

Spotfire Bootcamp

Advanced Data Visualisation UI

Day 2

Objectives

Spotfire Design Principles

Text Areas

Property Controls

Action Controls

Best Practices / Tips & tricks

Text Areas

Text Area

A Text area is not a visualization and can be used to provide observations, findings, etc.

It can also be used to provide actionable items like links, images and buttons

To edit text area, click on Edit -> Edit Text Area icon

Different elements added to the text area include text, image, action controls, etc.

Text areas have word processing tools Text areas can also contain

- Font
- Color
- Bullet-point
- Number list
- Justification
- Indentation

- Images
- Web Links

Text area size and position is handled just like a visualization window

Text Area

Expense Report Analysis



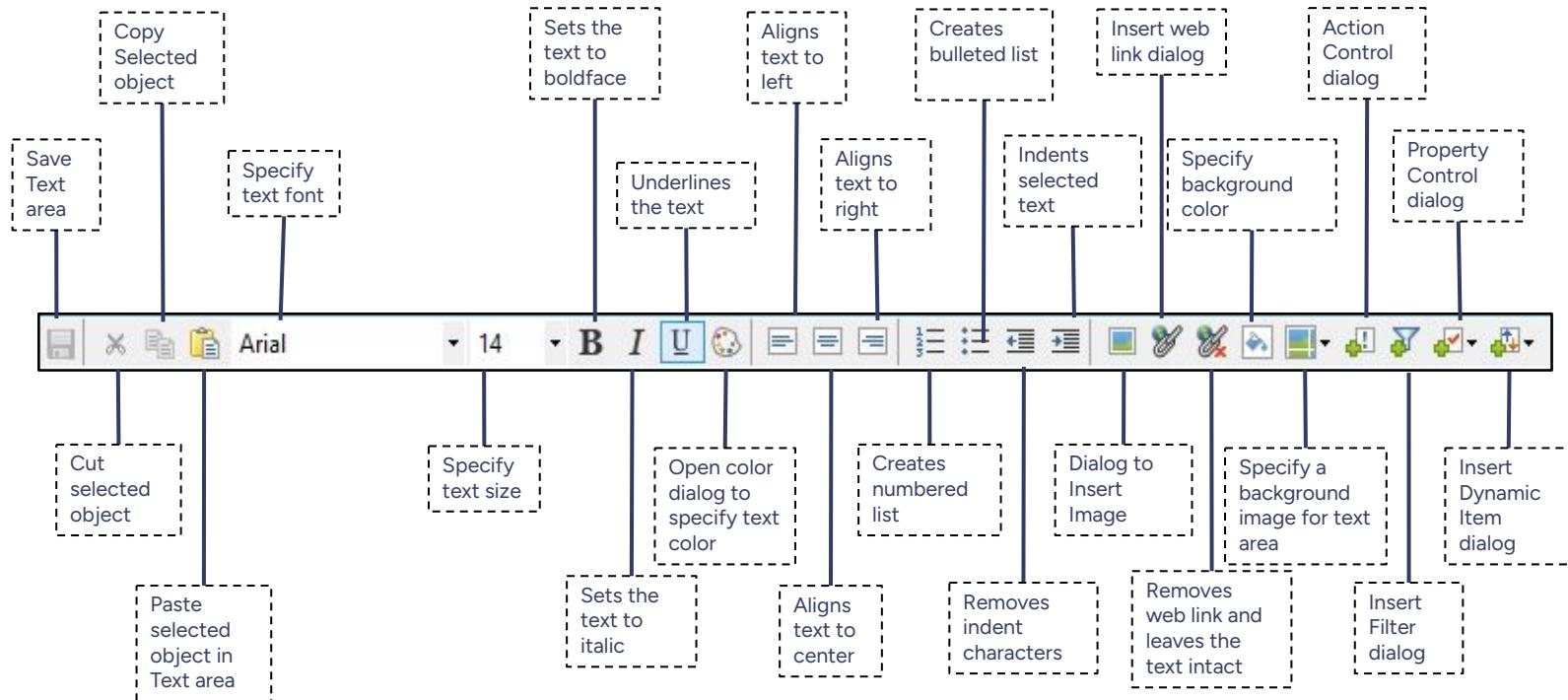
IRS Guidelines for Deducting Business Expenses

During the process of reporting expenses, our system provides an open text field which allows the employee to enter a justification for the expense. Currently, this field is being used only occasionally, and not in a uniform manner.

This sample of data from our **Expense Report database** will be used to help us to define some rules for data entry into this justification field. The goal is to collect information which will allow us to make business decisions* relative to expenses without placing undue burden upon the employee for engaging in data entry which is not value added.

* Through the process of this analysis, we will need to prioritize expense types based on magnitude of expense and frequency.

Edit Text Area Toolbar

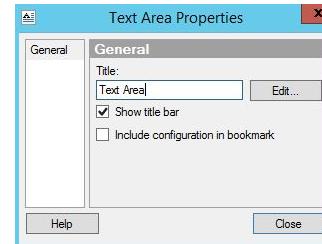
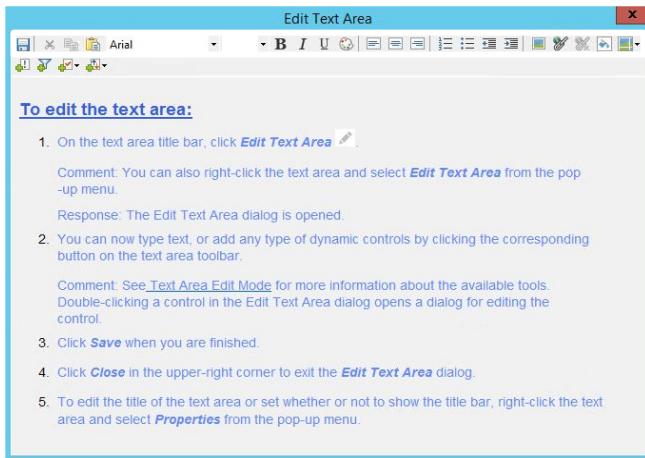


Customize Text Area

- To edit text area, click Edit Text Area icon to open
- Insert and customize text using provided functions and save and close
- Edit text area title using Text Area Properties -> General tab



- Font, font size, color, indentation
- Create links
- Modify background color or insert image



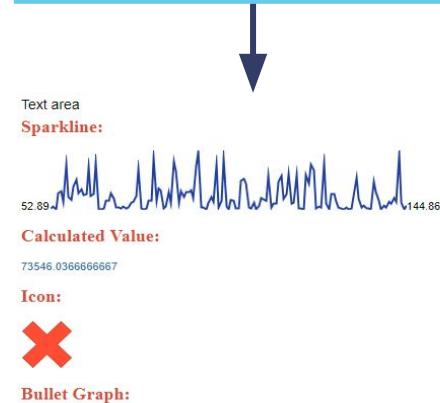
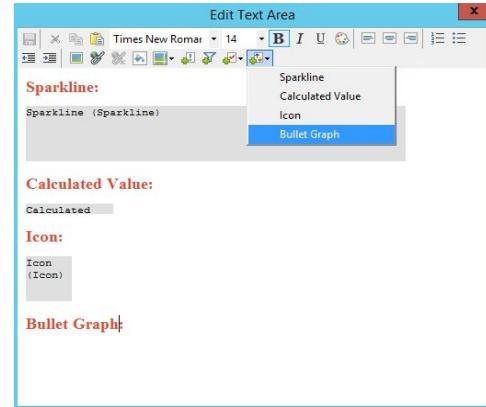
Add Dynamic Items

Similar to graphical table dynamic items

Provides an aggregated view of data

Dynamic items

- | | |
|------------------|-----------------------------------|
| Sparkline | • Line graph displaying trends |
| Calculated value | • Aggregated expression values |
| Icon | • Simple images displaying trends |
| Bullet graph | • Compare one value to another |



Add Filters

Add filter or filtering scheme

Text area

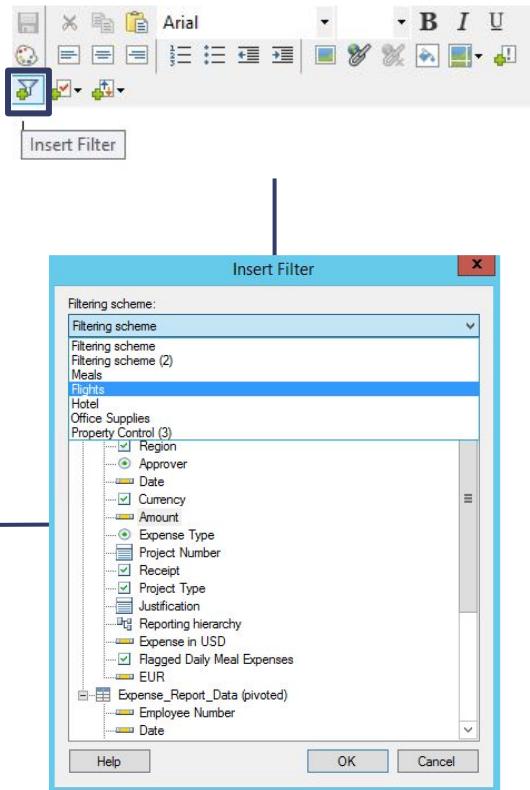
- (All)
- Canada
- Continental Europe
- Ireland
- UK
- USA
- (None)

1.89 1159.08

Summary Table

Column	UniqueCount
Employee Number	3
Cost Centre	3
Approver	2
Country	1
Region	1
Project Number	4
Expense Type	10
EUR	87

108 of 790 rows 0 marked 17 columns Expense_Report_Data



Property Control

Add items to control the values of selected properties

Edit Text Area -> Insert Property Control

New Property

Property name:	<input type="text"/>
Data type:	<input type="text"/> String
Description:	<input type="text"/>
Value:	<input type="text"/>

Help OK Cancel

The screenshot shows the 'Property Control' dialog box. At the top, there is a toolbar with icons for 'Label', 'Input field', 'Input field (multiple lines)', 'Drop-down list', 'List box', and 'List box (multiple select)'. Below the toolbar, the 'Control type:' dropdown is set to 'Drop-down list'. The main area is divided into several tabs: 'Document Properties', 'Data Table Properties', and 'Column Properties'. The 'Document Properties' tab is active, displaying a table of properties:

Name	Data Type	Value	Script
CADConversion	String	Sum	
DailyMealLimit	Currency	50.00	
EuroConversion	Real	0.727056	
FiscalYearOffset	Integer	0	

Below the table, there are buttons for 'New...', 'Edit...', and 'Delete'. A 'Set property value through:' section includes a 'Column selection' dropdown set to 'Expense_Report_Data'. Under 'Settings', the 'Data table:' dropdown is also set to 'Expense_Report_Data'. The 'Selectable columns (limit through expression):' section shows a table:

Name	Data Type
Employee Number	Integer
Cost Centre	Integer
Country	String

At the bottom, there is a checkbox for 'Include (None) alternative' and a 'Select Columns...' button. The dialog box has 'Help', 'OK', and 'Cancel' buttons at the bottom.

Action Control

Add/edit action control in text area as

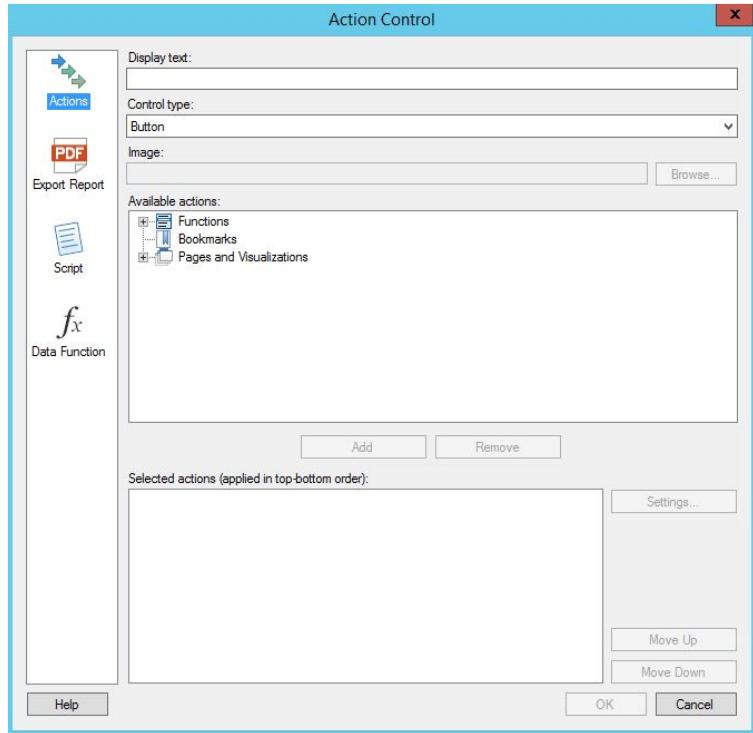
- Link, button or image

Action control

- Perform multiple actions in one click

Actions performed

- Mark or filter data
- Apply bookmarks
- Navigate to a page or visualization in the analysis
- Create customized actions using Ironpython scripting



Exercise - Text Area

1. Open your dpx
2. Insert Treemap Visualizations by dragging it in from the flyout
3. Insert a text area
4. Edit text area and play around by adding some filters, dynamic items, etc.
5. Edit text area as html
6. Observe the difference
7. Now add a background color (or insert an image)
8. Save the analysis

Property Controls

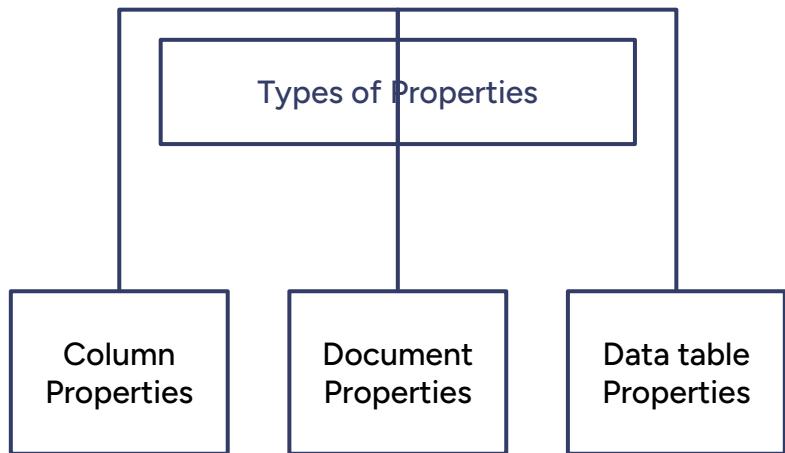
Concept of Property

Property

- A variable used to adjust the configurations of visualizations or calculations by others
- Stored separately from data tables
- Can be easily modified using property controls in text areas

Property Control

- Input devices inserted in text areas to define and modify property values



Property Control Types

Label: Shows the current value of the selected Property



Boston

Input field: Adds a text box to type a new property value



\$10000.00

Input field(multiple lines): Adds a text box to type new property values in multiple lines with type String



This Input field is used to insert multiple lines

Drop-down list: Adds a drop-down list with predefined property values to select from



Store Location ▾

List box: Adds a list box with predefined property values to select one



SSMM55001
SSMM55002
SSMM55003
SSMM55004

List box(multiple select): Adds a list box with predefined property values to select multiple at once



CVS PHARMACY
EINSTEIN BROS
HEALTHY PETS

Slider: Adds a slider to change values by moving the slider



0
4
1
50

Add Property Control in Text Area

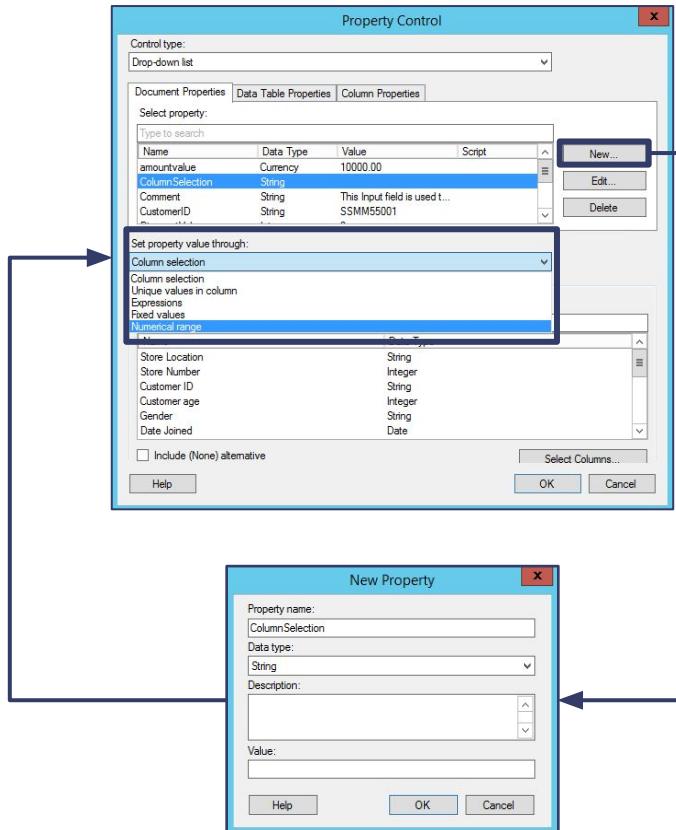
Edit Text Area -> Insert Property Control

Select property type and control type

Use existing property or insert a new property

Specify 'Set property value through'

- Property name
- Data type
- Value (default)



Set Property Value Through

It specifies how the property value should be selected

Set property value through:

Column selection

Settings

Selectable columns (limit through expression):

Name	Data Type
Groceries	Integer
Clothing	Integer
Toys	Integer
Departments Shopped	Integer
Number of Items Purchased	Integer
Total Amount of Purchases	Integer

Include (None) alternative

Set property value through:

Unique values in column

Settings

Data table: 3-The-5-Sheet-Book - TIBCO Mega

Column: Store Location

Type to search

Boston
Los Angeles
New York
Seattle

Include (None) alternative

For more information on search expressions click Help.

Set property value through:

Expressions

Settings

Display Name	Expression

Include (None) alternative

Set property value through:

Fixed values

Settings

Display Name	Value
LA	Los Angeles
DC	Washington DC

Include (None) alternative

Set property value through:

Numerical range

Settings

Min: 1 Max: 60

Value interval: 5

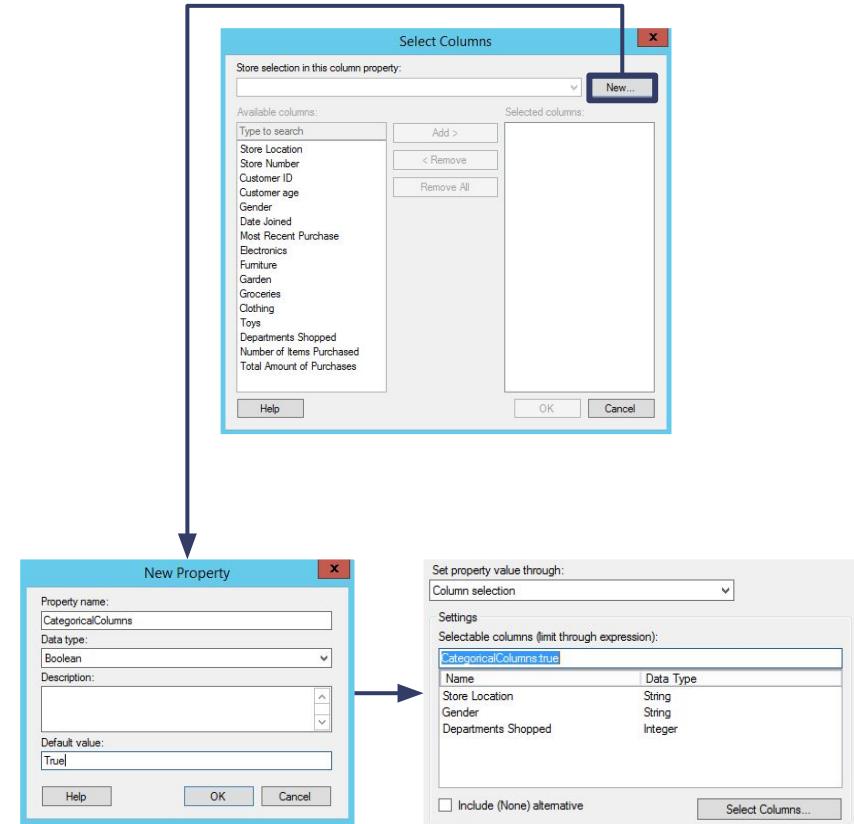
Show min and max labels

Select Columns Dialog

Used to handpick the values to show in the control

Stores the selection as a Boolean column property

- Selected columns: True
- Remaining columns: False

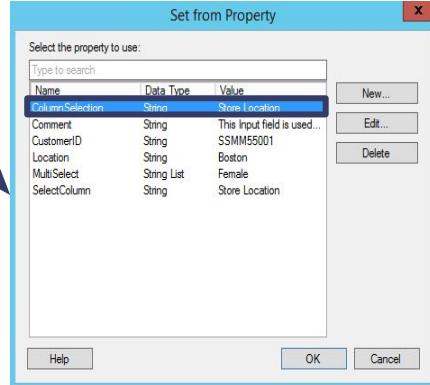
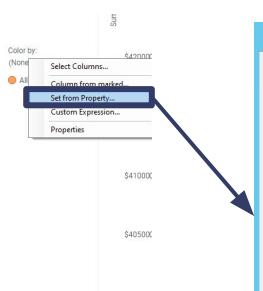
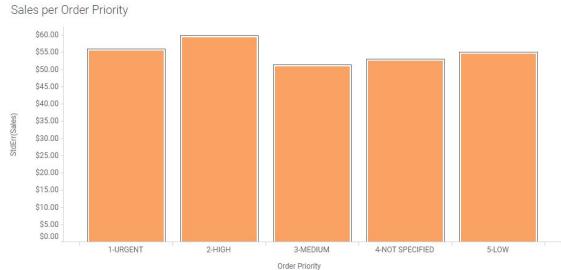


Set From Property Option

Used to specify property value for a column selector

Right click on column selector

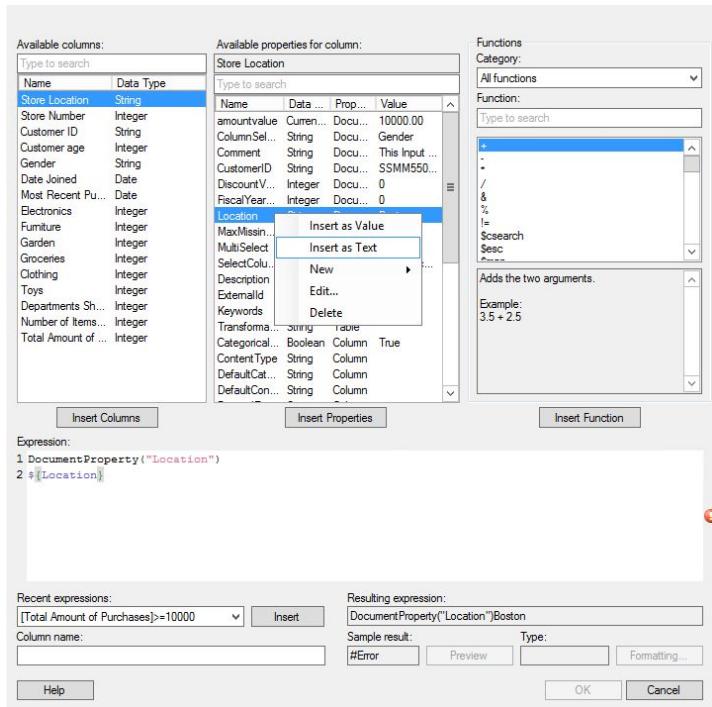
Select 'Set from Property...'



Insert Property in Custom Expressions

Insert as text

- Used to insert a string property in an expression
- Interpreted as a column name or string literal
- Syntax: \${PropertyName}
- Example: \${MyProperty}



Insert as value

- Used to insert value of a property in an expression
- Syntax: Property Function("PropertyName")
- Example: DocumentProperty("MyProperty")

Exercise Property controls

1. Open your dpx from the previous exercise
2. Duplicate the Treemap Visualization
3. Insert a text area
4. Insert Property control
 - a. Column from table
 - b. Fixed list
5. Use property control to change the parameters of the Treemap
 - a. Hierarchy
 - b. Color by
 - c. Group by (nested hierarchy)
6. Add property in the title

Action Controls

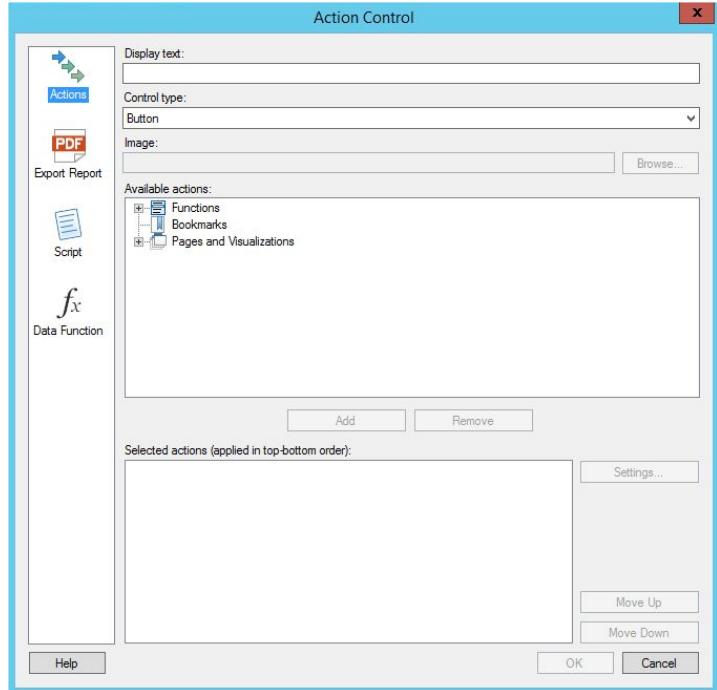
Insert Action Controls in Text Areas

To perform certain action or series of actions, add control types

Control types can be links, buttons or images

To insert, go to Edit Text Area -> Insert Action Control

Insert options include actions, export report, script and data functions



Actions

Actions include applying bookmarks, page navigation, etc.

Actions are applied from top to bottom

Selected actions (applied in top-bottom order):

- Navigate to visualization (Total Amount of Purchases per Store Location)
- Reset All Filters
- Unmark Marked Rows

Settings...
Move Up
Move Down

Display text:
Next Page

Control type:
Button
Link
Image

Available actions:

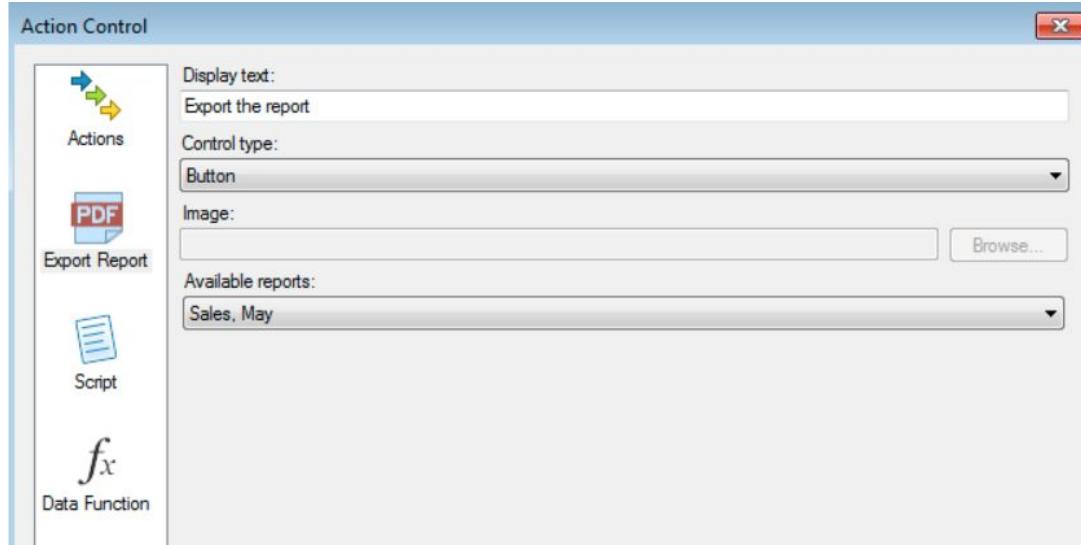
- Functions
- Bookmarks
- Pages and Visualizations
 - Page
 - 3-The-5-Sheet-Book - TIBCO Mega Mart
 - Total Amount of Purchases per Store Location
 - Page (2)
 - MyModel
 - MyModel1
 - Evaluation (MyModel)
 - Data Relationships

Add Remove

Export Report

Insert an action control to export a report to PDF

Select available reports in the drop down



Action Control Scripts

Insert an action control that executes a script

- Select from 'Available scripts'
 - Use 'Edit' to edit the existing script
- Create new scripts
 - Use 'New'
- Input parameter listed in 'Necessary input for the selected script'
- Must trust script to work with web clients

Display text:

Control type:

Button

Image:

Available scripts:

Name	Description	Remark	New...
AddPage		Trusted by you. Other users mu...	Edit...
changeVisuTitle		Trusted by you. Other users mu...	Delete
loops		Trusted by you. Other users mu...	Script Trust

Necessary input for the selected script:

Name	Description	Type	Value
aTitle		String	

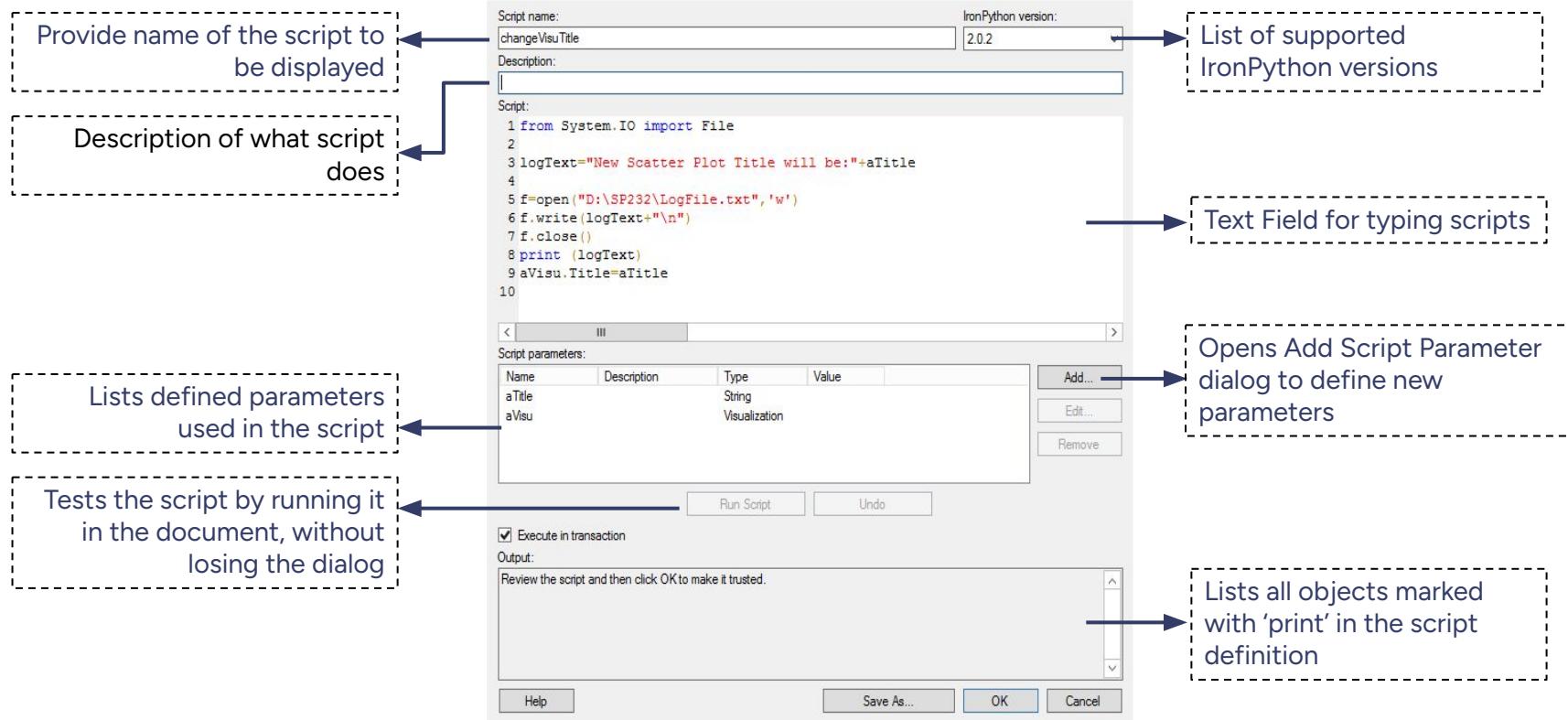
Input for the selected parameter

Select page:



Scripts must be trusted by a member of the Script Author group to work in the web clients.

Create or Edit a Script



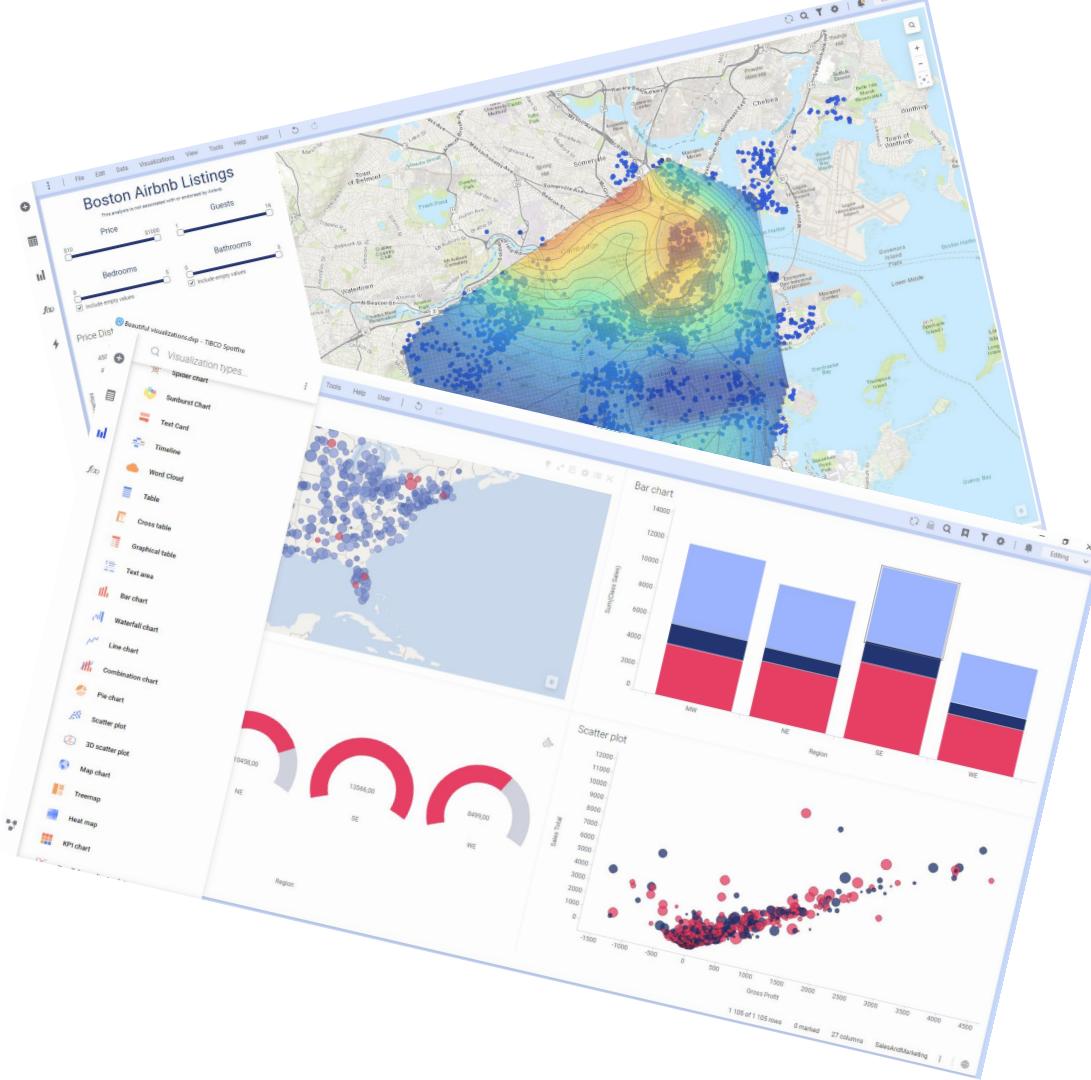
Exercise (example is Explainability demo)

1. Open your dpx from the previous exercise
2. Insert Visualizations by dragging it in from the flyout
3. Insert a new text area
4. Insert action control - default
5. Insert action control - script
6. Interact with the visualizations

Spotfire Best Practices + Tips & Tricks

Spotfire resources

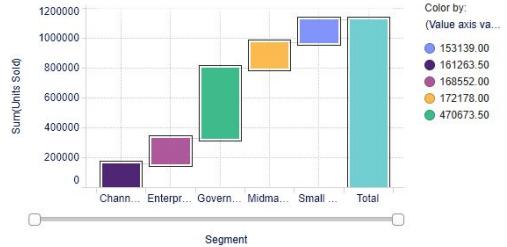
- [Tips for best visuals](#)
- [Visual design best practices](#)
- [Tips & Tricks](#)
- [Javascript](#)
- <https://community.spotfire.com/articles/spotfire/geoanalytical-resources-wms-and-tms-layers/>
 - http://server.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/{z}/{y}/{x}



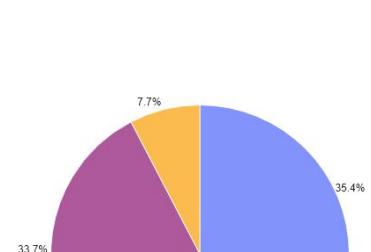
Brussels Airlines template

1. Dashboard name - Page name

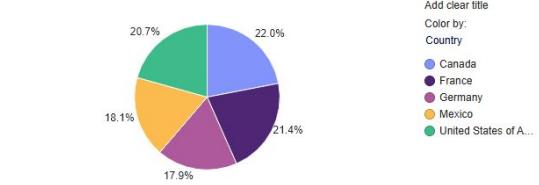
Add clear title



Add clear title



Add clear title



Details

Mark items to view details here.

Reset Filters

Reset Markings

Add clear title
Color by:
Discount ...

- High
- Low
- Medium
- None

Active Filters:

Filters

- Filter 1
- Filter 2
- Filter 3
- Filter 4

Exercise with text areas, filters, javascript and html

1. Recreate the Brussels Airlines template
 - a. Add a Text Area and use javascript for the accordion.
 - b. Add a Text Area with Action Control to reset markings and clear filters.
 - c. Add a Text Area and use document properties and ironpython to display the selected values.
 - d. Add a Text Area and improve the look and feel with html, images, etc.