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Power BI Dashboards | Beginner
Your Guides:
Robert Newell & Lulu Wang

Part I: Introduction

Course Outline

Overview

- What is Power BI
- Power BI Components
- Data Flow

Creating a Report

- Power BI Desktop Navigation
- Creating a Simple Report Using Power BI Application
- Examples of Using Custom Visuals

Data Transformation - Advanced

- Creating your own M script for your next advanced report
- M Script Examples

Connecting to Data Sources

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection

Data Import Options

- Connecting to ODATA and Oracle Server and Extracting Data
- DirectQuery vs. Import

Paginated Reporting

- Presentation Level Reports
- Integration Use Case **regoXchange**

Reports and Dashboards

- Dashboard Components
- Options to Share Reports and Dashboards

Data Transformation

- Data Transformation Components
- Data Modeling

Session Goal and Objectives

Course Goal: To provide an overview of Power BI functionality in conjunction with Clarity data.

Course Objectives: You will learn how to:

- Understand How Power BI Works with Clarity Data
- Connect to Data Sources
- Create Reports and Dashboard
- Create and Modify M Scripts

Overview

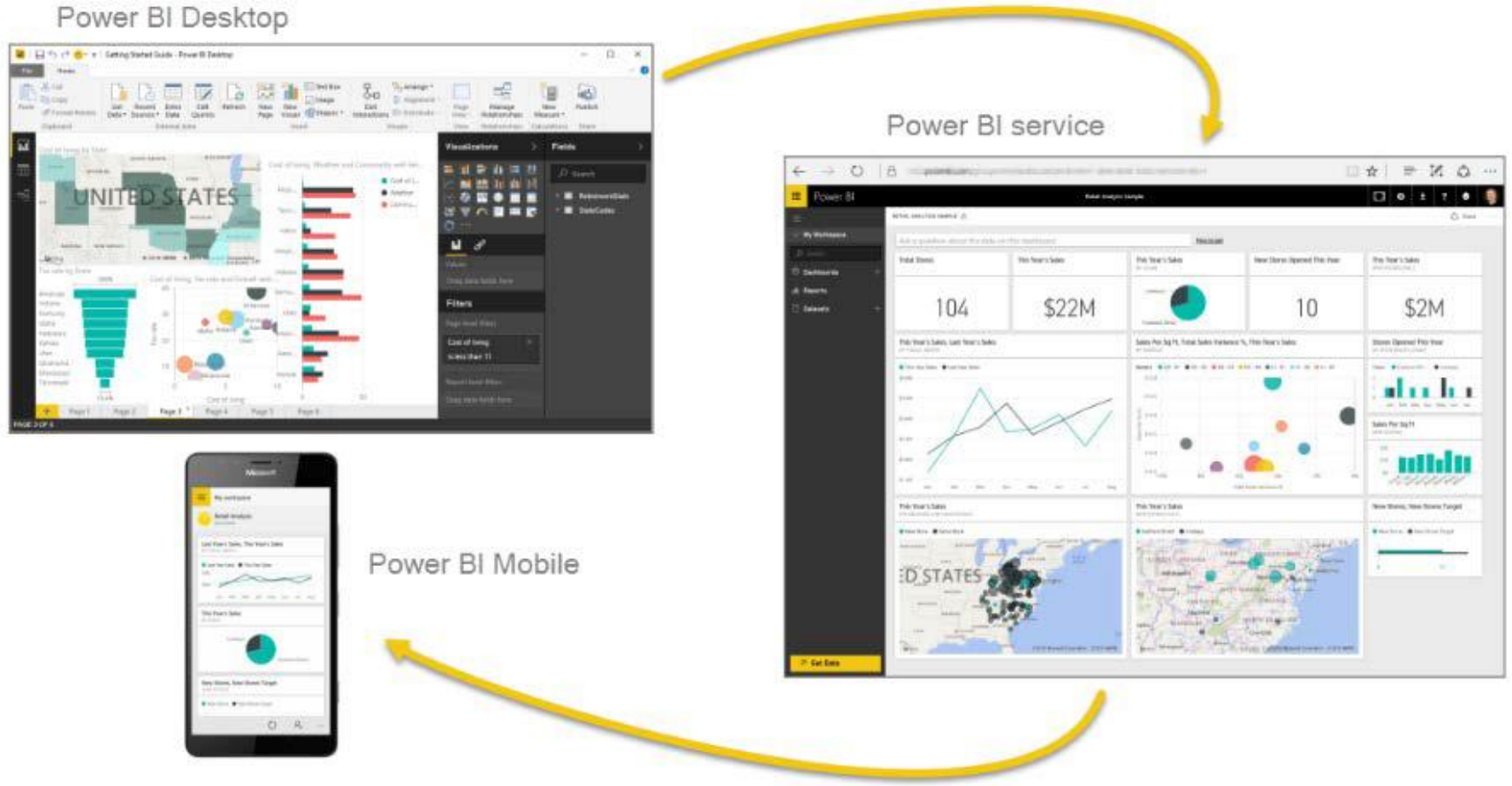
- What is Power BI
- Power BI Components
- Data Flow

Overview

Power BI is a dashboard tool from Microsoft that lets you connect to variety of data sources and create visually stunning and interactive dashboards.

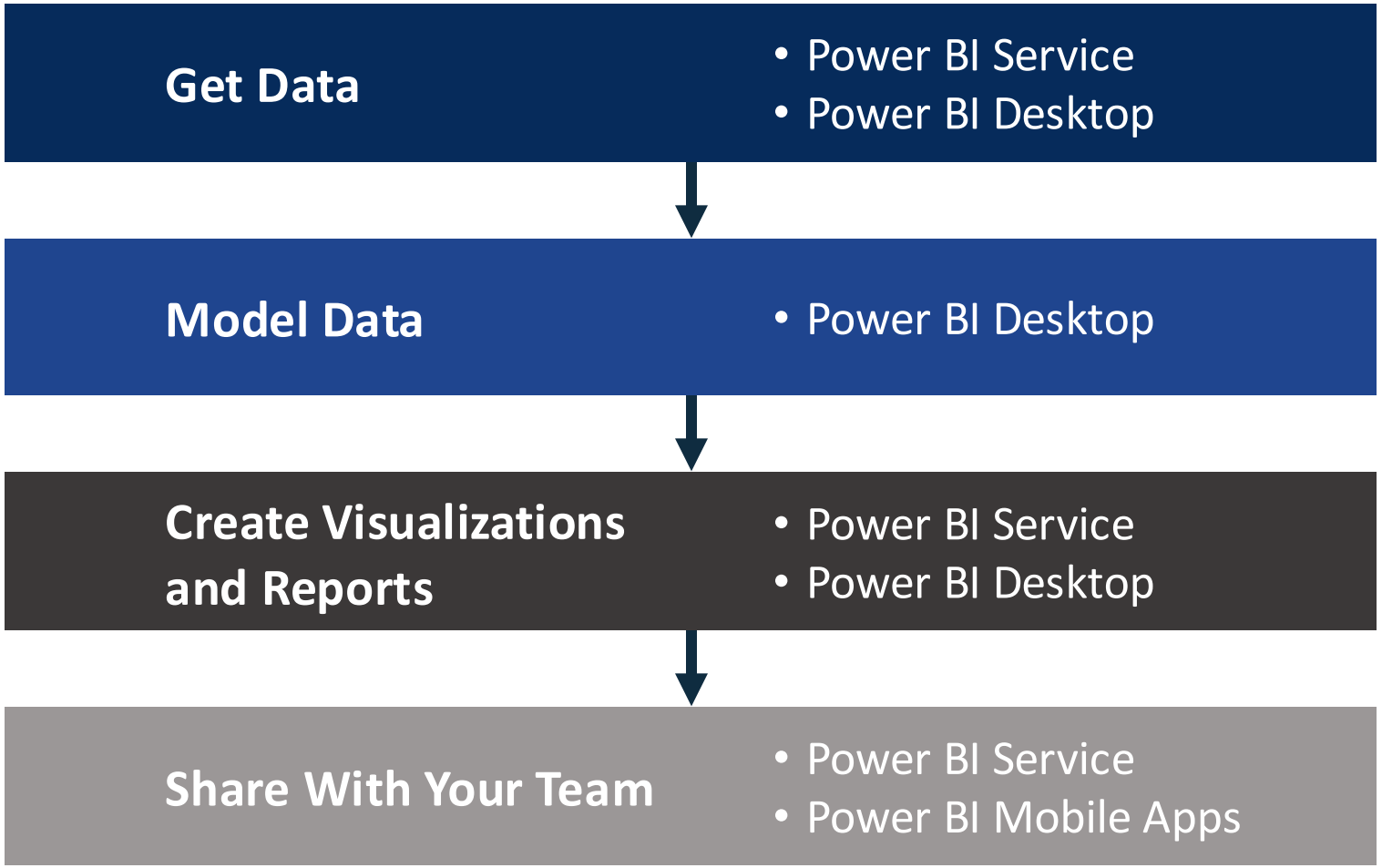
Overview

Power BI has 3 main components:



Overview

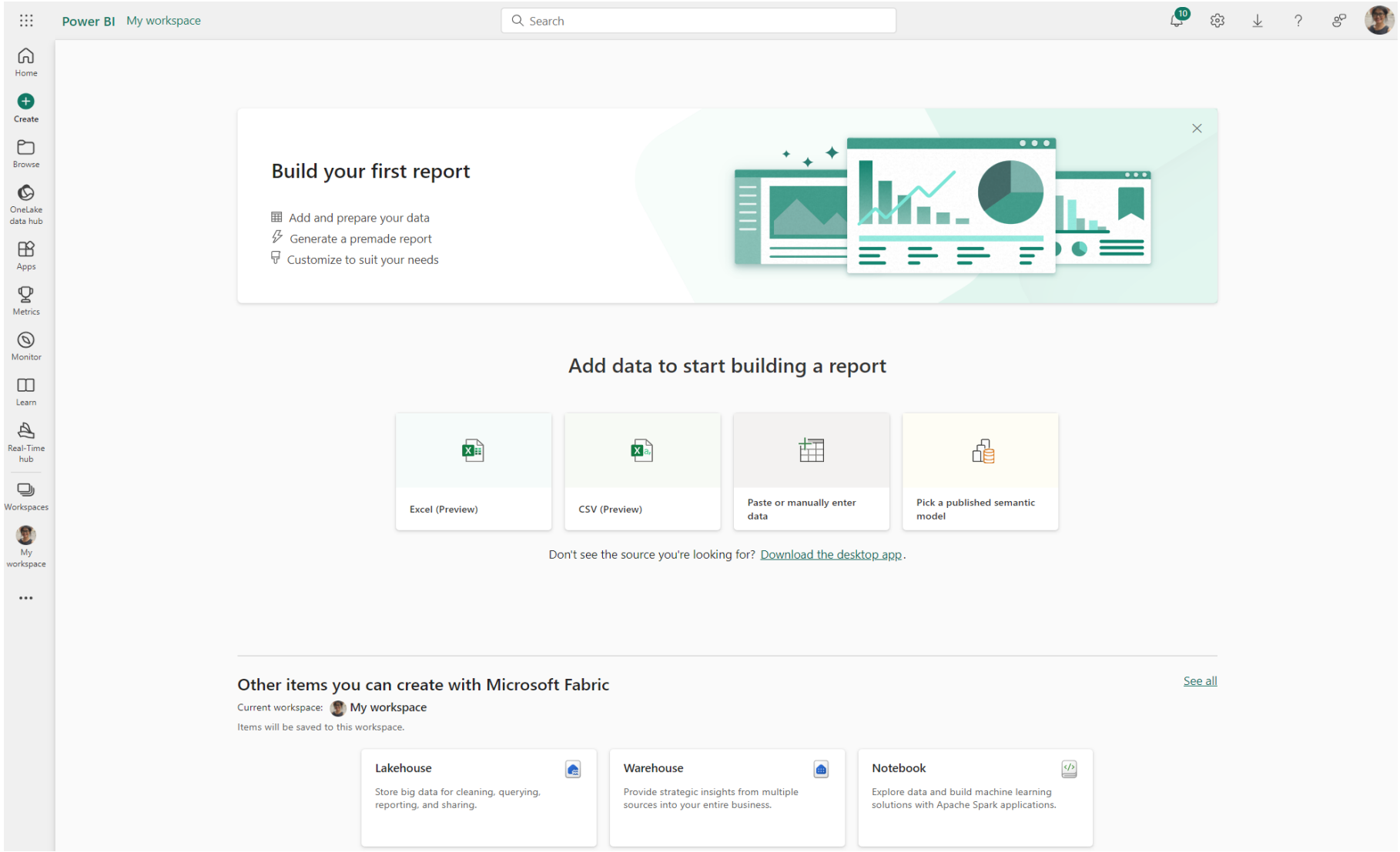
Development Approach



Power BI Service

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection

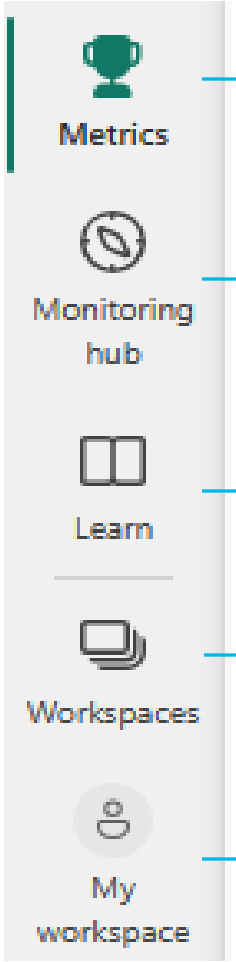
Power BI Service Navigation



Menu Links

- **Home:** Default landing page when you log in to the Power BI service. It's a great starting point for viewing and navigating your content.
- **Create**: This is where you can start creating new content. You can create reports, dashboards, and more. The options available depend on your license.
- **Browse**: This is a new navigation tab that provides sub-navigation for lists that were previously available individually. On this page, you can access the Recent, Favorites, and Shared with me lists.
- **Data Hub**: This hub helps you find, explore, and use data items in your organization, such as datasets, datamarts, and their related reports.
- **Apps**: This is where all apps that have been shared with and apps that you've installed are stored. You can go directly to your apps by selecting Apps on the navigation pane.

Menu Links



- **Metrics**: Provides a way to curate and track key business objectives, promoting accountability, alignment, and visibility within organizations.
- **Monitoring Hub**: This hub enables users to monitor various Microsoft Fabric activities, such as dataset refresh and Spark Job runs, and many others, from a central location.
- **Learn**: This is where you can find learning resources and tutorials about Power BI.
- **Workspaces**: This is where you can collaborate on Power BI content with your colleagues. Then you can publish the finished app to large groups of people in your organization.
- **My Workspace**: This is your private sandbox for learning and experimenting. Only you can see your workspace.

Metrics

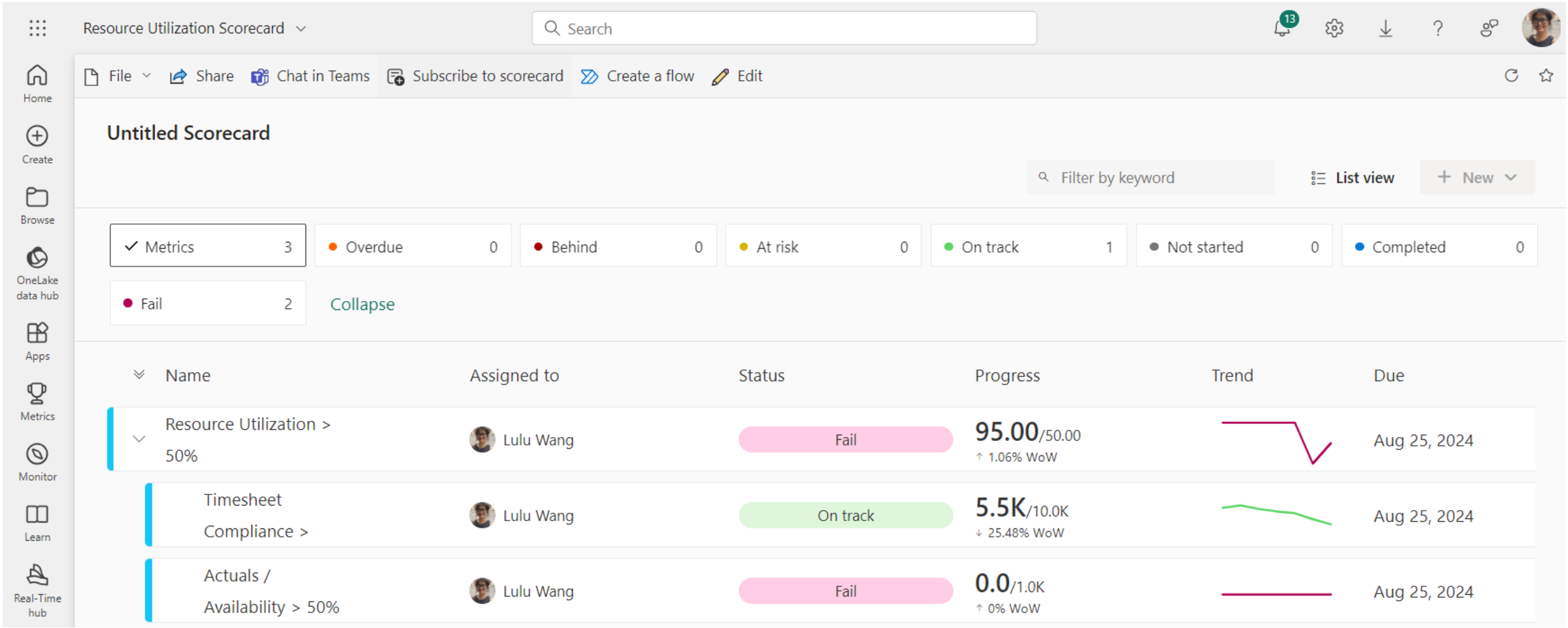
The metrics section of Power BI service can be a powerful tool for project and portfolio management reporting when used with data provided by Clarity. Here are some potential use cases:

Track Key Business Objectives: Metrics in Power BI allow customers to curate their metrics and track them against key business objectives. This can be particularly useful in project and portfolio management where you might want to track objectives such as project completion rates, resource utilization, or budget adherence.

Promote Accountability and Visibility: The features enhance data culture by promoting accountability, alignment, and visibility for teams and initiatives within organizations. For instance, you can create scorecards for different projects or teams and monitor their progress in real time.

Hierarchical Views: Power BI supports cascading scorecards that roll up along hierarchies set up in your scorecard. This can be useful for viewing data at different levels of your organization or project structure. For example, you might have a hierarchy based on project stages or OBS units.

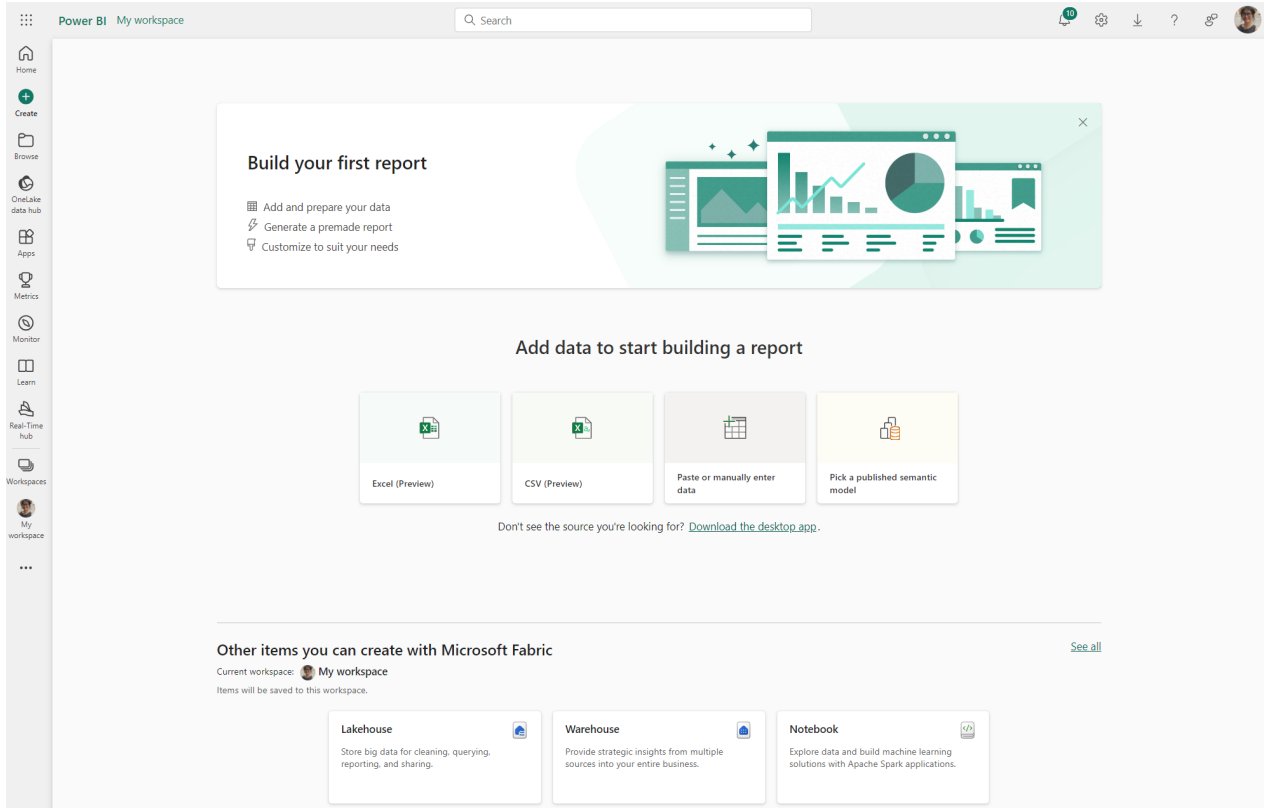
Example Metrics

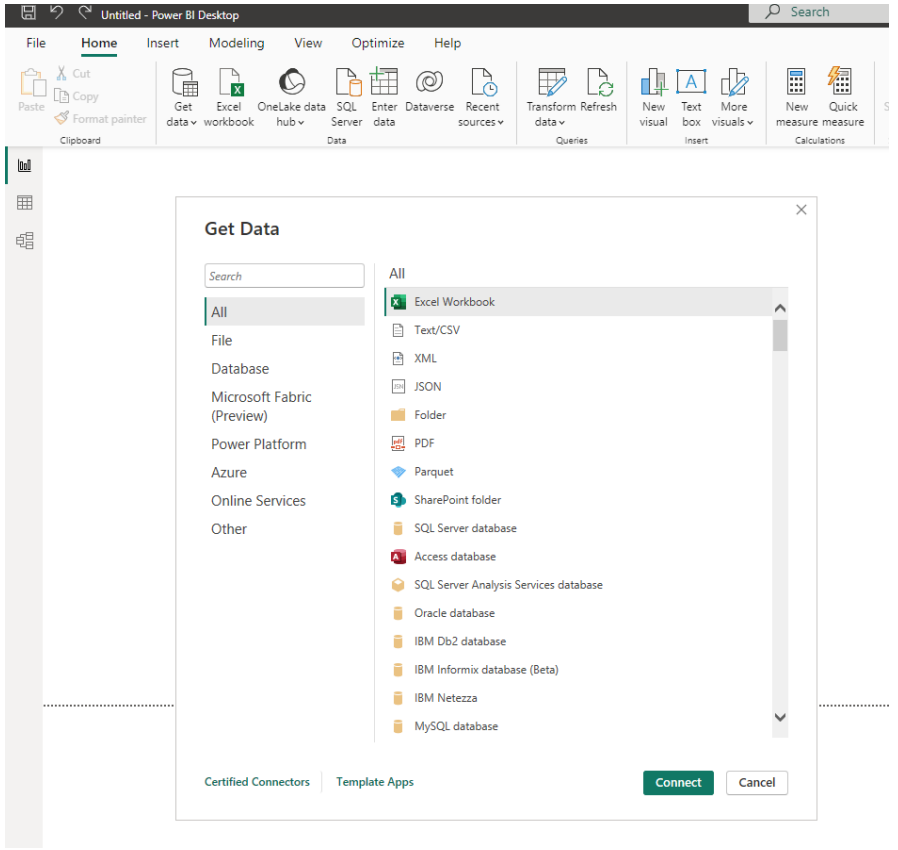


Connecting to Data Sources

- Power BI Service Navigation
- Options to Connect to Sources
- Creating a Data Connection

Connecting to Data Sources





Reports and Dashboards

- Dashboard Components
- Options to Share Reports and Dashboards

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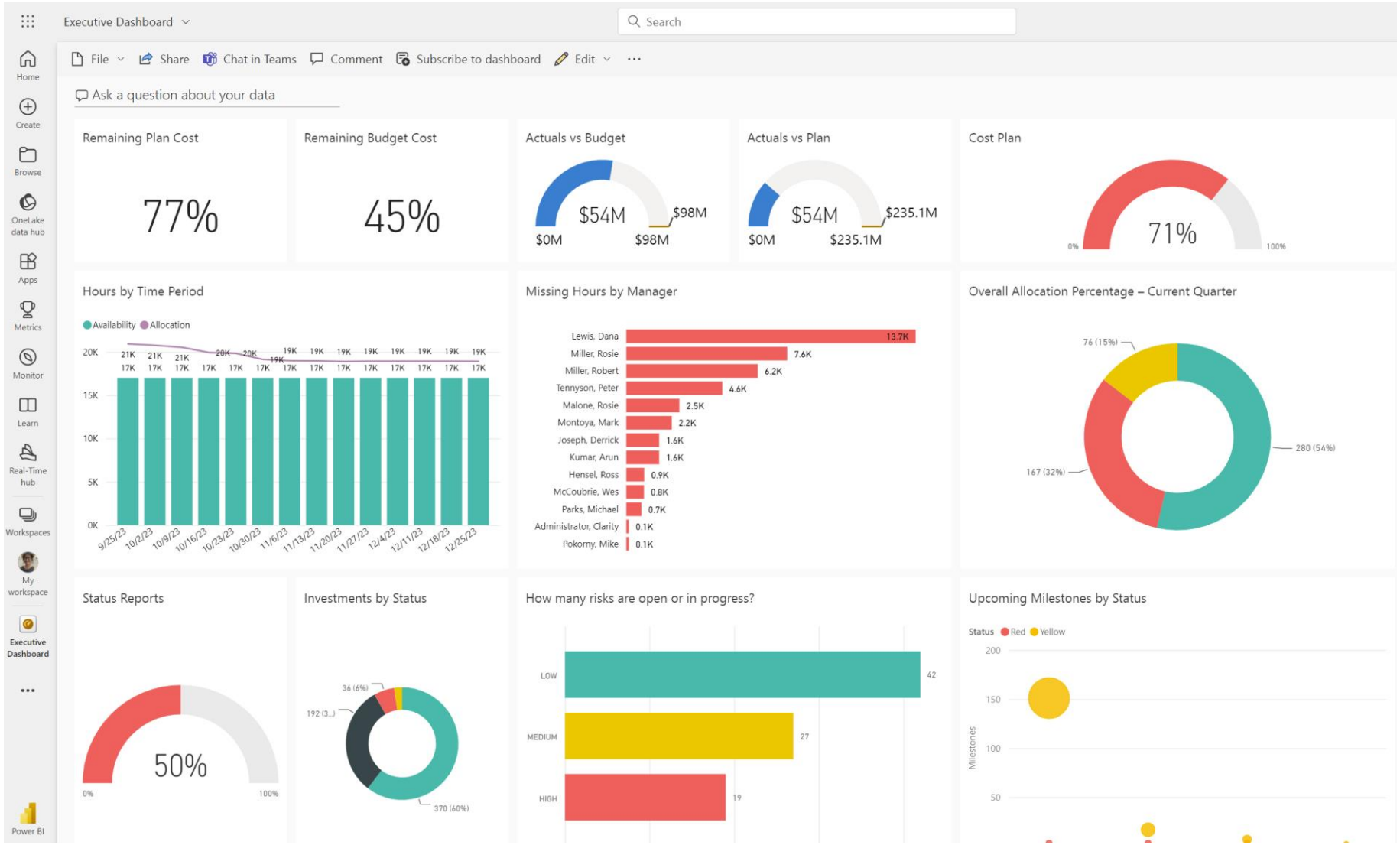
Reports and Dashboards

Dashboard Components

Dashboards provide a high-level view of select KPI from one or more reports. Reports are pinned to a live page which then adds them to a new or existing Dashboard.

An entire report can be published or individual visualizations from multiple reports.

Dashboard Example



Sharing Reports and Dashboards

Options to Share Reports and Dashboards:

- Publish reports to the web
- Share dashboards
- Duplicate and modify shared dashboards (personal versions)
- Export to multiple formats
- Print
- QR code

Sharing Reports and Dashboards

Share Reports and Dashboards

Workspace Collaboration

Share via Link

Share from Power BI Mobile Apps

Share from Power BI Desktop with OneDrive and SharePoint Integration

Licensing

Scenario	Creator	Consumer
✓ You create a report in Power BI Desktop (.PBIX). Then you publish it to your My Workspace on the Power BI service.	✓ As a creator, you only need the free Desktop app and a free Power BI license to publish to your My Workspace in the Power BI service for your own use. A paid Power BI Pro or PPU license is required to share content in My Workspace with others.	✓ Consumers can't see content in other people's My Workspace unless the owners decide to share. To see shared My Workspace content requires a paid license.
✓ You create a report in Power BI Desktop (.PBIX) and share the PBIX file to other people who open the file in Power BI Desktop	✓ No licensing needed, only the Power BI Desktop app to be downloaded and installed.	✓ No licensing needed, only the Power BI Desktop app to be downloaded and installed.
✓ You create a report in Power BI Desktop (.PBIX) and publish it to a shared workspace in the Power BI service.	✓ Paid license needed to publish to shared workspaces.	✓ Paid license required to view the content unless the workspace is hosted in Premium capacity. For workspaces in Premium capacity, the consumer only needs a free license to view that report.
✓ You're sent a link to a report hosted on the Power BI service and want to view it.	✓ You need a paid license to share a link. You need a free license to share a link to a report that is in Premium capacity.	✓ A paid license is required to view the report unless the report is hosted in Premium capacity. For reports hosted in Premium capacity, the consumer only needs a free license to view that report.

Reports and Dashboards

Steps to Share

Publish to Web

- Do not use this option as it will allow access to dashboard to public

Share

- Grant/Revoke access to colleagues in the organization
- It will warn you if you have entered an email address outside the organization

Create Workspaces (Pro only)

- Public or Private groups
- Edit or View only groups

Create Apps (Pro Only)

- Entire Organization
- Specific Individual or Groups

Data Import Options

- DirectQuery vs. Import
- Connecting to ODATA and Oracle Server and Extracting Data

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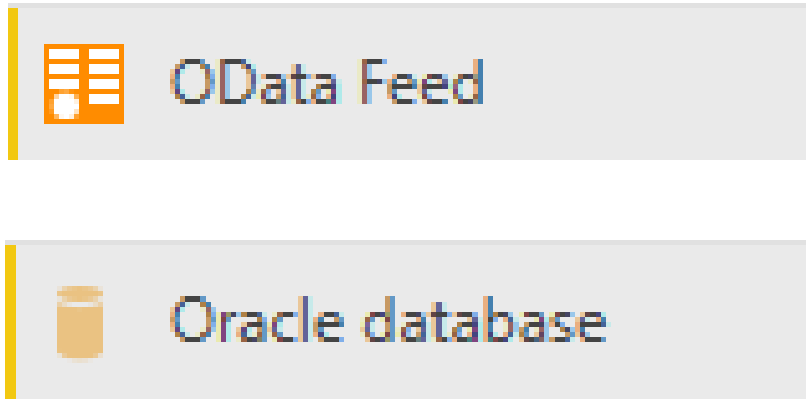
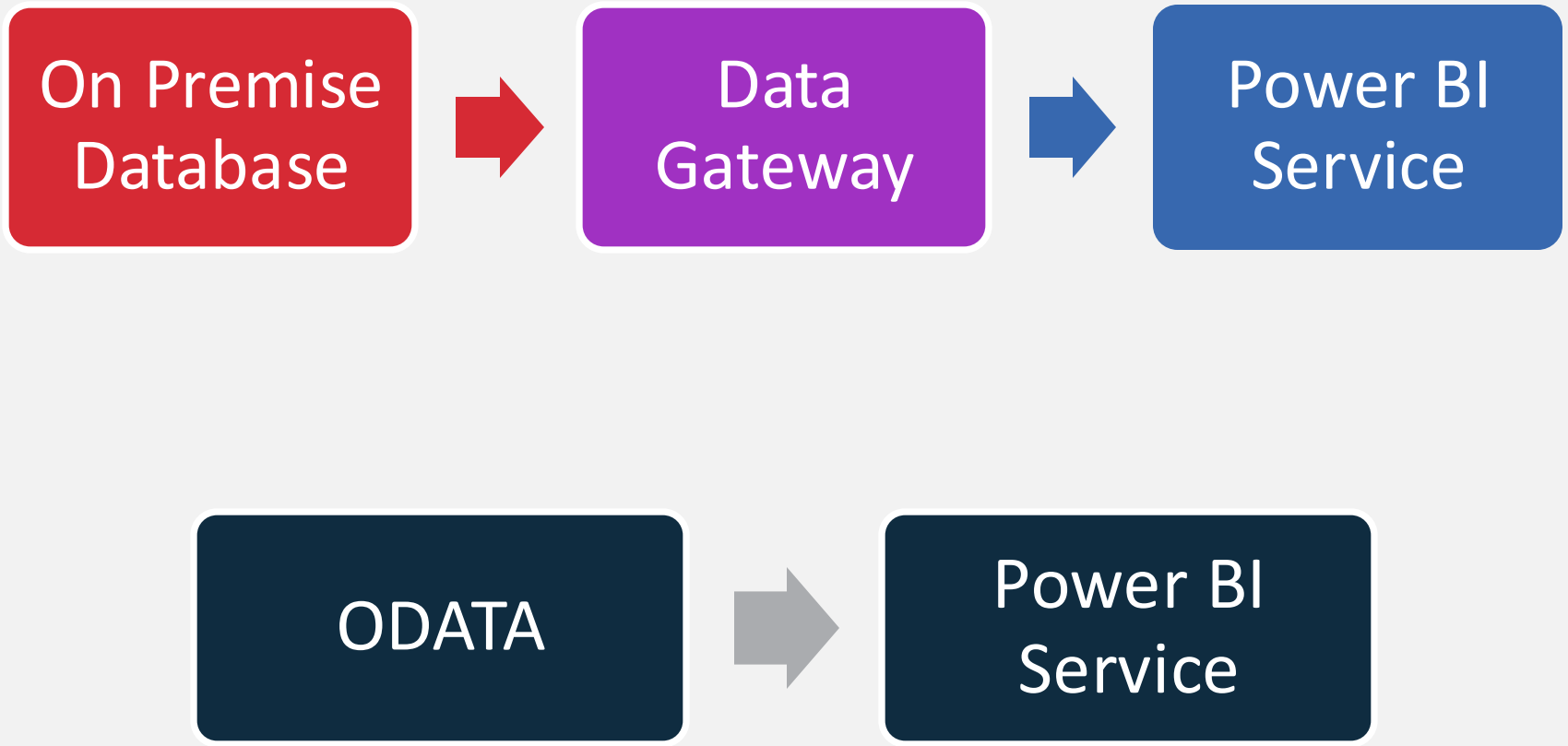
Data Import Options

Connecting to ODATA and Oracle Server and Extracting Data



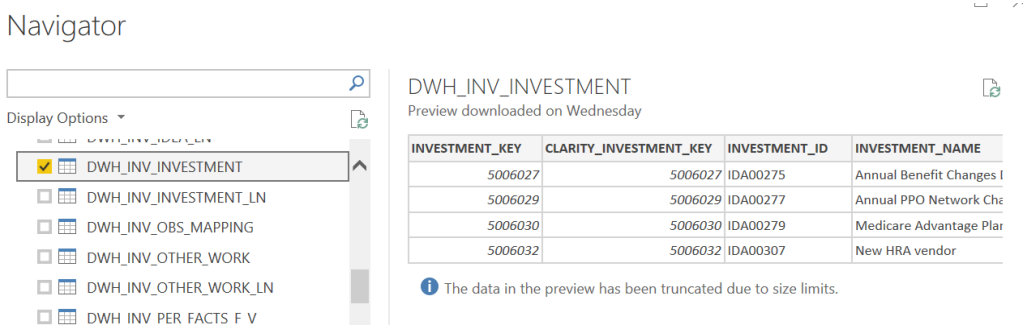
Data Refresh – On Premise vs On Demand Clarity

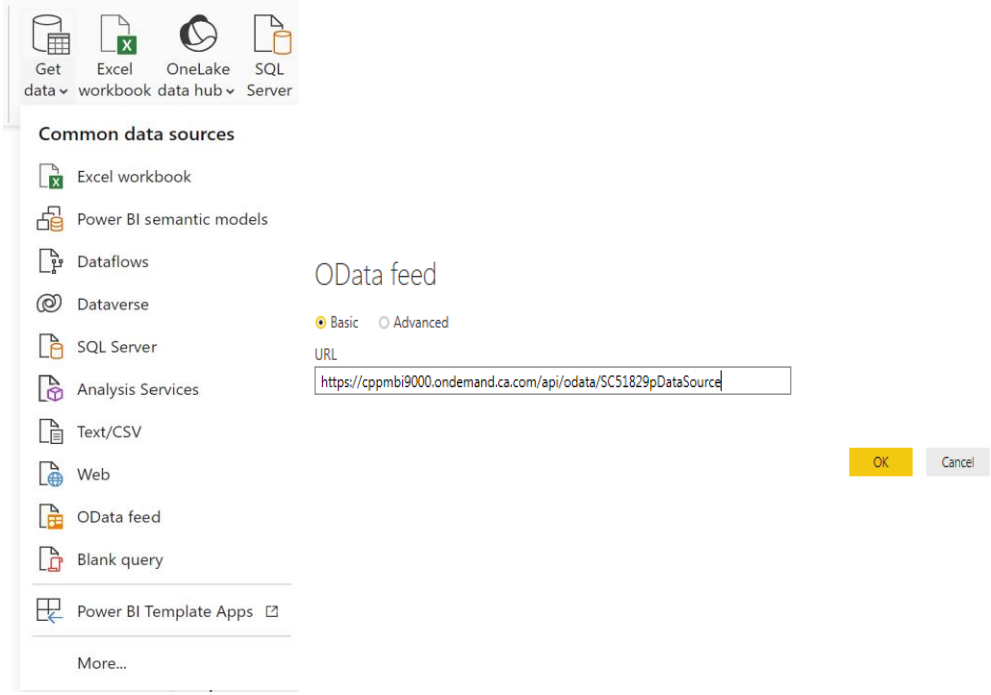


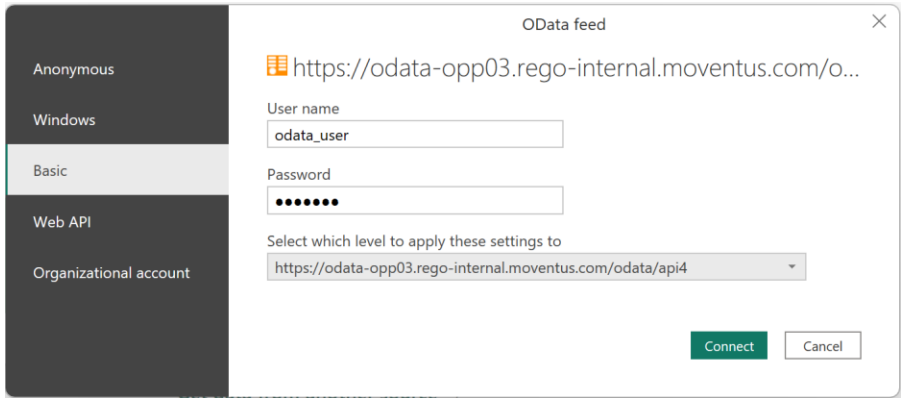
Connecting to Odata Feed

Here are the steps to create a dashboard:

- Open your Power BI Desktop instance.
- Select OData feed option under GetData.
- Enter the Odata URL provided by your admin and click on OK.
- Enter the username & password and click on Connect to authenticate.
- Odata Table Navigator opens. Select the tables required for your dashboard and click on Load.



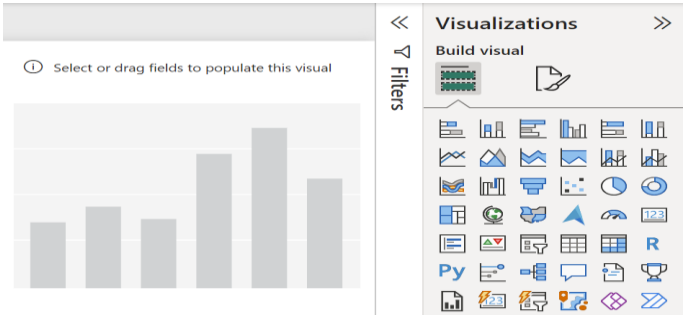


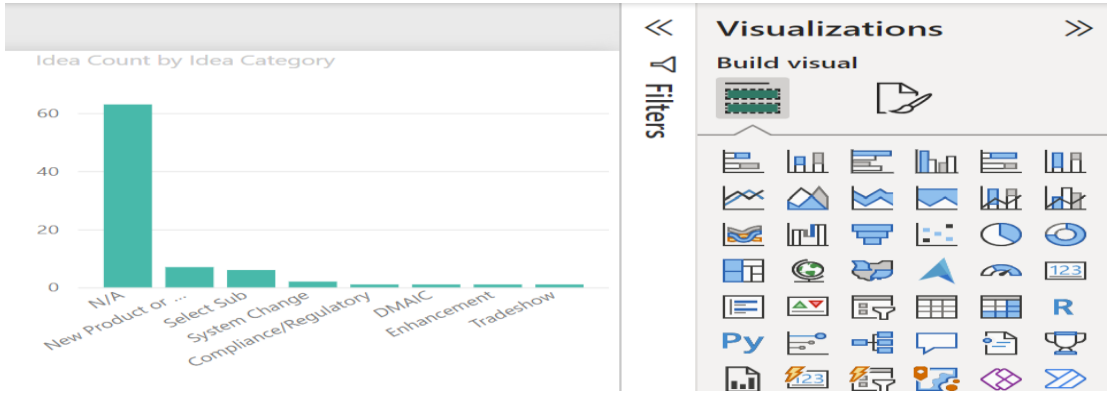


- Selected Tables gets loaded and power BI canvas opens up.

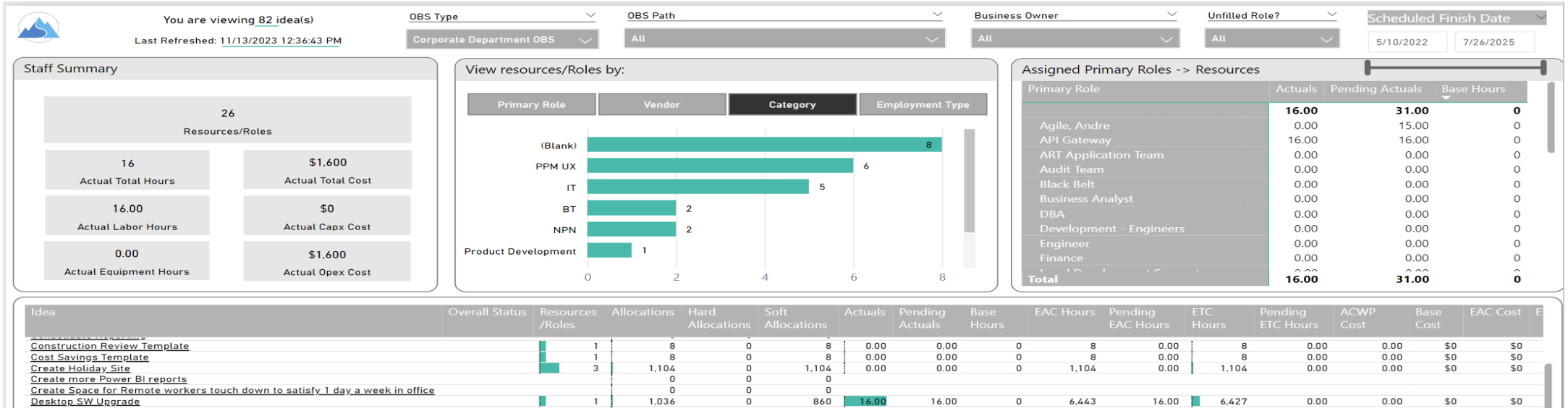
Connecting to Odata Feed

- Select the required visualization and drag the fields from the tables onto the settings to generate a meaningful visualization.



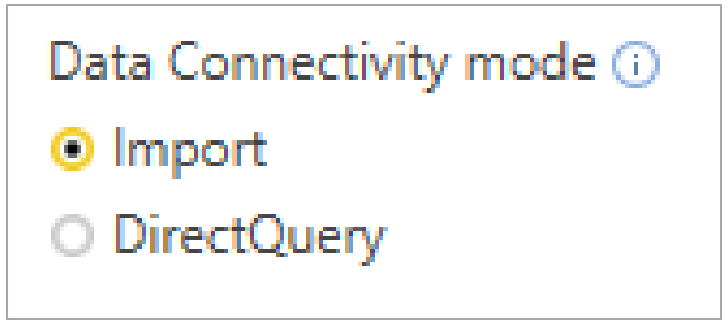


- You can group related visualizations under a single dashboard. Save the dashboard after completion.



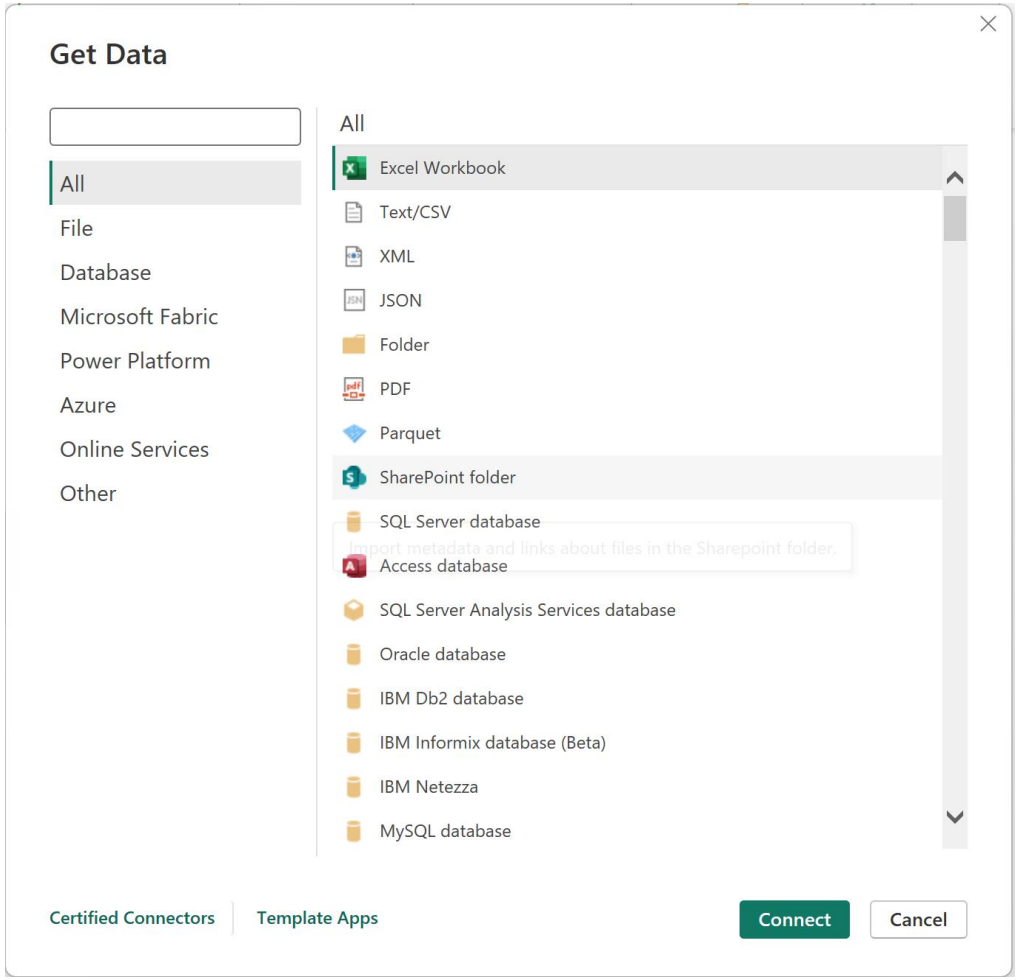
Data Import Options

DirectQuery vs. Import [Oracle]



Data Import Options

Connecting to a Source



Creating a Report

- Power BI Desktop Navigation
- Creating a Simple Report Using Power BI Application
- Examples of Using Custom Visuals

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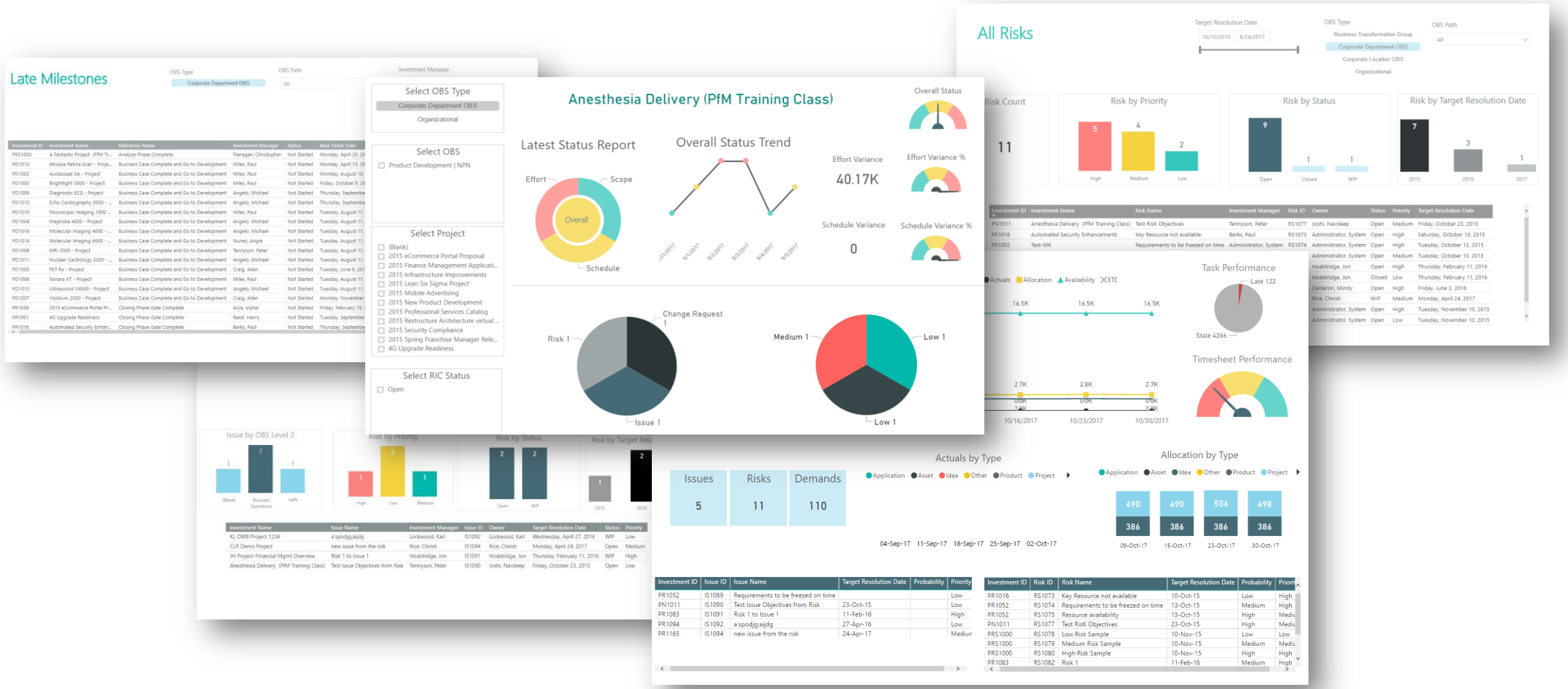
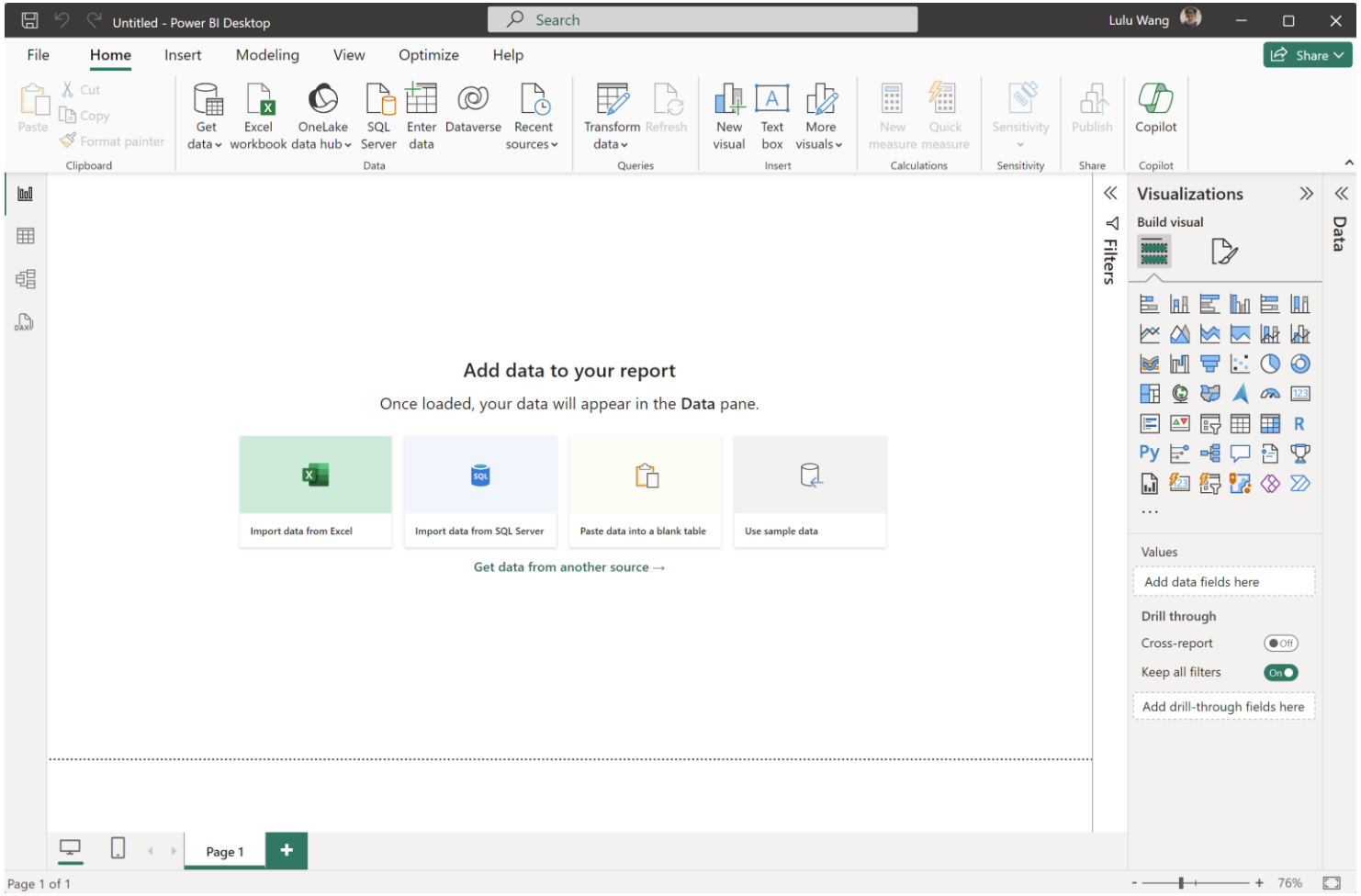
Creating a Report



Creating a Report

Power BI Desktop Navigation

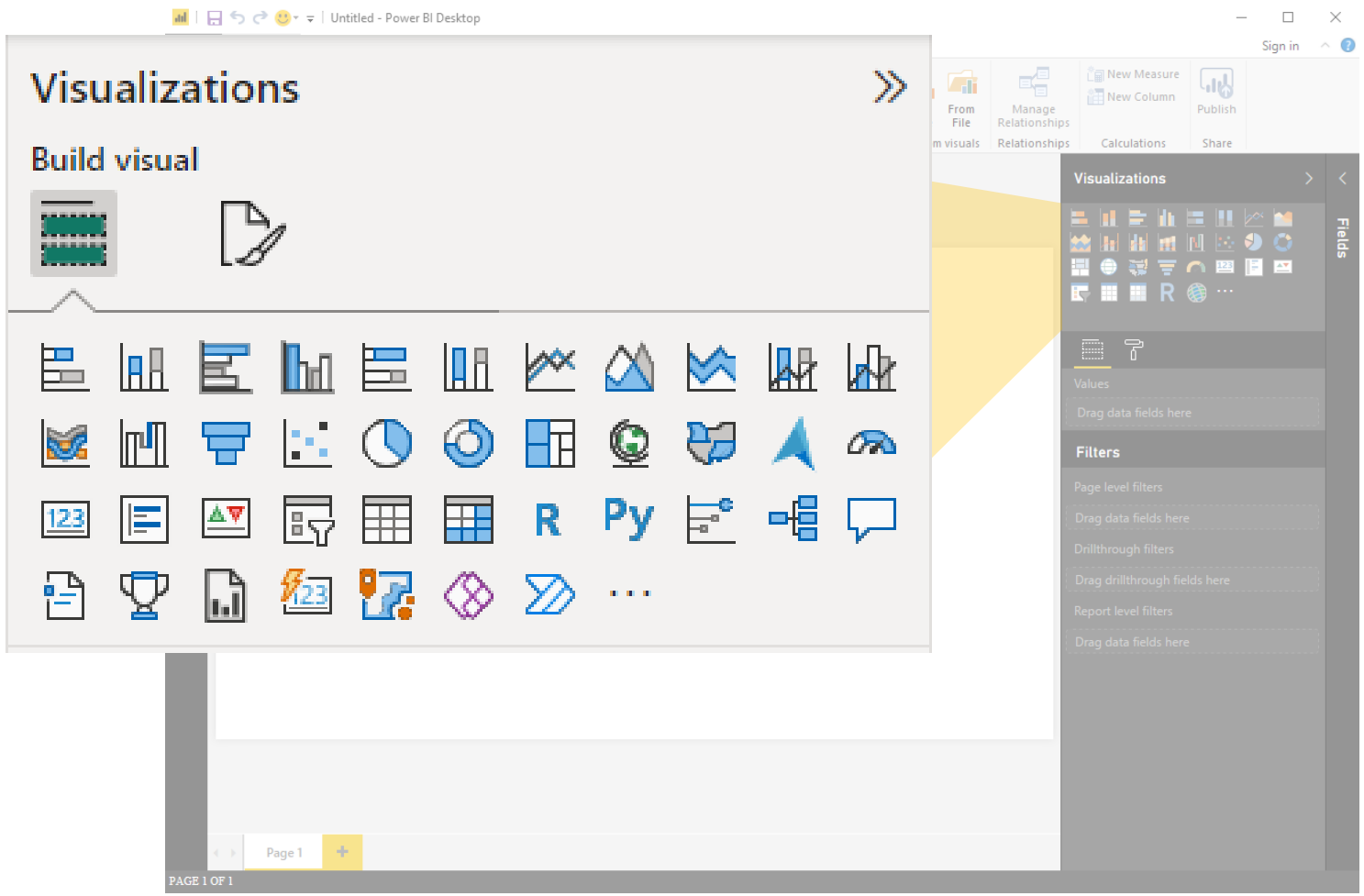


Reports and Dashboards

Dashboard Components

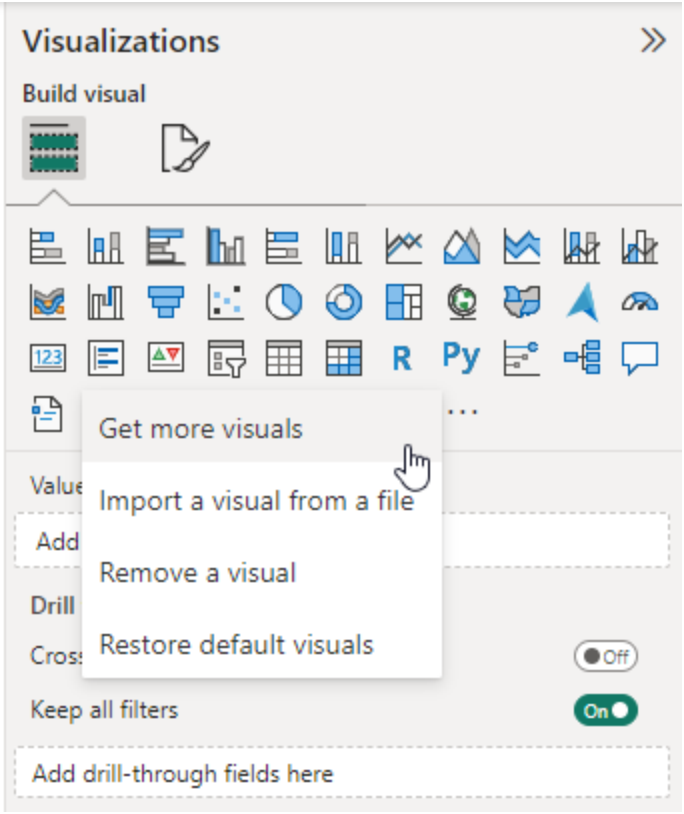
Chart Visualizations

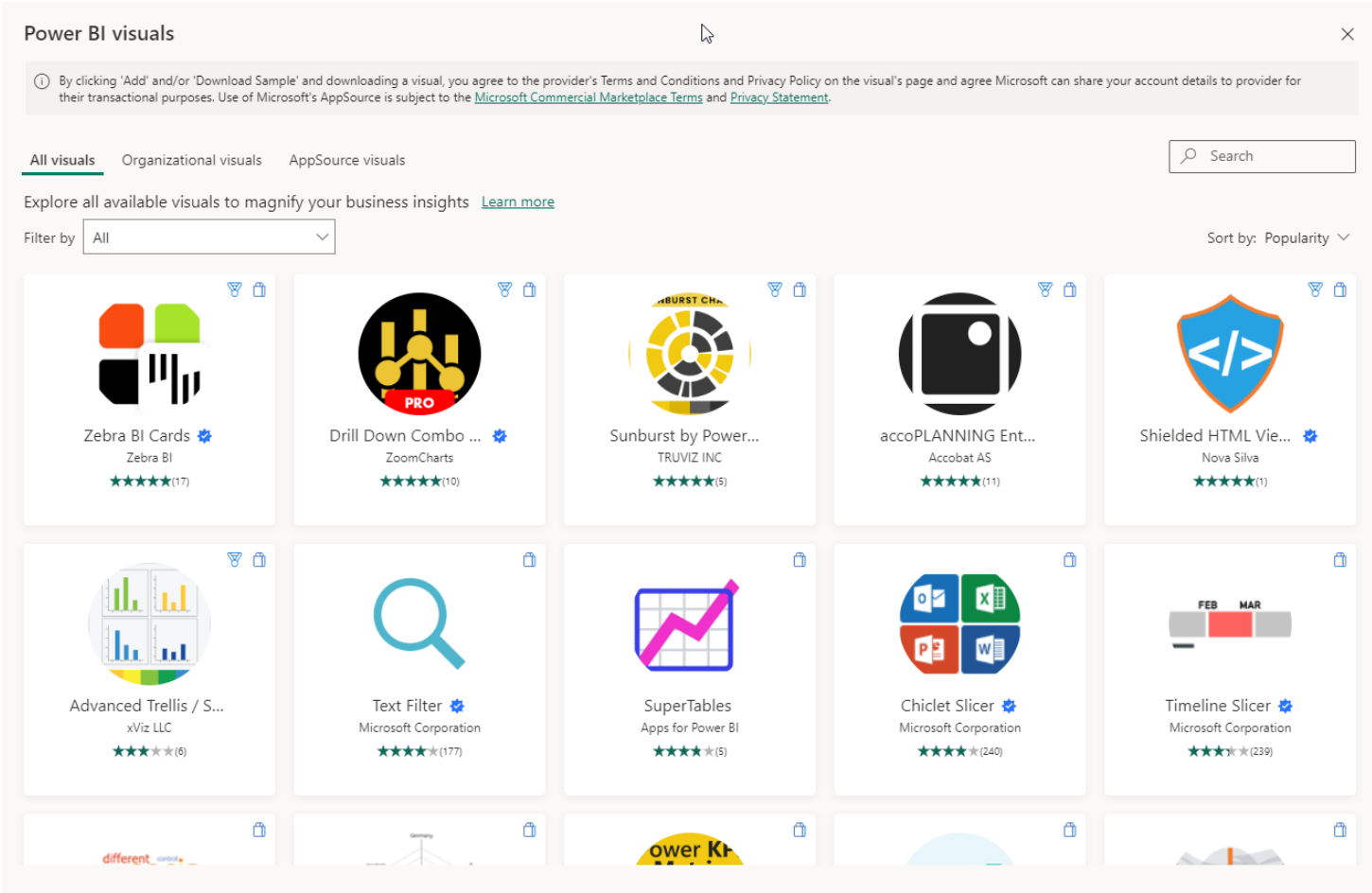
- Bar chart
- Column chart
- Line chart
- Are chart
- Pie chart
- Combo chart
- Bubble chart
- Scatter chart
- Donut chart
- Gauge chart
- Funnel chart
- Waterfall chart



Visuals

Examples of Custom Visuals





Data Transformation

- Data Transformation Components
- Data Modeling

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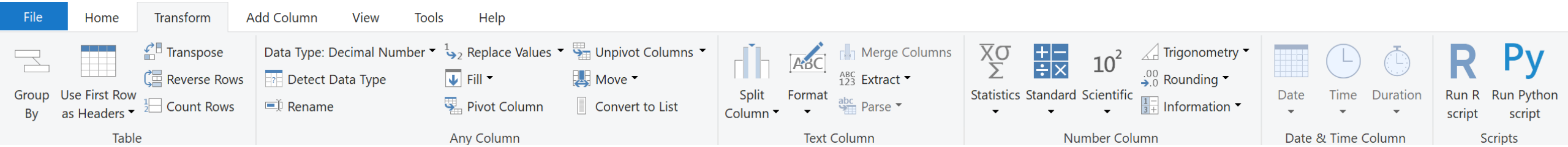
Data Transformation

Data Transformation Components

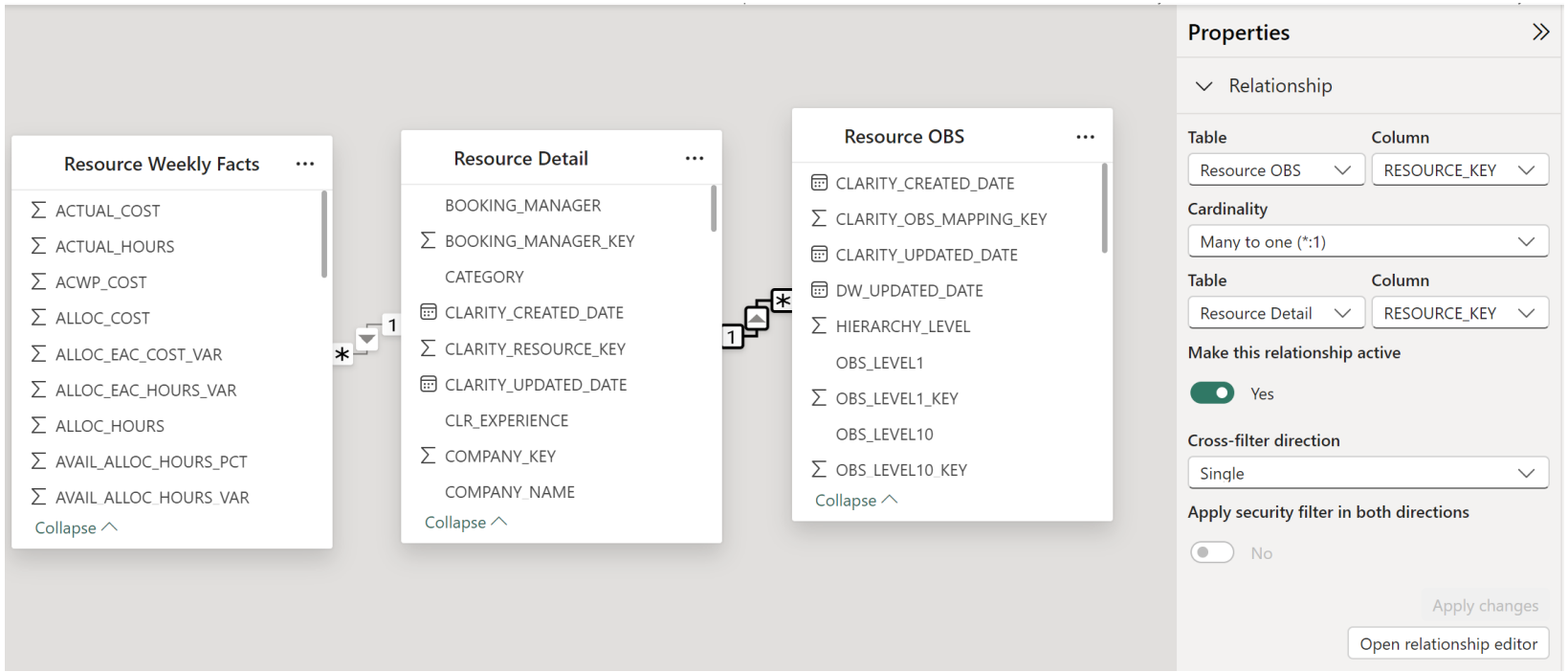
- Use first row as header
- Split the field or concatenate fields
- Replace values null with blanks
- Group data
- Pivot/unpivot columns
- Aggregate functions
- Format columns



Data Transformation

Data Modeling

- Import multiple tabs from Excel or Create multiple queries
- Join the tables



Data Transformation - Advanced

- Creating your Own M Script
- M Script Examples

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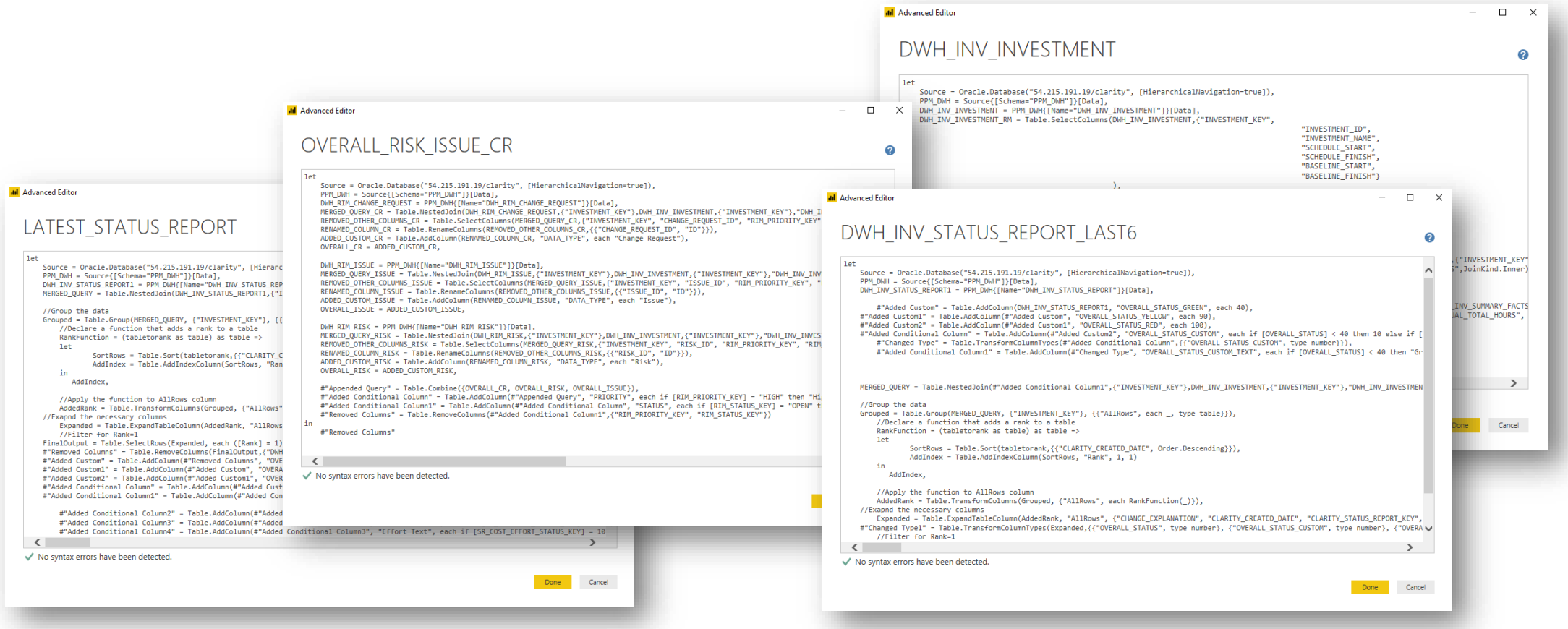
Data Transformation - Advanced

Creating your own M script
for your next advanced report

Data Transformation - Advanced

M Script Examples



Power BI Paginated Report

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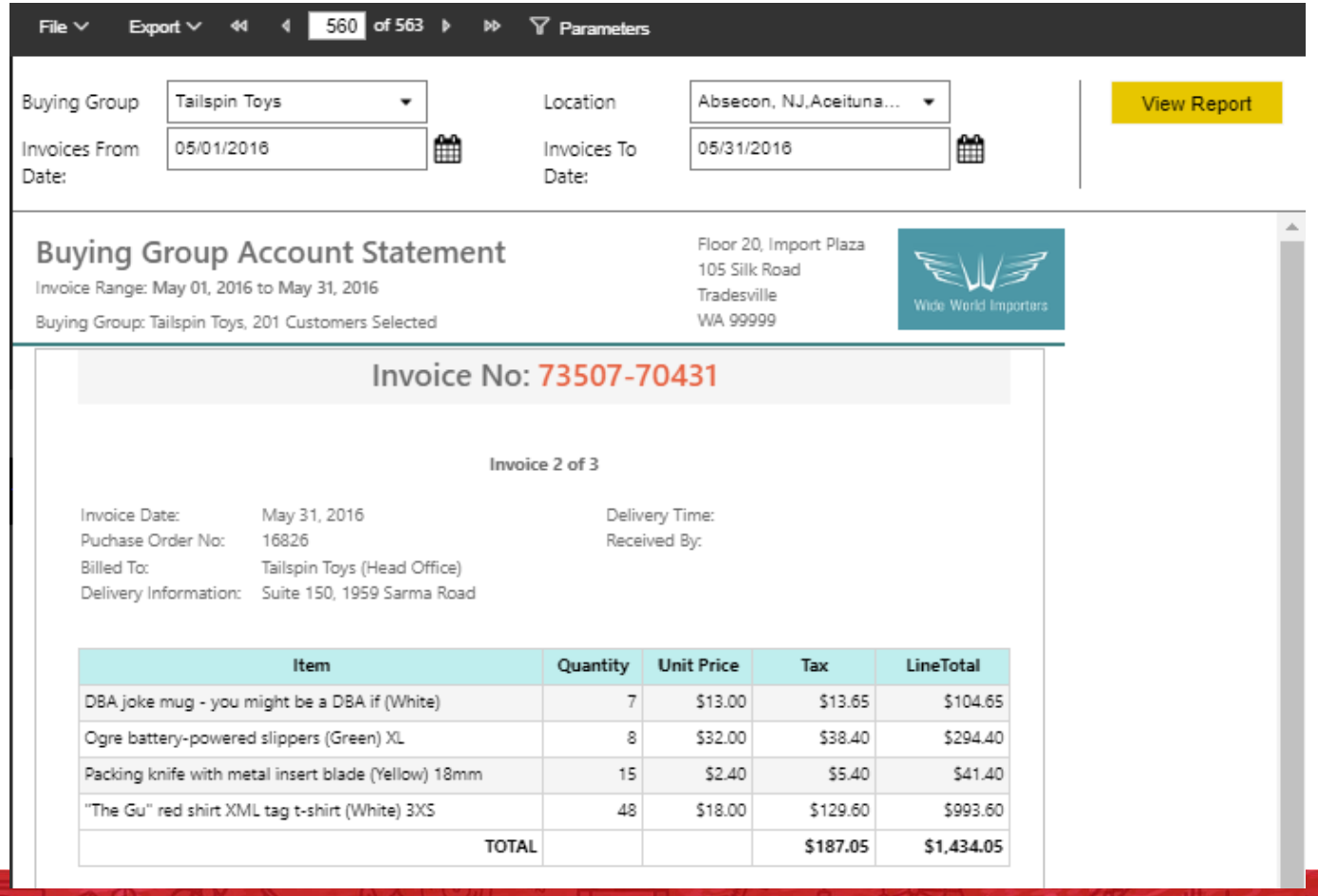
Overview

Power BI Paginated Report is designed to be printed or shared. You can create pixel-perfect reports with many pages of the same layout.



Use Case

- Export project summary for each program.
- Email list of Red projects of dynamic counts.
- Integrate with Power BI Report with parameters.
  - ✓Insert Paginated Report in Power BI report for exporting
    - Power BI table export to csv and excel only
    - 150,00 rows limit
  - ✓Add Power BI report hyperlink in Paginated Report for detail drill-thru
    - Pass in field as parameter

Advanced Fabric Options

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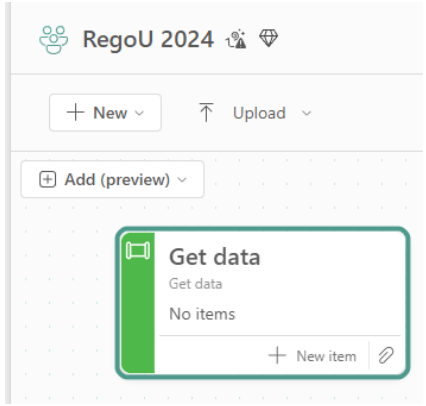
Advanced Use Cases

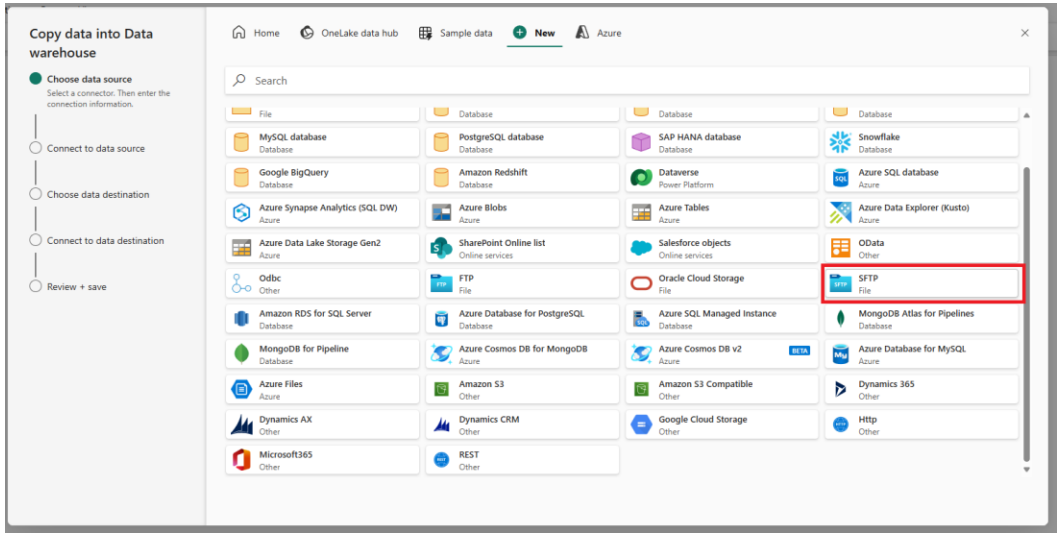
- SFTP
- Warehousing
- Datamart
- Copilot

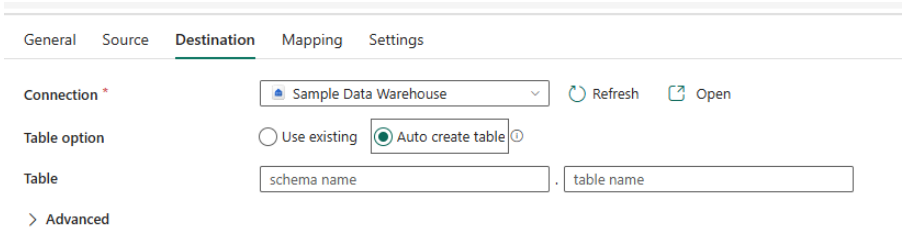
Read from file in SFTP

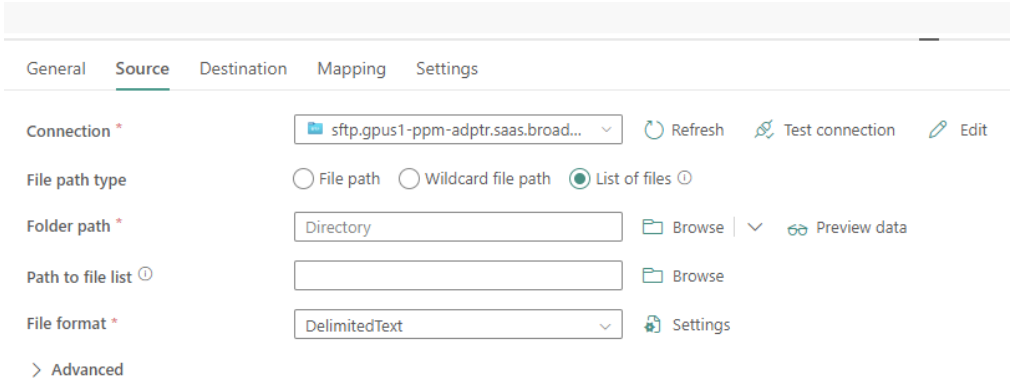
- Connect to SFTP via Data Pipelines: Use Microsoft Fabric's pipelines to extract data from the SFTP directory.
- Transform Data with Dataflows: Clean and prepare the extracted data using Fabric's dataflows.
- Load into Data Warehouse: Automatically load the transformed data into the target data warehouse.
- **Ingest Data into Datamart:** Use Microsoft Fabric to load the transformed data directly into a Datamart, enabling simplified analysis and reporting.
- **Leverage Copilot for Automation:** Utilize Microsoft Copilot to automate and streamline the data flow setup, transformations, and loading processes with AI-driven recommendations.
- Fabric Services might require additional licensing and considerations when setting up the service that will count towards Fabric capacity.

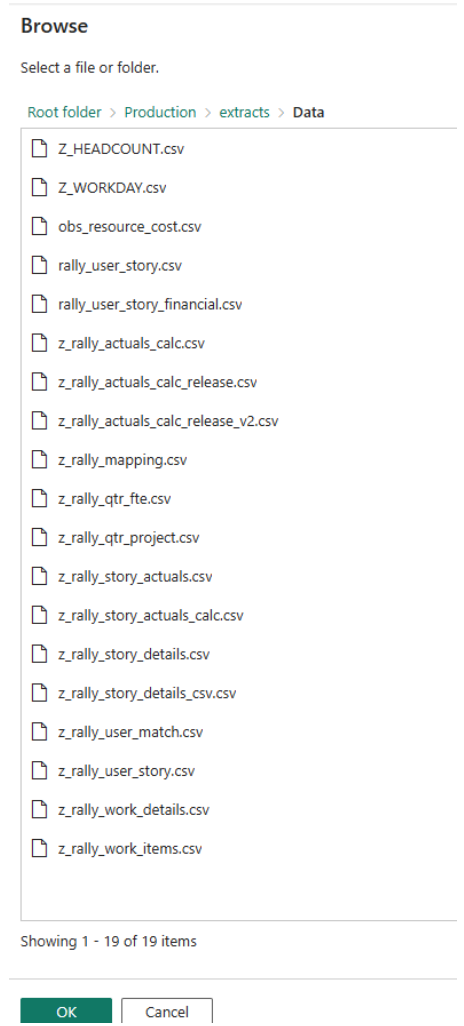
Read from file in SFTP











Questions?

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Master Clarity with Rego University

Earn Certifications in Administration, Leadership, and Technical Proficiency

Let Rego be your guide.

Elevate Your Professional Expertise with Rego University Certifications

Rego is excited to introduce our **new certification programs**, designed to enhance your expertise in Clarity administration, leadership, and technical skills. These certifications provide hands-on experience and knowledge to excel in your career.

Certification Requirements:

- **Completion**: 12 units per certification track
- **Eligibility**: Open to all Rego University attendees

Important Reminder:

To have your certification **credits tracked**, ensure you **complete the class surveys in the app** after each session. This step is critical for certification progress.

Surveys

Please take a few moments to fill out the class survey.
Your feedback is extremely important for future events.

Thank You For Attending Rego University

Instructions for PMI credits

- Access your account at pmi.org
- Click on **Certifications**
- Click on **Maintain My Certification**
- Click on **Visit CCR's** button under the **Report PDU's**
- Click on **Report PDU's**
- Click on **Course or Training**
- Class Provider = **Rego Consulting**
- Class Name = **regoUniversity**
- Course **Description**
- Date Started = **Today's Date**
- Date Completed = **Today's Date**
- Hours Completed = **1 PDU per hour of class time**
- Training classes = **Technical**
- Click on **I agree** and **Submit**

Let us know how we can improve!
Don't forget to fill out the class survey.

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