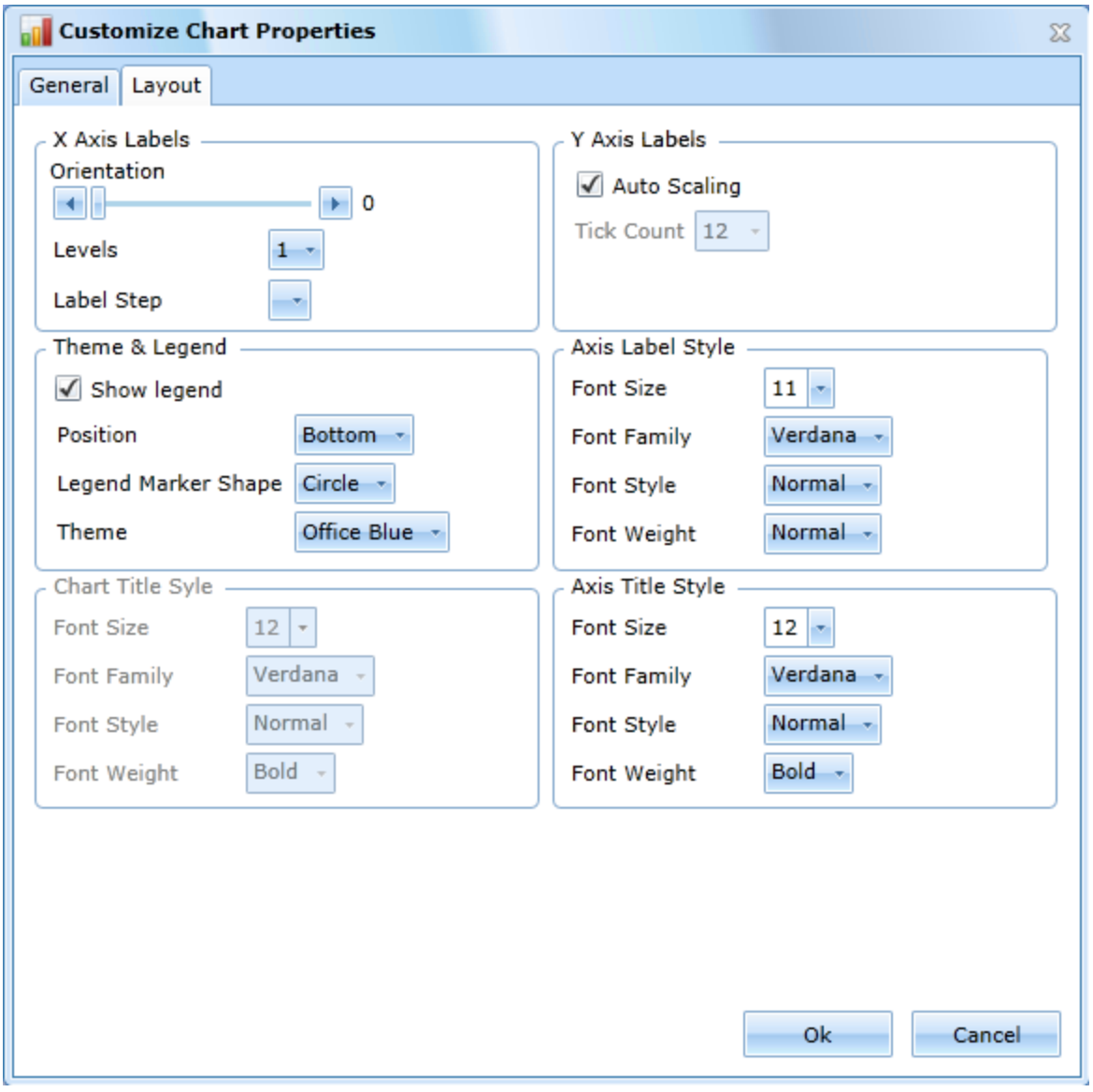
Axis and Paging: Permits you to define whether you want to display the X and Y axis, specify their title, select the formatting of the Y axis numbers and finally, determine how many items on the X axis you want to display per page.

Labels & Tooltips: Allows you to define whether or not labels are shown over the displayed bar/point/sector and to define the formatting of the label. Additionally, you may determine if tooltips are going to appear when moving the mouse cursor over the displayed data.

Additional Information: Allows you to determine what information to include in the header of the chart.

Chart Animation: Offers the choice to activate the animation effect when loading the chart's data.

The **Marked Zone:** Provides the option to display a band running across the graph, with defined Y boundaries and a set background color and opacity, which can be used to designate a target area for your data points.



The window above is used to specify the visual properties relative to the chart.

X Axis Labels and **Y Axis Labels**: Allows for the positioning of labels on the Axis. You may change the orientation of the labels, determine if you want to display them on many lines and if

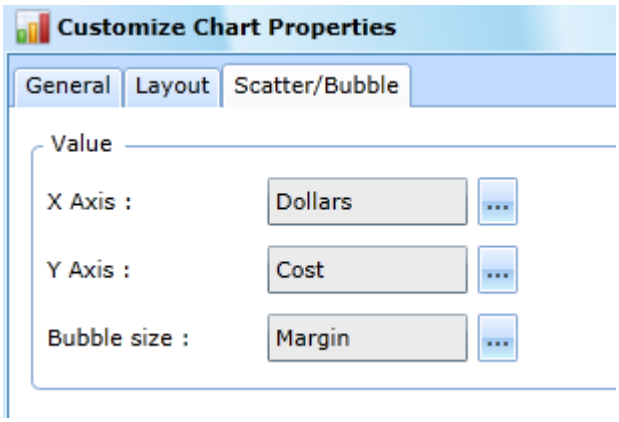
you want to display them only every x number of times with label step property. For the Y Axis, you may select if you want it to be automatically generated or specify the number of ticks on the axis.

Theme & Legend: This allows you to control the display and the position of the chart's legend. You may also select a global appearance theme for your chart with the Theme property.

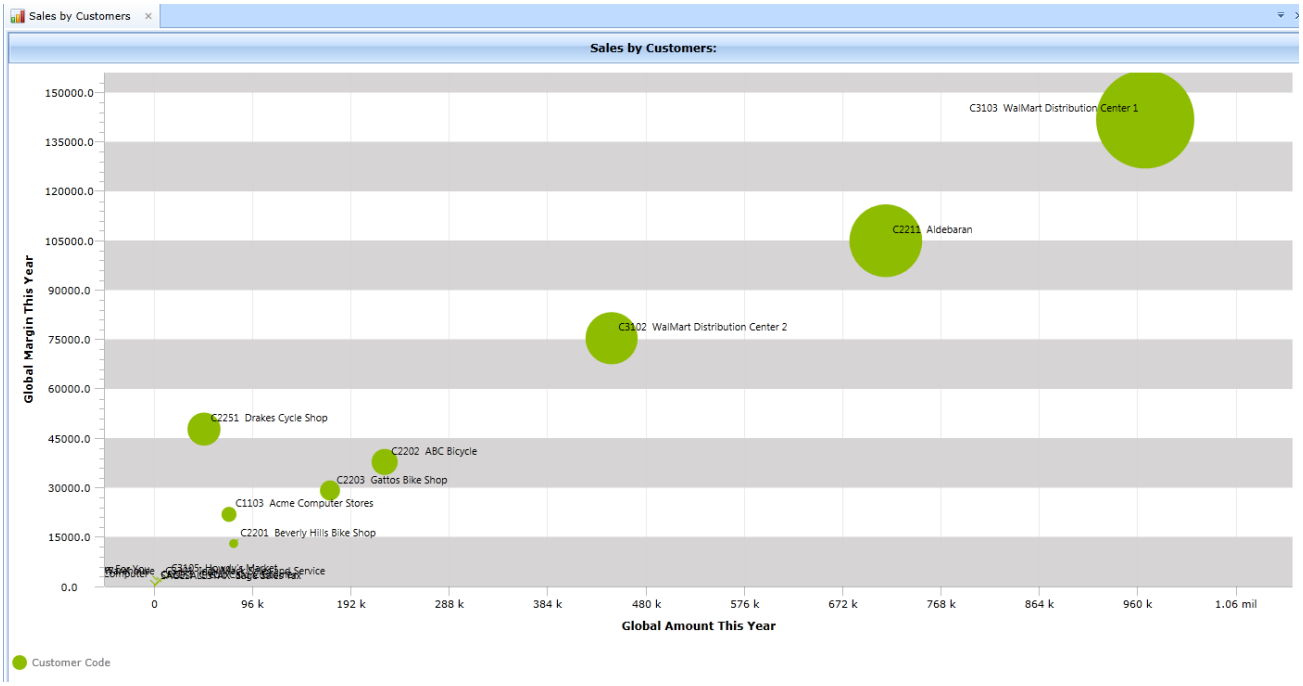
Axis Label Style, **Chart Title Style** and **Axis Title Style:** Permits you to select the font appearance for those sections of the chart.

Scatter and Bubble Charts Special Considerations

In a scatter chart and bubble chart, a special section in the Chart Properties allows for associating the x and y axis values to the magnitude of specific fields and for the bubble size to be determined by the relative magnitude of a field:



An example of the result of these settings can be seen below:



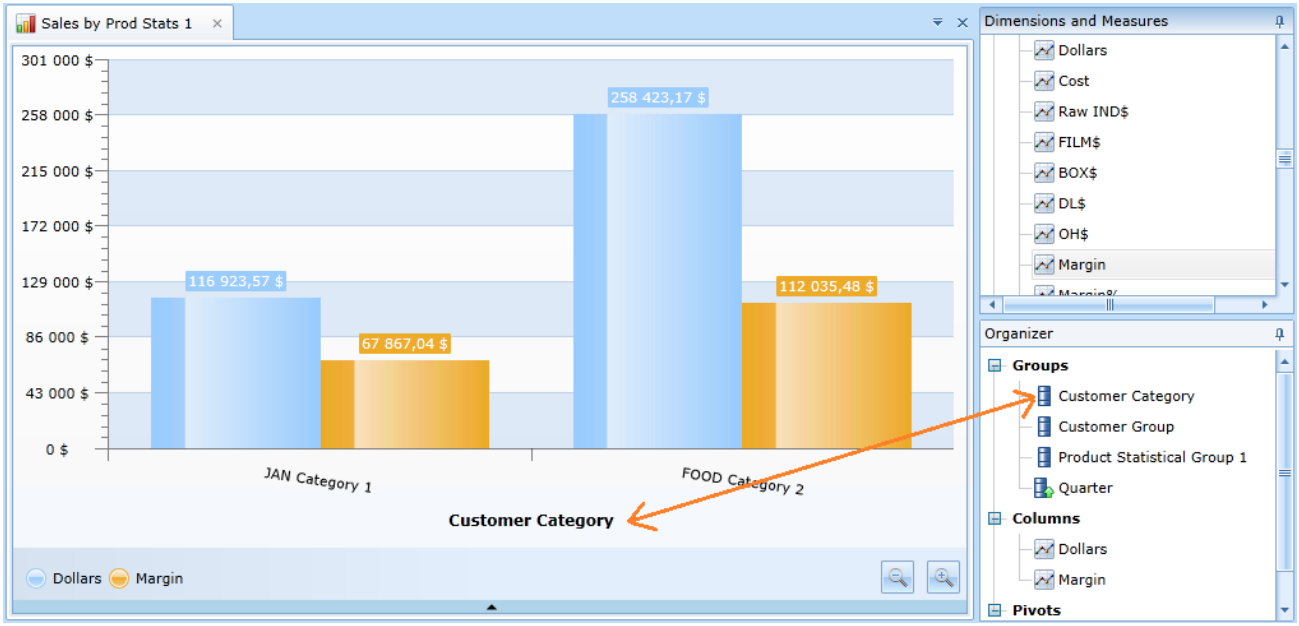
Navigation in the Chart

Navigation in the chart is designed to be intuitive and user-friendly, however navigation methods will differ depending on the type of chart (bar, line or pie chart).

Drill-Down/Drill-Up

Drill-down and drill-up allows users to navigate throughout the chart's Drill-Down Structure. When a chart is initially created, a Drill-Down Structure is defined to allow the user to explore the data it contains in a contextually relevant way.

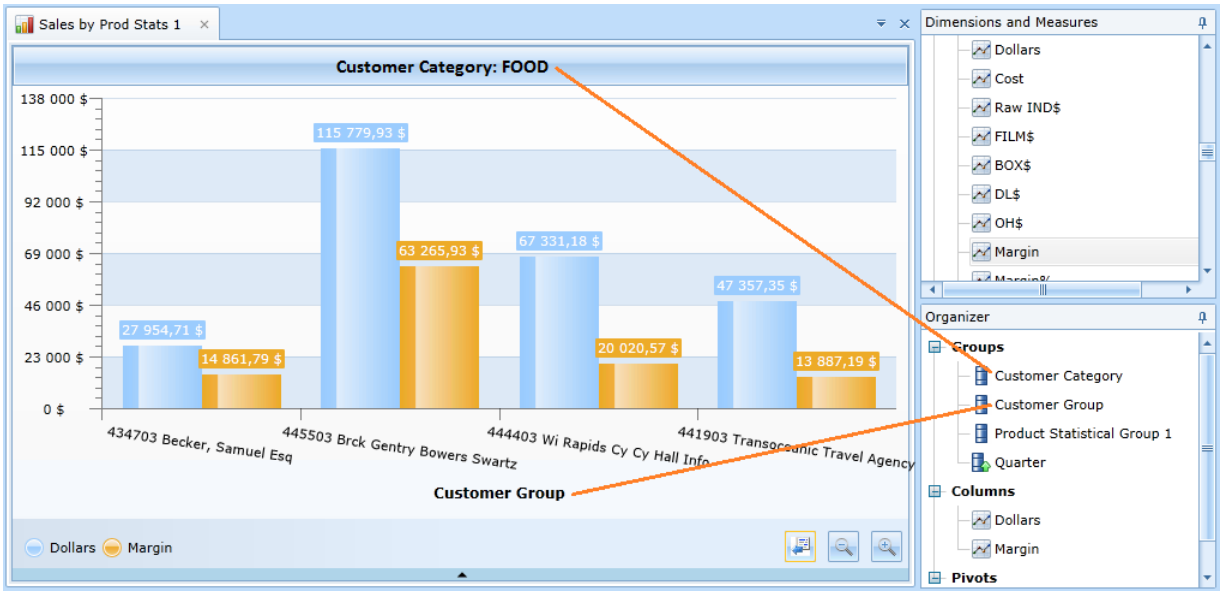
Let's use a bar chart as an example:



The label "Customer Category" is added at the bottom of the chart in order to indicate the current drill-down level of the chart.

To Drill-Down in a chart, simply click on the desired bar, pie or line depending on the type of chart.

The next figure illustrates a chart Drill-Down on the Customer Category FOOD. In order to perform this Drill-Down level, simply click the FOOD bar. As a result, shown below, the chart data will be filtered by "Customer Category=FOOD" and will be detailed by the next drill-down level "Customer Group":

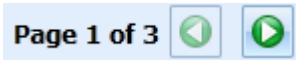


After doing the drill-down, the chart title will reflect the new level: "Customer Category = FOOD" and the level "Customer Group" will be displayed. Furthermore, the filter section located under the chart has now adopted the drill-down value "Customer Category: FOOD".

To Drill-Up (go back to the upper level), simply click the following button at the bottom of the chart: or use the context menu option "Drill-up" on the chart.

Paging

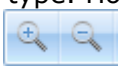
Depending on the amount of X-axis values, in some cases a chart may be composed of multiple pages. The paging indicator is present in SEI's toolbar when viewing a worksheet or a chart:



As shown above, paging buttons are available to navigate through different pages:

- To get to the next page: press the "next" button:
- To get to the previous page: press the "previous" button:
- To get to the first page: press the "first" button:
- To get to the last page: press the "last" button:

Zooming

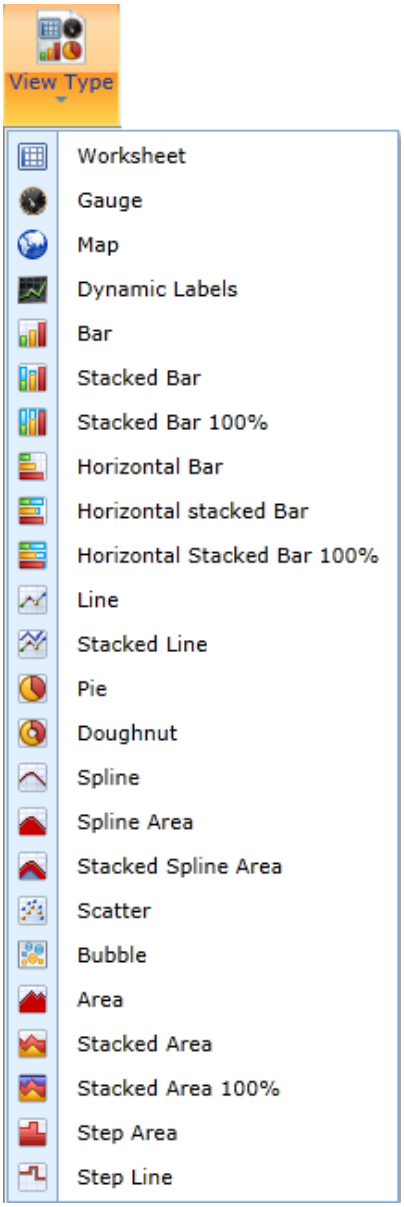
The SEI Chart View also supports zooming in on a particular chart type. However, zooming is not applicable for Pie Charts for example. Use the toolbar buttons  to zoom.

After doing the Zoom, the Y-axis reflects a smaller or larger range of values.

Switching between Chart types

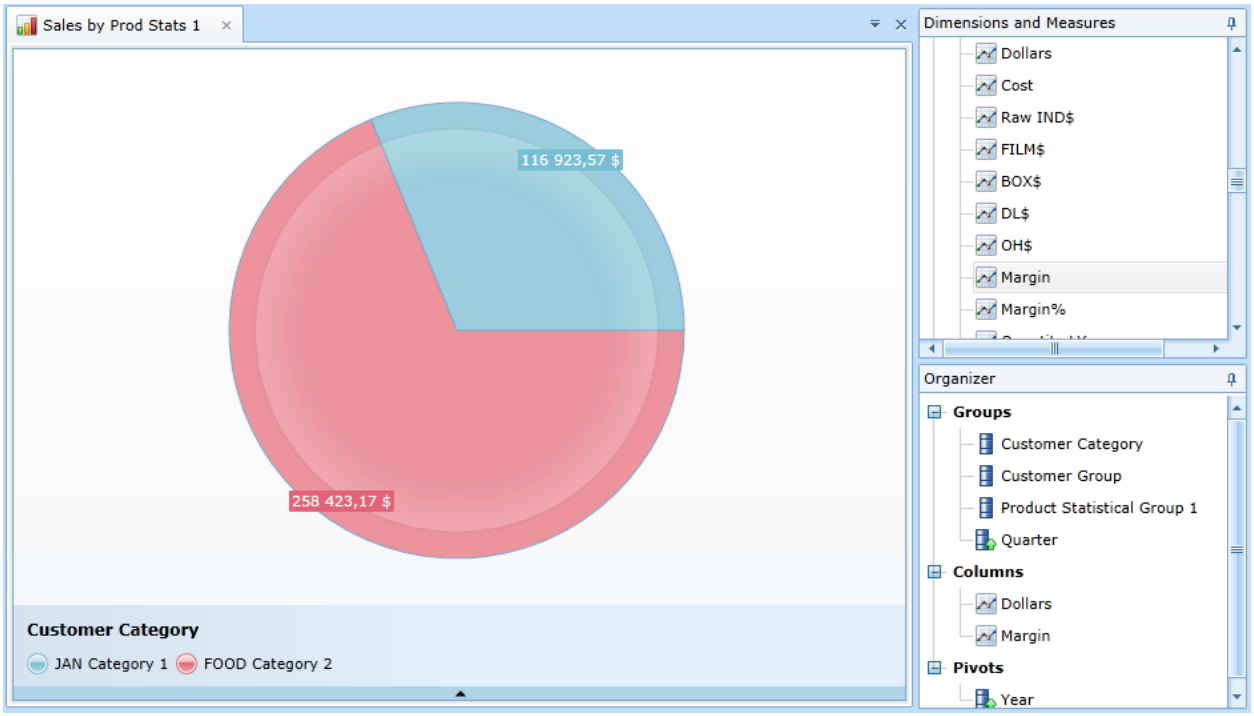
At any time, the user can change the type of the chart between pie, bar and line chart.

To change the type of the chart, use the View Type dropdown button located in the SEI toolbar



Pie Charts and Doughnut Special Considerations

In a pie chart and doughnut chart, only one measure at a time can be represented. In fact, the measure shown in a pie chart is the first measure of the Organizer section:



To change a Pie Chart's current measure, select the desired measure in the Organizer Columns section and click "Move first". The pie chart will automatically change to the selected measure.

Applying Instant Filters

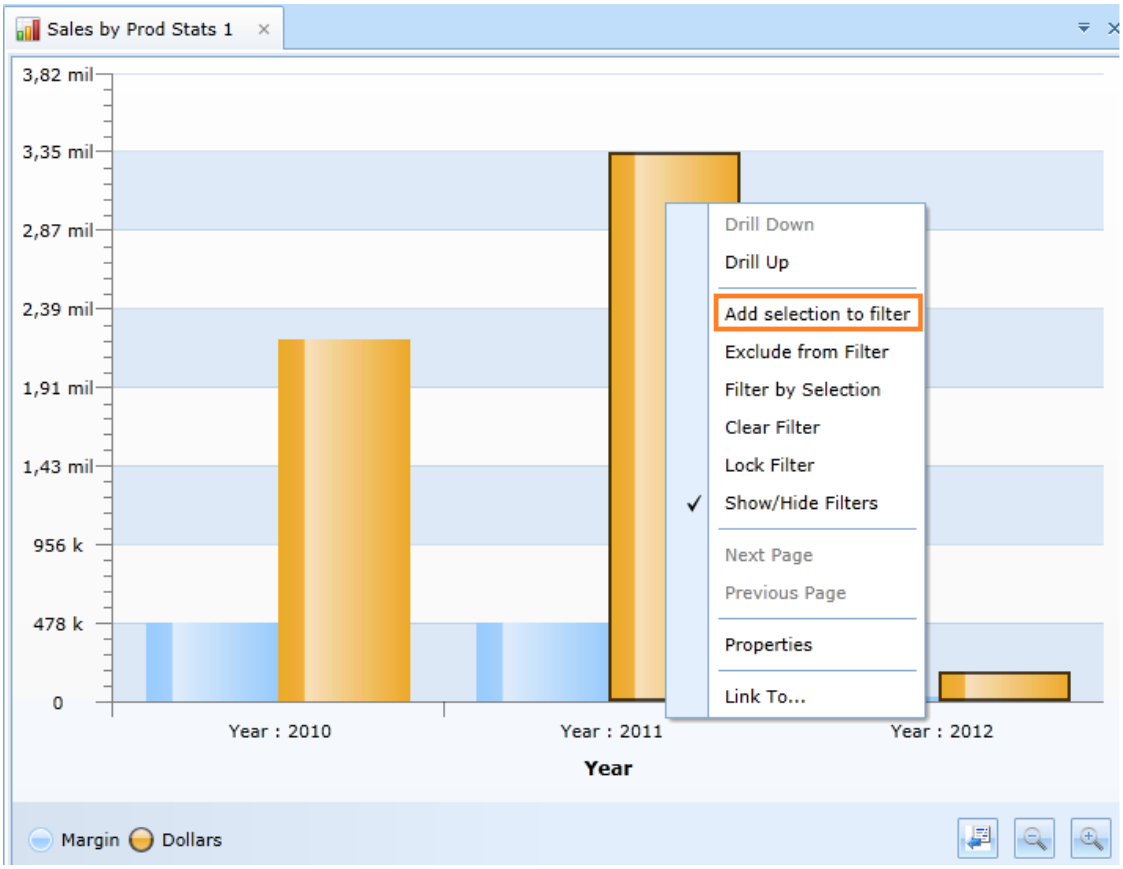
This is a very useful function in the SEI chart navigator. It allows users to instantly visualize a subset of data having specific common criteria.

To apply an instant filter, hold the <SHIFT> key on your keyboard and select one or more bar regions representing the values upon which you want to filter your data, do a right-click and select one of the following options (the same options are available from the toolbar):

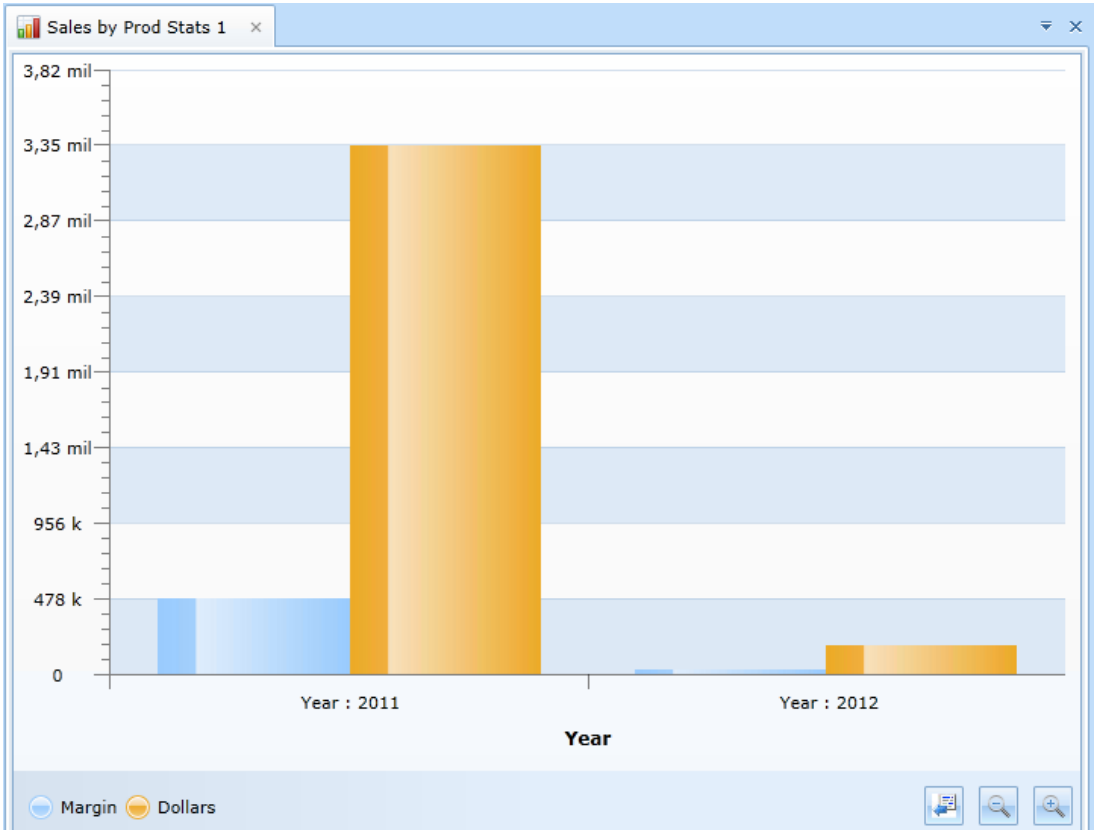
- Add selection to filter: to add the selection to the current filter.
- Filter by selection: to apply the selection to all data (the current filter will be replaced).
- Exclude from filter: to add the exclusion to the current filter.

Example:

In the Sales by Prod Stats 1 sample, we only want to display data for years 2011 and 2012. In order to achieve this, hold the keyboard key <Shift> and select the bars representing 2011 and 2012, right-click and select 'Add selection to filter'. The following example shows how to achieve this operation:



The chart will then be refreshed to reflect the filter selected. As a result, only data for years 2011 and 2012 is displayed:



Notice that the current filter is always displayed at the bottom of the chart.

In order to filter your chart, you may also switch to the worksheet view, build your filter using the worksheet data and then switch back to chart view.

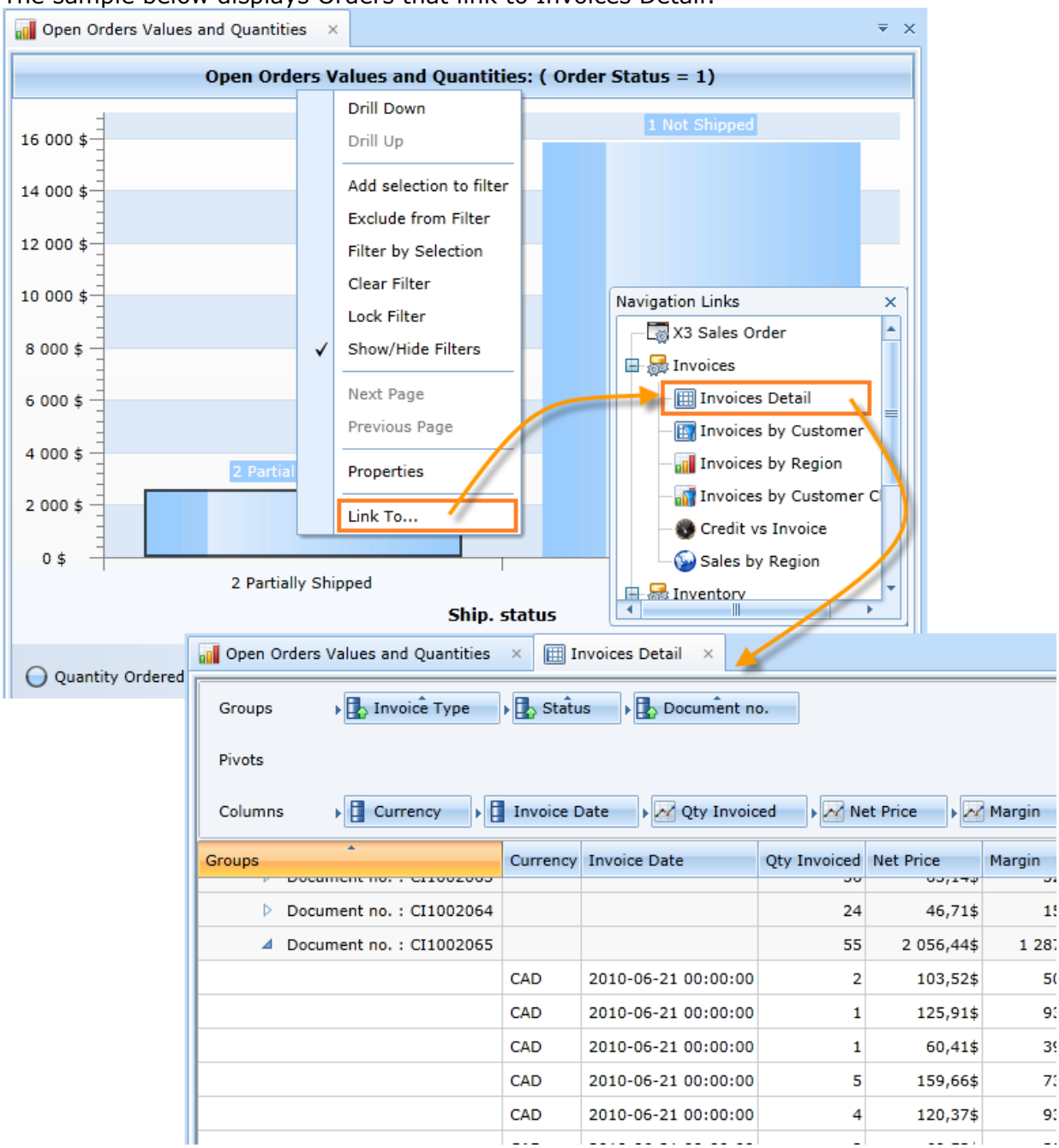
You can save your filter in order to apply it later, on any view of the process (worksheet, chart, gauge or map). Please refer to (Saving and Publishing Views / Filters) for more information.

Linking From One View To Another View

This is a very useful function in the SEI navigator. It allows users to instantly navigate from one view to another by passing filters of the selected areas to the linked view.

To open a linked view, hold the <SHIFT> key and select the areas containing the values on which you want to filter your data, then do a right-click and select "Link To…" A Navigation Links popup window will then appear with the predefined choices of views that can be opened as a link.

The sample below displays Orders that link to Invoices Detail:



Gauge Views

The Gauge View is a simple tool that allows creating gauges to display critical and important values that are often displayed in dashboards. This useful tool helps you define the gauge's appearance and offers a variety of features that allow customizing the content and the layout of your gauge.

SEI allows applying **Filters** and using **Prompts** on gauges in the same way that they can be used on any other type of view. Please refer to "Filters and Views" for details about using filters and prompts as well as "Saving and Publishing" features.

The following is a sample gauge created with SEI:

Creating a new Gauge

To create a new gauge, select the process in which you want to create it, and then do one of the following:

- Right click on the process, then select "New Gauge" from the context menu
  OR
- From the main menu, select "File", "New" then "Gauge"

You will then be asked to provide a name for your gauge and specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Ok" button after providing this information. An empty page is then displayed. You are now ready to start designing your gauge.

To create your first Gauge, start by switching to a worksheet view and by selecting the data required by filling the organizer with the proper groups and columns.

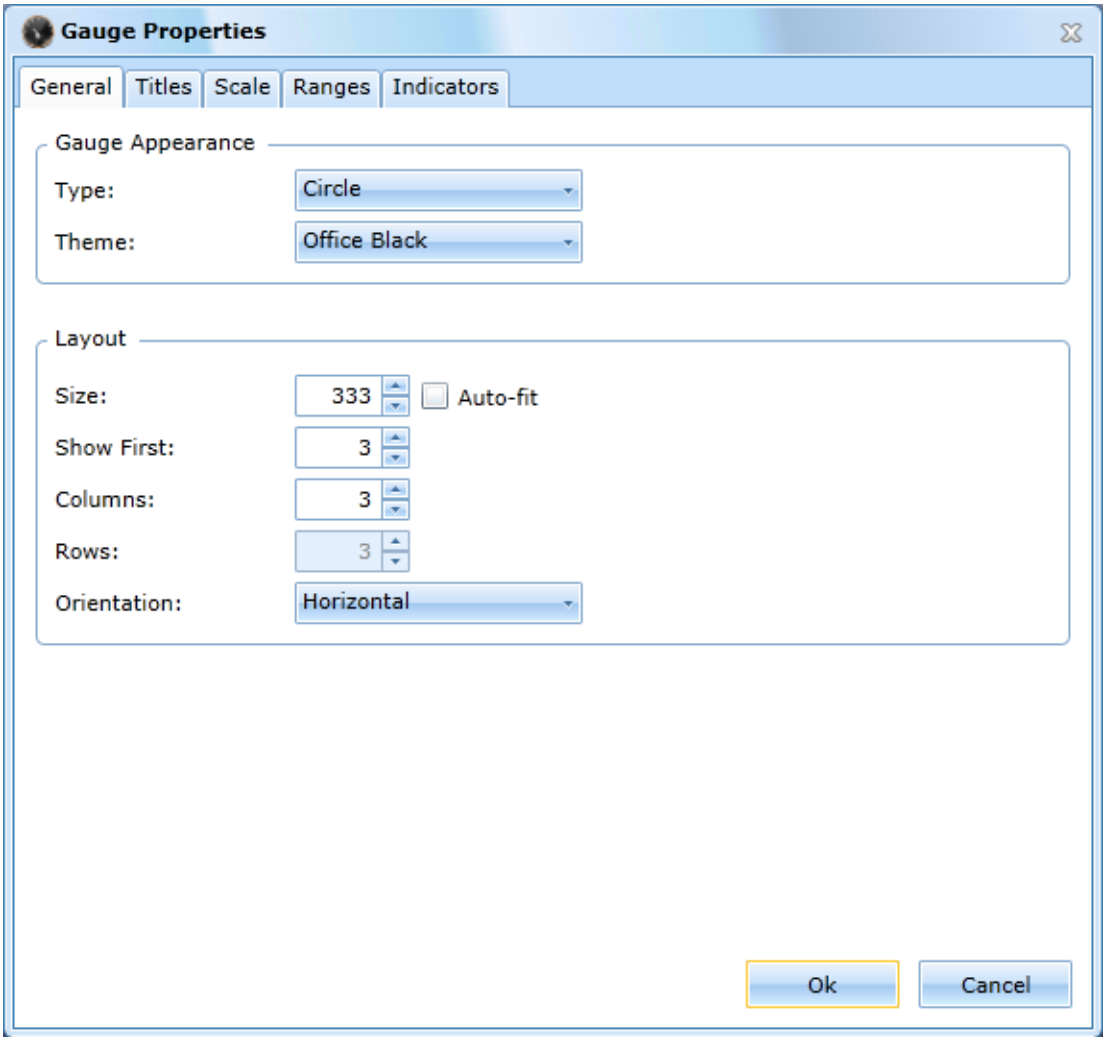
Then use the toolbar button View Type and switch back to type Gauge. Note that only the first level of information will be taken by the gauge view.

Then click on the toolbar button Gauge Properties to select the layout and data to use for your Gauge.

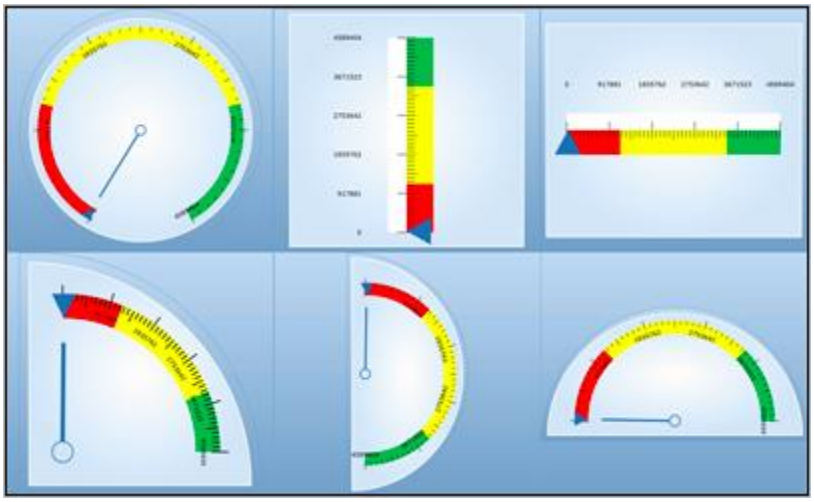
Note that Gauge does not work with pivot fields. All fields selected must be in groups or columns in the organizer section.

Gauge Properties is the window where you define all information about the display of your gauge and which data to use for its indicators, definable from the Indicators tab of the gauge properties window.

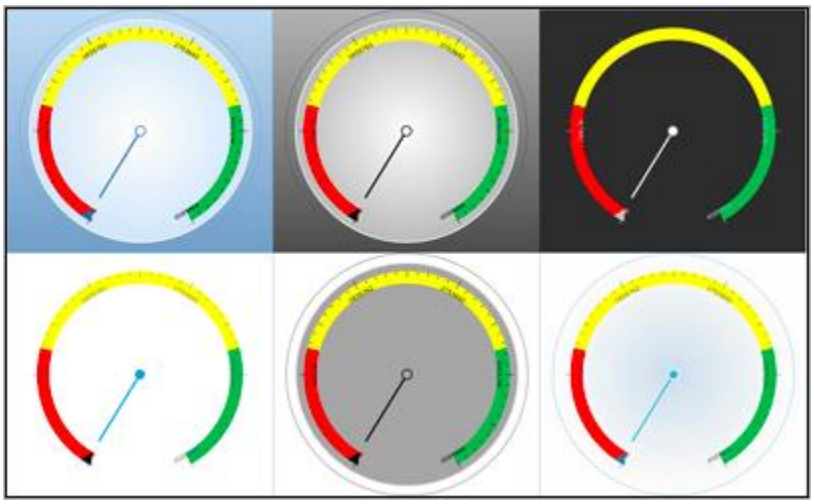
General:



Gauge Appearance: Allows you select which type of gauge you want. Choices include Circle, Vertical linear, Horizontal linear, Quadrant and Semicircle. Here is a sample of those available:



Theme: Offers various styles that change the colors of the gauge. Here is a sample of some of the themes:



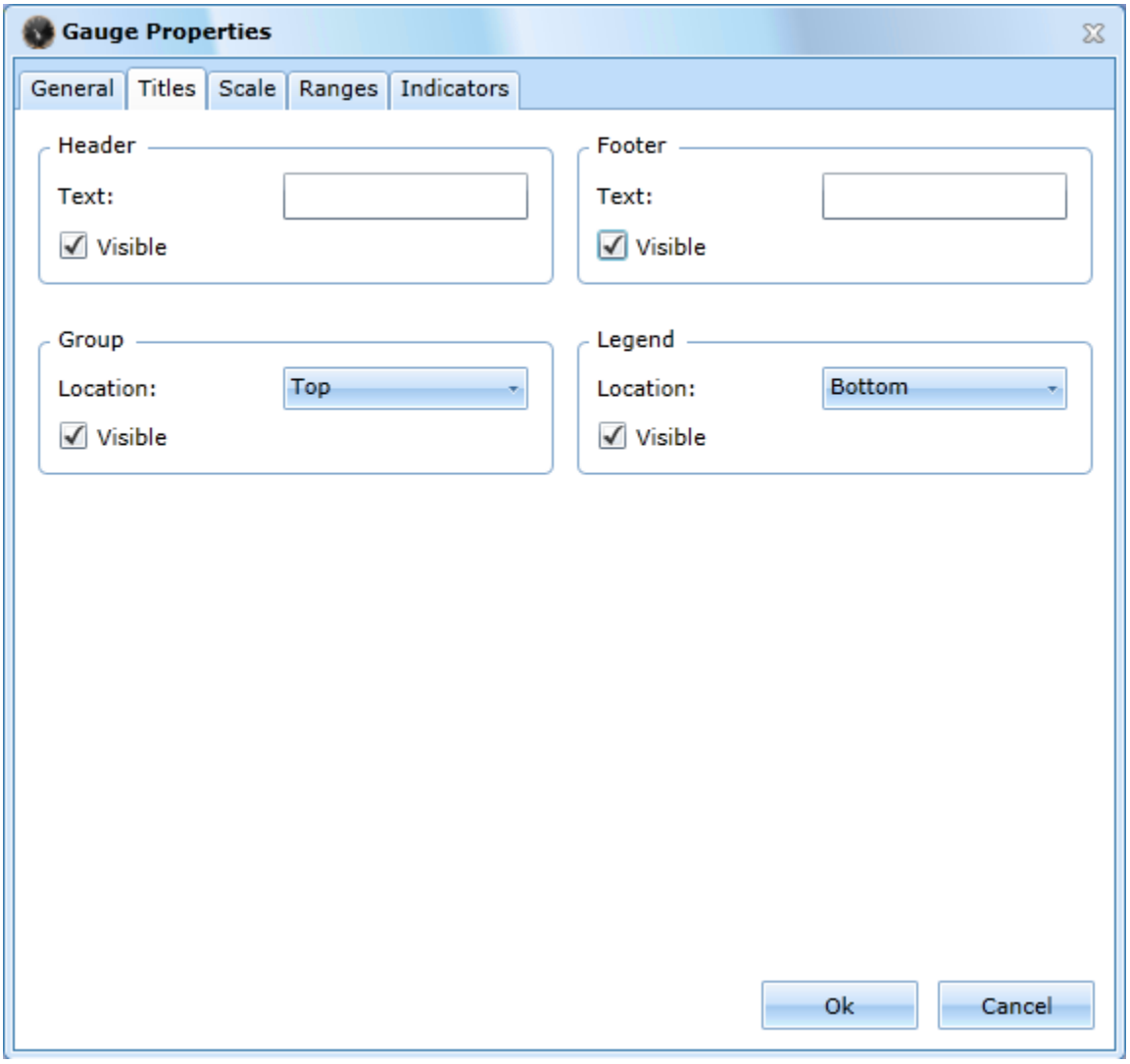
Layout: Determines the general format of the gauges.

Size: Allows you to enter a fixed size or you may select the option **Auto-Fit** to let SEI calculate the proper size based on the amount of space and screen size.

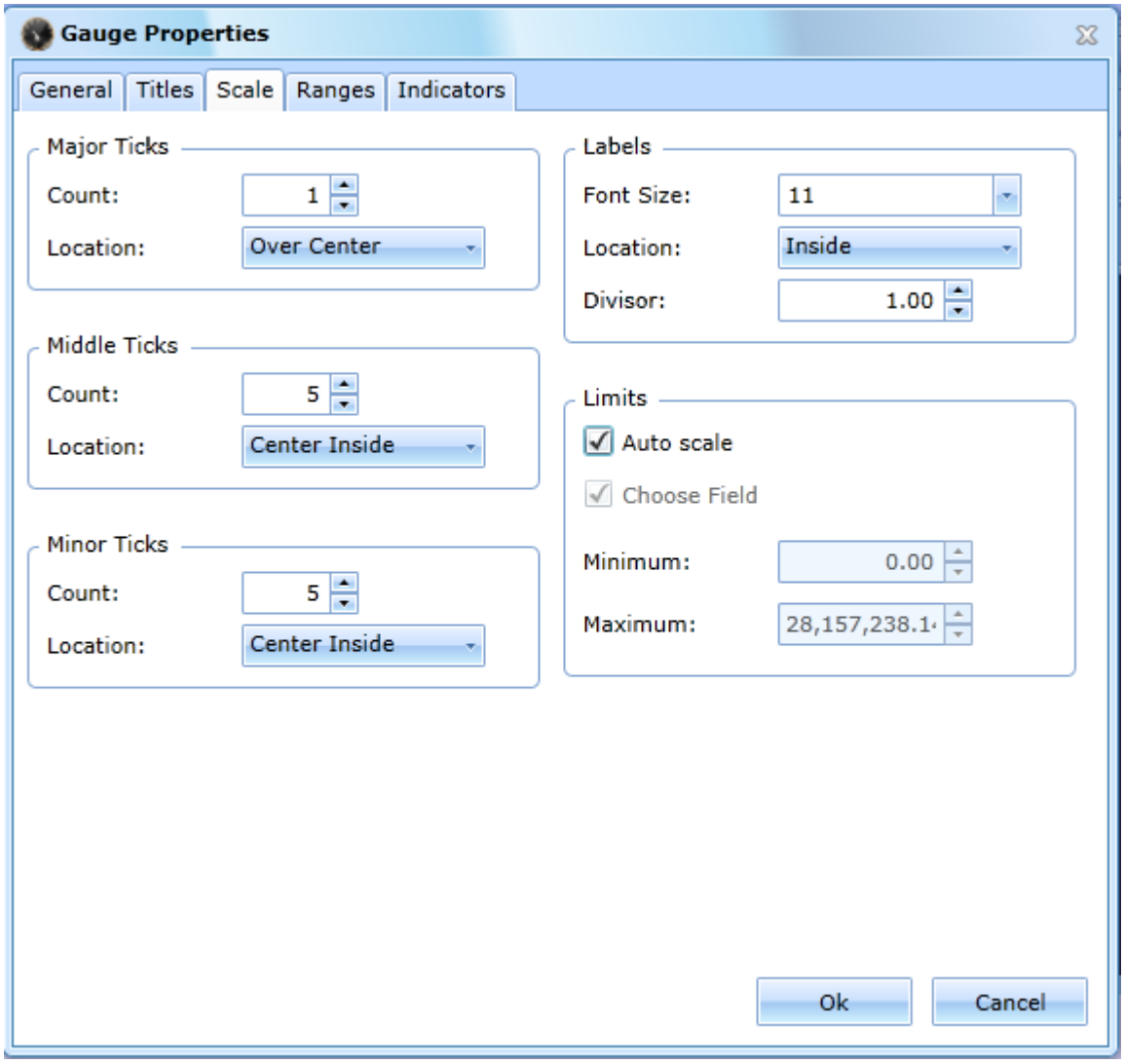
Show First: Permits you to determine how many gauges are going to be prepared and displayed based on a specific amount of records retrieved.

Columns, **Rows** and **Orientation:** Provides the choice of presenting the gauge by rows or by columns depending on whether the orientation is vertical or horizontal.

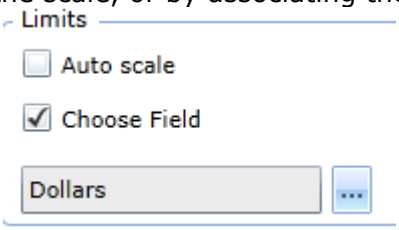
Titles: Allows you to select header and footer information to display. You may also choose to display or not, the group information and a legend, as well as to select the displayed position.



Scale: This tab enables you to define how the scale will be displayed. The scale is graduated with three levels of ticks that you can set. You can also set labels on the ticks.



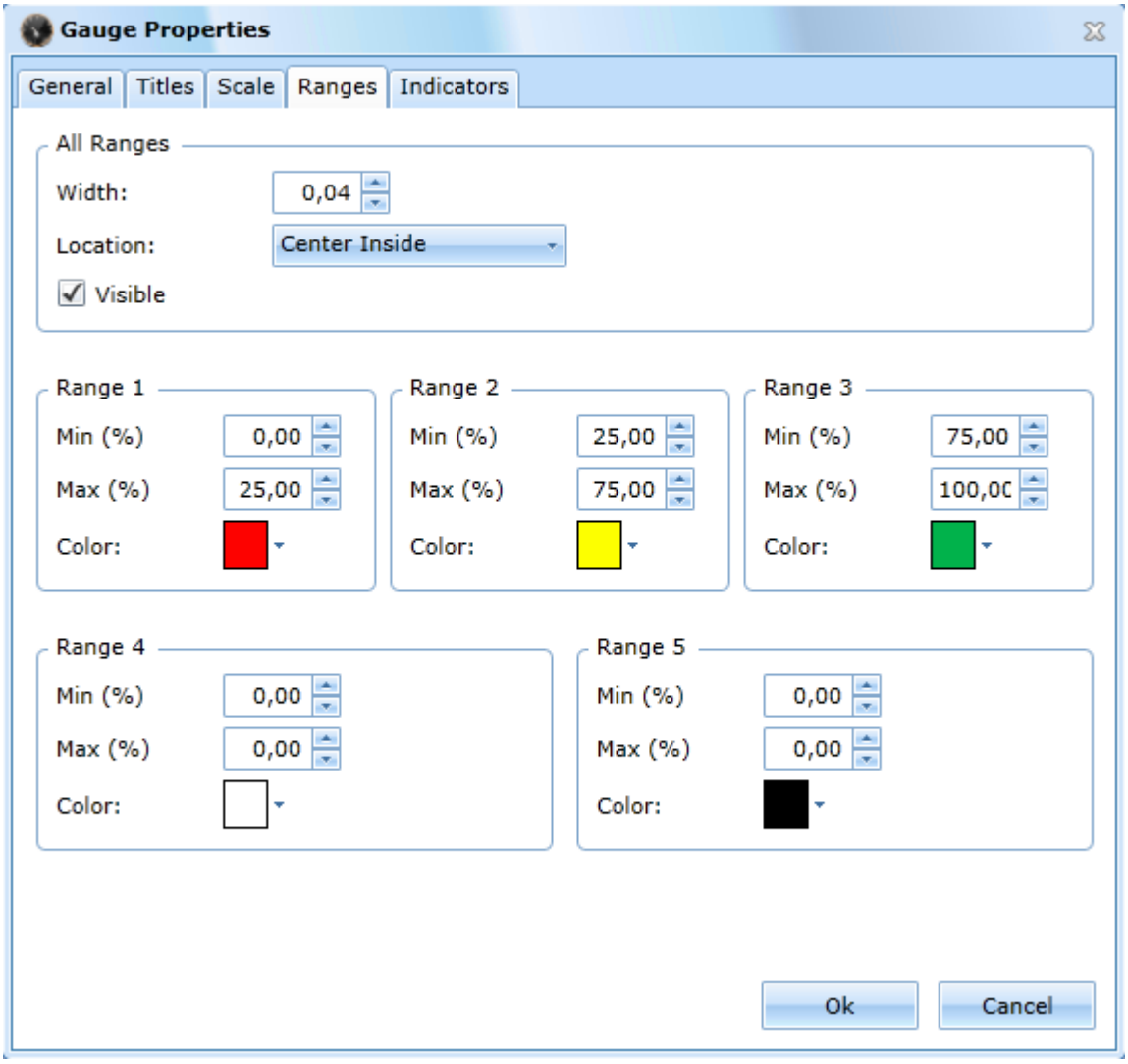
Finally, you can set limit values of the scale, either by letting SEI pick an auto scale, filling in the minimum and/or the maximum values for the scale, or by associating the scale with the



value of a field, thus creating a dynamic limit.

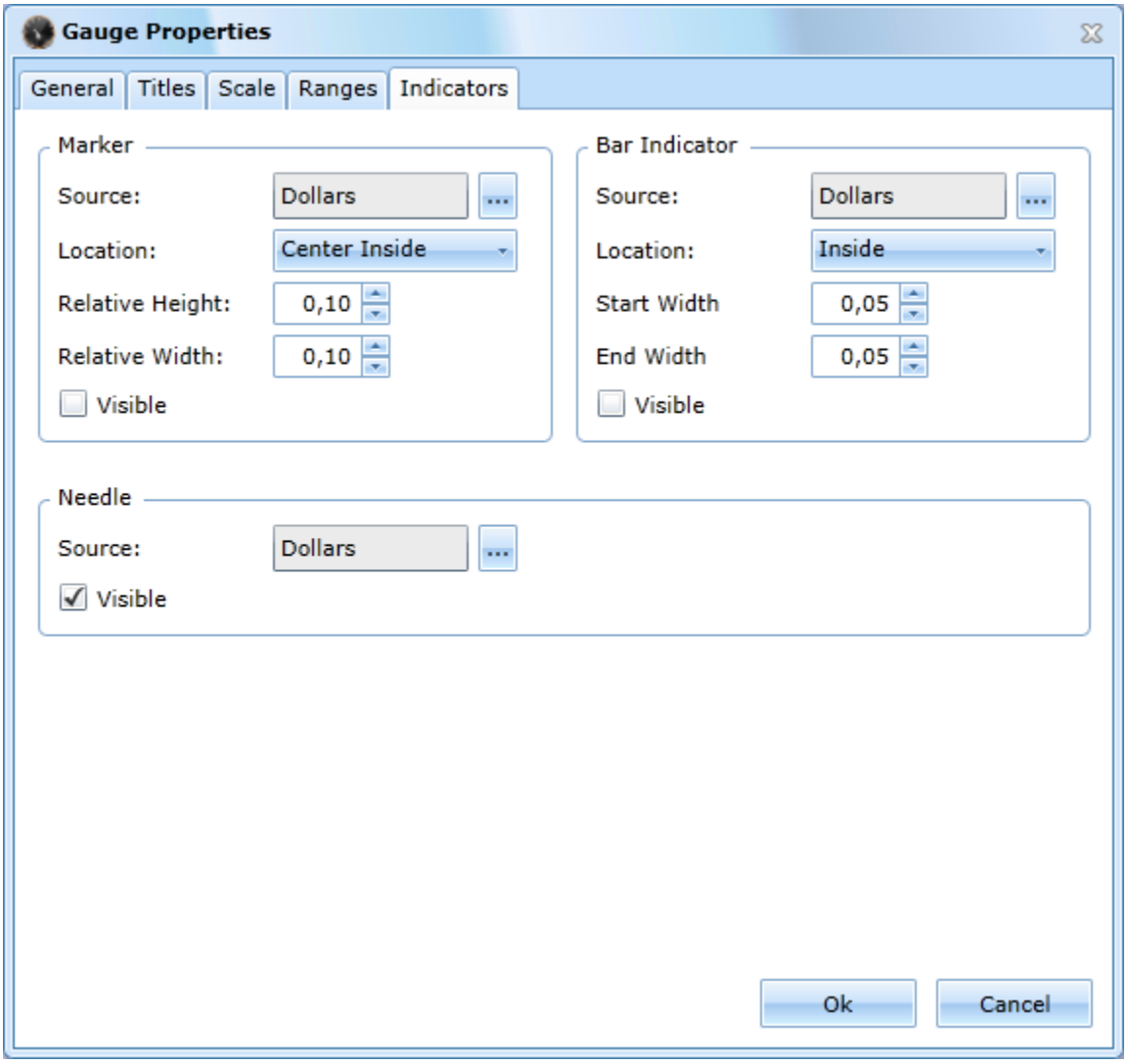
This will have the effect of adjusting the maximum value of the scale to be equal to the value of a field, thus making it easy to visualize other fields as a percentage of the chosen field. For example, when designing a gauge displaying the sales margin for a year, the dollars can be set as the maximum value of the gauge making it easy to see what percentage of the sales the margin represents.

Ranges: There are optional color ranges that can be displayed along the scale using this tab. You may define up to 5 ranges with different colors.



Indicators: This tab is where the values of the three possible visible indicators are defined to display either as a needle, a marker, or a bar indicator.

Select the field to use for each indicator by pressing the ellipsis button for the source.

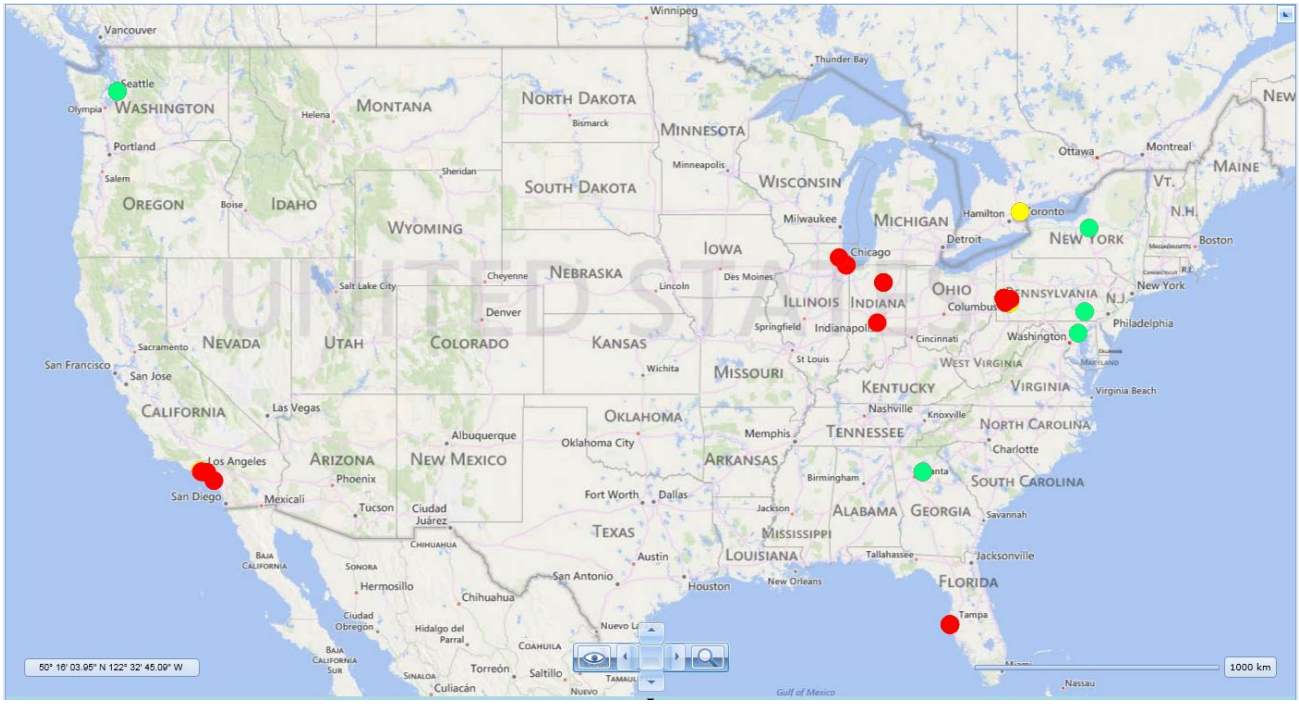


Map Views

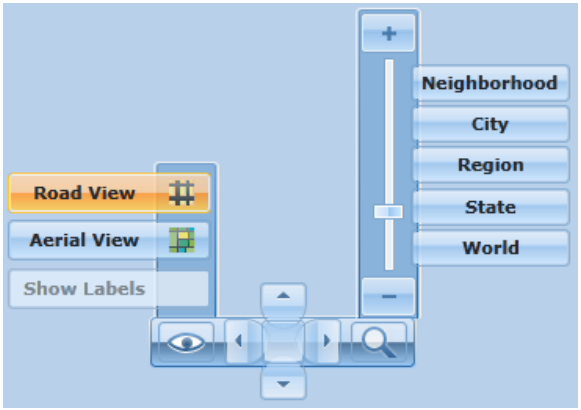
The Map View is a visual tool that allows displaying values geographically. This useful tool helps you to build the map and allows customizing the content and the layout of your map.

SEI allows applying **Filters** and using **Prompts** on maps like any other type of view. Please refer to "Filters and Views" for details about using filters and prompts as well as "Saving and Publishing" features.

The following is a sample Map created with SEI:



There is a small control at the bottom of the map for moving and zooming. You may also change the aspect between Road View and Aerial View.



Creating a new Map

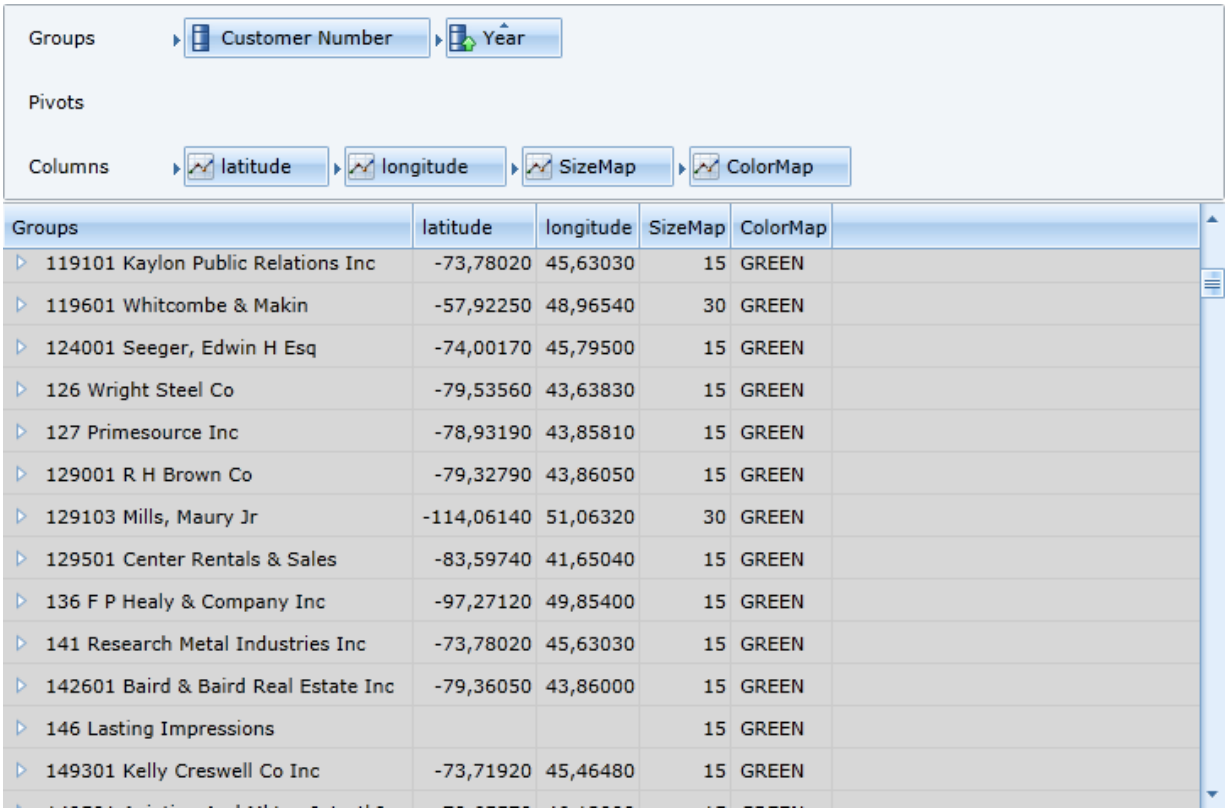
To create a new map, select the process in which you want to create it and then do one of the following:

- Right click on the process then select "New Map" from the context menu
  OR
- From the main menu select "File", "New" then "Map"

You will then be asked to provide a name for your map and to specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Ok" button after providing this information. An empty page is then displayed. You are now ready to start designing your map.

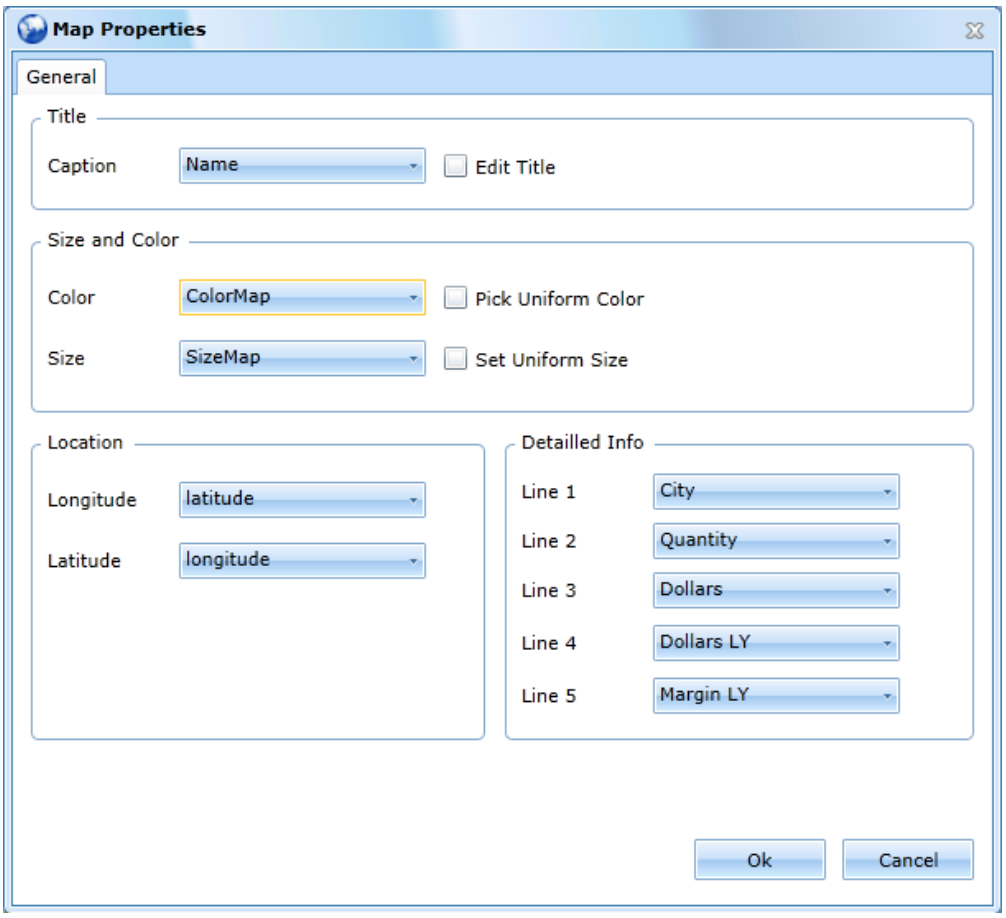
To create your first Map, start by switching to a worksheet view and selecting the data required by filling the organizer with the proper groups and columns. It is also possible to group the data that will be displayed in the map (ex: country, state, city, customers). If you do group the data this way, you will get one circle by country first, then you can right-click on a circle and choose the drill-down to see the circles by states, then city and finally customers.

Then use the toolbar button View Type and switch back to type Map.



Groups	latitude	longitude	SizeMap	ColorMap
119101 Kaylon Public Relations Inc	-73,78020	45,63030	15	GREEN
119601 Whitcombe & Makin	-57,92250	48,96540	30	GREEN
124001 Seeger, Edwin H Esq	-74,00170	45,79500	15	GREEN
126 Wright Steel Co	-79,53560	43,63830	15	GREEN
127 Primesource Inc	-78,93190	43,85810	15	GREEN
129001 R H Brown Co	-79,32790	43,86050	15	GREEN
129103 Mills, Maury Jr	-114,06140	51,06320	30	GREEN
129501 Center Rentals & Sales	-83,59740	41,65040	15	GREEN
136 F P Healy & Company Inc	-97,27120	49,85400	15	GREEN
141 Research Metal Industries Inc	-73,78020	45,63030	15	GREEN
142601 Baird & Baird Real Estate Inc	-79,36050	43,86000	15	GREEN
146 Lasting Impressions			15	GREEN
149301 Kelly Creswell Co Inc	-73,71920	45,46480	15	GREEN

Then click on the toolbar button Map Properties to select the layout and data to use for your Map. Two fields are mandatory in order to load a map. The process definition must include fields that have **longitude** and **latitude** information so they can be bound to the map properties. The map view may include two other informational fields: the size of the point on the map and the color of the point on the map.



The Map Properties let you define which fields to use to be bound to Longitude, Latitude, Color and Size. You can also specify information on which additional fields to use in a tooltip window by defining up to five fields in the Detailed Info section.

Note that Map does not work with pivot fields. All fields selected must be in groups or columns in the organizer section.

When saving a map, the current position and zoom level will be saved as the opening position.

Size is a value that determines the size of the circle point on the map coordinates, and normally it is a value that varies between 5 and 40.

Color is a text field that can have color code names or color code numbers.

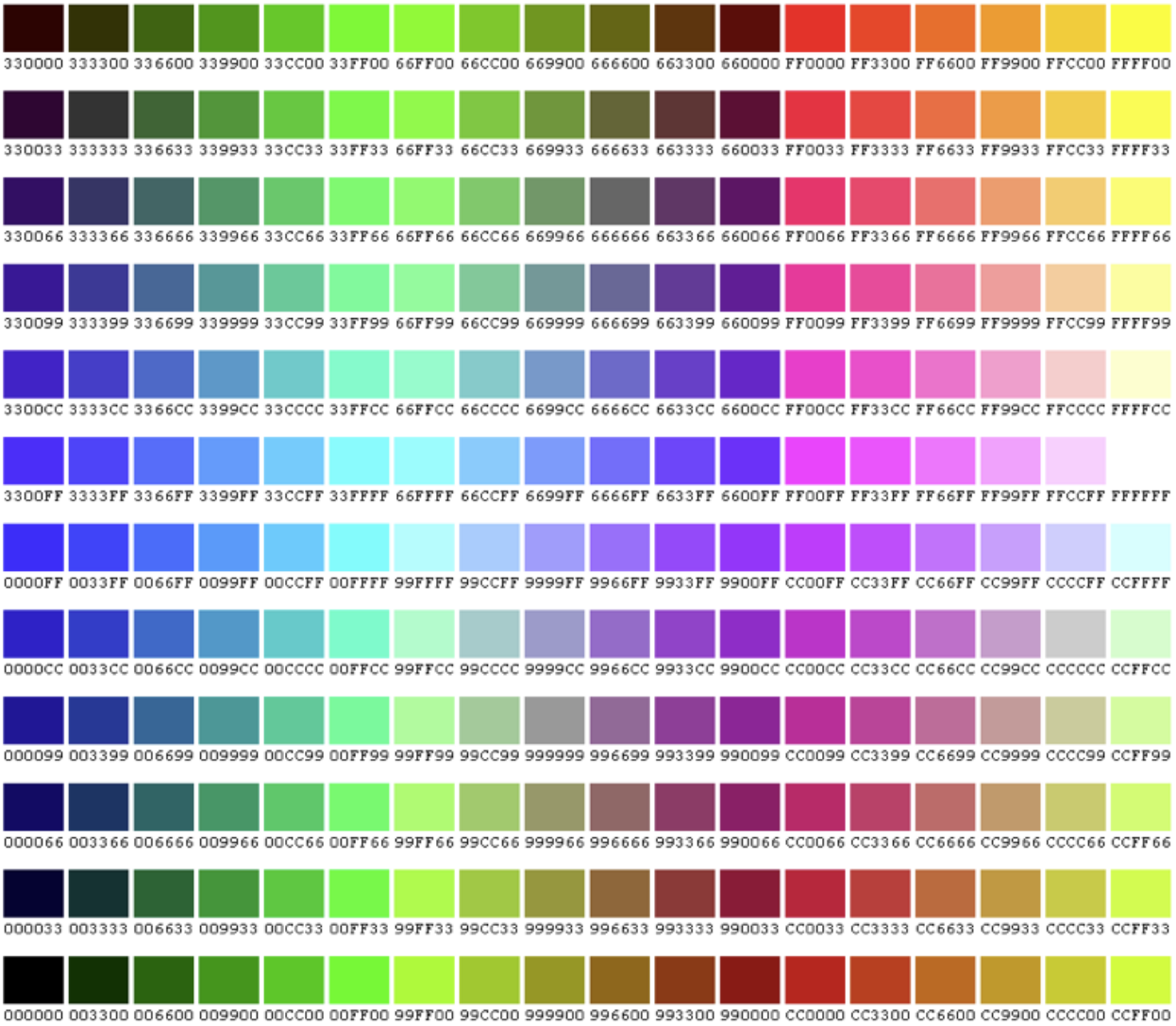
For your convenience, the following shows a list of some of named and hexadeciamal colors:

Color Name	Hexadecimal value	Color Preview
AliceBlue	#F0F8FE	
AntiqueWhite	#FAEBD7	
Aqua	#00FFFF	
Aquamarine	#70DB93	
Azure	#F0FFFF	
Beige	#F5F5DC	
Black	#000000	
Blue	#0000FF	
BlueViolet	#9F5F9F	
Brass	#B5A642	
BrightGold	#D9D919	
Bronze	#8C7853	
Brown	#A52A2A	
CadetBlue	#5F9EA0	
Chocolate	#D2691E	
Copper	#B87333	
Coral	#FF7F50	
Crimson	#DC143C	
Cyan	#00FFFF	
DarkBlue	#00008B	
DarkBrown	#5C4033	
DarkCyan	#008B8B	
DarkGoldenRod	#B8860B	
DarkGray	#A9A9A9	
DarkGreen	#006400	
DarkKhaki	#BDB76B	
DarkMagenta	#8B008B	
DarkOliveGreen	#4F4F2F	
DarkOrange	#FF8C00	
DarkOrchid	#9932CD	
DarkPurple	#871F78	
DarkSalmon	#E9967A	
DarkSlateBlue	#6B238E	
DarkSlateGray	#2F4F4F	
DarkTan	#97694F	
DarkTurquoise	#7093DB	
DarkViolet	#9400D3	
DarkWood	#855E42	
DimGray	#545454	
DustyRose	#856363	
FeldSpar	#D19275	
FireBrick	#B22222	
ForestGreen	#238E23	
Gold	#CD7F32	
GoldenRod	#DBDB70	
Gray	#C0C0C0	

Green	#00FF00	
GreenCopper	#527F76	
GreenYellow	#93DB70	
HotPink	#FF69B4	
HunterGreen	#215E21	
IndianRed	#CD5C5C	
Indigo	#4B0082	
Ivory	#FFFFF0	
Khaki	#9F9F5F	
Lavender	#E6E6FA	
LightBlue	#C0D9D9	
LightCoral	#F08080	
LightCyan	#E0FFFF	
LightGray	#A8A8A8	
LightGreen	#90EE90	
LightPink	#FFB6C1	
LightSteelBlue	#8F8FBD	
LightWood	#E9C2A6	
Lime	#00FF00	
LimeGreen	#32CD32	
Magenta	#FF00FF	
MandarinOrange	#E47833	
Maroon	#8E236B	
MediumAquaMarine	#32CD99	
MediumBlue	#3232CD	
MediumForestGreen	#6B8E23	
MediumGoldenRod	#EAEAAE	
MediumOrchid	#9370DB	
MediumSeaGreen	#426F42	
MediumSlateBlue	#7F00FF	
MediumSpringGreen	#7FFF00	
MediumTurquoise	#70DBDB	
MediumVioletRed	#DB7093	
MediumWood	#A68064	
MidNightBlue	#2F2F4F	
MintCream	#F5FFFA	
MistyRose	#FFE4E1	
NavyBlue	#23238E	
NeonBlue	#4D4DFF	
NeonPink	#FF6EC7	
NewMidnightBlue	#00009C	
NewTan	#EBC79E	
OldGold	#CFB53B	
Olive	#808000	
Orange	#FF7F00	
OrangeRed	#FF2400	
Orchid	#DB70DB	
PaleGoldenRod	#EEE8AA	
PaleGreen	#8FBC8F	

PaleTurquoise	#AFEEEE	
Pink	#BC8F8F	
Plum	#EAADEA	
PowderBlue	#B0E0E6	
Purple	#800080	
Quartz	#D9D9F3	
Red	#FF0000	
RichBlue	#5959AB	
RoyalBlue	#4169E1	
SaddleBrown	#8B4513	
Salmon	#6F4242	
SandyBrown	#F4A460	
Scarlet	#8C1717	
SeaGreen	#238E68	
Seinna	#8E6B23	
Silver	#E6E8FA	
SkyBlue	#3299CC	
SlateBlue	#007FFF	
Snow	#FFFAFA	
SpicyPink	#FF1CAE	
SpringGreen	#00FF7F	
SteelBlue	#236B8E	
SummerSky	#38B0DE	
Tan	#DB9370	
Teal	#008080	
Thistle	#D8BFD8	
Tomato	#FF6347	
Turquoise	#ADEAEA	
VeryDarkBrown	#5C4033	
VeryDarkGray	#5C4033	
Violet	#422F4F	
VioletRed	#CC3299	
Wheat	#D8D8BF	
White	#FFFFFF	
Yellow	#FFFF00	
YellowGreen	#99CC32	

Other Color Codes:



These are the grays:

These are the closest (more or less) to the 16 basic Windows colors:

Dynamic Label Views

In some circumstances, a quick summary of data can be very useful and revealing. The SEI Dynamic Label Views give users the possibility to easily create summaries of data, which can then be used as a part of dashboards to display important KPI's at a glance or to be used as a filter.

SEI allows applying **Filters** and using **Prompts** on dynamic labels in the same way that they can be used on any other type of view. Please refer to "Filters and Views" for details about using filters and prompts as well as **Saving** and **Publishing** features.

The following is an example of the dynamic label main window:

Dynamic Labels definitions and options may be directly modified from the dynamic label view. Two windows are used to maintain the dynamic label layout (Dynamic Label properties) and data options (Organizer).

Creating a new Dynamic Label

To create a new Dynamic Label, select the process in which you want to create it, and then do one of the following:

- Right click on the process, then select "New Dynamic Label" from the context menu
  OR
- From the main menu, select "File", "New", then "Dynamic Label"

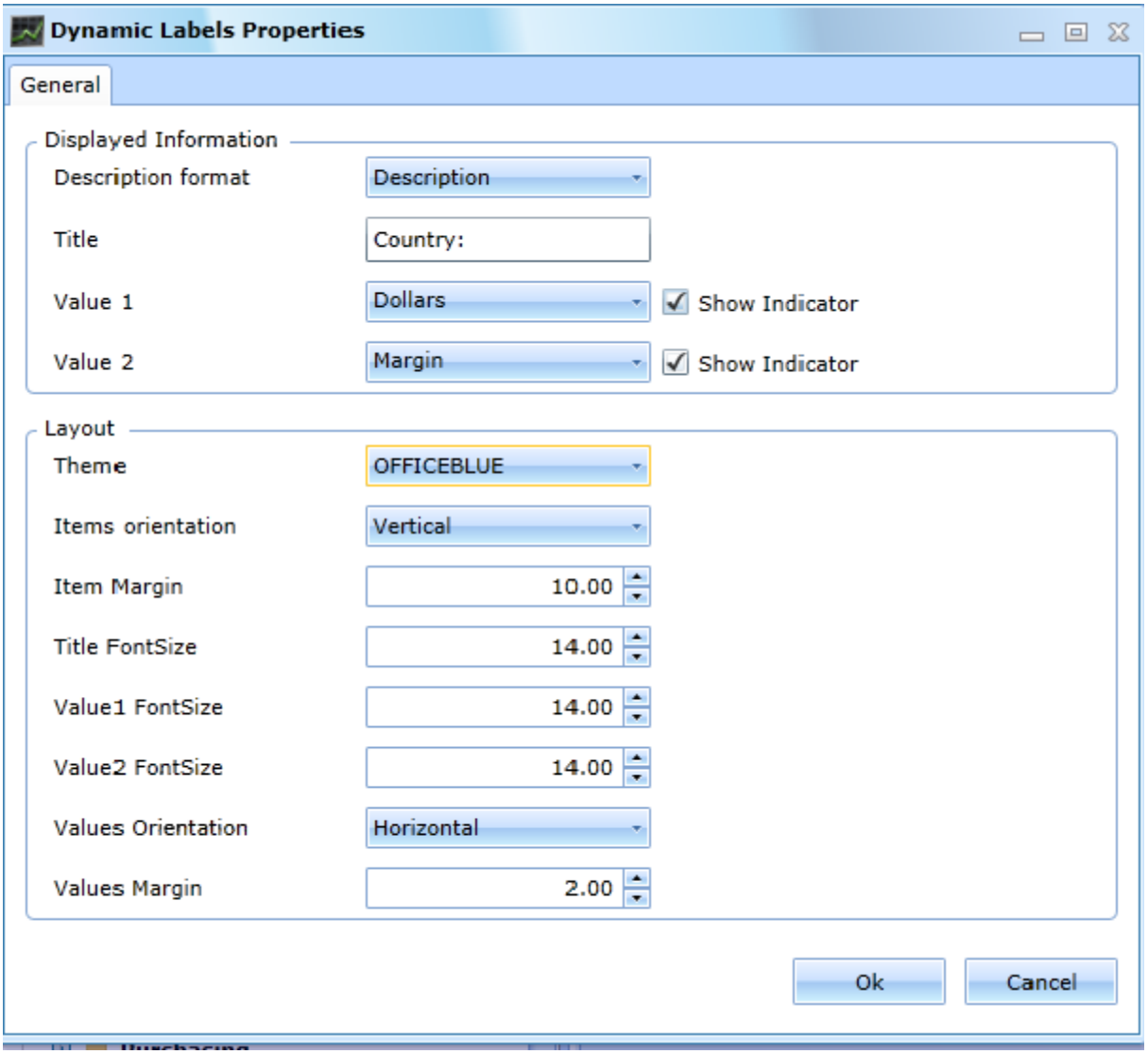
You will then be asked to provide a name for your Dynamic Label and specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Create New" button after providing this information. An empty Dynamic Label will then be displayed.

Dynamic Label Properties Window

The Dynamic Label properties window allows users to customize the layout properties (e.g., titles, orientation and which values to summarize, etc.), of the Dynamic Label. These parameters are classified in two different categories: Displayed information and layout.

Press the toolbar button "Dynamic Label Properties" to edit properties.

The figure below is an example of the content of the "Dynamic Label Properties" window.



The displayed information section is used to specify the general setup of the Dynamic Label.

Description Format: Allows defining how you want the labels to be displayed. The options available are various combinations of the title (the name of the field used for the grouped by), the code (the value of this field in the database) and the description (the description field associated with the grouped field, as defined in the process definition).

Title: Allows for adding an additional title in front of the expression defined by the description format.

Value 1 and **Value 2**: Allows for determining which fields to summarize and display in the details under each heading of the Dynamic Label.

Show Indicator for Value 1 and **Value 2**: If the Show Indicator is checked off, a small green arrow ▲ will be displayed if the value is positive. A small red arrow ▼ will be displayed if the value is negative.

The layout section is used to specify the visual properties relative to the Dynamic Label.

Theme: Controls the color of the Dynamic Label.

Items Orientation: Determines whether the data will be displayed horizontally or vertically.

Item Margin: Determines how much space should exist between different data items in the dynamic label.

Title Font Size: Determines the font size of the label titles.

Value 1 Font Size: Determines the font size of the values returned by the field associated with the Value 1 property.

Value 2 Font Size: Determines the font size of the values returned by the field associated with the Value 2 property.

Values Orientation: Determines whether the two values will be displayed horizontally or vertically.

Values Margin: Determines how much space should exist between the two values within each section of the dynamic label.

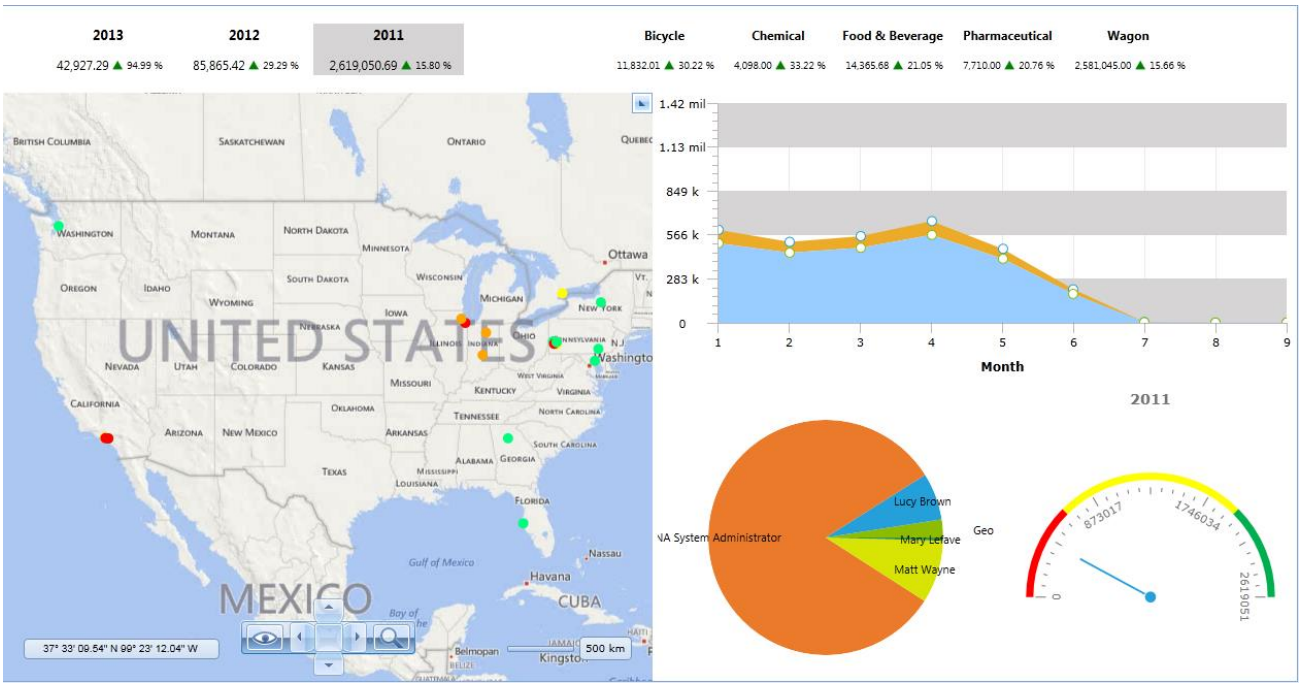
Navigation in the Dynamic Label

Dynamic Labels have a limited number of navigation options: for example one cannot drill-down in a Dynamic Label; however a user can filter (using the Advanced Filter, Prompt and Selection Page tools) and sort this type of view (by right-clicking on the desired field in the Organizer).

Dashboards

The Dashboard view regroups one or more views on the same page. Views such as worksheets, charts, gauges and maps can be mixed together on the same dashboard page, even if they are built from different processes.

The following is a sample Dashboard created with SEI:



Creating A New Dashboard

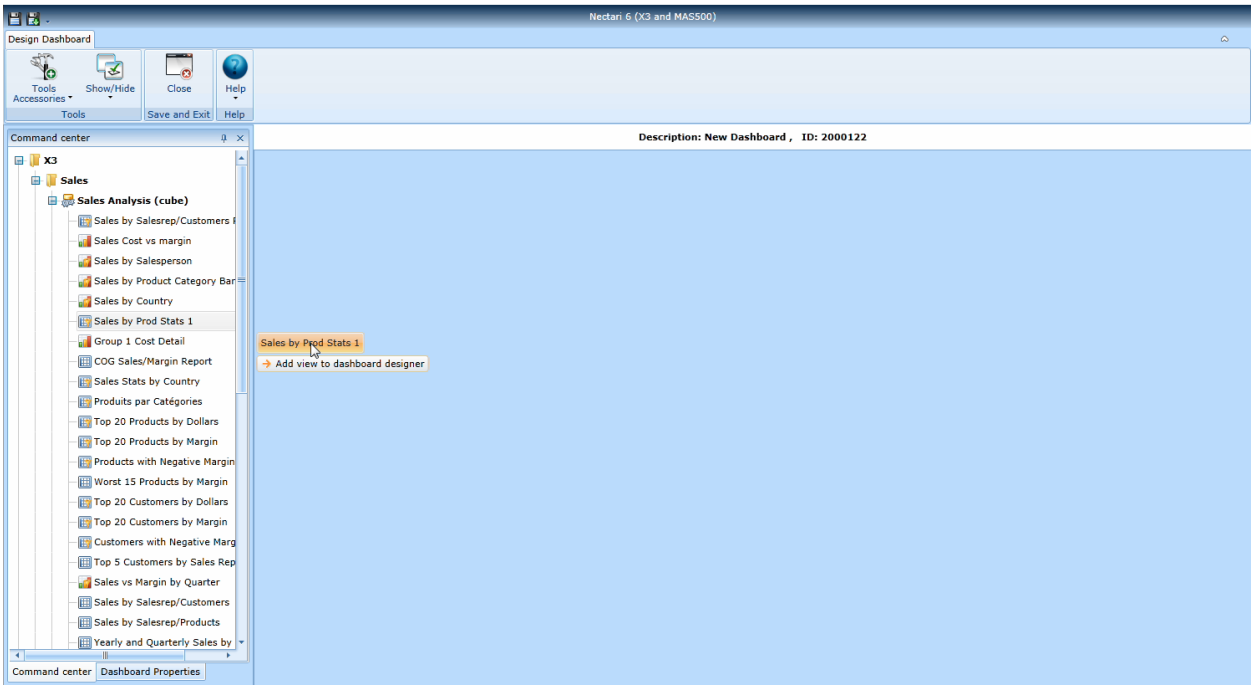
To create a new dashboard, select the tab Dashboard from the command center area.

- Right click on the white area, then select "New Dashboard" from the context menu
  OR
- From the main menu, select "File", "New" then "Dashboard"

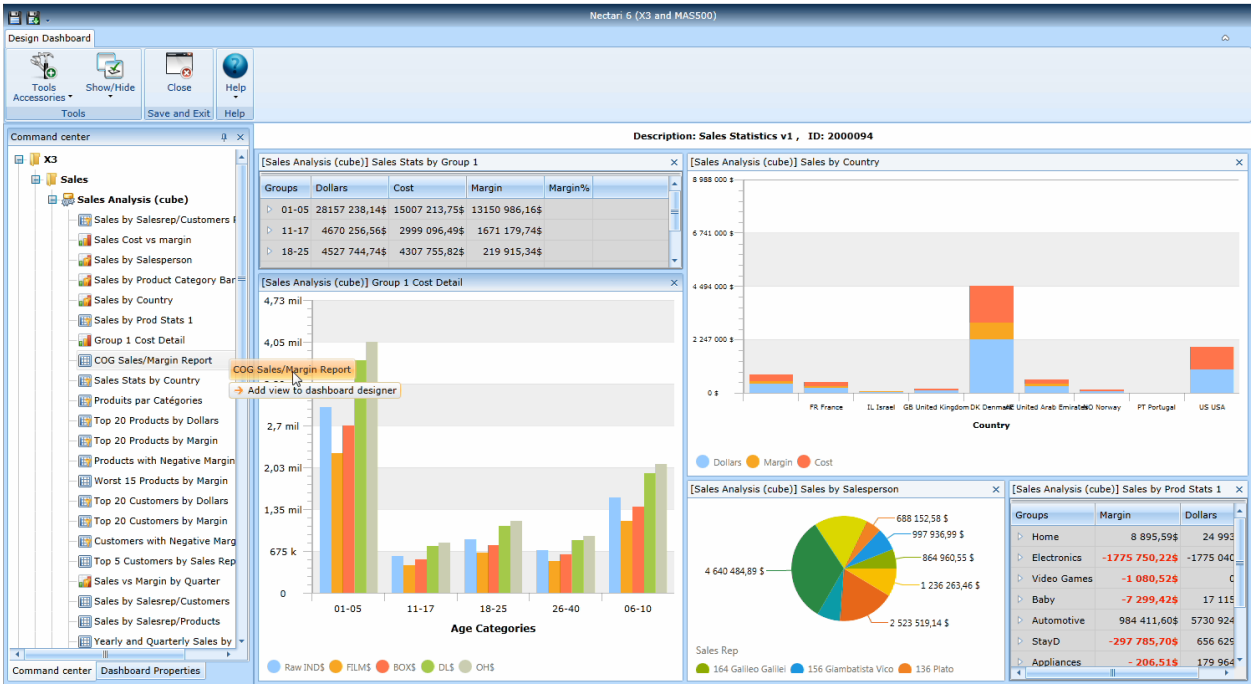
You will then be asked to provide a name for your dashboard and specify whether you want to publish it to another user or group (please refer to "Saving and Publishing Views / Filters" for more details). Press the "Ok" button after providing this information. An empty page is then displayed. You are now ready to start designing your dashboard.

Designing a Dashboard

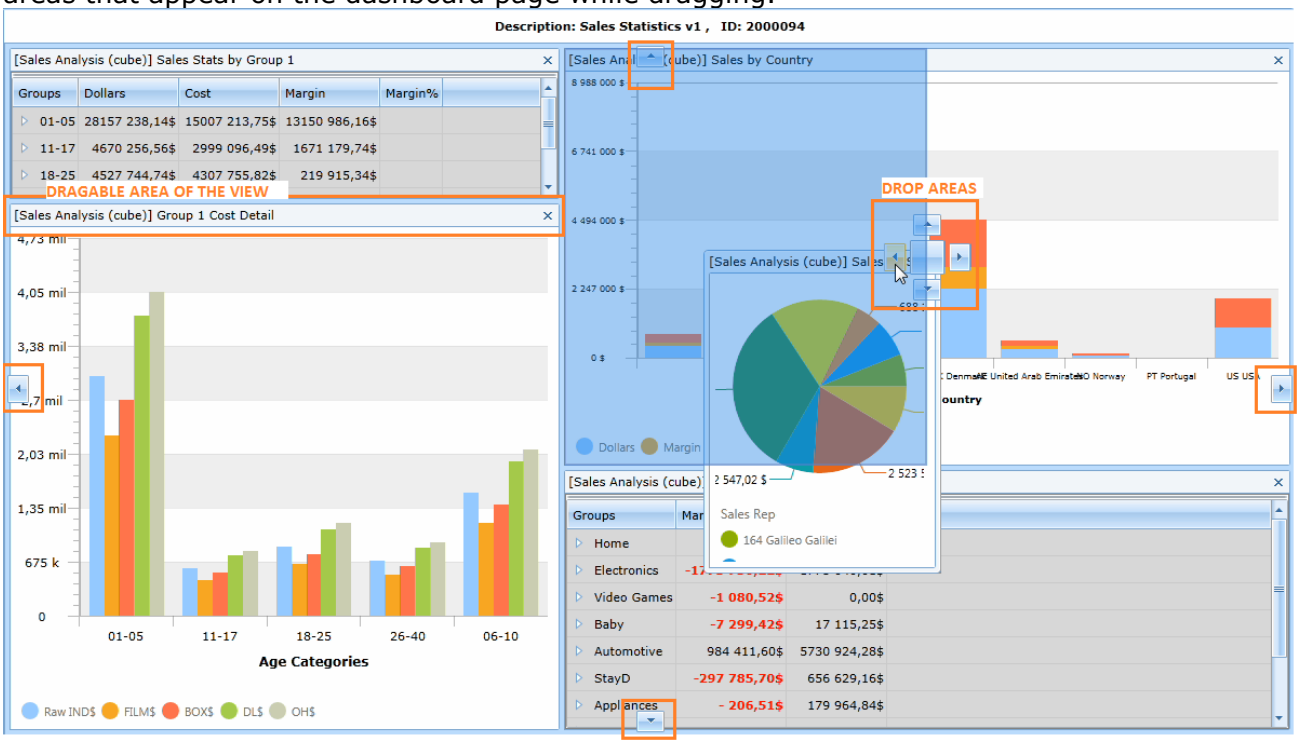
When designing a new dashboard, you will get an empty page where you can select views from the command center and drag and drop the views on the dashboard page.



Select as many views as requested from the command center and add them all in the design section.

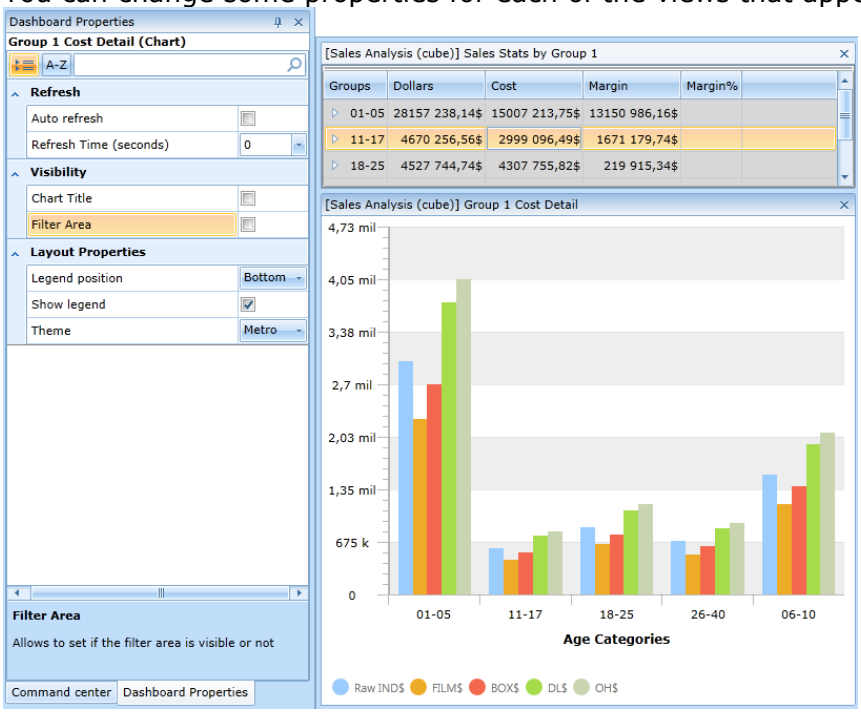


You may position the views on the dashboard by clicking and holding the mouse on their header section and then dropping them in the desired location. This is limited to the different drop areas that appear on the dashboard page while dragging.



Properties

You can change some properties for each of the views that appear on the dashboard page.



To change the properties of a view, select the tab "Dashboard Properties" and then activate the desired view by clicking on it. Be careful, the list of properties will be different based on the type of views.

Common Properties of Different to Types of Views

Auto Refresh: Determines if the specific view will be automatically refreshed.

Refresh Time (seconds): Determines how often (by number of seconds) the auto refresh will be executed.

Filter Area: Determines if the filter area will be displayed.

Action Properties: These are only available for the views from which a filter can be done. (dynamic label, bar graph, pie graph, etc…)

Enable Filtering on Click: Determines if the other views will be automatically filtered when we select a value from this specific view.

Single Selection: Determines if we can select more than one value to filter.

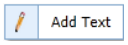
View to Apply Filter: Determines the views upon which the filter will be applied. By default all the views are selected.

Specific properties

Layout Properties and Style: Allows you to set other visual aspects of the view that are specific to each type of view. These properties will override the one defined in the original view.

Selected Values (Dynamic Labels only): Determines which value(s) will be automatically selected by default when you open the dashboard. It is possible to hardcode a value or to use the Global Variable in order to have a dynamic value. As an example, you could use @@CURYEAR to select the current year from the list of years.

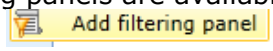
Generic Text Controls

Use the toolbar button "Add Text" 

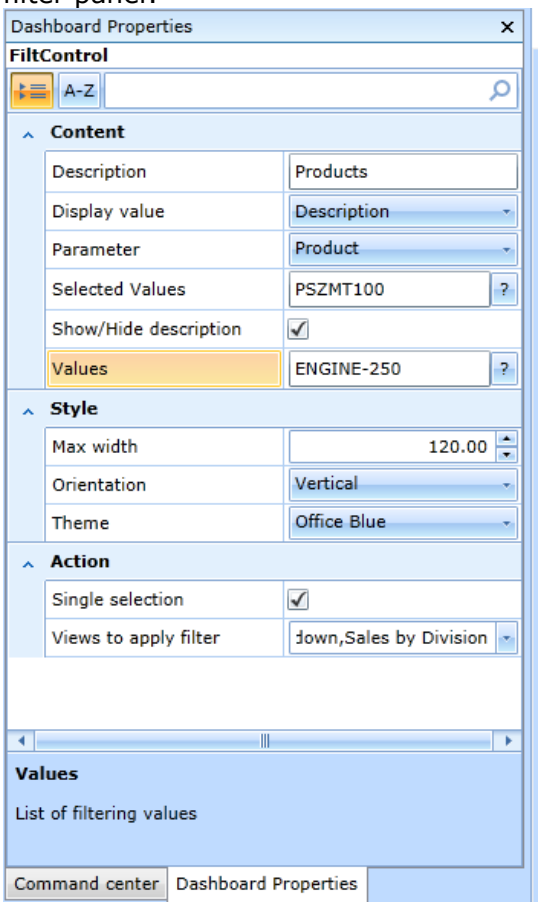
from "Toolbar Accessories" if you want to add one or more titles to the dashboard.

Filtering Panels

Filtering Panels offer a quick and intuitive way to filter your dashboard, based on lists of the possible values of a field. To use a filtering panel, a user simply needs to click on values in the panel, and the rest of the views in the dashboard can be automatically filtered as a result.

Filtering panels are available from the Tools Accessories menu, under the option 'Add filtering panel'. 

The filtering panel can then be configured by selecting the panel in the dashboard and then going to the Dashboard Properties tab. Please note that for a filtering panel to be functional, at least one global parameter has to exist in the system (see the **Global Parameters** section), and that global parameter needs to be associated with a field within the processes from which the dashboards views originate. The figure below illustrates an example of the properties of a filter panel:



The dashboard properties are going to be different, depending on the type of view that has been selected.

Parameter: Property is essential for the filtering panel to work and needs to be set to an existing Global Parameter. This is usually the first property that should be selected.

Description: Indicates the name which will be displayed as a title within the panel.

Show/Hide description: If checked, the description will be displayed.

Display Value: Indicates which field associated with the chosen global parameter should be selected (The list of available fields are coming from the prompt attached to the Global Parameter). (See the Global Parameters section for the association between Parameters and Prompts). As an example, you could display the "Customer Name" instead of the "Customer Code" to have a more meaningful name.

Values: Determines the list of values to be displayed in the filtering panel. By default all the values will be displayed.

Selected Values: Determines if one of the values is selected by default when the dashboard is opened.

Max Width: The property that controls the width of the value elements as displayed in the filtering panel.

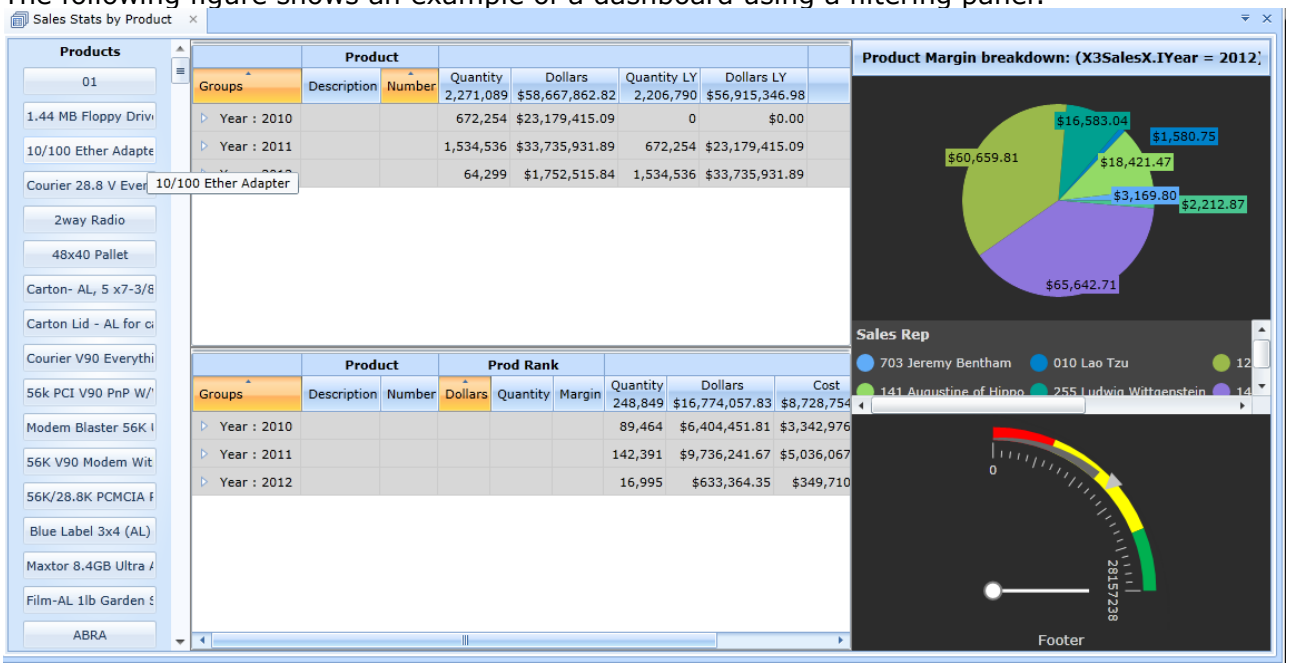
Orientation: Determines whether the panel displays data vertically or horizontally.

Theme: Controls the overall look of the panel.

Single Selection: Indicates whether the user should be limited to selecting one value at a time from the panel.

Views to Apply Filter: Control to which views the filter will be applied to when a value is selected from the filtering panel.

The following figure shows an example of a dashboard using a filtering panel:



Use the "Save" or "Save as" buttons to save the dashboard once completed.

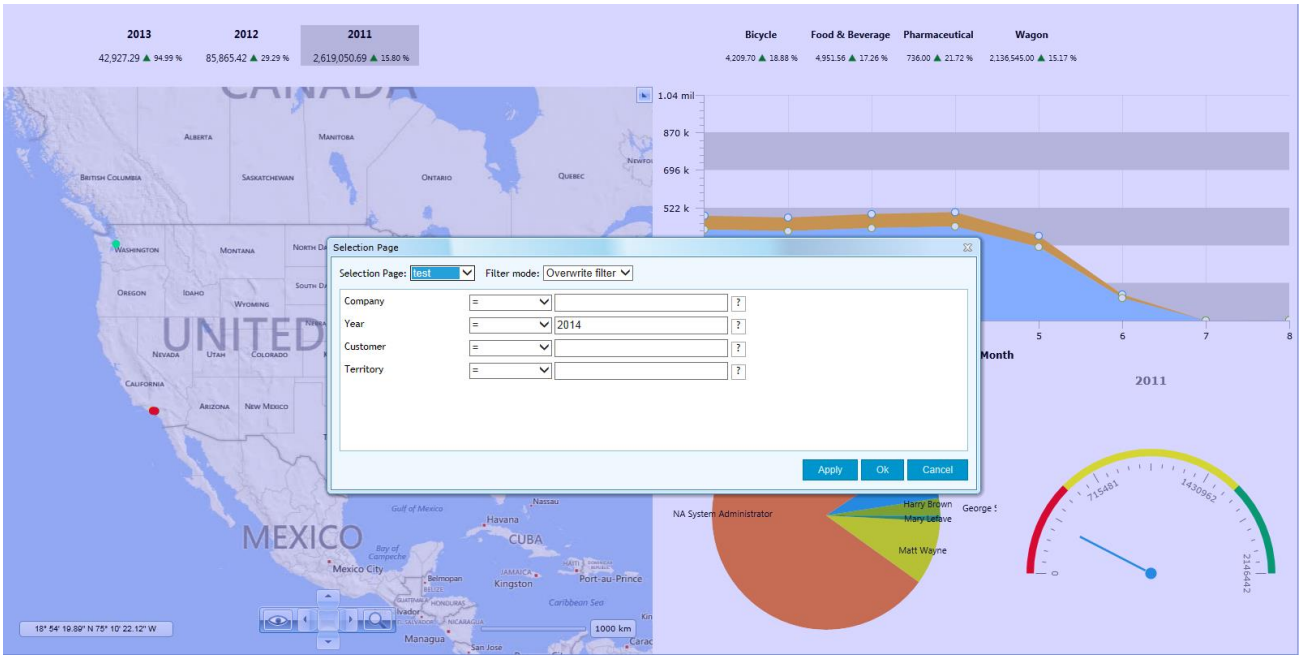
Click the "Close" button from the dashboard toolbar to return to Navigation mode.

Filtering Dashboards

The dashboard views can be filtered in multiple ways.

Selection Page

The dashboard can be filtered with the Selection Page. You can use the Selection Page by pressing the button in the toolbar or by setting a selection page in the "Prompt on open" property of the dashboard. For more information on the Selection Page please refer to the following section: Using the Selection Page



Prompt

The dashboard can also be filtered with the Prompt Control. You can use the Prompt by pressing the button in the toolbar or by setting a prompt in the "Prompt on open" property of the dashboard. For more information on the Prompt please refer to the following section: Using Prompts

Filtering On Click

It is possible to filter the content of the dashboard by clicking on any value of any type of view that has been pre-defined this way in the dashboard designer (filtering on click). You could, as an example, filter the data by selecting a year from a dynamic label or by selecting a customer from a pie chart.

Filtering With Context Menu

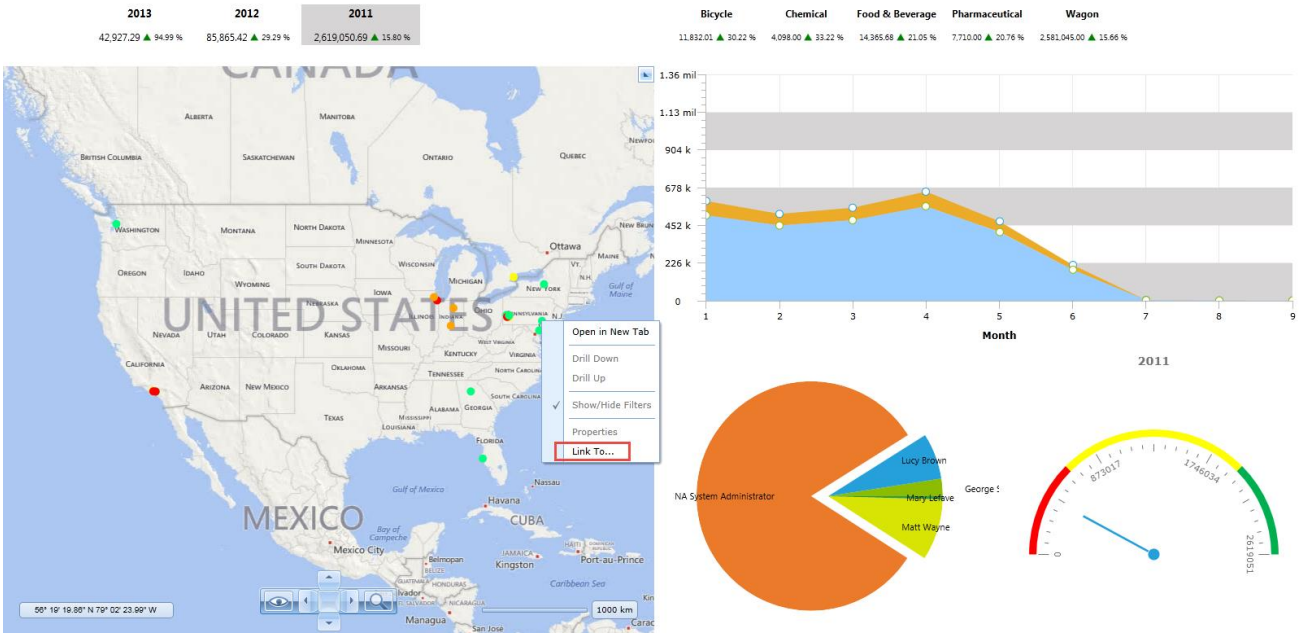
There is also an additional filter option that allows for filtering all the views on the dashboard based on the selection made from one view, by selecting the context menu option "Add Selection To All Filters in Dashboard". This special filter option will apply the current selection to all views on the dashboard that are based on the same process definition as the source view where the filter is selected.

Clear Filter

To remove the filter applied, you may press the button "Clear Filter" from the toolbar, or clear the filters of individual views using the context menu of the views by selecting the option "Clear Filter".

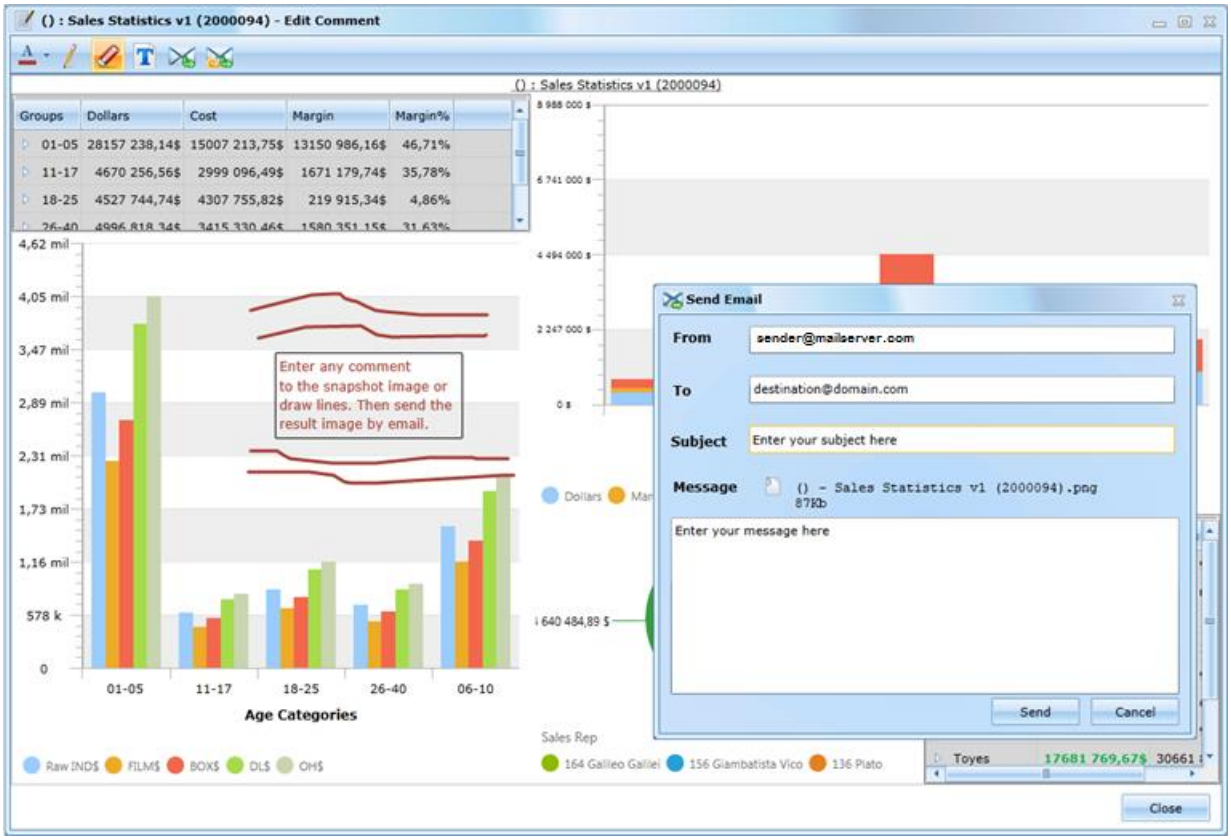
Link To

The context menu option "Link to" allows opening another view on a new tab by passing the current selection from the source view. This option can also be used from the map control by selecting one of the circles. Please refer to the section Linking from one view to another view.



Editing Comments

The option "Edit Comments" from the main toolbar lets you take a snapshot image of the current view and provides with tools to comment on the image and send it by email.



To comment on your image, first select the preferred color for your comments and annotations with the color toolbar button.

You have the option to draw lines over the image with the selected color. Select the pen toolbar button and then click and hold the left mouse button while moving the mouse to draw your lines.

To erase lines, use the eraser toolbar button and scrub over the line to erase with a mouse click.

To enter text, use the textbox toolbar button and then type your text inside the textbox. To remove a text comment, right-click over the text comment and select option "remove".

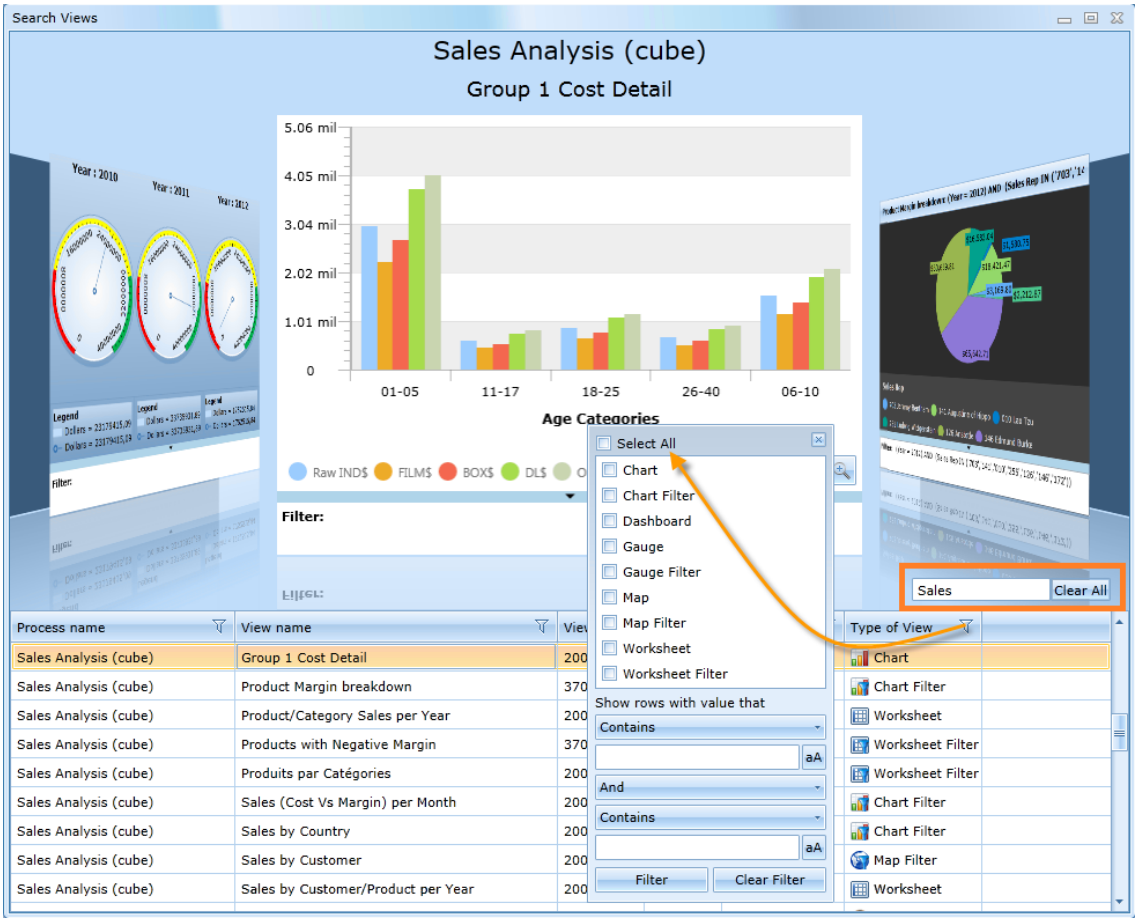
You have two options to email the resulting image. You may send the image with an automatic attachment using a simple email window, or you may use your own email application to send the image as an externally saved image.

Search Views

Search Views is available system-wide. To access it, click the Search Views icon in the main toolbar of your screen and type your search criteria in the search field. Not only will Search Views start finding views the moment you start typing in the search field, it will also display those views whose names, process names, owner, published for, or type of view properties match your search criteria.

For example, if you type "sales", Search Views will locate views that contain this text in the name of the view or in the name of the process, and will display a preview image as of the last save of the view.

Here's how to use Search Views to find what you need.



To refine your search criteria, click the icon besides the column you want to refine and select your criteria. To erase all search criteria, click the "Clear All" button Clear All.

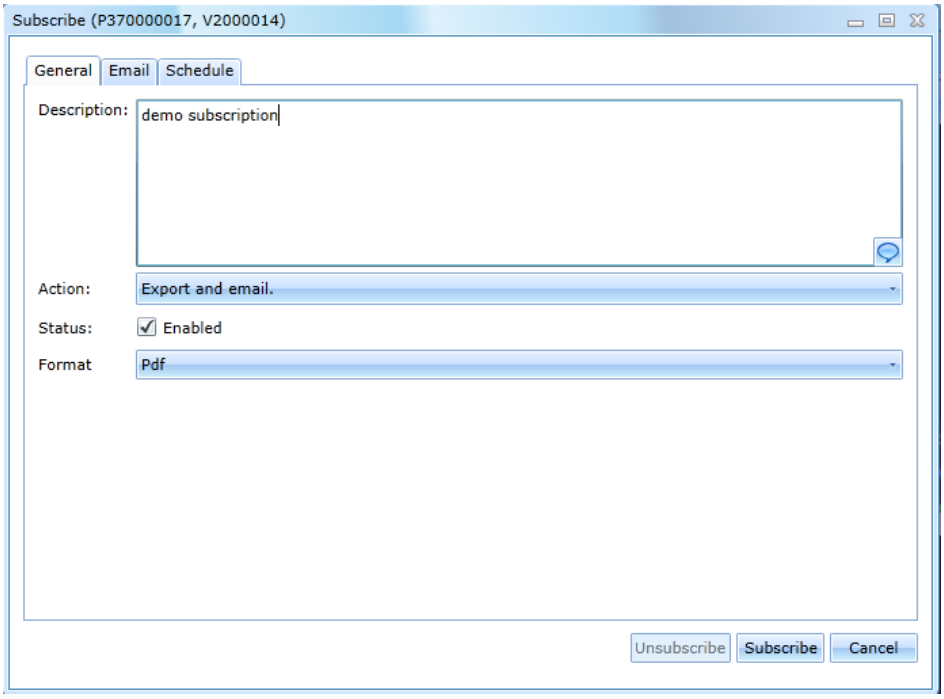
To open a view you can double-click on any row of the list or any preview picture.

Subscribing to a View

Regular users can subscribe to views to which they already have access in order to receive them on a regular basis according to a specific schedule and format of their choice. This can be accomplished by right-clicking on a view and selecting the option Subscribe for Distribution. This will bring up a **Subscribe** wizard for the view.

Existing scheduled views can be unsubscribed by selecting the view, going into the Subscribe wizard and selecting Unsubscribe for that particular view.

General



Description: Identifies your current subscription. It will be also be displayed to the administrator in the main Scheduler.

Action: Determines if you want to receive the view by email or archive it in a folder.

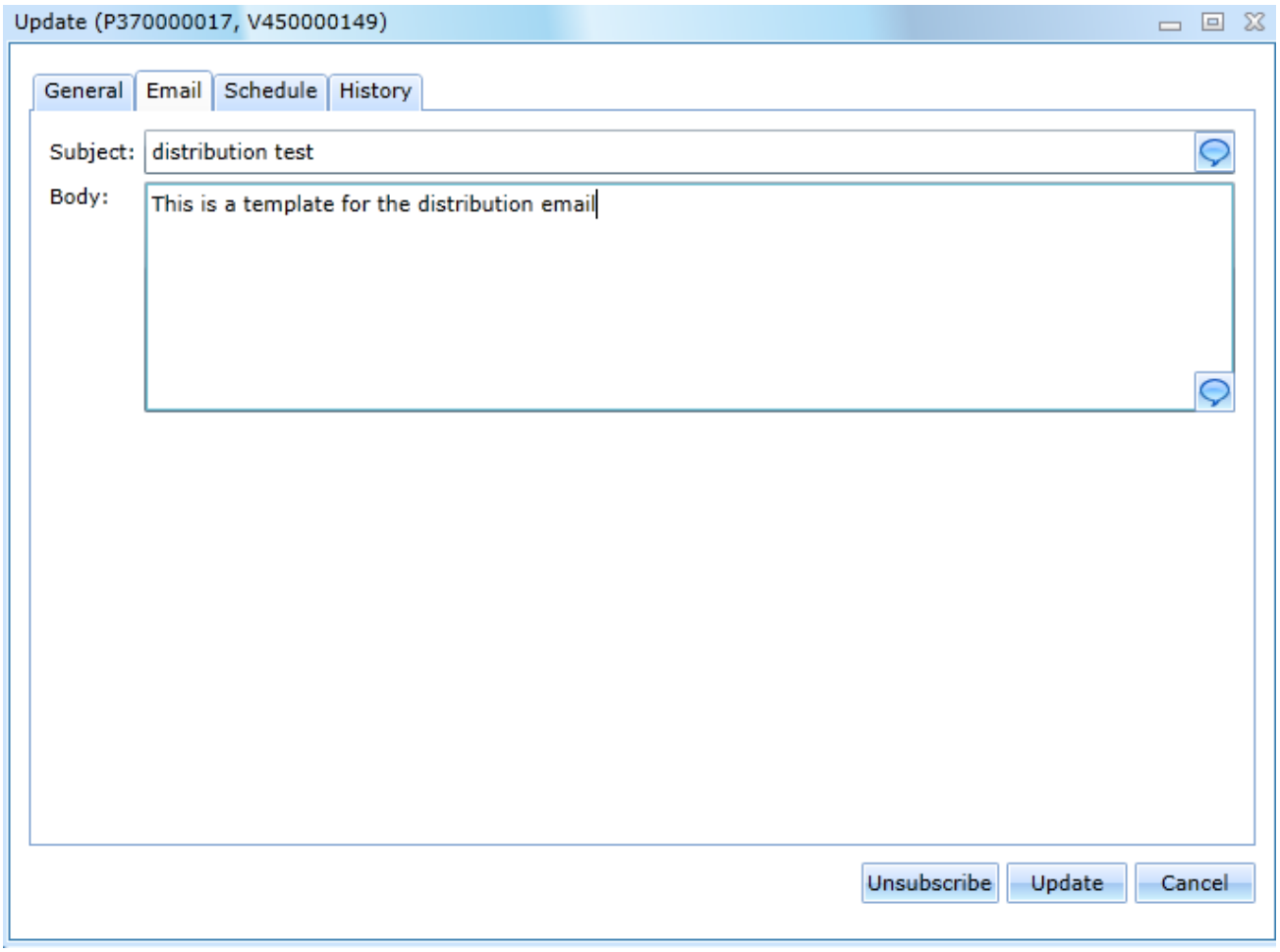
Status: Allows you to enable or disable the subscription.

Format: Defines the format that will be generated. The available choices include PDF, HTML and Excel.

Email

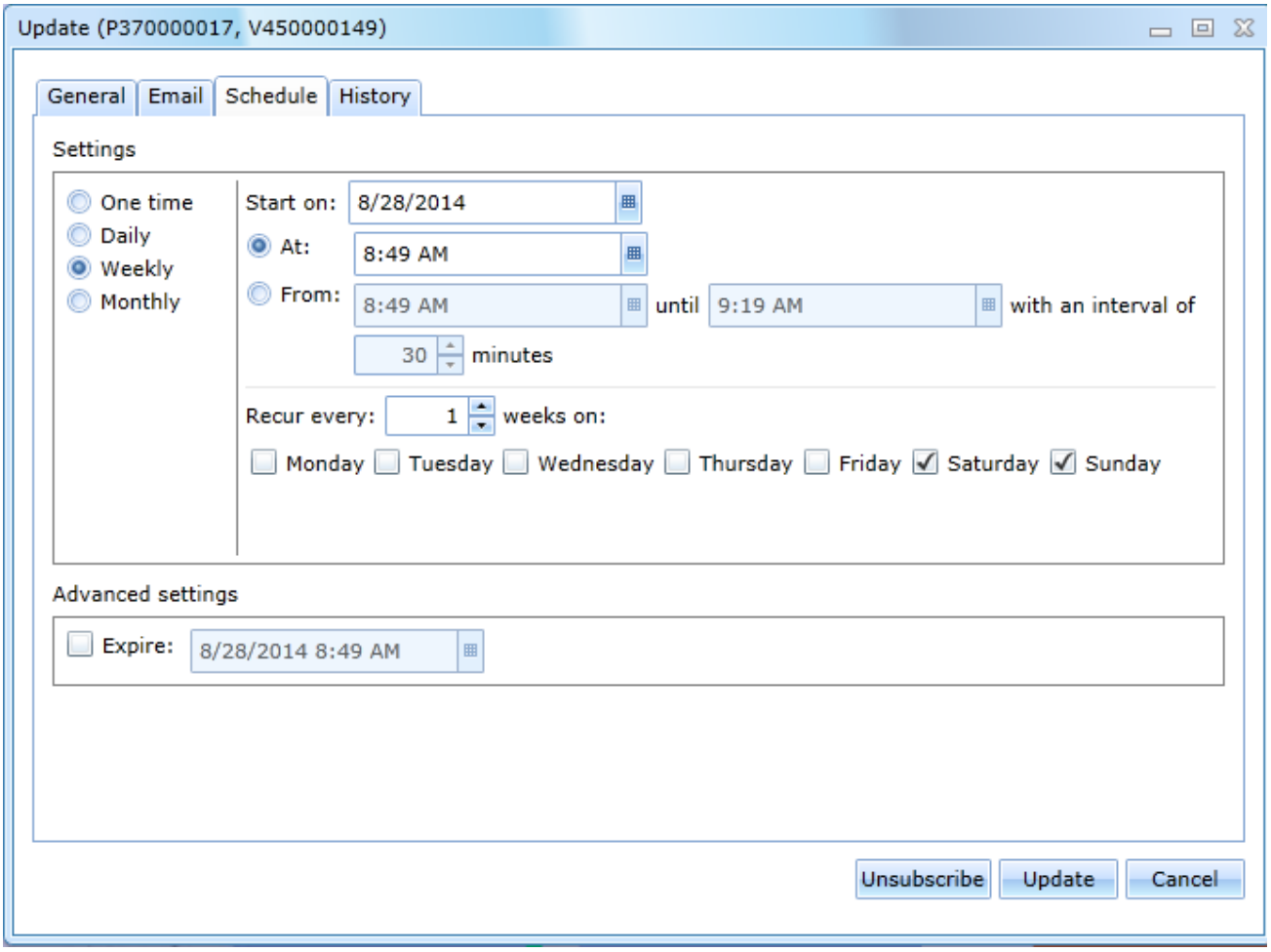
The **Email** tab allows for creating a template for the automatic email; thus the user can enter a subject and body for this email template.

The **Translation** button allows for creating multiple versions of the subject and body in each language defined.



Schedule

Finally, the **Schedule** tab allows the setting of a schedule for when the views will be run, saved and emailed. The various options allow for setting the frequency and exact timing for running the job and whether and when the job should expire.



Administrator Functions

Distribution Scheduler

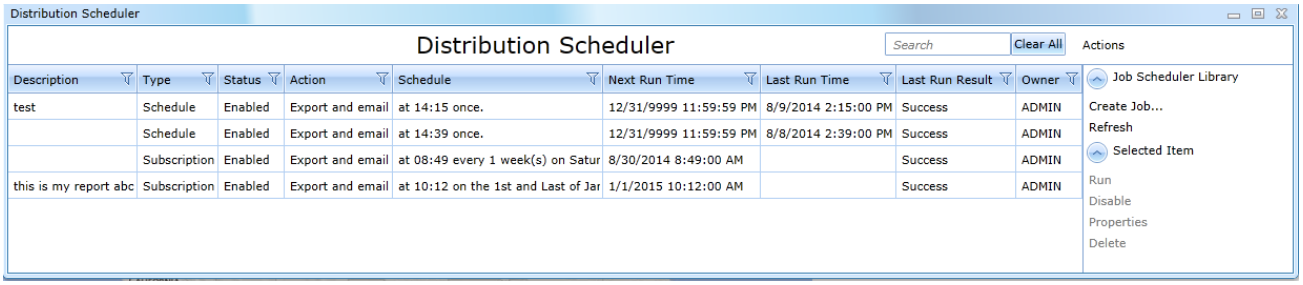
SEI offers a powerful automatic distribution function through the use of the Distribution

Scheduler, which is available by clicking on the

button in the Administration tab.

Main Window

Below, you can see an example of the Distribution Scheduler wizard, which allows for managing existing jobs (by selecting the job and clicking on Properties), creating new jobs and seeing at a glance when jobs ran last and when they are next scheduled to run:



Create Job: Allows for the creation of a new distribution.

Refresh: Refreshes the status of all the jobs in the grid.

Run: Runs the selected job immediately, allowing the administrator to test the different jobs that are scheduled. Be aware that the email will be generated and sent to all the users defined in the job.

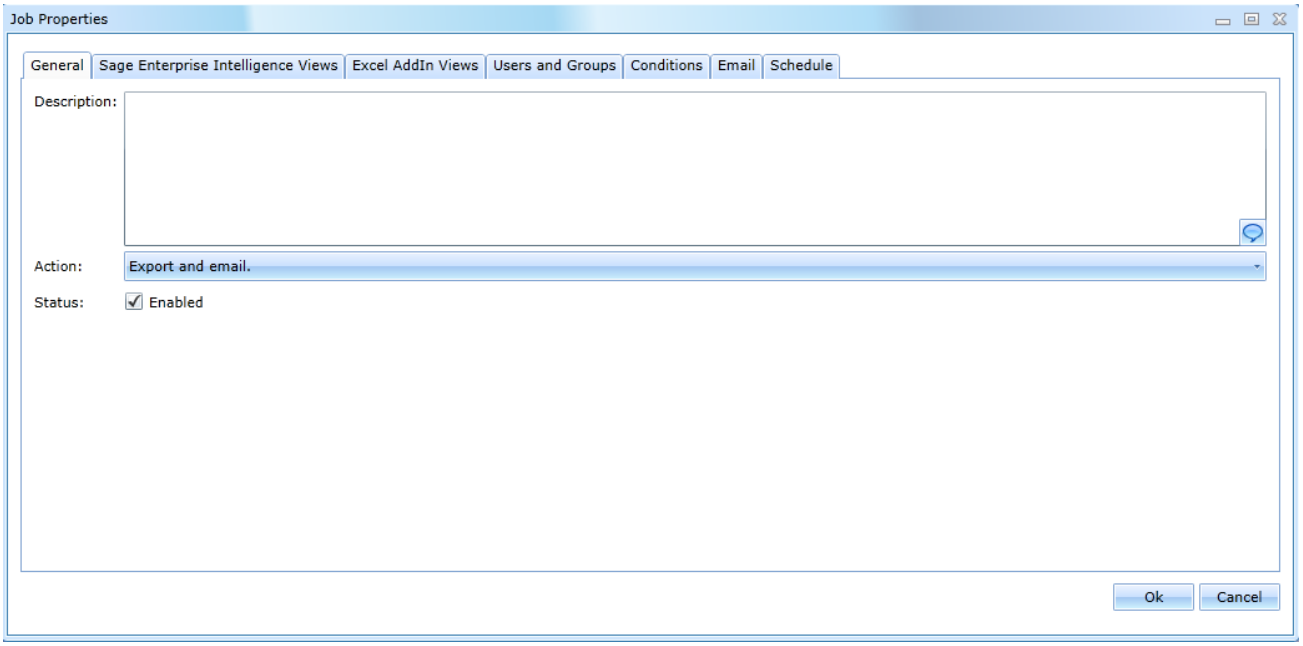
Disable/enable: Disables or enables the selected distribution.

Properties: Opens the properties window of the job and allows you to change all the properties of the selected distribution.

Creating A New Job

To create a new job, click on the **Create Job** button which will open a new Job Properties window.

General



Description: Identifies your current subscription and also displays it to the administrator in the main Scheduler.

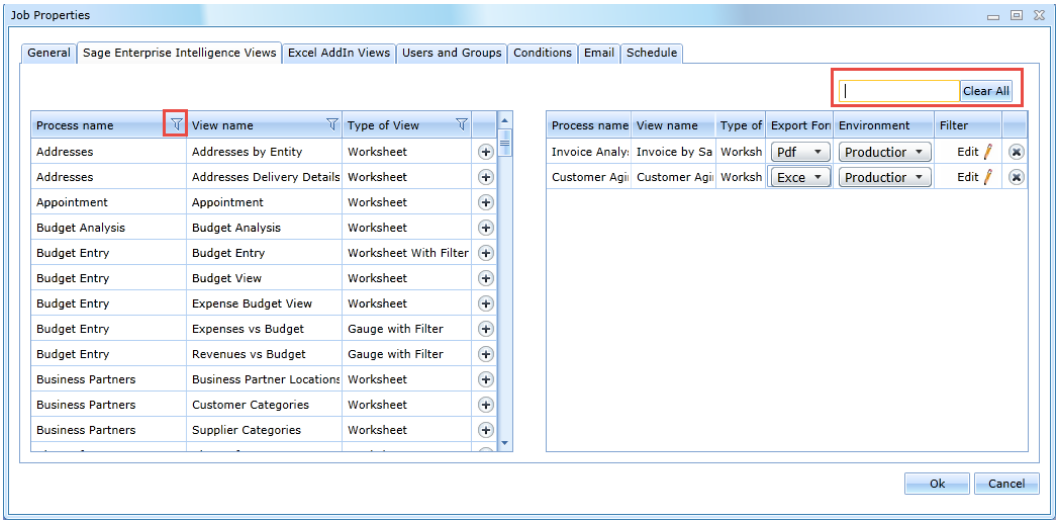
Action: Determines if it will be sent by email or archived in a folder. If the **Action** is set to export and save the results on the network, then the system will require entering a network path, where a set of new folders will be created automatically by the job: one for each user selected in the Users and Groups tab. Each folder will contain a copy of the reports being run, with the respective user's credentials. Otherwise, if the **Action** is set to export and email, the reports will be run with each user's credentials and sent out via email to the respective user.

Status: Enables or disables the subscription.

In this tab, as in many other places in the scheduler (and throughout the SEI application), click on the translation button which enables the user to set job descriptions, email templates, etc. in languages other than the language of the user.

Sage Enterprise Intelligence Views

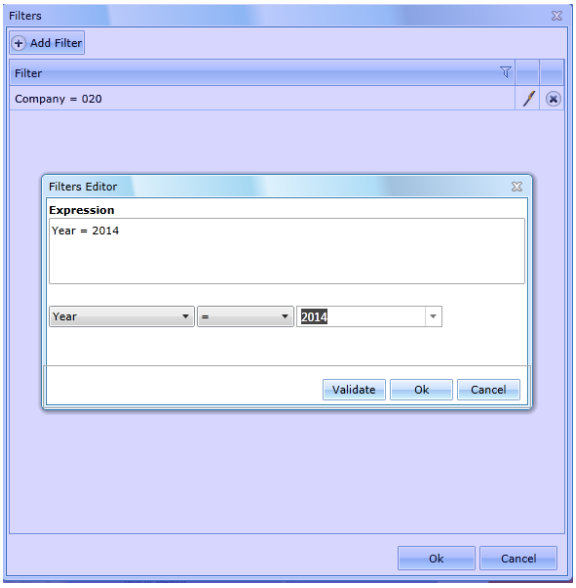
This tab allows for the selection of which views to run automatically and how to handle those views. It is possible to search from the generic search box or to use the filter to search a specific view.



Export Format: The export format can be selected for each view.

Environment: Determines from which environments the data for the view should come.

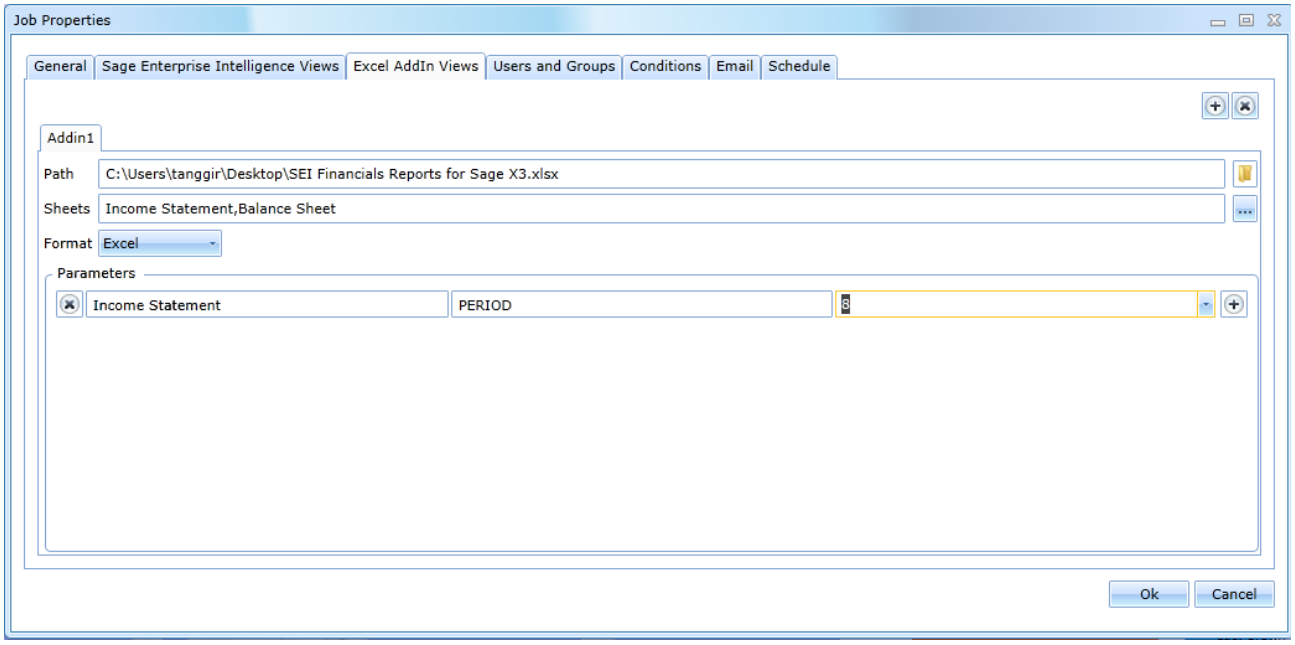
Filter: The filter option will allow the selection of specific data to be distributed. This filter is added to the existing filter of the view if a filter is already defined in the view. By pressing the Edit button, the filter builder will be displayed to help you in the creation of the filter criteria.



You can add as many filters as required. In the example above, a filter on the company and the year has been created. It is possible to filter on any fields available in the view and choose the operator and value(s).

Excel Addin Views

The **Excel AddIn Views** tab allows the user to select Add-in report files on the network. The user can select which files should be run automatically, which Sheets within the file should be run, and the format of the resulting file. It also allows for passing parameters to the Add-in report. These options become available after clicking on the ⊕ button.



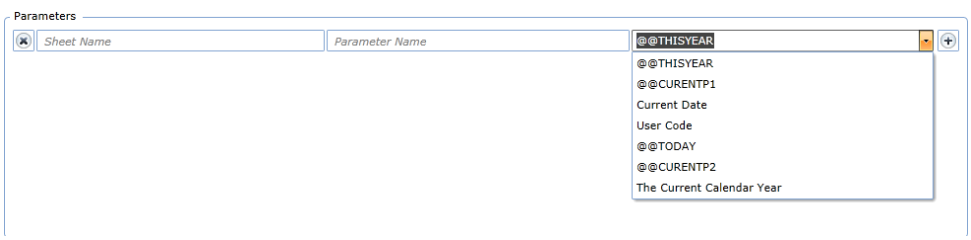
Path: The path of the Excel file that will be distributed. This path need to be accessible from the Distribution Server.

Sheets: Allows the user to define which sheets of the file will be included.

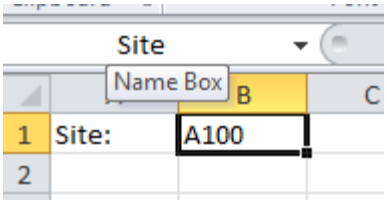
Format: Permits the user to select the output format that will be sent.

- **Excel:** Excel file with the values only, all the formulas are removed.
- **PDF:** Generic static PDF file.
- **CSV:** Comma-separated values (excel format).
- **ExcelAddIn:** Excel file including all the Add-In formulas. The calculation mode will be set to "manual".

Parameters: If the user would like to pass parameters to the Add-in report, one can click on the ⊕ button in the **Parameters** section, whereupon a new parameter section will be added. See below:

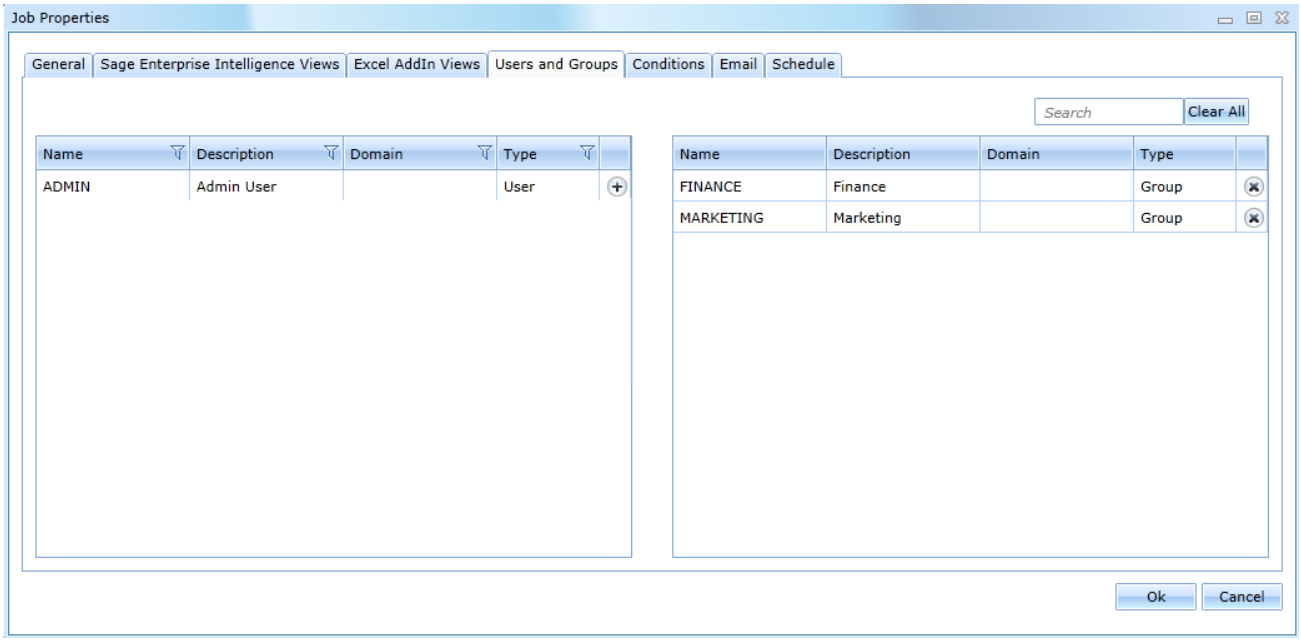


The user can then specify which specific sheet in the Excel File should be passed a parameter (in the **Sheet Name** cell), what the **Parameter Name** should be (this can be either a cell number, or the cell's name as defined in the Name Box in Excel.) (In the example below, the name would be Site and the cell number B1), and finally, a **Parameter Value** which could overwrite whatever may already be set in the Excel file in the cell indicated by the Parameter Name (In the example below, one could pass another site name such as B200, which would be used by any Add-in formulas referencing cell B1). The global variables can be used in the "Parameter Value" instead of typing the value manually.



Users and Groups

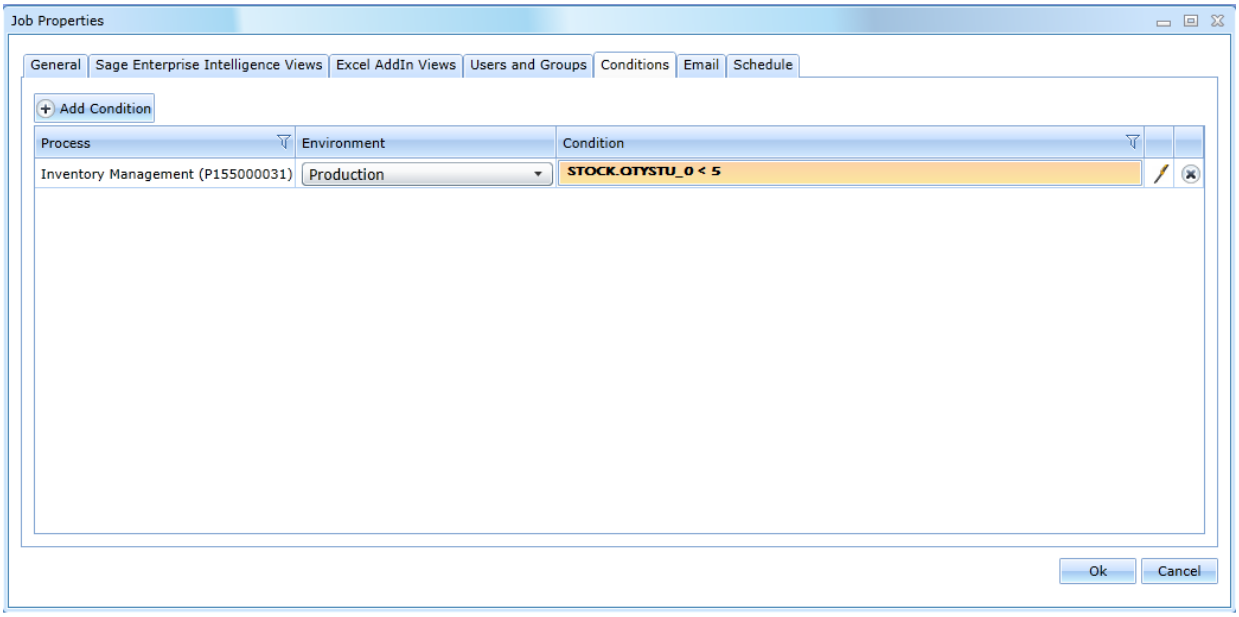
In the **Users and Groups** tab, the user can select which users and/or groups should receive the automatic emails generated by the job. At least one user needs to be selected in order for the job to be saved.

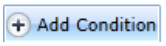


If a job is set to save the results of the views on the network drive, the users and groups selected in this tab will determine under which credentials the job should be run and also the names of the folders created automatically to store the results of the job.

Conditions

This tab is used to create a conditions that will define if the views will be distributed or not. As an example, you could schedule the view "Inventory" and validate every 15 minutes if the quantity is under 5 units. The "Inventory" view will only be distributed if the quantity is below 5.



You can add multiple conditions for your different processes by pressing the 

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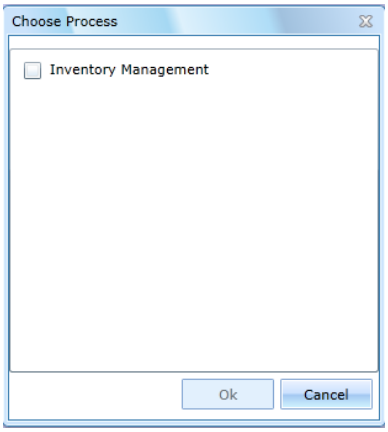
You will then need to choose the processes that a condition will be applied to.

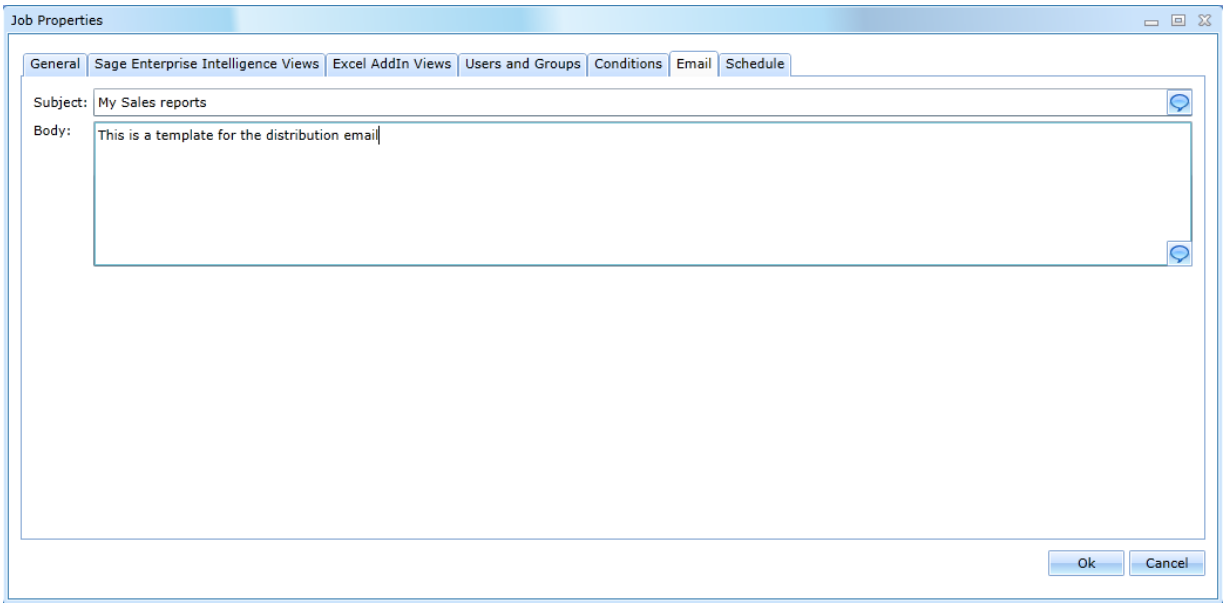


Finally, use the edit button to produce the expression builder to help you to build the filter. Please refer to the following section for more information: Expression Builder

Email

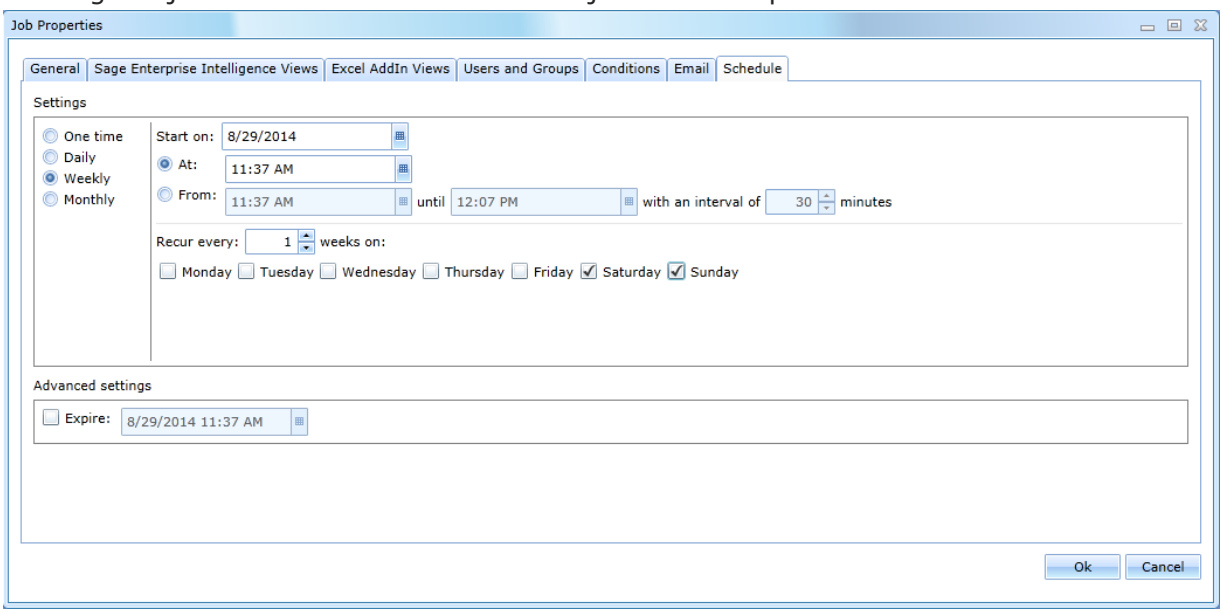
The Email tab allows for creating a template for the automatic email; thus the user can enter a subject and body for this email template.

The translation buttons allow for creating multiple versions of the subject and body, for each language defined for the Central Point.



Schedule

Finally, the **Schedule** tab allows for setting a schedule for when the views should be run, saved and emailed. The various options presented allow for setting the frequency and exact timing for running the job and whether and when the job should expire.

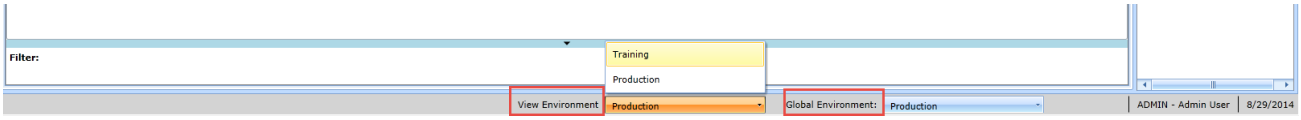


Manage Environments and Data Sources

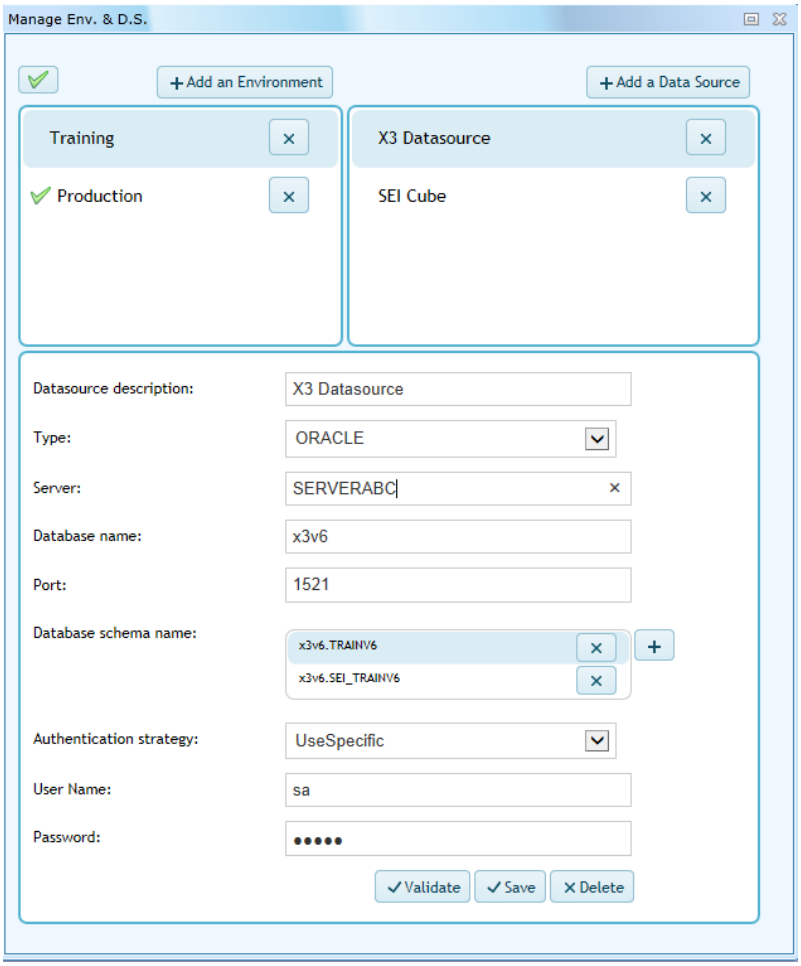
Environments and Data sources are a critical configuration component which manage the access to the data. Each Data Source contains the configuration information necessary to connect to, and access one, or several schemas within a database on a specific server.

Every process in SEI is based upon one Data Source.

An Environment can contain several Data Sources and users can easily change between environments for the active view using the View Environment drop-down in the status, or for all views opened henceforth using the Global Environment drop-down in the status bar.



To access the Environments and Data Sources management screen, one can click on the button in the Administration tab.



Add an Environment (Button): Use this to add a new Environment. You can add as many environments as required.

Add a Data Source (Button): Use this to add a new data source. The data source will be added in all the existing environments automatically. The data source needs to be configured in each environment.

When defining a Data Source, the following fields need to be filled in:

Description: Indicates the name which will be displayed in the Data Source list.

Type: Indicates which type of database connection the Data Source is using. The available options are SQL Server, Access, ISeries, Oracle and OLEDB, with more options coming in the future. To access another type of database, one can either create an OLEDB connection, or can create a linked server on the SQL server hosting the SEI application.

Server: Contains the server instance name.

Database name: Contains the database name. (e.g, For Oracle it will be SID).

Database schema name: Contains all the database schemas which should be accessible by a process based upon this particular Data Source. It is possible to add as many schemas as desired (though care must be taken in the order in which the schemas are entered: in case the same table or view name exists in more than one schema, the first schema in the list will be used).

The schemas should be entered with the following format:

SQL, OLEDB : Database name and schema name ex: databasexyz.schemaxyz

Oracle: User name and schema name ex: userabc.schemaabc

DB2: Library Name only.

Access: Not Required.

Transaction With (No Lock) (SQL only): Use this option when you want to read the transaction without waiting for the lock on the tables to be released. Be careful, you may read transactions that will not be accurate as some of these transactions could be uncommitted.

Port (Oracle only): Contains the port number of the Oracle instance.

Path (Access only): Contains the path of the Access database.

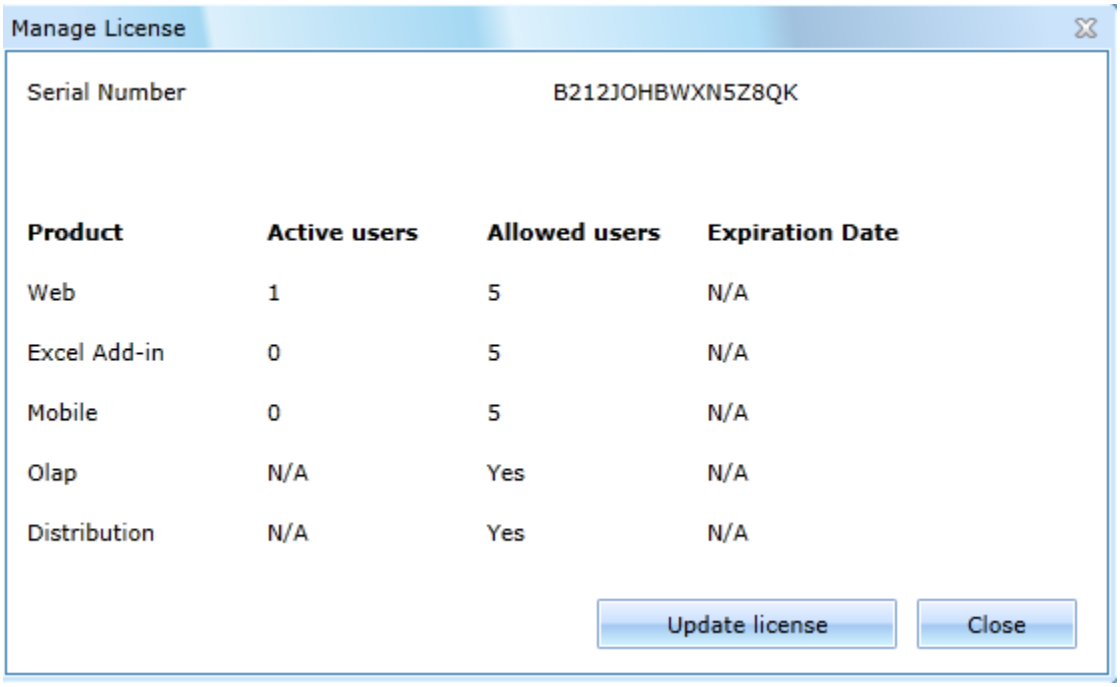
Authentication strategy dropdown indicates how SEI is supposed to connect to the database. The available options are Windows Authentication (when SEI runs on the same server as the database being accessed and if the local host account under which the SEI account runs has access to the database) and Use Specific (if using a specific server user to access the data).

User Name and **Password** contains the information required if the 'Use Specific' option was chosen for the credentials.

Manage License

The Manage License option displays all the information related to the current license. It also displays the number of users actually using the software.

To access the Manage License screen, click on the button in the Administration tab.

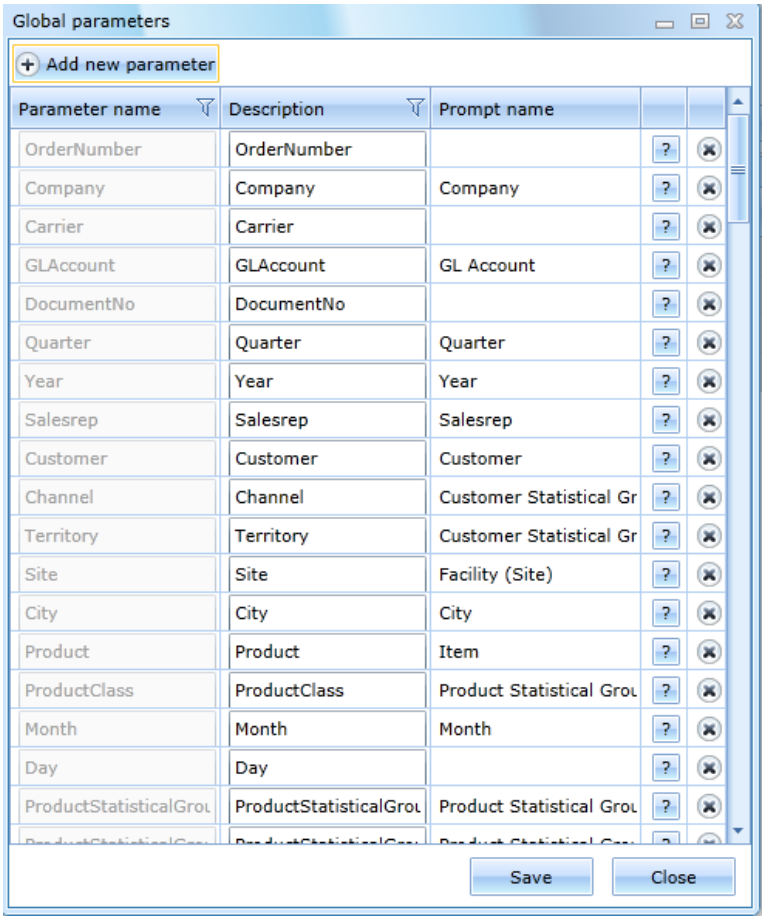


Update License (button): The update license button will connect to the SEI manufacturer to get the latest information about your license and will automatically update your current license based on the information received. The "Update License" button will refresh the actual license automatically (ex: you purchase more users, the "Update license" will add them as soon as the order is processed).

Global Parameters

Global Parameters are useful in a variety of places throughout the system. For example, Global Parameters are used in the Dashboard to configure Filtering Panels or to allow views from different processes to filter each other's. They are also used with the Application Links and Link-to features.

To access the Global Parameters Management screen, one can click on the button in the Administration tab.



Add New Parameter (button): This button is used to create a new Global Parameter, once pressed, a new empty row will be added at the top of the grid.

Parameter Name: The parameter name must be unique and must not contain any spaces.

Description: The description of the parameter.

Prompt Name: The prompt name will appear as soon as you select a prompt from the list of prompts. To select a prompt you need to press the button.

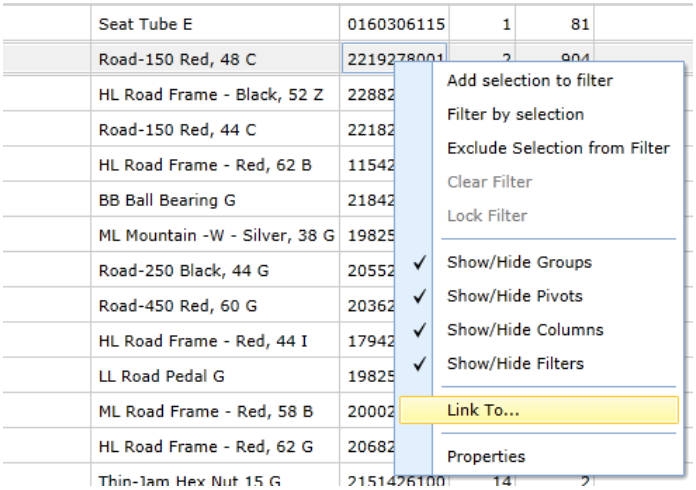
Save: It is mandatory to press the save button in order to have the changes committed.

Application Links

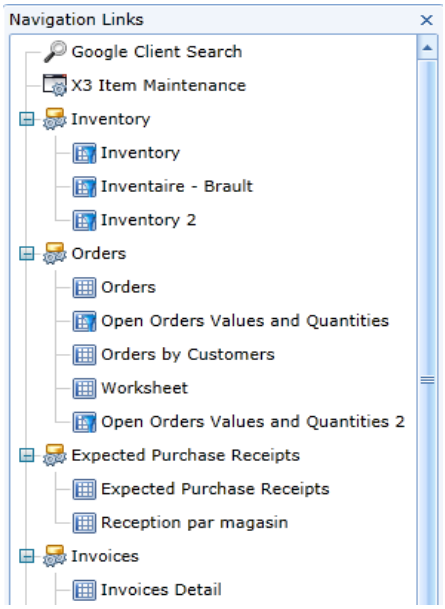
To provide the user with extra analysis capabilities, SEI offers users the ability to link from SEI to other external applications based on pre-configured application links.

For example, a user in a sales analysis process can select a specific product, using it to link to an ERP application, such as Product Master Maintenance.

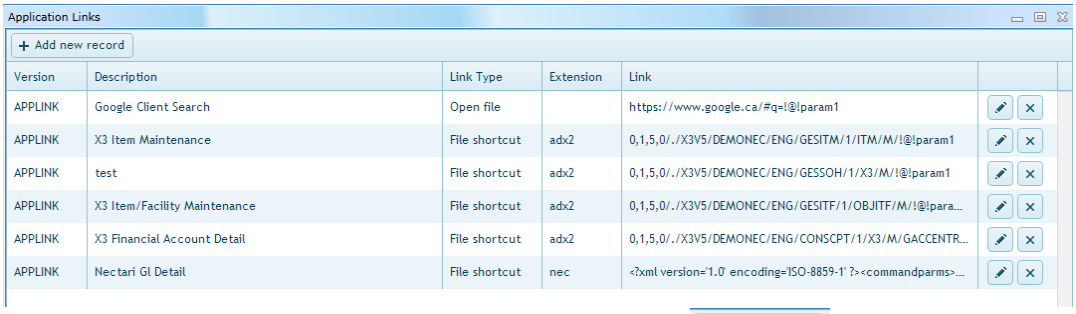
To access the application links, the user can select a field in the active view, right click to get a context-sensitive menu, and then select 'Link To…'

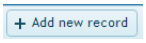


This will bring up a list of the various processes and external applications which are available to link-to from the active view. The Application Links will be at the beginning of the list.

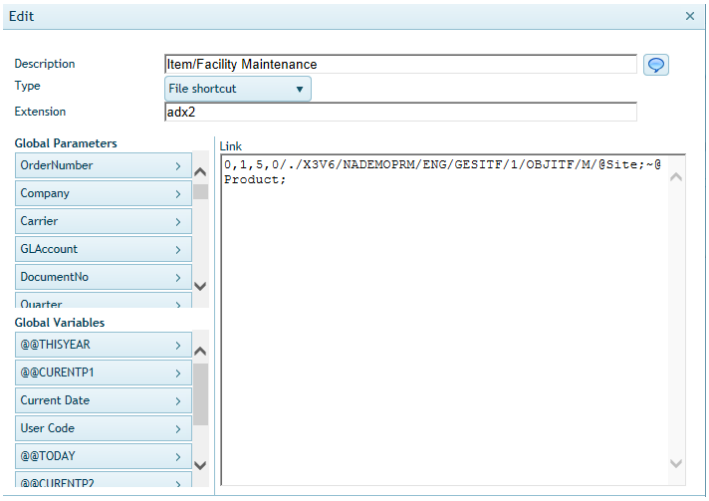


To access the Application Links management windows, click on the button in the Administration menu. Below is an example of an Application Links window:



To add a new application link, one can click on the  button.

Below is an example of the Edit/New Application link window:



Description: Name of the application link that will appear in the Link-to window.

Type: Dictates whether a shortcut file should be created "File shortcut" (if a Windows application such as X3 should be launched) or if a webpage should be opened "File Open".

Extension: Only required when the link is of type "File shortcut". In the example above, adx2 is an extension for files that can launch X3 automatically.

Global Parameters: These can be dragged into the **Link** window to help configure the link expression dynamically based on the values selected in the views.

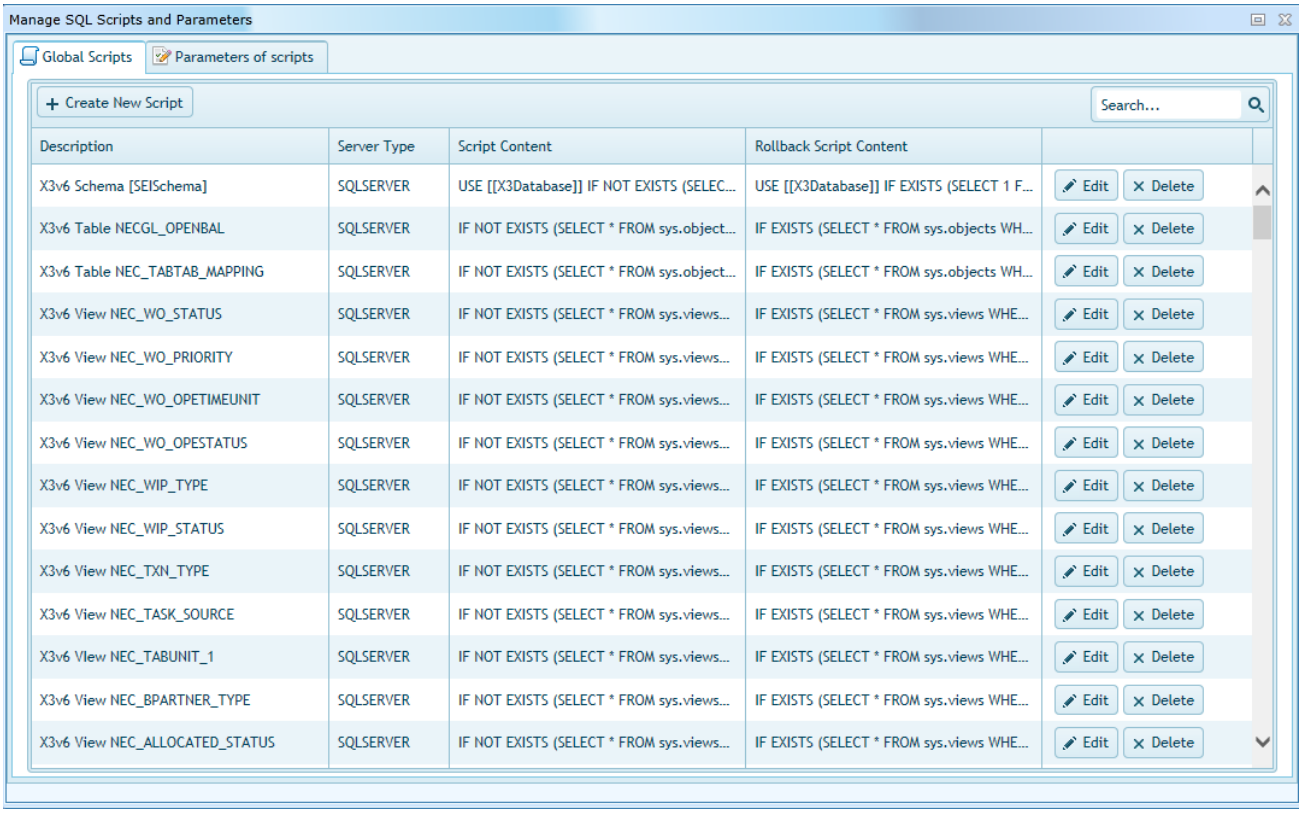
Global Variables: These can be dragged into the **Link** window to help configure the link expression dynamically based on the values of the global variables.

Of particular interest are link expressions meant to launch X3 sessions. In the example above, X3V6 is the X3 version, NADEMOPRM is the X3 folder, ENG is the language, GESITF is the X3 function (in this case Item Maintenance), ITM is the screen and @Product~@Site was added to the link by dragging the Product and Site Global Parameter into the link expression.

Global Scripts

Global scripts are a way to enable certain aspects of the SEI Process Design, such as using database views, without having direct access to database management tools. For example, one might wish to create a view on the SQL server, or a working table. The Global Scripts wizard allows for defining the script, the corresponding rollback script (in case of issues when running the script) and parameters to pass to the script. The Global Scripts associated with a process (refer to the process design section) will also be executed when the process is imported in order to create the missing SQL objects.

To access Global Scripts, you can click on the button in the Administration tab. This will cause a window similar to the one below, to display.

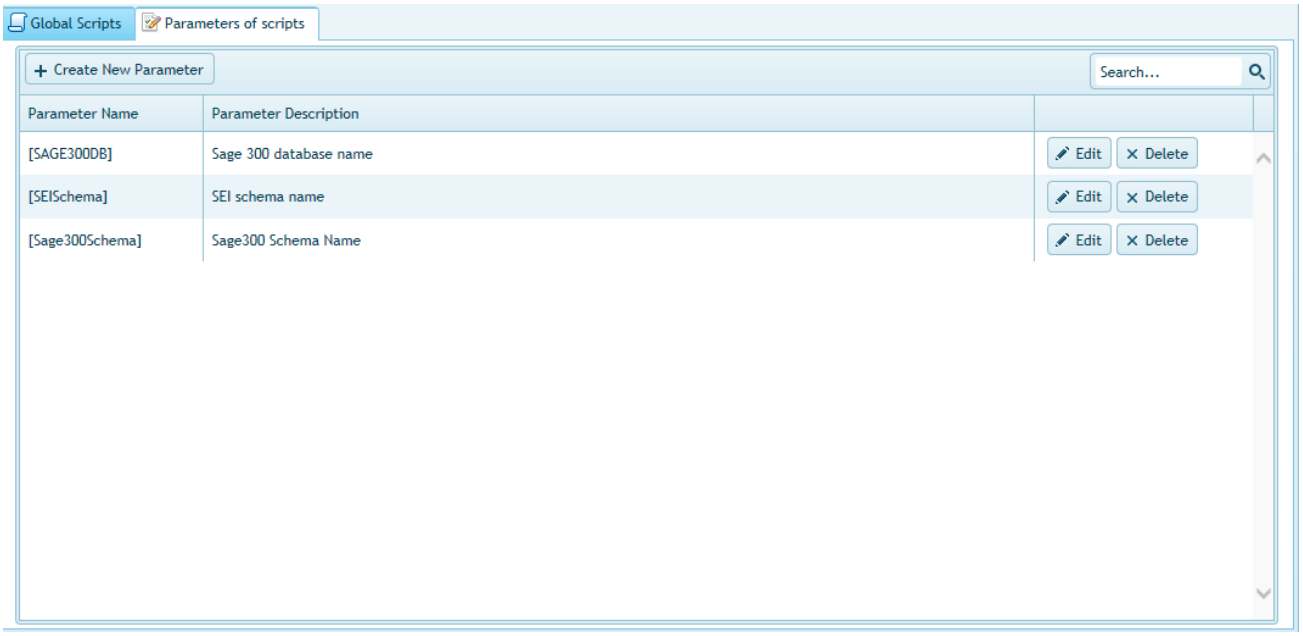


Global Scripts (tab): A list of all the global scripts defined.

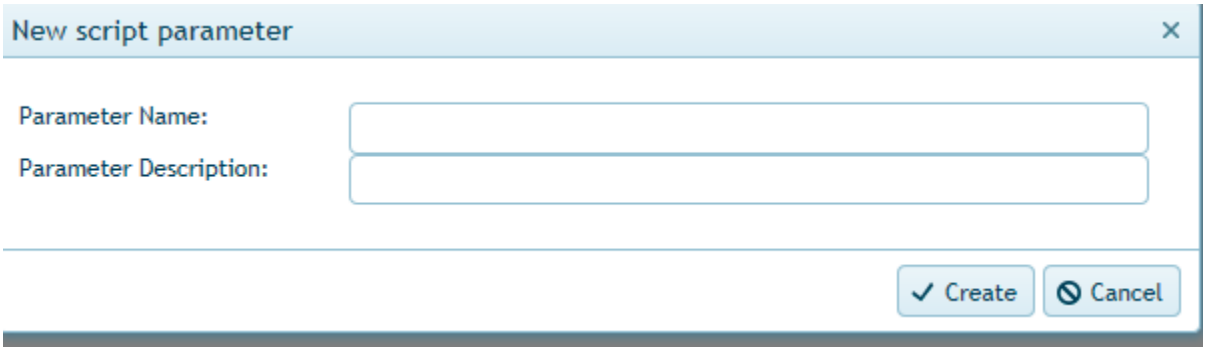
Parameters of scripts (tab): A list of all the Parameters that can be used in the Global Scripts.

Search: Will search for the values in all the columns of the list of Global Scripts.

The parameters of scripts tab will list all the parameters defined and usable from the Global Scripts.

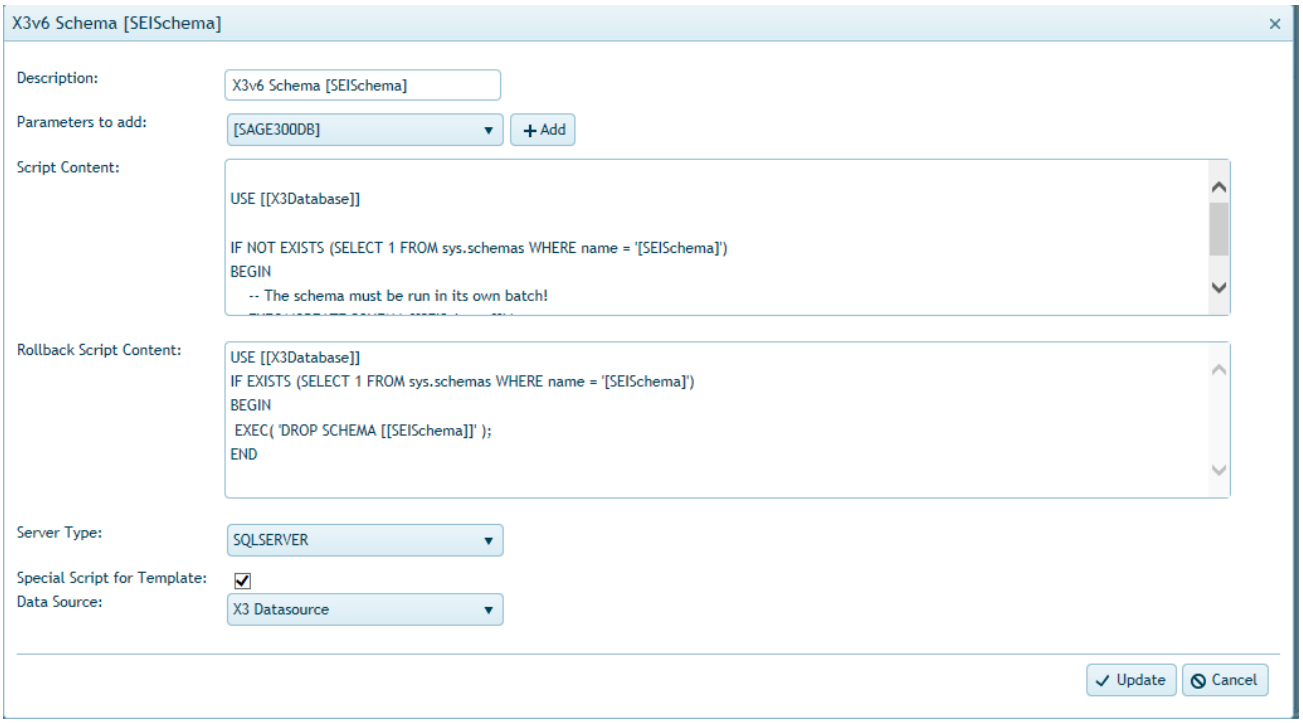


To create new Parameters of scripts, click on the + Create New Script button. This will bring up a window similar to the one below:



The parameter name must be unique.

To create a new Global Script, click on the + Create New Script button. This will bring up a window similar to the one below:



Description: Name of the Global Script.

Parameters to Add: Automatically populated from the list of parameters defined in the **Parameters of Scripts** tab, the Parameters can be used to dynamically change the content of the scripts on the execution of them. Once executed, a parameter window will appear to let the user enter the values for each parameter in the script.

Script Content: Contains the query that will run.

Rollback Script Content: Contains the query that would be run in case the query in the Script Content does not complete successfully or when the templates are un-installed.

Server Type: Indicates the language of the script (T-SQL for either SQL Server, ISeries or Oracle)

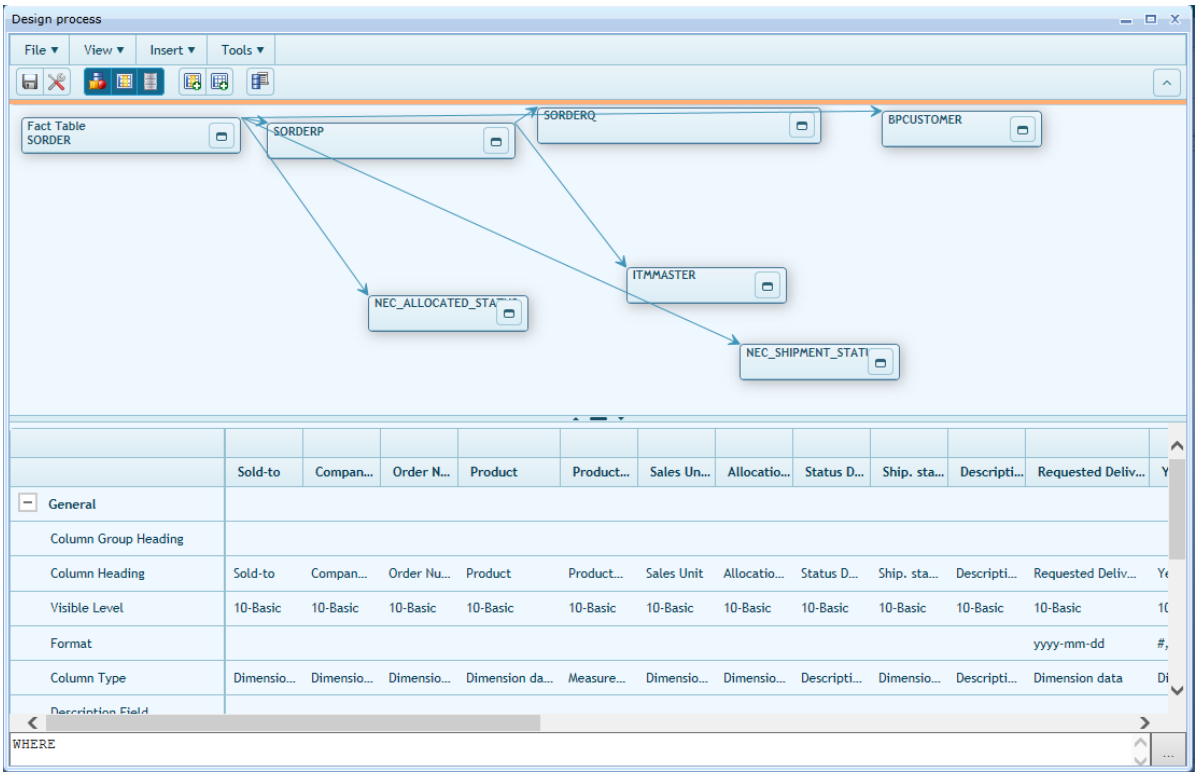
Special Script for Template: Indicates whether this script should be saved in the export as special script. The special script are executed before the scripts specific to processes. A good example would be the creation of the schema that needs to be done before any creation of tables or views specific to a process for a new installation.

Data source: When the script is a "Special Script for Template" and will not be associated with a process, as we always need to execute a script against a data source (setup at the process level), the data source need to be selected.

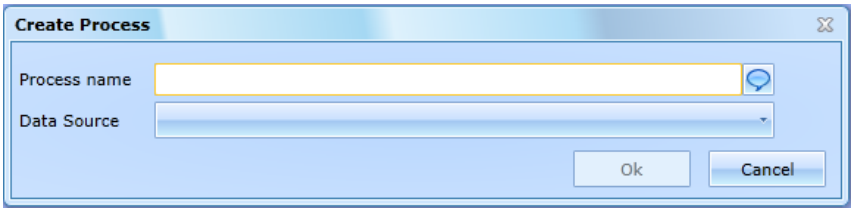
Process Designer

The SEI Process Designer is a key component of the application, which allows for the design and configuration of the processes, upon which views are built. In the process designer, administrator users can define which tables/views the process should use, how they are linked, which fields to use and what properties they should have. General process properties can be defined as well. A fair degree of technical (especially database) knowledge may be needed to use this tool.

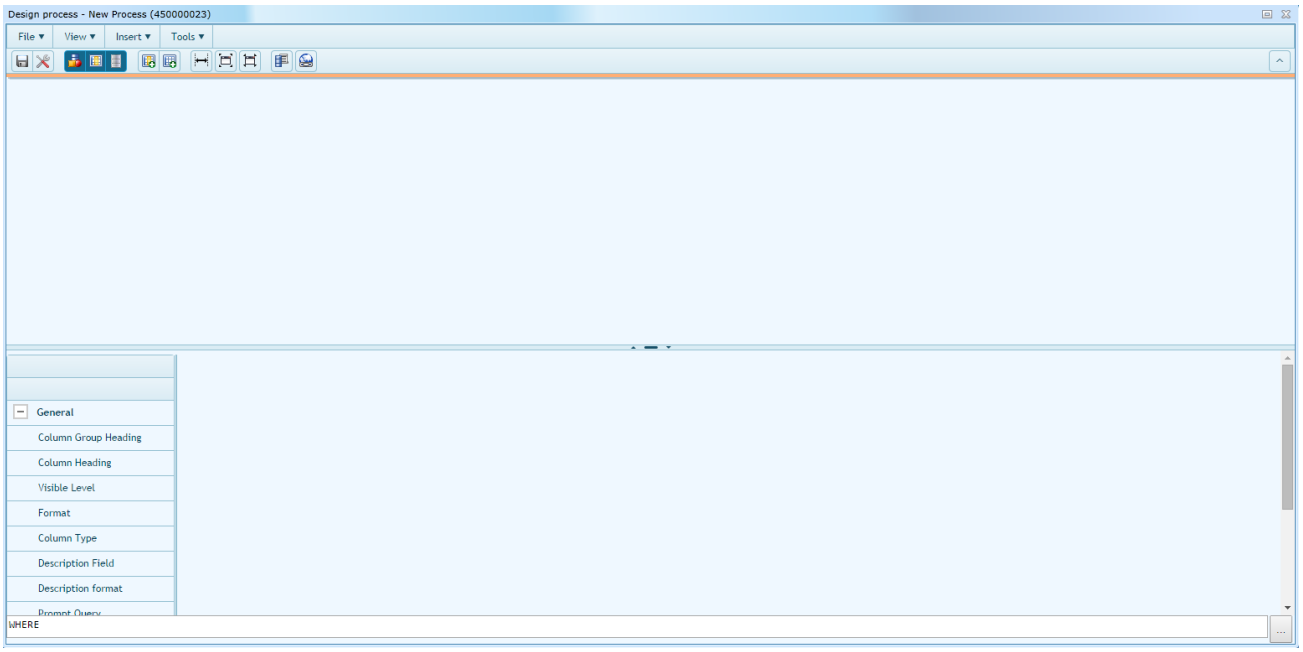
To access the process designer for existing processes, one can right-click on any process and select 'Design Process'. The process designer window will appear with the existing definition of the process selected.



To create a new process, one can right click in any folder in the Command Center (including the root folder) and select the 'New Process' option. This will cause the following window to display:



The user has to enter the Process name and select the associated Data Source (see the Manage Environments and Data Sources section for more details). The Data Source will determine which tables and views will be available for this process. The button allows for entering names for the process in the different languages available in the Central Point. If a new process is created you will get an empty process designer window after pressing the OK button.



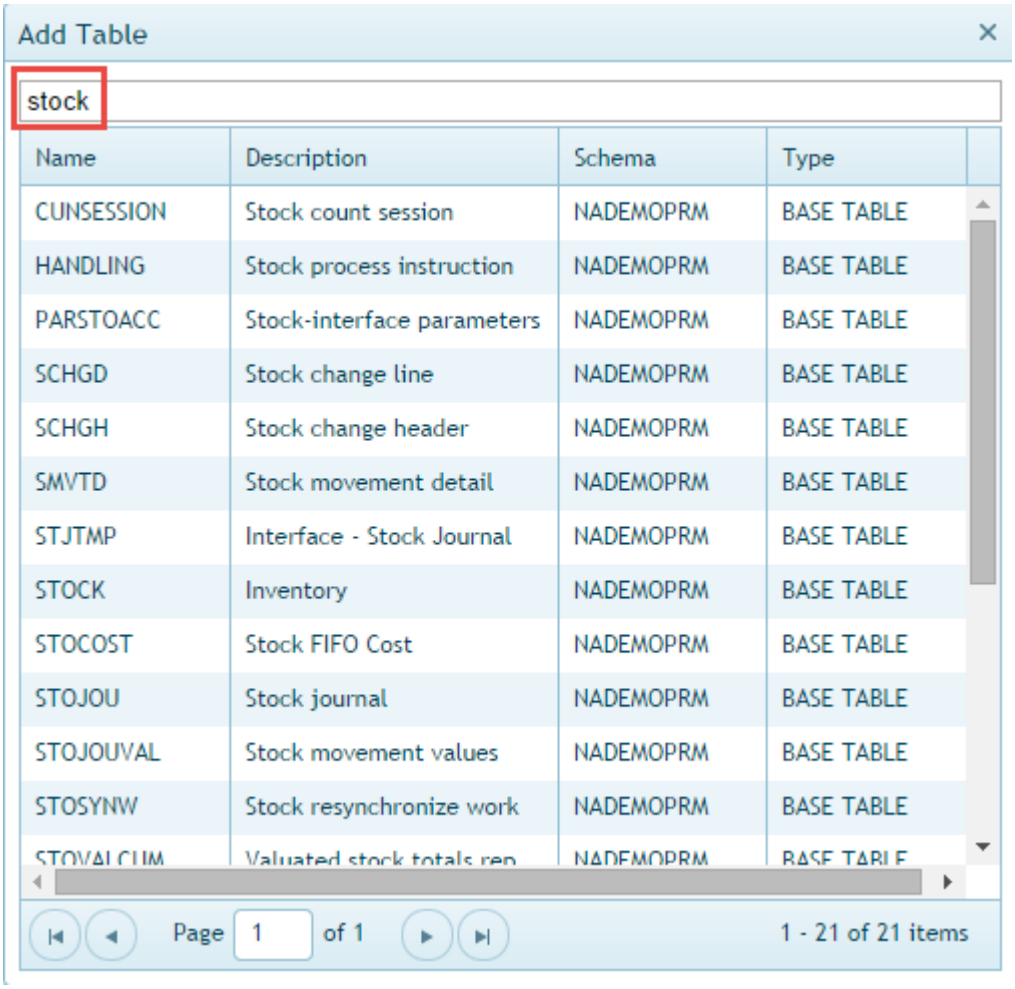
The Process design window is divided into three sections: **Design Graph, Process Fields Table, Where Clause**. They can be toggled to be visible or hidden either from the View menu, or by using one of the following buttons: for the **Design Graph**, for the **Process Fields Table** and for the **Where Clause**.

Design Graph Section

In the Design Graph section, the administrator can define which tables/views should be used in a process and how these tables/views are linked.

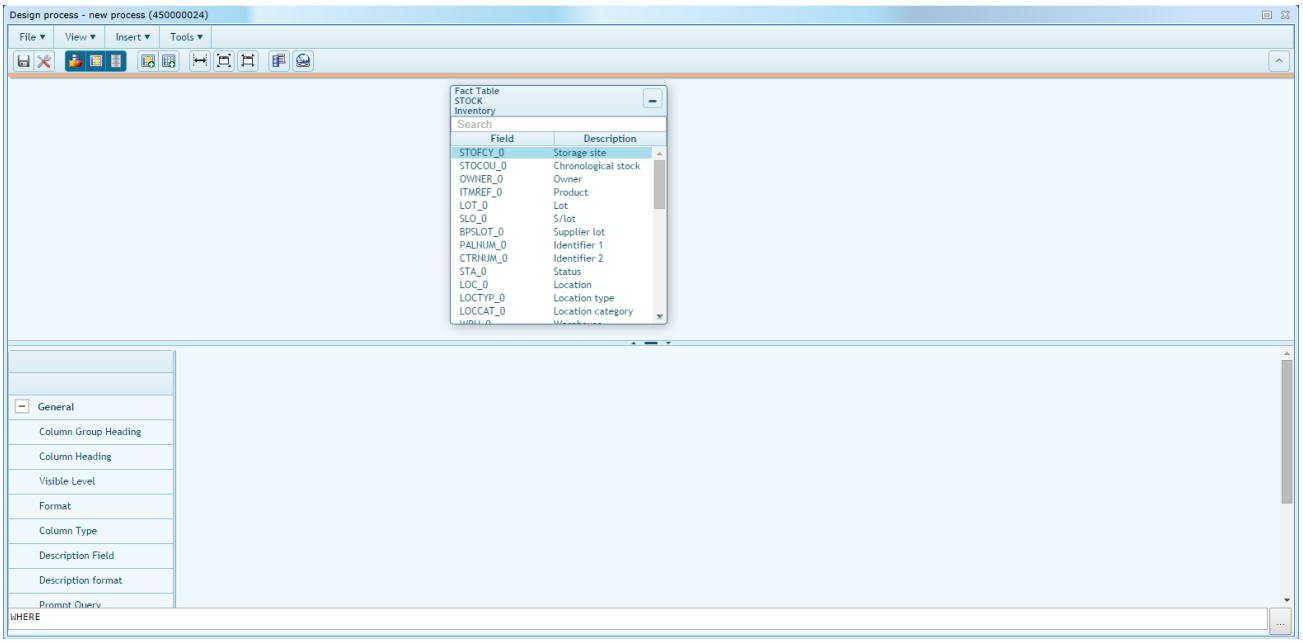
Add a table/view

To add a new table/view to a process, either right-click anywhere within the Design Graph section, or select 'Add Table' from the Insert menu, or click on the button. This will cause a window similar to the one below to display, which contains a list of all the tables and views available. You can also search in this list by entering your criteria in the search textbox and pressing the enter key. In the example below we have all the tables that contain the string "stock".



The list of tables and views available is determined by the configuration of the Data Source associated with this process. Double-clicking on one of the items in the list adds it to the process.

In the example below we double-clicked on the table "Stock".

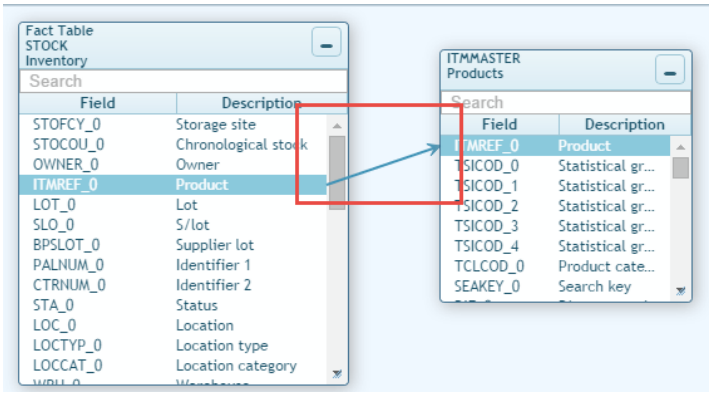


Fact Table

There will always be a table in the process called the Fact Table, which is the starting table whose records always get returned regardless of whether there are corresponding records in the other linked tables. This table is labelled with the keywords Fact Table above the table name. By default, the first table added to a process is set as the fact table, but this can be overridden by right-clicking on one of the other tables and selecting 'Set as Fact Table'.

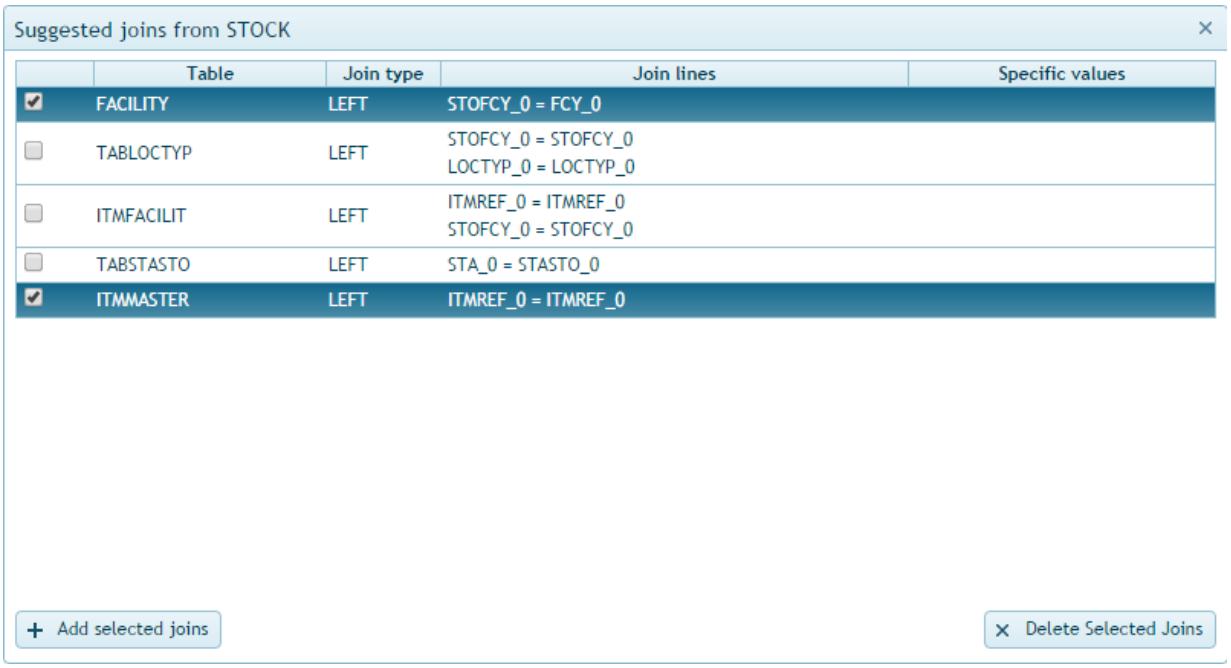
Join Tables Manually

Once a table has been added to the process, it needs to be linked to the other existing tables. This could be done by doing a drag and drop operation between the fields that need to be linked (first select the field from one table and then drag it to the corresponding field in the other table). In the example below we added a second table called "ITMMASTER" and we did the link by using the ITMREF_0 key. You can join tables on multiple fields.

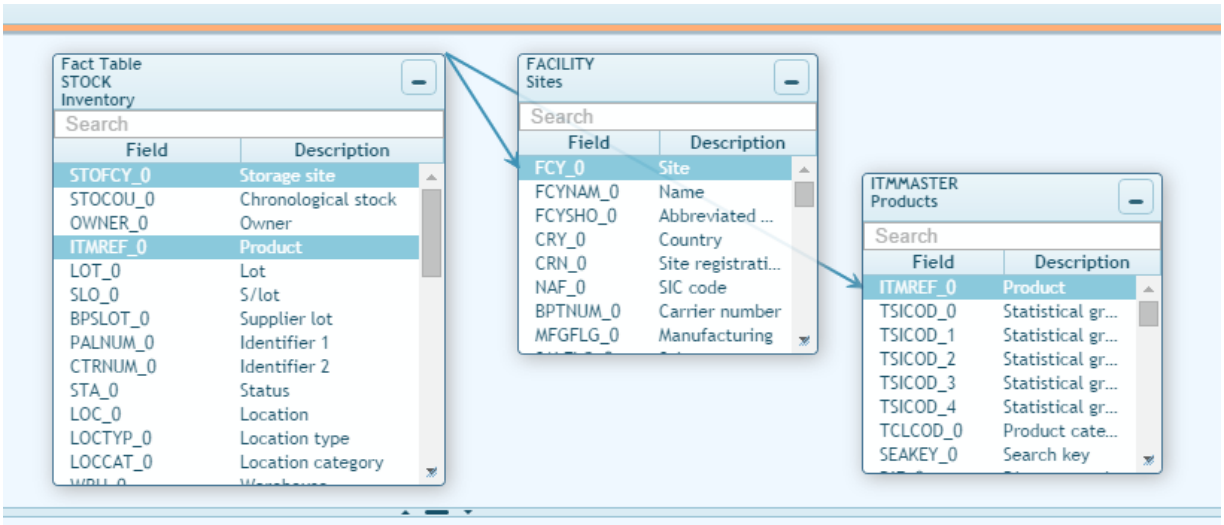


Join Tables with "Suggested Joins"

Once a table has been added to the process, it needs to be linked to the other existing tables. This could be done by using the context menu option over a table/view and choose the "Suggested Joins" option. This option will present a list of all the tables/views that can be joined to the selected table.

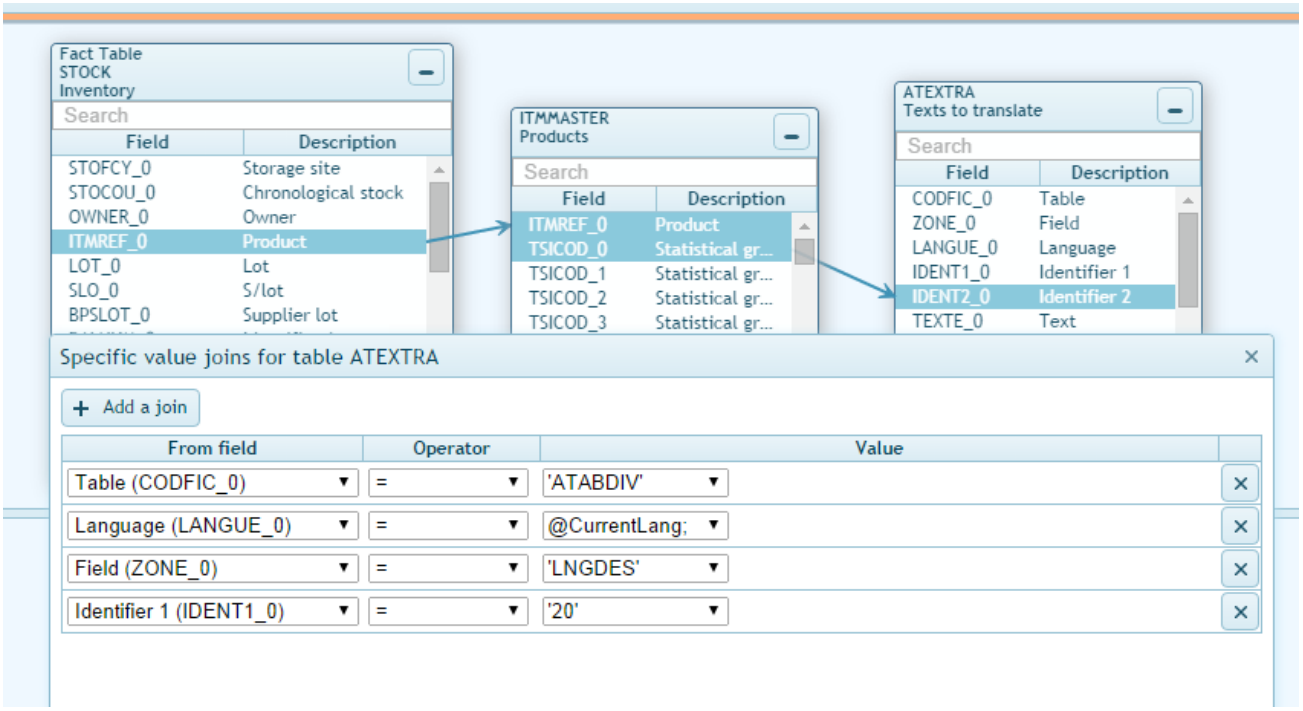


From the list of available joins, you can select as many joins as you want and you can press the "Add selected joins" button. Once done, all the tables/views will be added with the proper join. The "Delete Selected Joins" can be used to remove joins that are wrong. The list of suggested joins is dynamic and builds automatically based on the joins done by the administrator manually or based on all the existing joins delivered with the templates.



Joins On Specific Values

The joins on specific values (available from the context menu of any tables/views added to the design) will allow you to add some joins to pre-defined values directly in the design section. In the example below we are doing a join between the ITMMASTER table and the ATEXTRA table on a field and 4 specific values.



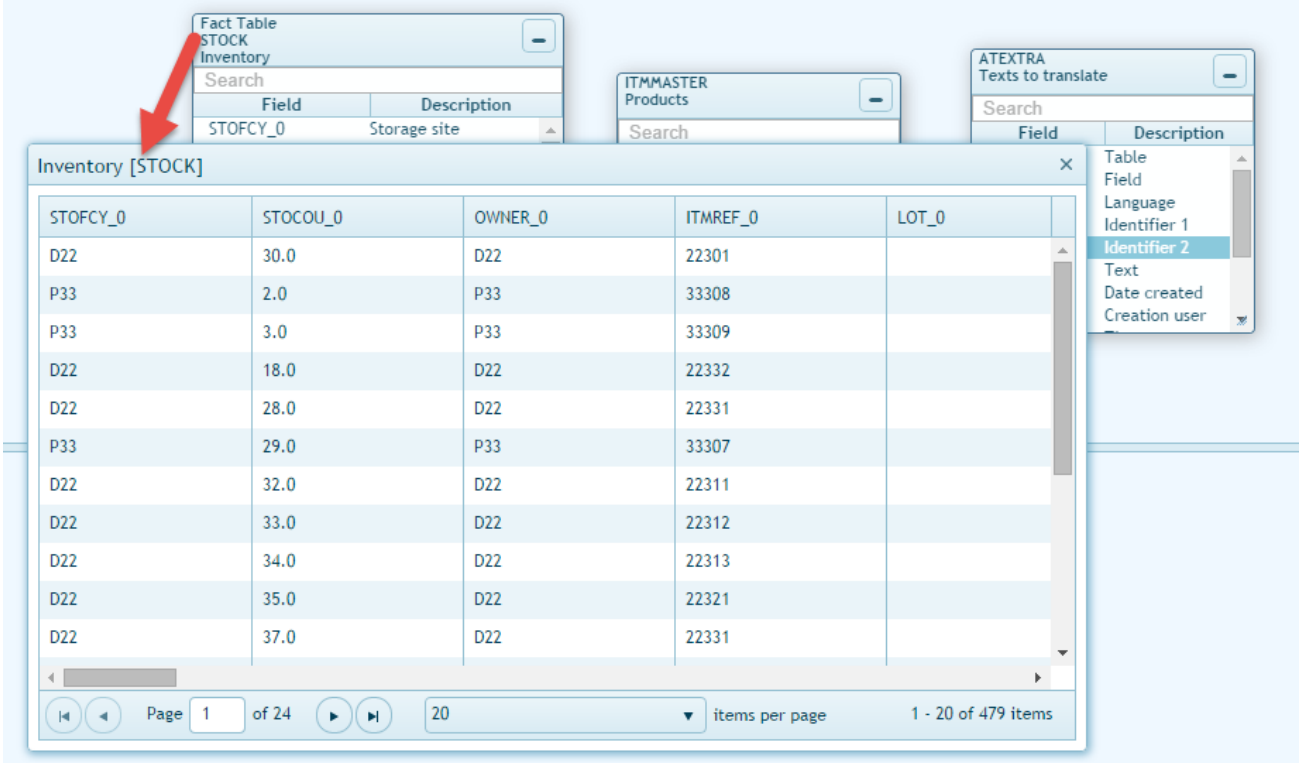
The specific values can be input manually or based on a "Global Parameter" that is dynamic or on two specific values:

- CurrentLang (will be replaced by the current languages of the user, this will allow the content of the data to be multi-lingual)

- CurrentUser (will be replaced by the current user)

Preview Data

From any tables/views it is possible to right-click and select from the context menu the option preview data. This will show the first 1000 records for the item selected.



Other Information

To see the list of fields in a table, if they are hidden, click on the symbol at the right of the table name, or right-click on the table name and select 'Show All Fields'.

You can never link from another table to the fact table: links always need to be created from the fact table to the other table (which corresponds to the fact table having a left join to the other table).

You can choose to see only the columns from a table already being used in the process by right-clicking on the table name and select 'Show Columns Only'.

After a join has been created, right-click on it and change the join properties. By default, joins are created as left joins, but you can change it to an inner join or delete it from the right-click menu.

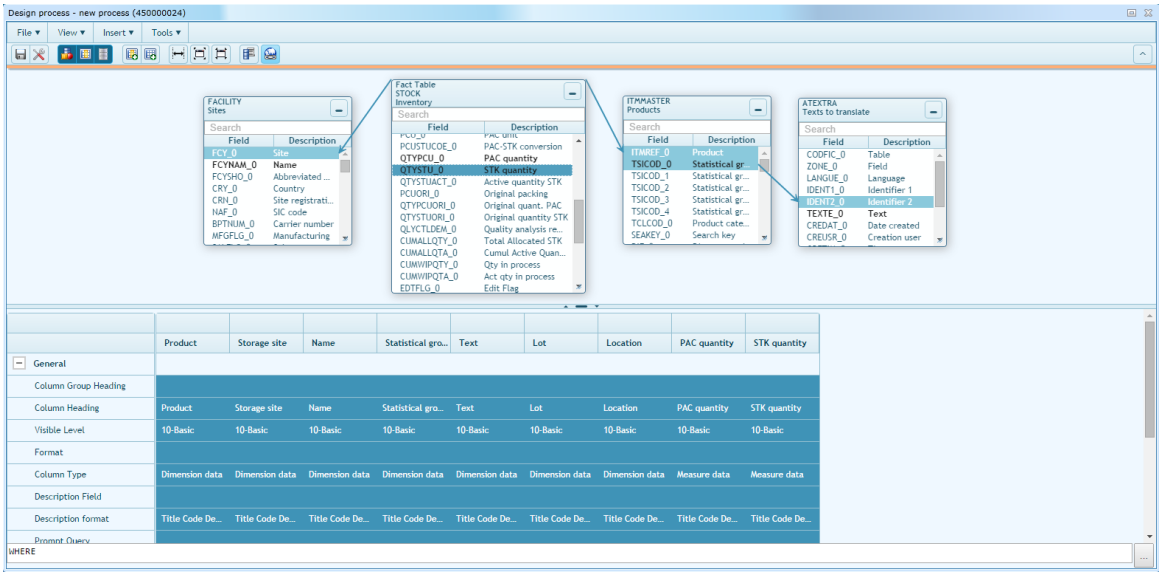
Process Fields Table Section

Add a field

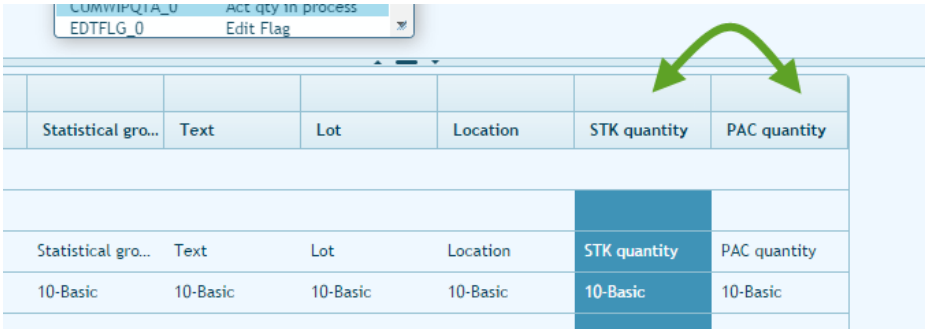
Once the tables have been added and linked, fields can be added to the process. This is done by right-clicking on a field name and selecting 'Add Column'. Fields that have already been added will be highlighted in blue and can be removed from the process by right-clicking on the field name and selecting 'Remove from Columns'. It is possible to select multiple fields and add them at the same time. Double-clicking on a field will also add the specific field in the list of columns.

Calculated fields can also be added to a process by selecting the option 'Add calculated column' from the Insert menu or by clicking on the button or by doing a right-click in the "Fields Table Section" and selecting the option from the context menu "Add Calculated Column".

In the example below multiple fields were added by double-clicking on them.



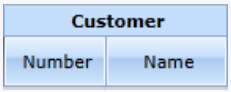
The fields will always be added at the end of the list. You can easily re-order them by doing a drag and drop.



The following 3 buttons can be used to resize the columns.

Columns Properties

Once a field has been added to the columns its properties can be set within the Process Fields Table section. Below is a list of the available properties for a field with a description and possible values:

Property Name	Description	Possible values
General :		
Column Group Heading	When a process is opened in a worksheet view, column headers can be grouped. This is used to show the columns that are related to the same entity. For example, if "Customer" is specified in this property for both "Customer Number" and "Customer Name", the resulting column header in a worksheet would be as follows :  This property is used in conjunction with the column heading property.	Free text
Column Heading	Column group heading and Column heading are combined to identify the columns of a process.	Free text
Visible Level	This property is used to identify the minimum authorization level applicable when displaying the specified column. "Column Visible Level" is one of the elementary Authorizations that can be set for a user within process Authorizations. The value of this elementary Authorization is compared to the "Visible level" property to determine if a user is allowed to see the column.	00-No Authorization 10-Basic 20-Intermediate 30-Advanced 40-Manager 50-Administrator 60-System Administrator 99-Security Officer
Format	Display format for Numbers, Currency, Date & Time, Percentages and Text. Each category may have several options, as applicable (for example for Numbers one can specify decimal places and leading zeroes). A preview of a formatted expression is provided.	Selected from a list
Column Type	There are three main categories of fields: - Dimension fields: Fields for which data is to be analyzed, summarized or grouped (e.g. Company, Region code, Customer Account No, Salesman Code, Item class, etc.). Fields that determine a unique record in the process must be set as "Dimension Key" (needed if process is setup to allow for data editing and can be a combination of multiple columns). - Measure Data: fields that represent data to be analyzed (e.g. Goods value, Quantity, Cost). Measures that are calculated based on the values of other columns are automatically set as "Measure Calculated". - Description Data: Fields that give a description of some dimension fields (e.g., Customer name, Item description, Salesman name etc.).	Dimension key Dimension data Measure Data Measure Calculated Description data
Description Field	This property allows linking a dimension key to its description field (e.g., Customer Account Number with Customer name, Item code with Item description). If data is grouped by Item code in a worksheet, the grouped lines	Selected from a list of the available fields within the process

	could contain both the Item code and its description, depending upon the Description format property.	
Description Format	Allows specifying the layout, in a worksheet or a graph, of dimension fields and their descriptions. The title indicates the name of the field, the description refers to the value of the description field associated with the field and code is the value of the field itself. For example, if the description field for a customer code was the customer name, and the Description format is Title-Description-Code, then a worksheet grouped by the customer code would display each group as something similar to 'Customer code-123-Company ABC', where 123 is the customer code and Company ABC is the name of customer 123. You have the same option with the "-" separator or without the separator.	Title-Code-Description Title-Description-Code Title-Code Title-Description Code-Description Code Description Description-Code Title Code Description Title Description Code Title Code Title Description Code Description
Prompt Query	Prompt that will be assigned to this column.	Any processes that are defined as a prompt.
Prompt Sort Order	If the current process is used as a prompt, this property will define how the values in the prompt window will be sorted.	None ASC DESC
Sub-Total	Allows for specifying which kind of summary operation will be used to calculate sub-totals when data is grouped.	None Sum Min Max Avg (average) Count Count Distinct OnCalcul
Sub-Total Restrictions	Allows for applying restrictions on what grouping levels should show subtotal values.	Subtotal restrictions window
OnCalculation	If the Sub-Total property is set to OnCalcul, this property allows for defining a script used to calculate the sub-total.	Refer to the Script Expression builder section
Calculation	Allows for specifying a SQL calculation for the calculated column	SQL syntax, refer to the SQL Expression builder
Parameter Name	Specify an SEI global parameter name which is used to set up application and process links, dashboard filtering and setting up dashboard filtering panels (see Global Parameters section).	List of Global Parameters
Edit:		
Editable Level	This property is used to define the minimum level of security that a user must have to be authorized to edit the value of the current column. "Column Editable level" is one of the elementary Authorizations that can be set for a user within the Process Authorizations. The value of this elementary Authorization is compared to the "Editable level" property to determine if a user is allowed to edit the value of related column.	00-No Authorization 10-Basic 20-Intermediate 30-Advanced 40-Manager 50-Administrator 60-System Administrator 99-Security Officer
Split By Ratio On	Used for splitting any amount entered on a total line using a ratio based on this specified field. Applicable only if this column is editable. For example, a budget entry process could have this property set to the actual amount, for the budget amount field (thus any budget values entered at a group level would be split at the detail level according to the ratios of the actual amounts).	Selected from a list

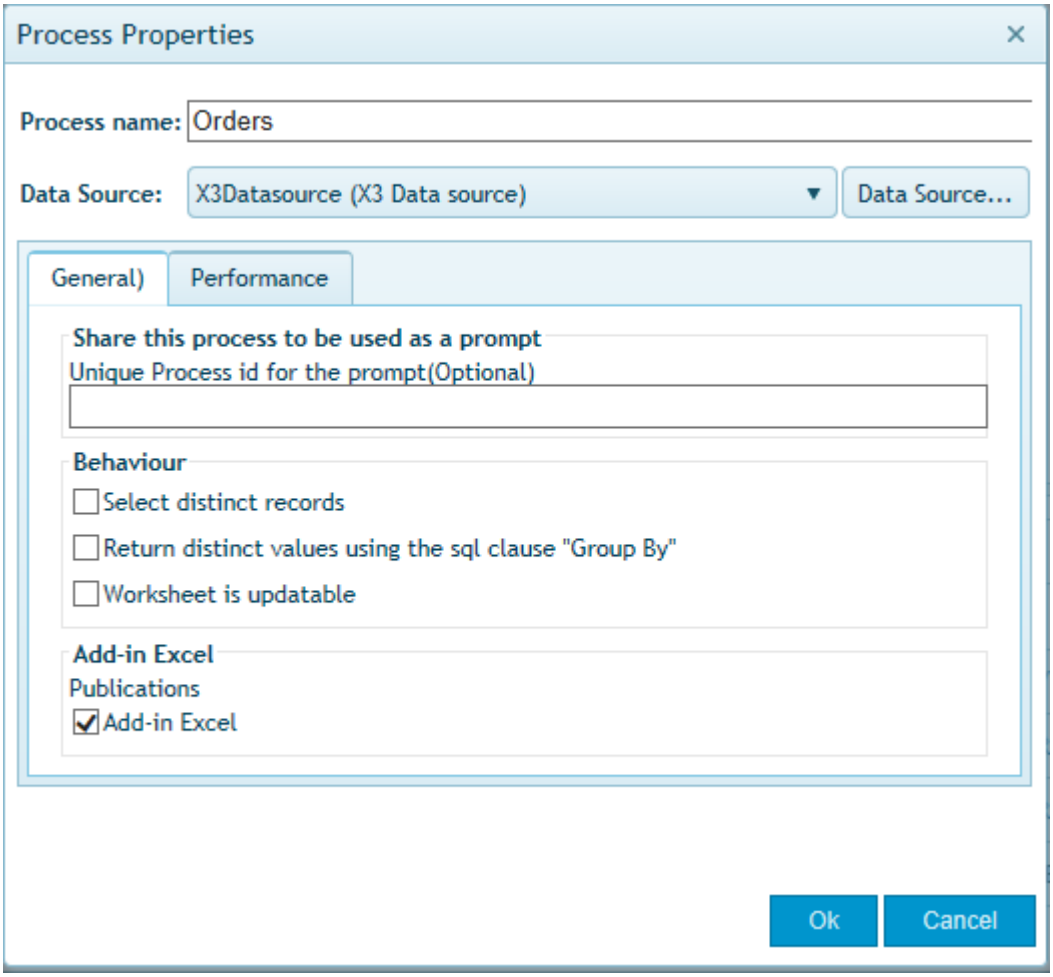
Edit Calculation	This is used to recalculate this specific column when any changes occur in one of the dependant columns. For example in the Forecast Total column (that represents the total of the 12 columns of Forecast Amount), you could recalculate the total column when any of the forecast values change in one of the 12 columns by adding a script (necResult=Forecast1+Forecast2+Forecast3….).	Refer to the Script Expression builder section
Advanced :		
(Source Field Name)	Database field name of the current column.	Cannot be changed.
(Source File Name)	Database table or view name for the current column.	Cannot be changed.
(Source File Alias)	Database table or view name for the current column (if a table or view has been added more than once).	Cannot be changed.
Data Type	Database field type. Automatically defaults from the database, but can be changed for calculated fields.	CHAR NUMERIC INTEGER DATE TIME DATETIME
Data Length or Decimal precision	If data type is NUMERIC, this property determines the number of decimal positions that will be considered when displaying data. If data type is CHAR, the property determines the field length. This automatically defaults from the database, but can be changed for calculated fields.	Numeric
Calculation	Allows for defining the SQL Calculation expression for calculated fields.	Script Expression builder

Where Clause Section

The 'Where Clause' section allows for entering a clause that allows for some filtering of the data for the whole process, which regular users cannot override on their views. This clause should be written in a language compatible with the Data Source of the process (for example if the Data Source is SQL Server, the Where clause should contain a statement in T-SQL language.

Process Properties

The general Process Properties can be set by selecting the 'Process Properties' in the File menu or by clicking on the button.



The following properties can be set:

- **Process Name**: Enter the name for this process.
- **Data Source Name:** Use this drop-down to select the data source name for this process.

General Tab:

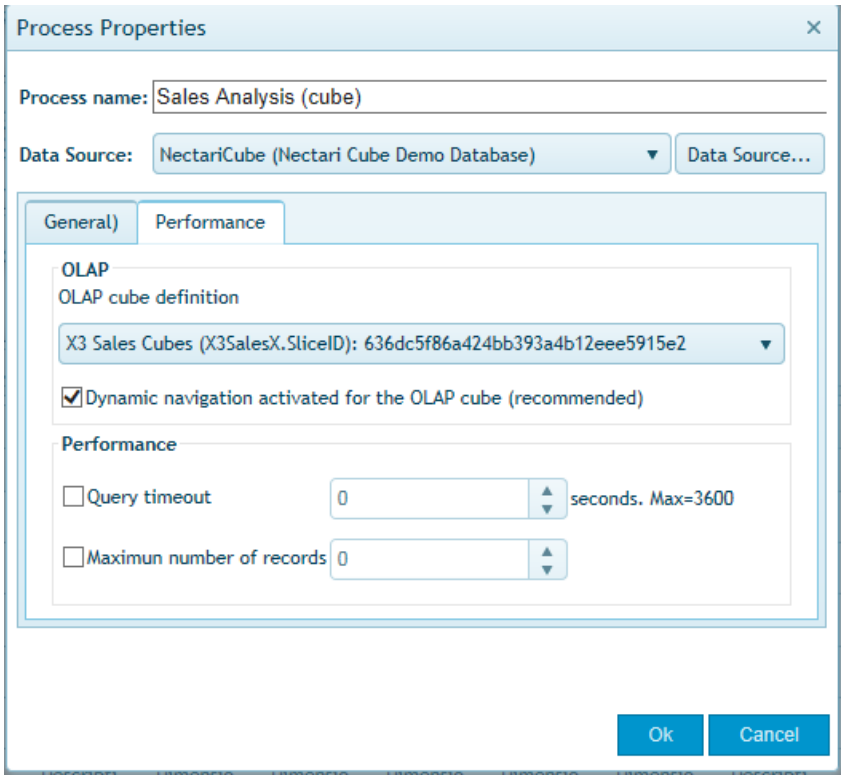
Share this process to be used as a prompt

- **Unique Process Id for the Prompt (Optional):** This information is optional. You may specify a unique Id for this process if you want to reuse its definition as a prompt for other processes.

Behaviour

- **Select Distinct Records**: When activated, all the duplicated rows will be removed. This is mainly used when a prompt is defined from a table where the list of values used for the prompt are not unique.
- **Return Distinct Values Using The SQL Clause "Group By"**: This option will return a distinct set of values using the "Group By" SQL syntax. In some database systems like DB2 the "Group By" is faster than the "Distrinct" that will do a table scan or force an index creation.
- **Worksheet Is Updatable**: SEI supports 2-way communication between the enterprise data and its views. This option is used to allow, at the process level, data entry for editable fields. If this option is not checked, editable fields cannot be updated. Note that only the fields from the fact table can be updated.
- **Excel Add-In**: Check this box if you want this process accessible from the SEI Add-In tool for Microsoft Excel.

Performance Tab:



OLAP

This section is only available if the fact table comes from an OLAP cube.

- **OLAP Cube Definition**: Select the OLAP cube defined in the OLAP Manager tool. If this process relates to one of these cubes, it will be automatically selected for you when you add an OLAP cube table as the fact table.
- **Dynamic Navigation Activated For The OLAP Cube:** It is recommended that this option is used (checked) if you always want SEI to analyze every request and to select the best data slice available according to each query request. If this option is not selected, the data from all the slices will be returned. If you un-check this option you must add a manual selection of slice in the Where clause of the process or, force the user to select a slice every time they access the data. We strongly recommend that this option be checked when you use an OLAP Cube.

Performance

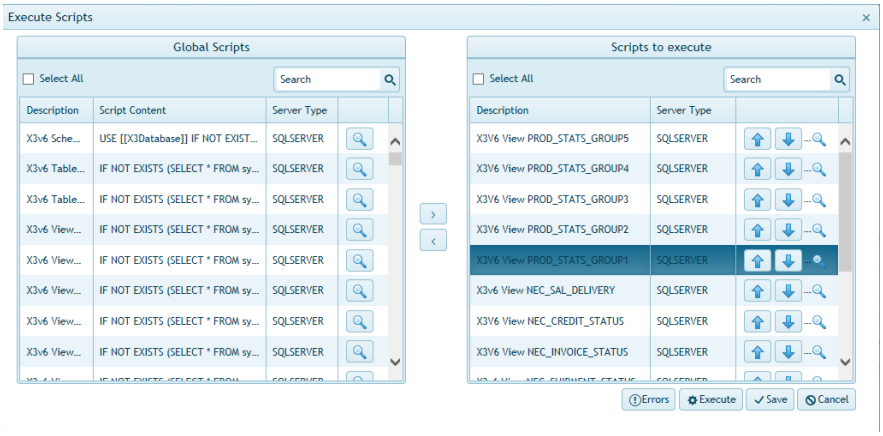
- **Query Timeout (DB2 only)**: The maximum number of seconds that SEI will wait for a query (related to a process) which will be running to extract data. This helps to prevent long and probably undesired queries from consuming resources (processor and disk). The query is cancelled if the timeout is reached. If this parameter is not specified, SEI will wait until the complete data is loaded. This option is working with DB2 data source only and will not have any impact on the other data source type.
- **Maximum Number Of Records**: The maximum quantity of records that can be loaded in any view of the process. If not specified, no restriction is applied.

Whenever desired, any changes done to a process can be committed by saving the process. This is done by selecting 'Save Process' from the File menu or by clicking on the button.

Process Scripts

The process scripts allow the link between a process and Global Scripts. When a process is using a custom SQL object (views, tables, stored procedure), a Global Scripts should be created in order to be able to generate this custom SQL object and should also be attached to this specific process. When the process will be exported, the Global Scripts related to this process will be exported as well. The scripts will be executed when the import of the process is executed.

The process scripts can be called from the menu "Tools" or by pressing the button in the toolbar.



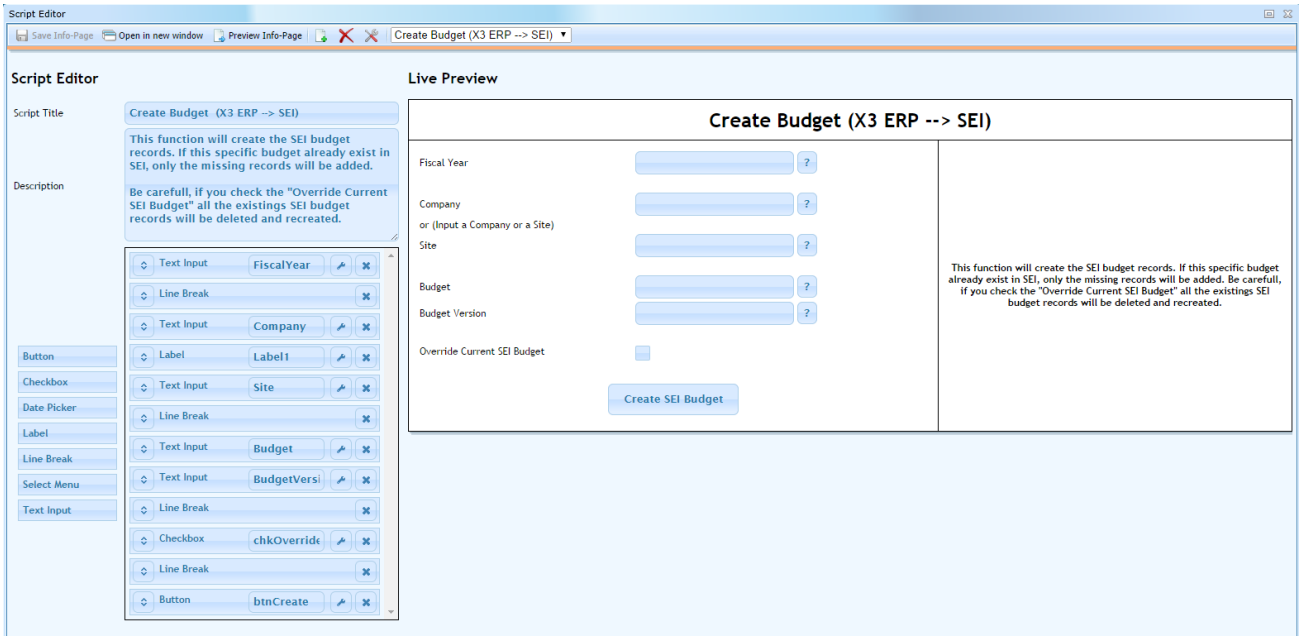
To add a Global Scripts to the list of "Scripts to execute", simply select the scripts from the list and click on the button.

You can preview the script by clicking on the search button .

You can also re-order the scripts that will be executed. In some cases the scripts need to be executed in a specific order (for example, the second script could use an object created in the first script). Use the arrow to change the order of the scripts.

The scripts can also be executed directly from this window. To execute the scripts press the "Execute" buttonEditing Info Pages

To edit an Info-Page, right-click on a process and select Edit Info-Page Scripts which allows for the creation and editing of controls and of scripts, such as in the example below:

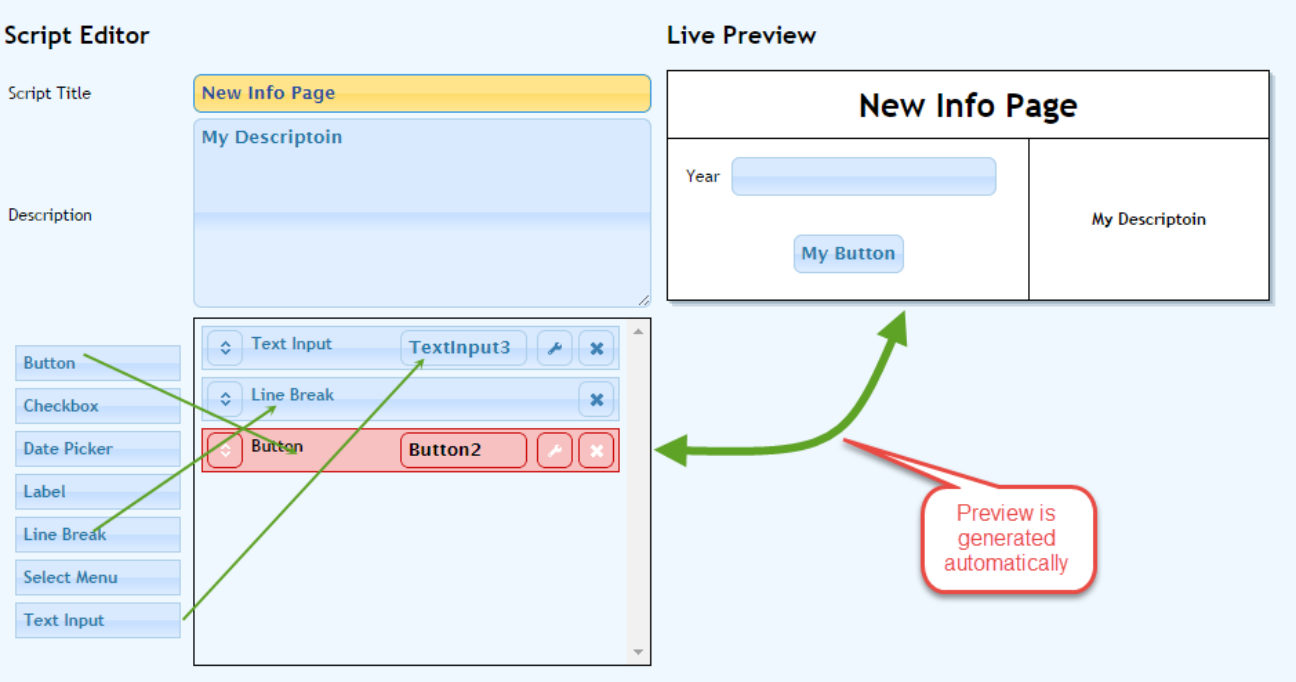


Once in the **Script Editor,** the user can click on the **Create New Script** button , or can select an existing script from the dropdown situated to the right of the Create New Script button, in order to edit it. The user also has the ability to **Delete the Current Script** and to manage the order in which scripts appear in the Info-Page by clicking on the **Manage Scripts** button .

The **Script Title** and **Description** determine what will appear above and to the right-hand side of the script respectively.

Within each script, several controls are available on the left side of the screen, which can be dragged and dropped within the script. They include Buttons, Checkboxes, Data Pickers, Labels, Line Breaks, Select Menus and Text Inputs.

In the example below a textbox has been added for the Year, a line break has been added to include a space between the Year and the next control and finally, a button has been added.



Once within the script, each control can have its relative position changed by clicking on the button and then dragging it to the desired spot.

A Control can be deleted from a script by clicking on the **Remove Control** button.

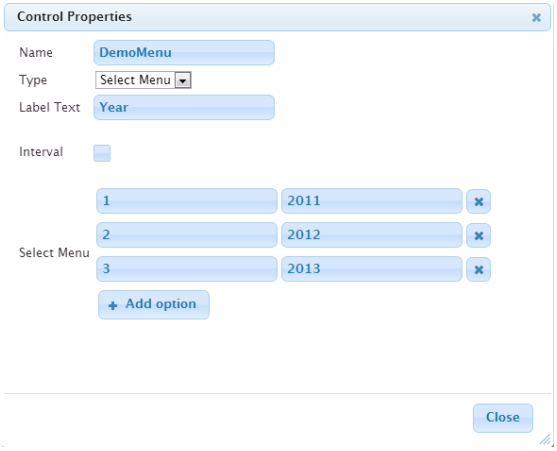
Each Control's properties can be accessed by clicking the button. Each type of control will have different properties.

List of properties available for the common controls:

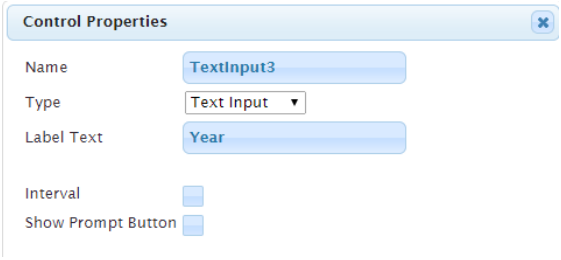
- **Name :** Defines the name of the controls itself. It can be used in the script executed by the button.
- **Label Text :** Text displayed for the control.
- **Interval :** Determines if only one value can be entered (not checked) or two values (interval).
- **Show Prompt Button:** Determines if we attach a prompt to the control
- **Select Menu :** Allows you to define the list of values that will be displayed in the "Select Menu."

Below are some examples of the Control Properties of a Selection Menu, a Textbox, a Checkbox and a Date Picker:

Selection Menu:

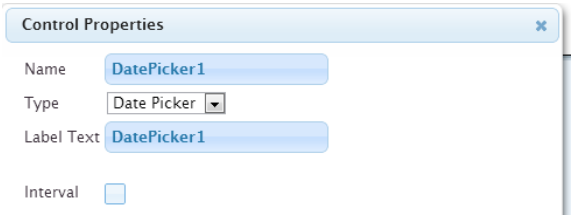


Textbox:



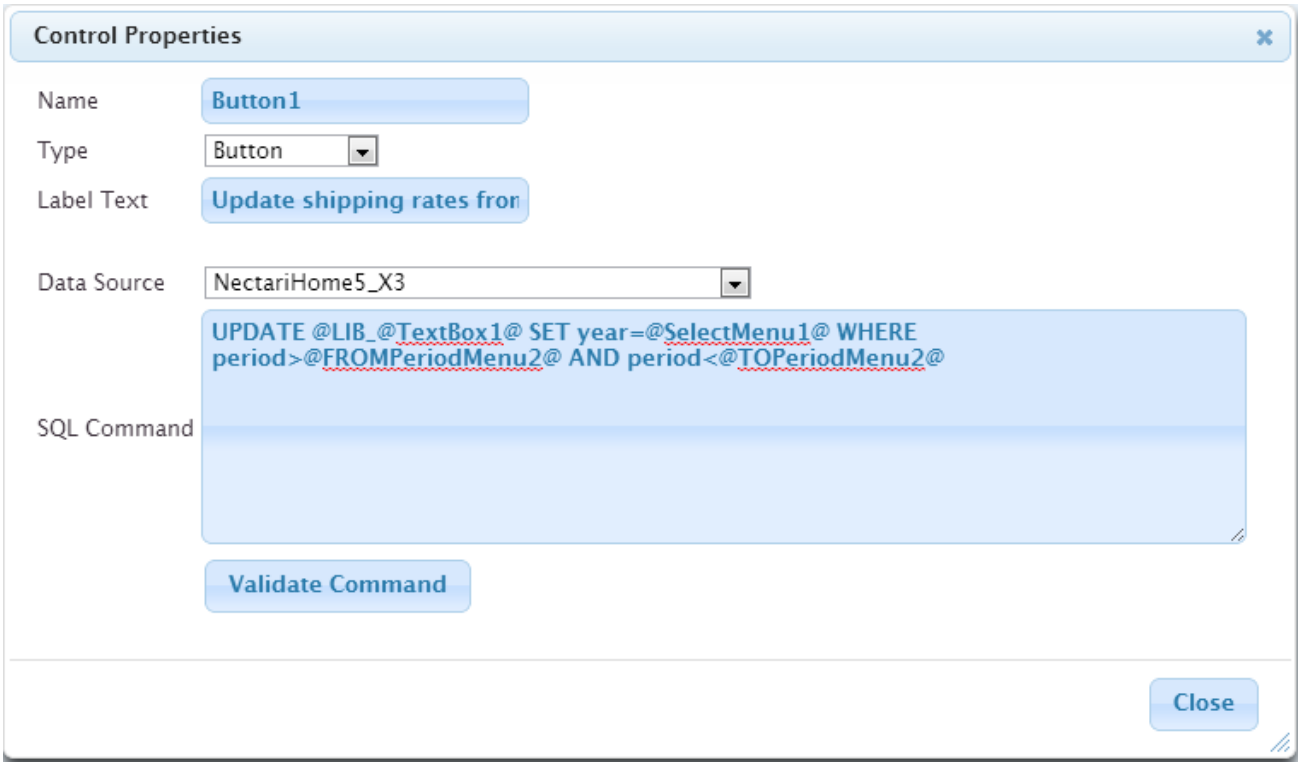
Checkbox:

Date Picker:



Button Control

A critical control is the Button. One of the properties of Button controls is the **SQL Command**, where the desired SQL Script can be configured. Within the SQL Script, the names of the various other controls in the Info-Page script can be passed as a parameter, by enclosing them in @ characters. In the example below, TextBox1, SelectMenu1 and PeriodMenu2 are controls in the script. The script will be executed in whatever database is specified by the Data Source selected in the **Data Source** dropdown. Please refer to the Administrator guide for information on how to configure Data Sources. It is important to click on the **Validate Command** button after making changes, to ensure that the SQL script does not contain errors.



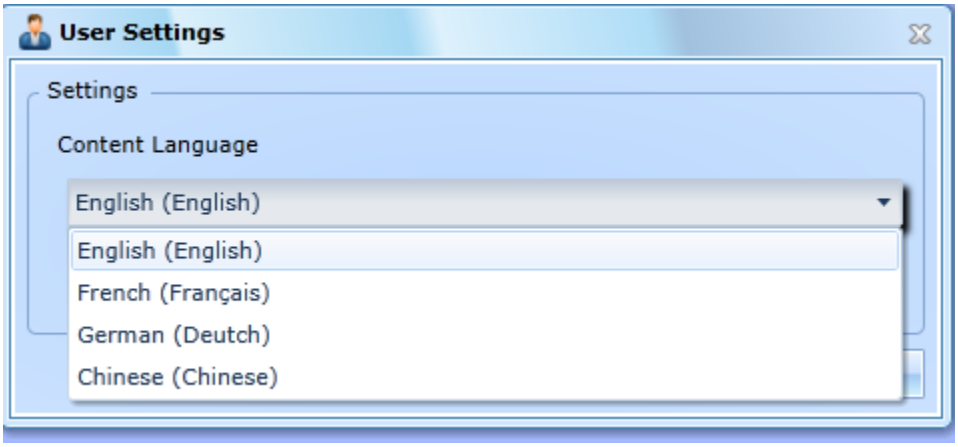
It is also possible in the SQL Command to use "stored procedures" and pass parameters. (ex: EXEC @LIB_STOREDPROCABC @Year@, @Period@, @Budget)

At any point, the user can see a preview of the Info-Page by clicking on the Preview Info-Page button, which will open up the preview in a new tab within the browser.

To save changes to the Info-Page, the Save Info-Page button can be used. Save Info-Page

Translating Processes

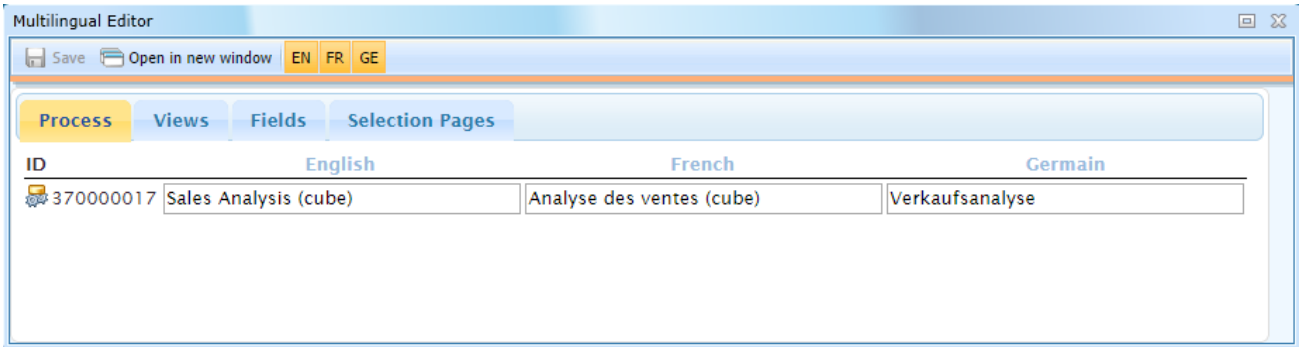
SEI offers users the ability to work in different languages. For now, the toolbar and various menu options are only in a few languages (English, French, Spanish, German, etc.) and they depend upon which language is selected in the login screen. However, the folders and the content of the processes and the various Views, Fields, Selection pages and Application links can be translated in other languages and will be displayed in whatever language the user picks for the **Content Language** in the **User Settings**, which is available from the File menu.



The languages available for selection as the Content Language is maintained in the "Manage Languages" option in the administration tab.

To translate a process, right-click on the desired process and choose the **Translate Process** option from the context menu. The user can then type in a translation in the various available languages, for each section.

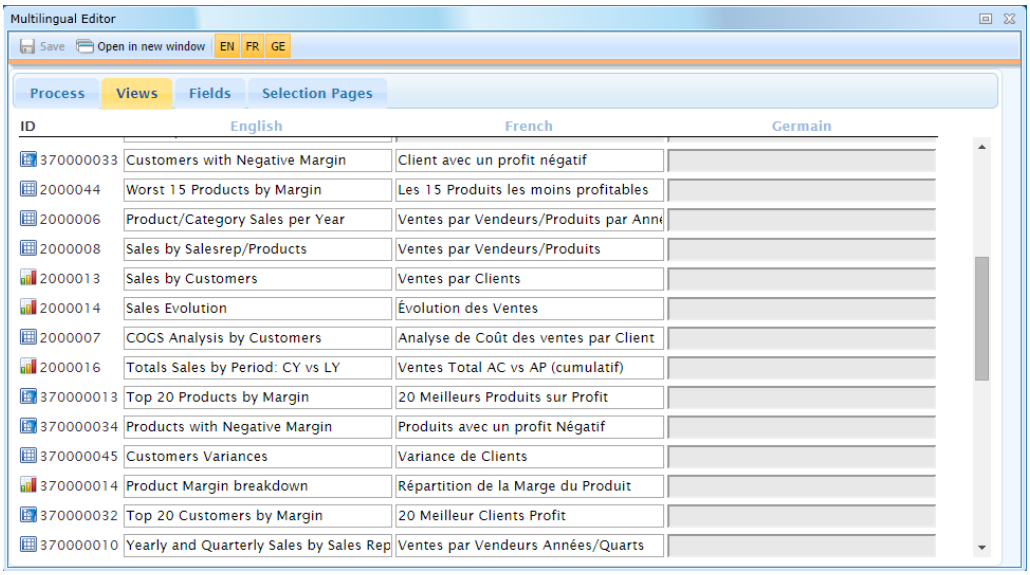
Process Translation



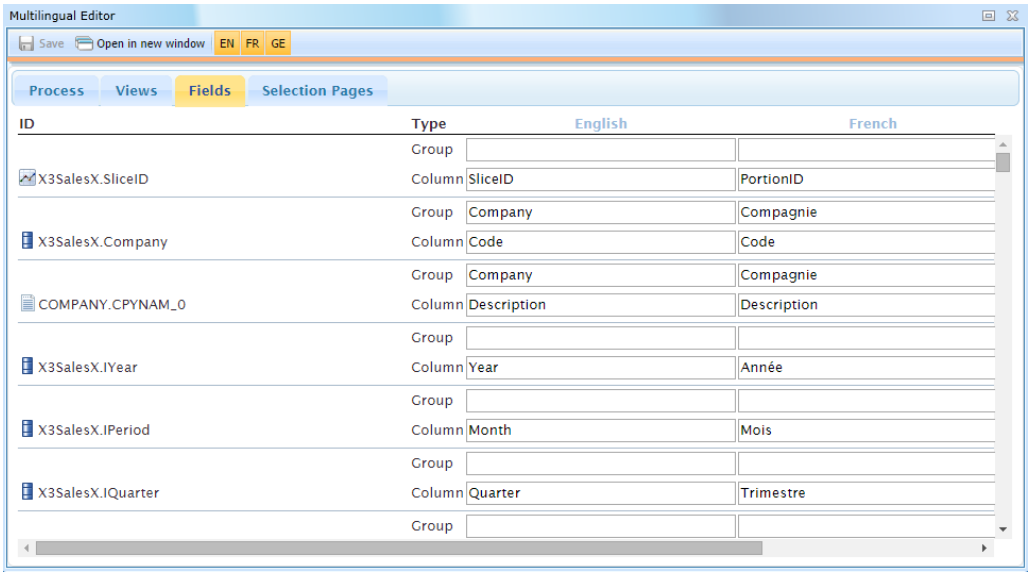
Languages available for translation can be toggled on or off (which will show or hide them from the translation window), by clicking on the respective language code button at the top of the Translations screen:

Once the desired translations have been filled in, they can be committed by clicking on the Save button.

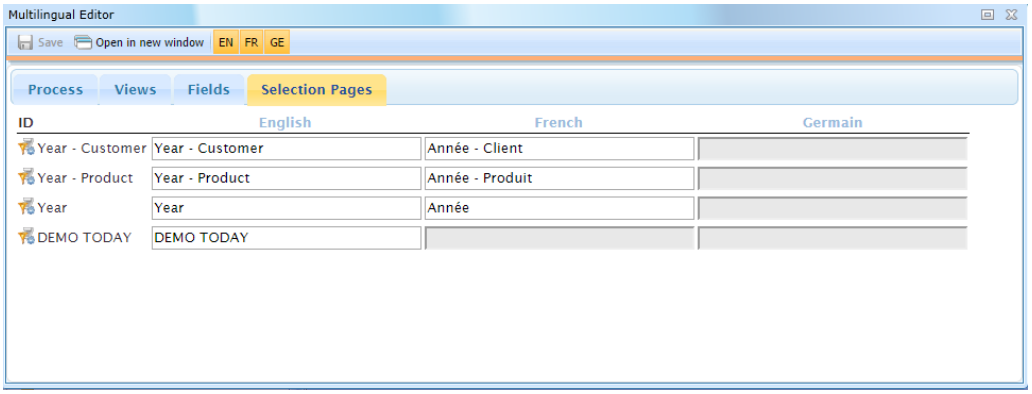
Views Translation.



Fields Translation



Selection Page



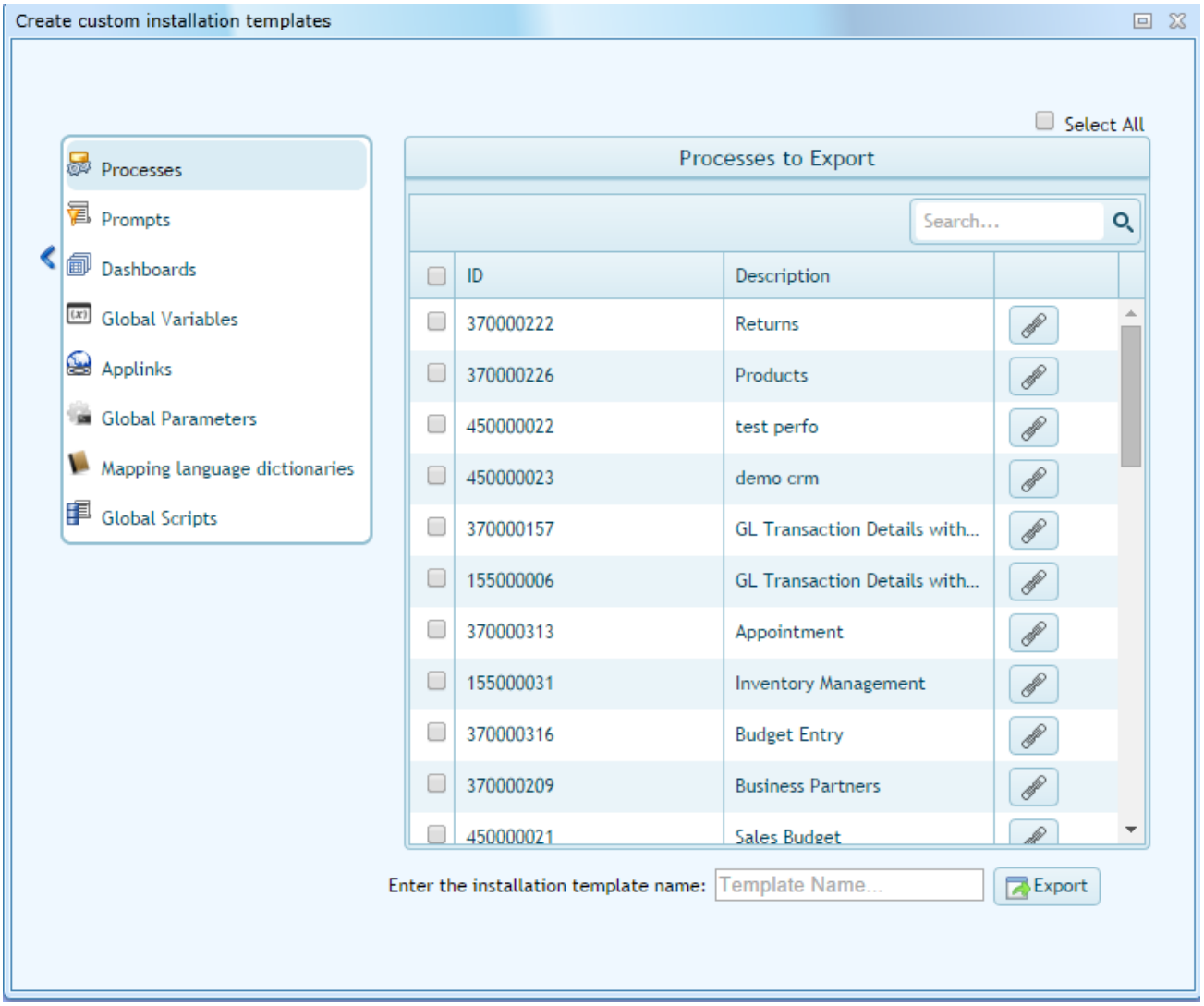
Templates

Templates are an important part of the installation process (refer to the installation guide). Also, on some occasions there may be a need to transfer SEI processes from one central point to another, or to back up the existing processes before making extensive changes. SEI offers administrators the option to create a template that can be exported to a physical file. This file can then later be imported into another SEI system, or imported in the same central point as a way of restoring the system to its old state.

Create Custom Installation Templates

A custom installation template can be a subset of any SEI objects (processes, views, prompt, global parameters, etc..). Once created, the file can be used to import and create this object in any SEI installation.

To create a custom installation template, go in the Administration tab and choose the option from the drop-down menu.



The window is divided in two main sections. On the left, we have a menu with the list of all the different object types and on the right, we have all the objects related to the selected object type.

The "select all" option will automatically select all the objects from all the object types. This option can be used when you want to create an installation template that contains everything.

You can select any objects from any objects type. By default, when you select a process, all the related objects will be selected (views, prompts, etc).

The icon will display all of the related objects.

Once all the desired objects are selected, enter a template name at the bottom of the window and press the "Export" button. You will then be prompted to enter the location where you want to save the exported file.

Manage Import Templates

This option is used to see all the installed templates and will let you remove any objects by selecting the object and pressing the "Uninstall" button.

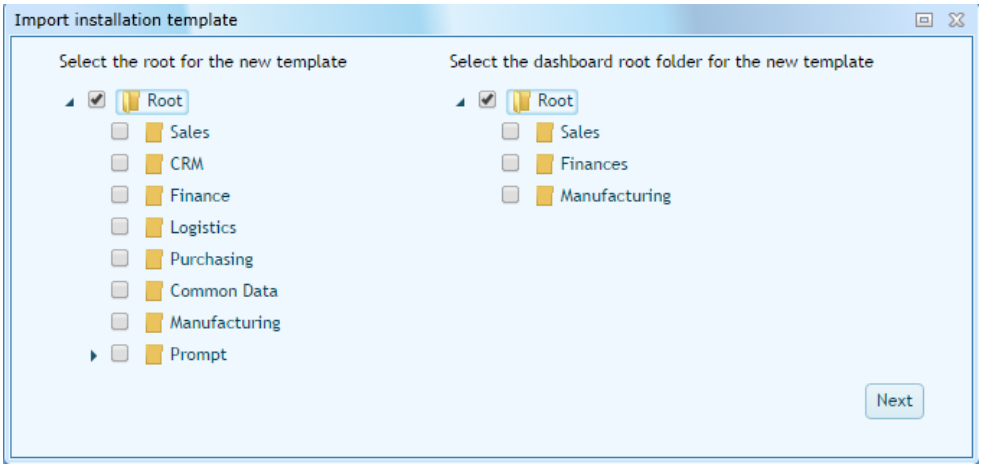
To Manage the Import Templates, go in the Administration tab and choose the option from the drop-down menu.

The button will display the execution report related to the installation of this specific object.

Import Installation Template

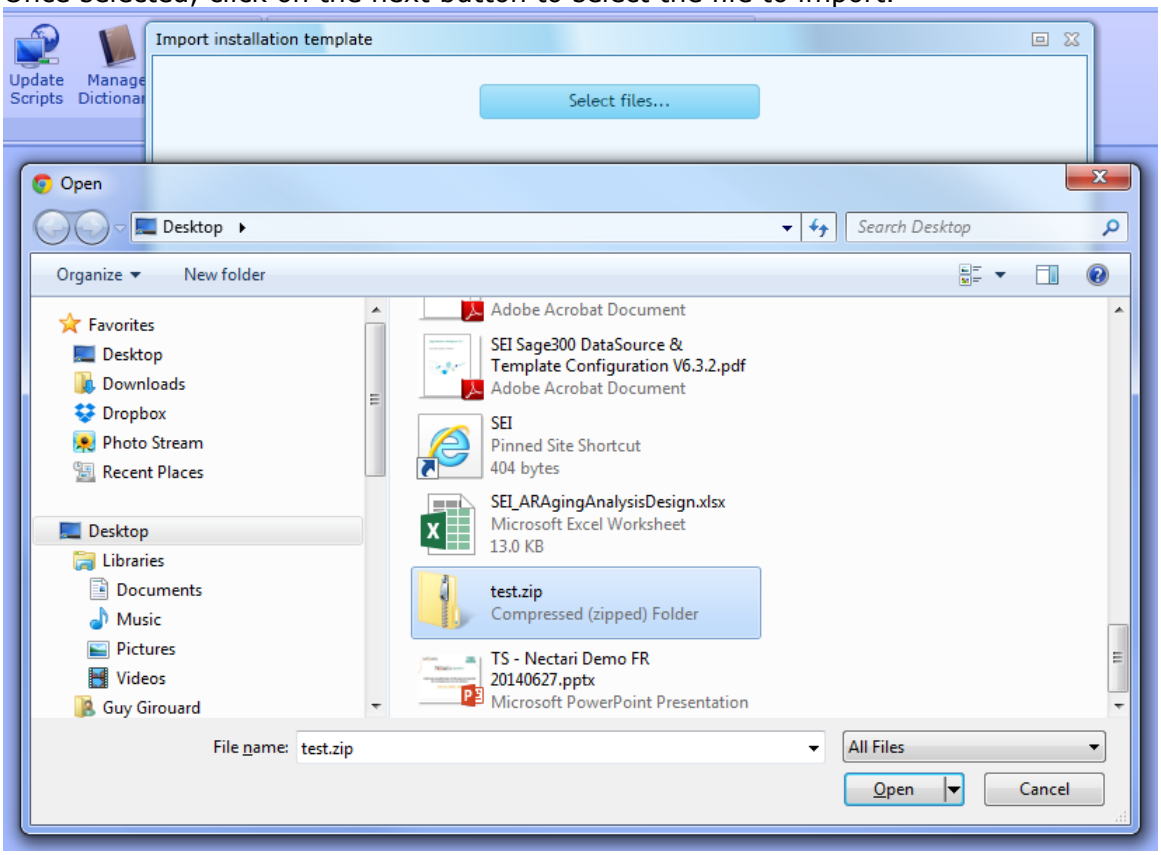
This option is used to import new templates into your current environment or to update existing templates with a new version.

To Import an Installation Template, go in the Administration tab and choose the option from the drop-down menu.

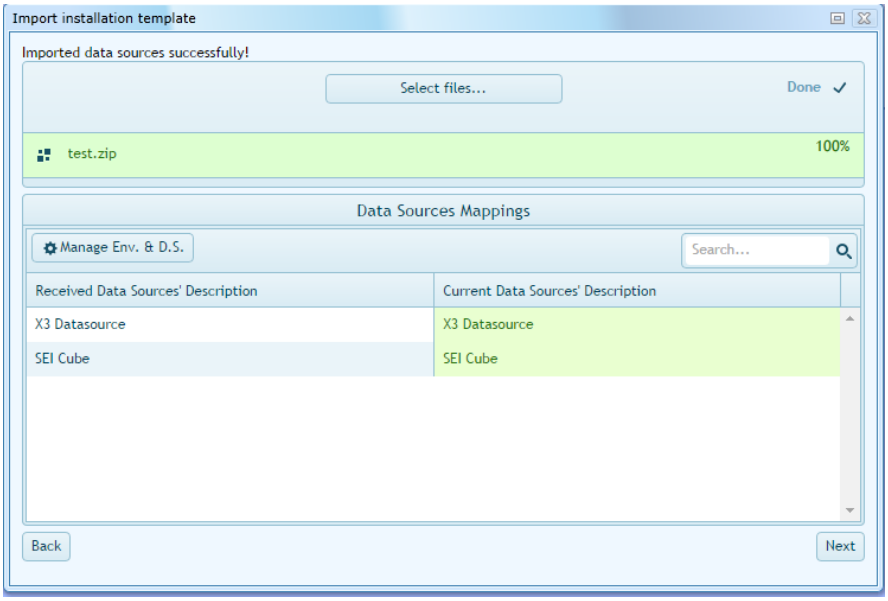


The first window that will be displayed will ask you to choose the root folder where the templates will be created if the matching folder does not already exist in your environment.

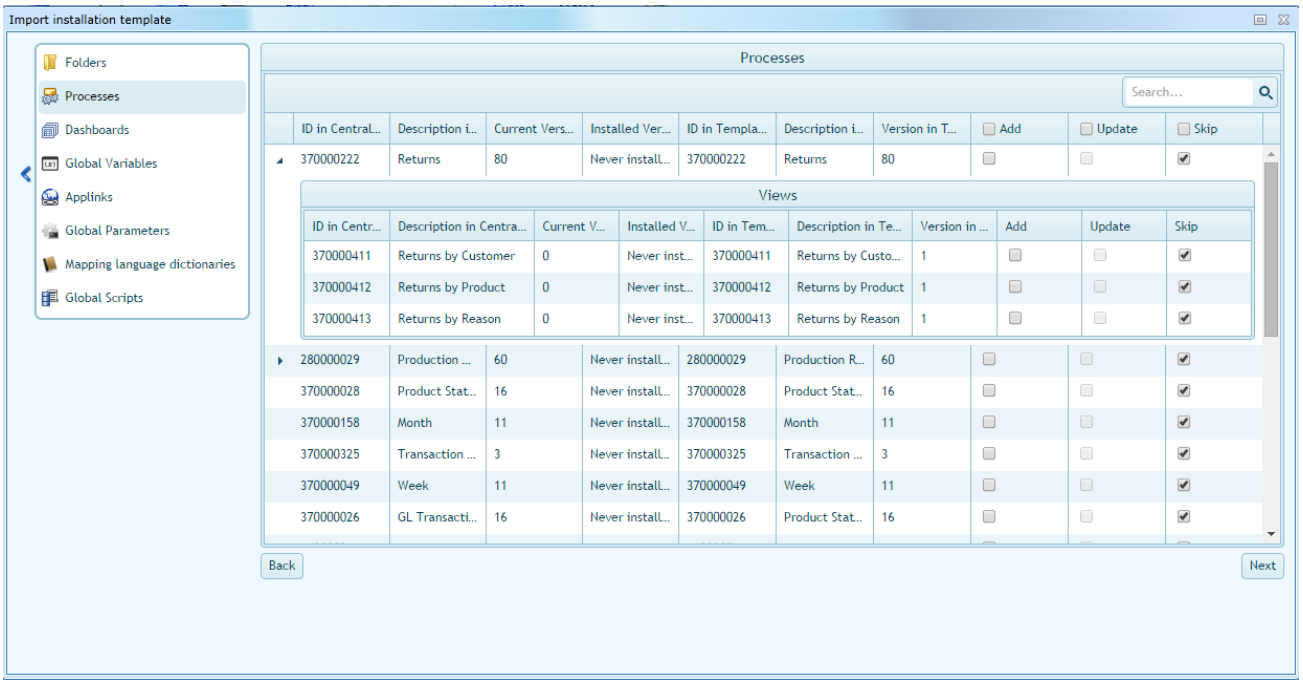
Once selected, click on the next button to select the file to import.



The next window will allow you to map the data source from the imported templates to your data source.



Map the data source and press the next button.



This window will display all the objects that were included in the installation template. For each object you can choose if you want to import them as a new object, skip them or update them.

Folder

The folder section will display all of the imported folders and also the matching folder from the central point if there is one. You will have to choose if you want to keep the folder name like it is in your central point or if you want to use the new name.

Processes
The Processes tab will show all the processes included in the installation package and match them with the existing processes if possible.

Additional information on the processes like the current process version, the version installed previously and the imported process version will be displayed to you. This way you will compared the imported version number with the last imported version number as well as the current version of the process. These information will tell you if the imported process is more recent than the current process or if the process has been customised.

An update of the process will be possible only if the imported version is higher than the existing version.

You can also choose to "add" instead. This option will create a copy of the process and keep the original process intact.

You can also expand the process to see all the views included in the process and choose if you want, to skip, update or add the views the same way.

Dashboard
The Dashboard tab will show all the dashboards included in the installation package and match them with the existing dashboard if possible.

You can also see all the version numbers the same way as the processes.

Other objects
The other objects tabs will display the list of the respective objects that are included in the installation templates and will match them if possible with the existing objects in your central point. You can choose to skip, update or add as well.

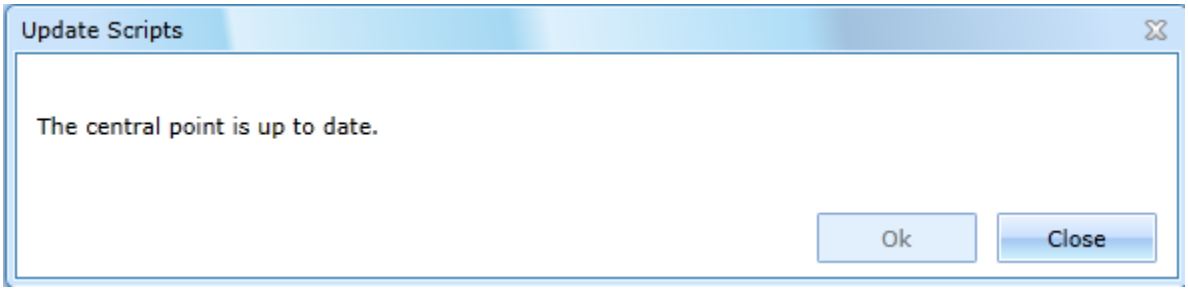
The add option will only be available for non-existing object.

Update Scripts

On some new releases an update script will be required. In these case when the administrator logs in SEI for the first time after the upgrade, the Update Script window will be automatically prompted to ask the administrator to update some application scripts.

If the administrator skips this step, it is always possible to re-open the window from the Administration tab by pressing the Update Script button

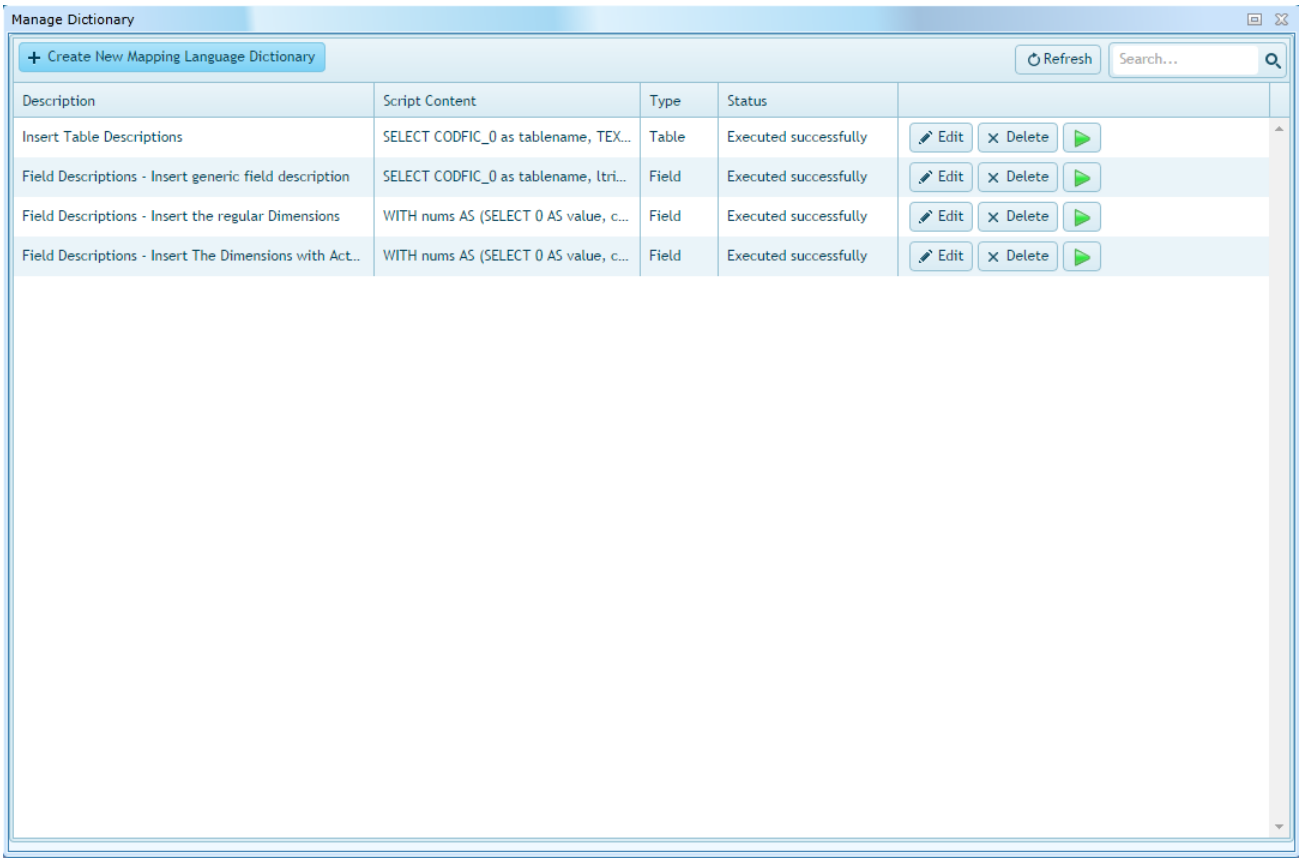
The window below will be displayed and show the status of the central point. If the central point is not up-to-date it is possible to run the "Update Script" by pressing the Update button.



Manage Dictionary

The Manage Dictionary option allows the definition of scripts that will update the SEI internal dictionary with external dictionary. The internal dictionary is used to store the description of the tables and fields in multiple languages.

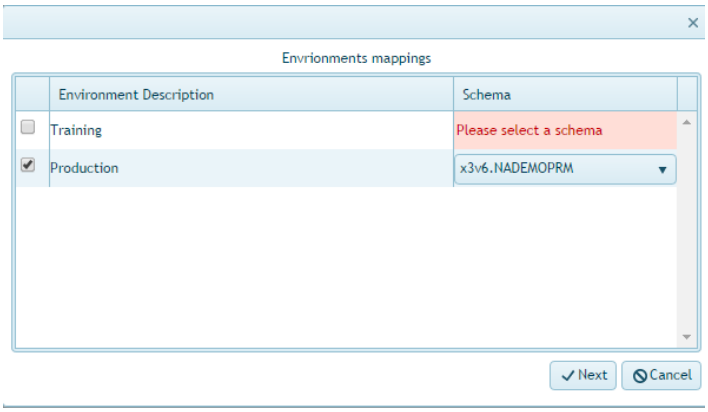
The Manage Dictionary can be called from the administration tab by pressing the button in the toolbar.



The Manage Dictionary window will display all the scripts already created, and allow the user to Edit, Delete or run a script.

To run an existing script press the "Play" button first to get the Languages Mappings window.

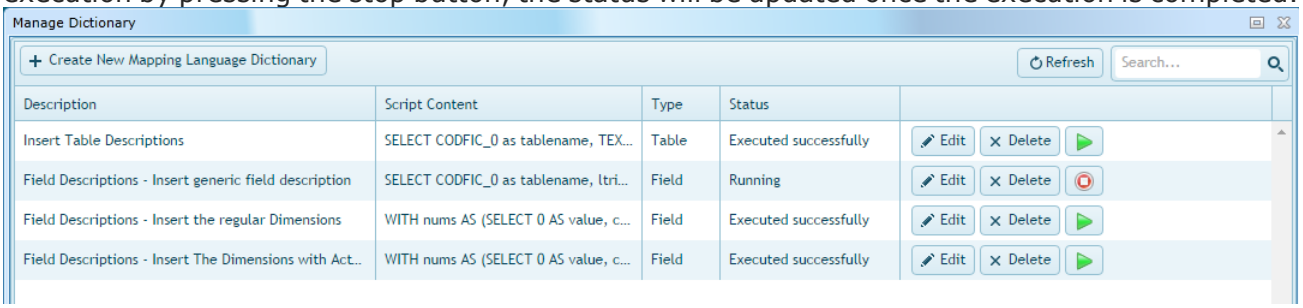
In this window you can map an SEI Language with the Source Language that is probably not set up the same way as SEI (as you can see in the example above). Once done, you can press the "Next" button to proceed with the selection of Environment and the selection of the Schema.



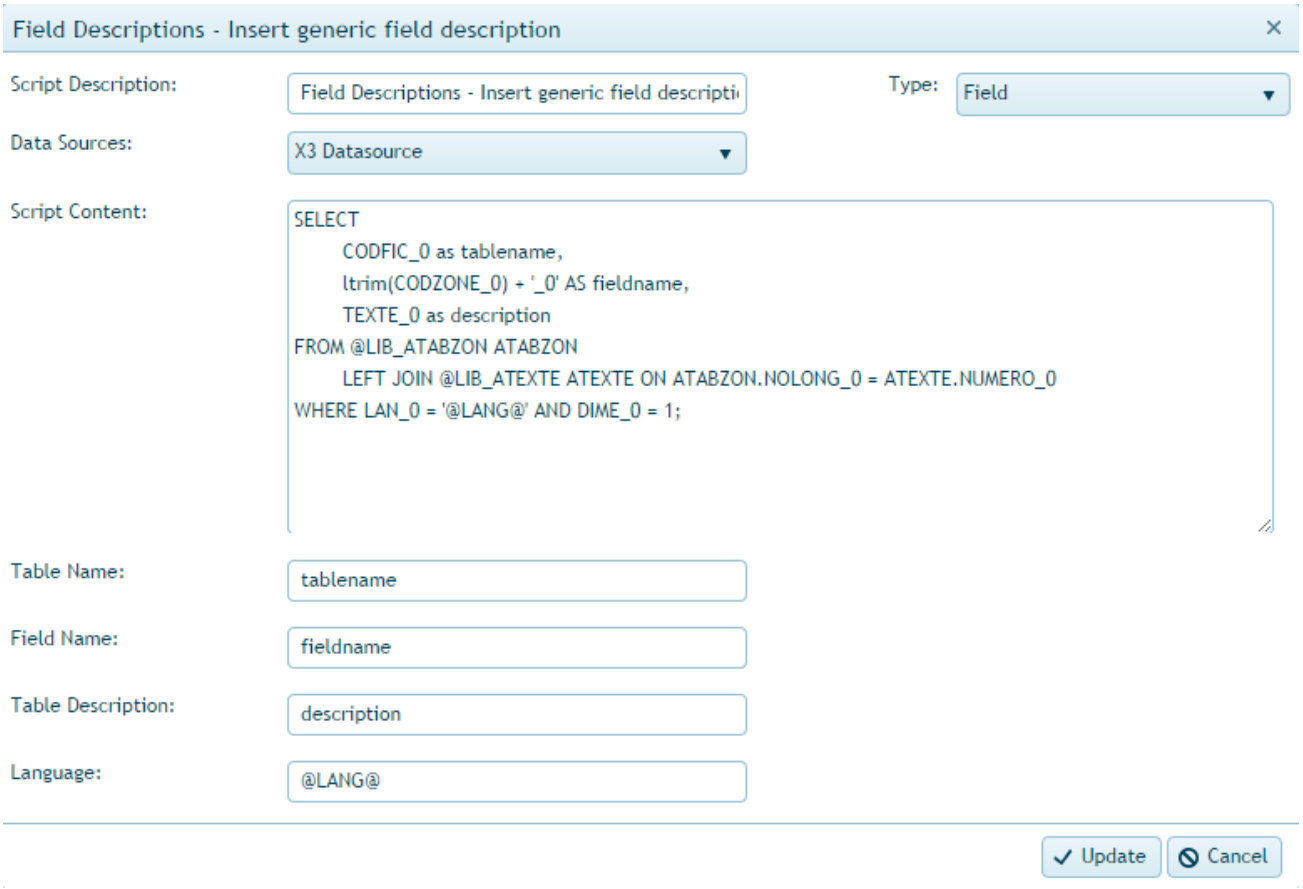
The schema selected should be the schema related to the description of tables/fields that you will retrieve.

Finally, you press the "Next" button again to execute the script.

The script will be run in batch as it could take a minute or two. It is possible to cancel the execution by pressing the stop button, the status will be updated once the execution is completed.



To create a new script you can press the button “Create New Mapping Languages Dictionary”.



Script Description: Description for the current script.

Data Sources: Source of the data used to execute the script.

Type: The type could be Table or Field. The Field type is use to retrieve the description of the field inside a table. The Table type is use to retrieve the description of the tables.

Script Content: SQL statement that will be used to retrieve the required information from data source.

Table Name: The name of the column that is coming from the SQL script that will contain the table name.

Field Name: The name of the column that is coming from the SQL script that will contain the field name.

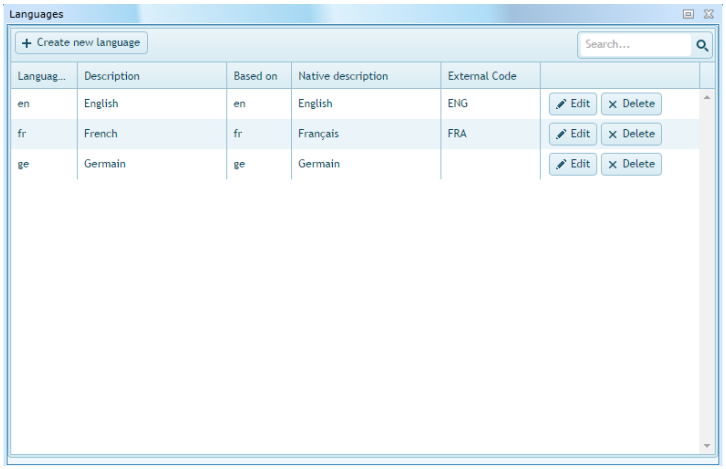
Description: The name of the column that is coming from the SQL script that will contain the description of the table or the field.

Language: The dynamic parameter used in the script that will be replaced by the language entered in the execution mapping language window.

Manage Languages

The Manage Language option will allow the administrator to configure the list of languages available to the Users for the content of the application.

The Manage Dictionary can be called from the administration tab by pressing the button in the toolbar.



To add a new language, simply click on the button "Create new language".

Code: The language code.

Description: The description of the language.

Native description: The description of the language in the "Native language".

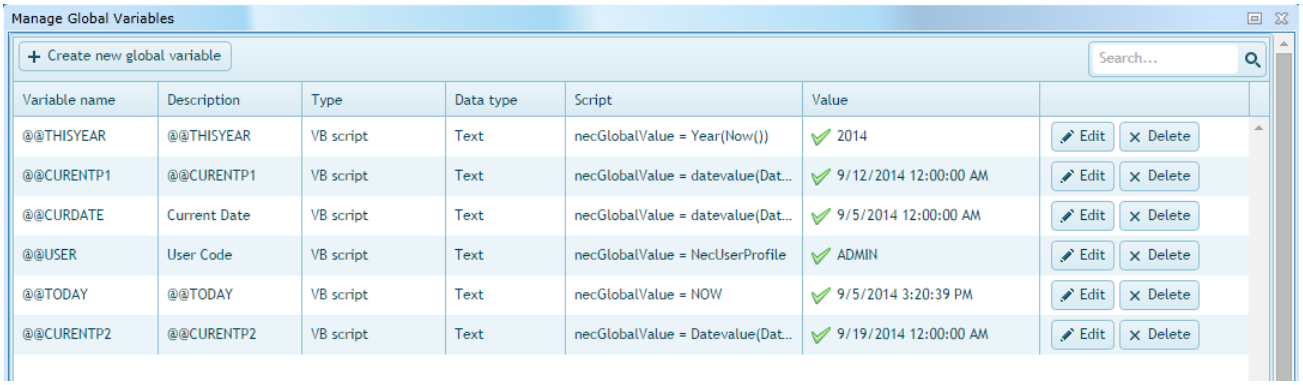
External Code: The language code of the external application (ex: ENG for English in Sage ERP X3). The external code will be usable as a parameter in different places in SEI. An example would be the "Joins on specific values" in the process designer where you will be allow to join tables based on the current languages of the user to dynamically retrieve data in the proper language.

Base on: If required, enter the base on language. If no description exists in the dictionary for the current language selected, SEI will retrieve the description from the "based on" language. With this option you could have the generic language "en" for English, create an "en-ca" for any translation that is specific to Canada and only translate what is specific in the "en-ca".

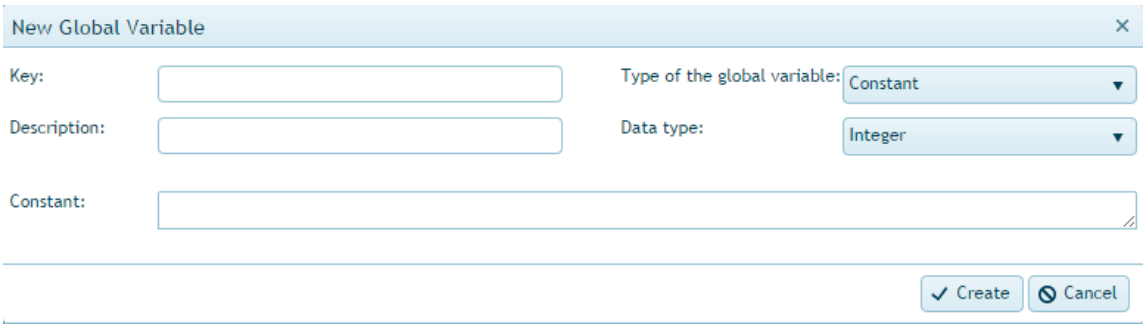
Global Variables

Global variables are used to globally define a variable that will store a value that will be hardcoded or dynamic based on a script. The value can later be retrieved and used in multiple places in SEI (filters, column heading, selection pages, etc.)

The Global Variables management window can be called from the Administration tab by pressing the button (x) in the toolbar.



To create a new global variable, click on the button "Create new global variable"



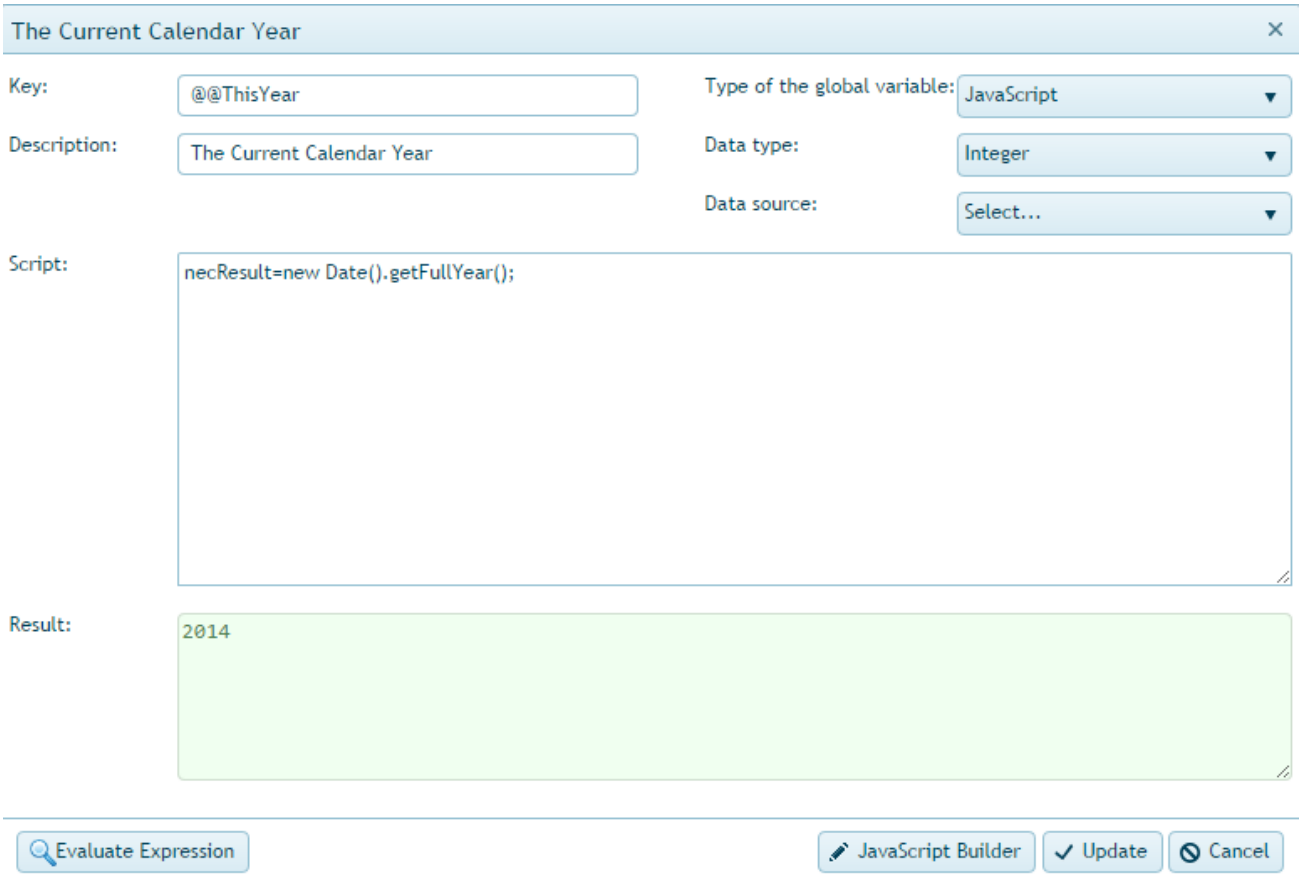
By default, the type of global variable will be Constant, you have the choice between Constant (hardcode value) and JavaScript (dynamic value).

In both cases you can enter a key and a description to identify your global variable.

You also need to select the proper Data type for your value.

The constant value is a hardcoded value.

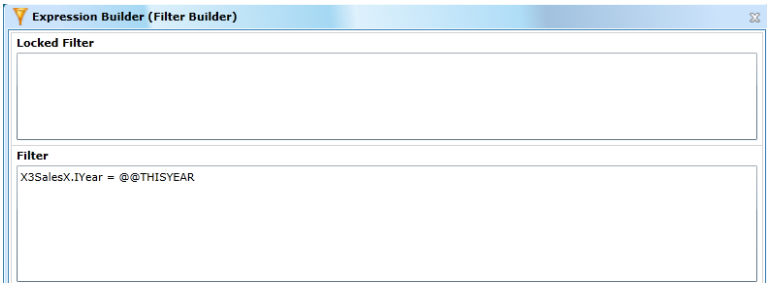
When you select the JavaScript type, the window layout will change to let you enter more information.



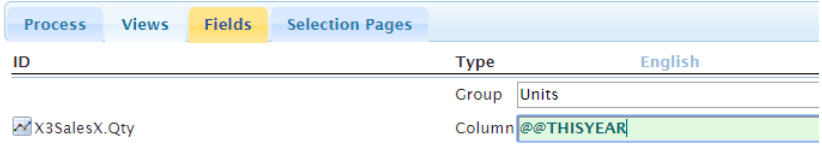
You can manually enter the Script or use the JavaScript Builder to build the script.

The Evaluate Expression will execute and evaluate the script and give you the result. You can use this option to test your script.

Example #1: You could use this global variable in the filter.



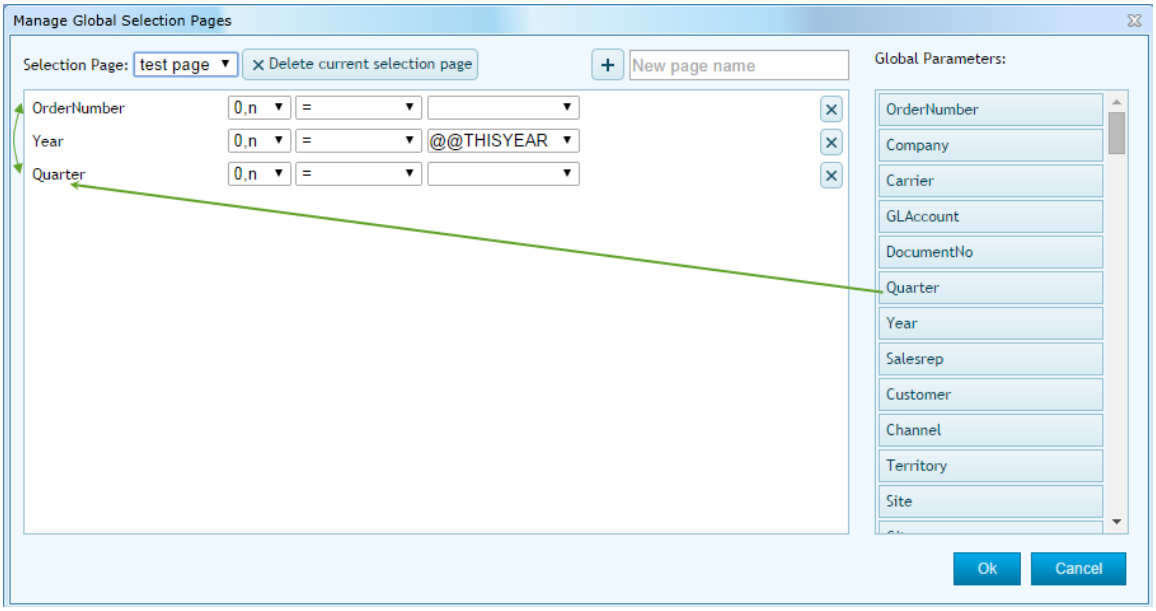
Example #2: You could use this global variable in the translation as a column heading.



Manage Global Selection Pages

The Manage Global Selection Pages allows the definition of a "Selection Page" in combination with the "Global Parameters" in order to have a selection page that can work globally in the application. For now, these selection pages will be used within the Dashboards only, but in a future release they will be usable across the solution. A selection page is used to filter the data displayed in the current view.

The Global Selection Pages window can be called from the Administration tab by pressing the button in the toolbar.

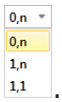


Selection Page (drop-down): Drop-down to select the "Selection Page" to maintain.

New page name (textbox): To create a new selection page, enter a name in the textbox and press the + button.

Global Parameters: This is a list of all the global parameters available. You can drag and drop any global parameters from the list to the left section to add criteria to the selection page.

You can easily re-order the parameters by drag and dropping the rows in the list.

Each selected field has an option to define whether it is mandatory or not with 

. Option "0,n" means that a minimum of zero values can be entered for that field and a maximum of "n" (any number). Option "1,1" means only one value MUST be entered, while option "1,n" means at least one or many values must be entered. "1,1" and "1,n" determine **mandatory** values for the selection page.

Each selected field can have a default value specified in the text box

. The default value can be a constant or a global parameter variable code. To **remove** a field from the list, just click the "x" button that appears beside the textbox of the field.

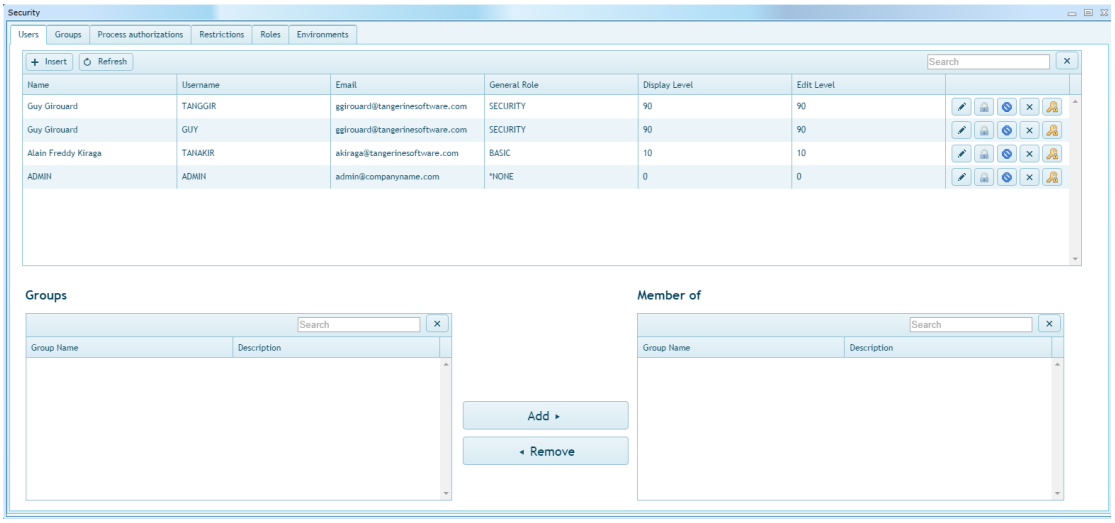
Manage Security

SEI has its own security system that needs a username in order to access the navigation interface of SEI.

The Global Selection Pages window can be called from the Administration tab by pressing the button in the toolbar.

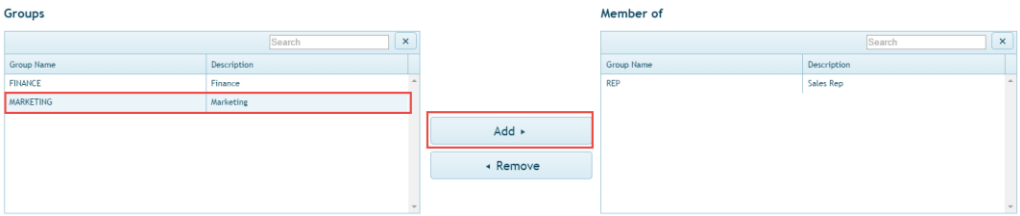
The security window is composed of 6 main tabs, by default the "Users" tab will be opened.

Users

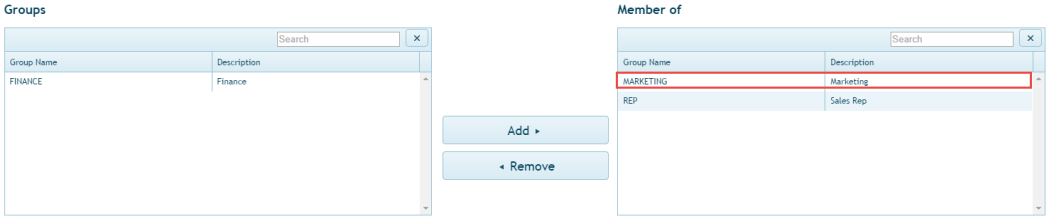


A list of users will be displayed and will provide the main information about each user. The bottom section will display the groups that the selected user is "Member of".

To add a user to a group, simply select the groups (you can select more than 1) and press the add button.



The group will be added to the list.

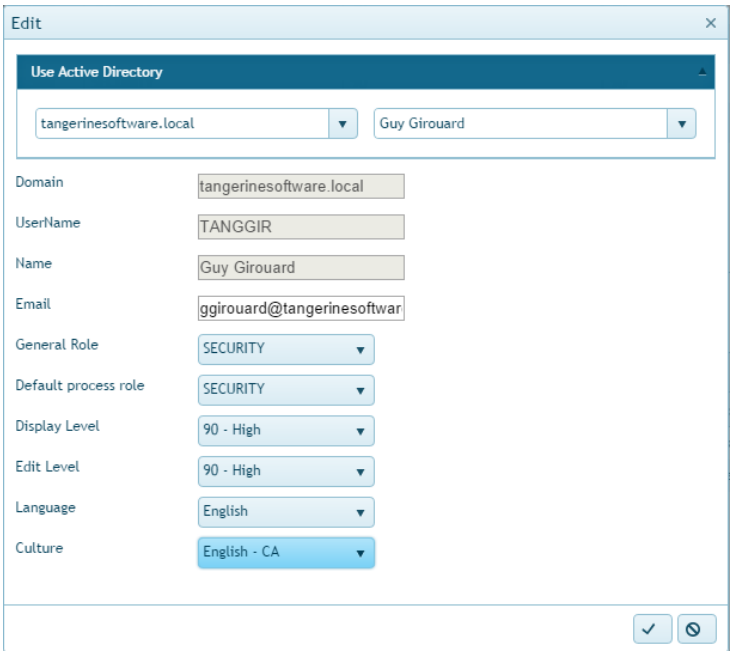


To unlock a user press the button. A user will be locked if they try to login 5 times with the wrong password.

To activate/deactivate a user press the button.

To reset and send the password of a user, press the button.

To create a new user click the button "Insert".



Use Active Directory: It is not mandatory to use the active directory. You have the choice between creating a regular user where the password will be maintained directly inside SEI or to use an Active Directory user where the password will be maintained in Windows.

Domain: In the case of an "Active Directory" user, you will need to choose a domain from the drop-down.

UserName: In the case of an "Active Directory" user, you will need to choose a user from the drop-down, otherwise, just type the username.

Name: In the case of an "Active Directory" user, the name will come automatically, otherwise, type the name of the user.

Email: In the case of an "Active Directory" user the email will come automatically if defined, otherwise type the email.

General Role: Select a role from the drop-down. Please refer to the "Roles" section for more information.

Default Process Role: Select a role from the drop-down. Please refer to the "Roles" section for more information. The role selected at this level will be used as the default role for a process when we authorize the user to access a specific process.

Display Level: Choose the level of authorization required to view the columns of a process. This will be the maximum level authorized for this user. Please refer to the section "Design Process" for more information on how to change the columns display level.

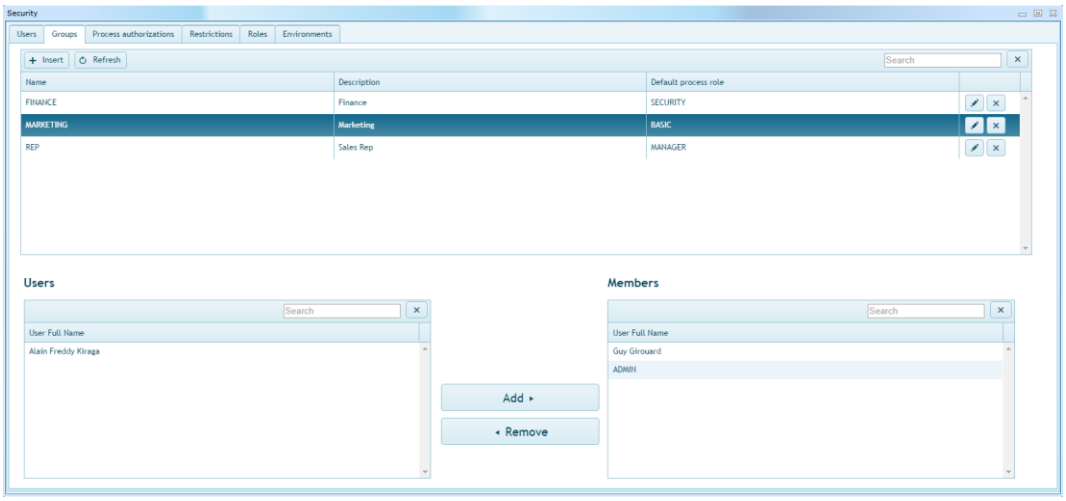
Editable Level: Select the level of authorization required to edit the columns of a process. This will be the maximum level authorized for this user. Please refer to the section "Design Process" for more information on how to change the columns edit level.

Language: The language of the content of SEI by default for this user, The user can change the language himself in the user settings. The language setting is also used by the distribution module, when a massive distribution is done to multiple users to generate the result in the proper language.

Culture: The culture of the content of SEI by default for this user. The user can change the culture himself in the user settings. The culture setting is also used by the distribution module when a massive distribution is done to multiple users to generate the result in the proper culture.

Groups

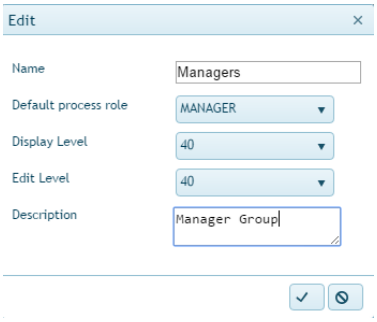
It is strongly recommend to create groups in order to maintain the security base on these groups instead of on individual users. You can create as many groups as required and a user can be in multiple groups.



A list of groups will be displayed and show the main information about each group. The bottom section will display the users that are "Members" of the selected groups.

To add a user to a group, simply select the users (you can select more than 1) and press the add button.

To create a new group, press the "Insert" button.



Default Process Role: Select a role from the drop-down. Please refer to the "Roles" section for more information. The role selected at this level will be used as the default role for a process when we authorize the group to access a specific process.

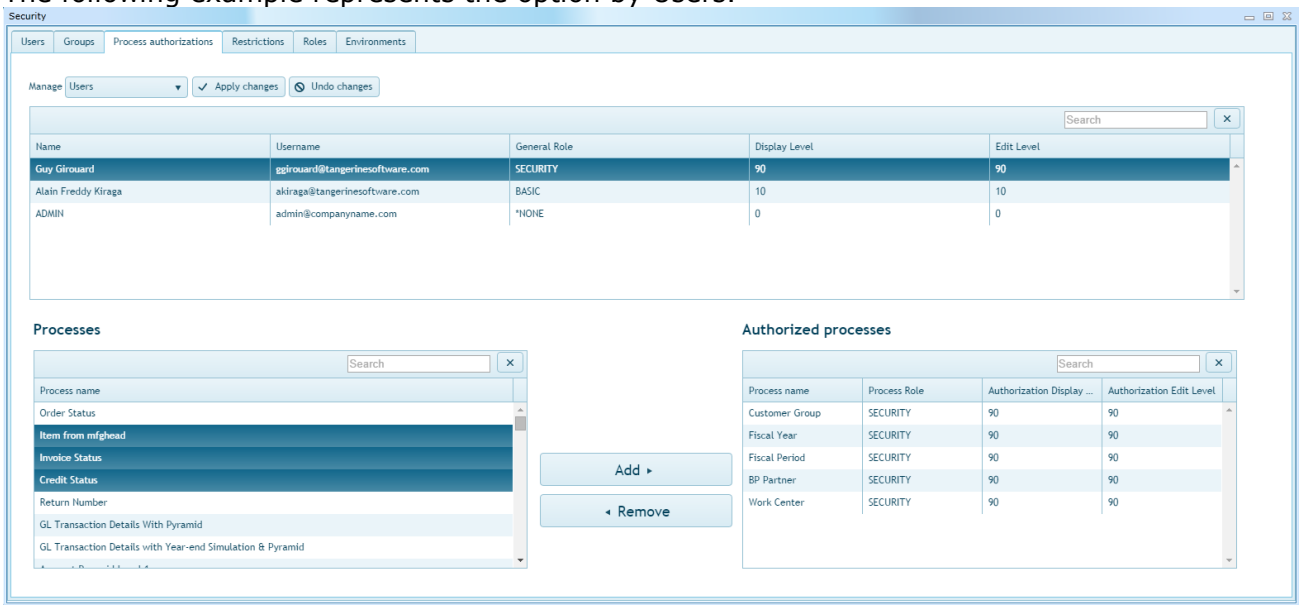
Display Level: The level of authorization required to view the columns of a process. This will be the maximum level authorized for this user. Please refer to the section "Design Process" for more information on how to change the columns display level.

Editable Level: The level of authorization required to edit the columns of a process. This will be the maximum level authorized for this user. Please refer to the section "Design Process" for more information on how to change the columns edit level.

Process Authorization

This option is used to grant access to the processes, to groups or to users. There are 3 different ways of adding authorization to a process and you can flip from one way to the other by changing the drop-down value "Manage". You can decide to manage the authorization by users, groups or processes.

The following example represents the option by Users.



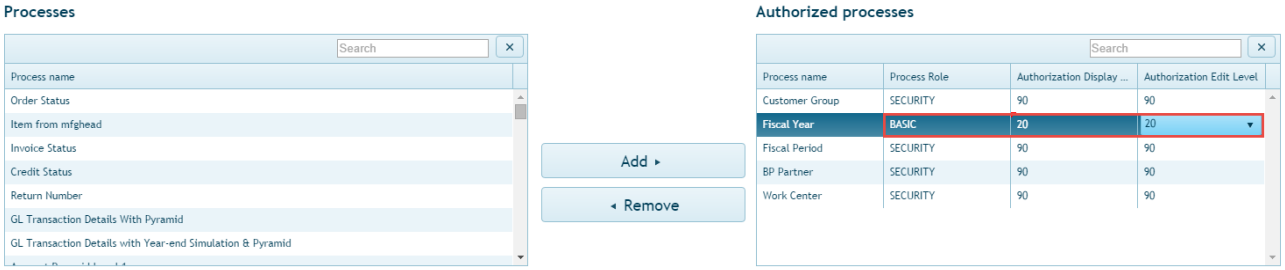
A list of users will be displayed and from that list you can select a user to see the processes that this specific user is authorized to access.

From the list of processes, you can select required processes and press the add button to add them to the "Authorized processes".

The list of "Authorized processes" that will be displayed contain the processes that are authorized specifically to the selected user and not to the group to which the user is a member.

You can do the same type of operation with the option "Groups" and the option "Processes". Simply use the one that is more convenient for you.

By default, when you add authorizations to a process, the "Process Role", "Authorization Display Level" and "Authorization Edit Level" will be set as the default value configured on the User or Group. These values can be overridden at the process level.



As mentioned earlier, the authorization should always be configured at the group level, not the user level.

If a user is part of multiple groups, and if all of these groups are authorized to the same process, the highest level of authorization of the group will be granted to the user (display and edit level), and all the roles will be merged.

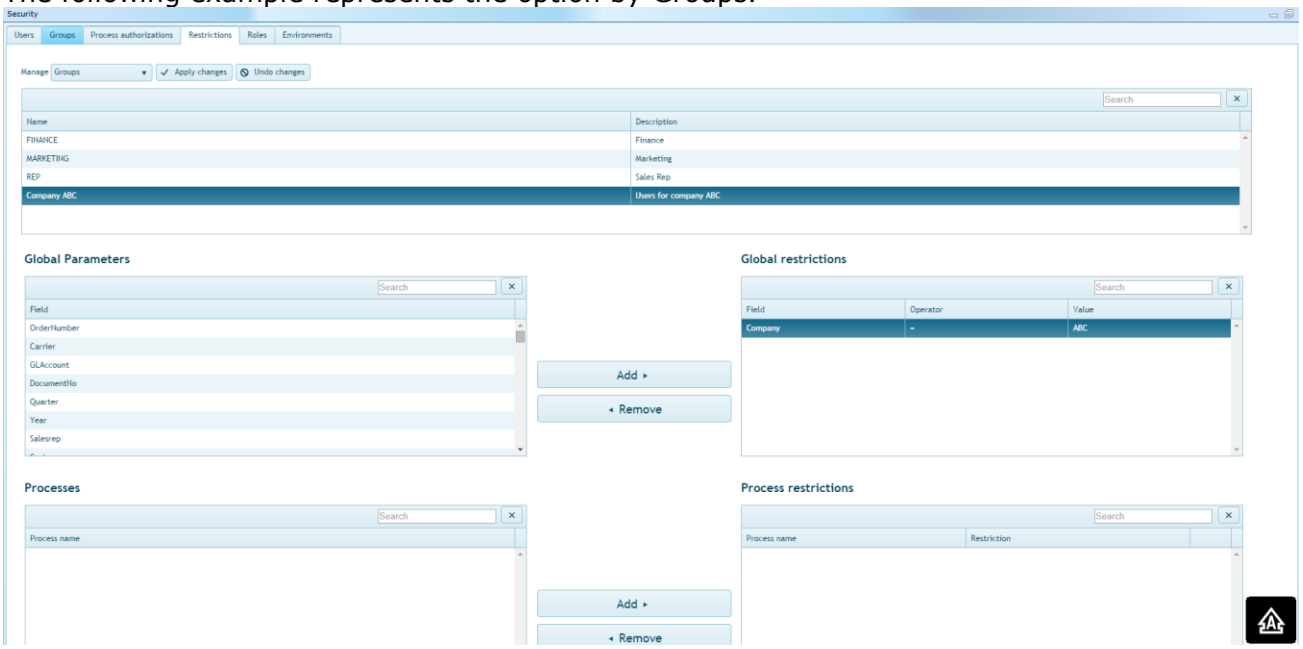
Example for Display Level: If the user is a member of group A and group B, and if group A is display level 20 and group B is display level 40, the user will have display level 40.

Example for Roles: If the user is a member of group A and group B, and if group A is authorized to "Print", but not authorized to "Create New Worksheet" and if group B is not authorized to "Print", but is authorized to "Create New Worksheet", the merge of the roles will grant the access to both "Print" and "Create New Worksheet" to the user.

Restrictions

This option is used when it is required to restrict the data that will be displayed to a specific user or group. The restrictions will apply automatically to any views/graph/dashboards or Excel Add-In reports that will be executed. It is possible to manage the restrictions by Groups, Users or Processes. Use the option that is more convenient to you.

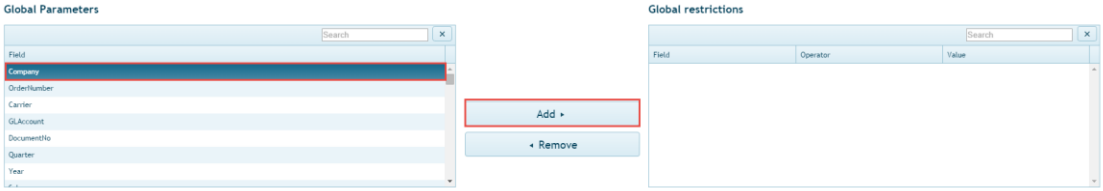
The following example represents the option by Groups.



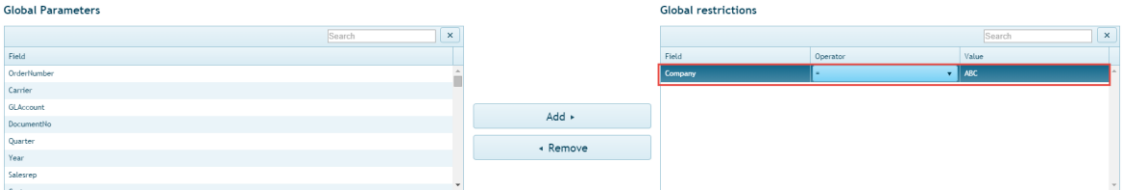
We can see in the above example that the Group "Company ABC" is restricted to the company "ABC" (Company = ABC), so automatically this restriction will be applied to any views opened by any users of that specific group.

Restrictions can be setup at the global level or process level. The global level will use the "Global Parameters" and will impact any processes that contain these "Global Parameters". The process level restrictions will affect only one process and will be based on the specific field of that process.

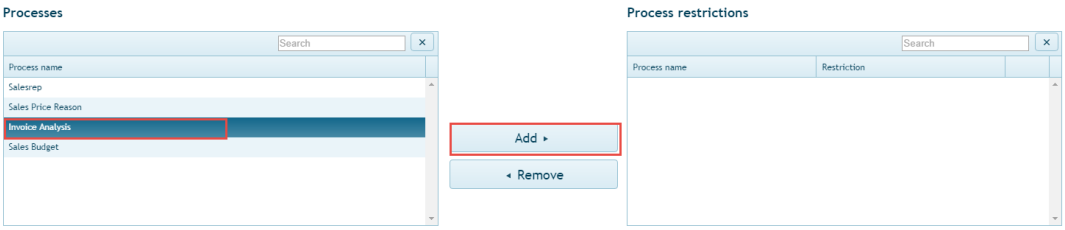
To add a restriction globally, select a global parameter on the left and press the add button. In this example we will add a restriction for the company.



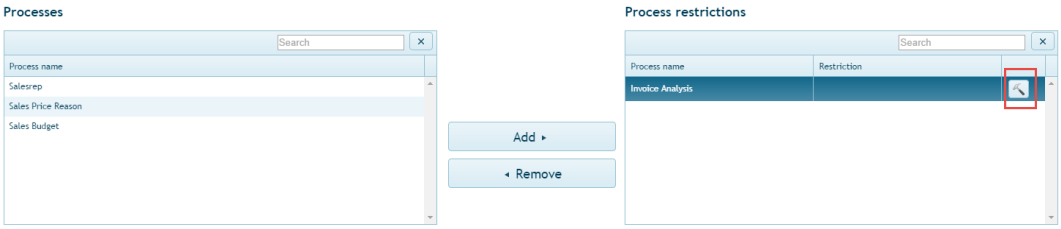
We now have a new Global restriction row. We will add the Value ABC and leave the operator to =.



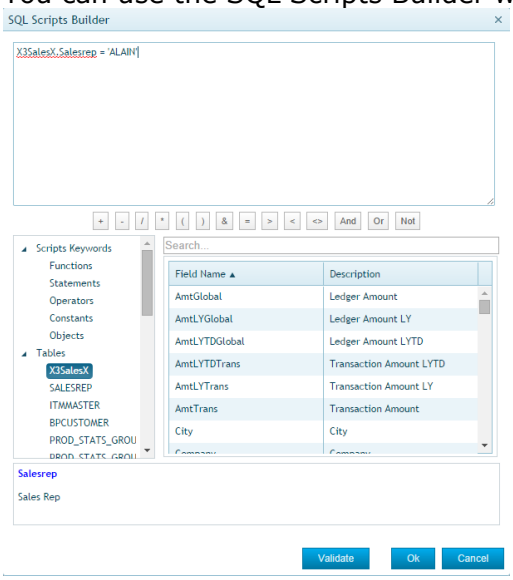
To add a restriction to a specific process we will select the process and press the Add button.



You will now have a new row in the "Process restrictions". Press the "Restriction builder" button to build your restriction.



You can use the SQL Scripts Builder window to create the restriction in SQL syntax.



Restrictions are cumulative when you have more than 1. As an example, if you have a global restriction on the company and a process restriction on the salesrep code, you will have at the end, a restriction of (Company = "ABC" and Salesrep = "ALAIN").

Be careful with the restrictions. If user A is part of group X and Y and if you have a restriction for group X that is (Company = "X") and for group Y that is (Company="Y"), the final combined restriction will be (Company = "X" and Company = "Y"), this restriction will not return any records as it could not be X and Y in the same time.

You should instead create a group XY and put the restriction (Company in ("X","Y")).

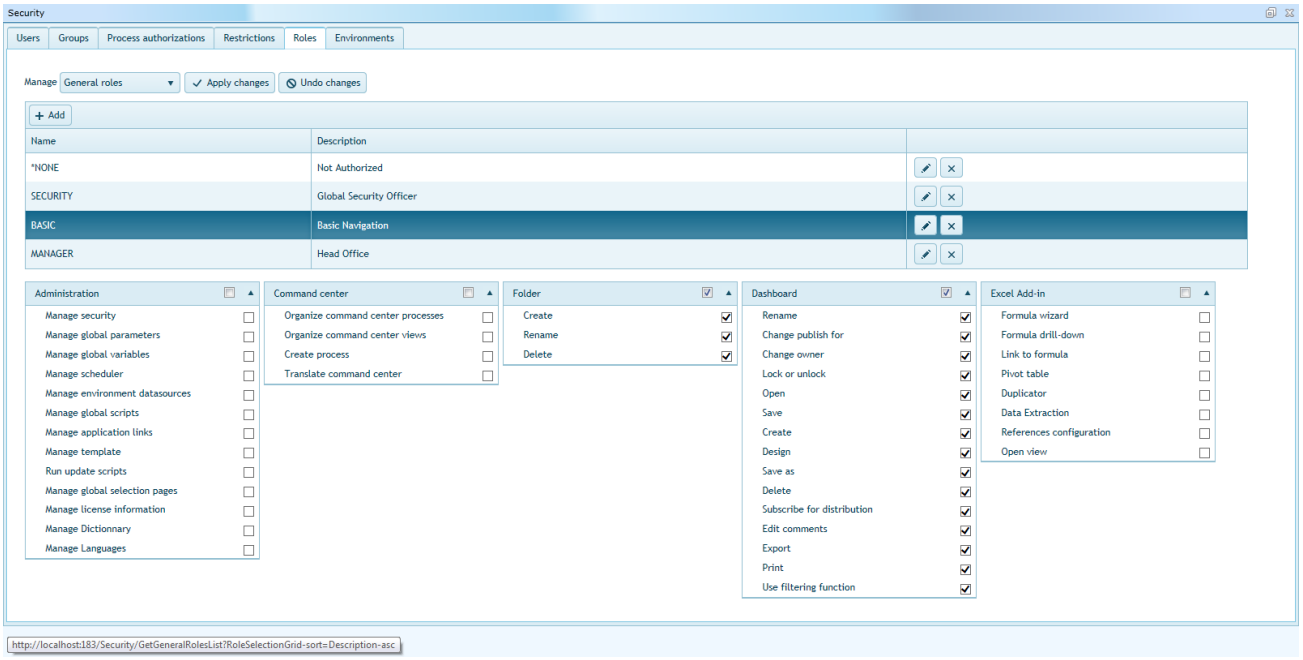
It is recommended to always setup the restriction at the global level with groups.

Roles

The roles define what a user can do in SEI. Two type of roles exist, the general roles and the process roles.

General Roles

Will define globally what the user can do in SEI (Administration, Command Center, Dashboard, etc…).

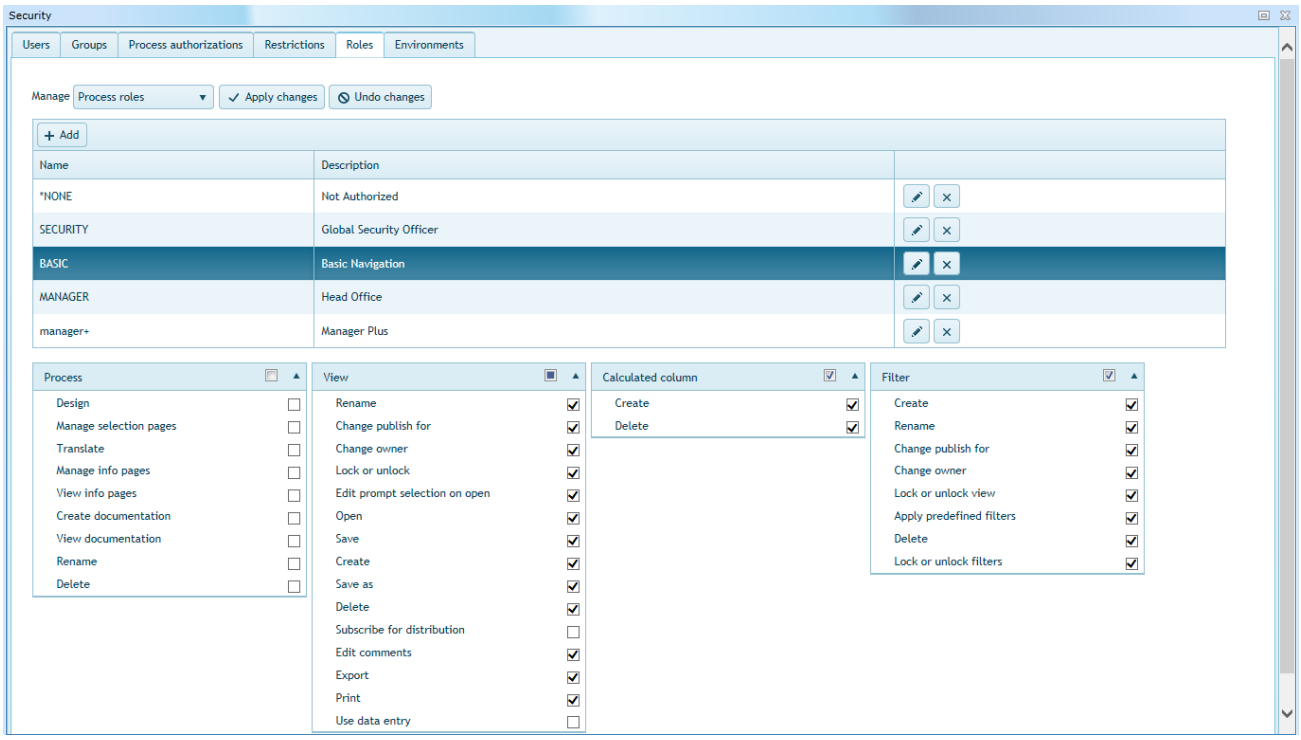


By default, three roles are installed with SEI (SECURITY, BASIC, MANAGER). These roles can be changed by selecting them, or new roles can be created if required.

The general roles are grouped in five main categories (Administration, Command Center, Folder, Dashboard and Excel Add-In). The options available are self-explanatory, you only need to activate the options required for each role.

Process Roles

These roles will define, at the process level, what the user can do in SEI (create new processes, export a view, create calculated columns, etc…).

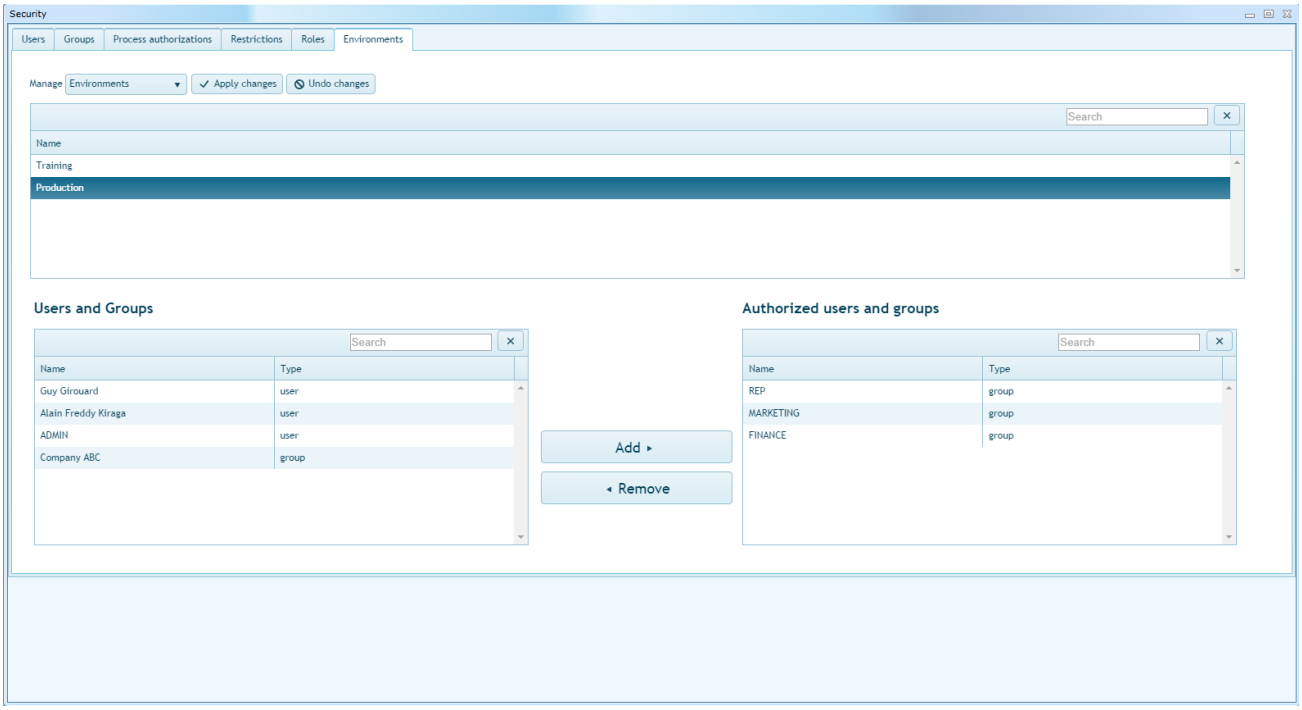


By default, three roles are installed with SEI (SECURITY, BASIC, MANAGER). These roles can be changed by selecting them or new roles can be created if required.

The process roles are grouped in four main categories (Process, View, Calculated column, Filter). The options available are self-explanatory, you only need to activate the options required for each role.

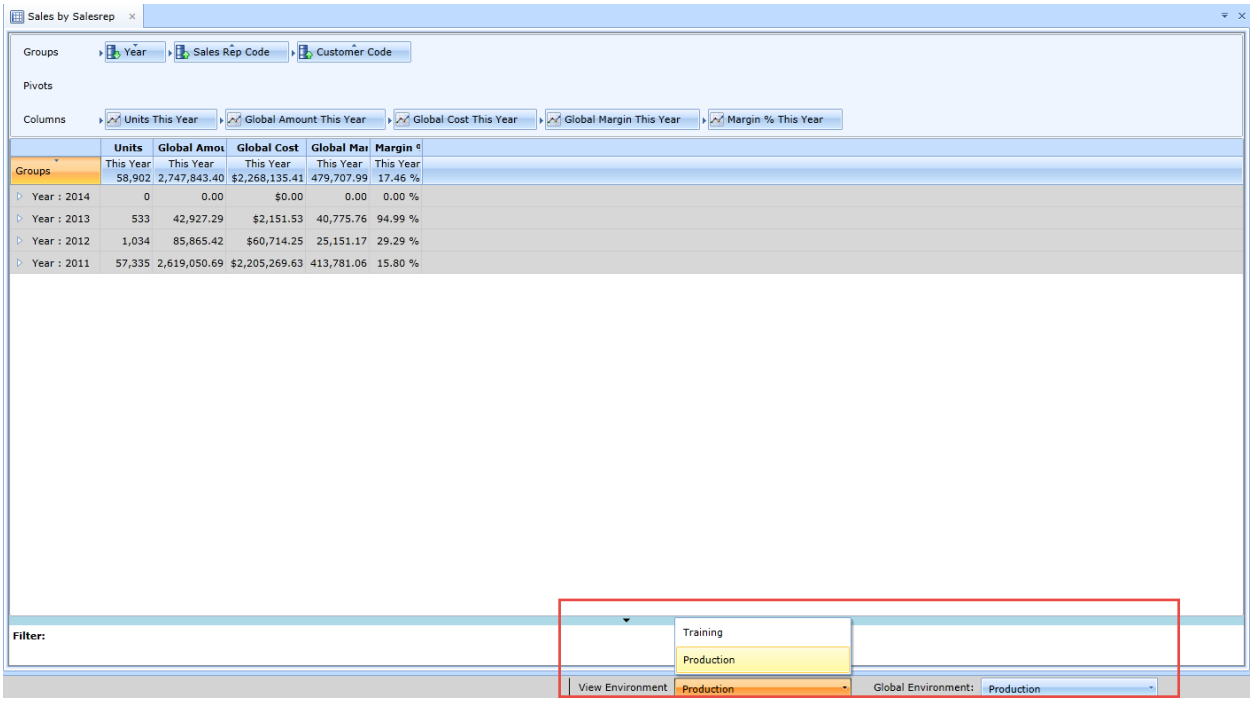
Environments

This option will let you define the environments that will be available to the users or groups.



You simply need to select an environment, click on the specific users/groups and press the Add button to give them access to the environment.

Based on the access granted to the user, the drop-down list in the status bar will only display the authorized environments.



Your Comments are Welcome

While every effort has been undertaken to make this documentation complete and accurate, we would be pleased to hear from you in order to improve its quality. If you have questions or comments regarding this documentation, please address them to:

Sage Software Inc.