

# Designing Interactive Reports in Power BI Desktop



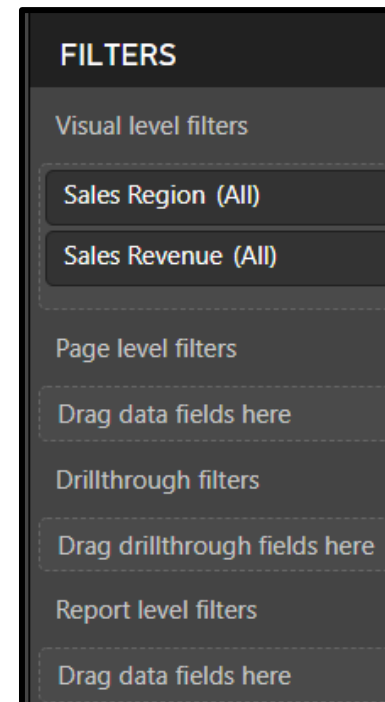
# Agenda

- Working with the Report Designer
  - Designing Interactive Reports using Slicers
  - Using Conditional Formatting
  - Designing Reports using Bookmarks
  - Importing Custom Visuals
  - Using Custom Report Themes
  - Publishing Power BI Reports
  - Creating Reports from Shared Datasets



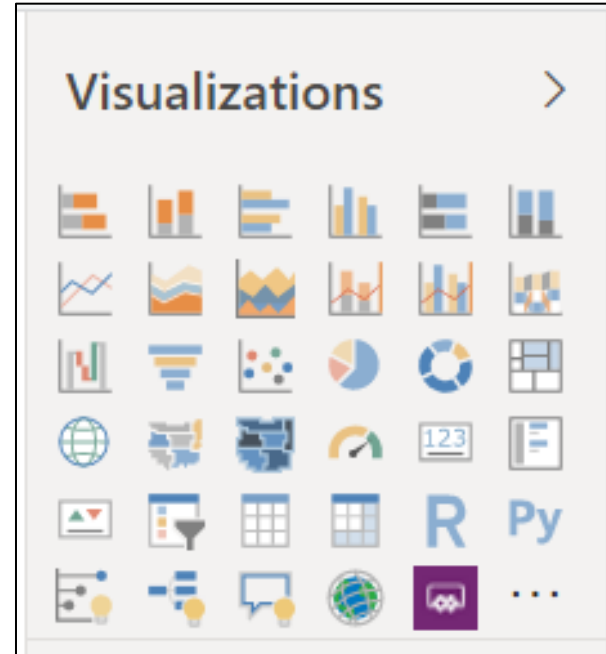
# Creating Reports

- 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

- Bar charts and Column charts
- Line chart and Area chart
- Scatter chart and Combo charts
- Ribbon chart
- Waterfall chart
- Funnel chart
- Pie charts and Doughnut chart
- Treemap
- Map, Filled Map and Shape map
- Gauge
- Card and Multi-row Card
- Slicer
- Table and Matrix
- R script visual
- Python script visual
- Key influencers
- Decomposition Tree
- Q&A
- PowerApps for Power BI



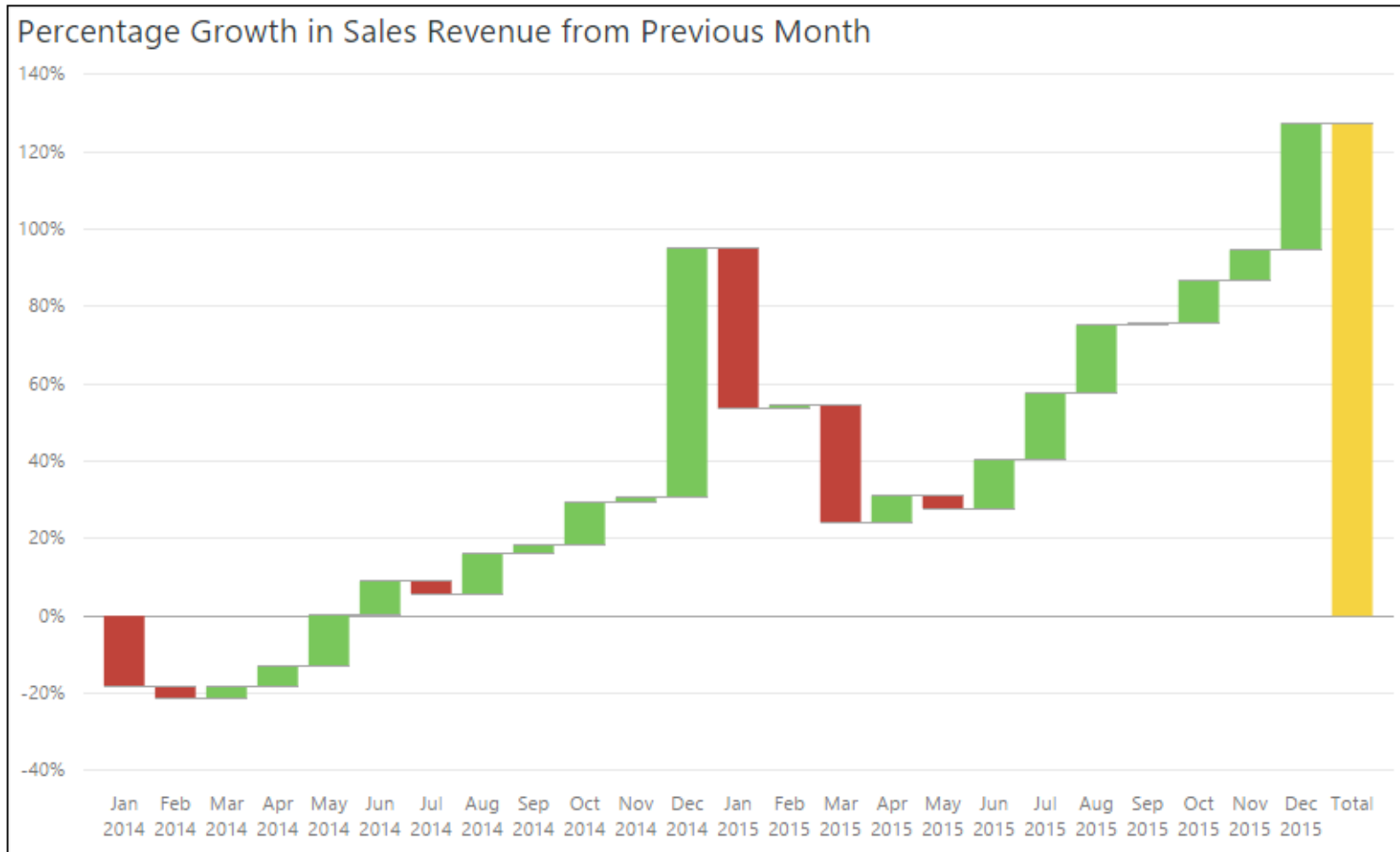
# Example Visual 1: Funnel

- Visualizes distribution across categories as percentage of top value



# Example Visual 2: Waterfall

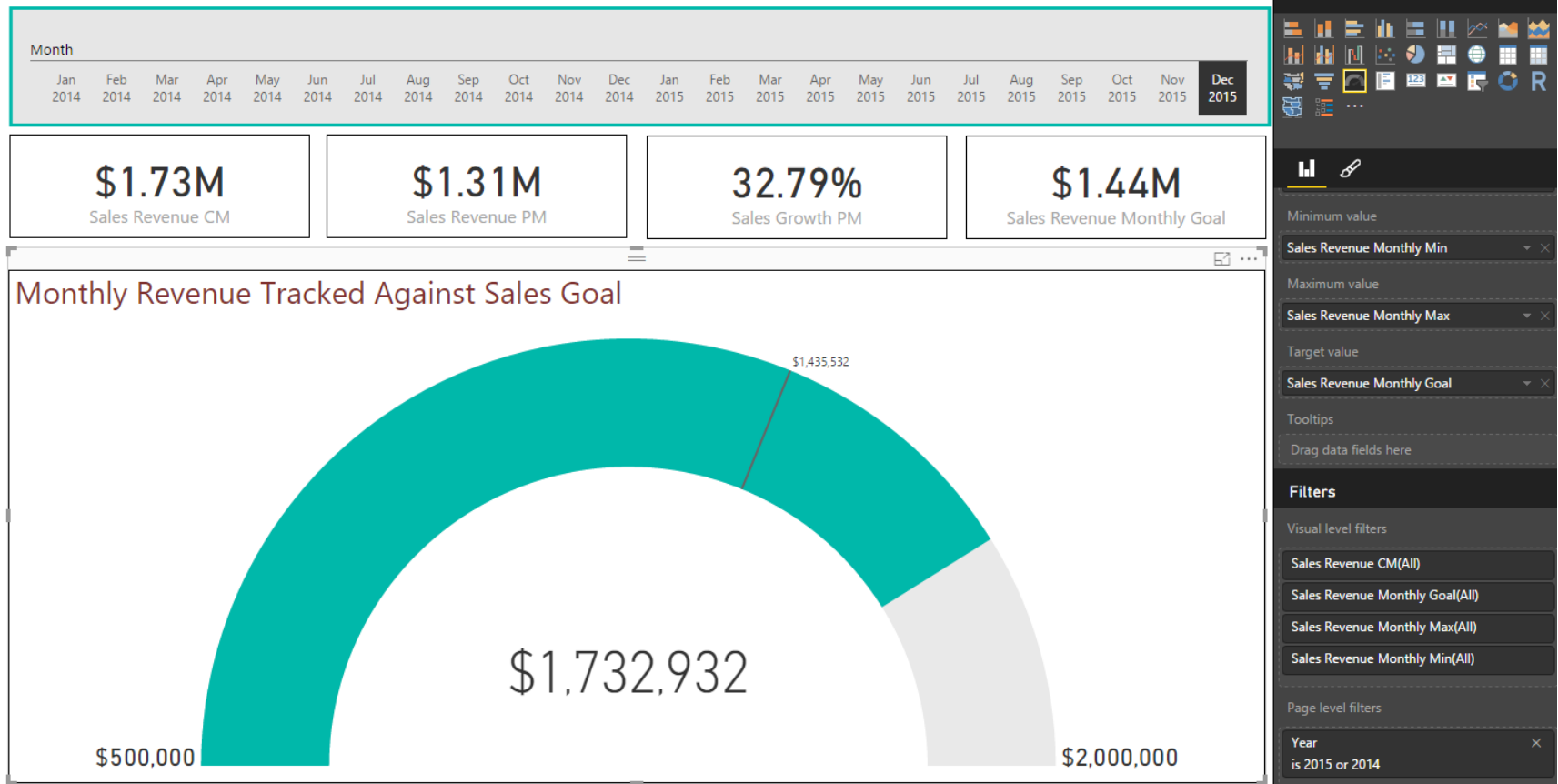
- Visualizes series-based data with positive and negative values



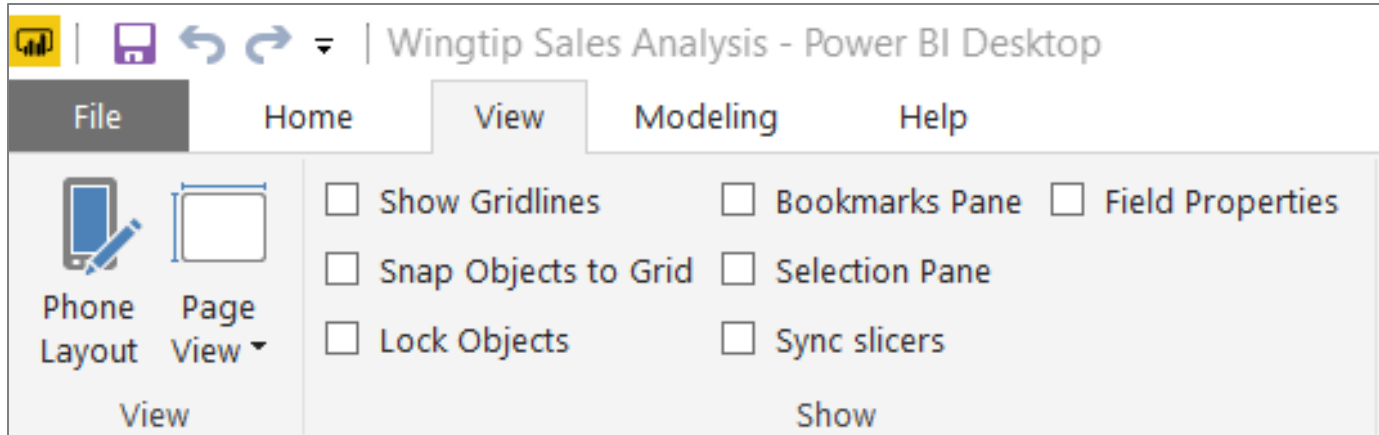


# Example Visual 3: Gauge Visual

- Visualizes how measured value is tracking against goal or budget



# Report Designer Modes and Panes



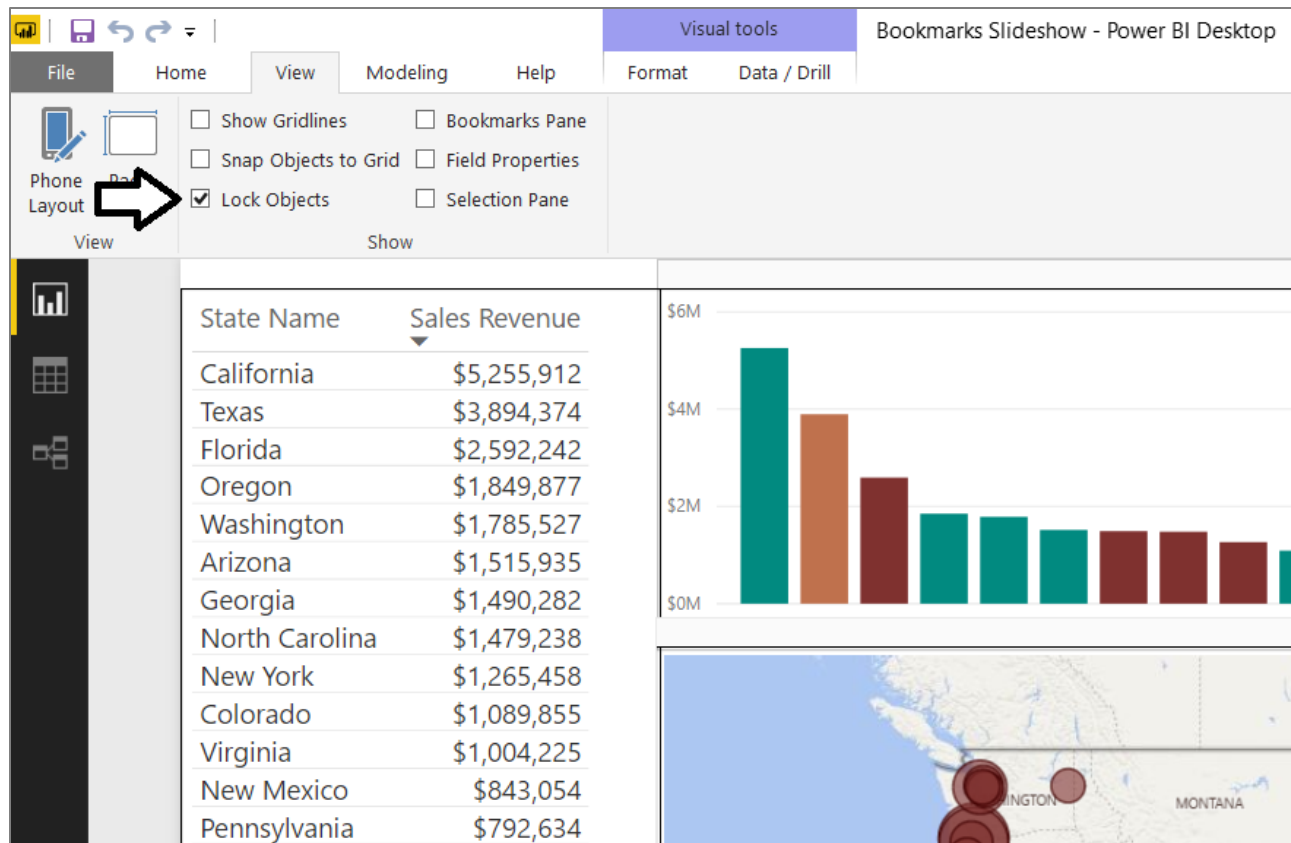
- **Show Gridlines** mode adds visual guides to report
- **Snap Objects to Grid** mode helps with object placement
- **Lock Objects** mode used to prevent accidental moving
- **Bookmarks Pane** used to create and manage bookmarks
- **Selection Pane** used to select, order, hide & show visuals
- **Sync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





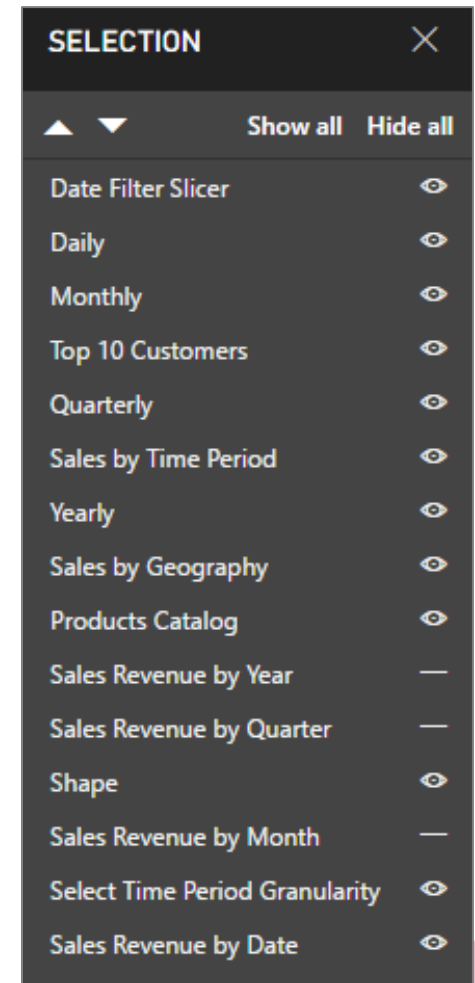
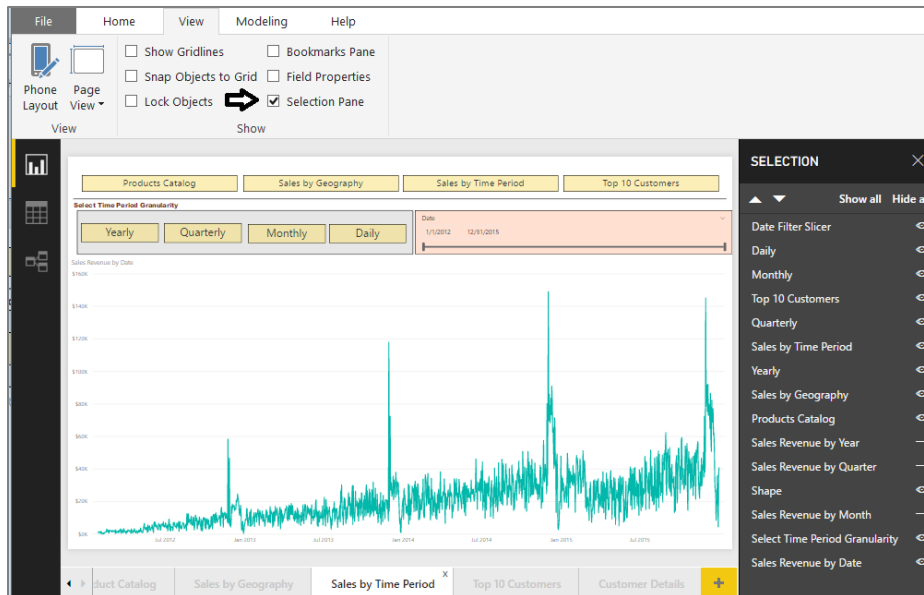
# Lock Objects Mode

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



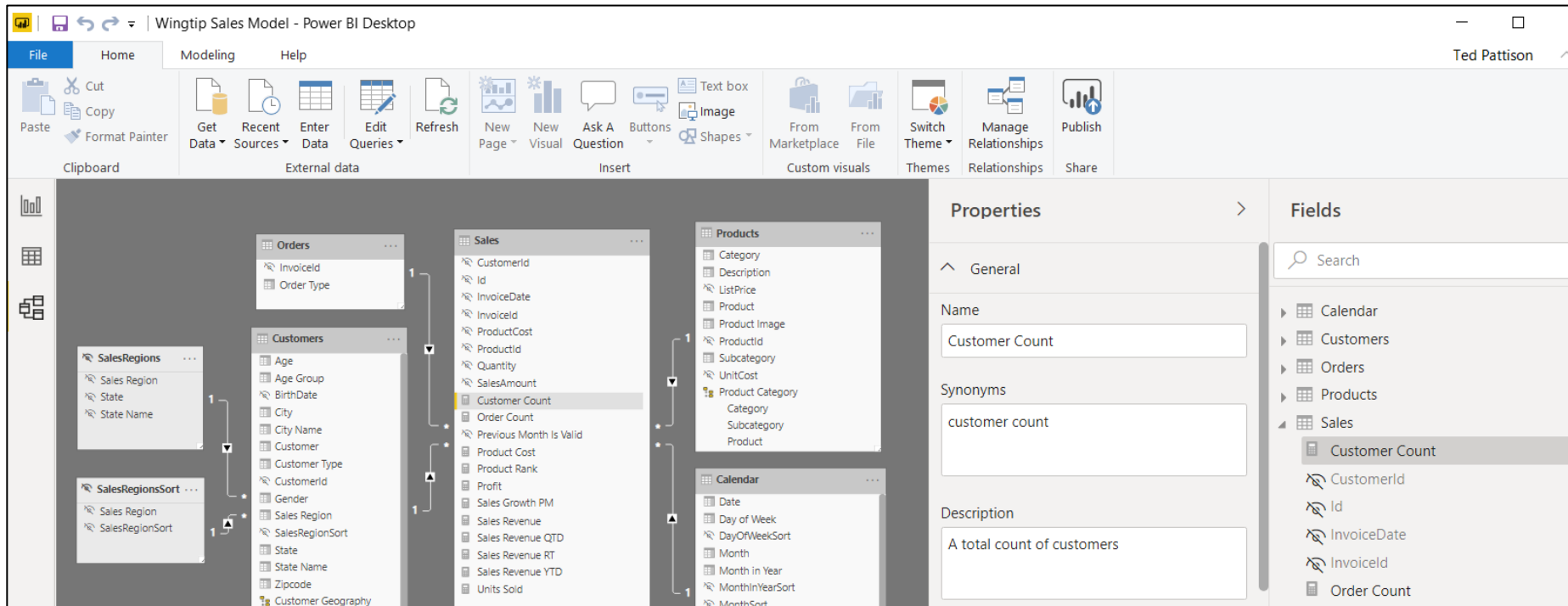
# Selection Pane

- 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



# Field Properties Pane

- Allows data model author to add table and field description
- Using the Fields Properties pane
  1. Navigate to Model view
  2. Select a table or field
  3. Edit property values



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# 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

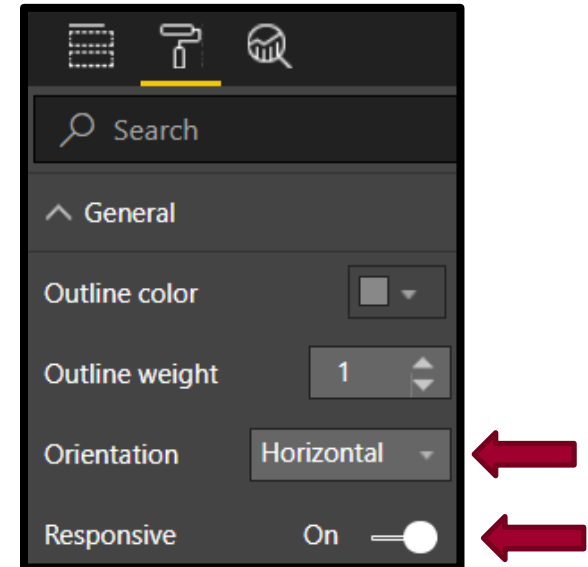
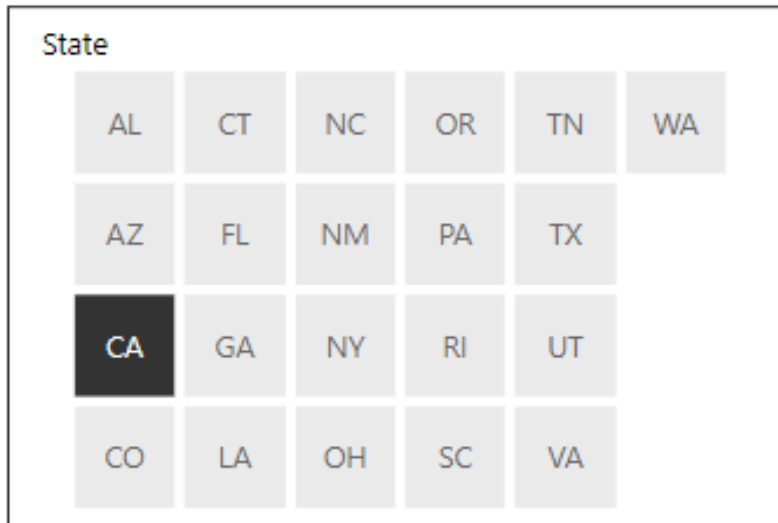
State Name

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





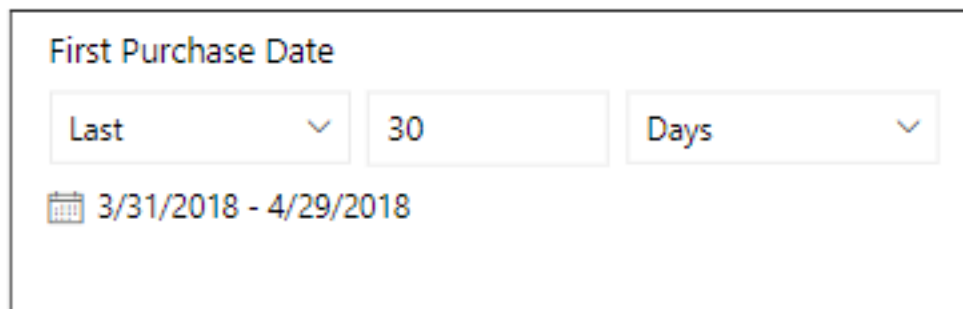
# Slicers with Date Fields

- 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)

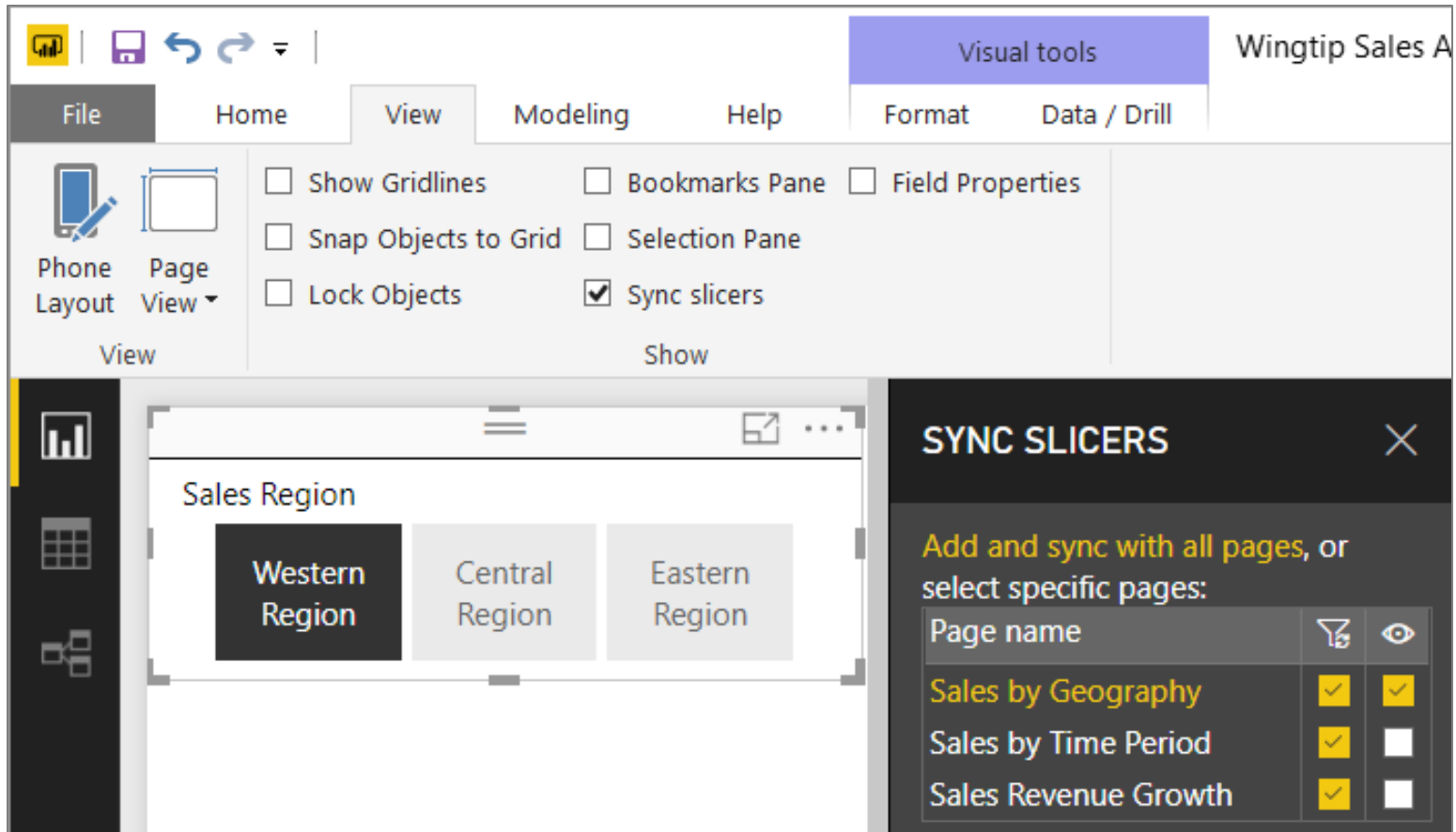


The image shows a date slicer interface in 'Relative' mode. The title 'First Purchase Date' is at the top. Below it are three input fields: a dropdown menu showing 'Last', a text box containing '30', and another dropdown menu showing 'Days'. Below these fields, there is a calendar icon followed by the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



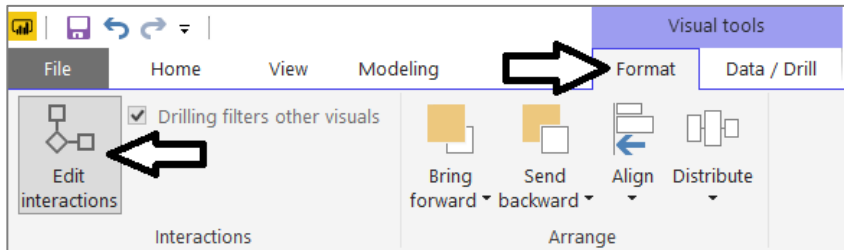
# Slicer Sync

- Slicer visual & filtering can be synchronized across pages

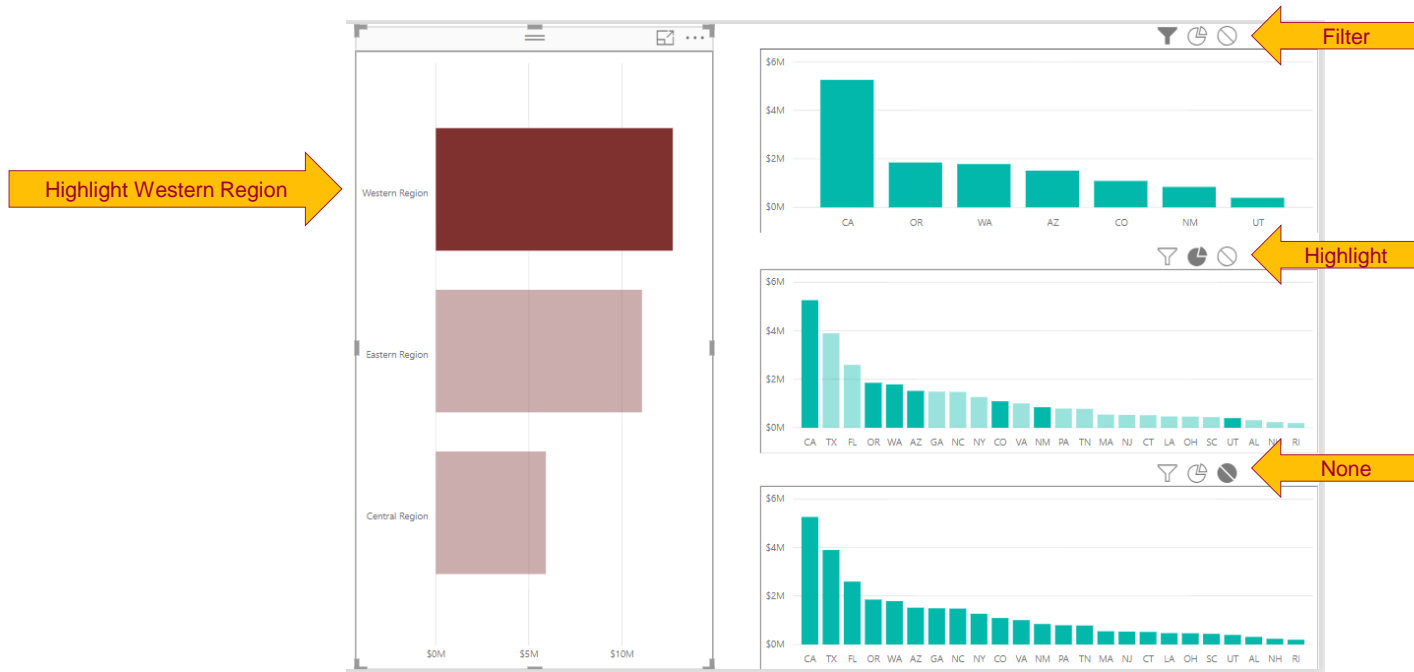


# Edit Highlight Interactions Across Visuals

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

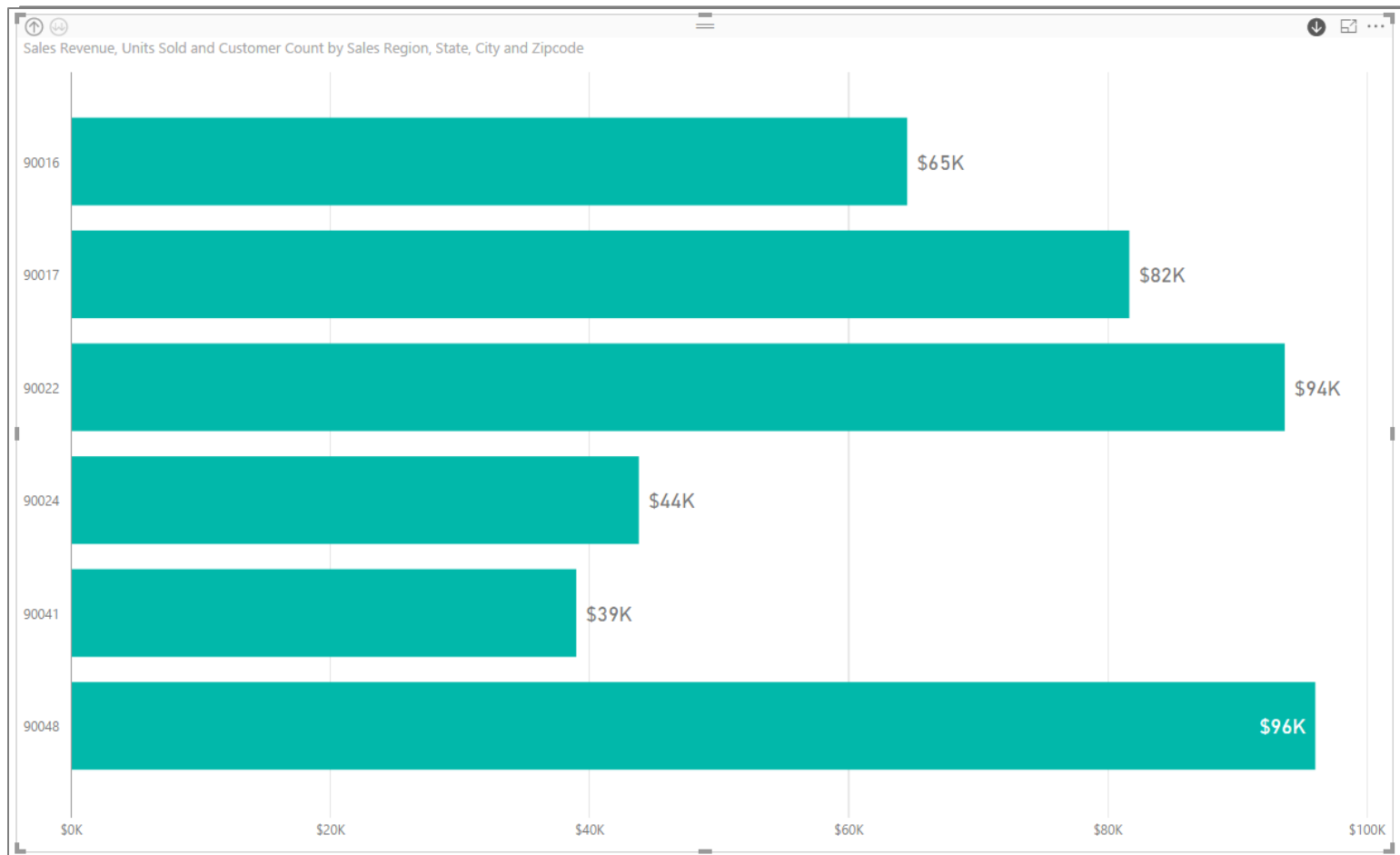


- Select a visual and then configure interactions with other visuals



# User Interaction using Drill Actions

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





**DEMO**

## Creating Drillthrough Pages



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# Using Conditional Formatting



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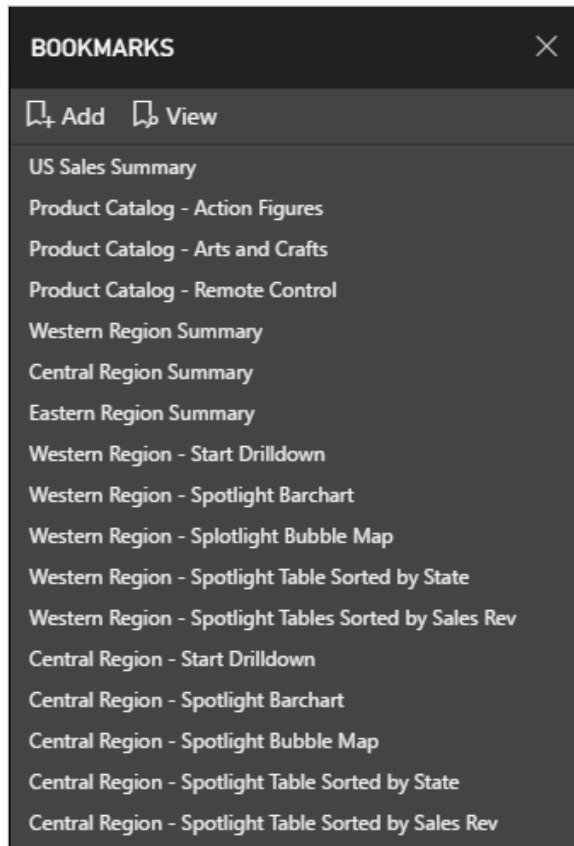
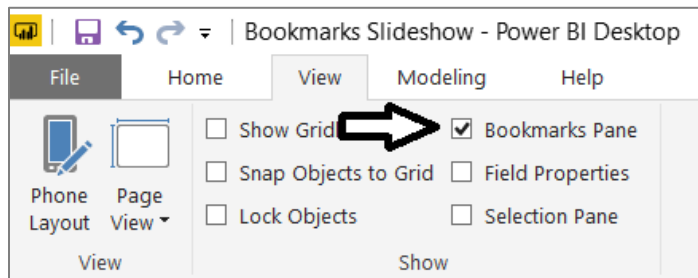
# What are Bookmarks

- 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



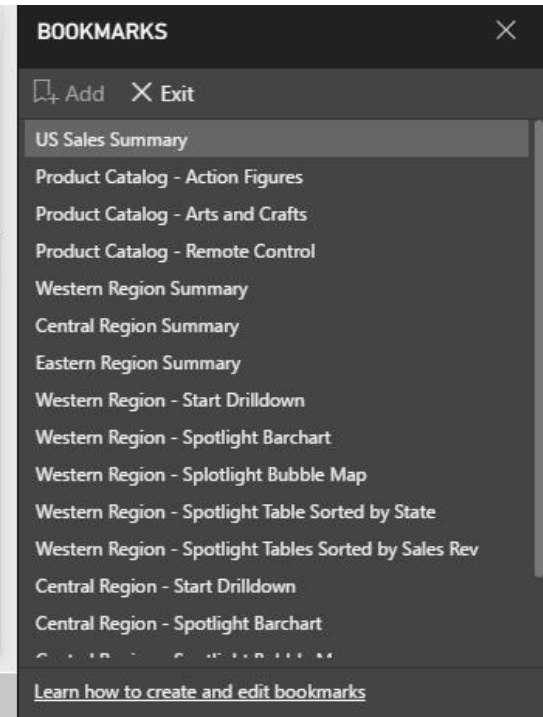
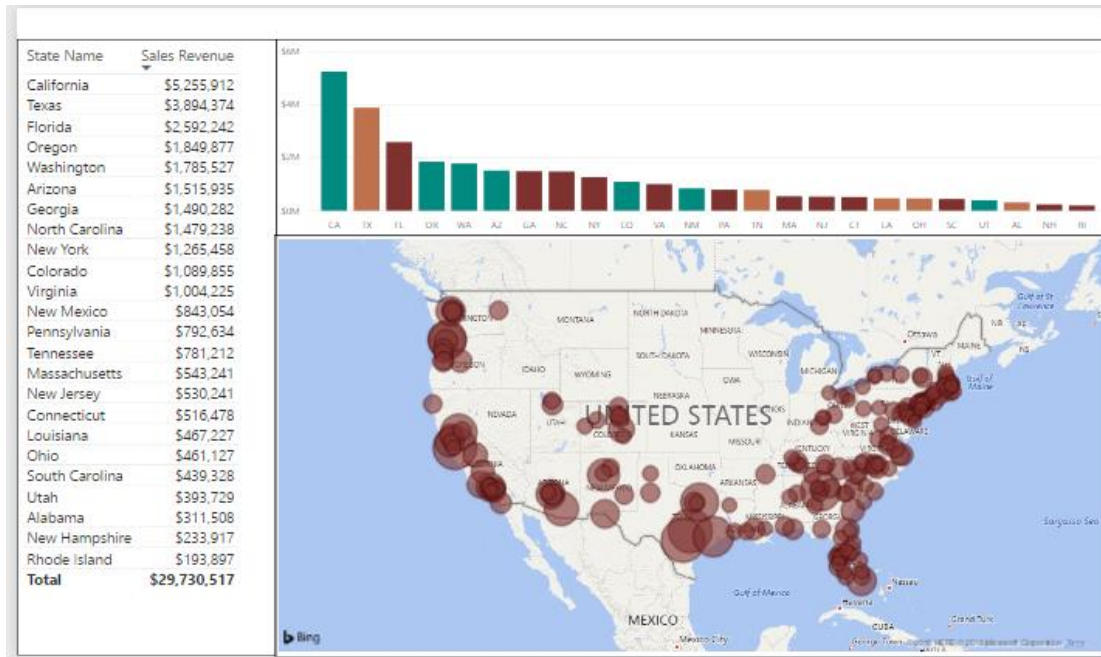
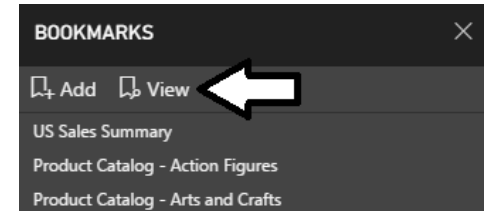
# Bookmarks Pane

- 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



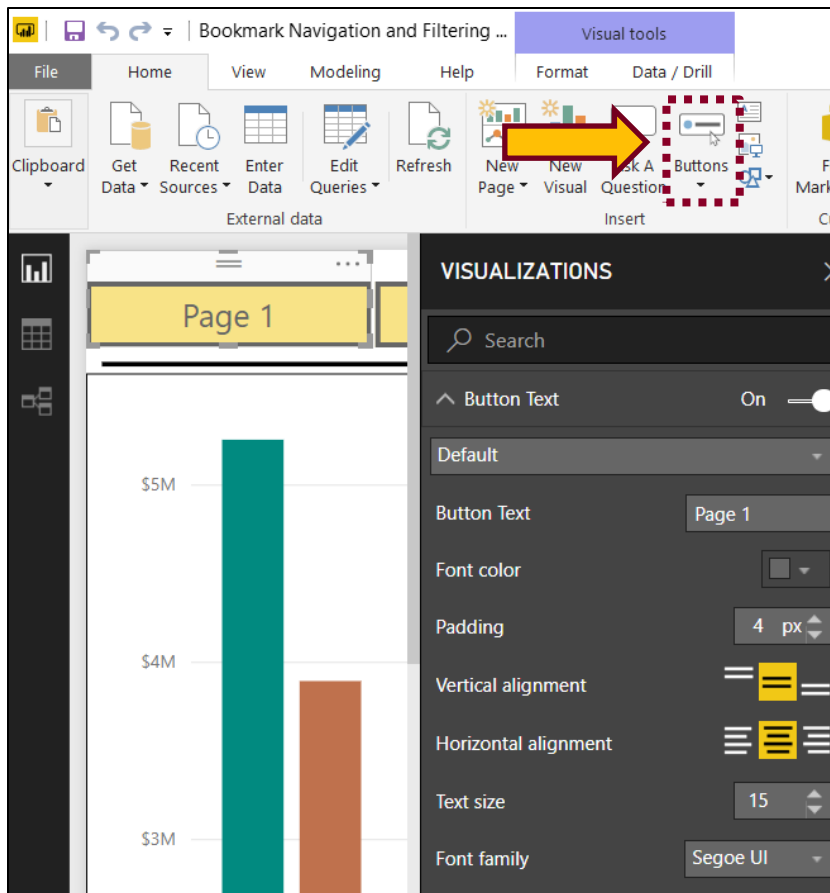
Bookmark 1 of 17

US Sales Summary



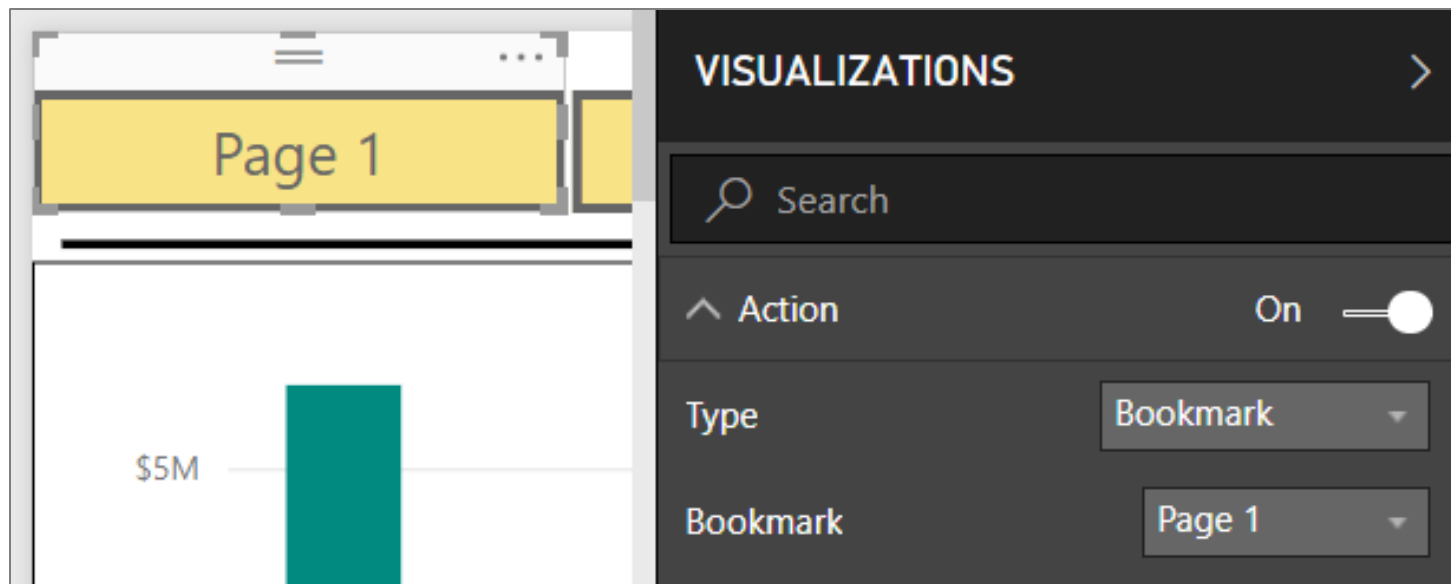
# Creating a Button

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



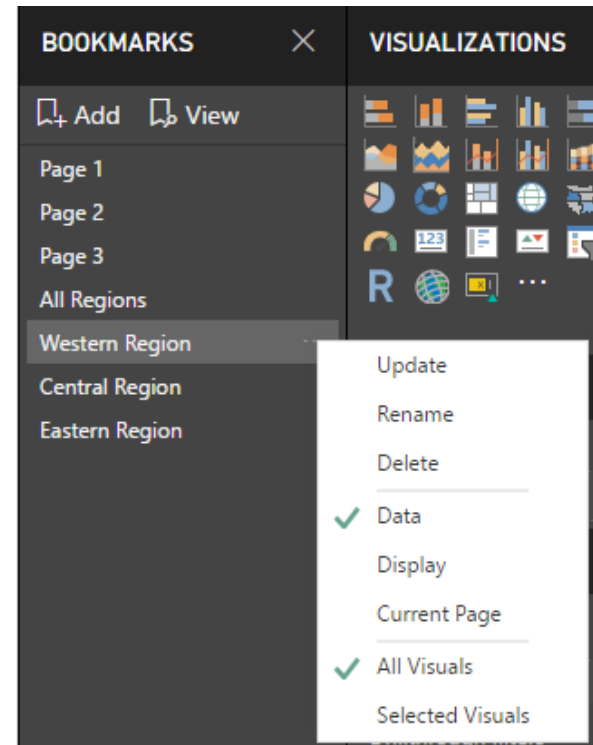
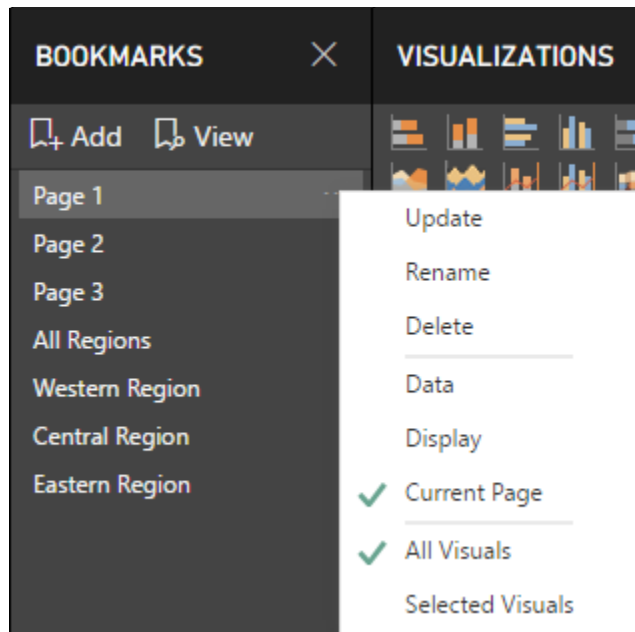
# Button Action Used to Apply Bookmark

- 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)







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# Designing Reports using Bookmarks

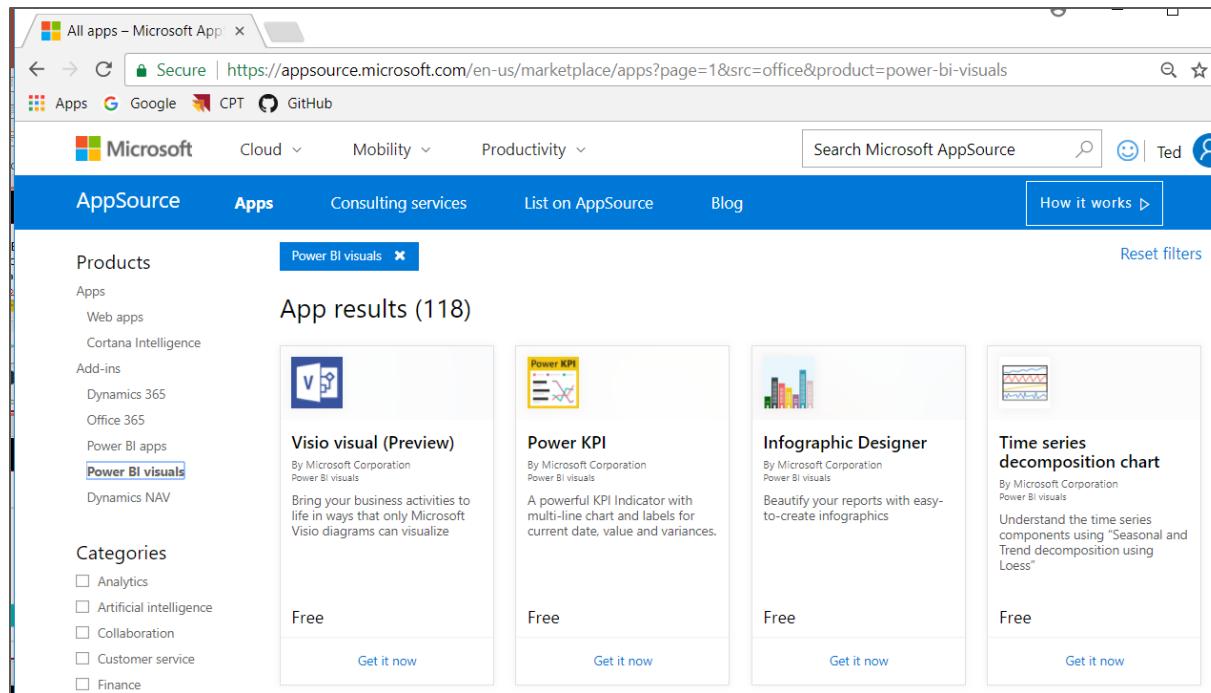
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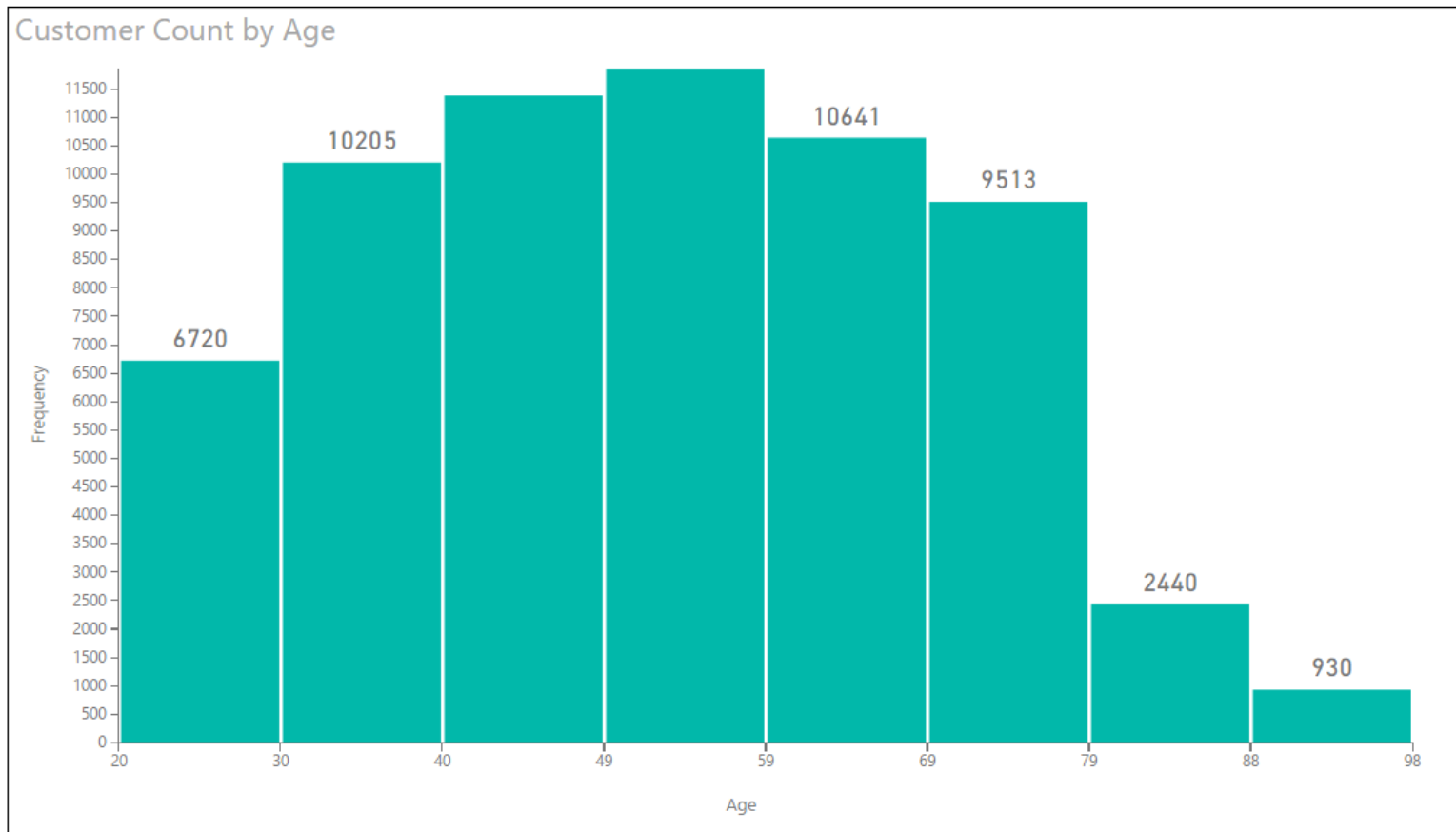
# Custom Visuals for Power BI

- 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





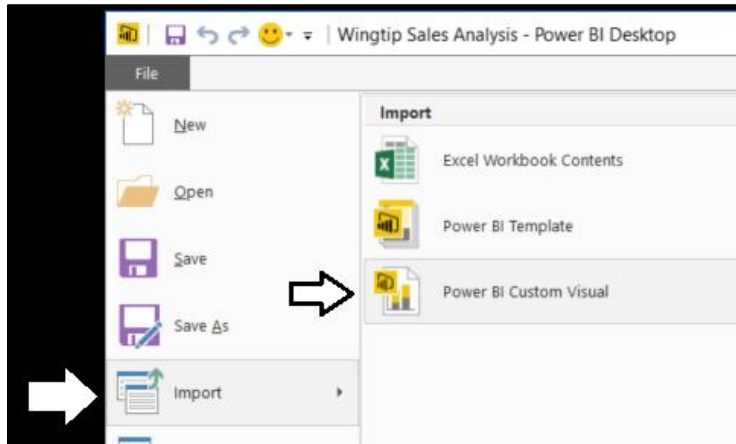
# Hierarchy Slicer

## ■ Custom Visual Example 2

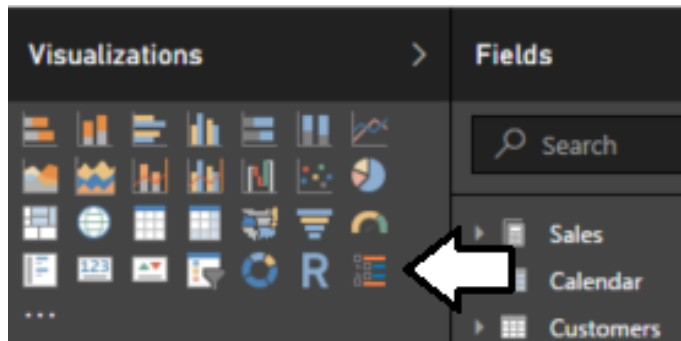


# Importing a Custom Visual

- 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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# 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

# Agenda

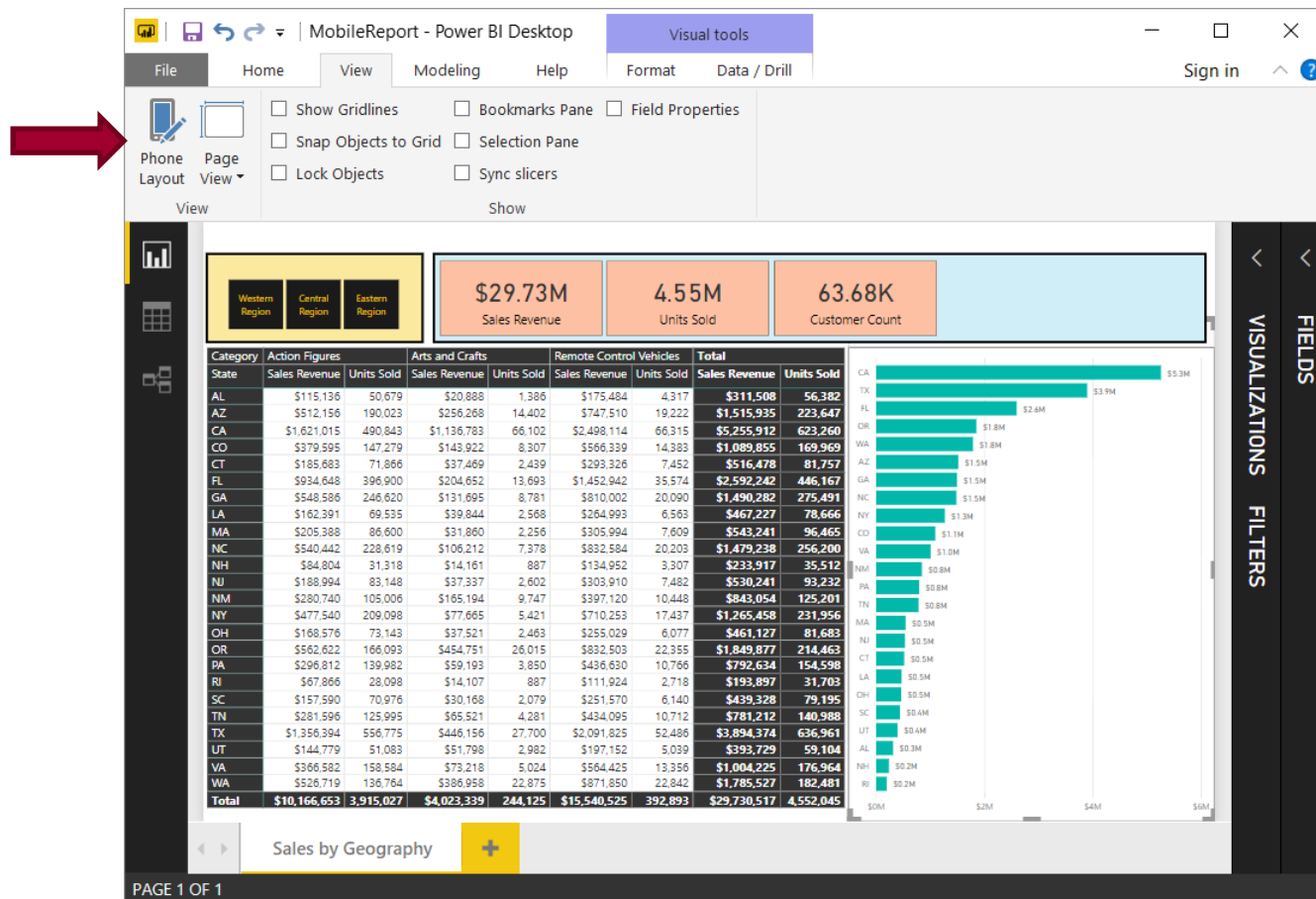
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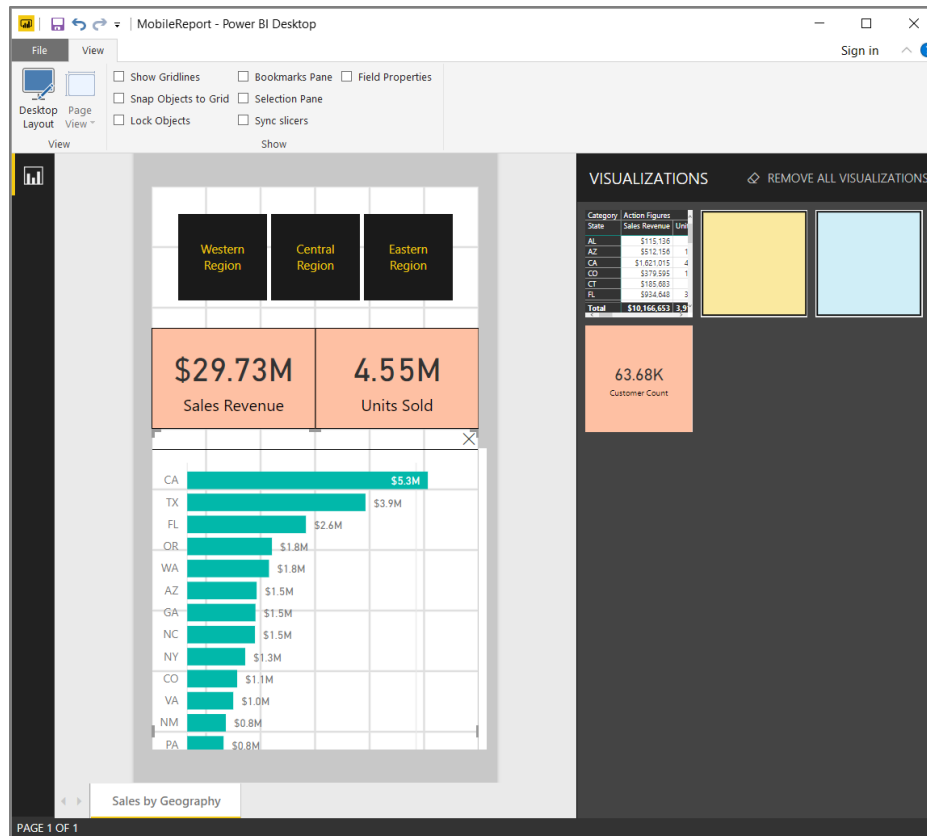
# Designing Reports for Mobile Devices

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



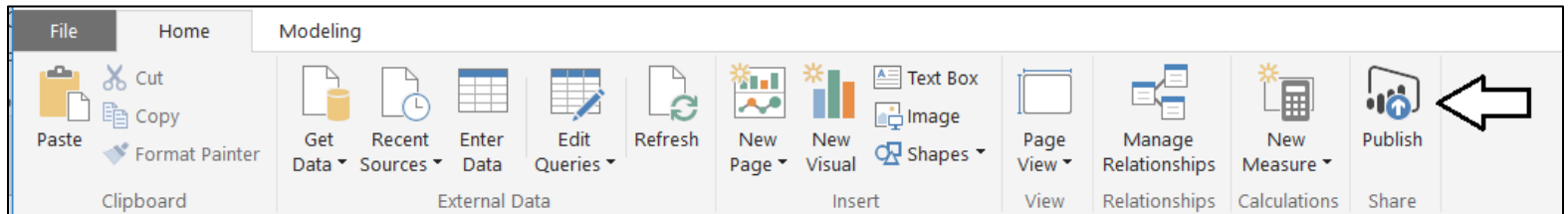
# Designing a Phone Layout

- 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

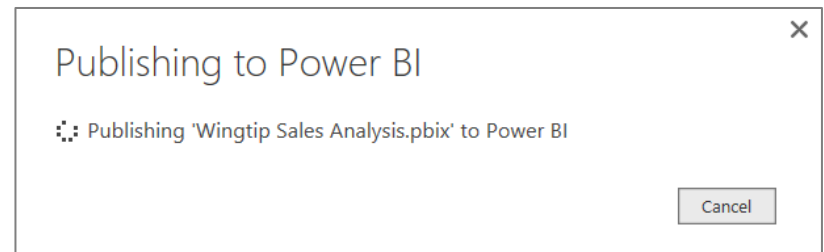
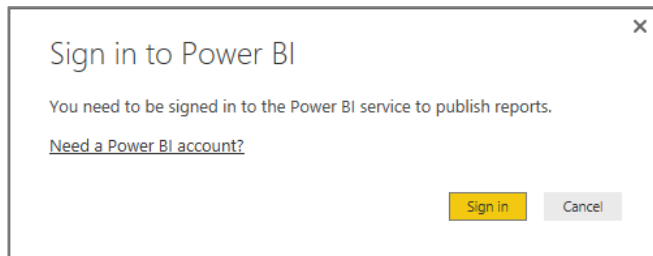


# Publishing a Power BI Desktop Project

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



- Requires logging into your Office 365 account

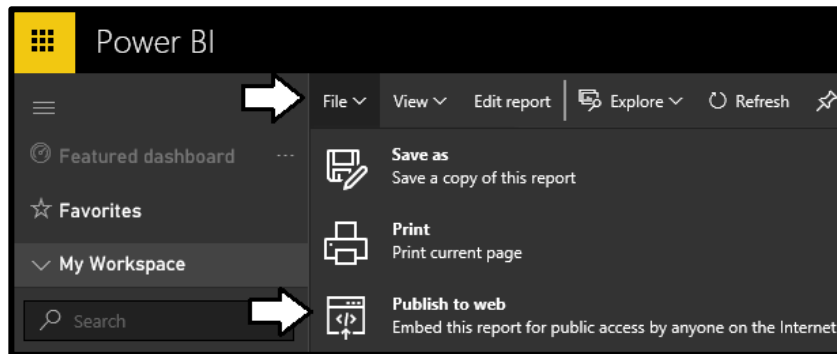


- Published articles added to a specific workspace

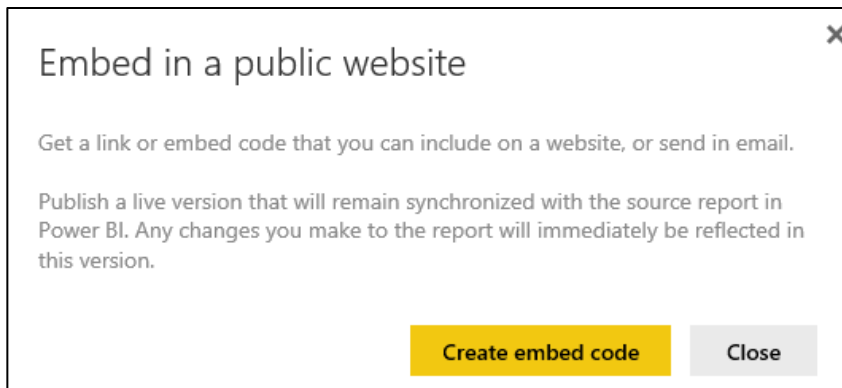


# Publish to Web

- **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

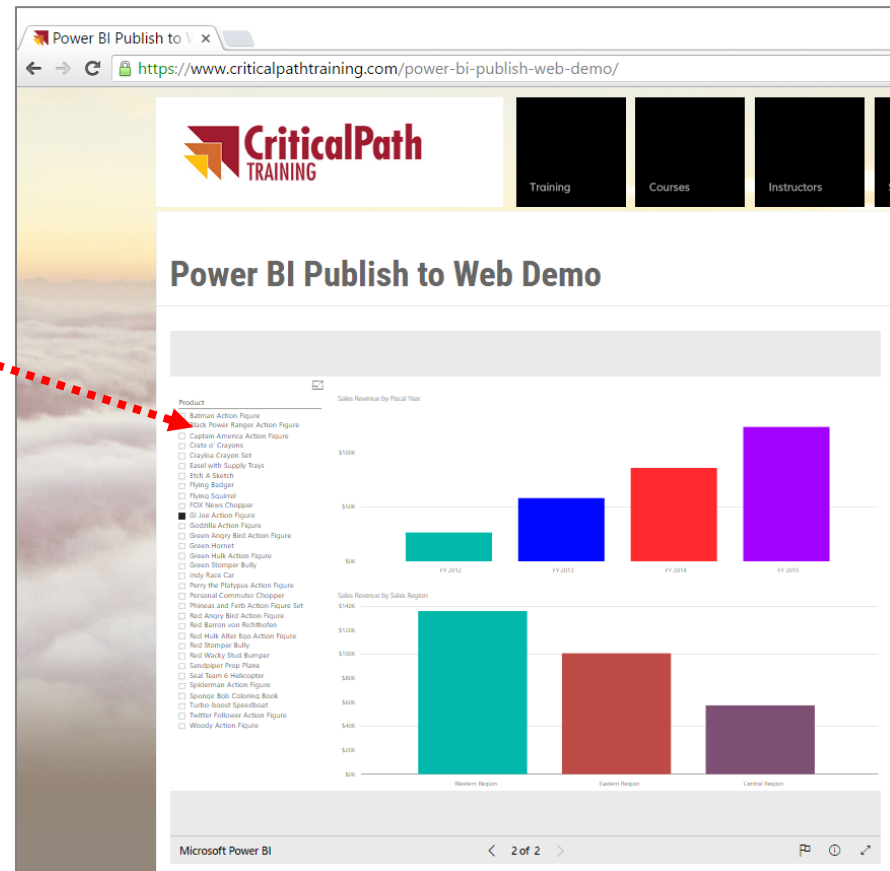
<https://app.powerbi.com/view?r=eyJrIjojYTU3YjlkNzctNWY5My00YTUyLl>

Html you can paste into your blog or website

`<iframe width="933" height="700" src="https://app.powerbi.com/view?r=eyJrIjojYTU3YjlkNzctNWY5My00YTUyLl" />`

Size

Close







**DEMO**

## **Using the Publish to Web and Publish to SharePoint Features**

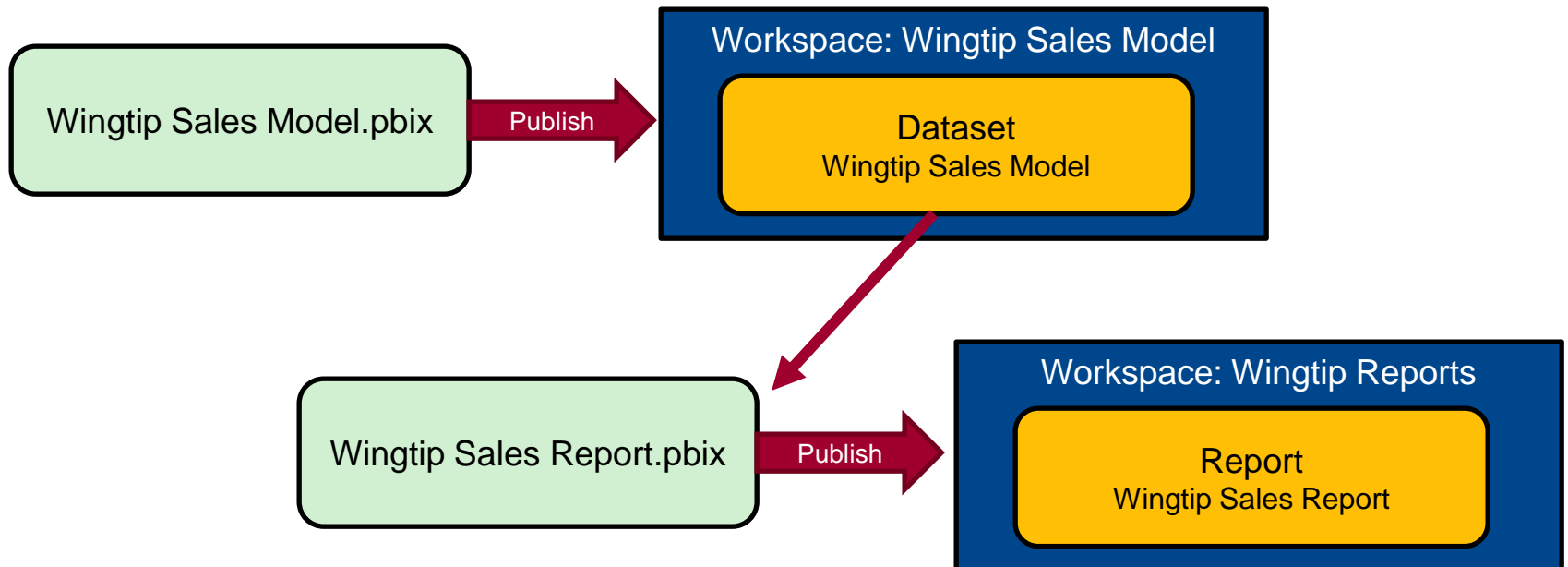
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# Creating Reports using Shared Datasets

- Datasets can be shared across workspaces
  - Makes it possible to separate datasets from reports
  - One team can build and publish datasets
  - Other teams can build reports on those datasets







**DEMO**

# **Creating a Power BI Report using a Shared Datasets**

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