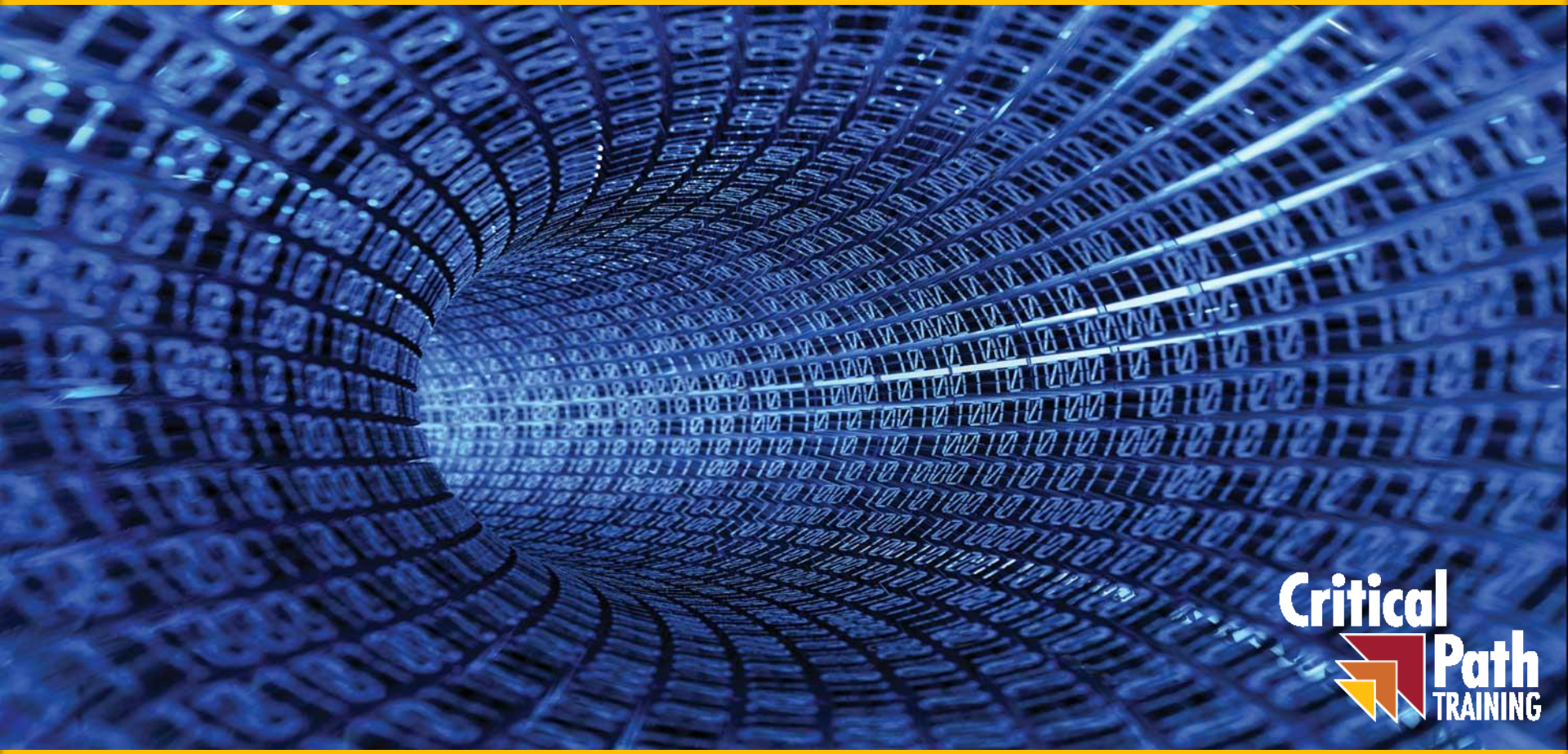
Designing Dashboards in the Power BI Service

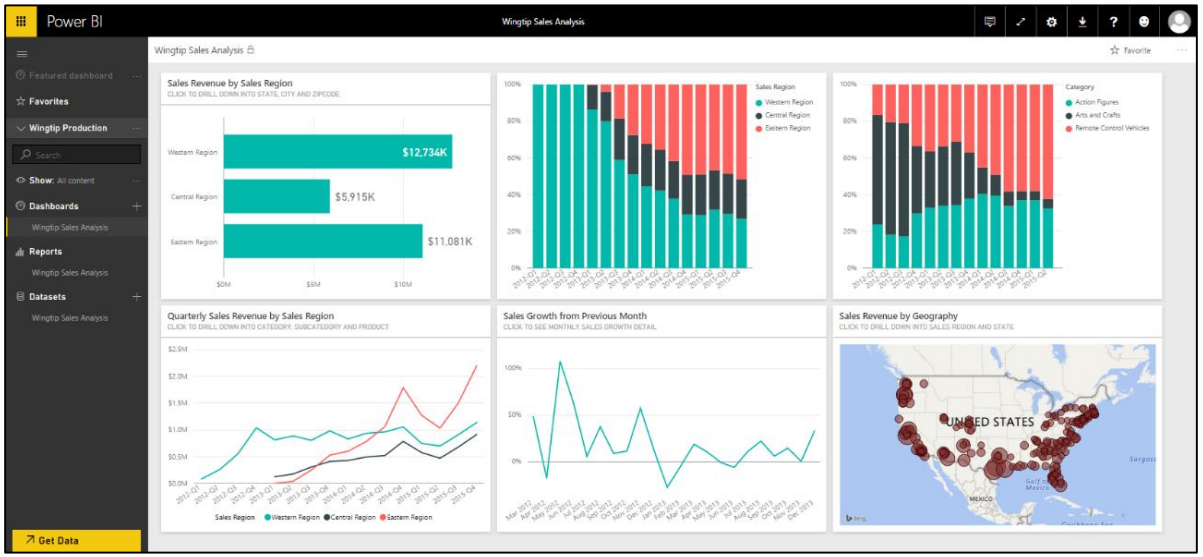


Agenda

- Understanding How Dashboards Differ from Reports
- Working with Natural Language Queries
- Configuring Data Alerts on Dashboard Tiles
- Sharing Dashboards with Other Users
- Designing Real-time Dashboards
- Understanding Streaming vs Push vs Hybrid Datasets

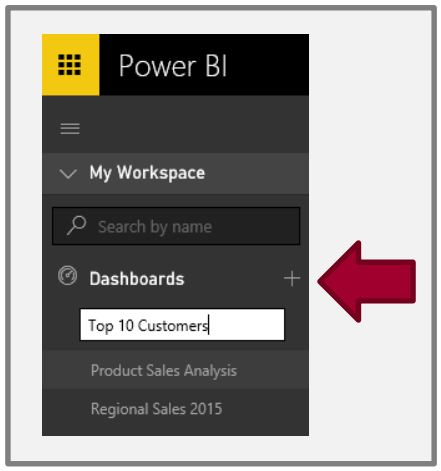
Dashboards in Power BI

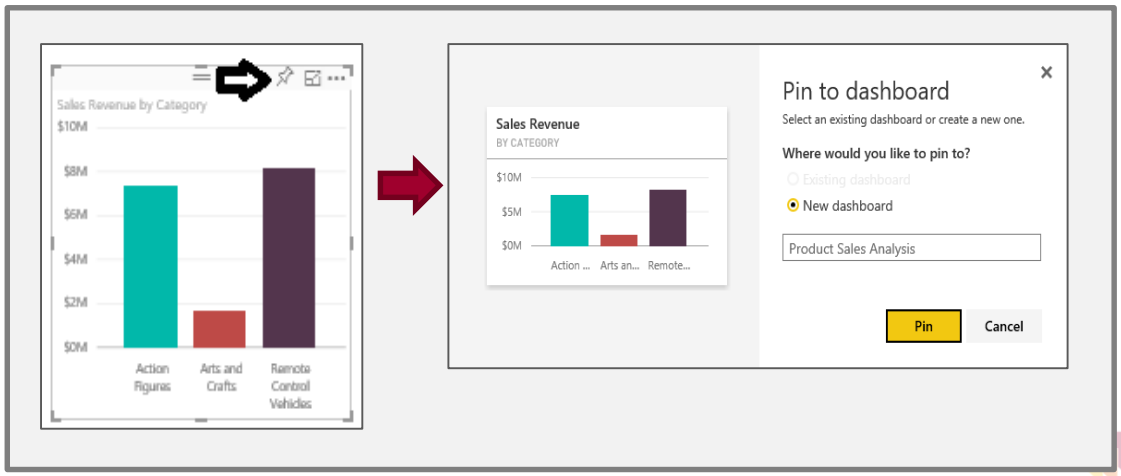
- Dashboard is consolidated view of reports & datasets
  - Provides simpler, more intuitive entry point to reports and datasets
  - Simplicity and intuition key for users with mobile devices & tablets
- Dashboard represents unit of deployment and reuse
  - Dashboards can by deployed via dashboard sharing
  - Dashboards can by deployed using organizational content packs



Creating Dashboards

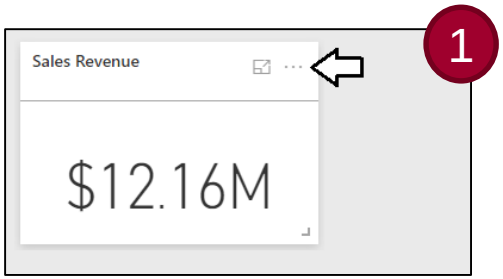
- Dashboard is a collection of tiles
  - Dashboard tiles can be created by pinning a visual from a report
  - Dashboard tiles can be created from Q&A search result
  - Each tile is snapshot of information from an underlying dataset
- Dashboard can be created two different ways
  - Click on (+) button in Dashboards section of navigation pane
  - Create new dashboard when pinning visual from report

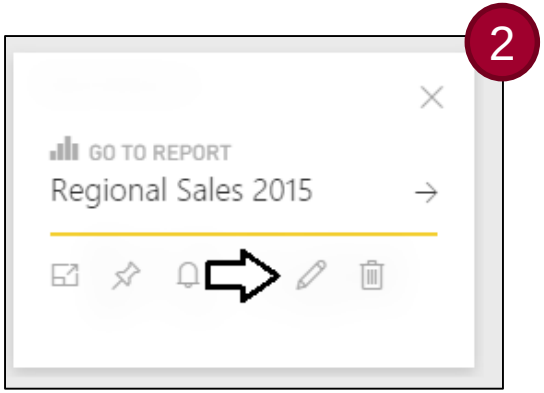


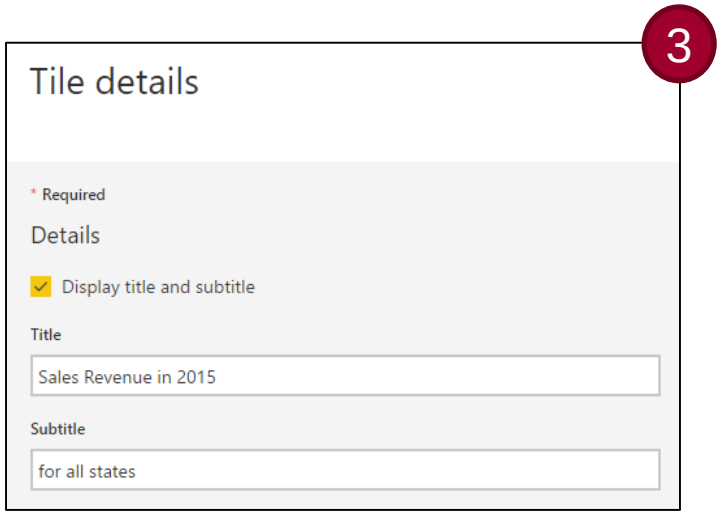


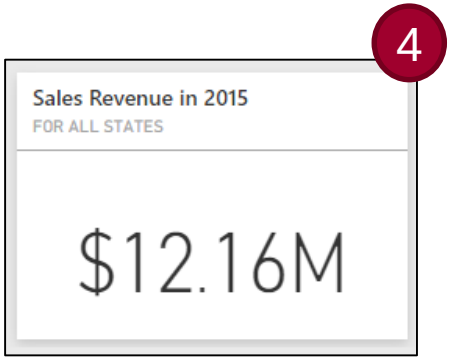
Modifying Tile Details

- You can customize a tile's title and subtitle
  - Default title and subtitle doesn't always provide enough clarity
  - Title and subtitle edited using **Tile details** dialog









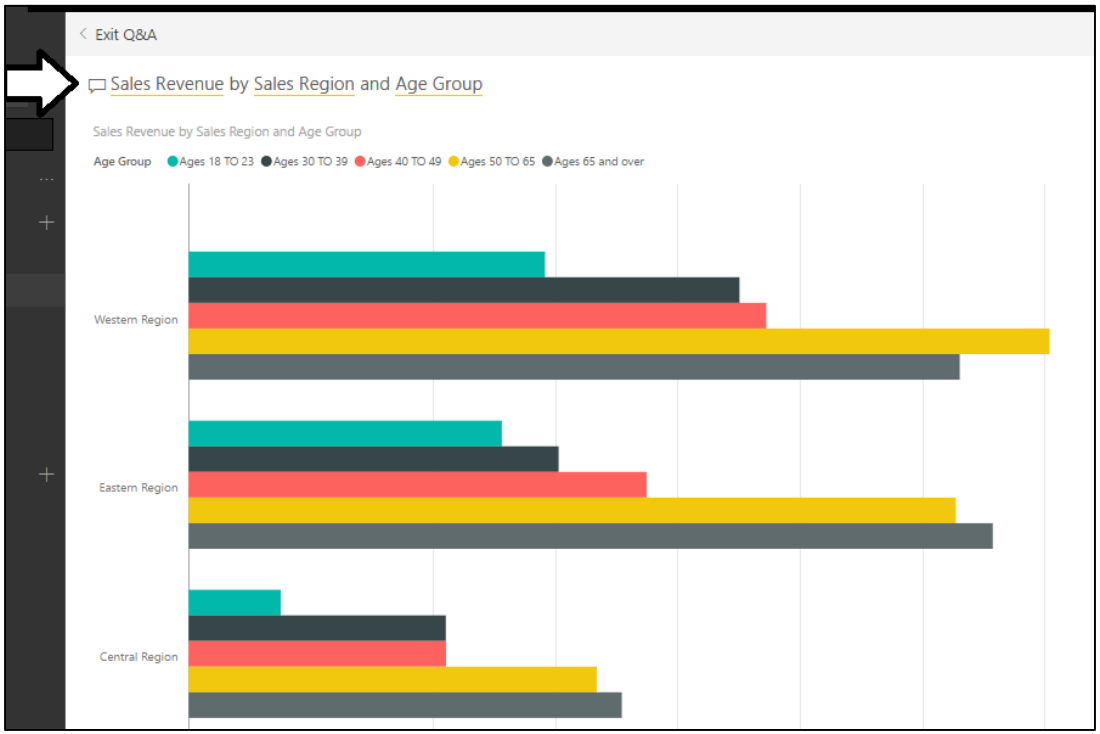

DEMO
Creating a Dashboard

Agenda

- ✓ Designing Dashboards for Power BI
- ➢ Executing Queries with Natural Language Q&A
- Sharing Dashboards
- Building Real-time Dashboards

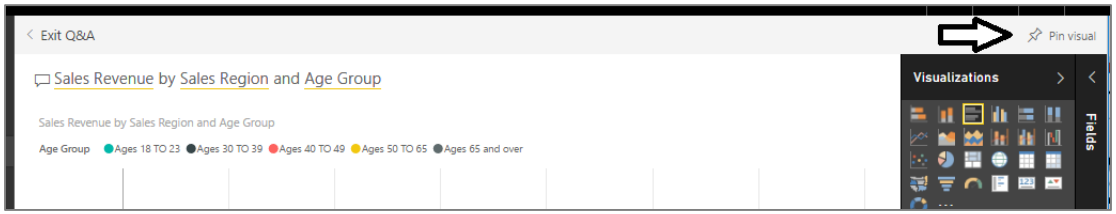
The Q&A Search Box

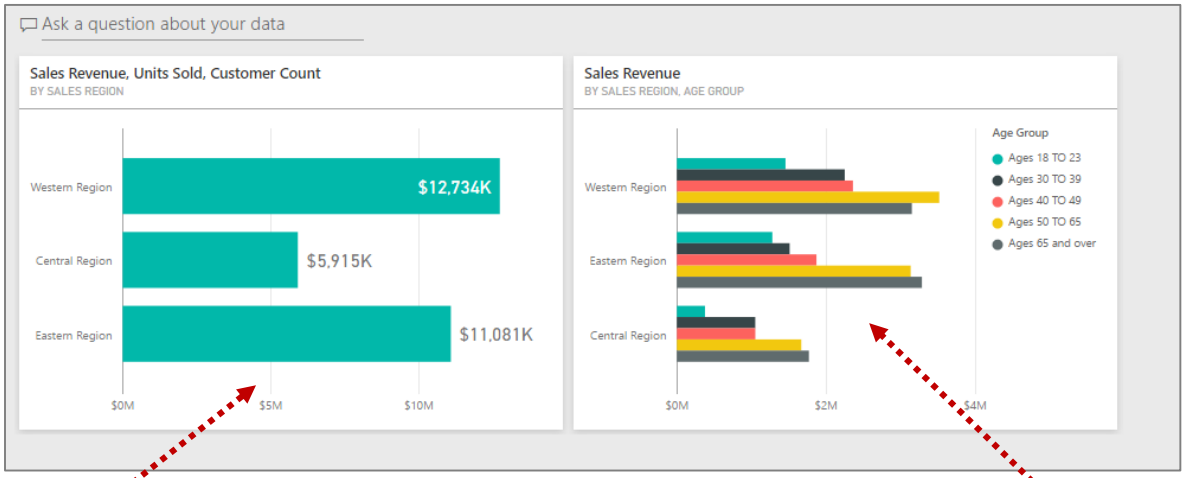
- Used to execute natural language queries
  - Queries are executed against underlying dataset(s) in workspace
  - Query results display using some type of Power BI visual
  - Power BI service selects Visualization type based on result type



Pinning Search Result to Dashboard

- Q&A search results can be pinned to dashboard
  - Allows users to easily save visuals from query results





This tile was created from a visual on a report

This tile was created from a Q&A query result

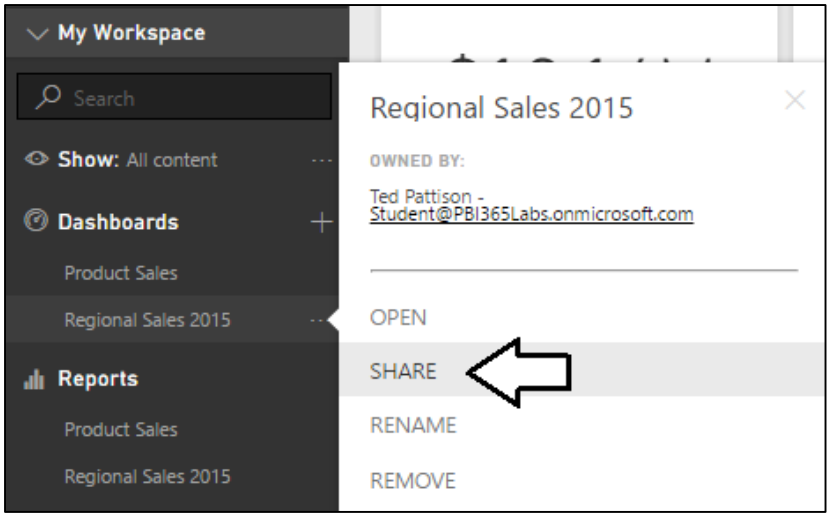

DEMO
Working with the Q&A Search Box

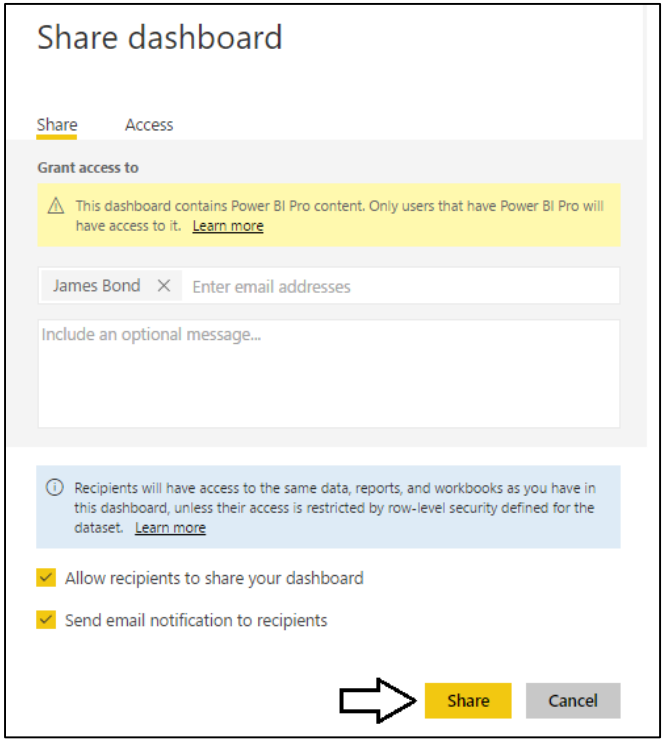
Agenda

- ✓ Designing Dashboards for Power BI
- ✓ Executing Queries with Natural Language Q&A
- ➢ Sharing Dashboards
- Building Real-time Dashboards

Sharing Dashboards

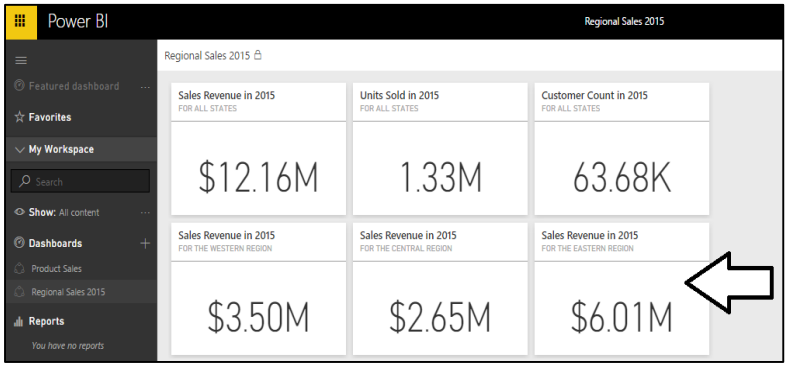
- Used to make dashboard accessible to other users
  - Other users must be within same Office 365 organization
  - Sharing dashboard provides indirect access to reports and datasets
  - Does not require Power BI Pro license



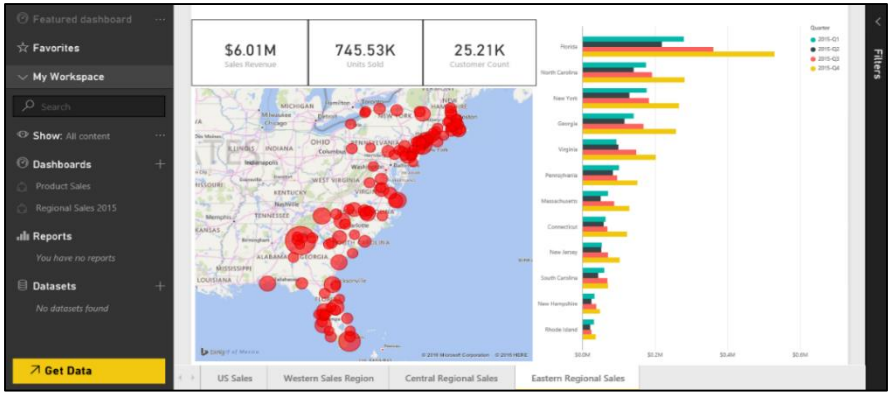


Testing Dashboard Sharing

- Login as secondary user
  - Make sure you can access the dashboard
  - Observe there is a link to dashboard but not to report or dataset



  - Clicking on dashboard tile navigates user to report



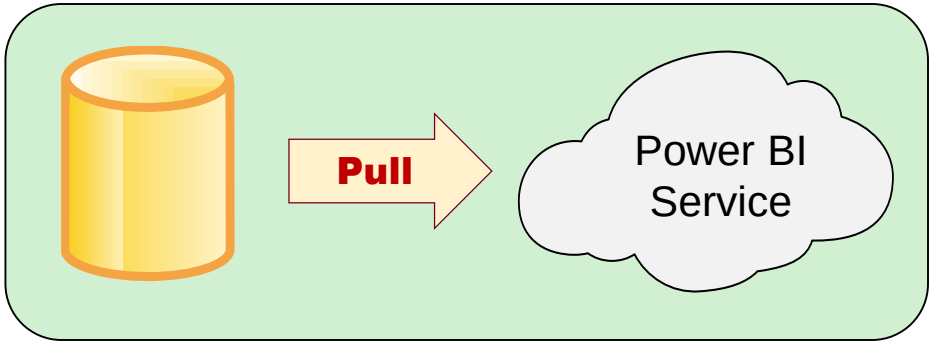

DEMO
Sharing a Dashboard

Agenda

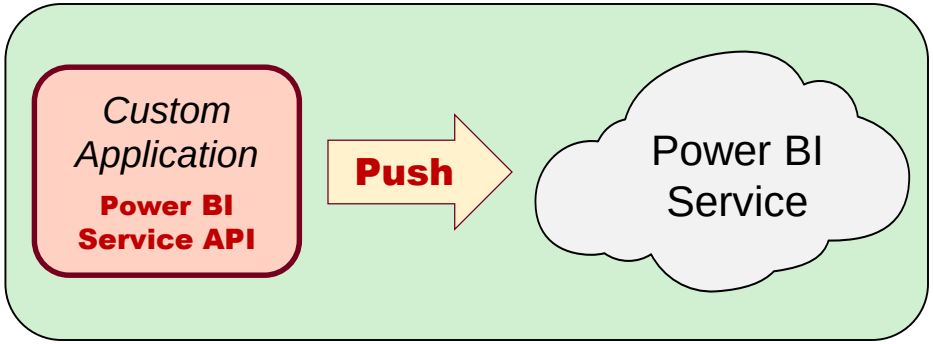
- ✓ Designing Dashboards for Power BI
- ✓ Executing Queries with Natural Language Q&A
- ✓ Sharing Dashboards
- ➢ Building Real-time Dashboards

Pull Datasets versus Real-time Datasets

- Pull Datasets
  - Imported Datasets
  - DirectQuery Datasets
  - Live Connect Datasets

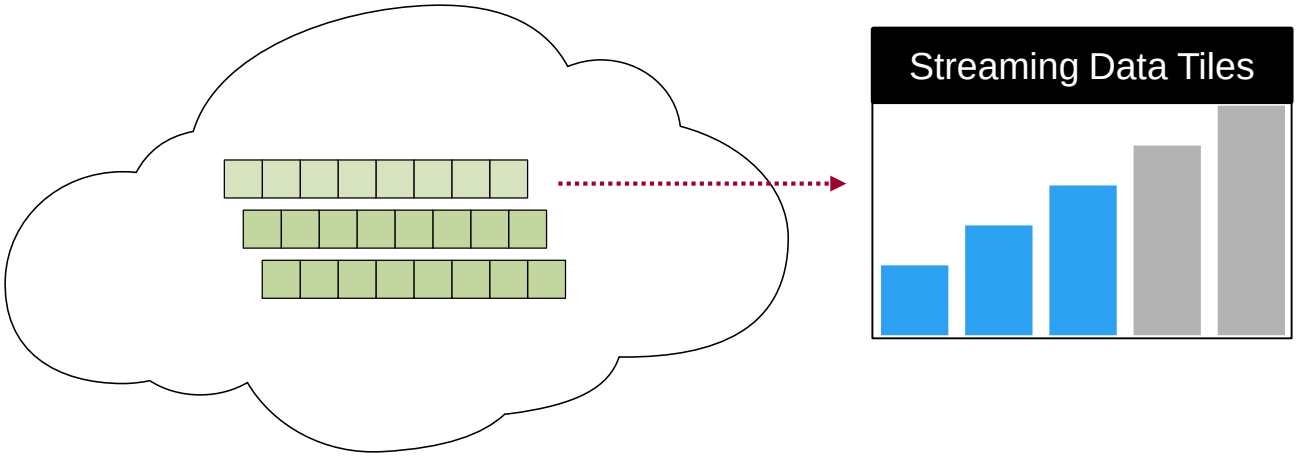


- Real-time Datasets
  - Streaming Datasets
  - Push Datasets
  - Hybrid Datasets



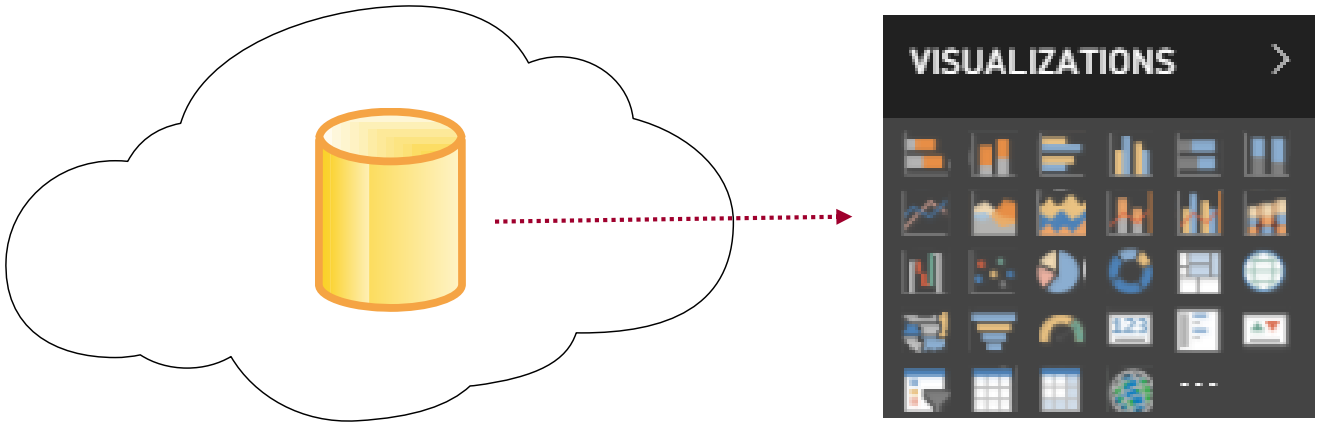
Streaming Datasets

- Data stored in cloud-based cache – not persisted in DB
- Restricted to single table - no rich data modeling
- Not supported by standard Power BI report designer
- Dashboard created using specialized streaming data tiles
- No support for DAX, aggregation or filtering



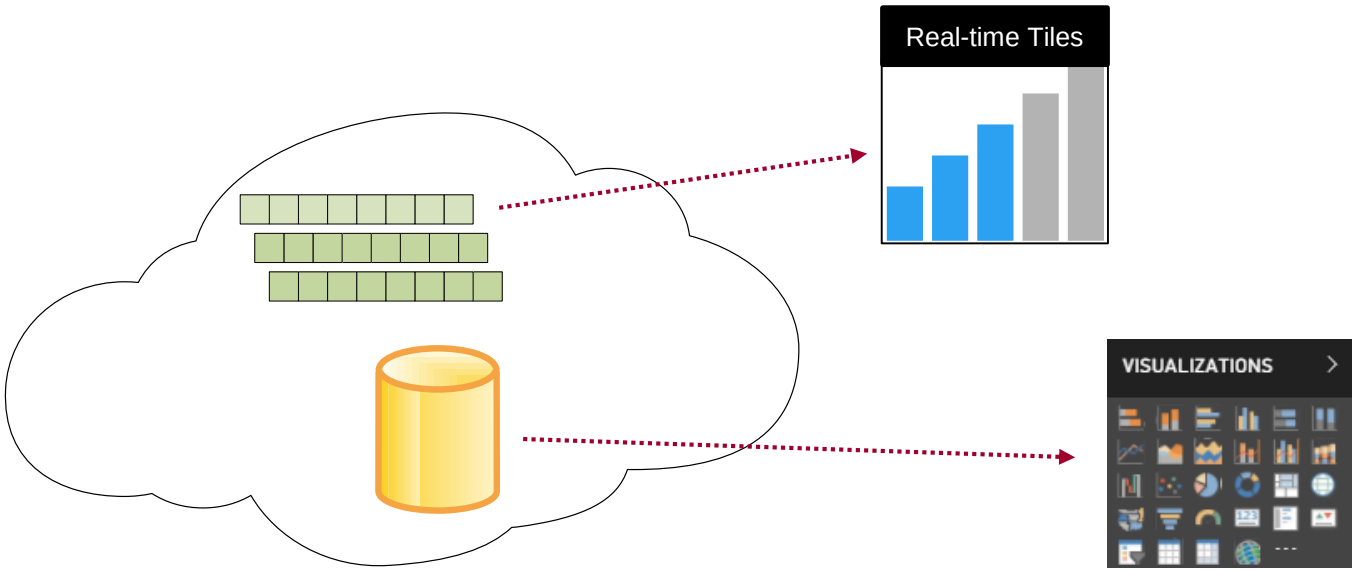
Push Datasets

- Data stored in Azure SQL DB – not in cache
- Supports multiple tables and table relationships
- Supported by standard Power BI report designer
- Supports DAX, measures, aggregation & filtering



Hybrid Datasets

- Data stored in cloud-based cache **AND** in Azure SQL DB
- Restricted to single table and no rich data modeling
- Supported by streaming data tiles
- Supported by Power BI report designer




DEMO
Creating a Hybrid Dataset by Hand

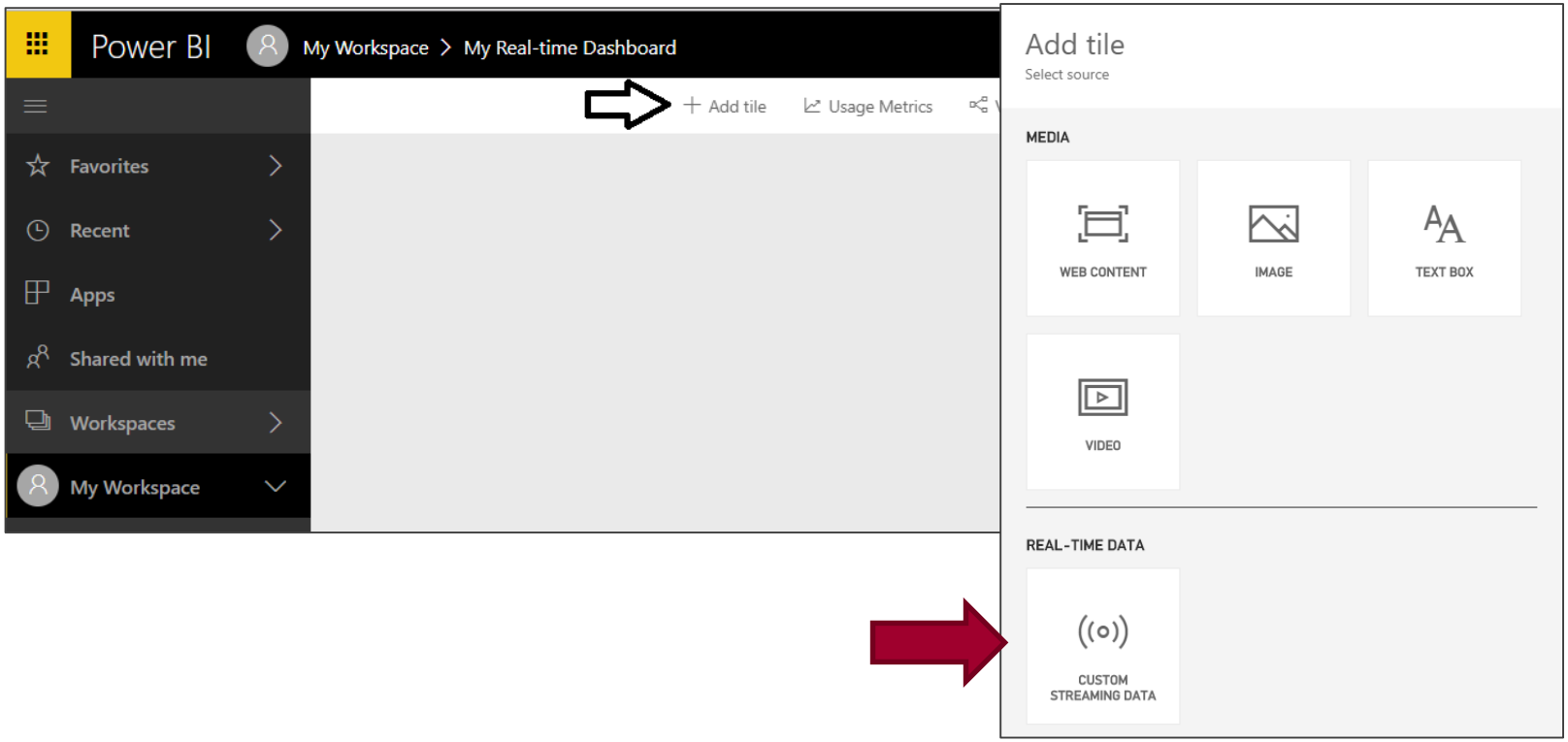
Streaming Data Tiles

- Streaming Data surfaced using Streaming Data Tiles
  - Used to surface data values from streaming dataset cache
  - Optimized to provide smooth animations for real-time data

- Available set of streaming titles as of today
  - Card
  - Gauge
  - Line chart
  - Cluster Bar Chart
  - Cluster Column Chart

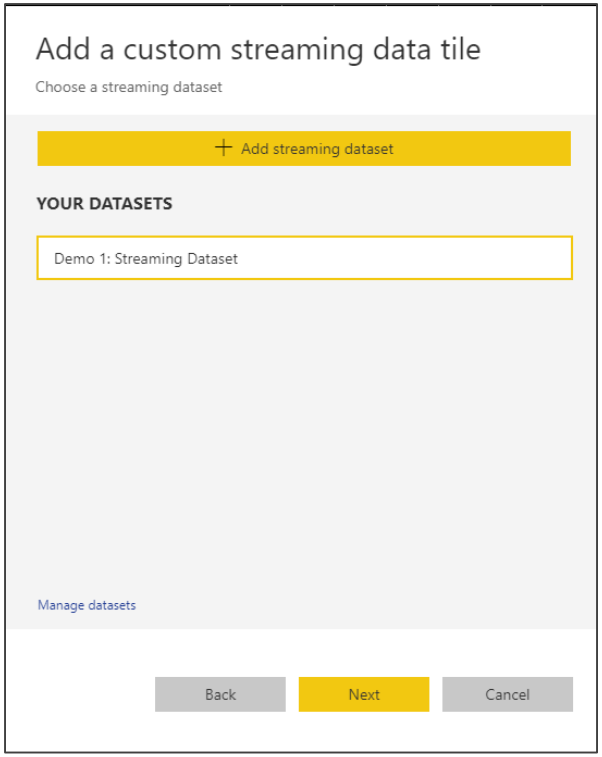
Creating Dashboards with Streaming Datasets

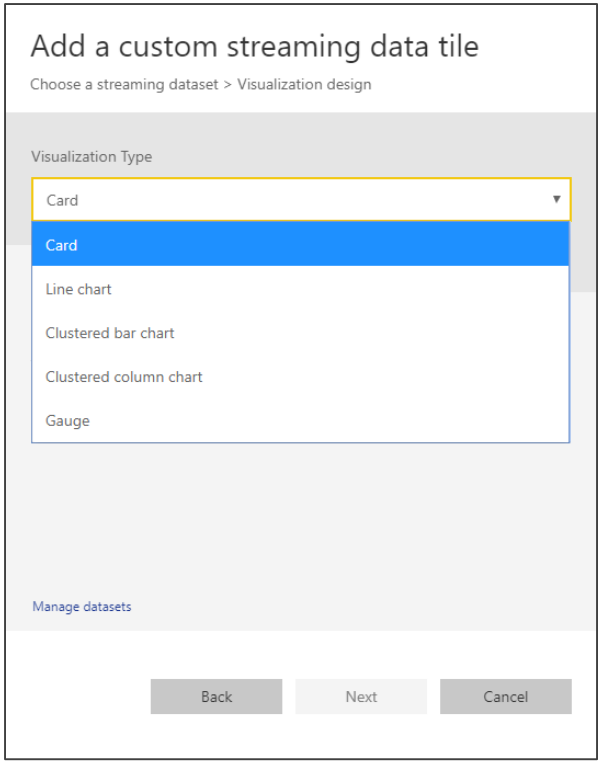
- You cannot use the Power BI report designer
  - Instead, you add real-time data tiles directly to a dashboard
  - Real-time data tiles different from standard set of Power BI visuals



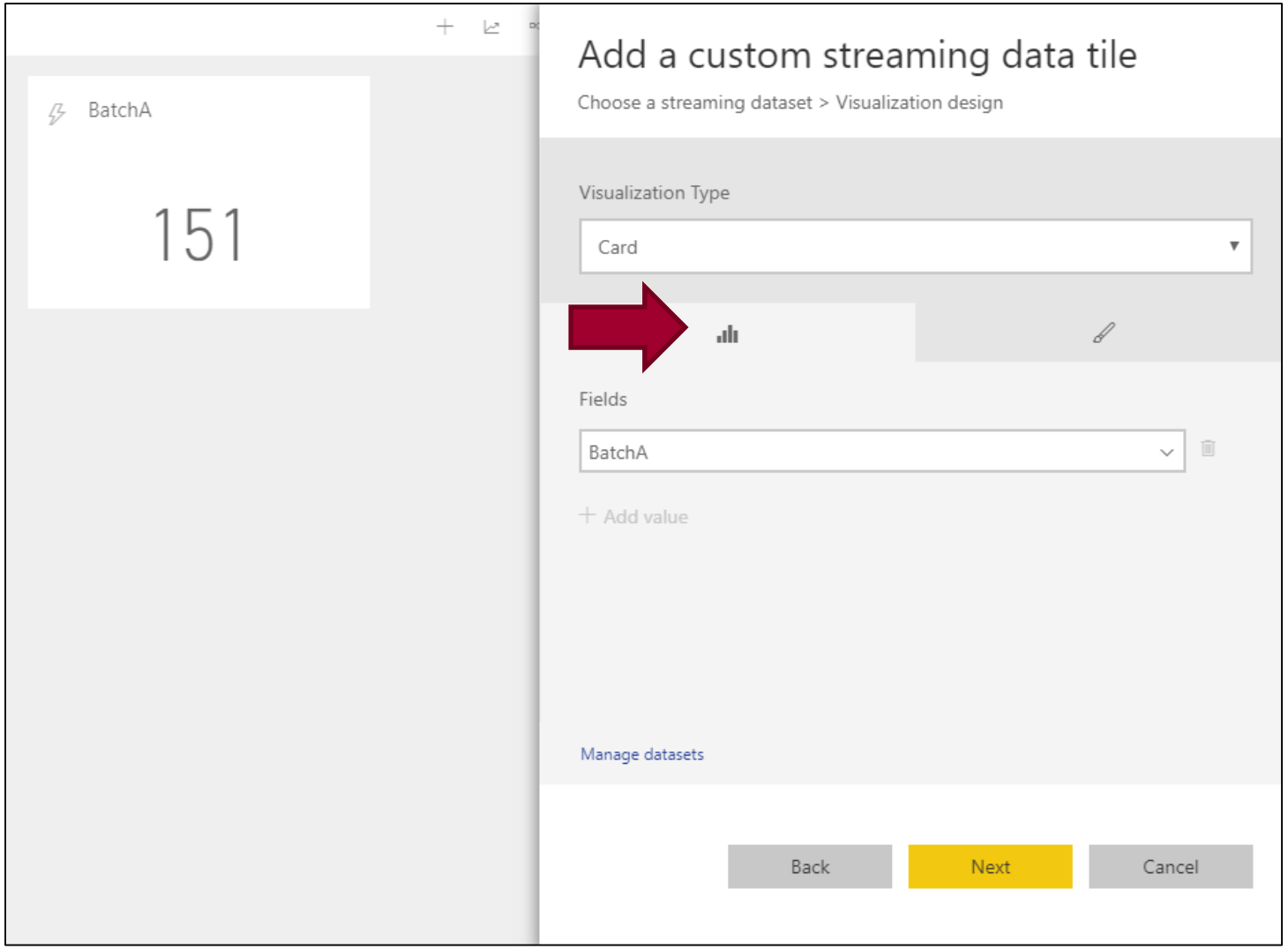
Creating a New Streaming Data Tile

- When creating a streaming data tile…
  - Select dataset that is a streaming dataset or a hybrid dataset
  - Choose the type of data streaming tile

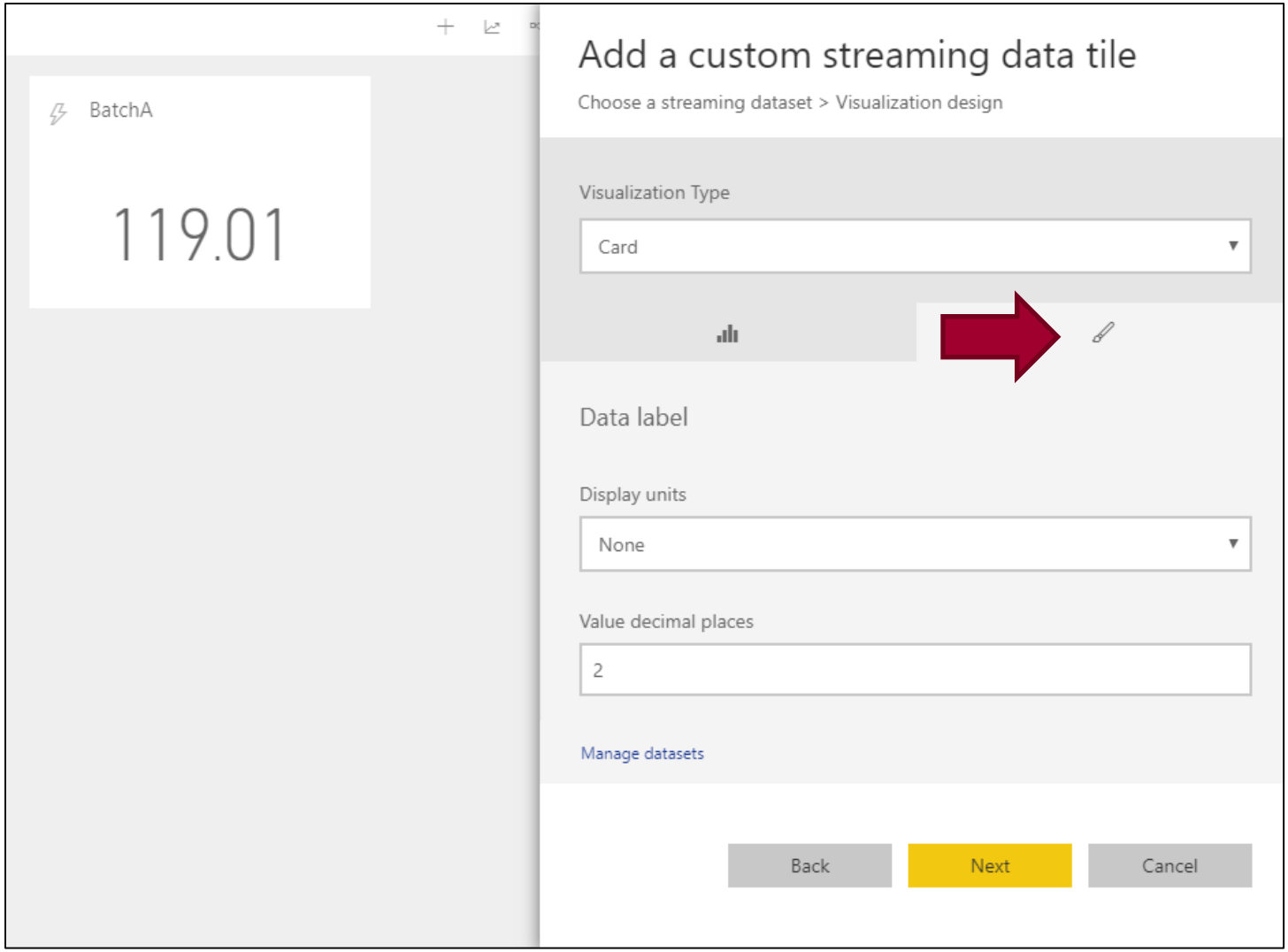




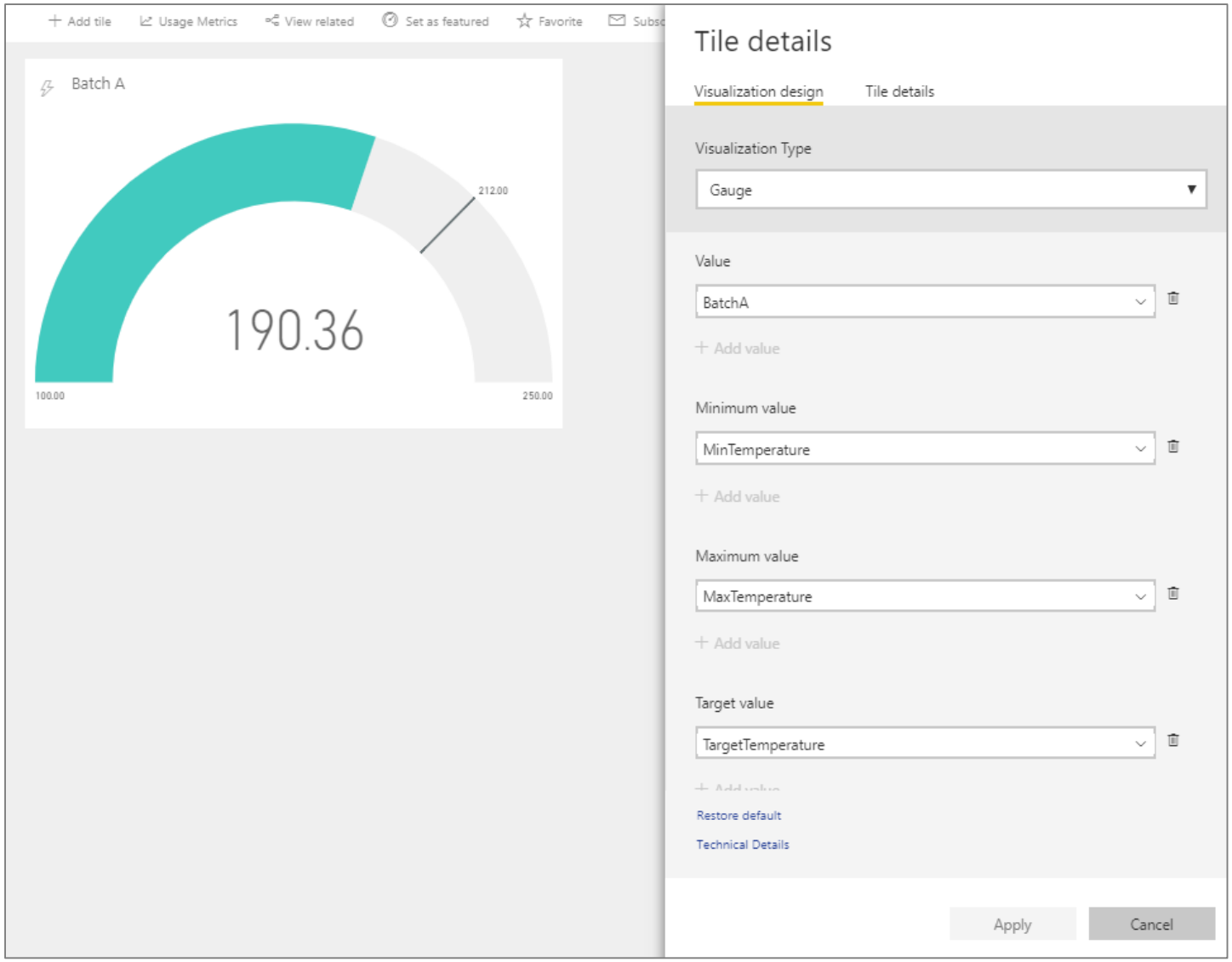
Real-time Data Tile Field Pane



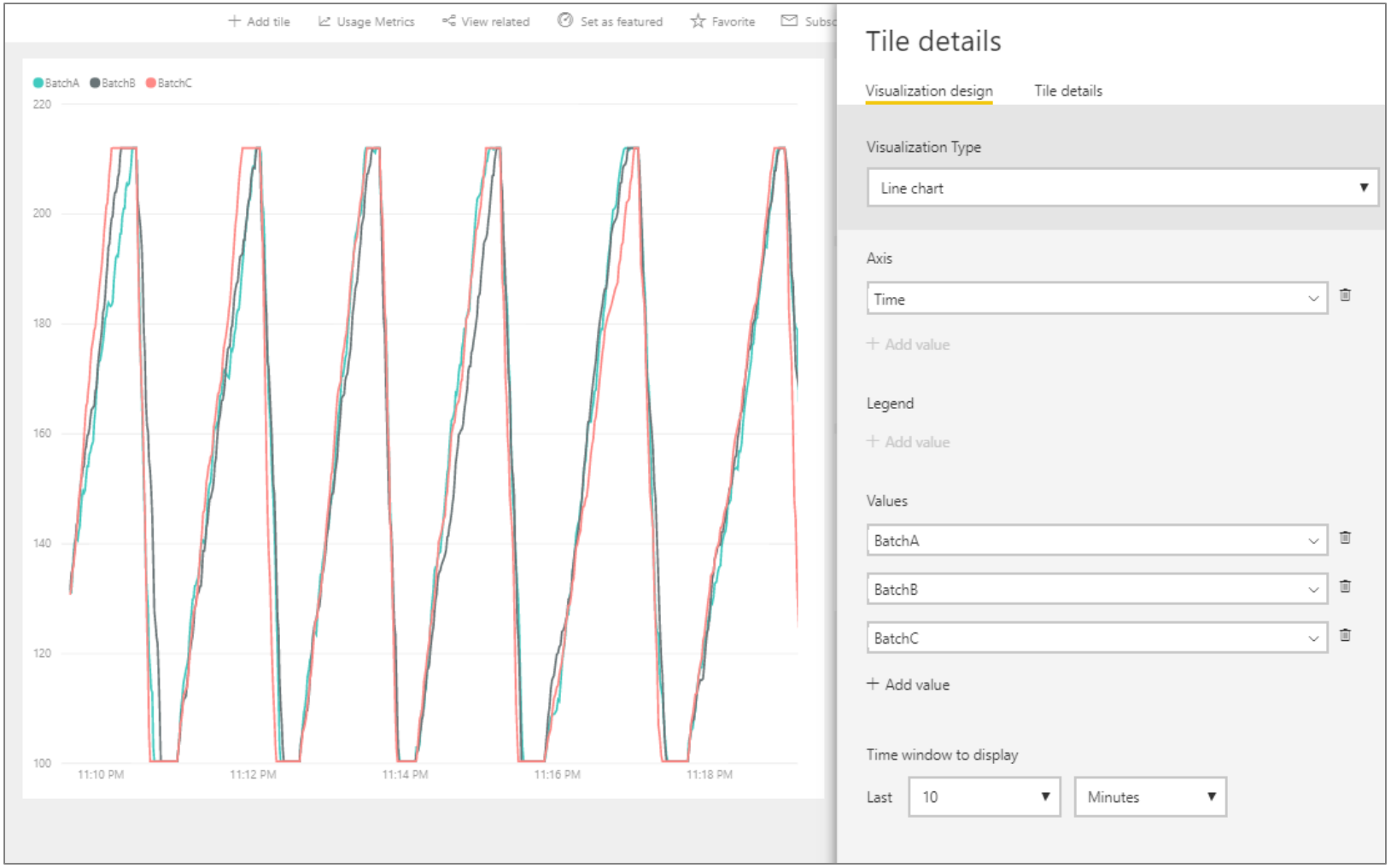
Real-time Data Tile Format Pane



Streaming Gauge Tile



Streaming Line Chart Tile

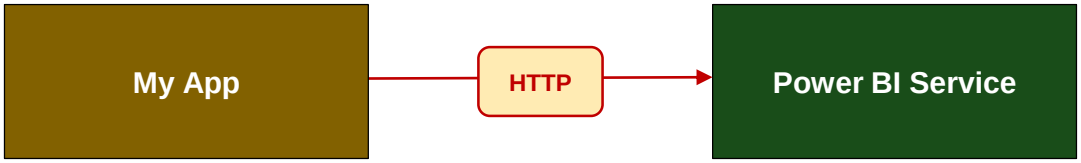


Real-time Dataset Matrix

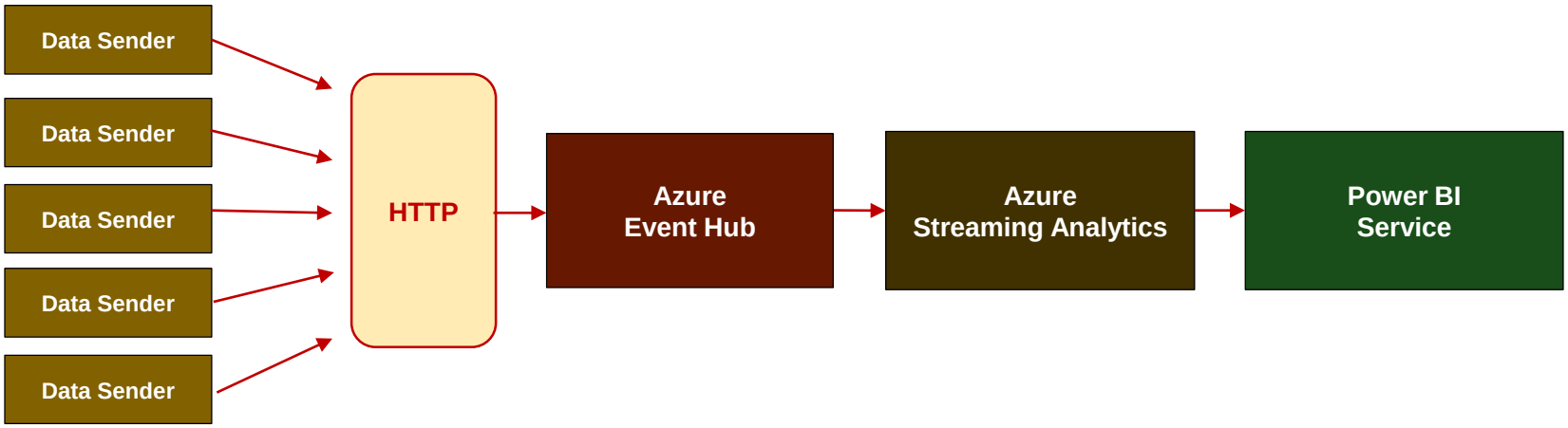
Feature	Streaming	Hybrid	Push
Updates in real-time	Yes	Yes	Yes
Smooth animations	Yes	Yes	No
Backed by Azure SQL DB	No	Yes	Yes
Report Designer Support	No	Yes	Yes
Allow Rich Data Modeling	No	No	Yes
Ingestion Rate	5 request/sec 15KB/request		1 request/second 16MB/request

Scaling a Real-time Dashboard

- Low velocity data scenario



- High velocity data scenario



Summary

- ✓ Designing Dashboards for Power BI
- ✓ Executing Queries with Natural Language Q&A
- ✓ Sharing Dashboards
- ✓ Building Real-time Dashboards