

Designing Interactive Reports in Power BI Desktop



Agenda

- Designing Interactive Reports
- Conditional Formatting
- Importing Custom Visuals
- Working with Bookmarks and Drillthrough
- Styling Reports using Themes
- Publishing Reports



Creating Reports

- Power BI Desktop project contains one report
 - Report within project can contain multiple pages
 - Report pages contains visuals
- Reports can be created using filters
 - You can add visual level filters
 - You can add page level filters
 - You can add drillthrough filters
 - You can add report level filters



Built-in Visualization Types

- Table and Matrix
- Bar charts and Column charts
- Pie charts and Doughnut chart
- Line chart and Area chart
- Scatter chart and Combo charts
- Card and Multi-row Card
- Treemap
- Ribbon chart
- Waterfall chart
- Funnel chart
- Gauge
- Map and Filled Map
- Slicer
- R script visual
- Shape map (in preview)



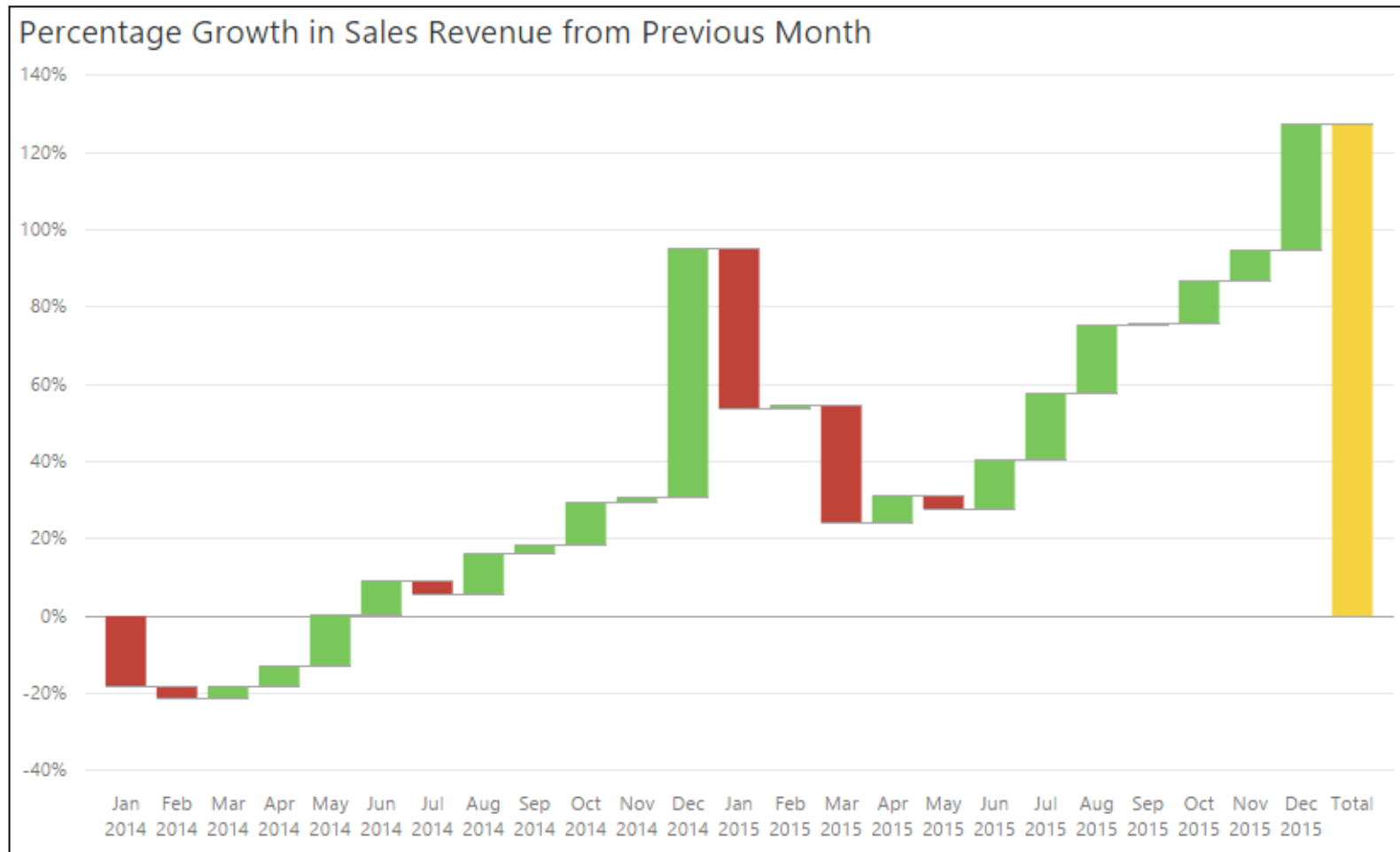
Example Visual 1: Funnel

- Visualizes distribution across categories as percentage of top value



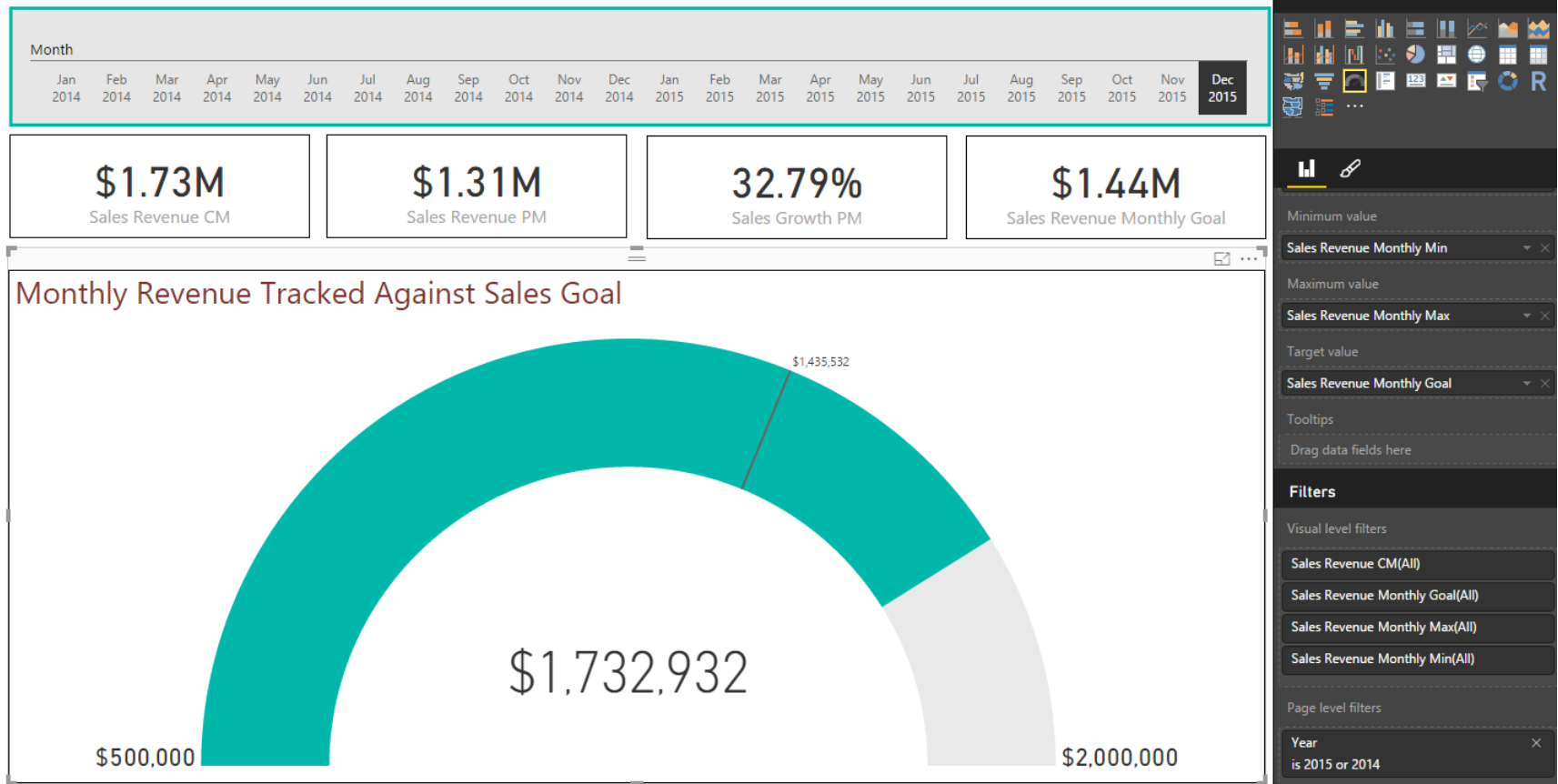
Example Visual 2: Waterfall

- Visualizes series-based data with positive and negative values

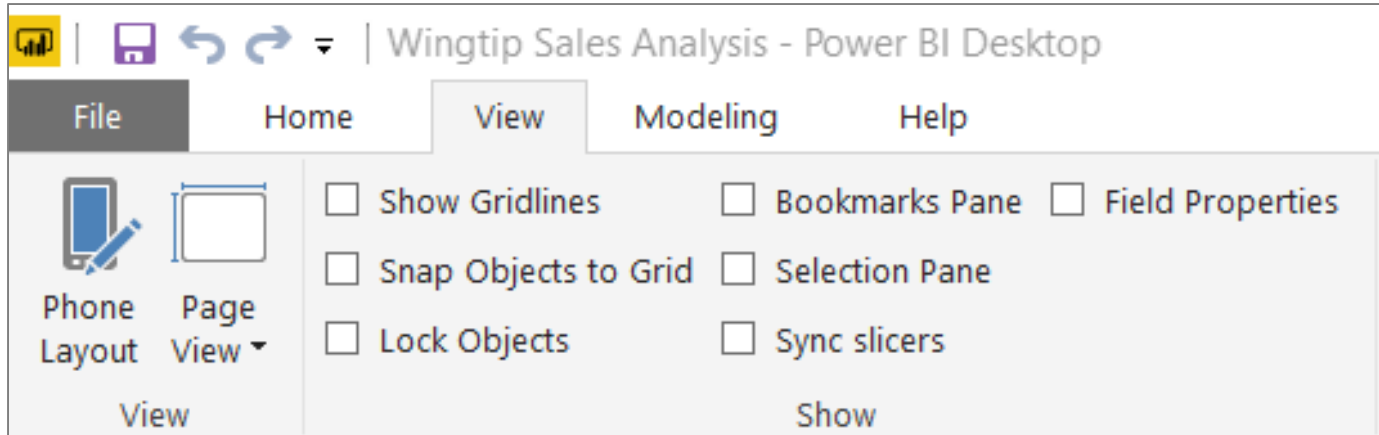


Example Visual 3: Gauge Visual

- Visualizes how measured value is tracking against goal or budget



Report Designer Modes and Panes



- **Show Gridlines** mode adds visual guides to report
- **Snap Objects to Grid** mode helps with object placement
- **Lock Objects** mode used to prevent accidental moving
- **Bookmarks Pane** used to create and manage bookmarks
- **Selection Pane** used to select, order, hide & show visuals
- **Sync slicers** pane used for advanced slicer control
- **Field Properties** used to add field description



Lock Objects Mode

- Prevents accident movement of report objects
 - Locks Objects setting is not saved at project level



Field Properties Pane

- Allows data model author to add field description

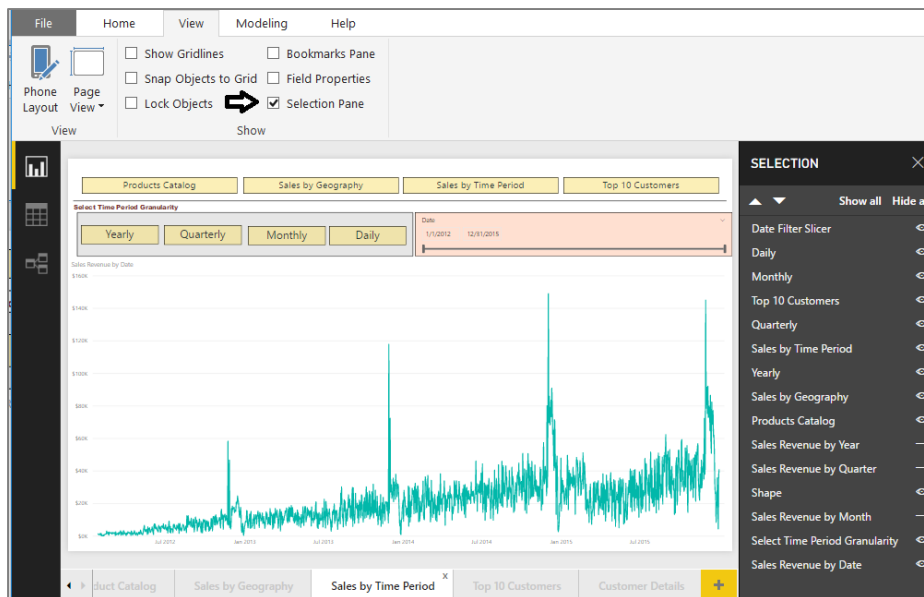


- Data model consumer can see description as tooltip in fields list



Selection Pane

- Provides control over object on a page
 - You can control whether visual is visible or hidden
 - You can change ordering to control what is on top



SELECTION ✕

▲ ▼ Show all Hide all

Date Filter Slicer	
Daily	
Monthly	
Top 10 Customers	
Quarterly	
Sales by Time Period	
Yearly	
Sales by Geography	
Products Catalog	
Sales Revenue by Year	
Sales Revenue by Quarter	
Shape	
Sales Revenue by Month	
Select Time Period Granularity	
Sales Revenue by Date	

Designing Reports with Interactive Filtering

- Slicers
 - Provide report consumers with intuitive filtering
- Visual Highlighting
 - Filtering applied when user clicks on a visual data element
- Drilldown Mode
 - Allows report consumer to drill into field hierarchy
e.g. Sales Region > State > City > Zipcode
- Drillthrough Pages
 - Allows report consumer to navigate to drillthrough page



Slicer with Text Field

- Slicer support List and Dropdown modes
 - Slicer create in List mode by default
 - Slicer switched to dropdown mode to conserve vertical space

State Name

- ☐ Alabama
- ☐ Arizona
- ☒ California
- ☐ Colorado
- ☐ Connecticut
- ☐ Florida
- ☐ Georgia
- ☐ Louisiana
- ☐ New Mexico
- ☐ New York
- ☐ North Carolina
- ☐ Ohio
- ☐ Oregon
- ☐ Pennsylvania
- ☐ Rhode Island

State Name

- ☐ Alabama
- ☐ Arizona
- ☒ California
- ☐ Colorado

List
Dropdown

State Name

California



Horizontal Responsive Slicers

- Slicer **Orientation** can be set to **Horizontal**
 - Horizontal slicer supports **Responsive** mode
 - Makes it possible to show many slicer choices at once
 - provides best filtering experience for mobile devices



Slicers with Date Fields

- Slicers with Date fields provide 7 different modes
 - Between, Before and After provide sliders and date pickers



The image shows a date slicer interface. On the left is a vertical menu with seven options: 'Between' (highlighted), 'Before', 'After', 'List', 'Dropdown', and 'Relative'. To the right, the 'Between' mode is active, displaying the title 'First Purchase Date'. Below the title are two date input fields containing '4/1/2012' and '10/1/2012'. Below these fields is a horizontal slider with two circular handles positioned at the dates shown in the input fields.

- Relative mode filter based on current date (e.g. last 30 days)



The image shows a date slicer interface in 'Relative' mode. The title 'First Purchase Date' is at the top. Below it are three input fields: a dropdown menu with 'Last' selected, a text box with '30', and another dropdown menu with 'Days' selected. Below these fields, there is a calendar icon followed by the date range '3/31/2018 - 4/29/2018'.



Slicer Sync

- Slicer visual & filtering can be synchronized across pages

The screenshot displays the Microsoft Power BI desktop application interface. The 'View' ribbon is active, showing options for 'Show Gridlines', 'Snap Objects to Grid', 'Lock Objects', 'Bookmarks Pane', 'Selection Pane', and 'Sync slicers'. The 'Sync slicers' checkbox is checked. Below the ribbon, a 'Sales Region' slicer is visible, showing three categories: 'Western Region' (selected), 'Central Region', and 'Eastern Region'. On the right side, the 'SYNC SLICERS' task pane is open, displaying a table with columns for 'Page name', a filter icon, and an eye icon. The table lists three pages: 'Sales by Geography', 'Sales by Time Period', and 'Sales Revenue Growth'. All three pages have the filter icon checked and the eye icon checked.

Page name	Filter	Eye
Sales by Geography	✓	✓
Sales by Time Period	✓	□
Sales Revenue Growth	✓	□



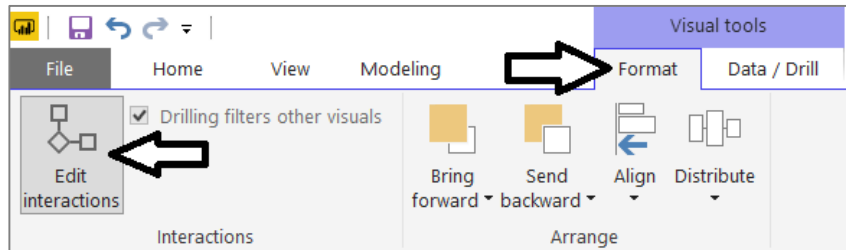
User Interaction with Slicers & Highlighting

- Provides user with interactive filtering control

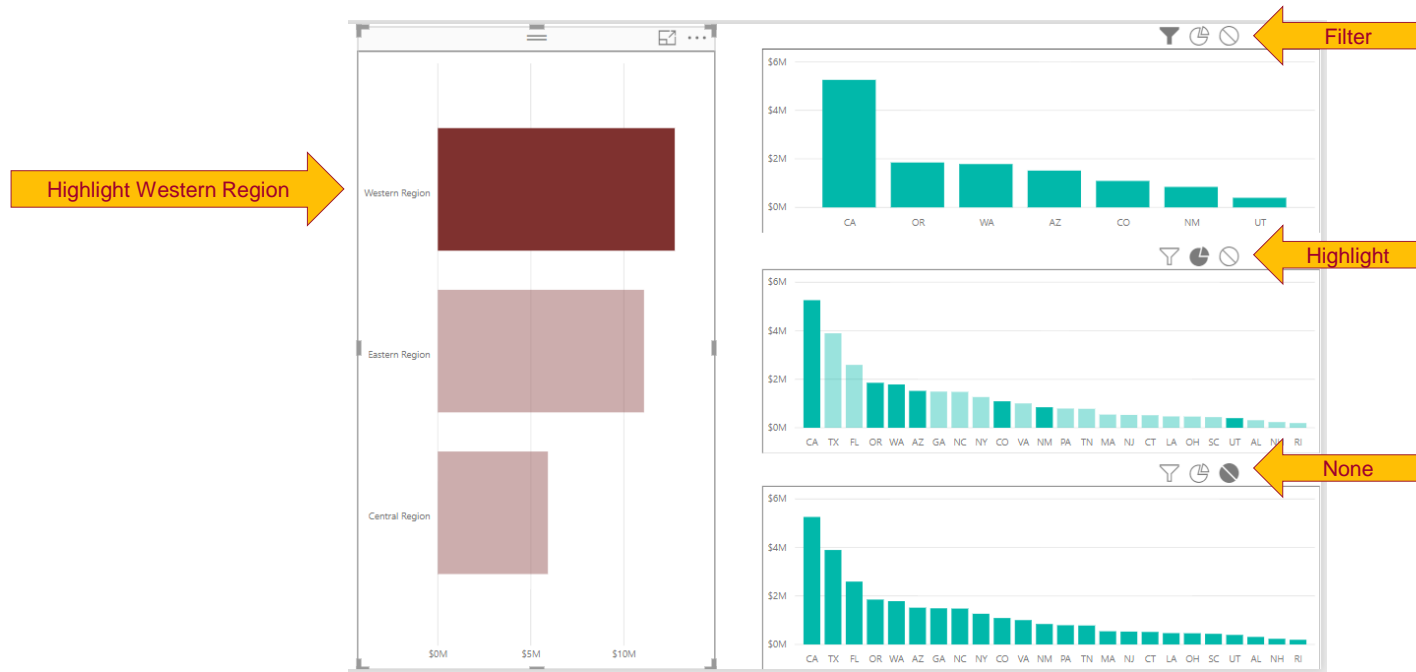


Edit Highlight Interactions Across Visuals

- Click **Edit interactions** button on **Format** tab of ribbon

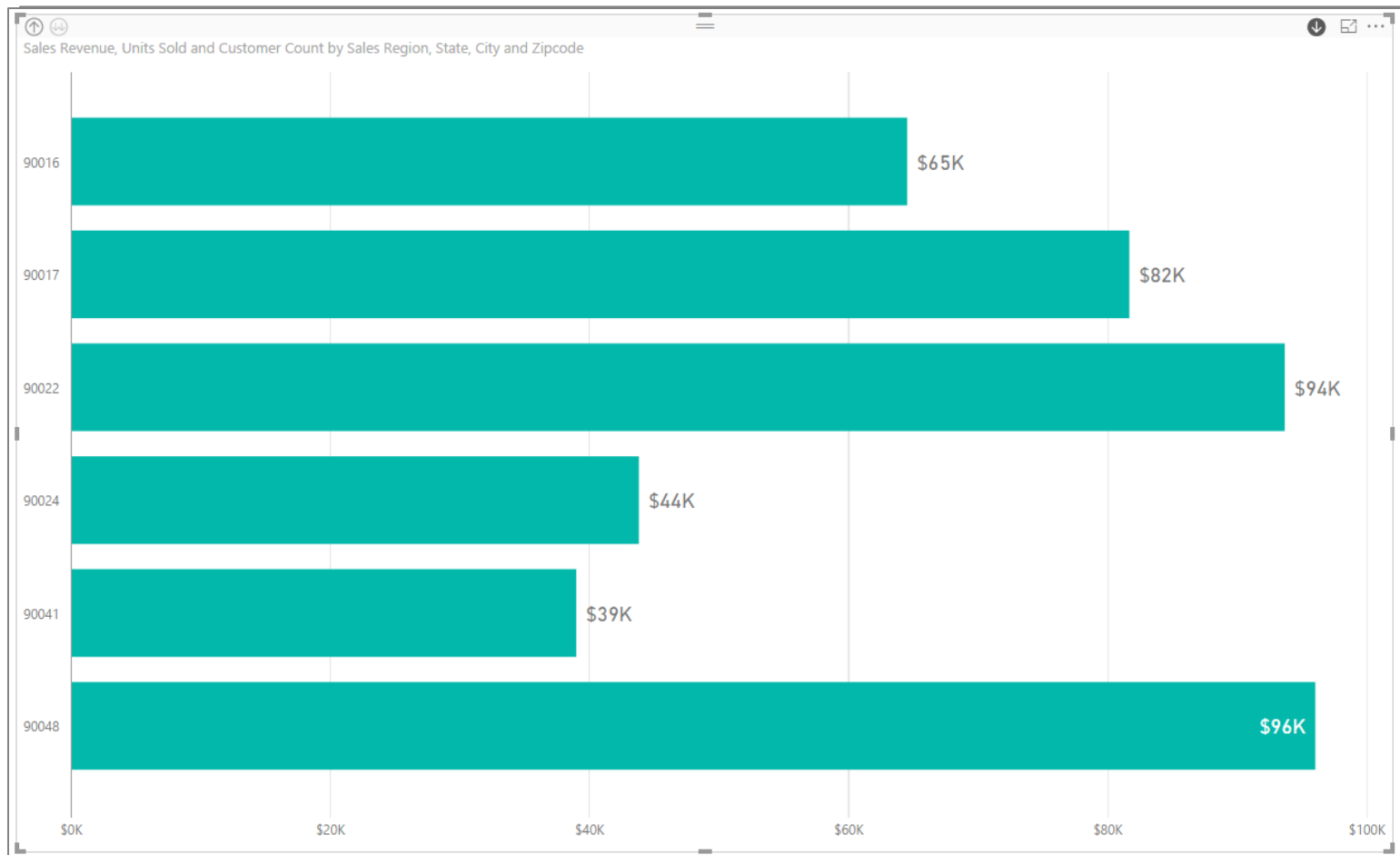


- Select a visual and then configure interactions with other visuals



User Interaction using Drill Actions

- Drill Actions supported when using hierarchies
 - You must enable drilldown mode in visual



Agenda

- ✓ Designing Interactive Reports
- Creating the Top 5 Products List
 - Working with Bookmarks and Drillthrough
 - Using Report Themes
 - Importing Custom Visuals
 - Designing Reports for Mobile Devices
 - Publishing Power BI Reports



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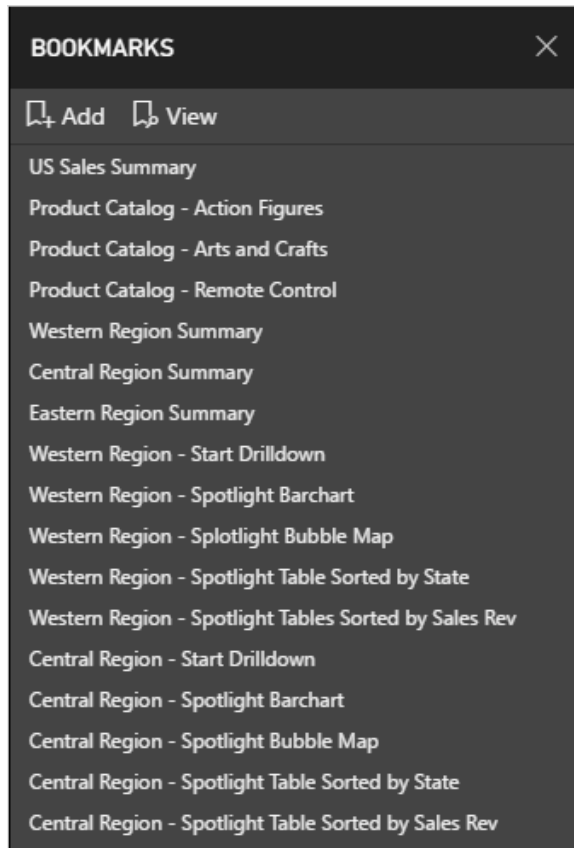
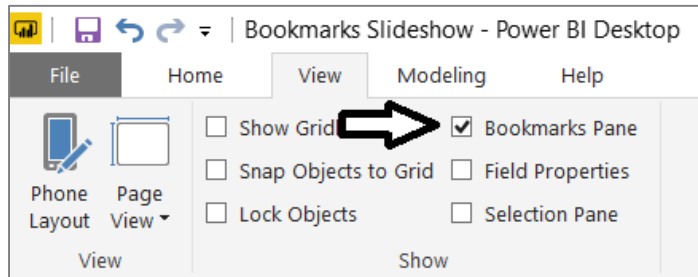
What are Bookmarks

- Snapshot of recorded settings which can include...
 - Current page
 - Filters
 - Slicers
 - Visual sort order
 - Drill location
 - Visibility
 - Spotlighting
- Bookmarks provide the foundation for story telling
 - Bookmarks are supported in reports only
 - Bookmarks are **NOT** supported in dashboards



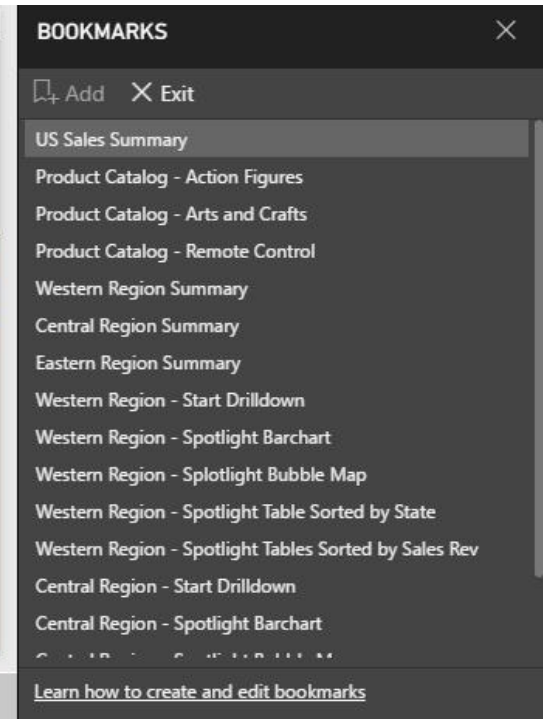
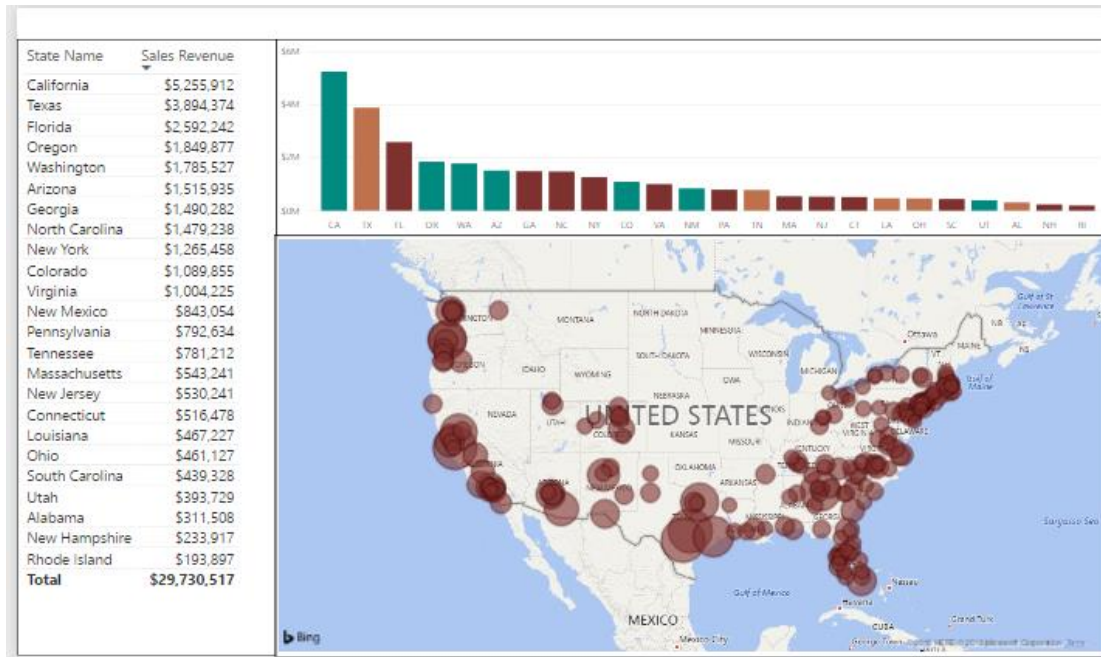
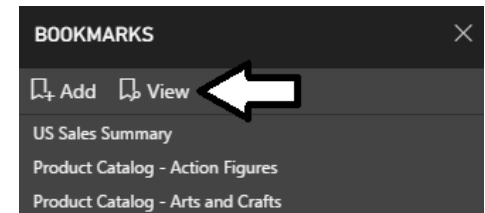
Bookmarks Pane

- Provide ability to create and manage bookmarks



Bookmarks as a Slide Show

- Bookmarks can be viewed as slide show
 - Start slide show by clicking View button
 - Consumer can step through one bookmark at a time



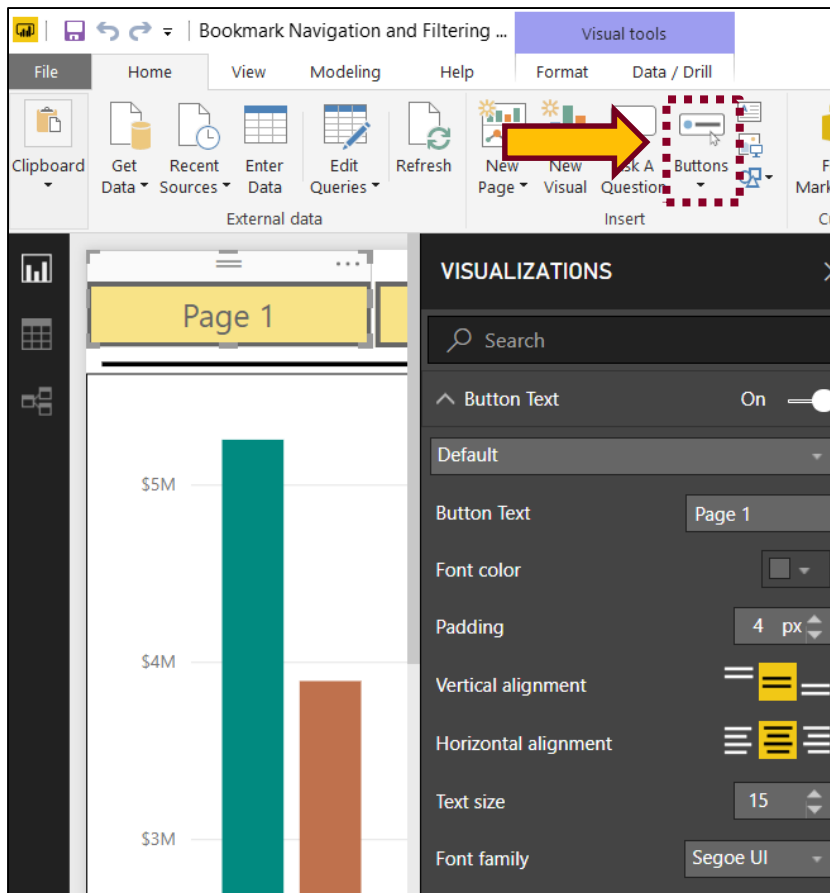
Bookmark 1 of 17

US Sales Summary



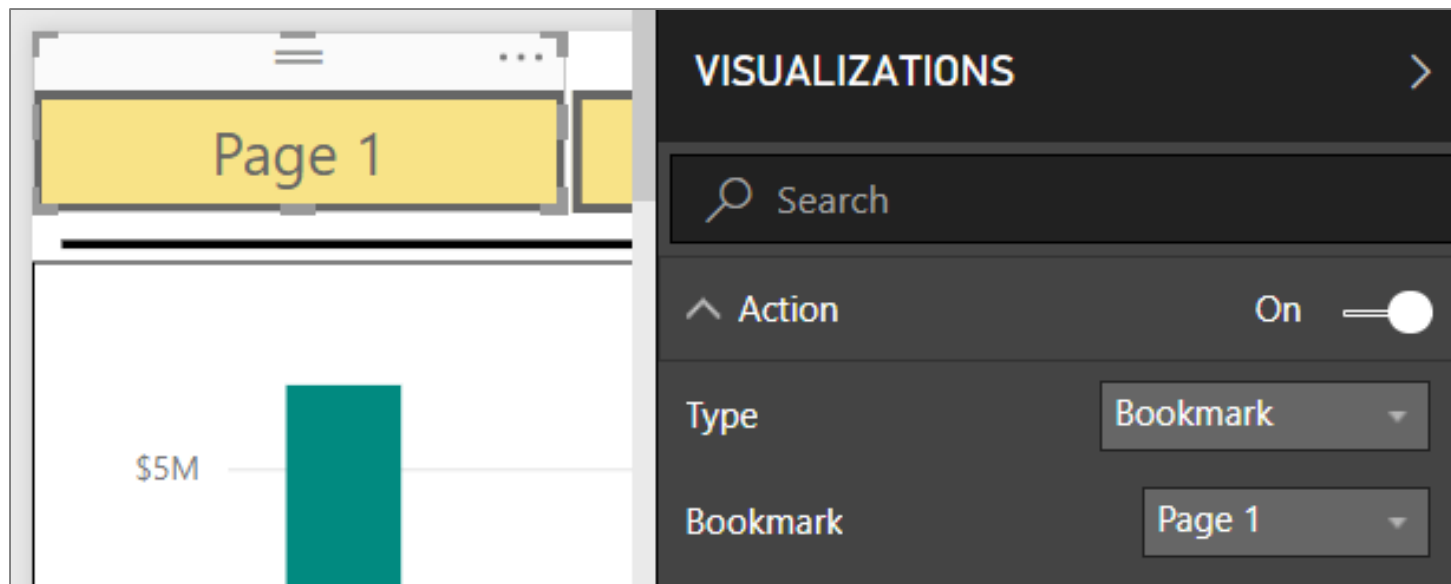
Creating a Button

- Buttons can be added to report pages to apply a bookmark
 - Button can be create with icon and/or text



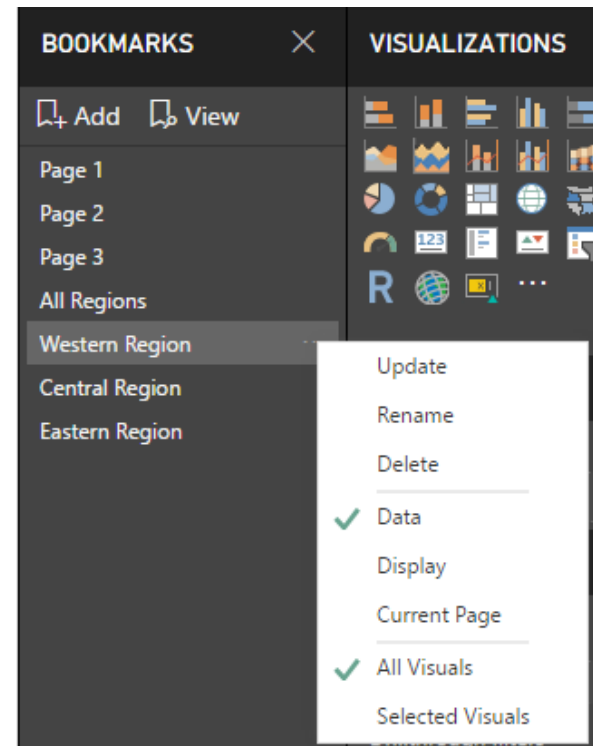
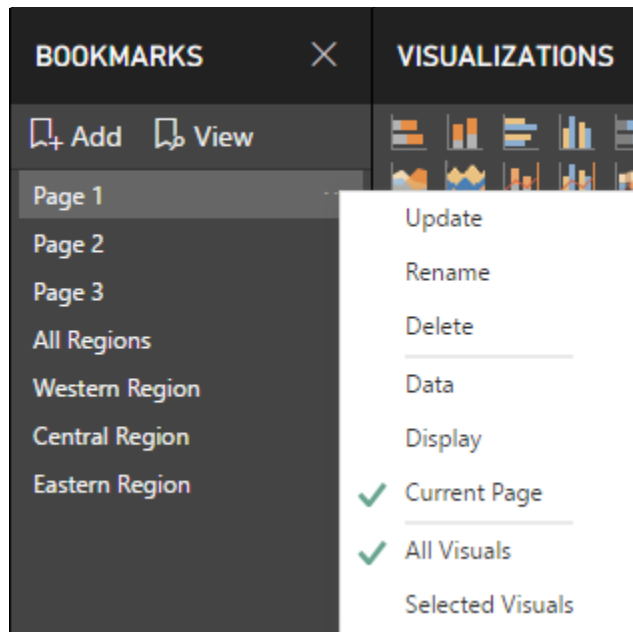
Button Action Used to Apply Bookmark

- Button action can apply a bookmark
 - Button responds to standard click in Power BI Service
 - Button requires CONTROL + click in Power BI Desktop



Bookmarks Types

- Bookmarks can capture or ignore certain types of data
 - Data (filtering and slicers)
 - Display (visible or hidden)
 - Current Page (page navigation)





DEMO

Working with Bookmarks and Drillthrough

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Report Themes

- Report can be styled using report theme
 - Provides consistency across reports for styling and branding
 - Report theme defined using JavaScript Object Notation (JSON)
 - Today report themes must be defined using JSON editor
 - Microsoft plans to release WYSIWYG theme designer later in 2018

```
CPT Demo Report Theme.json  -P X
{
  "name": "CPT Demo Report Theme",
  "background": "#fff8dd",
  "foreground": "#9F1B30",
  "tableAccent": "#fbc737",
  "dataColors": [ "#9F1B30", "#D16B2C", "#FEBF0F", "#fdae61", "#abdda4", "#66c2a5",
    "#3288bd", "#5e4fa2", "#bbbbbb", "#999999", "#666666", "#333333" ],
  "visualStyles": {
    "*": {
      "*": {
        "*": [ {
          "fontSize": 8,
          "fontFamily": "Cambria Math",
          "color": {
            "solid": {
              "color": "#000000"
            }
          }
        }
      ]
    }
  }
}
```





DEMO

Working with Report Themes

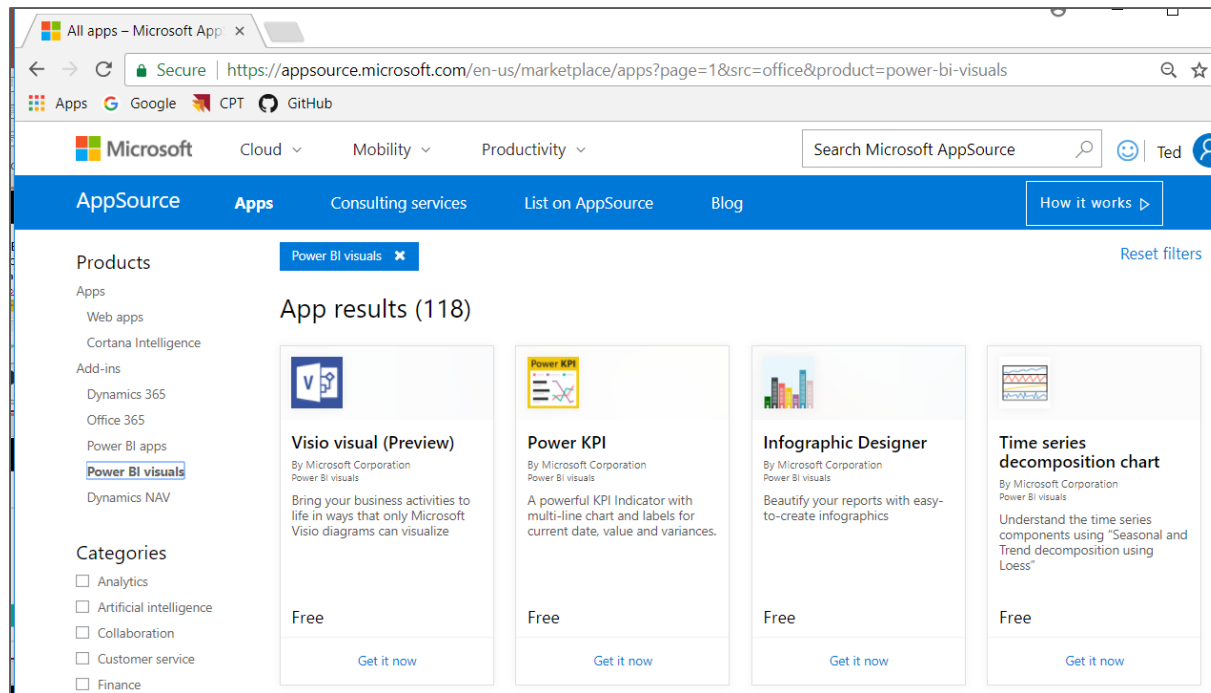
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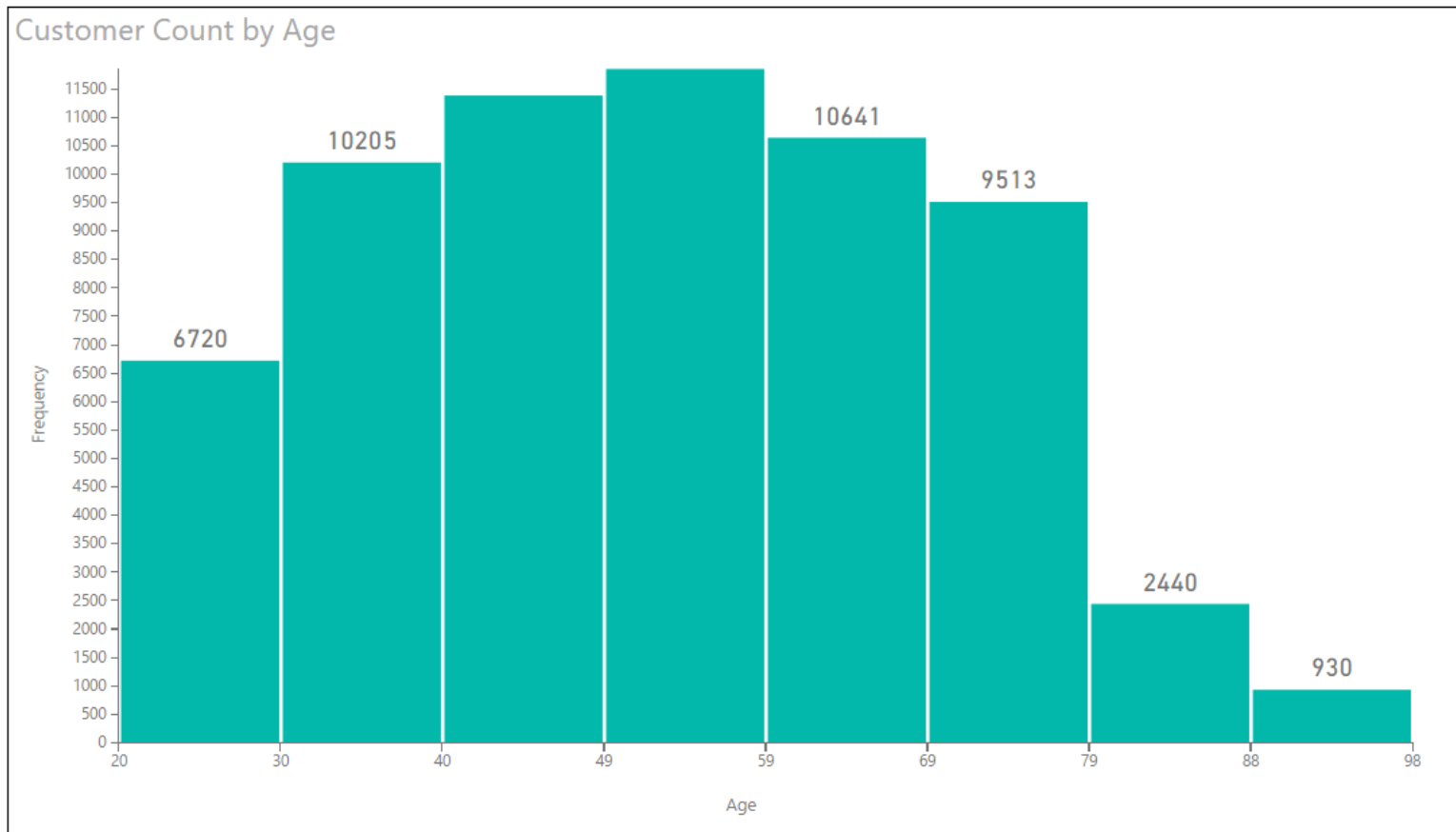
Custom Visuals for Power BI

- Power BI Framework for Visuals is Extensible
 - Developers can extend Power BI with Custom Visuals
 - Microsoft Hosts gallery of custom visuals
 - Gallery located at <https://appsource.microsoft.com>



Histogram

- Custom Visual Example 1



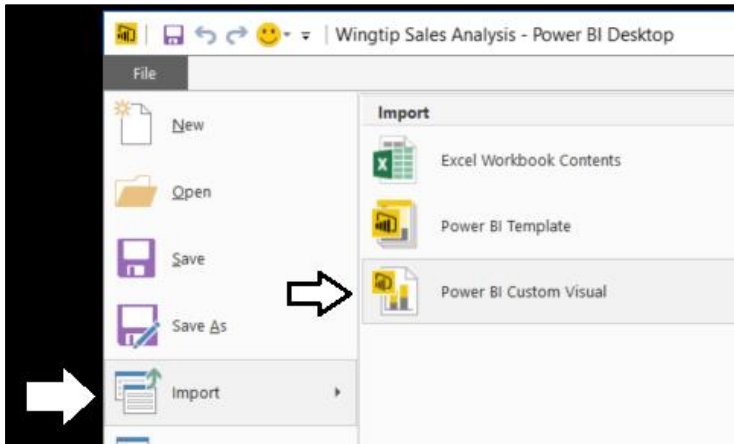
Hierarchy Slicer

■ Custom Visual Example 2

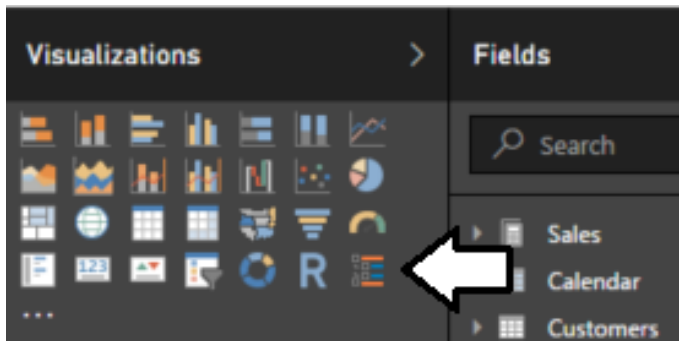


Importing a Custom Visual

- Import custom visual into Power BI Desktop project
 - Execute **Import > Power BI Custom Visual** menu command



- After import, Custom Visual appears in **Visualizations** list



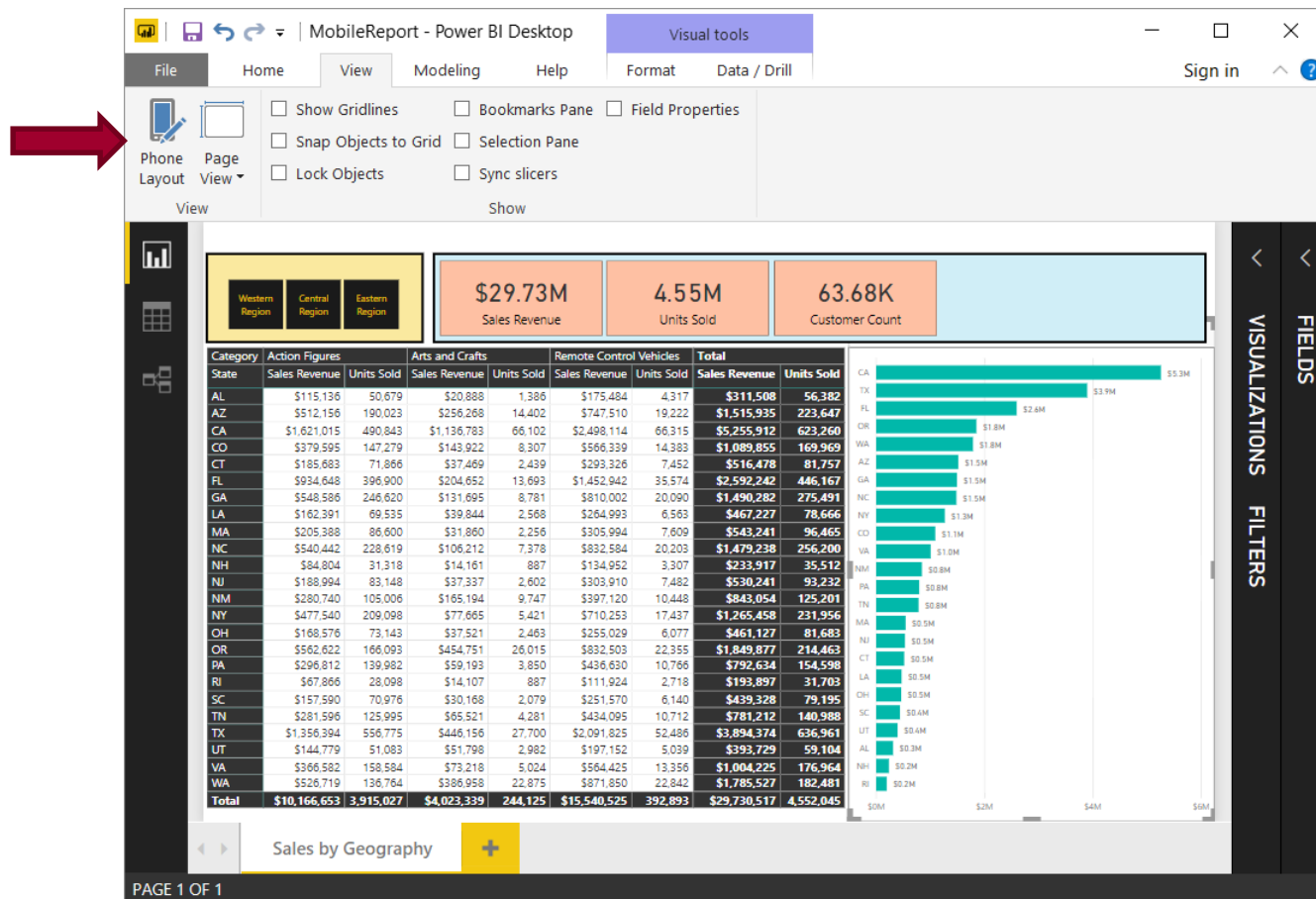
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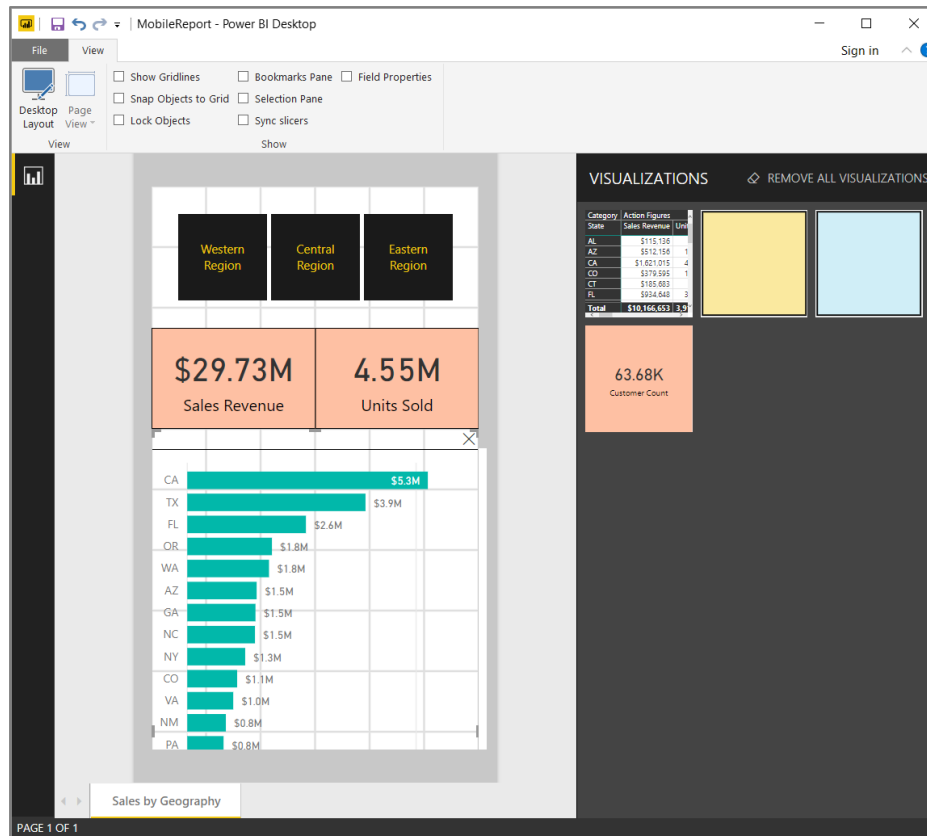
Designing Reports for Mobile Devices

- Many reports will not render properly on mobile devices
 - Phone Layout used to create separate version for mobile devices



Designing a Phone Layout

- Phone layout view allows you to select specific visuals
 - Only include report visuals that render correctly on mobile devices
 - You position visuals according to form factor of mobile device



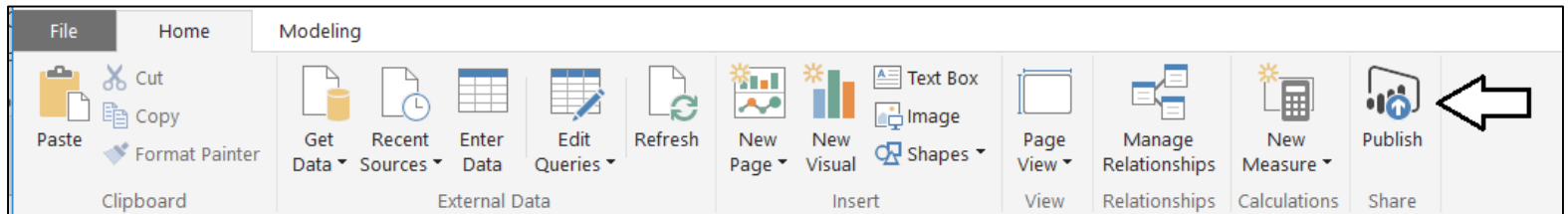
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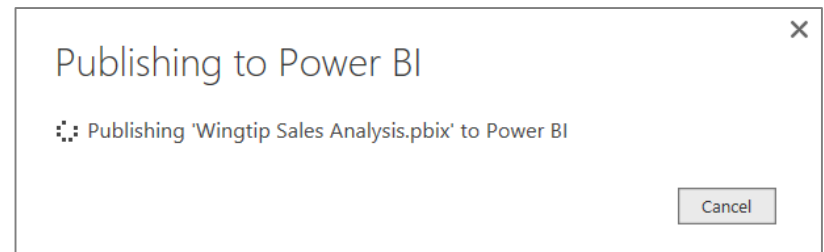
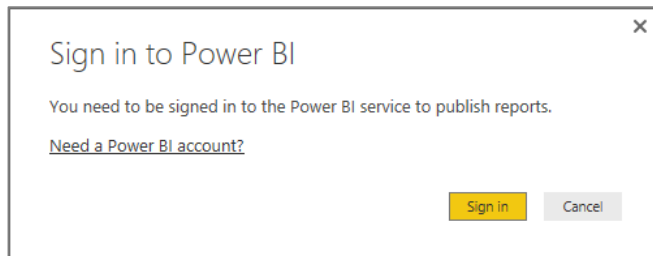


Publishing a Power BI Desktop Project

- Power BI Desktop provides **Publish** command
 - Used to publish project to Power BI service



- Requires logging into your Office 365 account

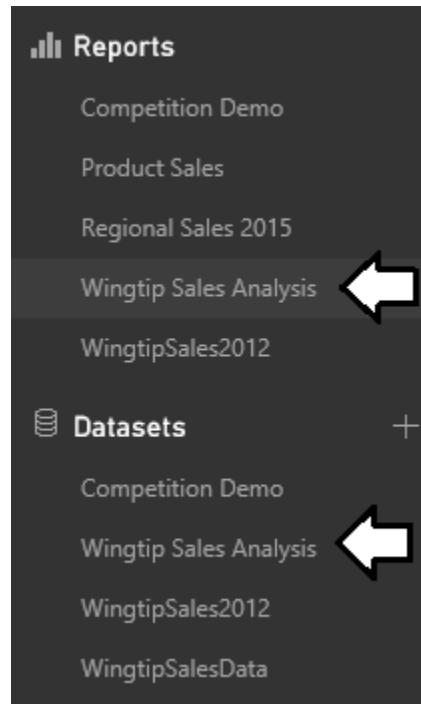


- Published articles added to a specific workspace



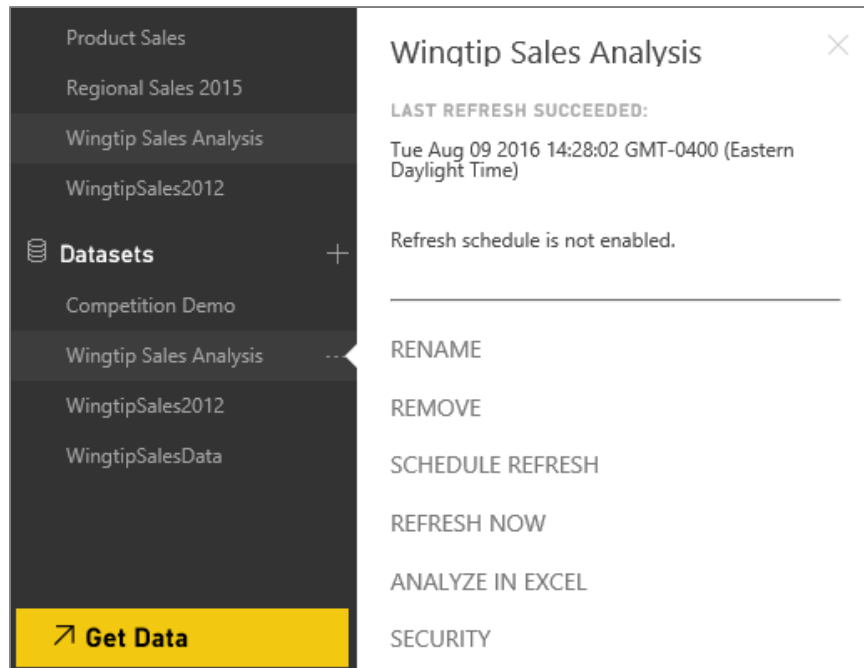
Examining What's Been Published

- What does project publishing add to workspace?
 - One dataset with same name as project
 - One report with same name as project



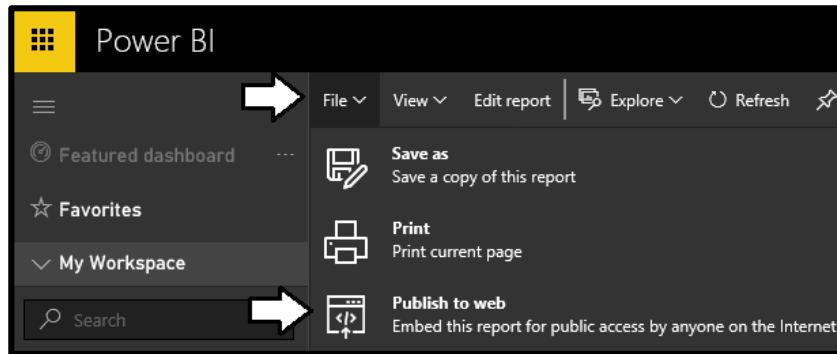
Dataset Configuration

- You can configure Dataset after its been published
 - Configure data source credentials
 - Configure refresh schedule
 - Configure Row-level Security

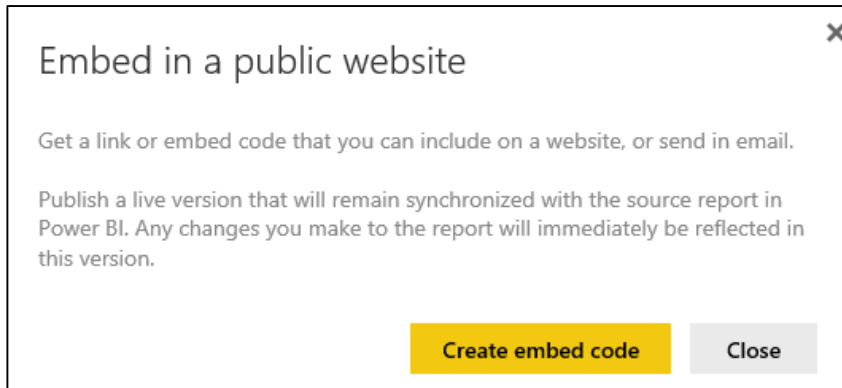


Publish to Web

- **Publish to Web** command available on reports
 - Not supported for reports and datasets which implement RLS



- **Publish to Web** command used to generate embed codes



Generating Embed Codes

- Used to provide anonymous access to report
 - Provide link which can be posted, emailed or texted
 - Provides **iFrame** HTML element for embedding in public web site

Success! ✕

Link you can send in email

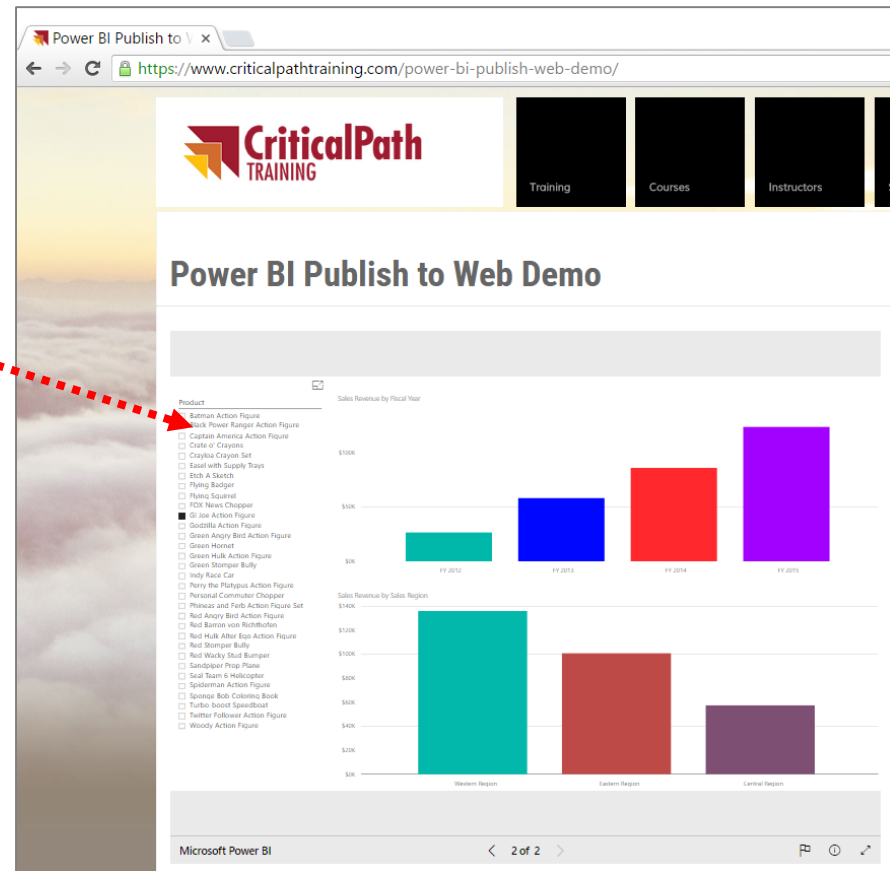
<https://app.powerbi.com/view?r=eyJrIjojYTM3YjlkNzctNWY5My00YTUyLl>

Html you can paste into your blog or website

`<iframe width="933" height="700" src="https://app.powerbi.com/view?r=eyJrIjojYTM3YjlkNzctNWY5My00YTUyLl" />`

Size

Close





DEMO

Using the Publish to Web and Publish to SharePoint Features

Summary

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