

BI Concepts, Tools and Applications

Exercise #4: Integrate MicroStrategy with Salesforce.com to build dossiers

INTRODUCTION

You are the Vice President of Sales for a leading enterprise software firm. Last year, your company made a significant investment in Salesforce.com. You found the reporting capabilities insufficient and are looking for a better way to drive weekly pipeline meetings with your sales team. You are interested in tracking deals as they move through the pipeline and exploring revenue forecasts. You would also like to track the performance of individual salespeople against their assigned goals.

This Exercise walks you through the steps of building an interactive dossier that delivers these business requirements. We will simulate a connection to three tables in a Salesforce.com environment using Excel: The **Account**, **Opportunity**, and **User** tables.

GETTING STARTED

Download all the required files that are in the module, below the exercise document, for completing the exercise.

Download of dataset:

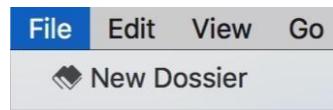
Account.xlsx
Opportunity.xlsx
User.xlsx

The excel files are datasets. The **Credentials_dossier.docx** contains credentials to the web server environment your dossier will be published to and the **.mstrc** will be used to upload the dossier to a server and interact with the dossier in MicroStrategy Library.

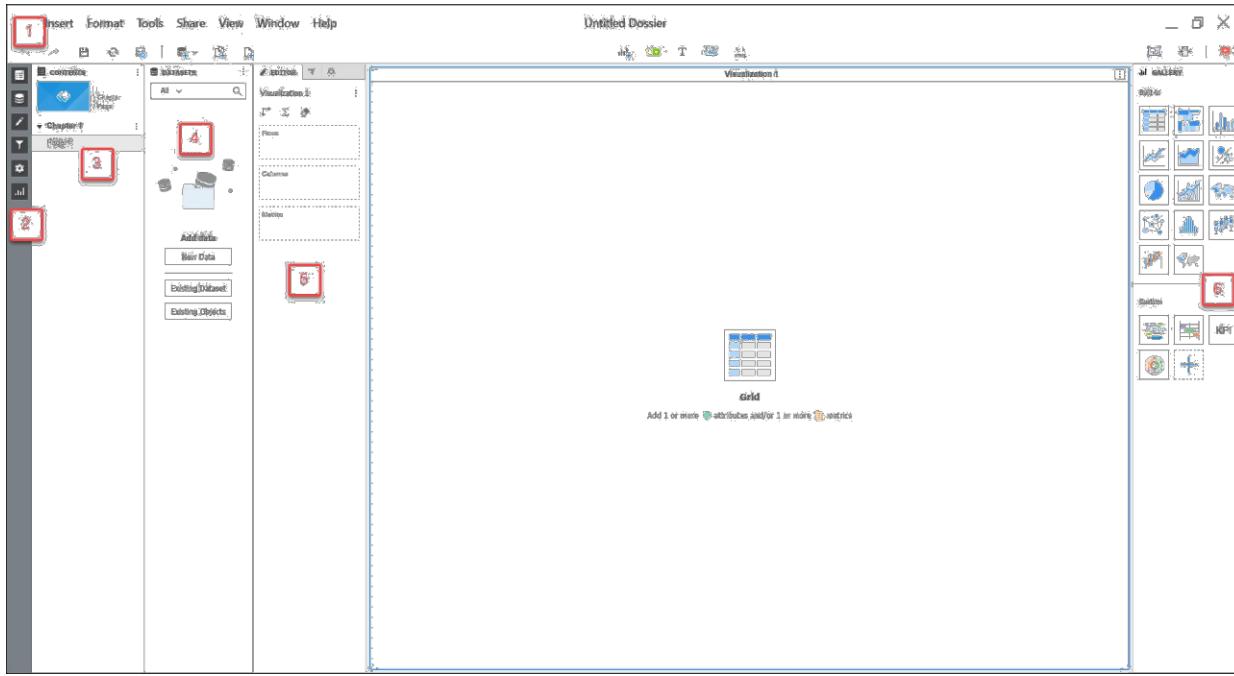
First, launch MicroStrategy Desktop by double-clicking the **MicroStrategy Desktop icon**:



1. Click the  button, or select **New Dossier** from the **File** menu to bring up the dossier authoring interface.



A new window opens with the dossier authoring interface. Before we get started building a dossier, let's briefly familiarize ourselves with the interface.



1. **Toolbar:** Provides controls to redo or undo an action, refresh the dossier, add dossier elements (including datasets, pages, chapters, visualizations, in-canvas filters, text, images, and links), change dossier formatting, and share your dossier. Click the **Responsive Preview** and **Responsive View Editor** icons to advantage of responsive design functionality to preview your dossier in mobile mode.
2. **Panel Control:** Click the icons on the left side of the interface to show or hide different panels, which are outlined below.
3. **Contents Panel:** This panel displays the dossier table of contents showing the chapters and pages of your dossier. Edit, add, and remove pages and chapters. In the table of contents, you can also add a thumbnail image for the dossier on this panel to help identify the dossier in Desktop. For example, you might add an image of a map for a dossier analyzing geographical performance. Click the editor icon in the Panel Control section to show or hide this panel.
4. **Dataset Panel:** The Datasets panel displays objects from each dataset in the dossier, organized by the dataset that they belong to. You can delete or add new datasets through this panel by clicking the Menu icon. To show or hide this panel, click the dataset icon in the Panel Control section.
5. The **Format**, **Filter**, and **Editor** panels are stacked next to the Dataset panel. Flip between these three panels to customize your visualizations and add filters to the dossier chapters.

- a. **Editor Panel:** To create your visualizations by adding data, use the Editor panel. Drag and drop attributes and metrics into the Rows, Columns, and Metrics boxes to see them appear in the visualization. Options in this panel depend on the selected visualization. Click the editor  icon in the Panel Control section to show or hide this panel.
 - b. **Filter Panel:** To apply filters to limit and specify the data visible on the dossier chapter, use the filter panel. You can use metrics, attributes, or visualizations to filter the data. Click the filter  icon in the Panel Control section to show or hide this panel.
 - c. **Format Panel:** To customize your visualizations, use this panel to change your visualization's font and the visualization container to fit your dossier needs. You can also customize visualizations by adding a legend, reference line, changing the shape of a graph, and so on. Click the format  icon in the Panel Control section to show or hide this panel.
- 6. Visualization Gallery:** Use the Visualization Gallery to quickly select the visualization you want to use to display your data, or import a custom visualization with just a few clicks. Hover over an icon to see the visualization name and data requirements. Click the visualization  icon in the Panel Control section to show or hide this panel.

DATA IMPORT AND WRANGLING

In this exercise, you will create a dossier and use data wrangling to prepare your data.

Overview

In this exercise, you will import three datasets, **Account.xlsx**, **Opportunity.xlsx**, and **User.xlsx**, into MicroStrategy Desktop. You will then create a dossier based on this data.

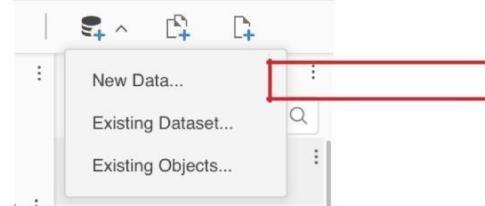
After you have imported the three datasets, you will use data wrangling to prepare the data in the **Opportunity.xlsx** dataset to conform to the following:

- Because you are using this data to drive your pipeline review meeting, you are only interested in data from the current year, 2017, and you want to filter out any other years.
- There are some discrepancies in the way the data for Region is currently represented. Your firm recently went through a reorganization, and now the regions should be represented as East and West. However, some of the data rows have region as Northeast, and some as Southeast. You want to correctly categorized these regions as East.
- Due to the way Salesforce.com names its primary keys, some columns in the datasets are named differently across the different tables. You will need to correct this by renaming **AccountExec ID** to **AcctExec ID** in order to properly relate the data.

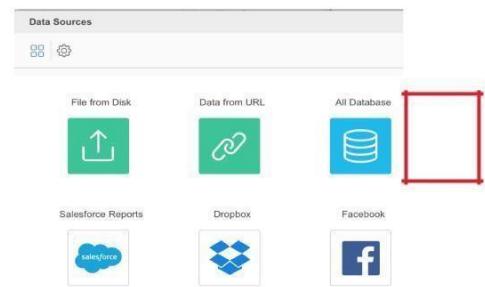
Save your dossier as **Introduction to Dossier** in your My Documents folder on your computer.

Detailed Instructions: Import the Datasets

1. From the menu bar, click the **Add Data** icon in the tool bar, and select **New Data** to open the **Connect to Your Data** interface.

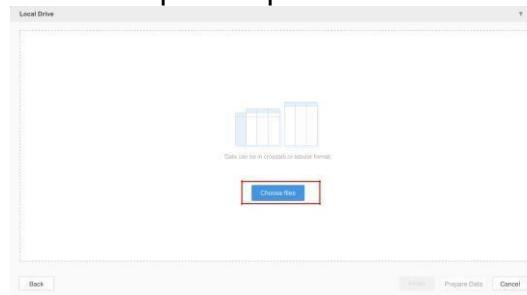


2. For this dossier, you will import data from an Excel file, click **File from Disk**.



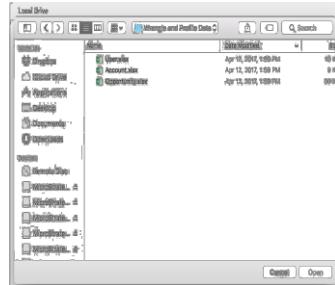
TIP: With MicroStrategy you can instantly connect to nearly any data source, from traditional Excel spreadsheets, to cloud-based applications, big data sources, and social media sources like Facebook and Twitter. MicroStrategy offers over 80+ data import options for even easier analysis.

3. After selecting your data source, click **Choose Files** to browse your local machine and import a spreadsheet.



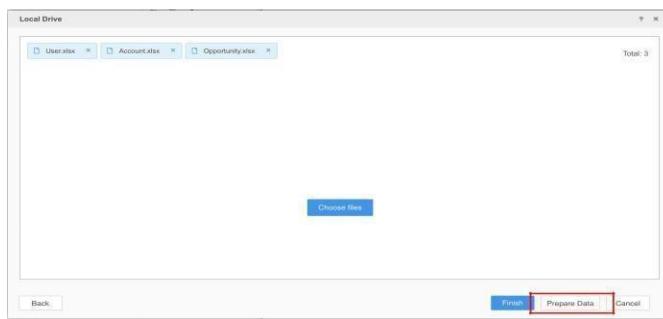
4. Browse to the **Account.xlsx**, **Opportunity.xlsx**, and **User.xlsx** files, use **CTRL+Click** (Command on Mac) to multi-select the files, then click **Open**.

These files should be in the supporting files folder provided to you before this session.



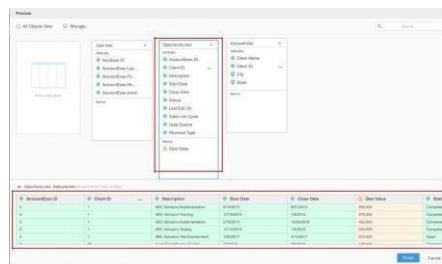
TIP: MicroStrategy allows users to import multiple sheets at the same time. This allows for easy uploading of entire Excel worksheets, without requiring you to delete sheets that aren't used for your dossier. Each sheet will automatically be treated as a different table within the dataset, allowing you to create joins between tables.

5. Ensure that you have the **Account.xlsx**, **Opportunity.xlsx**, and **User.xlsx** workbooks selected, then click the **Prepare Data** button.



After the data loads, the **Preview** window opens, which contains information about the attributes and metrics included in the different datasets.

6. To display the actual columns in the dataset, click the **Opportunity** table in the **Preview** screen.



7. Click the **Expand Preview** arrow adjacent to “**Opportunity.xlsx**” to expand the **Preview** window.

Opportunity.xlsx Data preview(shows first 50 rows of data)

AccountExec ID	Client ID	
5	1	A
5	1	A
5	1	A
5	1	A
5	1	A
9	22	C

Now you can see the full attribute and metric columns.

NOTE: The **Preview** window shows data for the first 50 rows in the selected dataset. It is designed to give you a general idea of the type of data contained within a specific dataset.

Opportunity List						
Opportunity ID	Description	Start Date	Cross Date	Deal Value	Status	Client Name
ABC-Advocacy-10000000000000000000000000000000	ABC-Advocacy-Implementation	6/2/2015	6/2/2015	600,000	Completed	Client 1
ABC-Advocacy-10000000000000000000000000000001	ABC-Advocacy Testing	1/1/2015	1/1/2015	420,000	Completed	Client 1
ABC-Advocacy-10000000000000000000000000000002	ABC-Advocacy Testing	1/1/2015	1/1/2015	250,000	Completed	Client 1
ABC-Advocacy-10000000000000000000000000000003	Good-Pool Baby Testing	7/3/2015	7/3/2015	210,000	Completed	Client 2
ABC-Advocacy-10000000000000000000000000000004	ABC-Advocacy Testing	7/3/2015	7/3/2015	175,000	Completed	Client 2
ABC-Advocacy-10000000000000000000000000000005	ABC-Advocacy Testing	7/3/2015	7/3/2015	350,000	Completed	Client 2
ABC-Advocacy-10000000000000000000000000000006	Quidley Foot-Stretch Testing	1/1/2015	1/2/2015	375,000	Completed	Client 3
ABC-Advocacy-10000000000000000000000000000007	Good-Pool Baby Testing	4/10/2015	4/10/2015	275,000	Completed	Client 3
ABC-Advocacy-10000000000000000000000000000008	Adventist Nature-France	4/28/2015	4/28/2015	186,000	Pending	Client 4



TIP: MicroStrategy automatically maps the imported rows and columns as attributes and metrics. Attributes provide a business model with context for reporting and analysis, such as Quarter and City. Metrics represent business measures and key performance indicators (KPIs), such as Revenue and Profit. If changes to any content or data types of the attributes or metrics are needed, they can be performed manually in the **Preview** window. Note that each attribute and metric is clearly marked. Attributes are represented by a **blue icon**  , while metrics are represented by an **orange icon**  .

Wrangle Your Data

There may be times when imported datasets contain errors, missing records, or incorrect formatting that can make analysis difficult. Rather than searching through each record in Excel and making individual modifications, we can make changes directly within MicroStrategy by using the **Data Wrangling** tool.

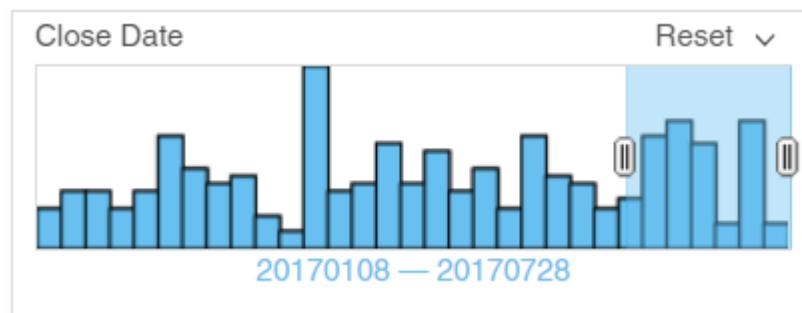
8. Ensure that you have the **Opportunity** table selected in the Preview screen, and then select **Wrangle** to open the Wrangle Your Data window.

- Because you are using this data to drive your pipeline review meeting, you are only interested in data from 2017. You can filter the dataset within the Data Wrangling window by using the Timeline Selector. Click the **Close Date** column, and in the **Select Function** dropdown menu, select **Timeline Selector**.

Notice that a Timeline Selector window appears below the data. This timeline shows the frequency of opportunities (number of rows) that fall within a specified date range. The range starts from 2015 and ends in 2017, as denoted by the numbers underneath the graph.

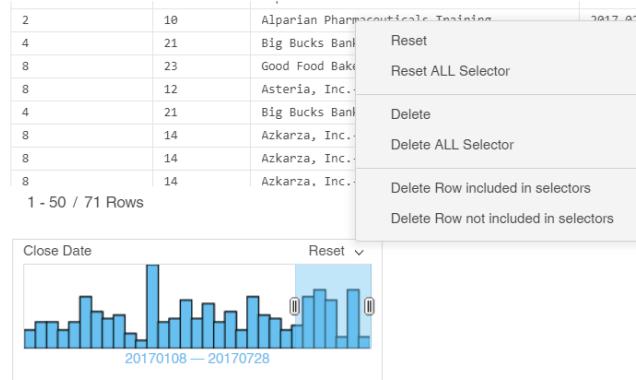
NOTE: The Timeline Selector mimics the date format from the date data. In this dataset, the date attribute is in a YYYY/MM/DD format, so 20150109 represents January 9th, 2015.

- Pull the **left** and **right sliders** inward to include only dates in the 2017 range — your Timeline Selector should look like the image below.



Notice the graph dynamically changes based on the range of dates you select. For this example, your dates should read **20170108** and **20170728**.

- After you select the correct range, click the **Reset arrow** in the Timeline Selector and click **Delete Row not included in selectors** to filter the data to include only 2017.



NOTE: After you delete the records not included in 2017, your dataset shrinks significantly. Ensure that you now have 71 rows of data.

AccountEvent_ID	Client_ID	Description	Start Date	Close Date	Deal Value	Status	Last Edit On	Sales Life Cycle	Lead Source
5	1	ABC Advisors-Yeast Environment	2017-01-20	2017-04-14	210000	Open	2017-02-14	4. SOW/Pricing	Business Develop
6	7	Adirondack Matters-Finance	2017-01-09	2017-04-28	135000	Completed	2017-02-28	4. SOW/Pricing	Business Develop
6	7	Adirondack Matters-Maintenance	2017-01-09	2017-04-28	24300	Completed	2017-02-28	4. SOW/Pricing	Business Develop
5	9	Aidy Crockett Group-HR Module	2016-11-29	2017-04-29	750000	Completed	2017-02-08	1. Needs Analysis	Business Develop
8	10	Alparian Pharmaceuticals-Finance	2017-02-20	2017-04-28	450000	Completed	2017-02-28	4. SOW/Pricing	Partner Referral
8	10	Alparian Pharmaceuticals-Finance Maintenance	2017-02-20	2017-04-28	81000	Completed	2017-02-23	4. SOW/Pricing	Partner Referral
2	10	Alparian Pharmaceuticals-Training	2017-02-20	2017-07-15	450000	Completed	2017-02-23	3. Solution Validation	Partner Referral
4	21	Big Bucks Bank-Testing	2016-06-09	2017-01-13	275000	Completed	2017-01-13	6. Won	Existing Customer
8	23	Good Food Bakery-Implementation	2016-12-20	2017-01-29	320000	Completed	2017-01-09	6. Won	Business Develop
8	12	Asteria, Inc.-Sales	2017-01-18	2017-02-13	475000	Completed	2017-02-16	6. Won	Business Develop
4	21	Big Bucks Bank-Implementation	2016-12-16	2017-02-22	525000	Completed	2017-02-25	6. Won	Existing Customer
8	14	Azkarza, Inc.-Training	2016-12-24	2017-02-23	625000	Completed	2017-02-25	6. Won	Existing Customer
8	14	Azkarza, Inc.-Implementation	2016-09-06	2017-01-24	390000	Completed	2017-01-24	6. Won	Partner Referral
8	14	Azkarza, Inc.-Yeast Environment	2017-01-31	2017-04-24	250000	Completed	2017-02-27	3. Solution Validation	Existing Customer
8	14	Azkarza, Inc.-Testing	2017-01-20	2017-03-12	250000	Completed	2017-01-28	1. Needs Analysis	Business Develop
4	21	Big Bucks Bank-Training	2016-11-01	2017-01-12	400000	Completed	2017-01-12	6. Won	Business Develop
7	24	NBBW, Inc.-Training	2016-10-10	2017-02-22	375000	Completed	2017-02-28	6. Won	Business Develop
4	21	Big Bucks Bark-Training	2017-02-16	2017-03-31	250000	Completed	2017-02-16	7. Lost	Existing Customer

If you look through your data in the data wrangling window, you can see that there are discrepancies within the **Region** column. Some rows have **Northeast**, some have **Southeast**, while others just show **East**. Because your firm recently went through a reorganization, not all the data has been updated in Salesforce.com and regional names are inconsistent. We will use the **Text Selector** to cluster these records into the correct regions.

- Click the **down arrow** above the **Region** column, and click **Text Selector**.

13. A new box opens at the bottom of the window. Hover over **Northeast** and click **Edit**.
14. Replace Northeast with the word “**East**”, and click **Apply to All** . Repeat this step to change the **Southeast** values to **East**.

The number of rows for East now shows 23 records.

If you make several changes to a dataset in the data wrangling interface and would like to **save** the steps for later use, you can export the **History Script**. To export a **History Script**, click the **Export** down-arrow in the **Wrangle Your Data** window.

You can either copy your history script onto your clipboard, or save it as a .txt file in a specified location on your computer.

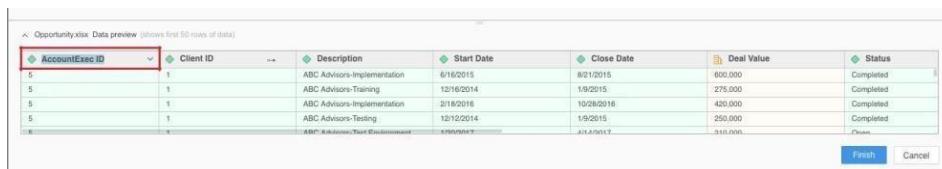
15. Click **Apply** to return to the Preview window.

TIP: Because the data wrangling tool stores every action in a script, you can revert any of your changes. To do this, look at the History Script window in of the Data Wrangling window. You can select individual changes to revert using the undo/redo buttons, revert the entire dataset, or simply change the last action you performed.

Prepare your Data

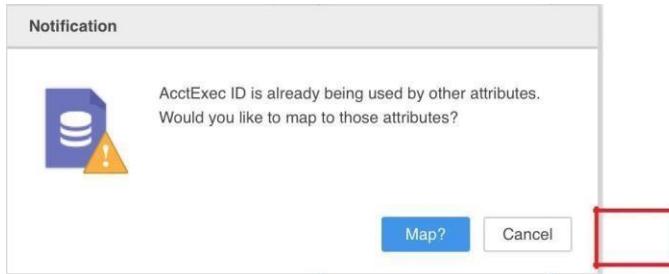
Although you imported all three spreadsheets from Salesforce.com, they won't necessarily have the relationships needed to do a complete analysis. Due to the way Salesforce.com names its primary keys, some columns in the datasets are named differently across the tables. Our next task will be to correct this by setting up the proper relationships within the data.

16. Select **Opportunity.xls** and double-click the **AccountExec ID** column header in the Preview screen. Rename it **AcctExec ID**.



AccountExec ID	Client ID	Description	Start Date	Close Date	Deal Value	Status
5	1	ABC Advisors-Implementation	6/18/2015	8/21/2015	600,000	Completed
5	1	ABC Advisors-Training	12/16/2014	1/9/2015	275,000	Completed
5	1	ABC Advisors-Implementation	2/18/2016	10/28/2016	420,000	Completed
5	1	ABC Advisors-Testing	12/12/2014	1/9/2015	250,000	Completed
		ABC Advisors-Task Environment	1/19/2017	1/19/2017	310,000	Pending

17. Press **Enter**. You will be prompted with a notification.
18. As there is another attribute in the User table called AcctExec ID, MicroStrategy automatically recognizes that the attribute may be the same across both tables—click **Map?** to map the AcctExec ID attribute to the Users table.



TIP: After MicroStrategy maps attributes a small link icon () appears next to them. It indicates that they are the same attributes across different tables.

19. Click **Finish** to exit the Preview window.

20. Click the **Save** button on the toolbar.



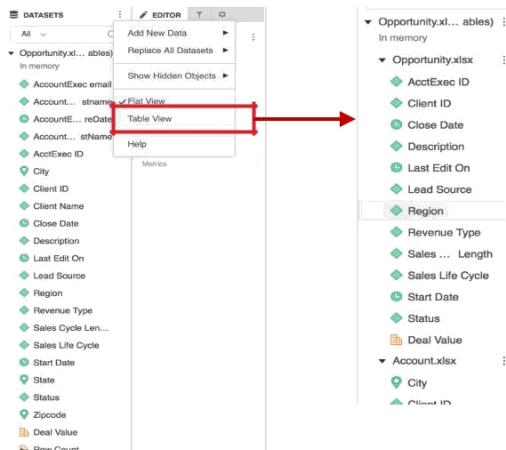
21. Click **Browse PC** to save your dossier in your My Document folder. Name the dossier **Introduction to Dossier**. This file is now a shareable MicroStrategy file (.mstr extension).

TIP: When you save your dossier as a MicroStrategy (.mstr) file, the entire dossier, including visualizations, filters, images, and datasets, is saved. You can share this file with other MicroStrategy users, who can import it into their own MicroStrategy environment to review, modify, or create new visualizations based on the data you share with them. Feel free to save your dossier at any point using the Save button.

Change the data view

MicroStrategy has two different views for displaying attributes and metrics within a dataset. The Flat View displays all the attributes and metrics at one time. The Table View breaks the display down by each imported table. The view you choose is up to user preference. For this lesson, we will choose to display the datasets in Table View.

22. In the Datasets panel, click the **Menu** icon next to Datasets, and select **Table View**.



STRUCTURE YOUR STORY

Create a **Table of Contents**.

Overview

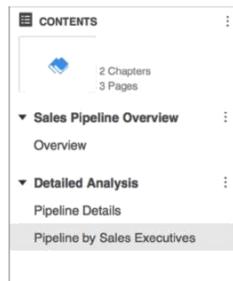
Now that you have imported your data, you are ready to put together a compelling story for your meeting.

Dossiers allow you to build a modern and interactive analytical book of your business. Each dossier consists of individual pages arranged in easy-to-navigate chapters. On each page, you can tell compelling stories about your data with powerful visualizations such as graphs and maps. To provide a guided experience for end users, dossiers include a **Table of Contents** that help you logically organize content into chapters and pages.

Create a **Table of Contents** with the following structure:

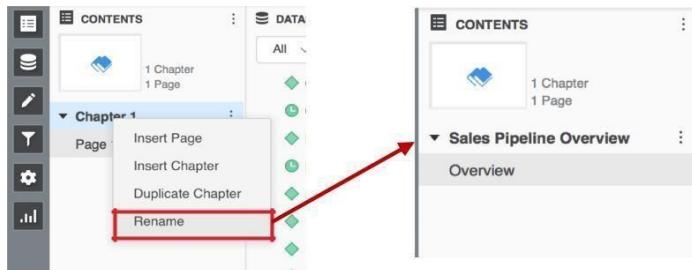
- The first chapter should be named **Sales Pipeline Overview**. It should have a single page named **Overview**.
- The second chapter should be named **Detailed Analysis**. It should have two pages: the first page named **Pipeline Details**, and the second page named **Pipeline by Sales Executives**.

When complete, the **Table of Contents** will look like the image below:

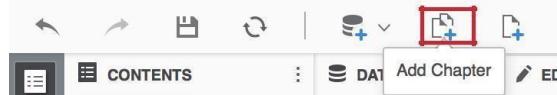


Detailed Instructions: Create a Table of Contents

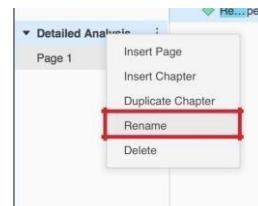
23. Right-click **Chapter 1** in the **Table of Contents**, and rename the chapter **Sales Pipeline Overview**.
24. To rename the page, right-click **Page 1**, and rename it **Overview**. You want the first page of your dossier to show key performance indicators.



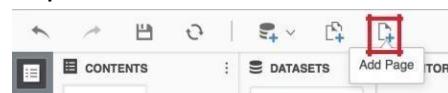
25. Click the **Add chapter** icon to insert a new chapter into your dossier. Notice that adding a new chapter also adds a page in that chapter.



26. Right-click **Chapter 1** (the newly added chapter), and rename it **Detailed Analysis**.

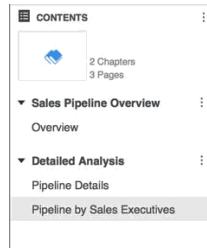


27. Click the **Add new page** icon to add a new page under the **Detailed Analysis** chapter.



28. Right-click **Page 1** and rename it **Pipeline Details**.
29. Right-click **Page 2** and rename it **Pipeline by Sales Executives**.

Your **Table of Contents** should now look like the image below:



VISUALIZE YOUR DATA

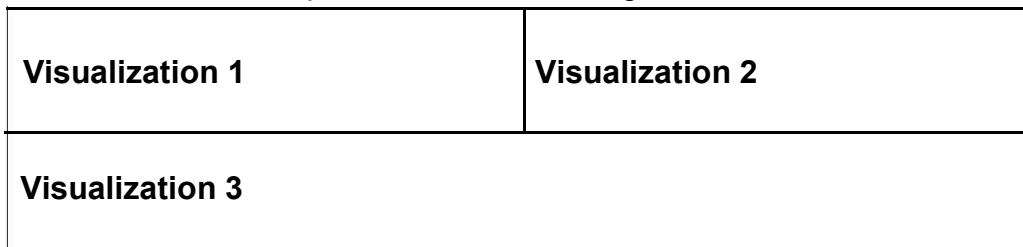
Add KPI And Bar Graph Visualizations to Your Dossiers.

Overview

In the **Sales Pipeline Overview** chapter, we want to display the total **Deal Value** that was won and lost in 2017.

- Add two **KPI visualizations** based on the Deal Value metric. Add a **filter** for each KPI visualization using the Sales Lifecycle attribute to filter the visualizations. Format the KPI visualizations to distinguish them from one another.
- Add a **bar graph** visualization below the two KPI visualizations. Add the **Sales Life Cycle** attribute in the horizontal axis, the **Deal Value** in the vertical axis and the **Revenue Type** in the color by drop zone to color each bar.
- Update the title of the bar graph visualization to **Deal Value by Sales Life Cycle**.

The visualizations should be positioned like the image below:



Your completed **Overview** page should resemble the following image:



Detailed Instructions: Visualize your data

30. From the Table of Contents panel, click the **Overview** page. As we haven't added data, the page only contains the default grid visualization.
31. Click the **KPI visualization** icon from the **Visualization Gallery** to change visualization 1 to a KPI visualization.



32. Drag the **Deal Value** metric into the metric drop zone.
33. You want to format Deal Value as currency. Right-click **Deal Value** in the Datasets panel, then hover over **Number Format**.
34. Click **\$**.
35. Decrease the decimals to zero by clicking **Decrease Decimal** twice. Your dossier should match the image below.



MicroStrategy automatically aggregates the metric and displays the sum of all deals in the pipeline. However, for your analysis, you want to narrow the data to display the total value of all deals won in 2017.

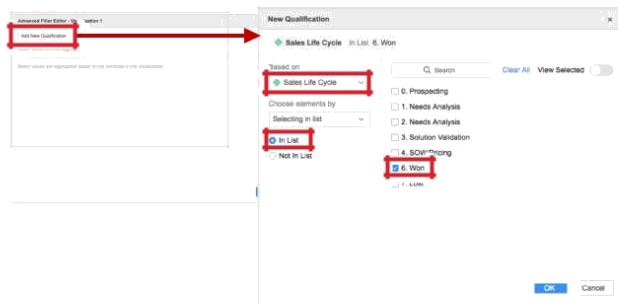
MicroStrategy allows you to quickly narrow down the data included in a visualization to only the data that you would like to display.

36. Click the **Menu** icon on visualization 1, and select **Edit Filter**. The Advanced Filter Editor opens.

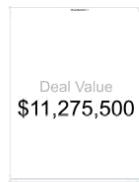


37. Click **Add New Qualification**. Then, choose **Sales Life Cycle** from the **Based On** drop down.
38. Ensure that the **In List** radio button is selected, and select the **6. Won** checkbox.

With the Advanced Filter, you are narrowing the data displayed in this KPI visualization to deal values where Sales Life Cycle attribute equals Won -- you are only displaying the total of Deal Value for all deals that were won.



39. Click **OK**, then **Save**. Your KPI visualization should look like the image below:



40. You also want to show a similar KPI for all the deals that were lost. Insert a new visualization by clicking on the **Insert Visualization** icon in the toolbar.



41. Repeat steps 32 to 38 to add a new KPI visualization, however this time in the **New Qualification** window, choose the deals that were **Lost**.

Your page should match the image below. The visualization on the left displays the total value of deals won, and right visualization displays the total value of the deals that were lost.

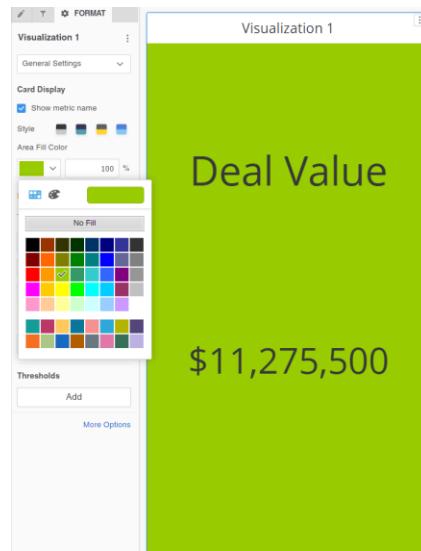


Before adding further information to your **Overview** page, you want to format the two KPI visualizations so they are visually differentiated from one another. This way, other users can easily distinguish which visualization shows which information.

42. Select the visualization on the **left (Total Deals Won)**, and select the **Format Panel**.

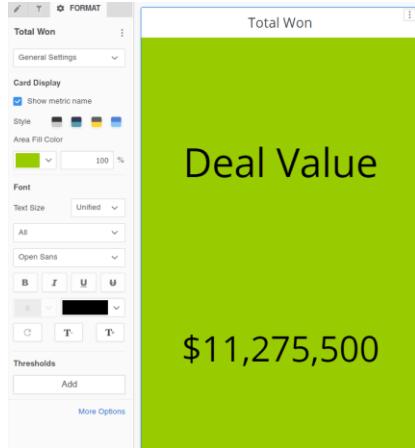


43. In the **General Settings Area** Fill Color option, select **lime**.



44. **Save** your work.

45. Select **Menu** next to Visualization 1. Rename **Visualization 1** to **Total Won** and the **Font** color to black



46. Repeat steps 41-44 for the visualization on the right, but select the **Area Fill Color** is set to **Light Orange**, **Display Text** is set to **Total Lost**, and the **Font** color is set to **Black**.

After you have made your changes, the visualizations should look like the following:



Add another visualization

As the VP of Sales for an enterprise software company, you oversee three primary offerings: software, maintenance, and training services. In addition to the key performance indicators on deals won and lost, you also want to add a visualization that will display the blend of deals by product type and sales lifecycle. To do this, we will add another visualization to the **Overview** page.

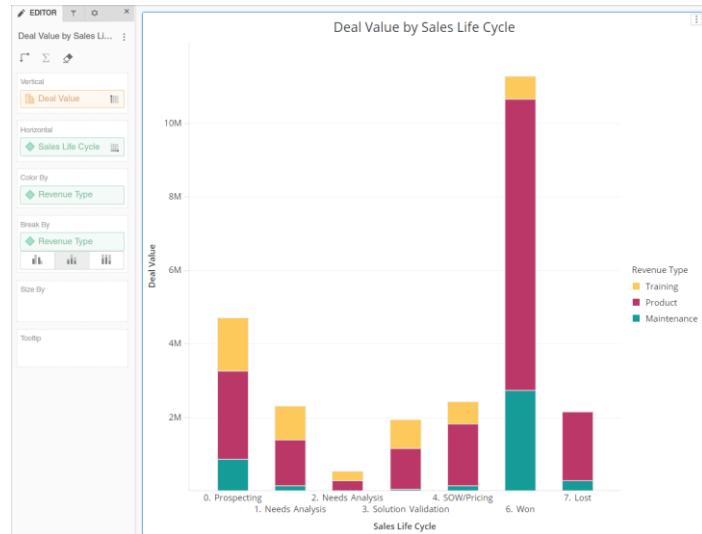
47. Insert a new visualization. The new visualization is added to the right of the Total Lost KPI visualization by default



48. Click the **Bar Chart** from the Visualization Gallery.



49. Double-click on the **title bar** of the new visualization, and update the title to **Deal Value by Sales Life Cycle**.
50. Add the **Sales Life Cycle** attribute to the **Horizontal** drop zone, **Deal Value** to the **Vertical** drop zone and **Revenue Type** to the **Color By** drop zone.



51. Drag the new visualization by its title bar, and place it under the two KPI visualizations (a thin blue line will indicate where the visualization will be placed).

Your **Overview** page should now look like the image below:

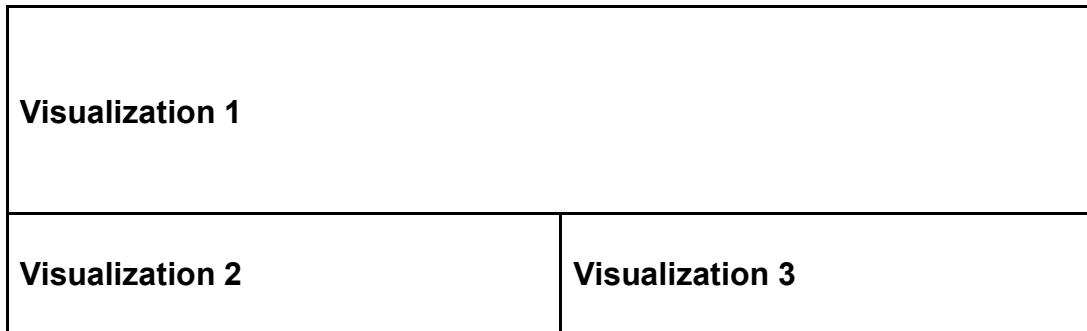


USING A VISUALIZATION TO FILTER OTHER VISUALIZATIONS

Use a Visualization to filter both a grid and another visualization.

Overview

Within the **Detailed Analysis Chapter**, on the **Pipeline Details** page add three visualizations and position them as follows:



Visualization 1:

- Add a stacked **bar chart** visualization across the top of the screen. Use the **Deal Value** metric in the Vertical drop zone, **Close Date (Month)** in the Horizontal drop zone, and **Sales Lifecycle** in the Color by and Break By drop zones.

Visualization 2:

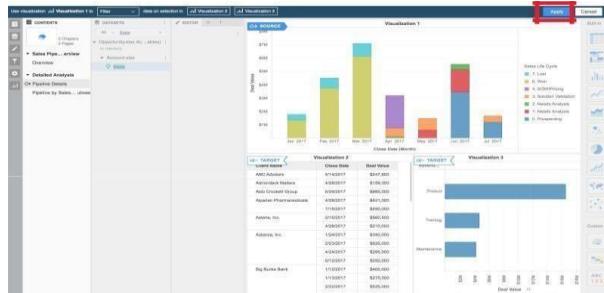
- Add a **grid visualization** to the bottom-left corner. Add the **Client Name** and **Close Date** attributes to the rows and the **Deal Value** metric to the columns.

Visualization 3:

- Add a horizontal **bar chart** visualization in the bottom-right corner. Add the **Revenue Type** attribute for the rows and the **Deal Value** metric for the columns.
- Use **Visualization 1** as a filter for the other two visualizations. It should target both **Visualization 2** and **3**.
- Finally, rename each visualization to the following:
 - **Visualization 1 = Sales Pipeline by Stage and Close Month**
 - **Visualization 2 = Pipeline Detail**

- **Visualization 3 = Pipeline Product Mix**

Your final dossier should look like the image below:



After completing the pipeline details page, move on to the **Detailed Analysis Chapter**. On the **Pipeline by Sales Executive** page add two visualizations that are positioned as follows:



Visualization 1:

- Add a horizontal **bar graph** visualization across the top of the screen. Drag **AccountExec LastName** to the Vertical drop zone, **Deal Value** to the Horizontal drop zone, and **Revenue type** to the Color by dropzone.

Visualization 2:

- Add a grid visualization beneath **Visualization 1**. Drag **ClientName**, **Description**, and **Revenue Type** to the Rows drop zone, and **Deal Value** to the Metric drop zone.
- Finally, rename each visualization to the following:
 - **Visualization 1 = Deal Value by Account Executives** and **Revenue Type**
 - **Visualization 2 = Pipeline Details by Client**

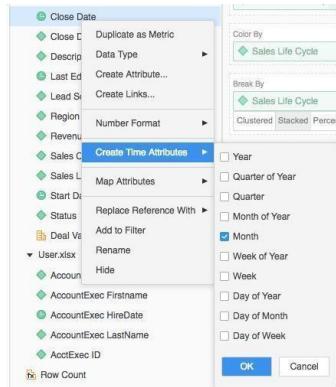
Your final dossier should look like the image below:



Detailed Instructions: Filtering using visualizations

Since we don't have higher level attributes such as **Month** in the dataset, we can create them on the fly from the **Close Date** attribute by using the **Create Time Attributes** feature.

- Right-click the **Close Date** attribute under the **Opportunity.xlsx** dataset, and select **Create Time Attributes**. Select **Month** and click **OK**.



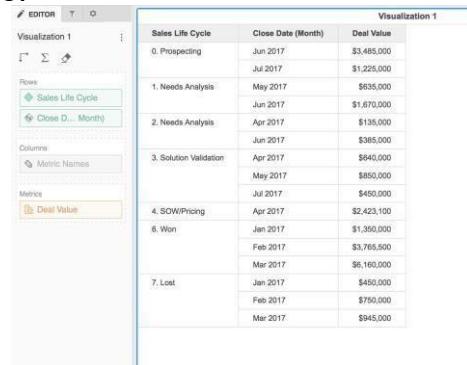
TIP: MicroStrategy enables the creation of time attributes on the fly without manually transforming attributes. The original attribute name still appears on the newly created time attributes to show they have been automatically derived.

- Click the **Pipeline Details** page in the **Table of Contents**. From the **Opportunity.xlsx** dataset, drag the **Sales Life Cycle** attribute and the **Close Date(Month)** attribute to the rows drop zone. Your grid should look like the image below:

Visualization 1

Sales Life Cycle	Close Date (Month)	Deal Value
0. Prospecting	Jun 2017	\$3,485,000
	Jul 2017	\$1,225,000
1. Needs Analysis	May 2017	\$635,000
	Jun 2017	\$1,670,000
2. Needs Analysis	Apr 2017	\$135,000
	Jun 2017	\$385,000
3. Solution Validation	Apr 2017	\$640,000
	May 2017	\$850,000
	Jul 2017	\$450,000
4. SOW/Pricing	Apr 2017	\$2,423,100
8. Won	Jan 2017	\$1,350,000
	Feb 2017	\$3,765,500
	Mar 2017	\$8,160,000
7. Lost	Jan 2017	\$450,000
	Feb 2017	\$750,000
	Mar 2017	\$945,000

54. Drag the **Deal Value** metric from the **Opportunity.xlsx** dataset to the Metrics drop zone.



To display your pipeline data in a more visual manner, convert the grid into a stacked bar chart.

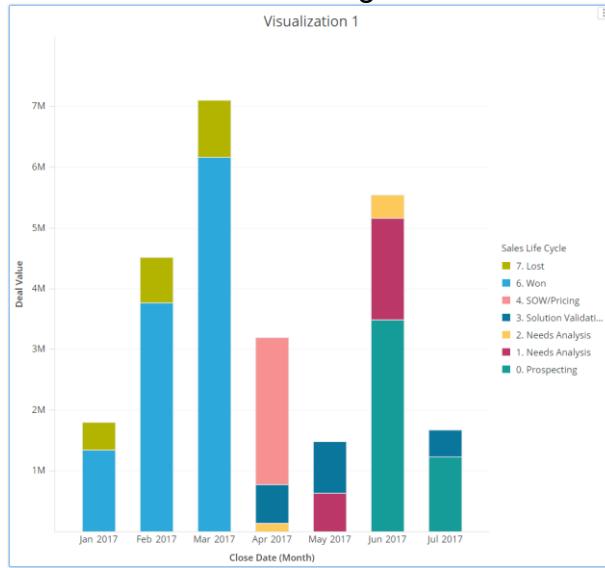
55. Click the **Menu** icon on the visualization and select **Change Visualization**, then **Bar Chart**.



56. In the **Editor** tab, drag the **Sales Life Cycle** from the **Vertical** drop zone to the **Color By** drop zone to distinguish the bar stacks by Sales Life Cycle. Elements dropped in the Color By drop zone are also added to the break by section.

57. Next, drag the **Close Date (Month)** from the **Break By** drop zone to the **Horizontal** drop zone.

Your visualization should now look like the image below:



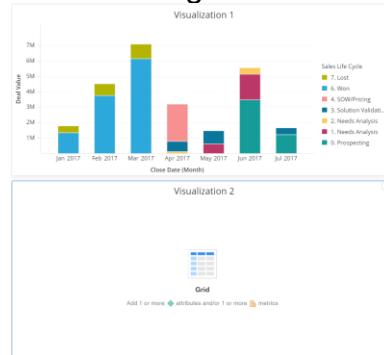
58. Save your work.

Add another visualization

You now have a graphical representation of your pipeline data, showing opportunities by stage and closed month. This visualization nicely displays your data; however, you would like to make it actionable. You need to add more detail to your dossier to help drive your pipeline meeting.

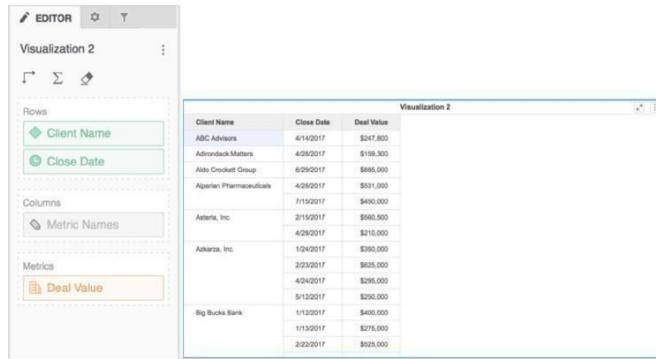
59. Insert a new visualization by clicking the **Insert Visualization** icon in the toolbar.
60. Move the blank visualization below your first visualization

Your page should now look like the following:



61. Drag the **Client Name** attribute from the **Account.xlsx** dataset into the **Rows** drop zone of the Editor panel.
62. Repeat this process to add the **Close Date** attribute from the **Opportunity.xlsx** dataset to the **Rows** drop zone.
63. Add the **Deal Value** metric from the **Opportunity.xlsx** dataset to the **Metrics** drop zone of the editor panel.

Your editor panel and grid should now look like this:



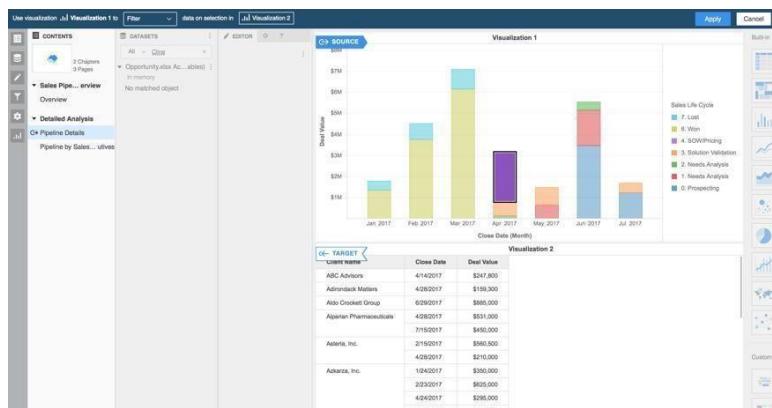
We now have a grid that shows the details needed to drive our pipeline meeting, but we need to tie the two visualizations together. To do so, use the pipeline graph to filter the second visualization. MicroStrategy allows you to use a visualization as a filter for one or more visualizations within a dossier. Let's configure the stacked bar chart to act as a filter for the detailed grid.

64. Click the **Menu** icon on the corner of the bar graph, and choose **Create Contextual Link**. Then select **This Dossier**.



You will be prompted to select which visualization you want to have as a target. If you had more than one visualization on the page, you could select multiple visualizations.

65. Since there is only one other visualization on the page, select **Visualization 2** by clicking anywhere on the visualization (as soon as you click on it, you will notice that a Target icon appears on the visualization) and click **Apply**.



Visualization 1 is now a filter for **Visualization 2**.

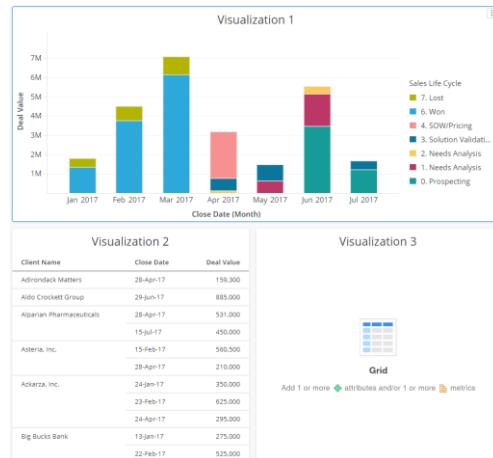
66. Click and drag your cursor around the **April** bar—the detailed grid is now filtered, showing only items for the selected month. To clear the filter, click the white space in the bar chart visualization.



Add another visualization

You also want to bring in details about revenue type so you can see what the product mix is for each month. To do this, you'll add another visualization.

67. Click the **Insert Visualization** icon from the toolbar.
68. Drag your visualization to the right of the visualization 2 and below your bar chart visualization by grabbing the header bar and moving it to the desired location.



69. Add the **Revenue Type** attribute to the Rows drop zone of the editor panel, then add the **Deal Value** metric to the Metrics drop zone of the editor panel.

Your visualization should look like the image below:



Convert the new visualization to a vertical bar chart

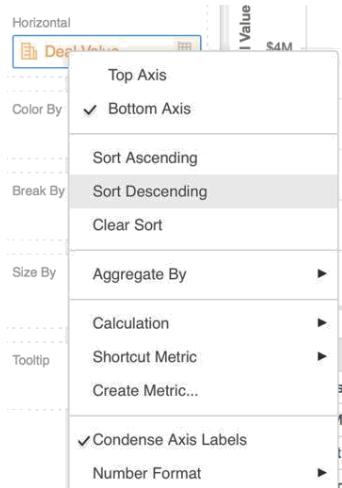
70. With the new visualization still selected, click on the **Menu** icon on visualization title bar, then select **Change Visualization**, and choose **Bar Chart**.



71. Since we want a vertical bar chart, we need to swap the axes on this chart. Click the **Swap** icon in the editor panel.



72. To make the visualization easier to analyze, sort **Deal Value** in descending order: right-click the **Deal Value** metric in the editor panel, and select **Sort Descending**.



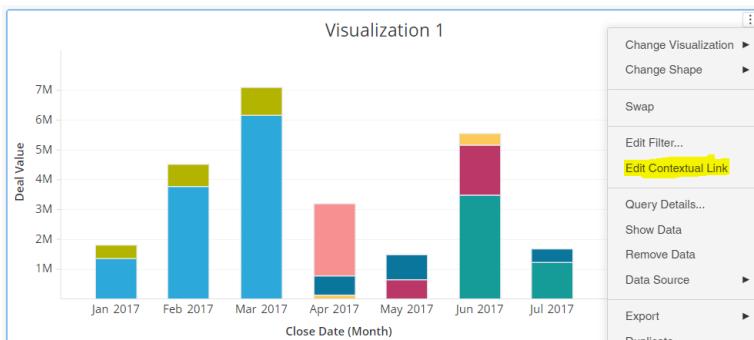
Your dossier should now look like the one below:



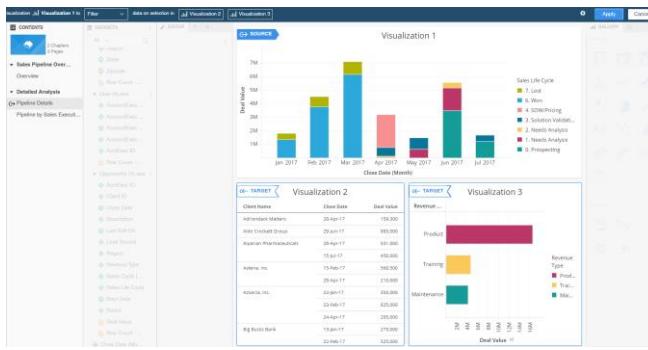
Filter the bar chart

We want to analyze our revenue mix for upcoming deals, so we want to have the stacked bar chart visualization filter the Revenue Type bar chart.

73. Click the **Menu** icon in **Visualization 1** and click **Edit Contextual Link**.



74. Target **Visualization 3** by clicking the visualization, then click **Apply**.



Visualization 1 now filters both **Visualization 2** and **Visualization 3**.

Rename the three visualizations on this page

75. Double-click the **Visualization 1** title bar, and rename the title **Sales Pipeline by Stage and Close Month**.
76. Repeat the process for the remaining visualizations, giving them the following names:

Visualization 2 = Pipeline Detail

Visualization 3 = Pipeline Product Mix

You have now finalized the content for your Pipeline Details page. However, you also want to include data broken down by sales executive.

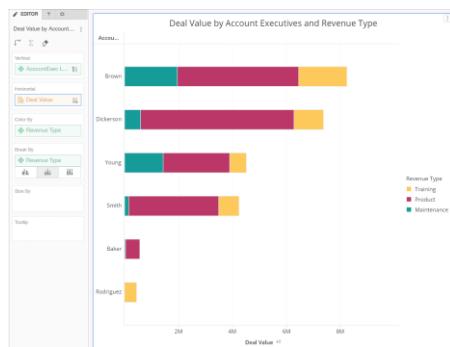
77. Select the **Pipeline by Sales Executives** page in the Table of Contents. Then, click the **Bar Chart** icon in the Visualization Gallery to change the Grid visualization to a Bar Chart.



78. Drag **AccountExec LastName** to the **Vertical** drop zone, **Deal Value** to the **Horizontal** drop zone, and **Revenue Type** to the **Color By** drop zone.
79. Rename the visualization **Deal Value by Account Executives and Revenue Type**.

80. Right-click Deal Value (in the drop zone), and click Sort Descending.

Your visualization should now look like the image below:



81. Insert a new visualization and place it under the bar chart.

- 82. Drag ClientName, Description, and Revenue Type to the Rows drop zone, and Deal Value to the Metric drop zone.**
- 83. Rename the visualization Pipeline Details by Client. Your page should now look like the image below:**

The dashboard contains two visualizations. The top visualization is a bar chart titled "Deal Value by Account Executives and Revenue Type", which is identical to the one shown in the previous step. The bottom visualization is a table titled "Visualization 1" with the following data:

Client Name	Description	Revenue Type	Deal Value
Adirondack Matters	Adirondack Matters-Finance	Product	135,000
Adirondack Matters	Adirondack Matters-Maintenance	Maintenance	24,300
Aldo Crockett Group	Aldo Crockett Group-HR Module	Product	750,000
Aldo Crockett Group	Aldo Crockett Group-Maintenance	Maintenance	135,000
Alparan Pharmaceuticals	Alparan Pharmaceuticals-Finance	Product	450,000
Alparan Pharmaceuticals	Alparan Pharmaceuticals-Finance Maintenance	Maintenance	81,000
Alparan Pharmaceuticals	Alparan Pharmaceuticals-Training	Training	450,000
Astera, Inc.	Astera, Inc-Sales	Maintenance	475,000
Astera, Inc.	Astera, Inc-Software Maintenance	Product	85,500
Astera, Inc.	Astera, Inc-Training	Training	210,000
Astera, Inc.	Astera, Inc-Implementation	Product	150,000

84. Save your work.

VISUALIZATION ON ANOTHER PAGE

Using a Grid Visualization as a filter for a visualization on another page

Overview

Now you have all the information you need for your meeting. However, you would like to be able to link the two pages in the Detailed Analysis chapter together. This way, if during the meeting someone has a question about a deal, you can easily identify the correct Sales Executive to reach out to. With dossiers, authors can easily use a visualization on one page to filter a visualization on a different page.

Create a link between the **Pipeline Detail** grid visualization on the **Pipeline Details** page in the **Detailed Analysis** chapter, and the **Deal Value by Account Executives and Revenue Type** bar chart on the **Pipeline by Sales Executive** page. Use the page to page linking to find out who the Account Executive is for the Rabotnics, Inc. deal that's currently in the Solution Validation sales lifecycle stage.

Detailed Instructions: targeting visualizations

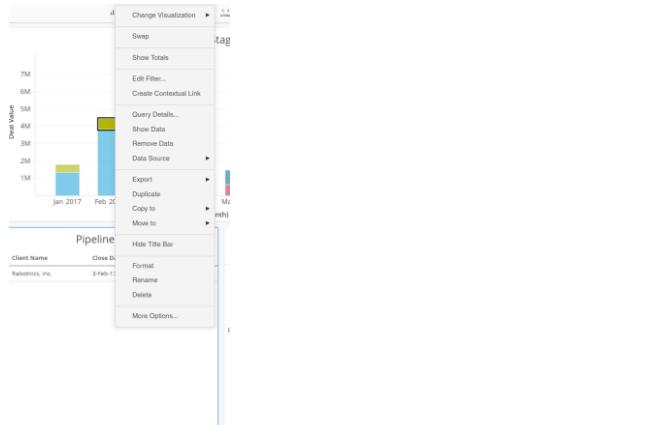
85. Click the **Pipeline Details** page and select the **Sales Pipeline by Stage and Close Month** visualization.
86. Select the **top color for Feb** that represents the deals that are currently in the Solution Validation stage —this action filters the data in the two visualizations below.

Your page should now look like page below:

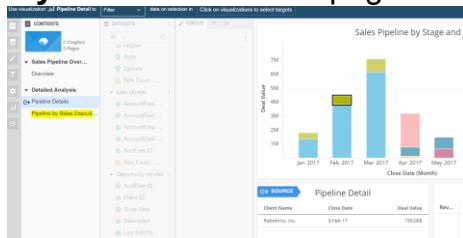


You only have product revenue in the pipeline. Since your firm doesn't sell product (software) without associated maintenance, you realize that you are missing an opportunity and understating your pipeline. Based on the **Pipeline Detail** grid, you know that the deal was with Rabotnics, Inc. Now, you want to see who the account executive is for this client so you can clear up the discrepancy. To do so, you need to link the grid in **Pipeline Details** to the **Bar Chart** on the Pipeline by Sales Executive page.

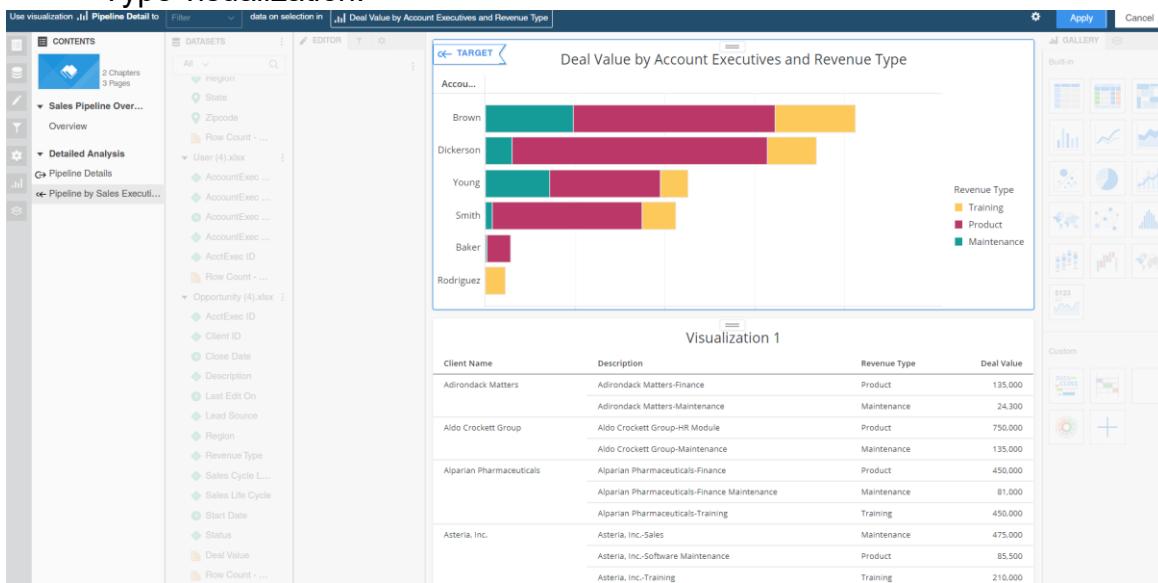
87. Click the **Menu** icon on the Pipeline Detail visualization and click **Create Contextual Link**. Click **This Dossier**.



88. Click the Pipeline by Sales Executives page in the Table of Contents.

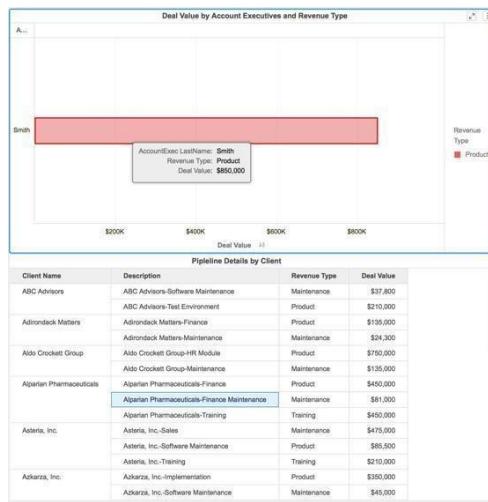


89. Click the Bar Chart, then click Apply — you have linked the grid on the Pipeline Details page to the Deal Value by Account Executive and Revenue Type visualization.



90. To filter, right-click Robatnics Inc. on the Pipeline Detail visualization, and select Go to Page.

This filters the bar chart on. The Pipeline by Sales Executive page, which should look like the image below. You need to speak with Michael Smith regarding this deal.



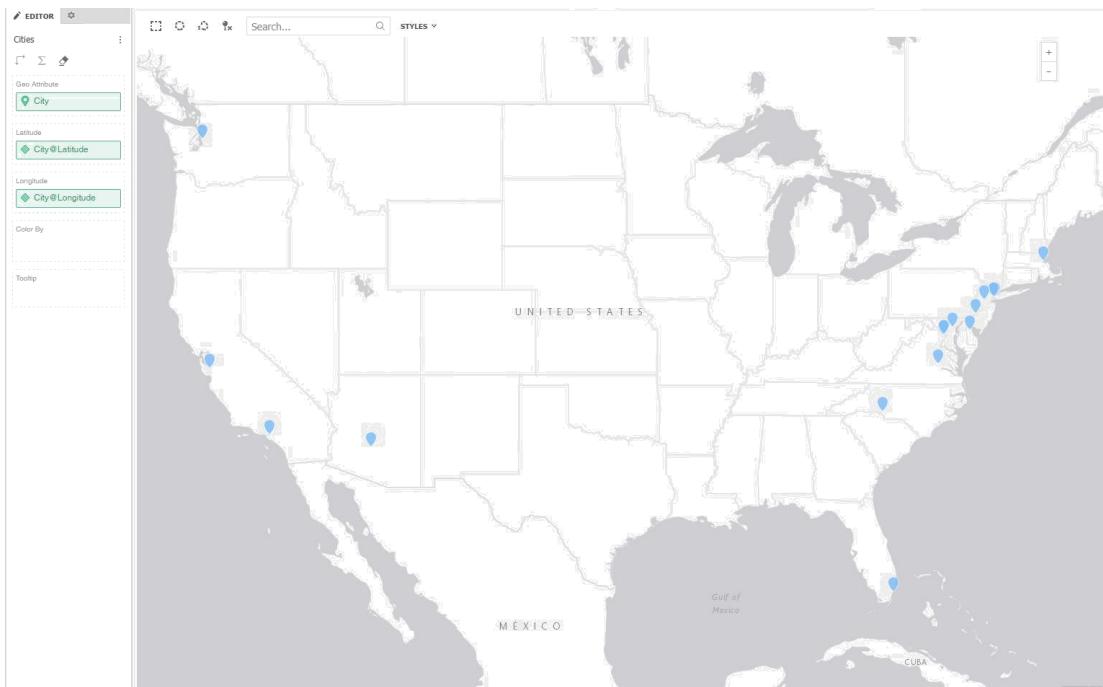
USING A VISUALIZATION IN THE FILTER PANEL

Using a Map as a Visual Filter

Overview

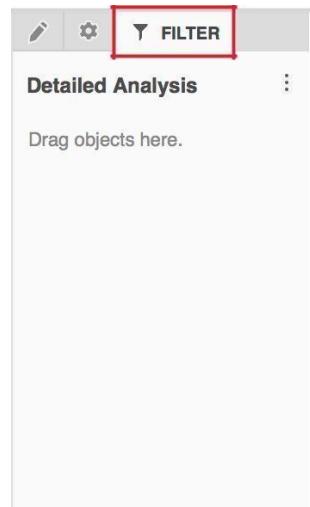
In your last meeting, you were asked how your pipeline information differs by city. In this exercise, we will add a map visualization to the filter panel for the Detailed Analysis chapter. Use the **City** attribute in the **Geo Attribute** drop zone. Rename the visualization filter **Cities**.

Your map visualization in the filter panel should look like the following image:

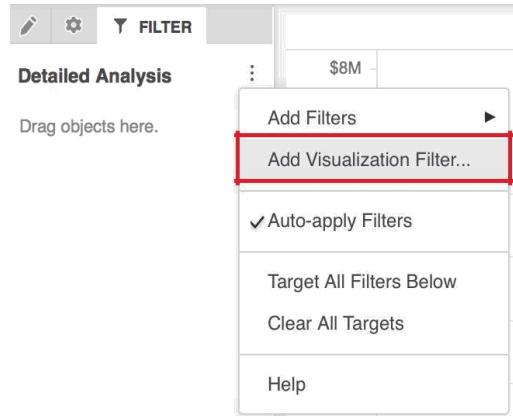


Detailed Instructions: Using a Map as a Visual Filter

91. Select the Filter Panel.

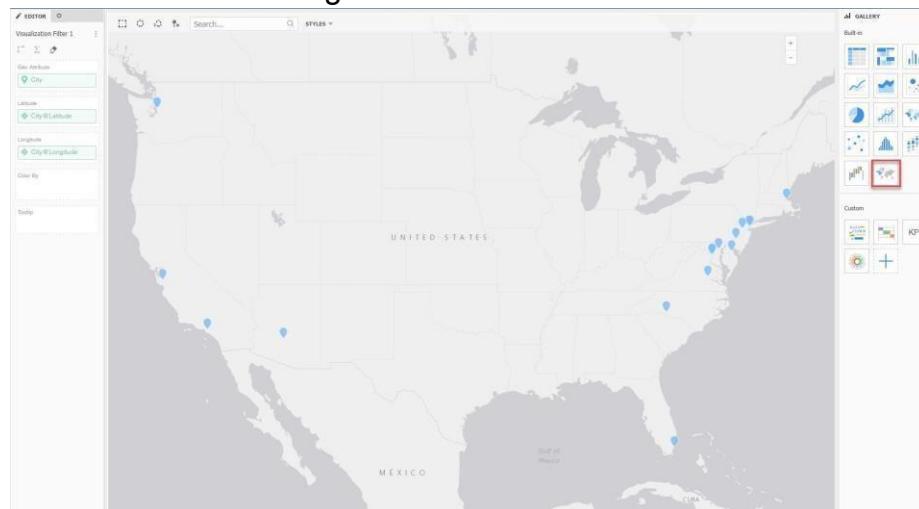


92. Click on the **Menu** icon in the Filter Panel, then click **Add Visualization Filter**.



93. Click the **Map** icon from the Visualization Gallery. Then, drag the **City** attribute to the **Geo Attribute** drop zone. Make sure you select the Map icon — when you hover over the correct icon Map will display, not Geospatial Services.

Your filter should look like the image below:



94. Double-click **Visualization Filter 1**, and rename the filter **Cities**.
95. Click on **Done** to save the filter — this filter now applies to the content of the chapter **Detailed Analysis**.
96. To use this filter, click the filter panel, and select the cities on the map you want to analyze.



TIP: You can use any of the built-in visualizations as a filter. This feature is helpful in scenarios where you would have previously added a visualization to your page for the sole purpose of using it as a selection tool. By adding the visualization to the filter panel instead, you can free up valuable screen real estate while still delivering the desired functionality.

FORMATTING YOUR DOSSIER

Adding a Cover Page and Using the Color Palette

Overview

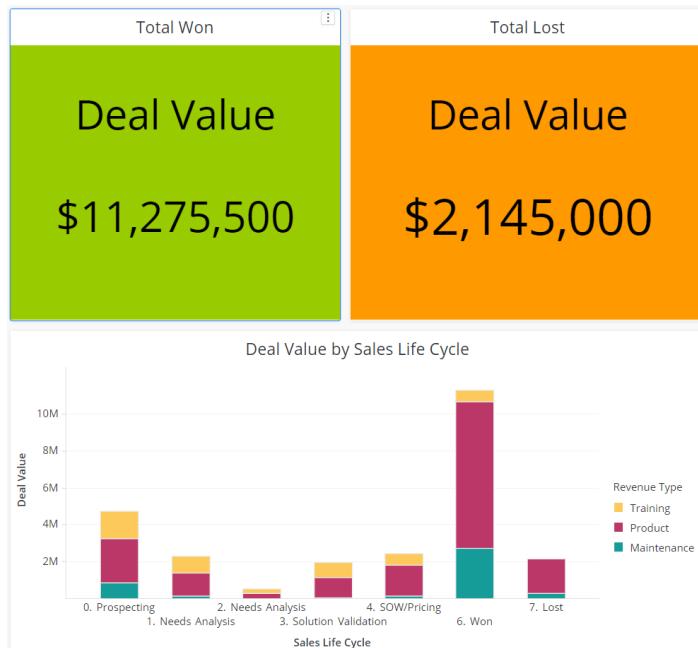
Congratulations! You've created a dossier, which is based off data sourced from your Salesforce.com system and can be used to drive your weekly pipeline meeting.

Before sharing your dossier, you want to apply formatting to make the dossier in line in with your firm's brand. Let's take a few minutes and clean up the dossier formatting.

First, add a cover page to your dossier. You can choose any image you wish.

Second, update the dossier formatting by changing the color palette to use the **Sunset** style.

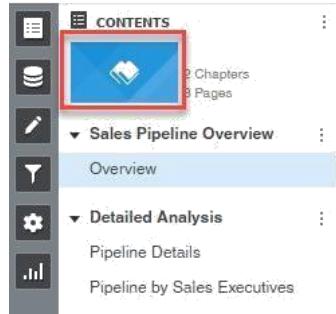
Your final dossier should look like the following image:



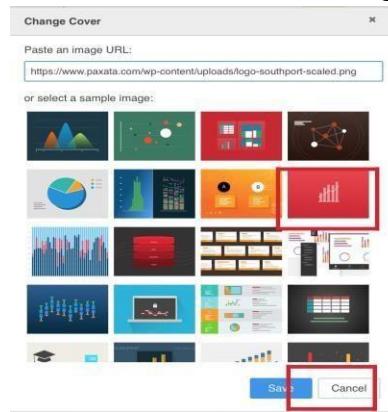
Detailed Instructions: Formatting the dossier

Let's add a cover image to your dossier, we would like to add our firm's logo as the cover image.

97. Click the **cover image** icon in the contents panel.

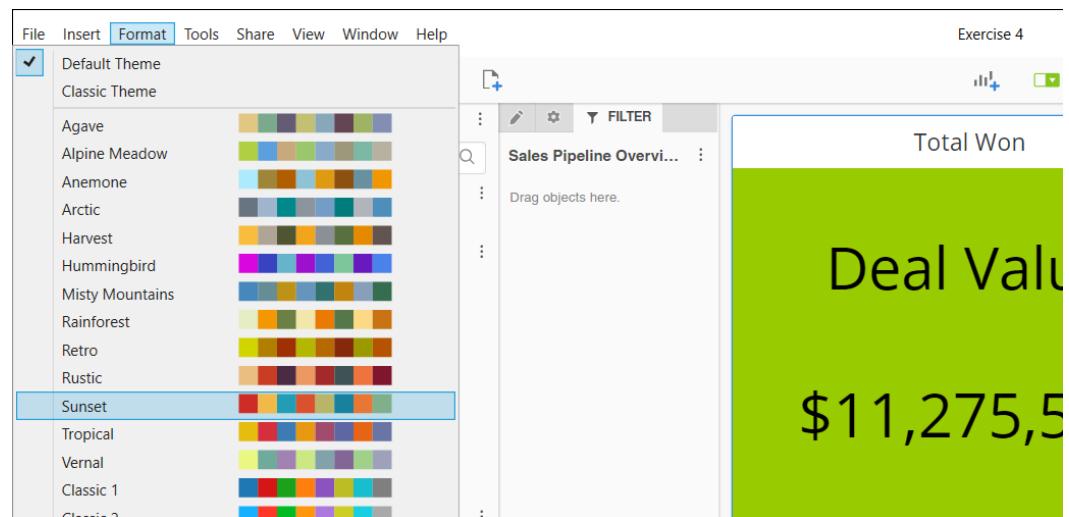


98. On the Change Cover window, choose an image, then click **Save**.

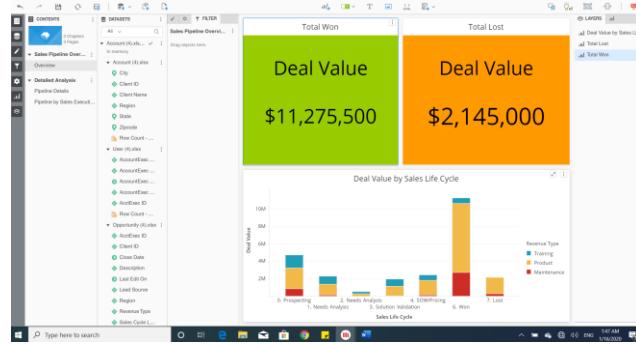


Next, change the colors in your dossier to match your firm's color palette.

99. In the menu bar, click **Format**, and select **Sunset**.



Your dossier should now look like the screenshot below:



TIP: MicroStrategy provides a variety of color palettes inspired by nature to make it easier than ever to build beautiful dossiers with coordinated colors. Color palettes apply to the entire dossier and provide both consistency and coordination of colors.
