

# BUILD AN INTERACTIVE DOSSIER FOR POWERFUL DATA DISCOVERY

MICROSTRATEGY  
**WORLD**  
2019

**MicroStrategy®**  
Analytics and Mobility



Thank you for participating in a workshop at MicroStrategy World 2019. If you missed or did not finish an exercise and want to complete it after the conference, use this workbook and access the supporting files at

**[microstrategy.com/world-2019-workshops](https://microstrategy.com/world-2019-workshops)**

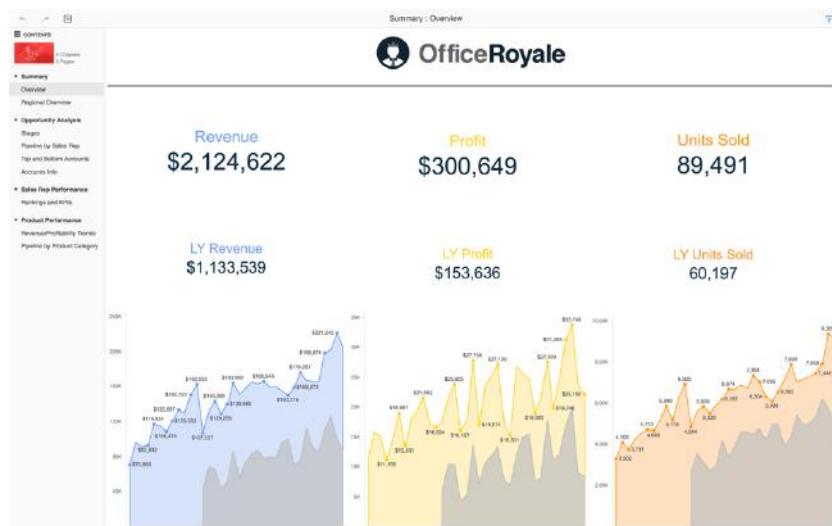


*\*Workshop files will expire 4/30/2019*

# Introduction

## Dashboarding foundations

Dossiers are MicroStrategy's modern dashboards.



Visual representations of your data makes analysis intuitive and simple. Each dossier consists of individual pages arranged into easy-to-navigate chapters. On each page, you can access business-critical updates about your data with compelling visualizations, such as graphs and maps. To provide a guided analytical experience for end users, dossiers include a table of contents that logically organizes chapters and pages. The example below shows an outline of a dossier with two chapters and five pages.



Dossiers help businesses drive the success and adoption of Business Intelligence (BI), an integral component of an Intelligent Enterprise. Intelligent Enterprises effectively designs and implements BI solutions while promoting effective use of data across the organization.

## Data exploration: MicroStrategy Desktop

MicroStrategy Desktop is a powerful data discovery tool that will be used throughout this workshop to help you explore your data and answer key business questions.

Use MicroStrategy Desktop in an agile environment for individual data discovery

and ad-hoc, self-service reporting, or connect it to the enterprise Intelligence Server and share valuable BI data with your department or organization.

## Requirements

For this workshop you need to have MicroStrategy Desktop downloaded to your computer.

- If you already have the necessary software for this course, skip to the *Getting started* section. If you have not downloaded the necessary software, follow the steps below.
- If you did not bring a laptop with you, if your laptop permissions prohibit you from downloading software, or you are otherwise unable to complete the necessary software installations, find a neighbor and form teams for the remainder of the workshop.

## Workshop software setup

Follow the steps below to download MicroStrategy Desktop on your Mac or PC.

- 1 Download MicroStrategy Desktop for Mac or Windows 64-bit at  
<https://www.microstrategy.com/us/get-started/desktop>
- 2 Populate the fields and click **Download Now**.



- 3 Choose the appropriate link based on your computer for either Windows or Mac.

## For Windows

- 1 Extract the **MicroStrategyDesktop\_11.1\_Windows.zip** file found in **C:\Users\<yourusername>\Downloads**.
- 2 Open the folder **MicroStrategy Desktop 11.1**.
- 3 Double-click **DesktopSetup.exe**. Follow the steps to complete the installation.

## For Mac

- 1 Double-click **MicroStrategyDesktop\_11.1\_Mac.zip** found in **MacintoshHD:\Users\<yourusername>\Downloads**.
- 2 Double-click **MicroStrategy\_11.1\_Mac.dmg**. Click to agree with the license.
- 3 Drag the **MicroStrategyDesktop.app** into the **Applications** folder and follow the steps to complete the installation.

MicroStrategy Desktop is now ready to go. Leave Desktop open as we will use it throughout the remainder of this workshop.

## Getting started

You are a Sales Analyst for MicroStrategy, Ink, a printer supply company with offices across the United States. The Chief Sales Executive and the Chief Marketing Officer have asked you to create a dossier that provides insight into this year's company sales.

Before creating your own dossier, you want to review the MicroStrategy, Ink dossier that was previously created and presented at an All Hands Meeting. The MicroStrategy, Ink dossier contains:

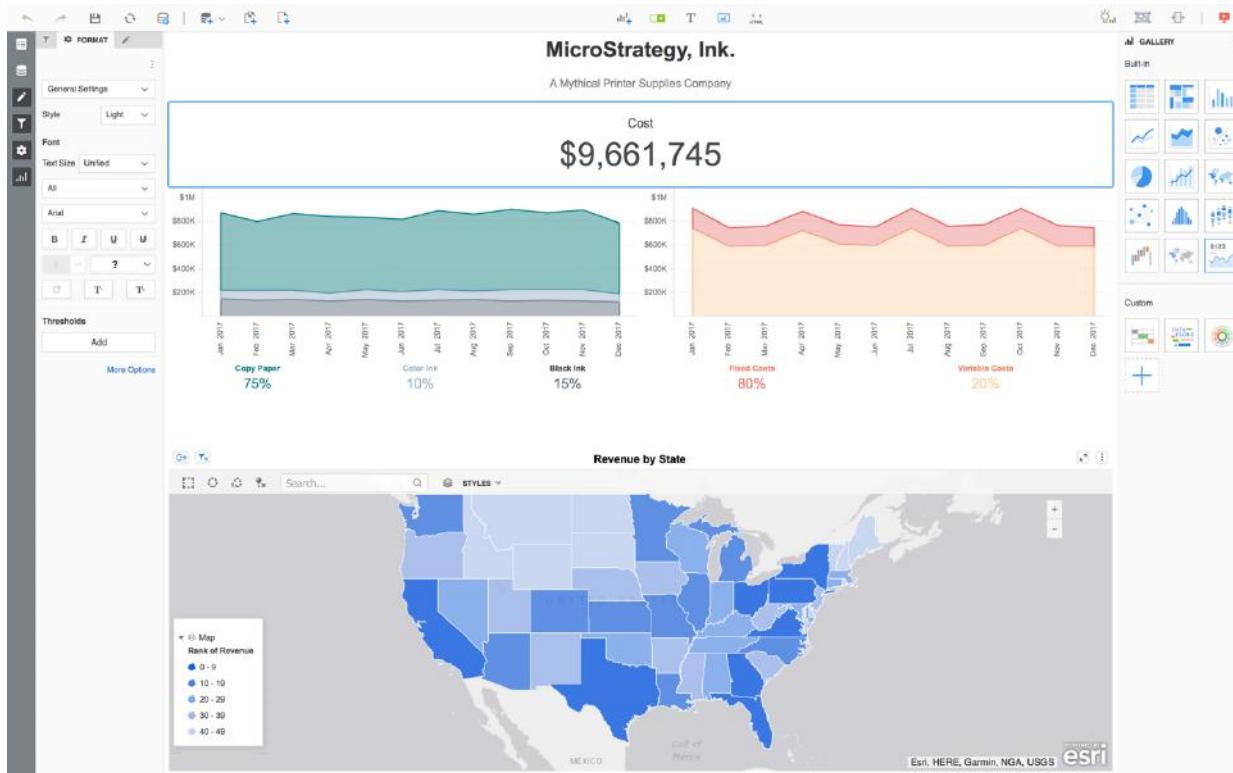
- An overview that allows executives to understand performance across different years and the various offices' branch locations.
- A sales analysis across the past six years that includes revenue and customers by sales representative and office.
- Historical analysis, including transaction level information.

# Exercise 1: Explore the MicroStrategy, Ink dossier

You want to analyze the dossier presented at the All Hands meeting to get familiar with how your dossier should look.

## Explore the MicroStrategy, Ink dossier

- 1 In MicroStrategy Desktop, open the **MicroStrategy, Ink** dossier from the Supporting files folder provided to you by your instructor.
- 2 The dossier opens in a Dossier Editor window. You should be on the Executive Overview page. If you are on a different page, select the **Executive Overview** page within the Contents Panel.



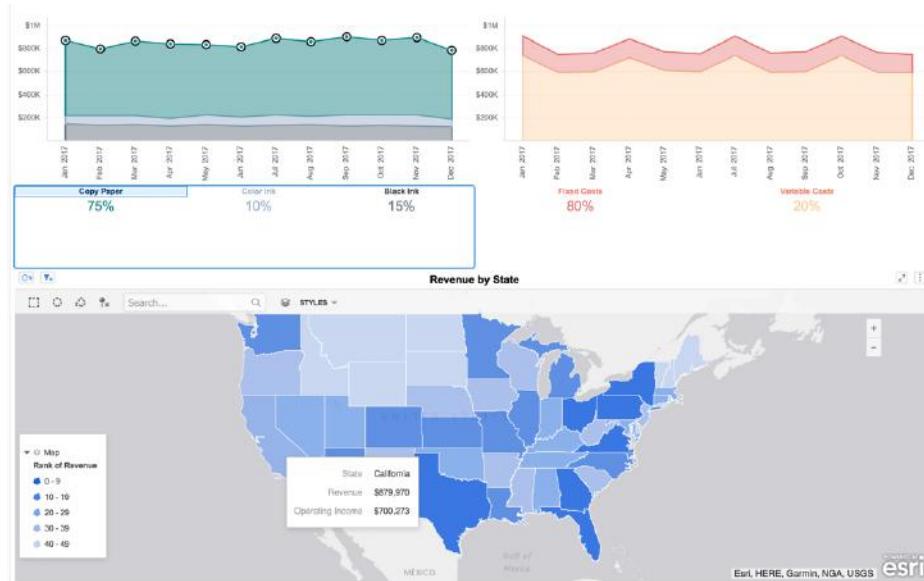
The contents panel displays the chapters and pages of your dossier. To show or hide this panel, click the **Table of Contents** icon .

- 3 The Executive Overview page provides a summary of key performance indicators across the year, such as revenue and cost. Hover over **California** on the Area Map—it displays each state colored by revenue across the year with a blue gradient.

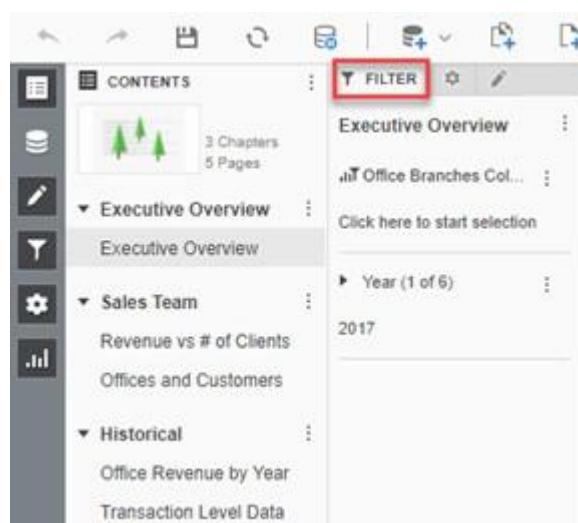
The darker the state, the higher the revenue. This tool tip displays State, Revenue, and Operating Income for 2017.

- 4 In Desktop, you can add innovative filters to customize the data displayed. The business analyst who created the dossier added several filtering options.

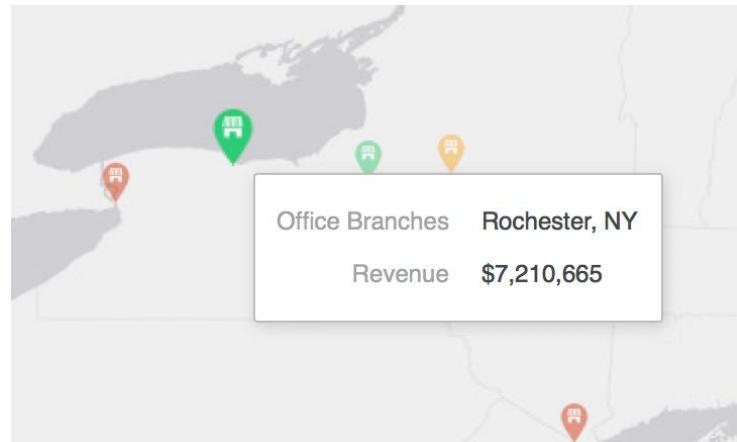
Click **Copy Paper** above the area map. This visualization acts as a filter to narrow data on the Area Map and Revenue Chart visualizations to only show data for Copy Paper.



- 5 Hover over **California** on the Area Map; notice the numbers now reflect revenue and operating income for copy paper only. Click **CopyPaper** again to clear the filter.
- 6 In addition to the filter placed on the page, dossier designers can add filters. A filter defines the condition that the data must meet to be included in the dossier. Click the **Filter** icon to open the Filter panel. The MicroStrategy, Ink dossier authors added two filters here—a Year filter and an Office Branch filter. The current view is set to all branches and 2017.



- 7 You would like to view the data on this page for the office branch with the highest revenue. Click **Office Branches Colored by Revenue** in the Filter panel to open the filter options.
- 8 A map opens with markers for each office branch, colored by revenue. The highest performing branch is Rochester, NY. Click the **Rochester, NY** marker to select that branch; then click **Done**. The Executive Overview page now only shows data for Rochester.



- 9 To view data for both 2016 and 2017, click on **Year** in the Filter panel and select the **2016** check box. The 2017 check box is already selected.

The page shows data for 2016 and 2017.

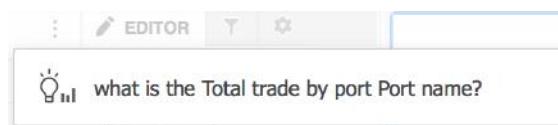
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#### Use NLQ to generate a visualization

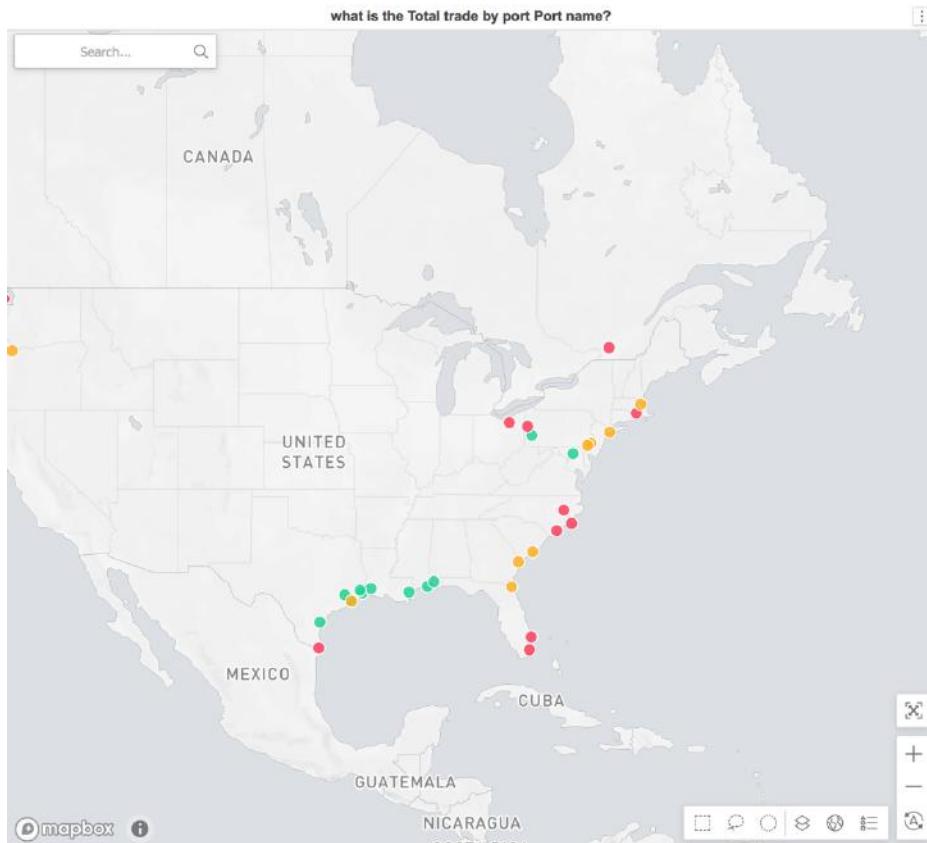
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To help determine which visualizations can answer your business intelligence questions contained within the dossier's datasets, you can query your data with natural language to automatically generate visualizations.

For example, if a data analyst wants to start building a dossier evaluating shipping trends across North America, she can just click the NLQ icon in the tool bar and type, "what is the Total trade by Port name?"

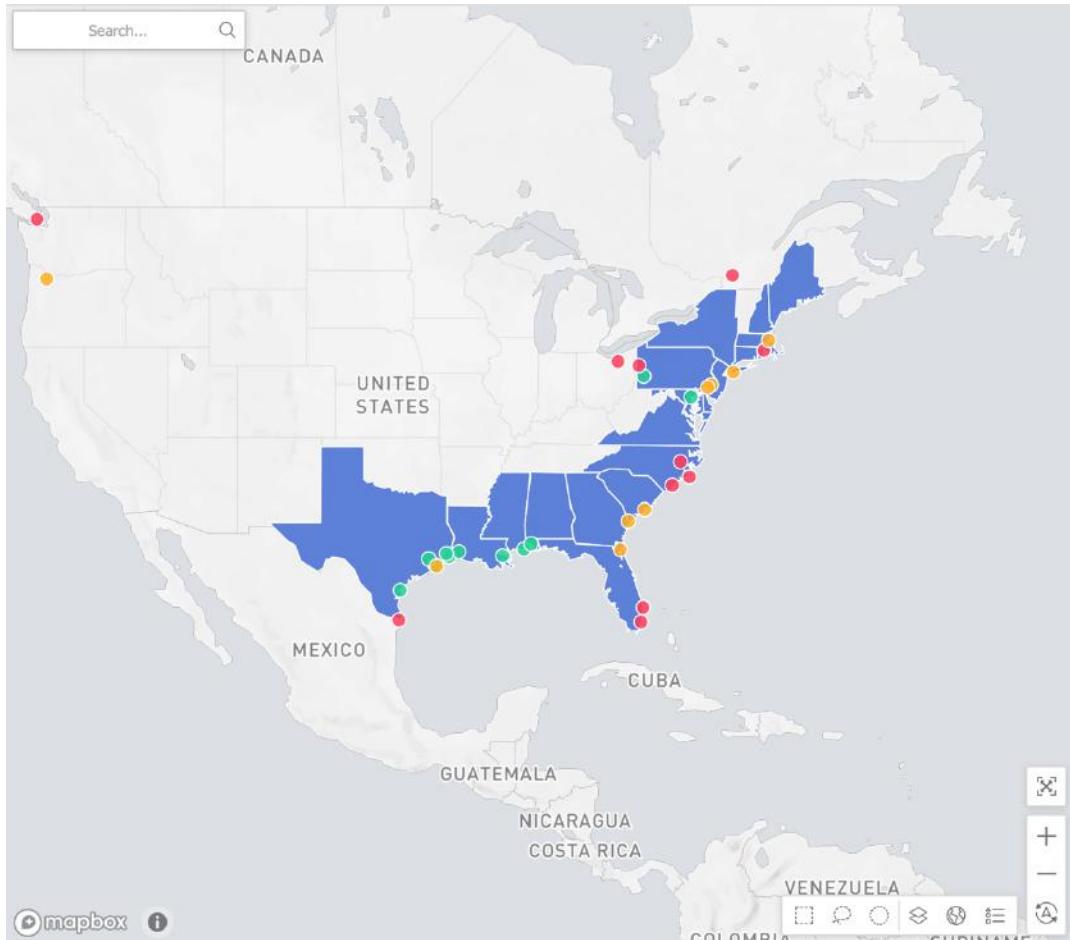


Based on the Total Trade metric and the Port Name attribute, the following Geospatial Services visualization is generated to answer her question:



The data analyst can use the Geospatial Services visualization as a starting point to analyze total trade. She can also add an additional State layer to her map so the

final visualization analyzes trade at both the State and Port level, as seen in the image below.



MicroStrategy's Natural Language Query (NLQ) tool is a convenient way to kick-start a visualization. You want to include a visualization on this page that shows revenue. Let's use NLQ to help determine which visualization is the best fit for your question.

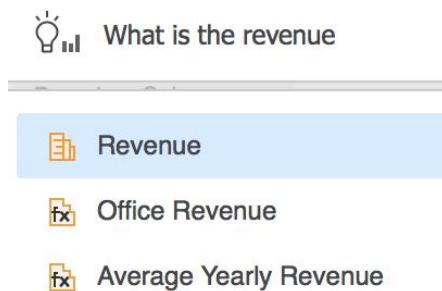
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#### Create a visualization using NLQ

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- 1 On the Executive Overview page, click the **Natural Language** icon .

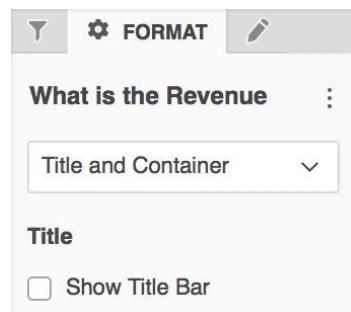
- 2 Type “**What is the revenue**” and select the **Revenue** metric as shown in the image below. Press **Enter** on your keyboard.



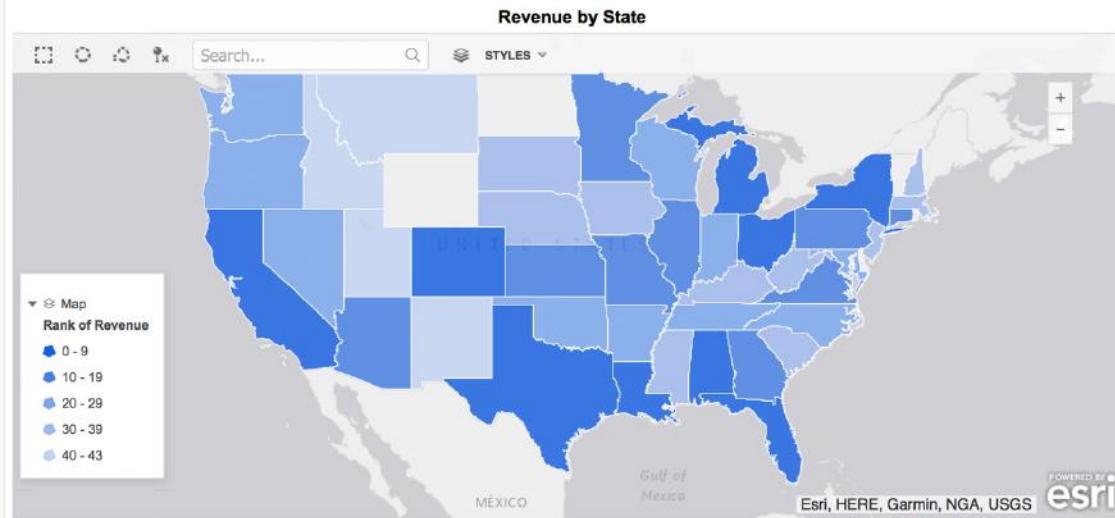
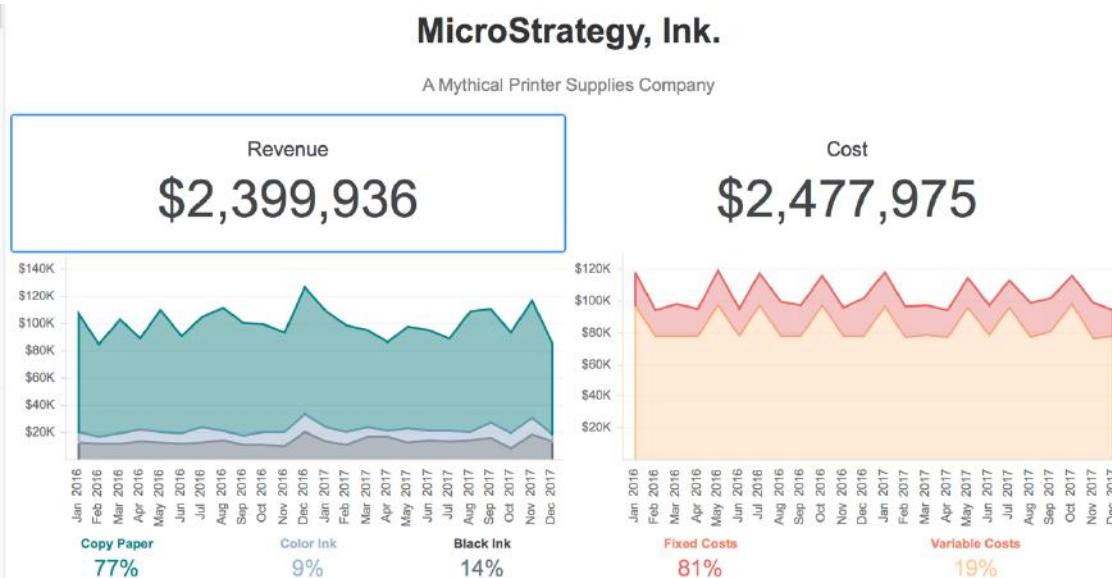
A KPI visualization displaying the total revenue is generated. To ensure that your dossier matched the standards set in place by your organization’s Application Architect, let’s edit the KPI visualization to match the Cost KPI.



- 3 Click and drag the **Revenue KPI** to the left of the Cost KPI.
- 4 Select the **Format** panel. In the drop-down list at the top, select **Title and Container**.
- 5 Clear the **Show titlebar** checkbox.



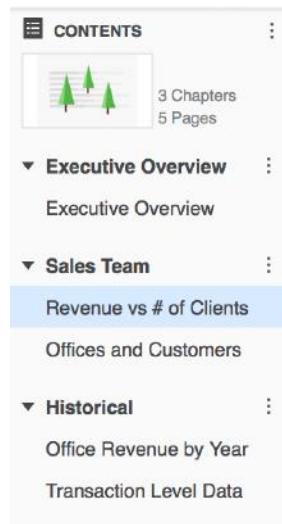
Now, the formatting of the two KPI visualizations match.



You can use page-to-page linking to view revenue versus number of clients.

To do this, you can use visualizations on one page to filter information on a different page and chapter. The MicroStrategy, Ink designer linked the Area Map with the Transactional Level Data page. You can right-click on any state and select **Go to Targets** to view the Transactional Level Data page.

- 6 Use the Contents panel to navigate through the rest of the pages. Is there anything else you need to add to the dossier before presenting it to the board?



## Comment and collaborate: MicroStrategy Library

MicroStrategy Library is a personalized virtual bookshelf that allows you to access all your dossiers from a single location. With Library, you can share, collaborate, and interact with your dossiers. You can make your dossiers available in the Library from Desktop when you connect Desktop to an enterprise Intelligence Server.

Through Library, you and your team can:

- Gain new insights on your dossiers by reading others' comments.
- Share findings with your colleagues in real time instead of using email threads.
- Tag users in comments using @user\_name.
- Reach out to subject matter experts and have a conversation alongside your data visualizations.
- Share a link to your “view” of a dossier, such as your current filter settings, to provide additional context by using @filter in your comment.

The image below is an example of a comment thread on a dossier in Library.



## Extending data discovery: HyperIntelligence

MicroStrategy helps Intelligent Enterprises inject BI into the daily workflows of their users and employ the power of their own data. To help extend BI and increase data literacy, enterprises can use HyperIntelligence, a Chrome browser extension that uses MicroStrategy data to identify and highlight key information on a web page. When a user hovers over a highlighted item on a web page, a KPI card with key information, referred to as a Card, is displayed, as shown in the Google search below:

The screenshot shows a Google search results page for "microstrategy". The search results include links to MicroStrategy's official site, Domo, Looker, and MicroStrategy's LinkedIn profile. A green callout box highlights a KPI card for MicroStrategy, which displays the following information:

Symbol	Ticker	CEO	Employees
MSTR	Michael J. Saylor	2,464	

The card also includes a link to <https://www.microstrategy.com> and a note that the information is from the "Fortune 500 2017" dataset.

For example, say a sales representative at a television production company needs to see key account information while typing notes during a meeting with her manager, and a supply chain manager needs to view a count of set props to manage inventory numbers. Instead of logging into multiple systems to get the data they need, the company can leverage HyperIntelligence to embed in-line analytics in their web-based applications such as Salesforce and Google Docs.

Additionally, HyperIntelligence can be used to augment dossier analysis. Users can hover over key words to view more information within a dossier without needing to navigate to another dossier page, or log into another system. In the example below, a sports management analyst can view upcoming matches in a soccer game and view current statistics.

## Exercise 2: Explore HyperIntelligence on the web

In this exercise, you'll install the Chrome plug-in and view HyperIntelligence in action, leveraging data to extend your analysis.

The screenshot shows a dossier for Leicester City F.C. on a web browser. At the top, there's a navigation bar with the club's name and logo. Below it, a summary section displays:

- Leicester City F.C.**
- Soccer club
- [lcfc.com](#)
- Leicester City** (with a blue background)
- 7 • Premier League • England

Below the summary, there are two main sections:

- Recent Stats:**

Matches Played	Matches Won	Points
21	9	31
- Team Data:**

Owner: King Power	Goals For: 25	Goals Against: 23	Goal Difference: 2
Manager: Claude Puel			
Arena/Stadium: King Power			
Location: Leicester, United Kingdom			
CEO: Susan Whelan			

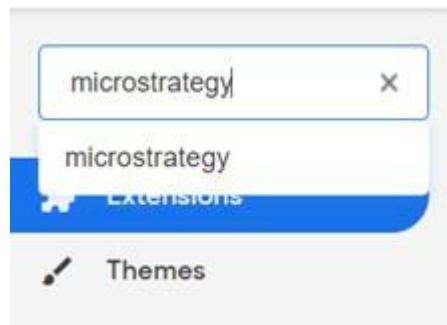
At the bottom, there's a link to "Leicester City on Google" and a small image of a player in action.

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### Add the HyperIntelligence plug-in to your Chrome browser

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- 1 Navigate to <https://chrome.google.com/webstore/category/extensions> in Google Chrome.
- 2 Search for **MicroStrategy** in the search bar and press **Enter**.



- 3 Click **Add to Chrome** on the MicroStrategy HyperIntelligence extension. In the pop-up dialog box, click **Addextension**.

The screenshot shows the MicroStrategy HyperIntelligence extension page on the Chrome Web Store. It features the MicroStrategy logo and the product name "HyperIntelligence". Below the title, it says "Offered by: MicroStrategy" and "Surface relevant information directly in your web browser." A "Productivity" badge is also present. On the right side, there is a prominent blue "Add to Chrome" button.

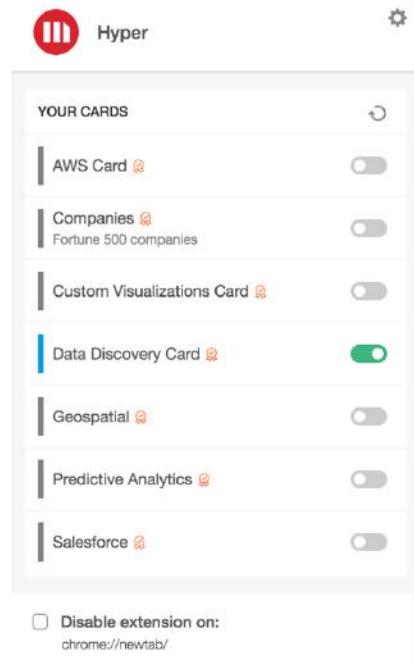
You are notified that HyperIntelligence has been added to your Chrome browser and the MicroStrategy logo is shown on your toolbar.

- 4 Connect your plug-in to the MicroStrategy Cloud environment. Click the **MicroStrategy logo**  on the toolbar and type the following environment URL:

[https://env-  
XXXXX.customer.cloud.microstrategy.com/MicroStrategyLibrary/api](https://env-XXXXX.customer.cloud.microstrategy.com/MicroStrategyLibrary/api)

Replace the XXXXX with the environment number provided by your instructor.

- 5 Click **Continue**.
- 6 Type **hyper** for the Username and **hyper** for the Password, and then click **Log In**.
- 7 In the list of Cards, enable **Data Discovery Card**.



*Notice the Certified badge next to each card. Cards, like dossiers, are certified to help maintain a single version of truth and adhere to your Intelligence Enterprise's data governance policies. Certifying a card also allows it to be distributed to other users.*

### View KPIs for Big Bucks Bank

- 1 In an online search engine, search for **Big Bucks Bank**. Hover your cursor over Big Bucks Bank to see KPIs for the bank.

Around 40,000,000 results (0.47 seconds)

Solved: Suppose That Big Bucks Bank Has The Simplified Bal ... - Chegg  
<https://www.chegg.com/.../suppose-big-bucks-bank-simplified-balance-sheet-shown-r...> ▾

★★★★★ Rating: 100% - 3 votes

Answer to Suppose that Big Bucks Bank has a reserve ratio is 20 percent: Instr...

**Big Bucks Bank**  
Richmond

\$275,000	1/13/2018	Completed
Deal Value	Close Date	Status
Brown	karen@strongsales.com	Existing Customer
Account Exec	AccountExec email	Lead Source

**Suppose that Big Bucks Bank has a reserve ratio is 20 percent:**  
<https://study.com/.../suppose-that-big-bu...>  
 Show in columns 1 and 1' how the bank's balance sheet would change if the additional amount ... How will the bank's balance sheet change if the amount of the new loans have been cleared ...

**Images for big bucks bank**

## Exercise 3: Prepare data for analysis

Now that you have reviewed the MicroStrategy, Ink dossier and cards, you are ready to create your own dossier.

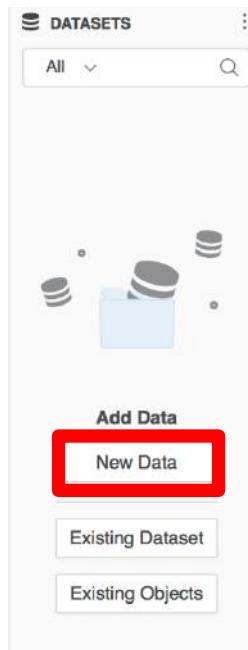
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### Import your data

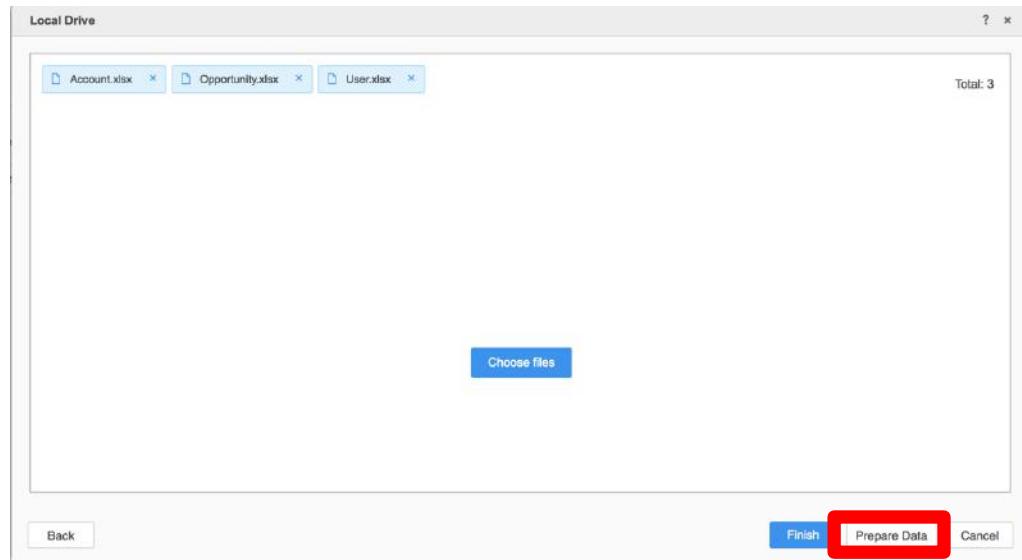
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- 1 In the Desktop Home window, select **New Dossier** on the left.
- 2 In the **Datasets** panel, under **Add Data**, select **New Data**.

The Datasets panel displays objects from each dataset in the dossier, organized by the dataset they belong to.



- 3 From the Data Sources window, select **File from Disk**, then **Choose Files** to browse your local machine and import spreadsheets.
- 4 From the Supporting Files folder for this workshop, select the **Account.xlsx**, **Opportunity.xlsx**, and **User.xlsx** files. Use **Ctrl+Click** (on a Mac, use **Command**) to select multiple files at once, then click **Open**.
- 5 To make sure the data fits your needs, click **Prepare Data** in the Local Drive window.



- 6** The Preview window opens. A preview of the data in the selected dataset is shown at the bottom of the window.

The screenshot shows the 'Preview' window in MicroStrategy. It displays three datasets: 'Account.xlsx', 'Opportunity.xlsx', and 'User.xlsx'. Each dataset is represented by a card with a list of attributes and metrics. The 'Opportunity.xlsx' card is highlighted with a blue border. The 'Account.xlsx' card shows attributes: City, Client ID, Client Name, and Region. The 'Opportunity.xlsx' card shows attributes: AccountExec ID, Client ID, Close Date, Description, Last Edit On, Lead Source, and Region. The 'User.xlsx' card shows attributes: AccountExec Fir, AccountExec Hir, AccountExec La, and AccountExec em. At the top left of the preview window, there are buttons for 'All Objects View' and 'Wrangle'.

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 adjusted manually in the Preview window.

## Wrangle the data

Imported data can contain errors, missing records, or incorrect formatting that can make analysis difficult. We can make changes directly within MicroStrategy by using the Data Wrangling tool.

- Select the **Opportunity** table in the Preview window, then click **Wrangle**.

The screenshot shows the MicroStrategy Preview window with three tables listed:

- Account.xlsx** Attributes: City, Client ID, Client Name, Region.
- Opportunity.xlsx** Attributes: AccountExec ID, Client ID, Close Date, Description, Last Edit On, Lead Source, Region.
- User.xlsx** Attributes: AccountExec Firstname, AccountExec HireDate, AccountExec LastName, AccountExec email.

A red box highlights the **Wrangle** button at the top right of the preview area.

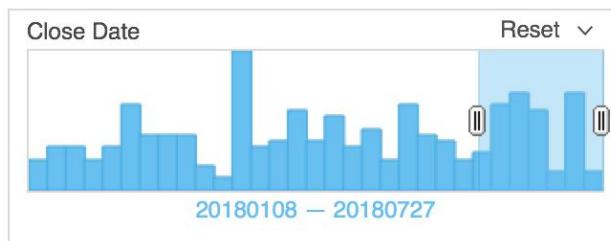
- You are only interested in data from 2018, so you want to filter the dataset by using a timeline selector. Select the **Close Date** column in the Sample data area. From the **Select Function** drop-down list at the top of the page, select **Timeline Selector**.

The screenshot shows the Data Wrangling interface for the **Opportunity.xlsx** table. The **Close Date** column is selected. A context menu is open over the column header, showing options like Delete, Extract, and Selector. The **Text Selector** option is highlighted with a red box.

Date	Close Date	Deal Value	Status	Last Edit On
06-16	2016-08-21	600000	Completed	2017-01-09
12-16	2016-01-09	275000	Completed	2017-01-09
02-18	2017-10-28	420000	Completed	2017-01-09
12-12	2016-01-09	250000	Completed	2017-01-09
01-20	2018-04-14	210000	Open	2018-04-14
07-02	2016-07-02	175000	Completed	2017-01-09
07-20	2016-08-28	350000	Completed	2017-01-09

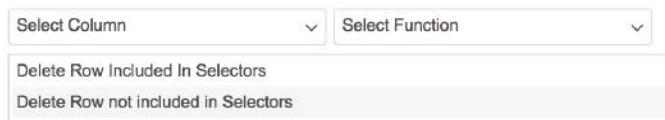
A timeline selector window appears below the data. The timeline shows the frequency of opportunities (number of rows) that fall within a specified date range. The range starts at 2016 and ends in 2018, as denoted by the numbers underneath the graph.

- 3 Drag the left and right sliders in to include only dates in the **2018** range. Your timeline selector should look like the image below.

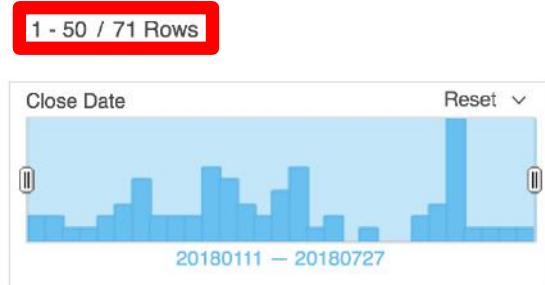


The graph dynamically changes based on the range of dates you select. For this example, the date range should read 20180108–20180727.

- 4 Click the **Reset arrow** in the timeline selector and select **Delete Row not included in selectors** to filter the data and include only 2018.



Your dataset shrinks significantly. Ensure that you now only have 71 rows of data.



In your data in the data wrangling window, you can see that there are discrepancies in the Region column. Some rows have Northeast, some have Southeast, while others just show East. You can cluster these records into the correct regions by using text select.

- 5 Click the **Down arrow** in the Region column header and select **Text Selector**.
- 6 The text selector opens at the bottom of the window. Hover over **Northeast** and click **Edit**. Replace Northeast with the word **East** and click **Apply to All**.
- 7 Repeat the previous step to change the **Southeast** values to **East**.

The number of records in the East row should now be 23.

- 8 Click **Apply** to save your changes and return to the Preview window.

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### Complete the relationships between datasets and save your dossier

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The three datasets do not necessarily have the relationships needed for complete analysis. There are columns within the datasets that are named differently across the tables. The next task is to correct this discrepancy by setting up the proper relationships within the data.

- 1 On the Preview window, select the **Opportunity.xlsx** table. Double-click the **AccountExec ID** attribute in the table, rename it **AcctExec ID**, and press **Enter**.
- 2 On the Notification window that appears, click **Map** to link the AcctExec ID attribute in the two tables.
- 3 Click **Finish** to import the data into your dossier.
- 4 Click **Save** on the toolbar. Save your dossier to your Desktop with the name **Introduction to Dossier**. The file is now a shareable MicroStrategy file.

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 that you share with them.

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### Change the data view

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MicroStrategy has two different views for displaying attributes and metrics within a dataset:

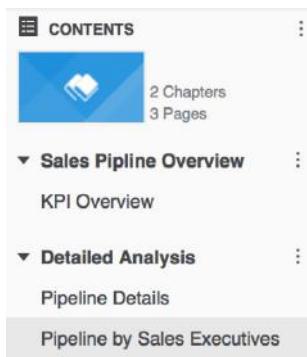
- **Flat View** displays all the attributes and metrics in all the datasets in a single list. The datasets are currently displayed in this view.
  - **Table View** breaks the display down by each imported table.
- 1 You want to view the datasets in Table View. Click the **Menu** icon  at the top of the Datasets panel and select **TableView**.
  - 2 Click **Save** on the toolbar.

## Exercise 4: Structure your story

Dossier chapters and pages allow dossier designers to logically group related data. The table of contents then helps end users navigate through the related content. This logical grouping of the data is helpful when multiple users with different goals or from different departments are viewing the same dossier.

- 1 In the Contents panel, right-click **Chapter 1**, and rename the chapter **Sales Pipeline Overview**.
- 2 Right-click **Page 1**, and rename it **KPI Overview**. The first page of your dossier will show key performance indicators.
- 3 You want to add a new chapter into your dossier. In the toolbar, click the **Add Chapter** icon  . Notice that adding a new chapter also adds a page in that chapter.
- 4 Right-click **Chapter 1** (the newly added chapter) and rename it **Detailed Analysis**.
- 5 In the toolbar, click the **Add Page** icon  to add a new page under the Detailed Analysis chapter.
- 6 Right-click **Page 1** and rename it **Pipeline Details**.
- 7 Right-click **Page 2** and rename it **Pipeline by Sales Executives**.

Your table of contents should now look like the image below.



- 8 **Save** the dossier.

## Exercise 5: Visualize your data

Data visualizations are an essential piece to telling an analytical story with business intelligence data that may have otherwise been lost in a sea of never-ending data. Visualizations form a picture of business trends at a glance, explore relationships between data, and quickly identify areas of improvement.

The dossier's first page is going to provide a high-level overview of the data. This will allow the dossier viewers to quickly assess the information that will be in the rest of the dossier and helps add context to the in-depth analysis in other chapters and pages.

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### Format metric data type

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You want the Chief Sales Executive and the Chief Marketing Officer to see the dollar value of the deals that were won as compared to those that were lost. To do this, you need to change the Deal Value metric format to currency.

- 1 In the Introduction to Dossiers dossier, right-click **Deal Value** (in the Opportunity.xlsx dataset) in the Datasets panel, point to **Number Format**, and click **\$**.
- 2 Decrease the decimals to zero by clicking the **Decrease Decimal** icon  twice. Click **OK**.

Now that the Deal Value metric is formatted as currency, you want to create KPI visualizations to best display the deals won and lost in 2017 using the metric.

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### Create and filter a KPI visualization for deals won

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- 1 Click the **KPI Overview** page in the Sales Pipeline Overview chapter.
- 2 Click the **Natural Language**  icon.
- 3 Type **What is my deal value**, and select the **Deal Value** metric from the list. Press **Enter** on your keyboard.

The metric value is displayed as a KPI visualization, because this visualization best answers your question.



MicroStrategy automatically aggregates the metric and displays the sum of all deals in the pipeline. Notice that the visualization is automatically named by the NLQ statement you typed.

#### Add a filter

For your analysis, you want to narrow the data to display the total value of all deals won in 2018. MicroStrategy allows you to quickly narrow the data included in a visualization to only the data that you need to display using a filter.

- 4 Click the **Menu** icon [::] on the title bar of the **what is my Deal Value** visualization and select **Edit Filter**.
- 5 In the Advanced Filter Editor window, click **Add New Qualification**.



- 6 From the **Based On** drop-down list, choose **Sales Life Cycle**. This is the attribute that you will be comparing.
- 7 By default, an attribute filter uses a list of selected attributes, so **Selecting in list** and **In List** are selected. This is how the selected attribute is compared to values.
- 8 Select the **6. Won** check box. This is what the attribute is compared to.

The advanced filter allows you to narrow the data displayed in this KPI visualization to deal values where the Sales Life Cycle attribute equals Won. The KPI visualization displays the total of Deal Value values for all deals that were won.
- 9 Click **OK**, and then click **Save**.
- 10 Double-click the **title bar** for the **what is my Deal Value** visualization and rename the visualization **Total Won**.

Your KPI visualization should look like the image below.



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#### Create and filter a KPI visualization for deals lost

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- 1 You want to create a similar KPI visualization for all deals that were lost. Insert a new visualization by clicking the **Insert Visualization** icon  in the toolbar.
- 2 Repeat the steps from the *Create and filter a KPI visualization for deals won*, except choose the deals that were **Lost**. Rename the visualization to **Total Lost**.

Your visualizations should match the image below.



Now that you have displayed the deals that were won and lost in 2018, you need to format the visualizations so they are easily differentiated.

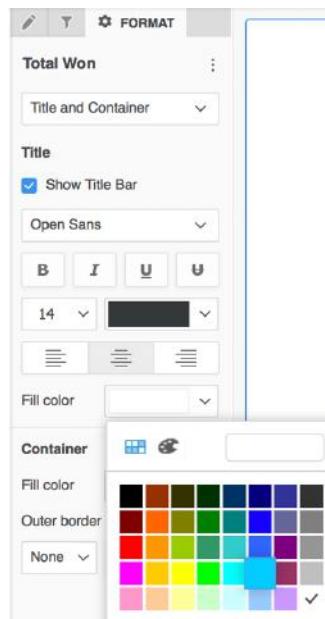
---

#### Format the Deal Value visualizations

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When formatting the Deal Value visualizations, you can reference the Enterprise's corporate style guide to access the application standards and guidelines, which includes organization branding requirements like colors, fonts, sizing, and thresholds.

- 3 Click the **TotalWon** visualization.
- 4 Click the **Format** icon  to display the Format panel.
- 5 In the Format panel, from the first drop-down list, select **Title and Container**.
- 6 Under the **Title** section, change the title bar **Fill color** to **Sky Blue**.



- 7 Click on the **Total Lost** visualization.

- 8 In the Filter panel, under the Title section, change the title bar **Fill color** to **Gold**.



Your visualizations should now look like the image below.



---

#### Add a bar graph to the Overview page

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In addition to key performance indicators on deals won and lost, you also want to visualize the deals by product type and sales life cycle. To make this information immediately visible, you will add it to a new visualization on the Overview page.

- 1 Add a new visualization by clicking the **Insert Visualization** icon on the toolbar.
- 2 Drag the new visualization by its title bar and place it under the two KPI visualizations. A thin blue line indicates where the visualization will be placed.
- 3 Select the **Bar Chart** icon from the Visualization Gallery.
- 4 Rename the visualization. Double-click the title bar and give it the name **Deal Value by Sales Life Cycle**.
- 5 From the Opportunity.xlsx dataset:
  - Add the **Sales Life Cycle** attribute to the **Horizontal** drop zone.

- Add the **Deal Value** metric to the **Vertical** drop zone.
- Add the **Revenue Type** attribute to the **Color By** drop zone.

**6** Save your dossier. Your Overview page should now look like the image below.



## Exercise 6: Filter using visualizations

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### Filter using visualizations

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We would like to filter using higher level time attributes, such as Month, but because we do not have them in our datasets, we can create them on the fly.

- 1 Right-click the **Close Date** attribute in the Opportunity.xlsx dataset and point to **Create Time Attributes**. Select the **Month** check box and select **OK**.

MicroStrategy enables the creation of time attributes without having to manually transform attributes. The original attribute name still appears on a newly created time attribute to show that it has been automatically derived.

The newly created attribute is named Close Date (Month) and is displayed at the bottom of the Datasets panel.

- 2 Click the **Pipeline Details** page in the Contents panel.
- 3 From the Opportunity.xlsx dataset:
  - Add the **Sales Life Cycle** attribute to the **Rows** drop zone.
  - Add the **Close Date (Month)** attribute (displayed at the bottom of the datasets panel) to the **Rows** drop zone.
  - Drag the **Deal Value** metric to the **Metrics** drop zone.

Visualization 1

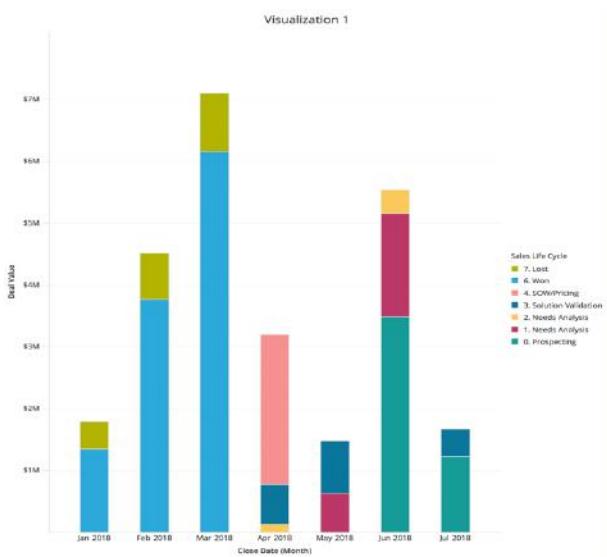
Sales Life Cycle	Close Date (Month)	Deal Value
0. Prospecting	Jun 2018	\$3,485,000
	Jul 2018	\$1,225,000
1. Needs Analysis	May 2018	\$635,000
	Jun 2018	\$1,670,000
2. Needs Analysis	Apr 2018	\$135,000
	Jun 2018	\$385,000
3. Solution Validation	Apr 2018	\$640,000
	May 2018	\$850,000
	Jul 2018	\$450,000
4. SOW/Pricing	Apr 2018	\$2,423,100
	Jan 2018	\$1,350,000
6. Won	Feb 2018	\$3,765,500
	Mar 2018	\$6,160,000
	Jan 2018	\$450,000
7. Lost	Feb 2018	\$750,000
	Mar 2018	\$945,000

- 4 To make your pipeline easier to read and understand, convert the grid into a stacked bar chart. Click the **Menu** icon  on the visualization, point to **ChangeVisualization**, and select **Bar Chart**.
- 5 When the grid is changed to a bar chart, the Sales Life Cycle attribute is moved to the Horizontal drop zone. To distinguish the bar stacks by Sales Life Cycle, navigate to the **Editor** panel and drag the **Sales Life Cycle** attribute from the **Horizontal** drop zone to the **Color By** drop zone.
- 6 To distinguish the bars by the close date, drag the **Close Date (Month)** attribute from the **Break By** drop zone to the **Horizontal** drop zone below Sales Life Cycle.

- 7 Drag the **Sales Life Cycle** attribute from the **Horizontal** drop zone to the **Color** drop zone.



Your visualization should resemble the image below.



- 8 Save your dossier.

You now have a graphical representation of your pipeline data, showing opportunities by stage and closed month. The visualization nicely displays the data, but you would like it to be more actionable. To help drive the meeting, you will add more detail and filter your data.

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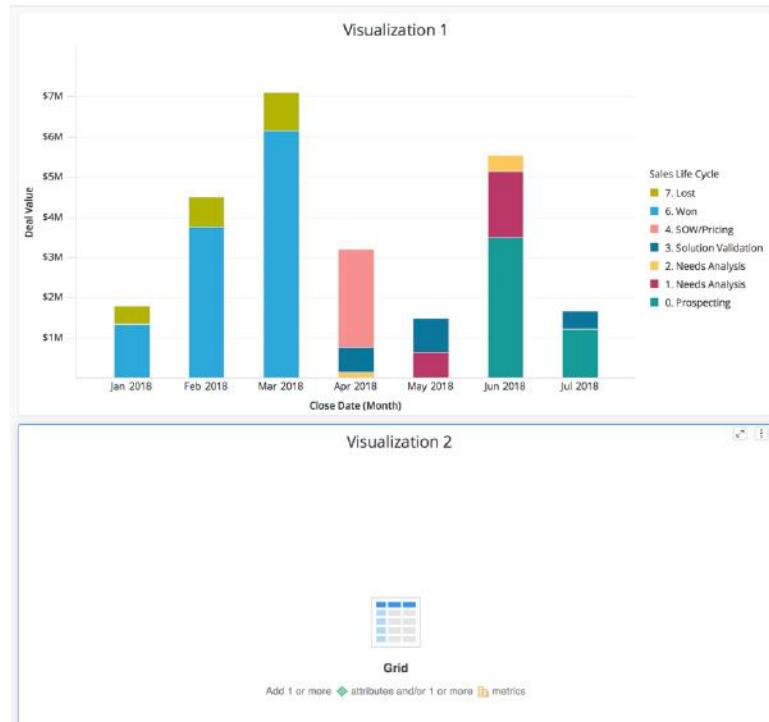
#### Add a visualization to depict pipeline details

---

- 1 Insert a new visualization on the Pipeline Details page of your dossier. Move

the new visualization below the first one.

Your page should now look like the following image.



- 2 Drag the **Client Name** attribute from the Account.xlsx dataset into the **Rows** drop zone of the Editor panel.
- 3 From the Opportunity.xlsx dataset:
  - Drag the **Close Date** attribute to the **Rows** drop zone.
  - Drag the **Deal Value** metric to the **Metrics** drop zone.

Your visualization should now resemble the following image:

Visualization 2		
Client Name	Close Date	Deal Value
Adirondack Matters	4/28/2018	\$159,300
Aldo Crockett Group	6/29/2018	\$885,000
Alparian Pharmaceuticals	4/28/2018	\$531,000
	7/15/2018	\$450,000
Asteria, Inc.	2/15/2018	\$560,500
	4/28/2018	\$210,000
Azkarza, Inc.	1/24/2018	\$350,000
	2/23/2018	\$625,000

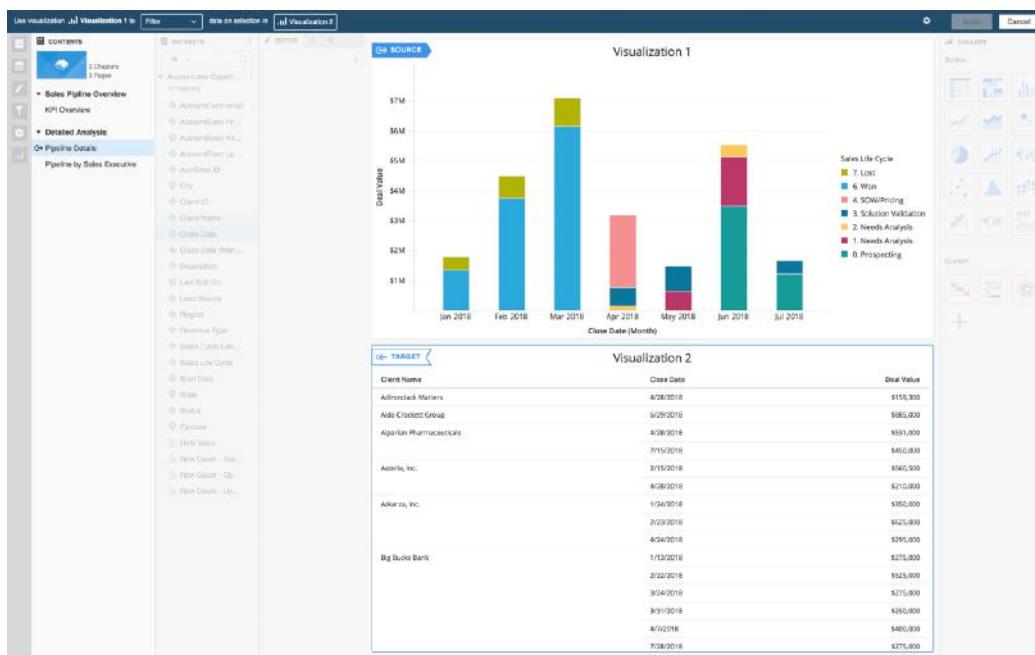
Now that we have the information necessary to drive our pipeline meeting, we need to tie the two visualizations together. Using the pipeline graph, you can filter the second visualization. MicroStrategy allows you to use a visualization as a filter for one or more visualizations within a dossier.

## Filter visualization 2 using visualization 1

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- 1 On the bar graph, select the **Menu** icon  and click **Select Targets**.
- 2 You are prompted to select which visualization to target. If the page contained more than one other visualization, you could select multiple visualizations. Since the page contains only one other visualization, select **Visualization 2** by clicking anywhere in the visualization.
- 3 A target icon is displayed on the selected visualization, as shown below. Click **Apply** at the top of the screen.

Visualization 1 now filters Visualization 2.



- 4 In the bar graph (Visualization 1), click and drag your cursor around the **April** bar to select it. The grid (Visualization 2) is now filtered, showing deals only for the selected month.

Clear the filter by clicking the white space in the bar chart.

---

## Rename the Pipeline Details page visualizations

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- 1 Double-click each visualizations title bar, and rename them the following:
  - **Visualization 1: Sales Pipeline by Stage and Close Month**
  - **Visualization 2: Pipeline Details**
- 2 **Save** the dossier.

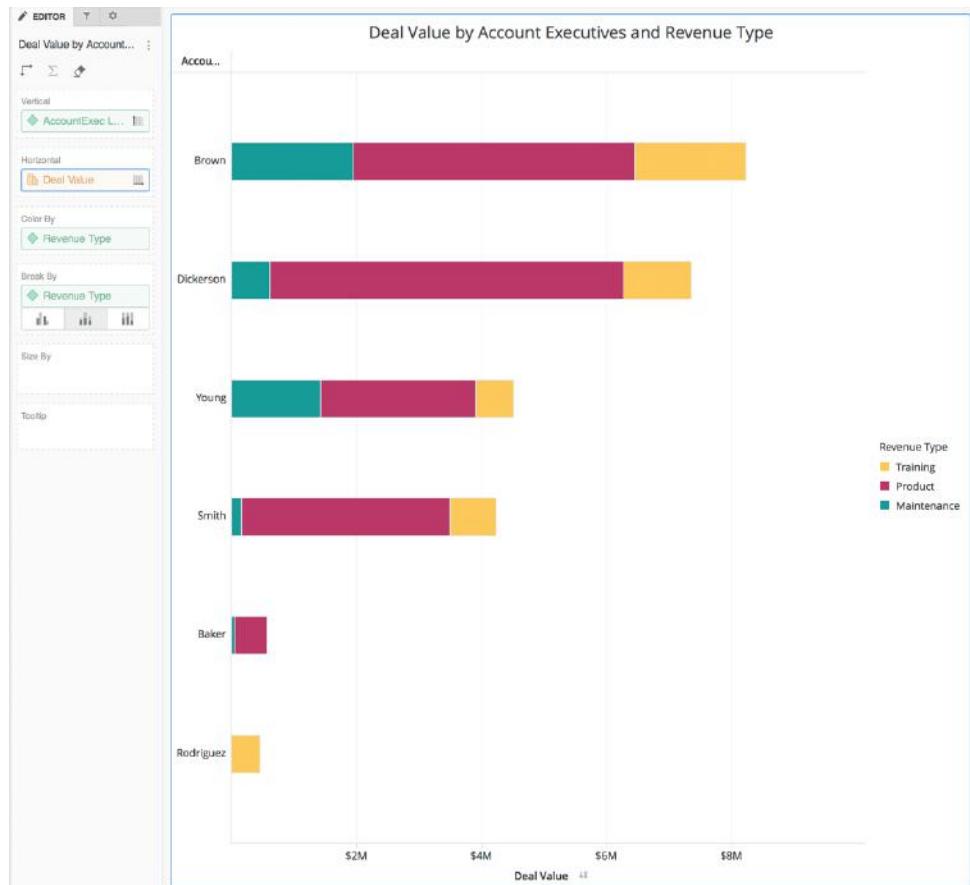
## Exercise 7: Filter visualizations across pages

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Add a visualization to show data breakdown by sales executives

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- 1 Select the **Pipeline by Sales Executives** page in the Contents pane.
- 2 Change the default grid visualization to a bar chart by selecting the **Bar Chart** icon  from the Visualization Gallery.
- 3 Add the following objects to the visualization:
  - **AccountExec LastName** from the User.xlsx dataset to the **Vertical** drop zone.
  - **Deal Value** from the Opportunity.xlsx dataset to the **Horizontal** drop zone.
  - **Revenue Type** from the Opportunity.xlsx dataset to the **Color By** drop zone.
- 4 Rename the visualization **Deal Value by Account Executives and Revenue Type**.
- 5 Right-click **Deal Value** in the Editor panel and select **Sort Descending**.



### Add a visualization for client details

- 1 Insert a new visualization and place it under the bar chart on the Pipeline by Sales Executives page.
- 2 Add **ClientName** from the Account.xlsx dataset to the **Rows** drop zone.
- 3 From the Opportunity.xlsx dataset, add the following objects:
  - Add **Description** and **Revenue Type** to the **Rows** drop zone.
  - Add **Deal Value** to the **Metrics** drop zone.
- 4 Rename the visualization **Pipeline Details by Client**.



## 5 Save your dossier.

Now that you have the information you need for the meeting, you would like to link the two pages in the Detailed Analysis chapter. Linking the two pages lets users easily identify the sales executive for each deal.

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### Link the pages in the Detailed Analysis chapter

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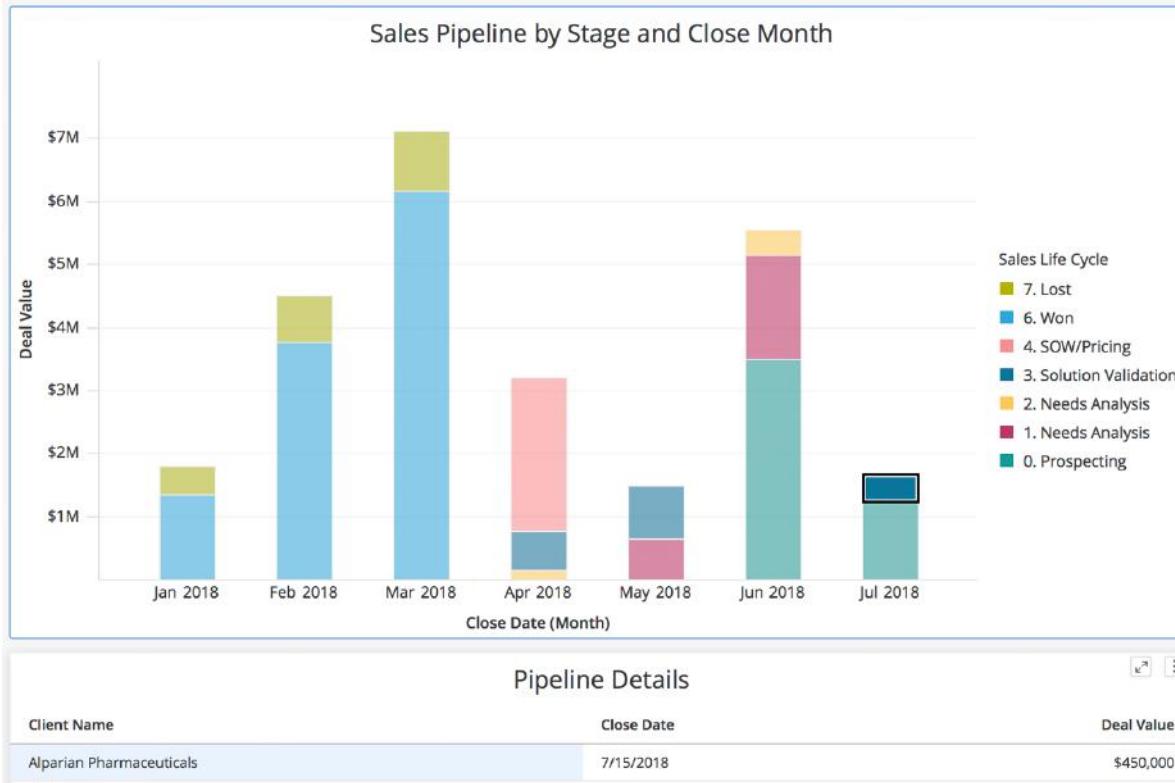
## 6 Select the Pipeline Details page in the Contents pane.

## 7 Select the Sales Pipeline by Stage and Close Month visualization.

Keep in mind that the bar chart filters the grid on this page.

## 8 Click the blue portion of the July bar that represents the deals that are currently in the Solution Validation stage (the top part of the bar).

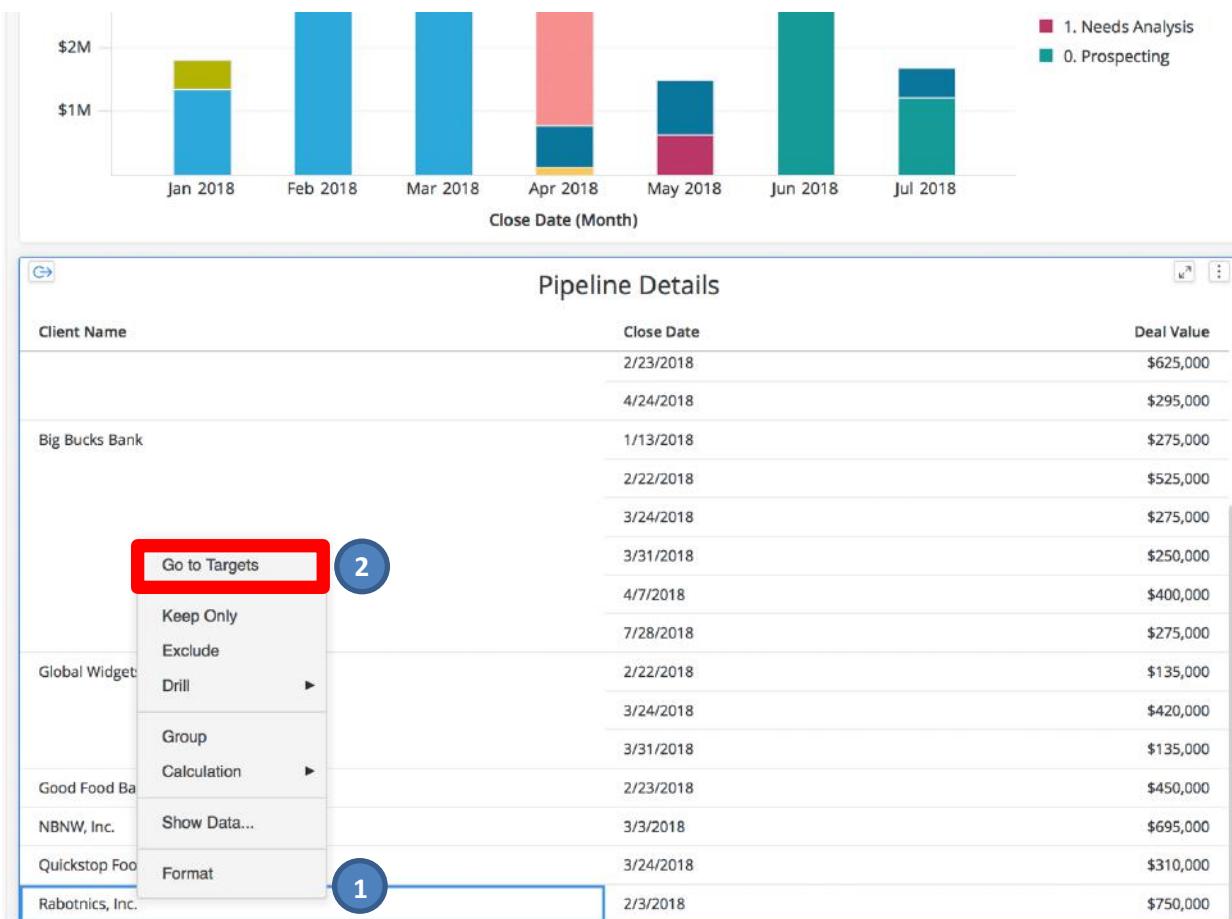
The grid now displays only a single client.



Clear the filter by clicking anywhere in the white space in the bar graph visualization.

- 9 Click the **Menu** icon  on the **Pipeline Detail** visualization and point to **Select Targets**.
- 10 Select the **Pipeline by Sales Executives** page in the Contents pane.
- 11 Select the **bar chart**, then click **Apply**. The grid on the Pipeline Details page and the Deal Value by Account Executive and Revenue Type visualizations are now linked.
- 12 To filter the bar chart on the other page, right-click **Rabotnics, Inc.** on the Pipeline Detail visualization, and select **Go to Targets**.

This filters the bar chart on the Pipeline by Sales Executive page, which should now look like the image below.



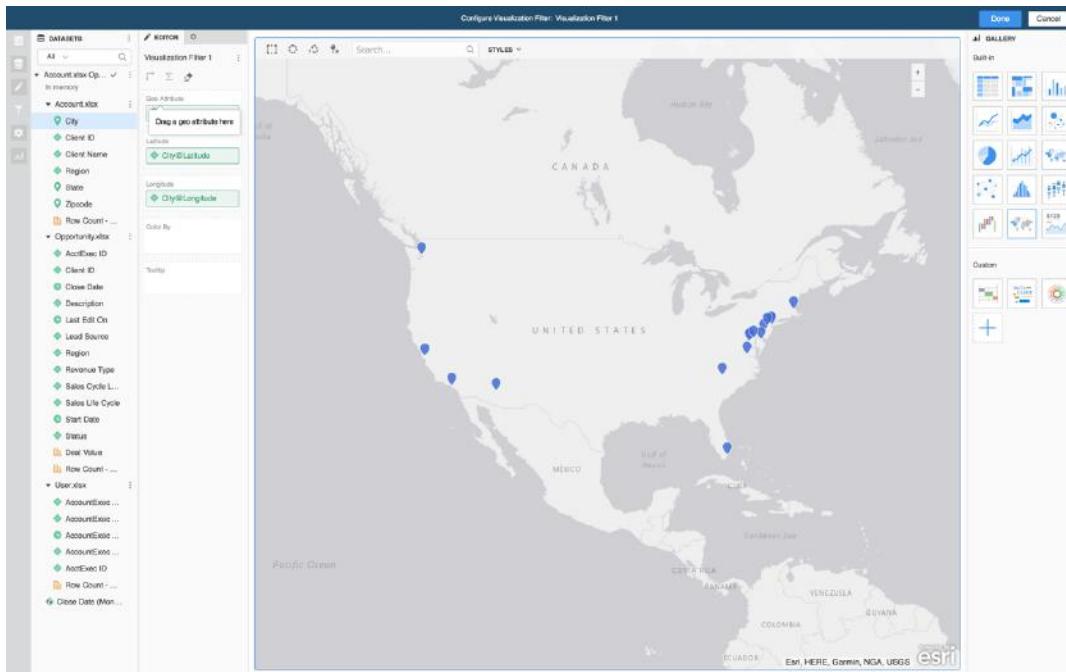
**13** Save your dossier.

## Exercise 8: Create a map visualization filter

Adding a map visualization to your dossier will allow you to break down pipeline information by city.

- 1 Navigate to a page in the **Detailed Analysis** chapter.
- 2 Click the **Filter** icon in the Filter panel.
- 3 Click the **Menu** icon in the Filter panel and select **Add Visualization Filter**.

- 4 From the Visualization Gallery, select the **Map** icon  . Be sure to select the Map icon and not the Geospatial Service icon; the Map icon has more gray countries.
- 5 Add the **City** attribute from the Account.xlsx dataset to the **Geo Attribute** drop zone.



- 6 Double-click **Visualization Filter 1** at the top of the Filter panel and rename the filter **Cities**.
- 7 Click **Done** at the top of the screen to save the filter. This filter now applies to all the pages in the Detailed Analysis chapter.
- 8 To use this filter, click **Cities** in the Filter panel. On the map that is displayed, select **Boston** then click **Done**.
- 9 To unfilter the chapter, click the **menu** icon  next to the Cities filter in the Filter panel, and select **Unset Filter**.
- 10 **Save** the dossier.

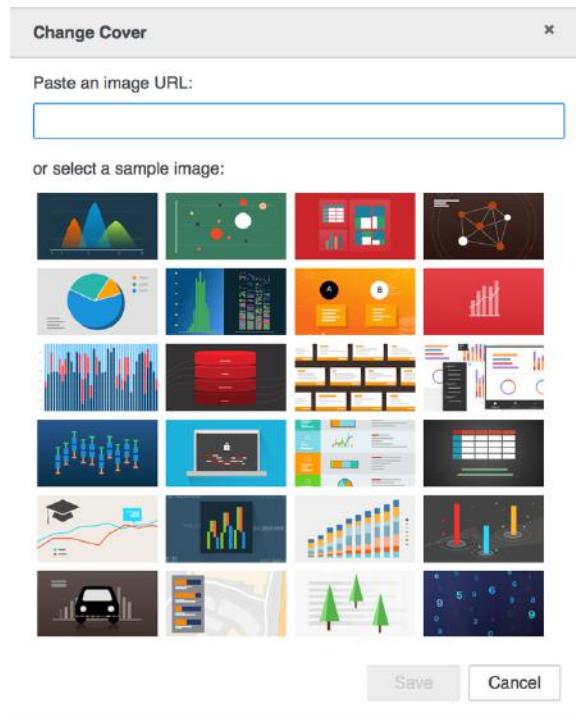
You can use any of the out-of-the-box visualizations as filters. This feature mitigates having to add a visualization to your page for the sole purpose of using it as a selection tool. Adding the visualization to the filter panel frees up valuable screen real estate while still delivering the desired functionality.

## Exercise 9: Format your dossier

Before presenting your world class dossier to the Chief Sales Executive and the

Chief Marketing Officer, you want to format the dossier to align it with your firm's brand.

- 1 Select the **Cover Image** icon  in the Contents panel.
- 2 In the **Change Cover** window, select the **red bar graph** image, then click **Save**.



- 3 Change the color scheme in your dossier to better match your firm's color palette. From the **Format** menu, select **Sunset**.



#### 4 Save the dossier.

Your dossier should now look like the image below, with your selected cover page shown in the Contents panel. The bars now use colors from the Sunset palette, but the KPI widgets at the top of the page still use the light blue and light orange that you selected.



## Exercise 10: Optimize your dossier for mobile

When designing a dossier in MicroStrategy Desktop, you can preview each page in mobile view to ensure content is displayed correctly on different devices or screen sizes. This allows you to find and correct any issues before viewing the dossier in MicroStrategy Library on a mobile device.



To access Library on a mobile device, download the MicroStrategy Library app from the Apple App Store (for iOS) or Google Play (Android). Configure the Library app to your Library by opening your Library's URL in the app. For more information about Library on mobile, take the *Introduction to Dossiers: Storytelling and Collaborating 11.116* class.

- 1 To preview how the dossier will render on a mobile device, on the toolbar select the **Responsive Preview** icon

In the Responsive Preview, the visualizations display stacked on top of each other. However, you want the visualizations to be side-by-side so users have the full context in one view.

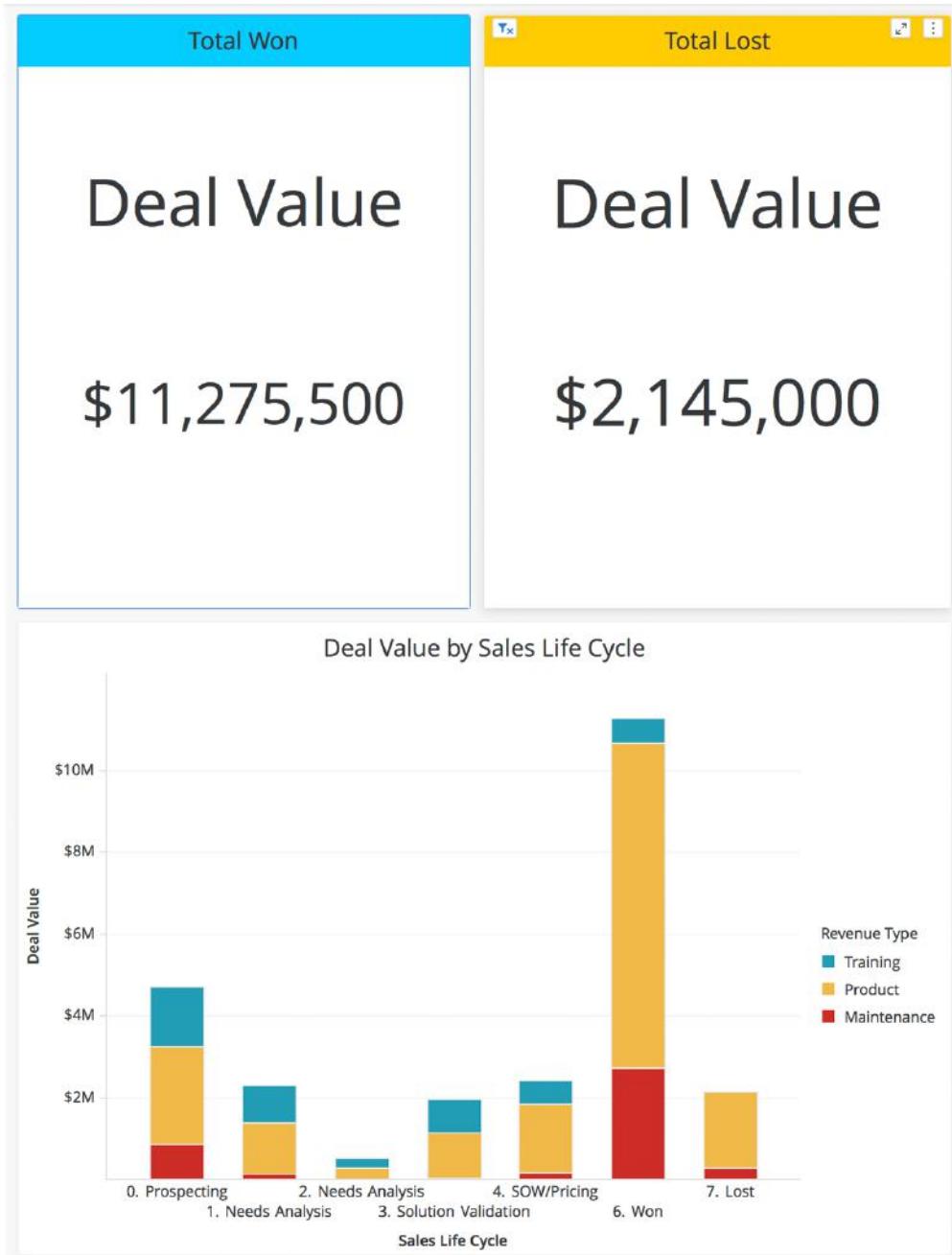
- 2 In the toolbar, click the **Full View** icon

- 3 In the toolbar, select the **Responsive View Editor** icon  to make changes to the mobile display.
- 4 Click the two **KPI** visualizations to select them (selected items are outlined in blue). Notice that Group 1 is displayed on the left of the toolbar.
- 5 Click **Group**, and then click **Save** at the top of the screen to save the group and return to the original view.



- 6 In the toolbar, select the **Responsive Preview** icon  to preview the mobile display with the changes you just made.

The mobile view of your dossier should now look like the image below.



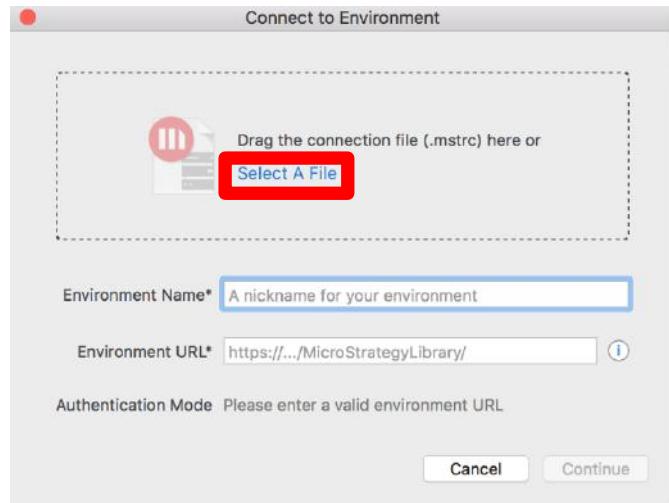
- 7 Return to the original view by clicking the **Full View** icon
- 8 Save your dossier.

## Exercise 11: Certify and publish your dossier

In order for the dossier to be presentation-ready, you need to certify it to validate that the content is reliable. Once you certify the dossier, you can share it to the enterprise environment to allow for collaboration and commenting by others.

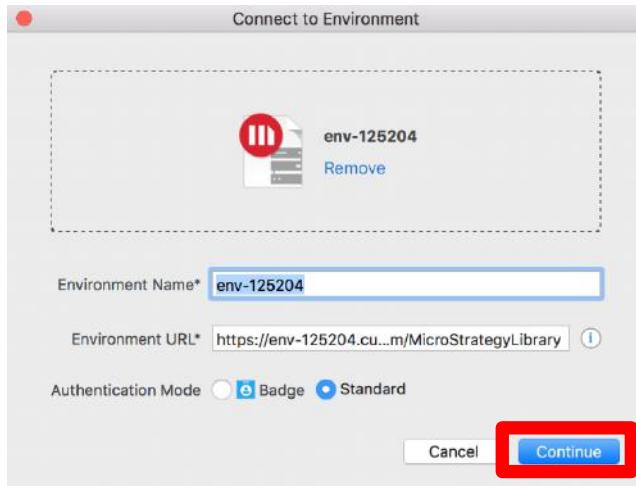
### Upload your dossier to the enterprise environment

- 1 In the Desktop Home window, select **Environments** on the left.
- 2 Select **Add New Environment Connection**.
- 3 In the Add New Environment Connection window, click **Select a File**.

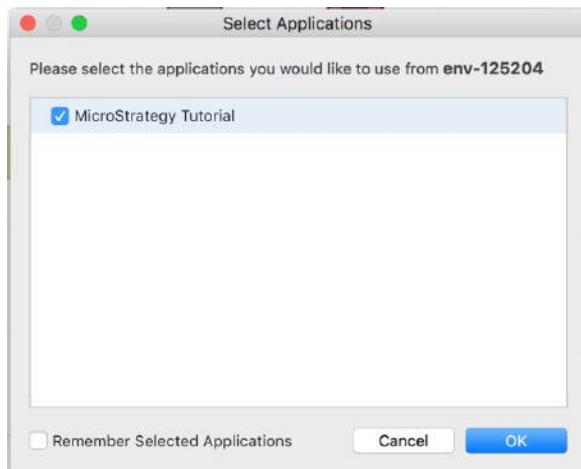


- 4 Navigate to the **env-xxxx.mstrcc** file (where xxxx stands for the environment number) provided in the Supporting files folder provided at the beginning of the workshop.
- 5 Select the file and click **Open**.
- 6 In the Connect to Environment window, the details of the environment, as well as available authentication modes, are displayed. Accept the default **Standard** authentication mode to allow you to use a username and password.

**7 Click Continue.**



- 8** In the login page, type (or copy and paste) the **User name** and **Password** provided below. Click **Connect**.
  - **Username:** Assigned by your Instructor
  - **Password:** WebClass
- 9** All of the projects or applications available in your MicroStrategy environment are displayed. You can associate your dossier with any of these applications. For this exercise, only the MicroStrategy Tutorial is available. Select the **MicroStrategy Tutorial** check box.
- 10** Click **OK** to continue.



- 11** To add your dossier to this environment, return to your **Introduction to Dossier** dossier in the authoring window.
- 12** From the **File** menu, select **Save as**. In the Save as box, rename the dossier **IntroductionToDossier\_MyInitials**, replacing **MyInitials** with your initials.

- 13 Double-click **MicroStrategy Tutorial**. All the folders in the project are displayed.
- 14 Double-click **My Personal Objects**, then double-click **My Dossiers**.
- 15 Click **Save** to upload your dossier to this folder.
- 16 Close the dossier to exit the authoring window.

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#### Certify and share your dossier

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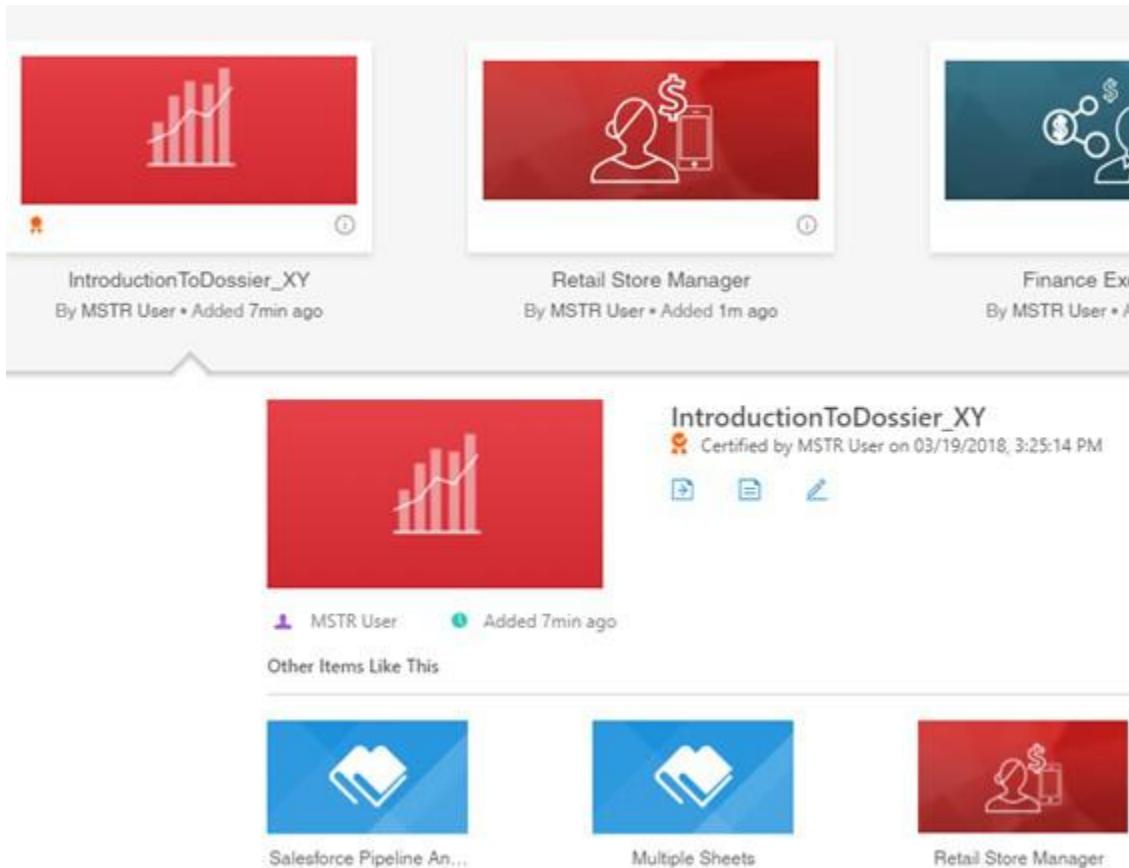
- 1 In the MicroStrategy Desktop home screen, select **Applications** from the navigation bar on the left.
- 2 Navigate to your dossier by double-clicking the **MicroStrategy Tutorial** application. Double-click **My Personal Objects**, then **My Dossiers**.
- 3 Right-click the **IntroductionToDossier\_MyInitials** icon, then select **Certify**. Your dossier is now certified.
- 4 Double-click the **IntroductionToDossier\_MyInitials** dossier to open it in the editing window.
- 5 From the **Share** menu, select **GetLink**.
- 6 Click **Open in browser** to launch MicroStrategy Library, allowing you to interact with, collaborate on, and consume your dossier.
- 7 You are now viewing your dossier in Library, on a web page. Select **Add to Library**, in the top corner of the window, to add this dossier to your virtual bookshelf in MicroStrategy Library.
- 8 Click the **Library** icon  to open your Library's homepage.

## Exercise 12: MicroStrategy Library, the virtual bookshelf

MicroStrategy Library provides a simple way for users to access content shared to the enterprise environment. Visually organized as a virtual bookshelf, each of your

dossiers can be viewed and easily distinguished by the cover page assigned to them during the authoring process.

- 1 In MicroStrategy Library, you can sort your content by:
  - Dossier Name
  - Date Added
  - Date Updated
  - Date Viewed
  - Oldest on Top
  - Newest on Top
- 2 In the **Sort By** drop-down list, select **Date Added**.
- 3 You can also view more information about the contents of your Library from the information panel. Click the **Information** icon  for your dossier. Details such as the description are displayed. Notice the dossier also displays the certified icon  . You can also:
  - Export the dossier as a PDF.
  - Download the dossier as a .mstr file for offline use.
  - Edit the dossier using MicroStrategy Web.
  - Discover and explore similar dossiers that are relevant to the current dossier that you are viewing.



- 4 Click the **Export to PDF** icon .
- 5 You can select what to export (such as visualizations on separate pages and filters after each chapter) and how (such as the page orientation). You want to export the entire dossier with filter information on every page. In the **Layout** area, select the **Export Individual Visualizations** check box. Click **Filter Summary**, then select the **On Every Page** check box.
- 6 Click **Export**. Open the PDF that is created to view it.

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#### Navigate your dossier in Library

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Library allows you to optimally navigate your dossier and collaborate in real-time with your peers.

- 1 Double-click the **IntroductionToDossier\_MyInitials** dossier to open it.
- 2 Click the **Table of Contents** icon  to view your dossier's table of contents. The table of contents provides a simple, intuitive navigation method for you to consume your dossiers like a book.
- 3 Click through the pages in the table of contents to open and view them in MicroStrategy Web.

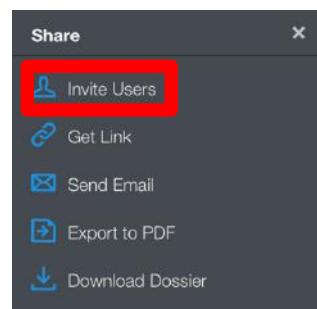
## Share and collaborate on your dossier

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Sharing a dossier in Library allows other users to view, comment on, collaborate, and ask questions about your dossier.

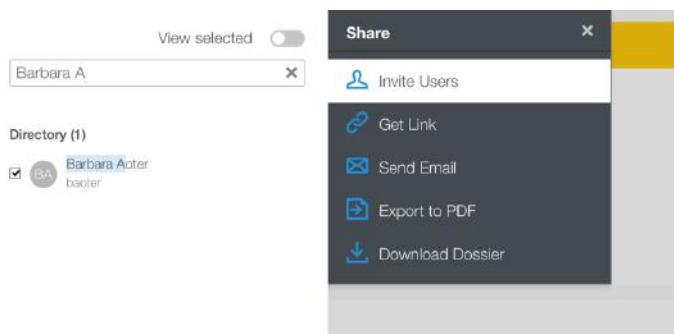
Once you have shared your dossier, you can collaborate with other users in real time via the collaboration panel. You can tag users at the page level, and send filter manipulations at the chapter level, to directly pass context to other users.

- 1 From Library, double-click and open your dossier. Click the **Share** icon , and select **Invite Users** from the available options.



- 2 Type **ClassAttendeeLoginUserName** replacing **ClassAttendeeLoginUserName** with the workshop username given to you at the beginning of the workshop (user1, user2, etc) of someone in the workshop, and click **Invite**.

The invited user will get a notification email that they have been invited to view the dossier.



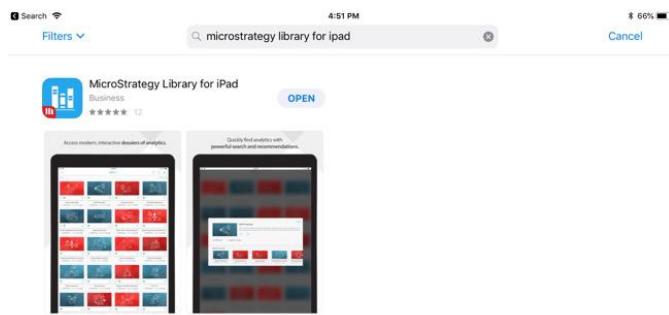
- 3 Now you would like to send a comment to the same user that you shared your dossier with. Open the comment panel by clicking the **Comments** icon  to begin a conversation with the dossier author.
- 4 Type a comment in the comment box, and then type **@ClassAttendeeLoginUserName**, replacing **ClassAttendeeLoginUserName** with the login (user 1, user 2, etc.) of

the person whom you have decided to comment back and forth with.

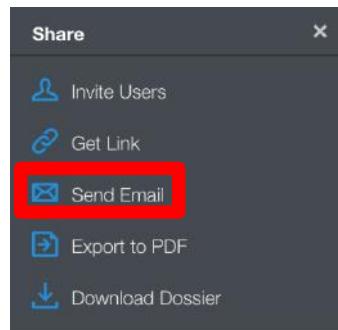
## Exercise 13: Bonus mobile section (IOS or Android tablet required)

MicroStrategy Mobile offers a quick and easy way to view and edit your dossiers on the go.

- 1 Download the MicroStrategy Library mobile application from the Apple App Store or Google Play Store onto your mobile device.



- 2 To configure your mobile app, send your dossier from your Library to yourself via email.



- 3 From your mobile device, click the **link** in your email, log in to your environment via the mobile web browser, and select **Open in App**.

You can now view and interact with your dossier in MicroStrategy Library for mobile.

# Conclusion

You have now completed the Build an Interactive Dossier for Powerful Data Discovery workshop. Over the course of this workshop you have:

- Explored the MicroStrategy, Ink dossier.
- Imported and wrangled data in MicroStrategy Desktop.
- Visualized key data in a dossier with interactive features.
- Optimized your dossier for mobile use.
- Published and utilized MicroStrategy Library functionality.

For more information on creating dashboards, including visualizations, filters, data import, and Library, MicroStrategy offers the *11.142 Dashboarding and Visualizations* course.

For more information on creating dashboards, including visualizations, filters, data import, and Library using MicroStrategy Desktop, MicroStrategy offers the *11.114 Visual Data Discovery: MicroStrategy Desktop* course.

For resources and certifications with MicroStrategy Education, visit: <https://www.microstrategy.com/us/services/education/>.

