Distributing Content using a Power BI App

Lab Time: 60 minutes

Lab Folder: C:\Student\Modules\07_AppWorkspaces\Lab

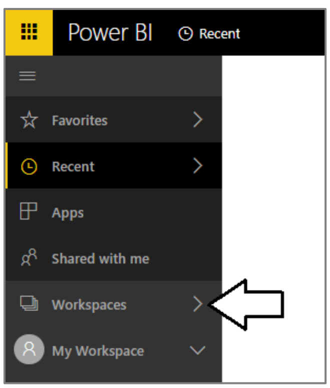
Lab Overview: In this lab you will continue to work with the report and dataset that you created in the Power BI Desktop project named **Wingtip Sales Analysis.pbix**. You will focus on the techniques required to create and deploy dashboards to an audience of business users in an Office 365 environment.

Lab Dependency: This lab assumes you have completed the lab titled **Designing Interactive Reports in Power BI Desktop** in which you created a multipage report in the **Wingtip Sales Analysis.pbix** project and then published this report and its underlying dataset to the Power BI Service. If you would like to begin work on this lab without completing the earlier lab, copy the lab solution file named **Wingtip Sales Analysis.pbix** which is located in the student folder at **C:\Student\Modules\06_Reports\Lab\Solution** into the folder at **C:\Student\Projects** using the Windows Explorer.

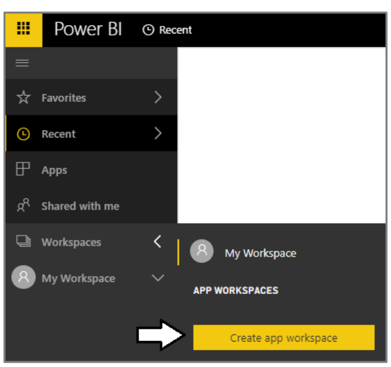
Exercise 1: Create New App Workspaces for a Custom Solution

In this exercise, you will create a new dashboard using the dataset and report you created in early labs using Power BI Desktop.

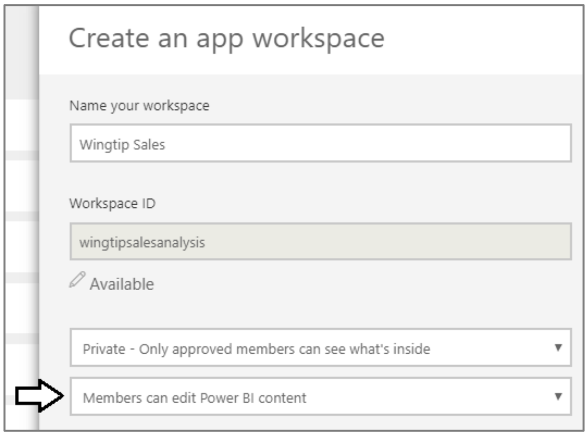
1. Make sure you are logged into the Power BI service with your primary user account
    a) Verify that you are running in the context of your personal workspace which is named **My Workspace**.
2. Create a new app workspace named **Wingtip Sales**.
    a) Click the **Workspace** flyout menu in the left navigation.



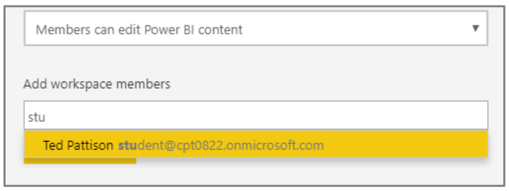
    b) Click the **Create app workspace** button to display the **Create an app workspace** dialog.



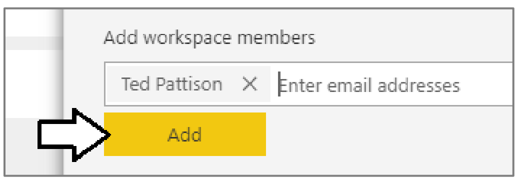
    c) In the **Create an app workspace** pane, enter a new group name of **Wingtip Sales**.
    d) Note that by default, a new group has a setting of **Members can edit Power BI content**. Leave this setting with its default value since you are creating a new group workspace for team development.



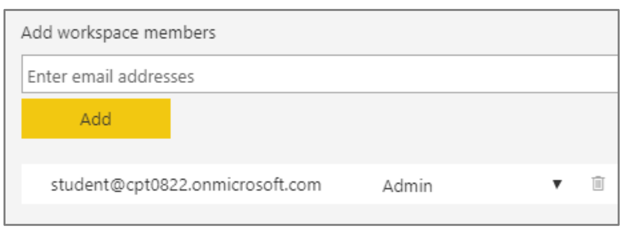
e) In the **Add workspace members** section, add in the email address for your primary Office 365 account.



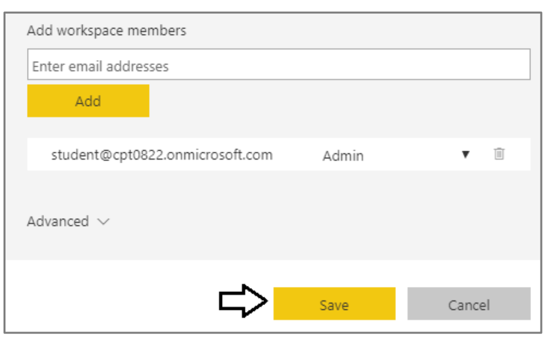
f) Once your account name has been resolved, click **Add** to add your account as a member of the new group workspace.



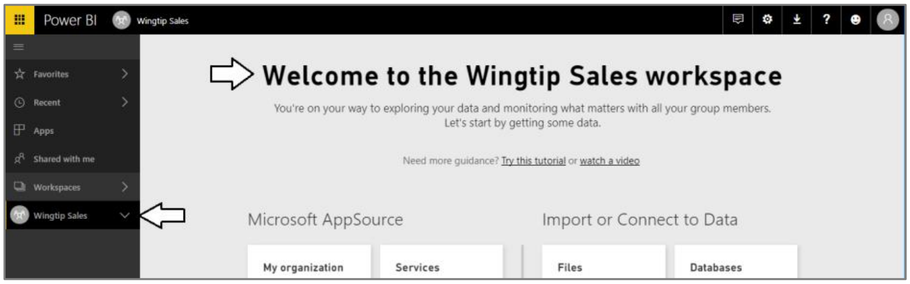
g) Modify the account to be an **Admin** instead of a standard **Member**.



h) Click the **Save** button to create the new group workspace named **Wingtip Sales Analysis**.



i) When you click **Save**, the Power BI service should create the new app workspace and then switch your current Power BI session to be running within the context of this new group workspace.

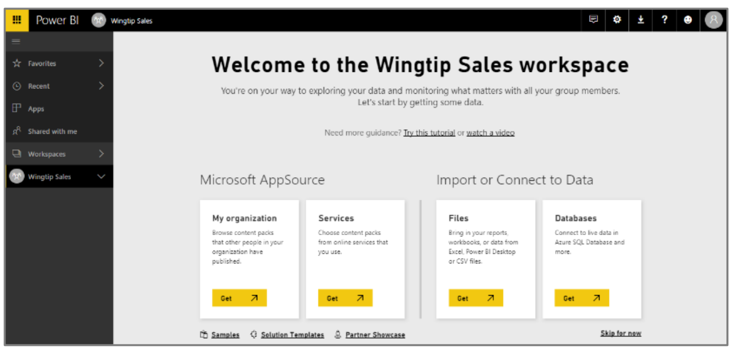


Now you have created the foundation for managing the lifecycle of Power BI dashboards and reports where they can be created and tested in an app workspace and then pushed out into production with an app that is published from the app workspace.

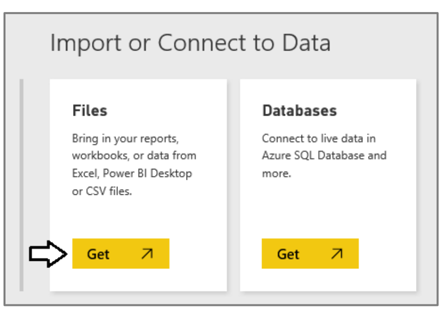
Exercise 2: Publish a Power BI Desktop Project to the Development Group Workspace

In this exercise you will create a new dashboard using the dataset and report you created in early labs using Power BI Desktop.

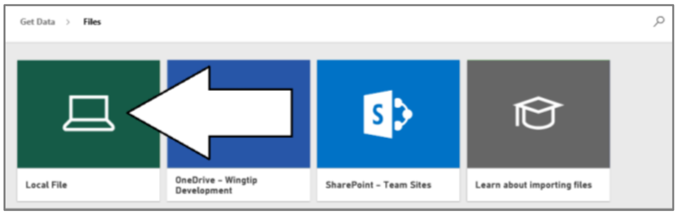
3. Navigate to the **Wingtip Sales** app workspace that you created in the previous exercise. This workspace should currently display the standard Welcome page because it does not yet contain any datasets, reports or dashboards.



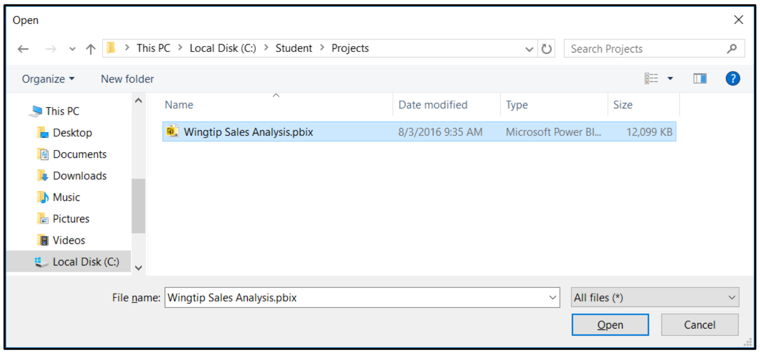
4. Import the **Wingtip Sales Analysis.pbix** project into the **Wingtip Sales** app workspace.
   a) On the Welcome page, click the **Get** button in the **Files** section.



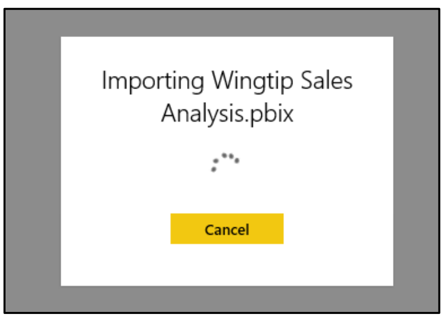
   b) On the **Get Data > Files** page, click the **Local File** button to display the Windows **Open** file dialog.



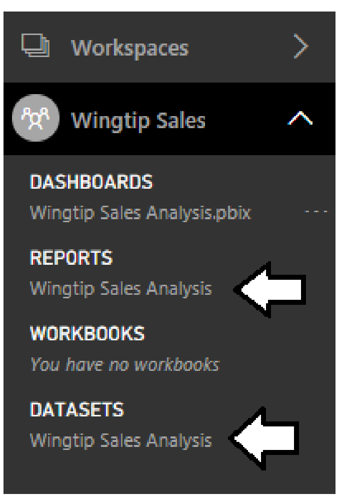
c) In the Windows **Open** file dialog, select the project file at **c:\Student\Projects\Wingtip Sales Analysis.pbix** and click **Open**.



d) Wait while the Power BI service uploads the PBIX files and imports its assets into the **Wingtip Development** group workspace

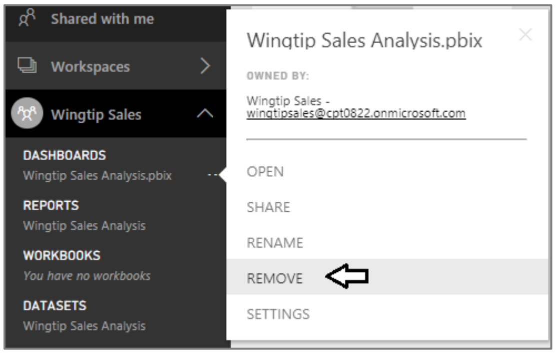


e) Once the import process completes, you should see a new dataset, a new report and a new dashboard in the left nav menu.



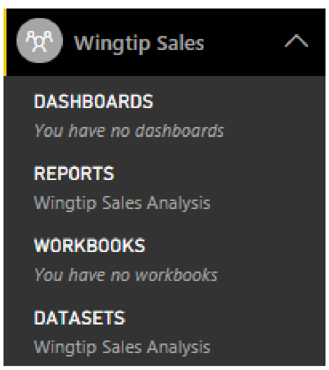
5. Remove the dashboard that was created during the import process.

   a) Dropdown the flyout menu for the **Wingtip Sales Analysis.pbix** dashboard and click the **REMOVE** menu command.

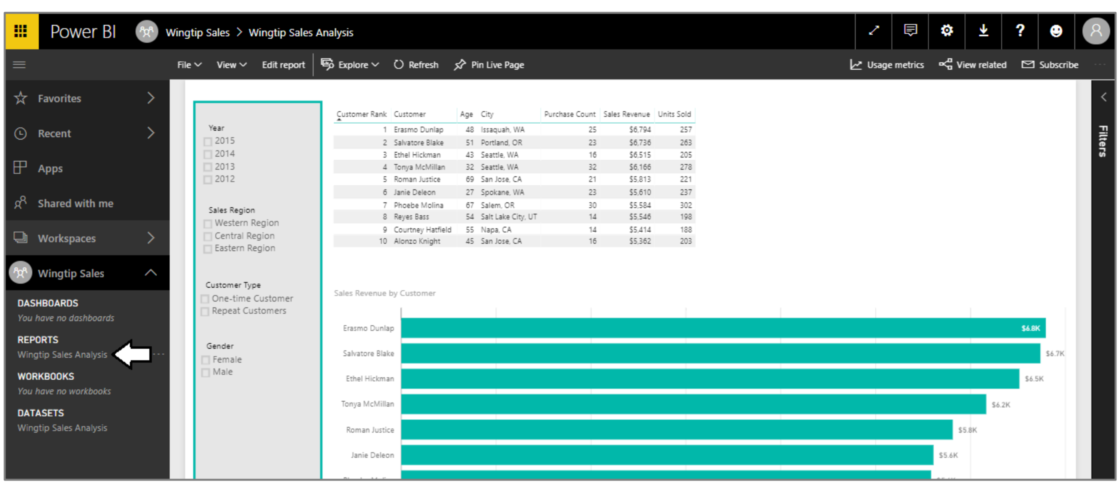


b) Confirm that you want to delete the dashboard by clicking the **Delete** button the **Delete dashboard** dialog.

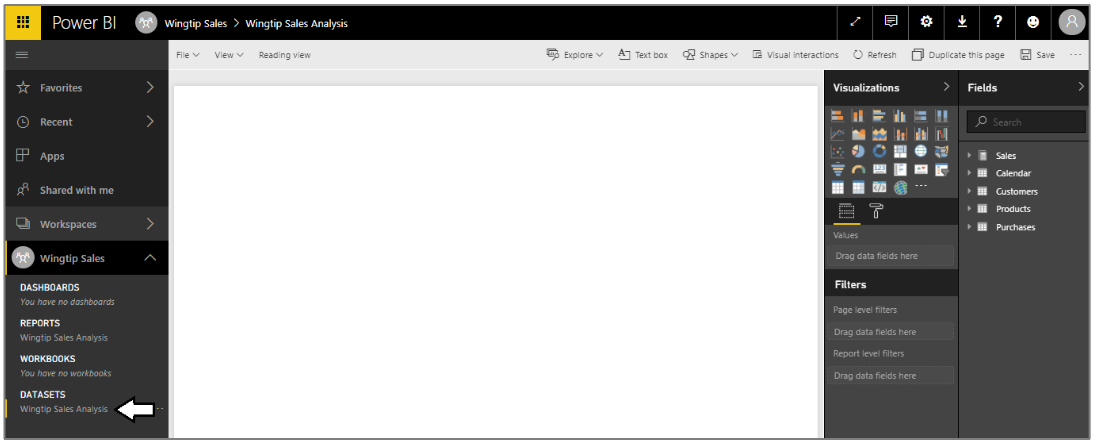
c) You should be able to confirm that the dashboard has been removed.



6. Click on the report named **Wingtip Sales Analysis** in the **Reports** section. Examine the pages in the report and verify that these are the same report pages that you have been designing over the last several labs.

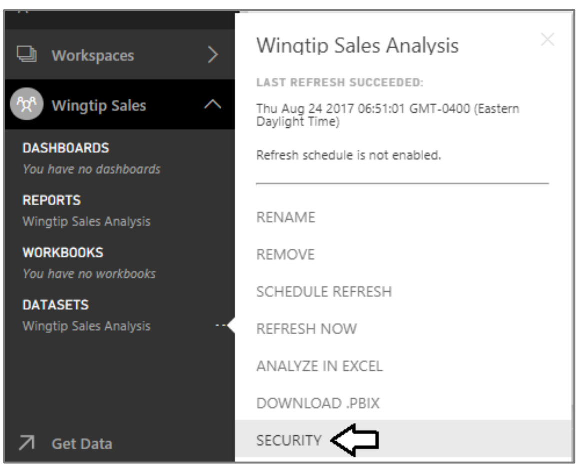


7. Click on the dataset named **Wingtip Sales Analysis** in the **Datasets** section. The Power BI service responds by displaying a new report that allows you to begin adding visuals.

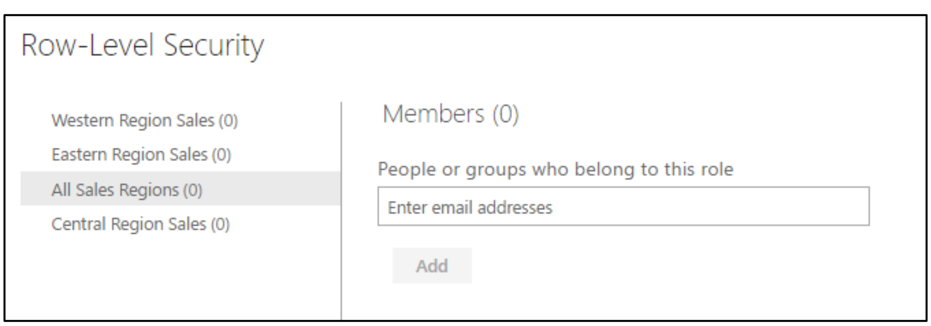


When you navigate to a dataset in the Power BI service, it provides a different experience compared to when in Power BI Desktop. That's because Power BI Desktop allows you to customize and extend a dataset while the browser-based experience of the Power BI service only allows you to consume datasets but not to modify them. Given the fact that a dataset is a read-only object, the Power BI service responds to user's request to navigate to a dataset by opening a new report and showing the **Fields** list for that dataset.

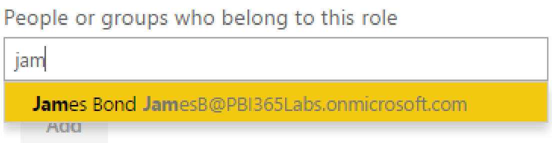
8. Configure Row-Level Security for the secondary user.
   a) Drop down the flyout menu for the **Wingtip Sales Analysis** dataset and click the **SECURITY** menu command.



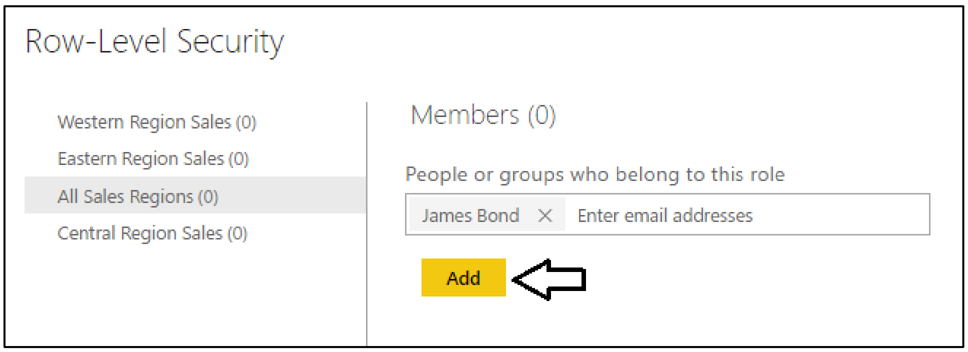
   b) In the **Row-Level Security** dialog, make sure the **All Sales Regions** role is the one that is selected.
   c) Place your cursor in the textbox which displays the hint **Enter email address**.



d) Enter the name of the secondary user account with which you've shared the dashboard.



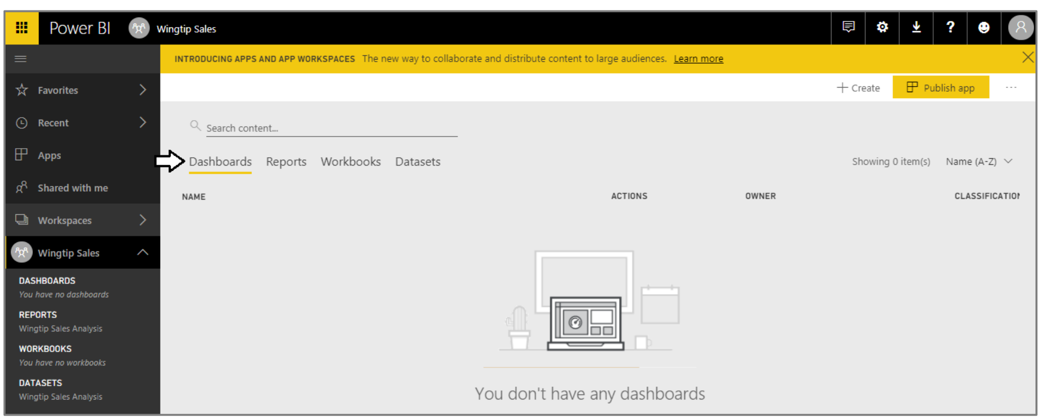
e) Once you have resolved the secondary user account, click the **Add** button to add the user to the **All Sales Regions** role.



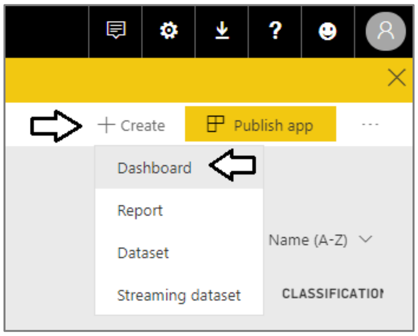
Exercise 3: Create and Design the Product Sales Dashboard

In this exercise you will create a new dashboard using the dataset and report you created in the **Wingtip Sale Analysis** project.

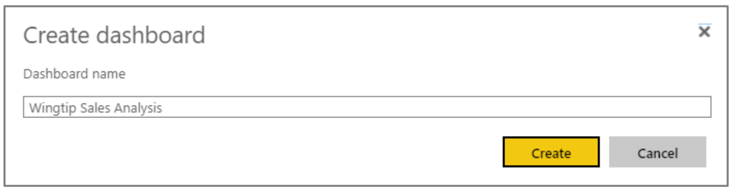
9. Create the **Wingtip Sales Analysis** dashboard.
   a) Ensure you are running in the context of the **Wingtip Sales** app workspace.
   b) Examine the **Dashboards** tab for this app workspace. It should be empty.



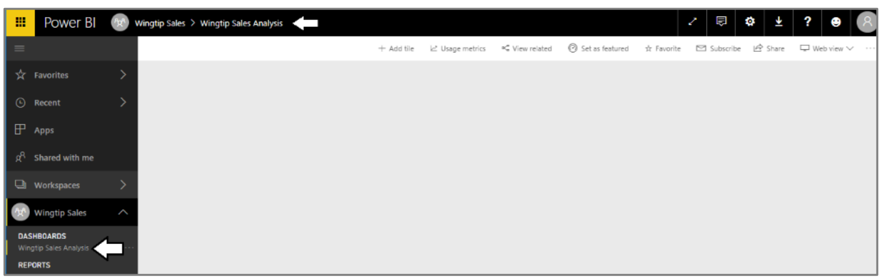
   c) Click the **Create** dropdown menu button at the top right and click **Dashboard** to create a new dashboard.



d) Type in a new dashboard name of **Wingtip Sales Analysis** and click **Create**.



e) At this point, you have now created a new dashboard which is initially empty of tiles.



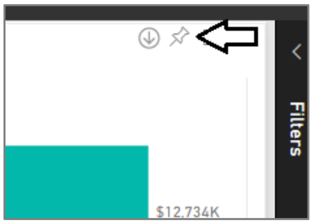
10. Pin a report visual to create a new dashboard tile.

a) Click on the report named **Wingtip Sales Analysis** in the **Reports** section of the left navigation.

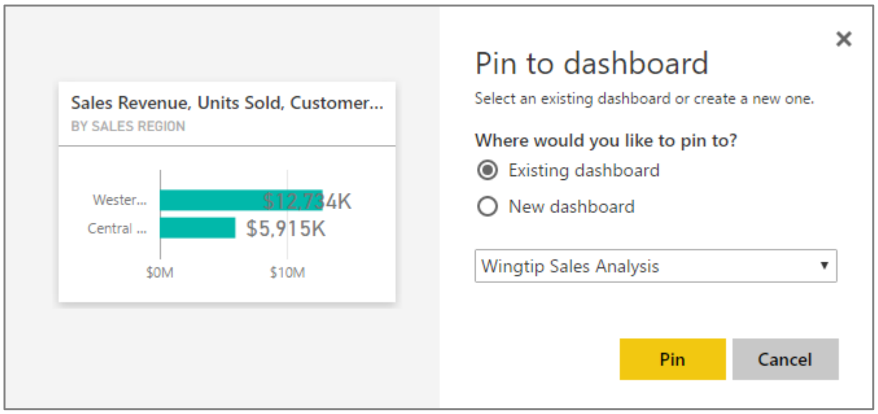
b) Navigate to the **Customer Geography Drilldown** page using the page navigation menu at the bottom of the report.

c) Hover the mouse over the top right corner of the bar chart visual on the **Customer Geography Drilldown** page.

d) Click on the button with the thumbtack icon in the top right corner of the bar chart visual.



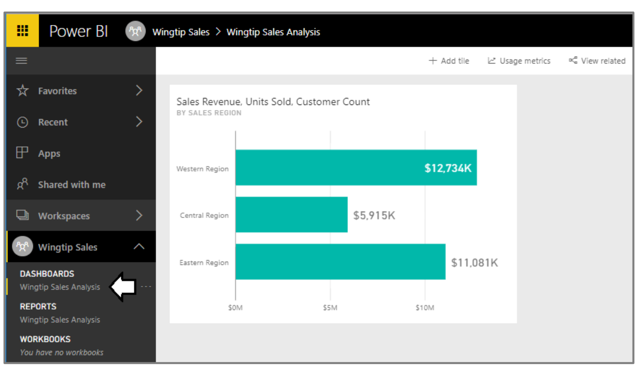
e) In the **Pin to dashboard** dialog, click the **Pin** button to create a new dashboard tile from the report visual.



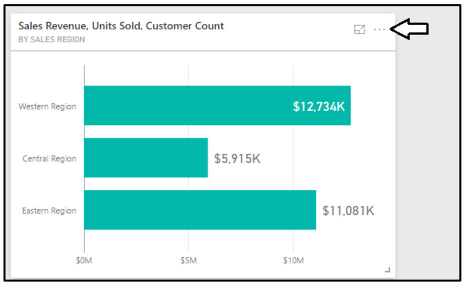
f) The Power BI service acknowledges the creation of the new dashboard tile with a **Pinned to dashboard** notification.

You will see the a **Pinned to dashboard** notification several more times during this lab. You can simply dismiss it each time you see it.

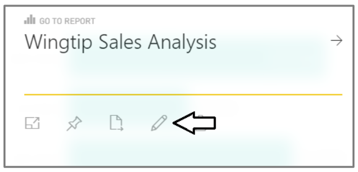
11. Inspect the new tile you've created on the **Wingtip Sales Analysis** dashboard.
    a) Click on the **Wingtip Sales Analysis** dashboard in the left navigation.
    b) You should see a new tile that has been created from the report visual you just pinned to the dashboard.



12. Update the **Title** property and the **Subtitle** property of the new dashboard tile.
    a) Hover the mouse of the top right corner of the dashboard tile and click the ellipse (**…**) menu.



b) On the tile's menu page, click on the button with the pen icon to navigate to the **Tile details** page.

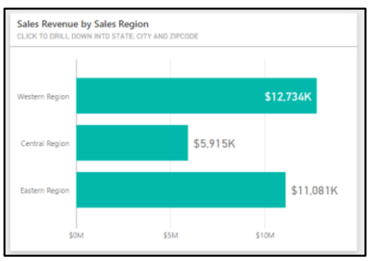


c) On the **Tile details** page, update the tile **Title** property to **Sales Revenue by Sales Region**.

d) Update the tile **Subtitle** property to **Click to drill down into state, city and zipcode**.

e) Click the **Apply** button at the bottom of the **Tile details** page to save your changes to the title and subtitle.

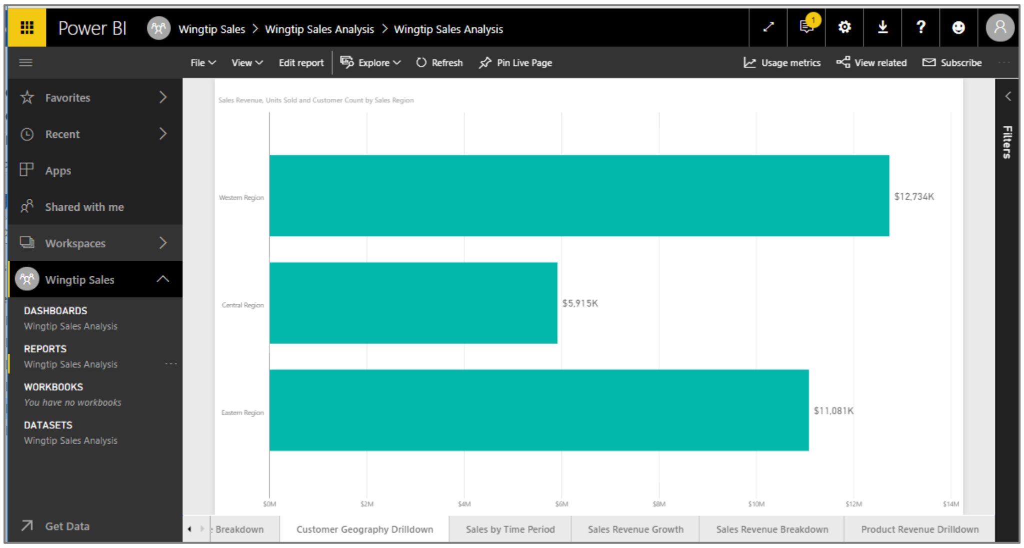
f) Verify the dashboard tile now displays the new title and subtitle.



Remember that dashboard tiles can be used for navigation. When a user clicks on a dashboard tile created from a visual in a report, the user is redirected to underlying report page which hosts that visual.

13. Click on the dashboard tile to navigate to a report for further drill down.

a) Click on the dashboard tile to navigate to the page in the **Wingtip Sales Analysis** with the bar chart visual.



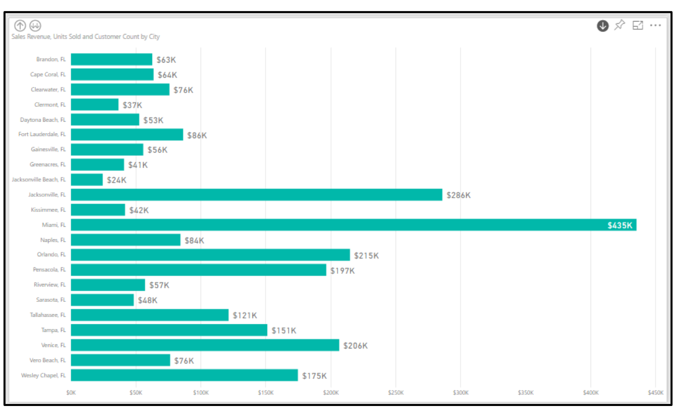
b) Hover the mouse over the top right corner of the bar chart visual to display its menu buttons.

c) Click on the **Drilldown** to enable drill down mode for this report page.

It is unfortunate but the Power BI platform does not currently save the drilldown mode setting when you save a report. That means you must enable drilldown mode each time you want to drill down into a greater level of detail.

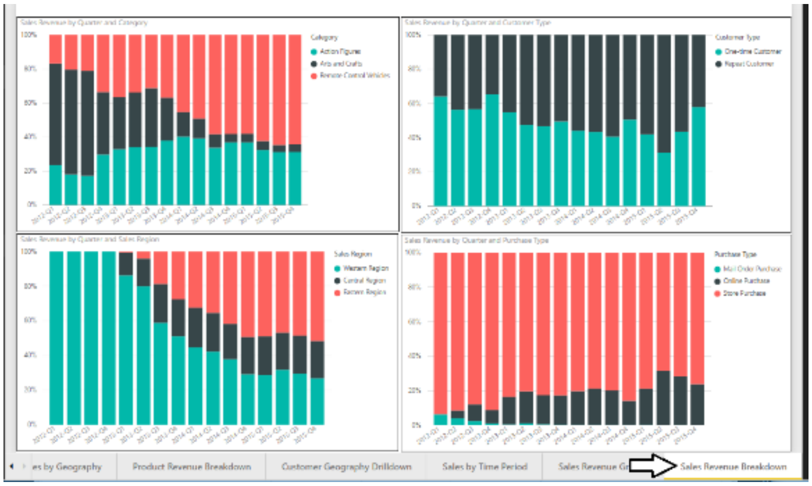
d) Click on the bar of the **Eastern Region** to see the sales revenue breakdown of the states in that sales region.

e) Click on the bar for **FL** to see the sales revenue breakdown of the cities in Florida.

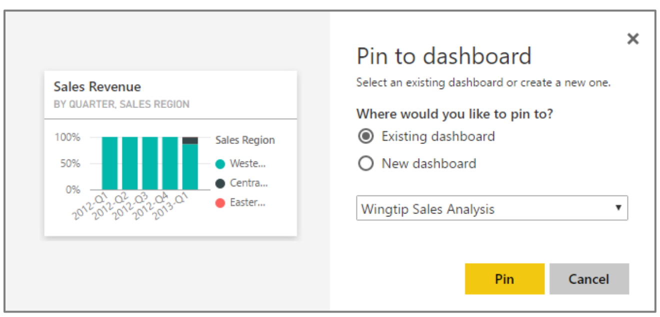


The purpose of the last few steps has been to emphasize the general relationship between dashboard and reports in the Power BI platform. Dashboard are generally used to show high-level detail and reports are designed to complement dashboards by giving users an opportunity to drill down into a much greater level of detail and specificity when desired.

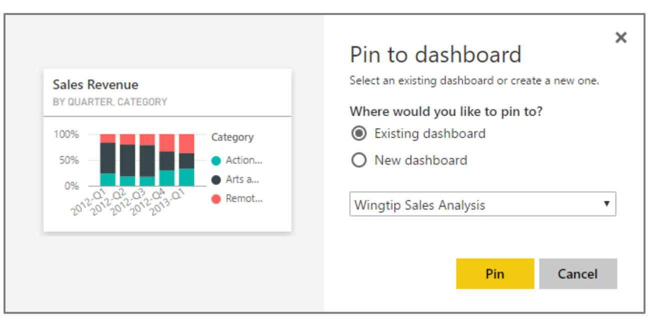
14. Pin two more report visuals to create new dashboard tiles.
    a) Click on the report named **Wingtip Sales Analysis** in the **Reports** section of the left navigation.
    b) Navigate to the **Sales Revenue Breakdown** page using the page navigation menu at the bottom of the report.



    c) Pin the visual in the bottom left corner of the page by clicking the thumbtack icon in the top right corner.
    d) Click the **Pin** button when you see the **Pin to dashboard** dialog.

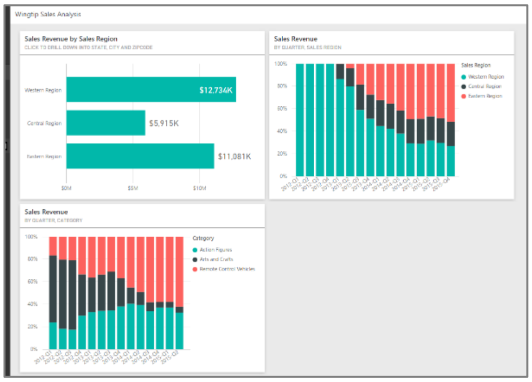


    e) Pin the visual in the top left corner of the page by clicking the thumbtack icon in the top right corner.
    f) Click the **Pin** button when you see the **Pin to dashboard** dialog.

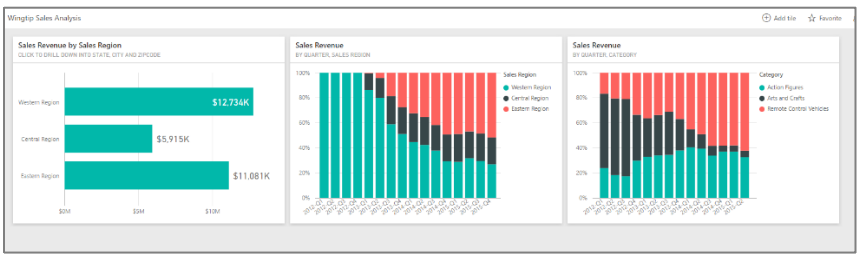


15. Inspect and reposition the two new tiles you've created on the **Wingtip Sales Analysis** dashboard.
    a) Click on the **Wingtip Sales Analysis** dashboard in the left navigation.

b) You should see the two new tiles in addition to the other tile you created earlier.



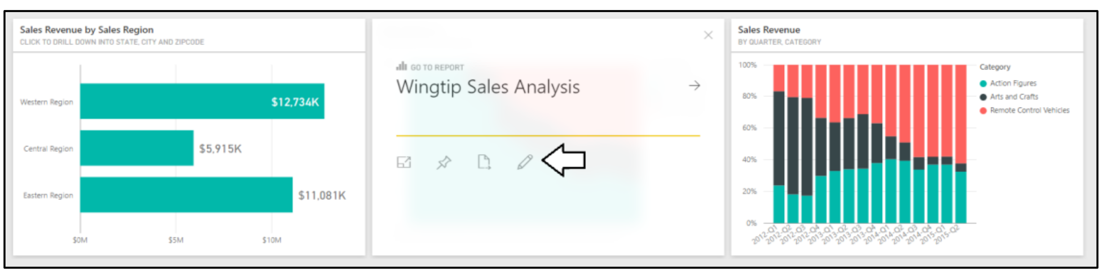
c) Use the mouse to move the third tile so it sites to the right of the other two tiles.



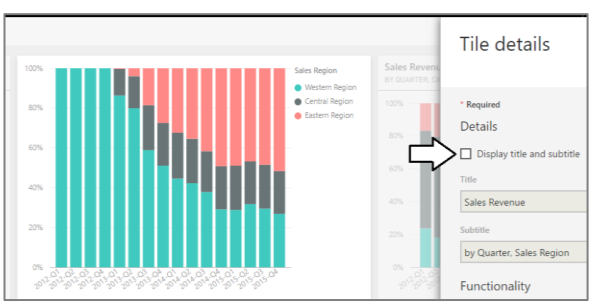
16. Modify the two new tiles so that they do not display a title or subtitle.

a) Hover the mouse of the top right corner of the middle dashboard tile and click the ellipse (**...**) menu.

b) On the tile properties view, click the button with the pen icon to navigate to the **Title details** page.

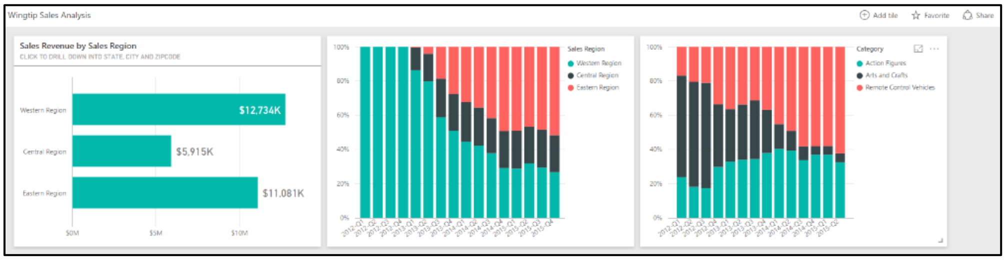


c) On the **Tile details** page, uncheck the **Display title and subtitle** checkbox and then click the **Apply** button.

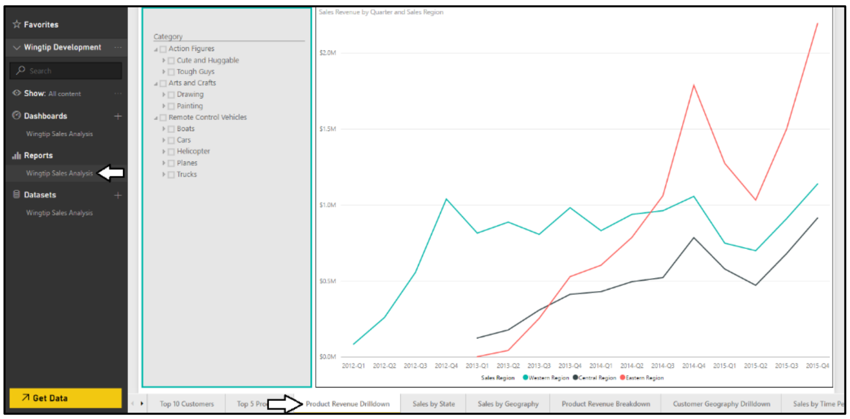


d) Follow the same steps to hide the title and subtitle for the tile on the right.

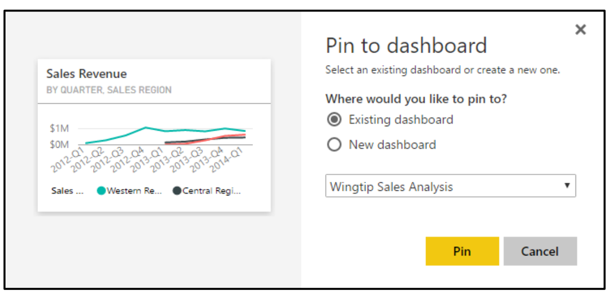
e) At this point, the two new titles should be displaying without a title or a subtitle.



17. Pin another report visual to create a forth dashboard tile.
    a) Click on the report named **Wingtip Sales Analysis** in the **Reports** section of the left navigation.
    b) Navigate to the **Product Revenue Drilldown** page using the page navigation menu at the bottom of the report.



    c) Pin the line chart visual by clicking the thumbtack icon in the top right corner.
    d) Click the **Pin** button when you see the **Pin to dashboard** dialog.

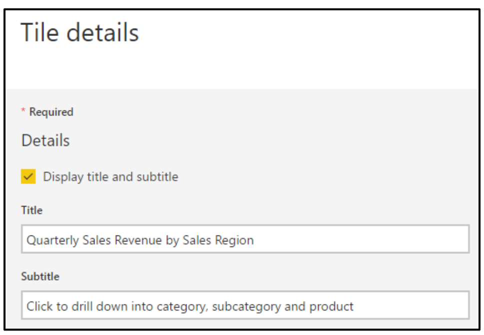


    e) Navigate to the **Wingtip Sales Analysis** dashboard to see the new line chart tile you have just created.

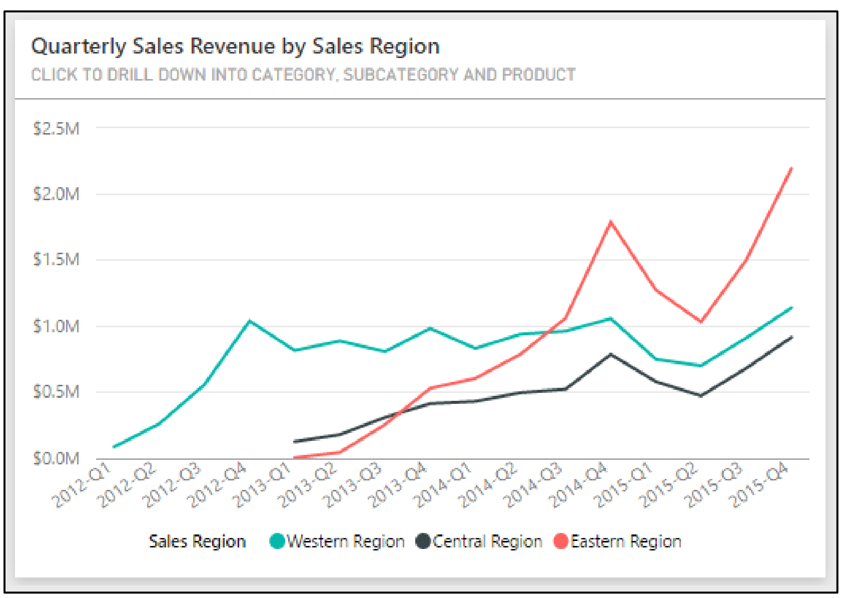
f) Navigate to the **Tile details** page for the new tile.

g) Update the tile's **Title** property to **Quarterly Sales Revenue by Sales Region**.

h) Update the tile's **Subtitle** property to **Click to drill down into category, subcategory and product**.



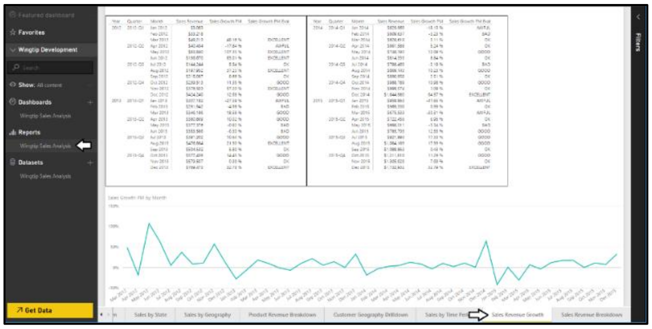
i) Verify that the tile has been updated with your changes to the title and subtitle.



18. Pin another report visual to create a fifth dashboard tile.

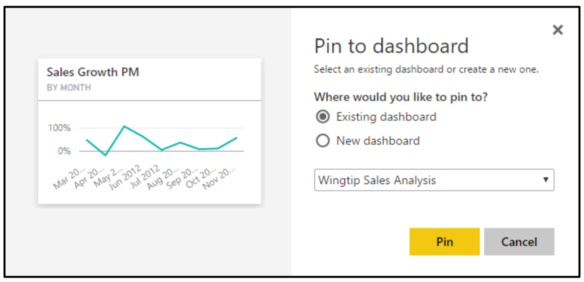
a) Click on the report named **Wingtip Sales Analysis** in the **Reports** section of the left navigation.

b) Navigate to the **Sales Revenue Growth** page using the page navigation menu at the bottom of the report.



c) Pin the line chart visual at the bottom of the page by clicking the thumbtack icon in the top right corner.

d) Click the **Pin** button when you see the **Pin to dashboard** dialog.

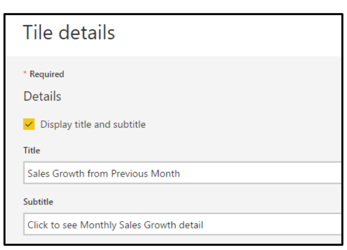


e) Navigate to the **Wingtip Sales Analysis** dashboard to see the new line chart tile you have just created.

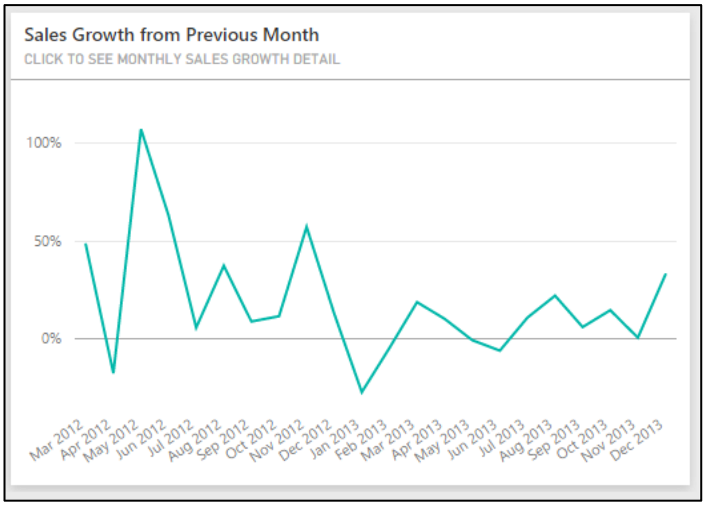
f) Navigate to the **Tile details** page for the new tile.

g) Update the tile's **Title** property to **Sales Growth from Previous Month**.

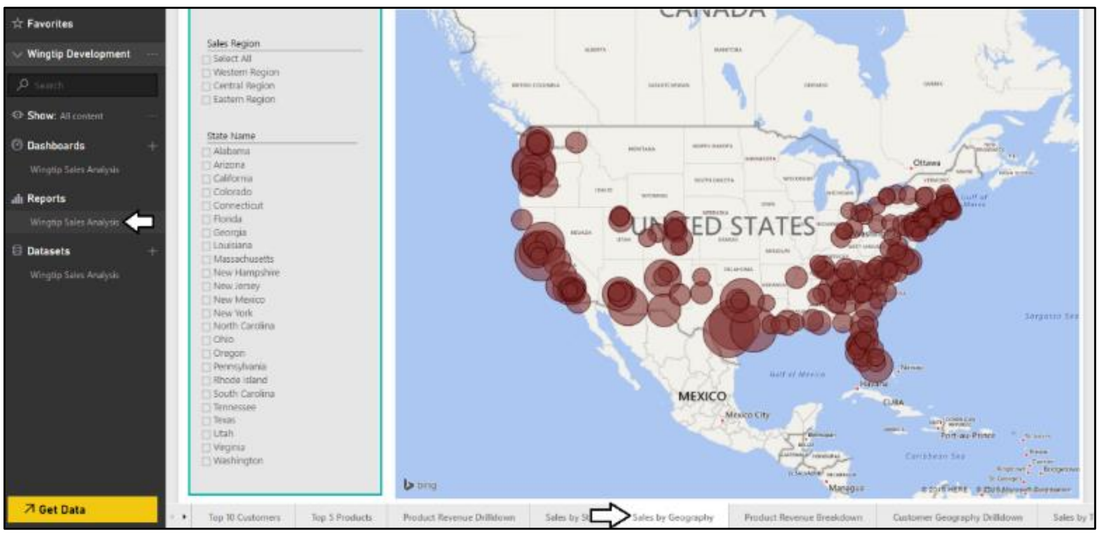
h) Update the tile's **Subtitle** property to **Click to see Monthly Sales Growth detail**.



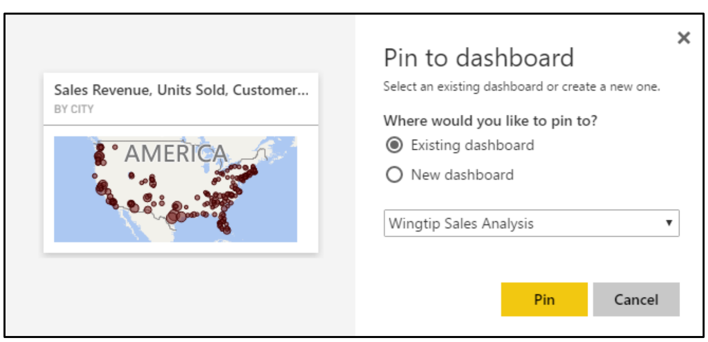
i) Click **Apply** on the Tile details page to see your changes applied to the line chart tile.



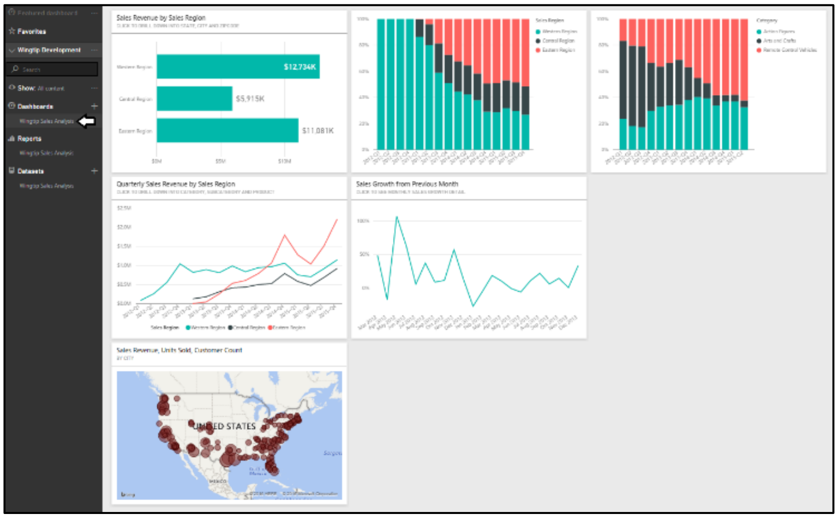
19. Pin another report visual to create a sixth dashboard tile.
    a) Click on the report named **Wingtip Sales Analysis** in the **Reports** section of the left navigation.
    b) Navigate to the **Sales by Geography** page using the page navigation menu at the bottom of the report.



    c) Pin the map visual by clicking the thumbtack icon in the top right corner.
    d) Click the **Pin** button when you see the **Pin to dashboard** dialog.



    e) Navigate to the **Wingtip Sales Analysis** dashboard to see the new line chart tile you have just created.

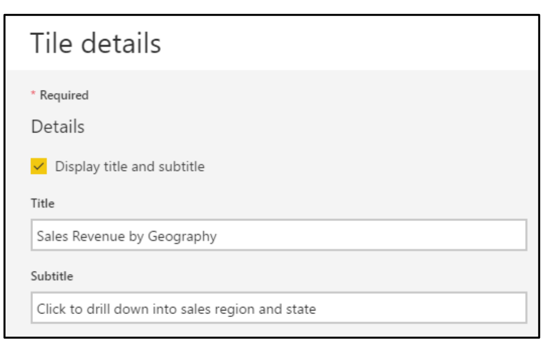


f) Use the mouse to move the tile with map visual to the end of the second row.

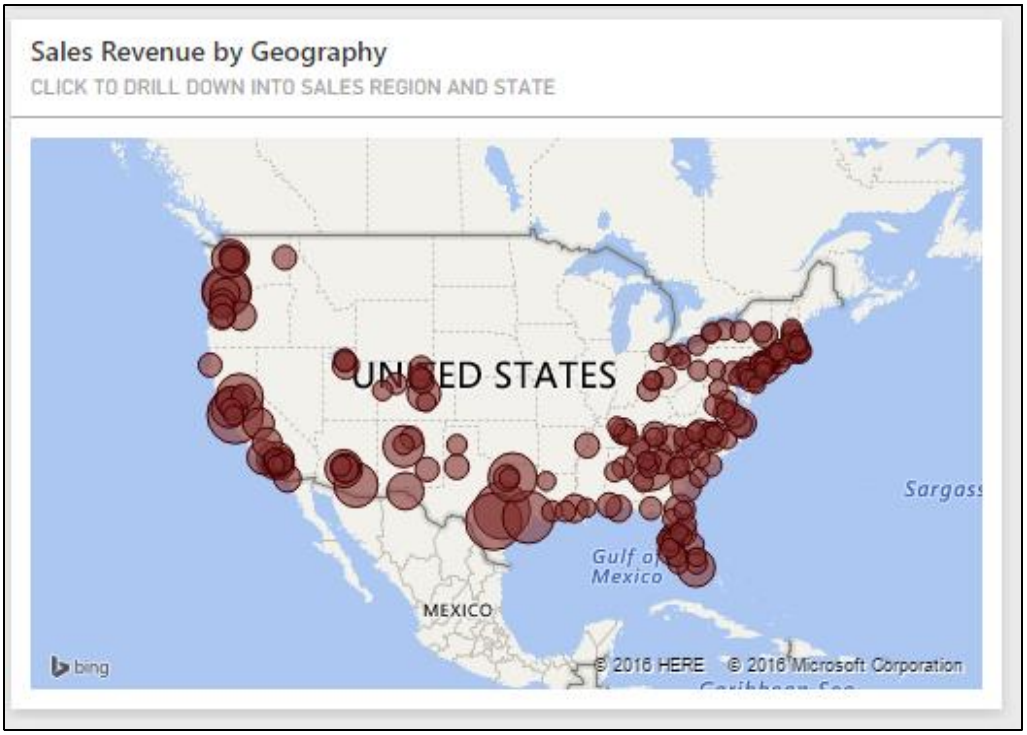
g) Navigate to the **Tile details** page for the new tile with the map.

h) Update the tile's **Title** property to **Sales Revenue by Geography**.

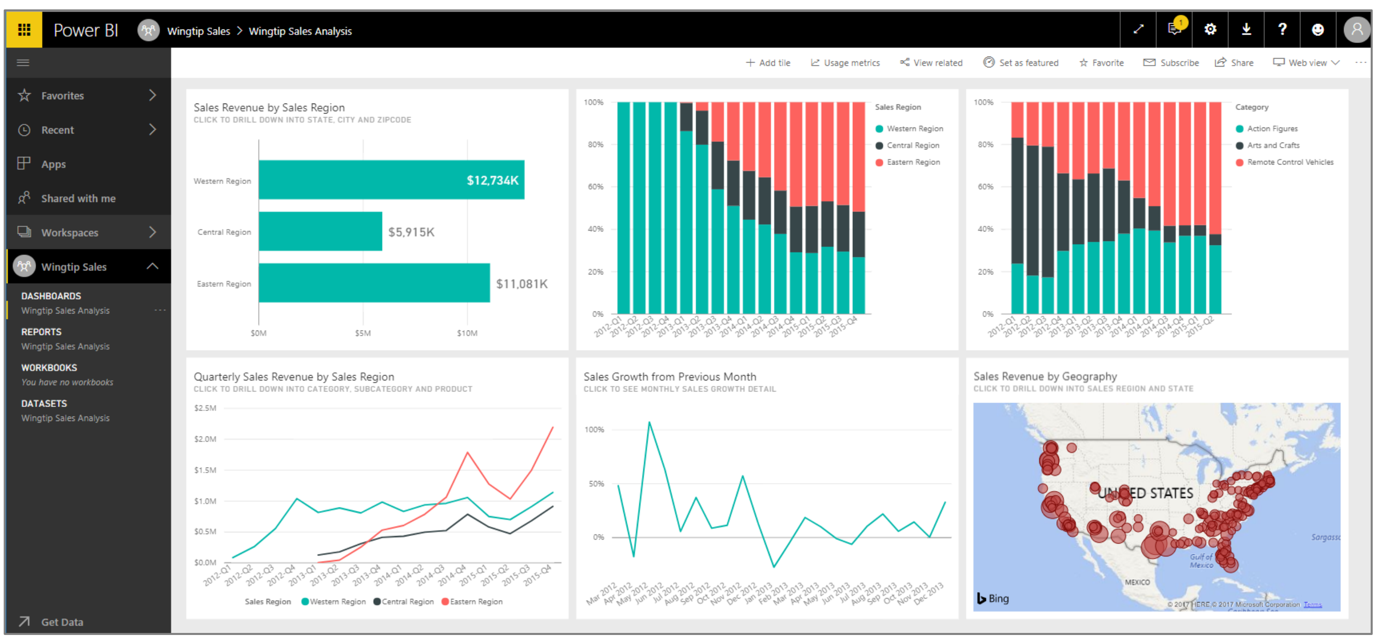
i) Update the tile's **Subtitle** property to **Click to drill down into sales region and state**.



j) Click **Apply** on the Tile details page to see your changes applied to the tile's title and subtitle.



20. At this point, you have finished building the **Wingtip Sales Analysis** dashboard.

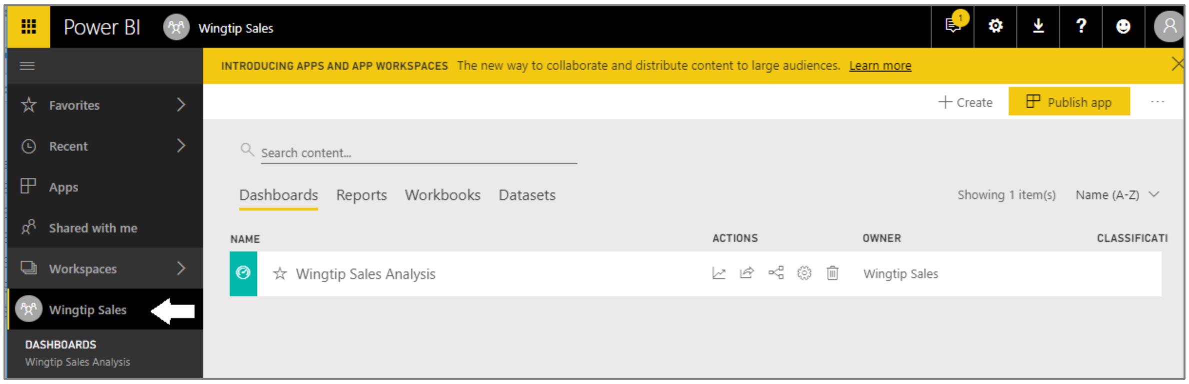


Now that you have created a dashboard, the next step is to make it accessible to other users within your Office 365 tenancy. You will make this dashboard available to other users by publishing the current app workspace as a Power BI app.

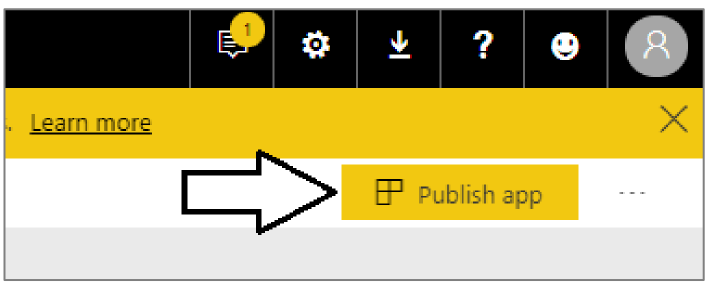
Exercise 4: Publish an App Workspace as a Power BI App

In this exercise you will publish the **Wingtip Sales** app workspace as a Power BI app.

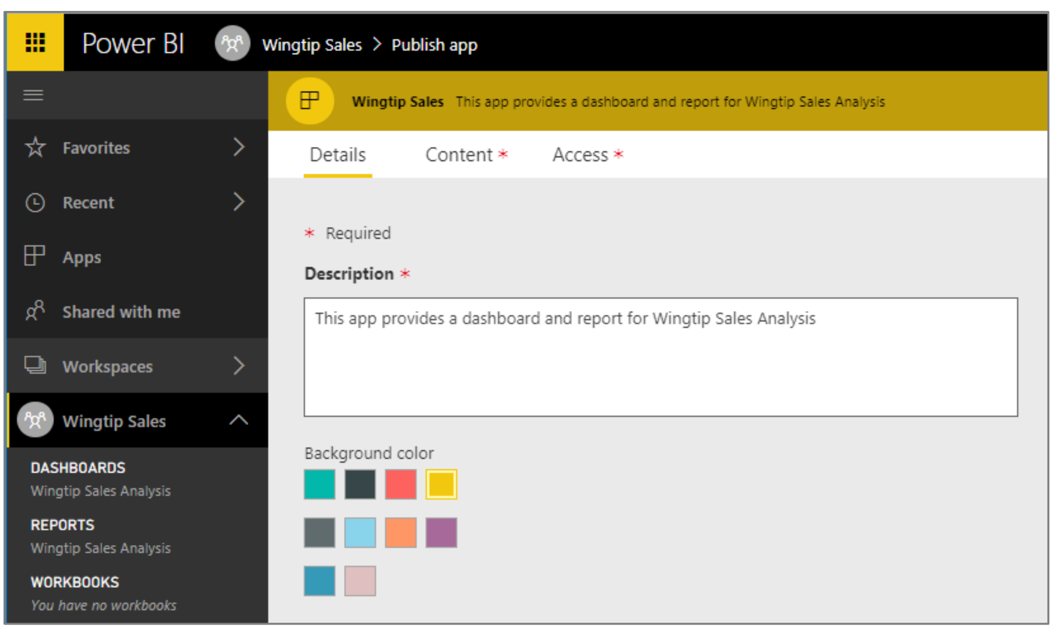
21. Publish the Wingtip Sales workspace as a Power BI app.
    a) Click the Wingtip Sales link in the left navigation to show the summary page for the **Wingtip Sales** app workspace.



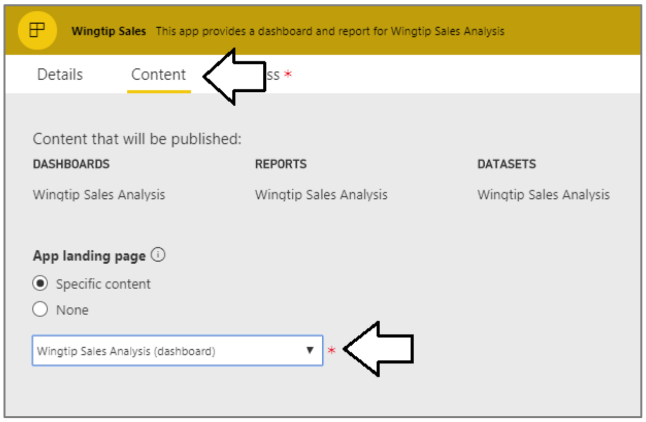
    b) Click the **Publish app** button.



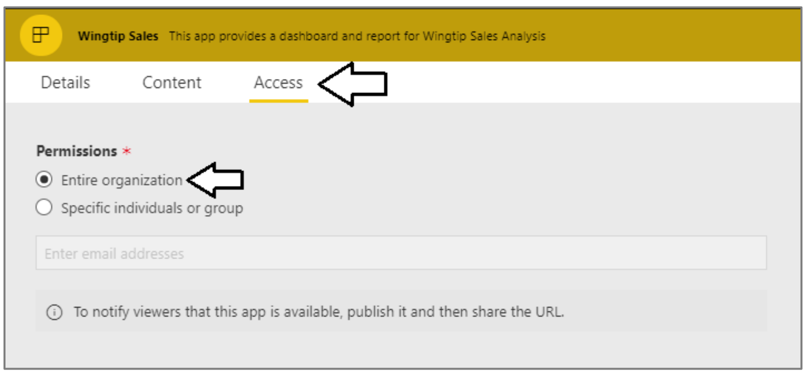
    c) On the **Details** tab of the **Publish app** page, enter a **Description** for the app and select a **Background color** as shown in the following screenshot.



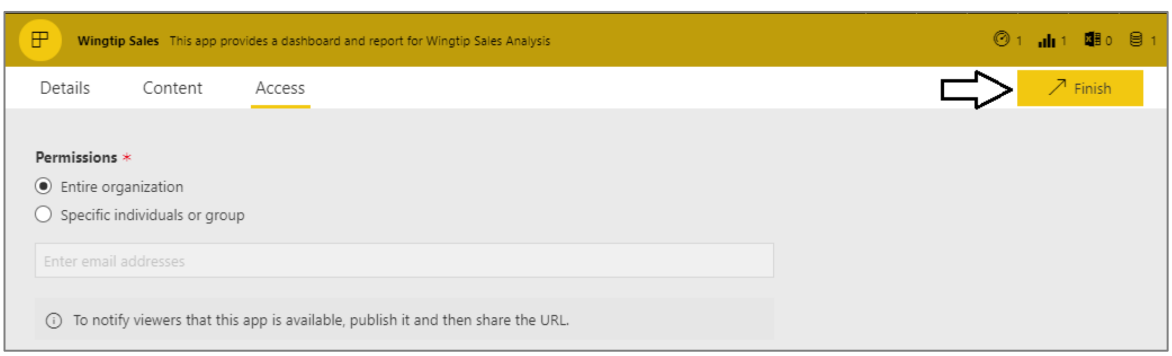
d) Click on the **Content** tab and configure the App landing page for the **Wingtip Sales Analysis (dashboard)**.



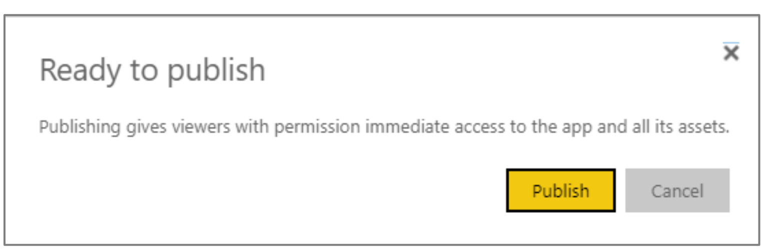
e) Click on the **Access** tab and configure app **Permissions** for the **Entire Organization**.



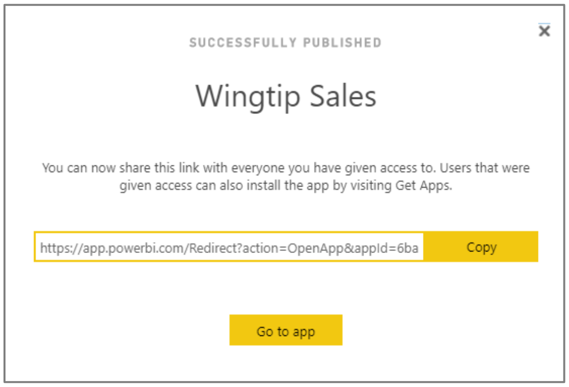
f) Click the **Finish** button on the right to complete the publication process.



g) When prompted by the **Ready to publish** dialog, click **Publish**.



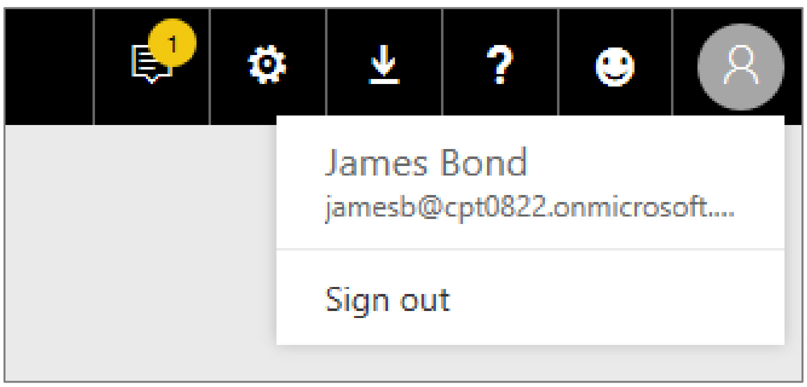
h) When you see the **SUCCESSFULLY PUBLISHED** dialog, close it by clicking the **X** button in the upper right corner.



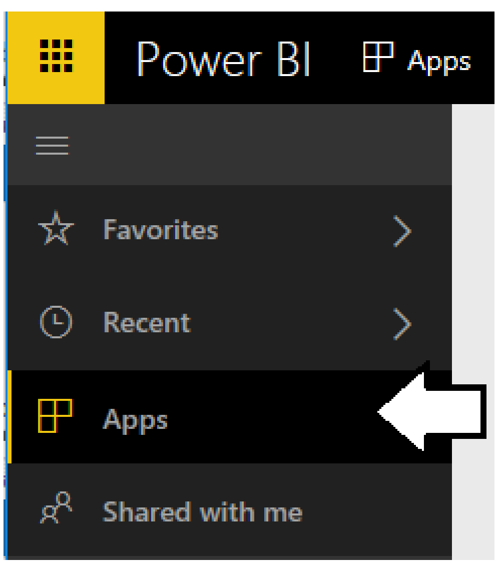
In the next step, you will logon as a different user. If you use a different browser (e.g. Chrome, Edge, Internet Explorer) for the secondary user, you can be logged on with two different users at the same time.

22. Install the app as a secondary user,

a) Log into https://app.powerbi.com using the secondary user account.

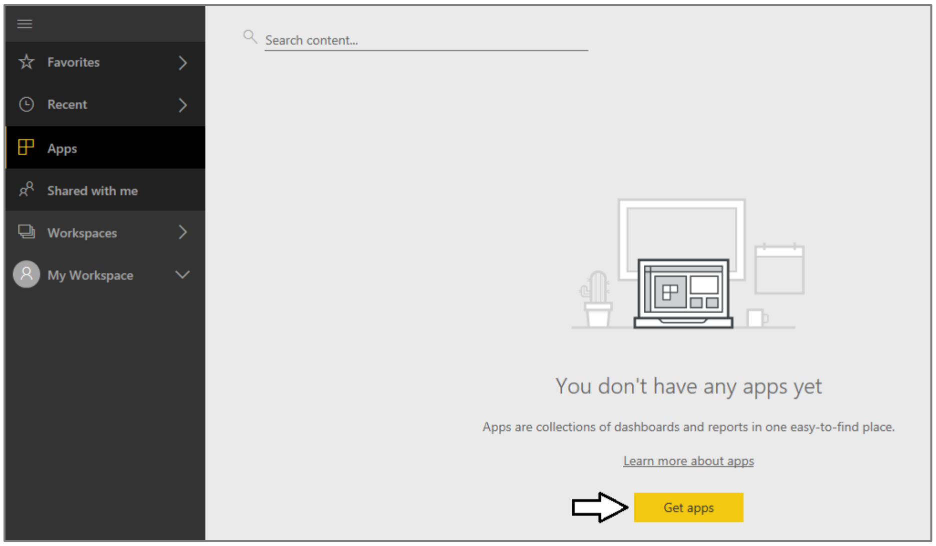


b) Click the **Apps** button in the left navigation menu.

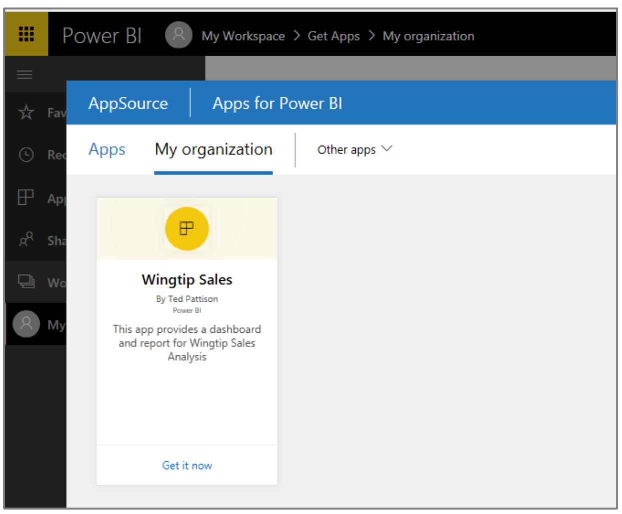


c) You should see there are no apps currently installed.

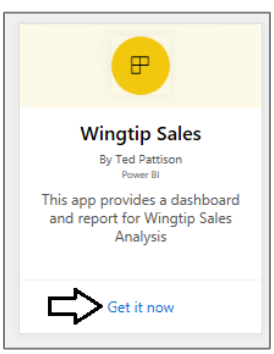
d) Click the **Get apps** button.



e) You should see the **AppSource** dialog showing you what apps are available for installation. The Wingtip Sales app should be displayed as an app available for installation.

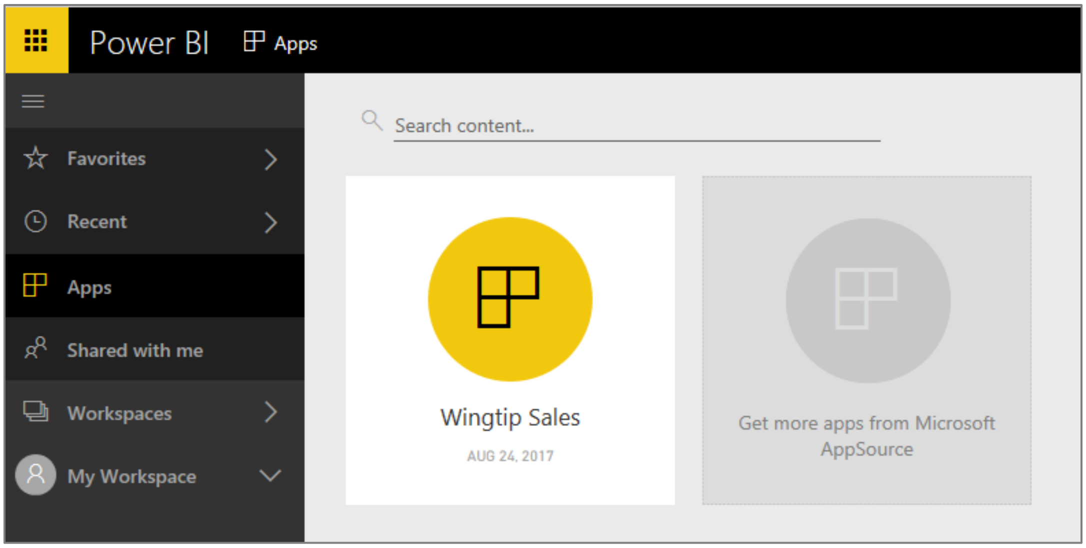


f) Click the **Get it now** link.

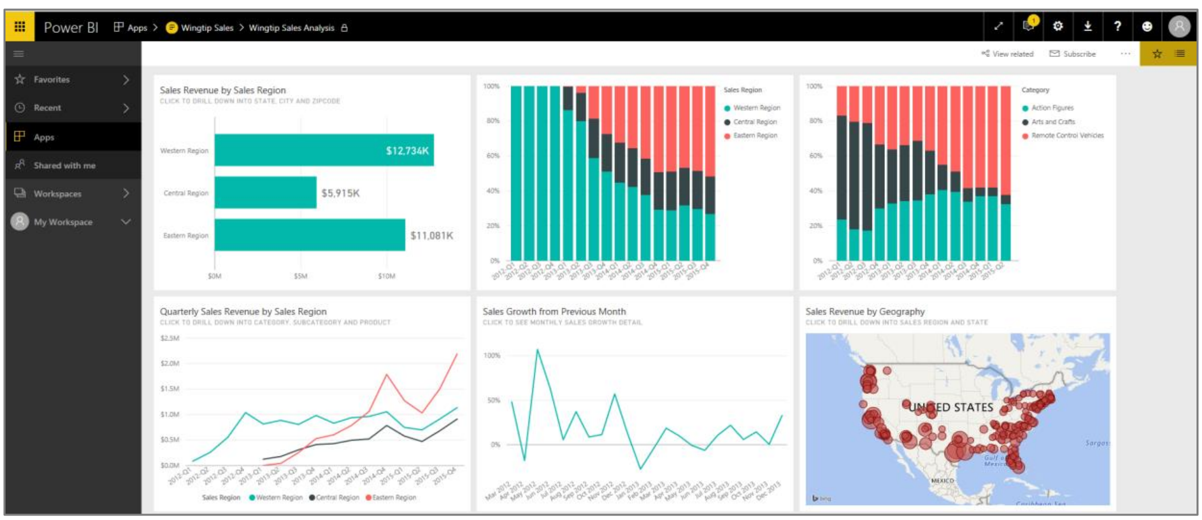


g) The app should install and then be displayed as shown in the following screenshot.

h) Click on the tile for the **Wingtip Sales** app to launch it,

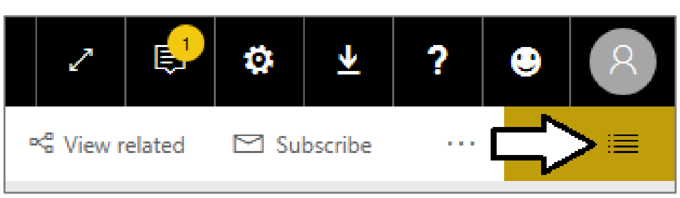


i) When the app is launched, it should display the **Wingtip Sales Analysis** dashboard

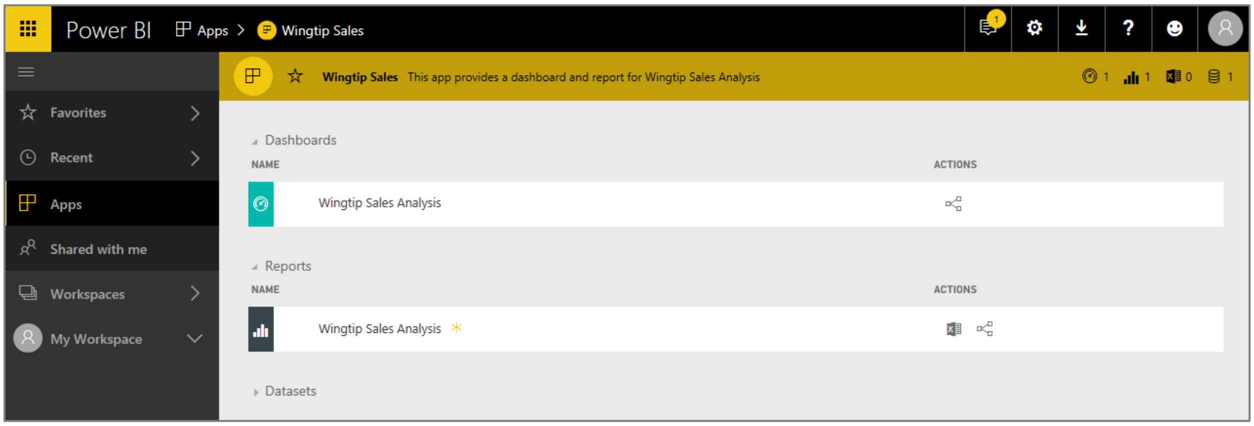


j) Note the breadcrumb at the top shows a path with the app and the dashboard inside the app.

k) Inspect the contents of the app by clicking the **View content list** button on the left.



l) You should now be able to see the contents of the app which includes a single report and dashboard.



Congratulations. You have reached the end of this lab.