






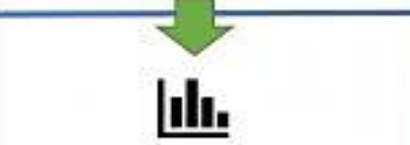





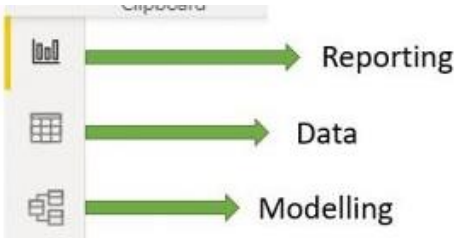
Визуализация и анализ данных с Power BI. День 5

Power BI: режимы загрузки данных

		Connectivity Types			
		LiveConnection	DirectQuery	Import	Composite
		<ul style="list-style-type: none"> For Enterprise Solutions No data stored in memory Full Reporting No data transformation No data modelling High-performing Data stored at source Queries sent to source No refresh required 	<ul style="list-style-type: none"> Full Reporting No data stored in memory No data transformation Limited data modelling Lower-performing Data stored at source Queries sent to source No refresh required 	<ul style="list-style-type: none"> Full Reporting No data stored in memory Full data transformation Full data modelling High-performing Data stored in Power BI Queries not sent to source Refresh required Supports Q&A & Quick Insights 	<ul style="list-style-type: none"> Combine DQ & Import Larger volumes of data No Analysis Services
Data Source		 <p>Analysis Services + Power BI Dataset</p>	 <p>SQL Databases + 20+ more Data Connectors</p>	 <p>SQL Databases + 60+ more Data Connectors</p>	 <p>SQL Databases (Import) + SQL Databases (DirectQuery)</p>
Component stored within	Data Source	 <p>Data + Model</p>	 <p>Data</p>		 <p>Data</p>
	Power BI	 <p>Visuals</p>	 <p>Model + Visuals</p>	 <p>Data + Model + Visuals</p>	 <p>Data + Model + Visuals</p>

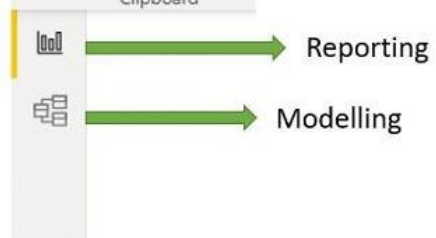
Power BI: режимы загрузки данных

Import Data



- + Fastest Possible Connection
- + Power BI Fully Functional
- + Combining Data from different sources
- + Full DAX expressions
- + Full Power Query transformations
- Power BI file size limitation

DirectQuery



- + Large Scale data sources supported. No size limitation.
- + Pre-Built models in some data sources can be used instantly
- Limited Power Query functionality
- Limited DAX functionality
- Cannot combine data from multiple sources
- Slower Connection type: Performance Tuning in the data source is MUST DO

Live Connection

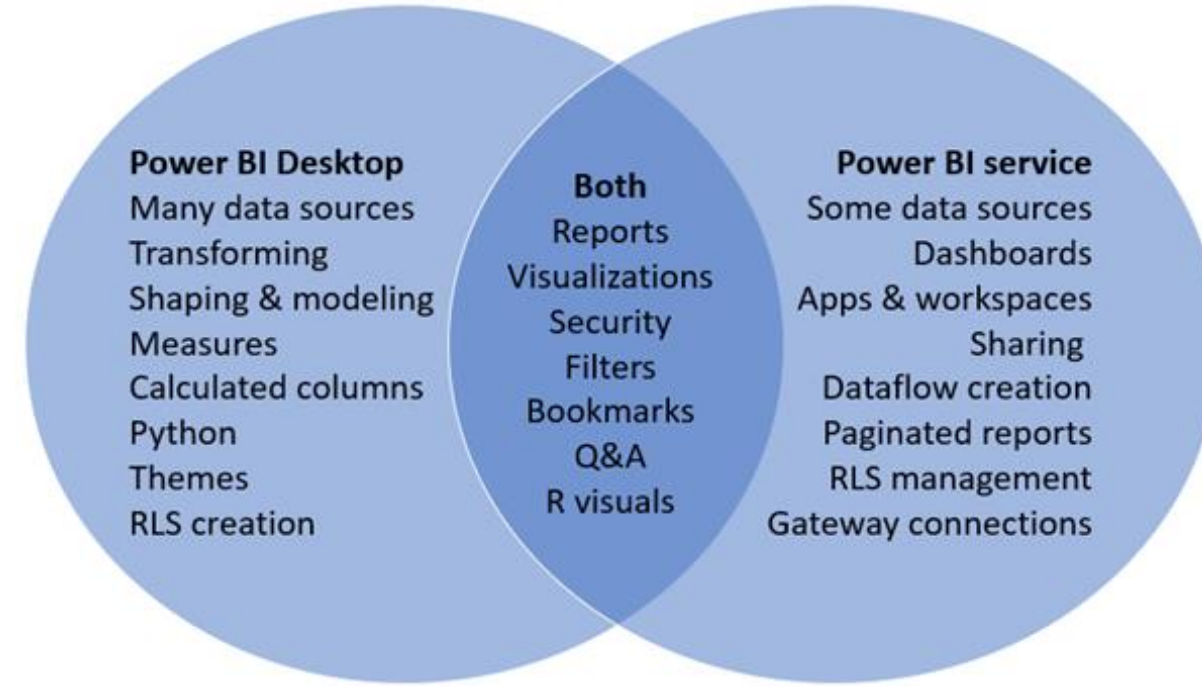


- + Large Scale data sources supported. No size limitation as far as SSAS Supports.
- + All interaction with a report will directly query the existing Analysis Services model without the need to replicate that into Power BI.
- + The overall performance will be much higher compared to DirectQuery.
- + Report Level Measures
- No Power Query
- Cannot combine data from multiple sources
- No opportunity to add your own content to the model




Andmete visualiseerimine ja analüüs Power BI abil. Päev 5


Power BI komponendid

- ❑ Power BI Desktop
- ❑ Power BI service (pilveteenus)
- ❑ Power BI Mobile Apps (Windows, iOS, Android)



Microsoft | Power BI

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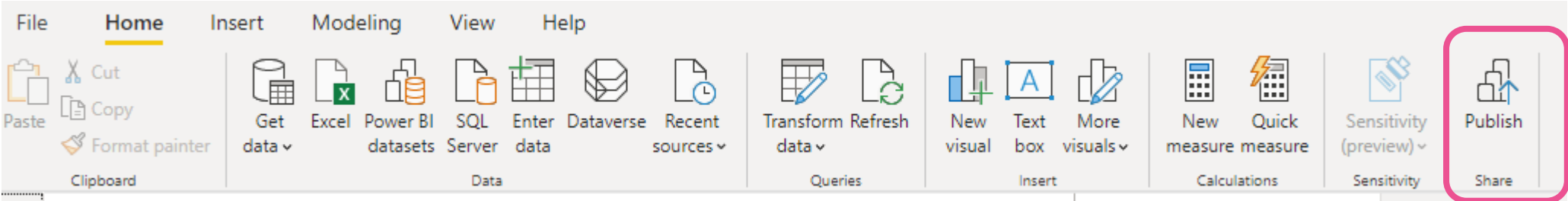
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Raporti Power BI desktopist publitseerimine:



All Content Datasets + dataflows

	Name	Type	Owner	Refreshed	Next refresh
	aruanne30	Report	Olga	6/18/21, 7:16:38 AM	—
	aruanne30	Dataset	Olga Dunajeva	6/18/21, 7:16:38 AM	N/A

Power BI service: Home screen

The screenshot shows the Power BI Home interface. On the left is a navigation pane with sections: Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Discover, Learn, Workspaces, My workspace, Dashboards (highlighted with a red box and callout 1), Reports (highlighted with a red box and callout 1), Sales Analysis (highlighted with a red box and callout 1), Workbooks (with sub-item 'You have no workbooks'), and Datasets (with sub-item 'Sales Analysis'). The main content area features a 'Good morning, MOD' greeting, a 'Procurement Discount %' bar chart (callout 6), a 'Favorites + frequents' section with seven dashboard/report tiles (callout 7), and a 'Data stories from the Power BI community' section (callout 8). The top navigation bar includes a search box (callout 5), settings, help, and feedback icons (callout 4), and a '+ New report' button. A red callout 2 points to the Microsoft 365 app launcher icon, and a red callout 3 points to the Power BI home button.

1. Navigation pane
2. Microsoft 365 app launcher
3. Power BI home button
4. Icon buttons, including settings, help, and feedback
5. Search box
6. Favorited dashboards that you use the most
7. Favorite and frequent dashboards, reports and workspaces
8. Reports built by the Power BI Community, picked by the Power BI team

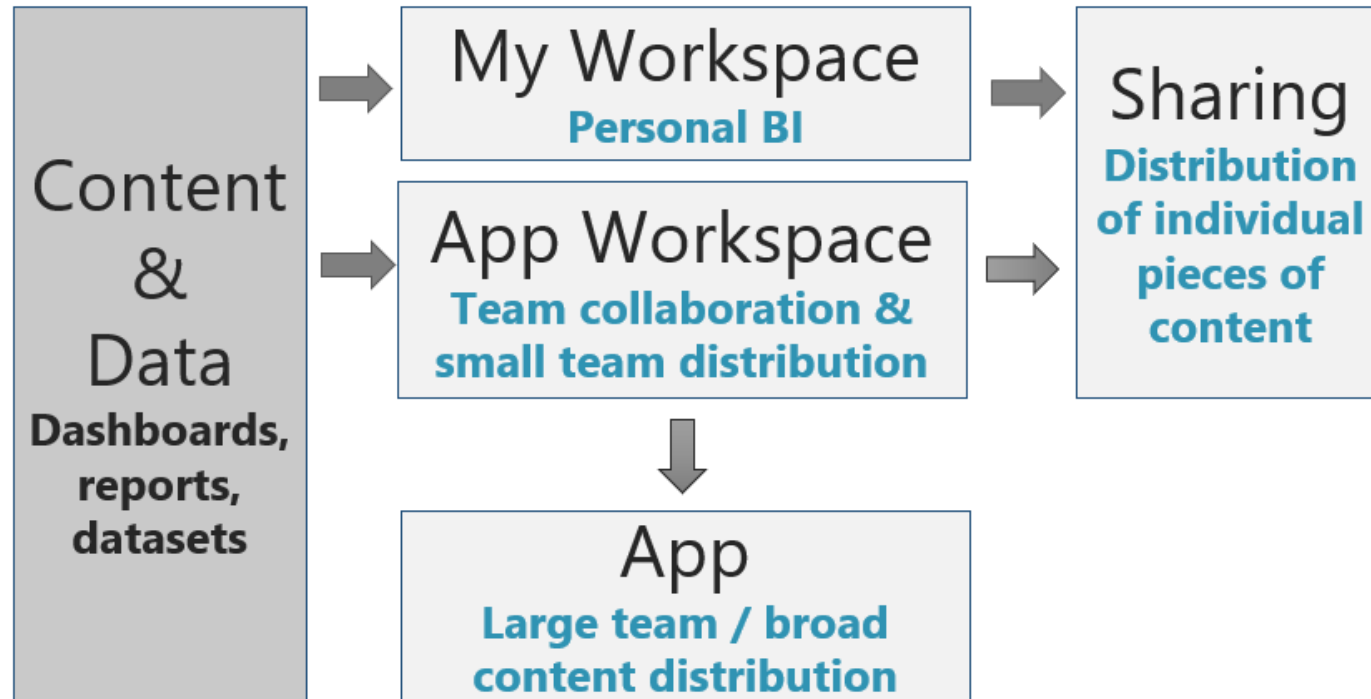
Power BI service

- ❑ После публикации отчета в Power BI service отдельно доступны Report и Dataset

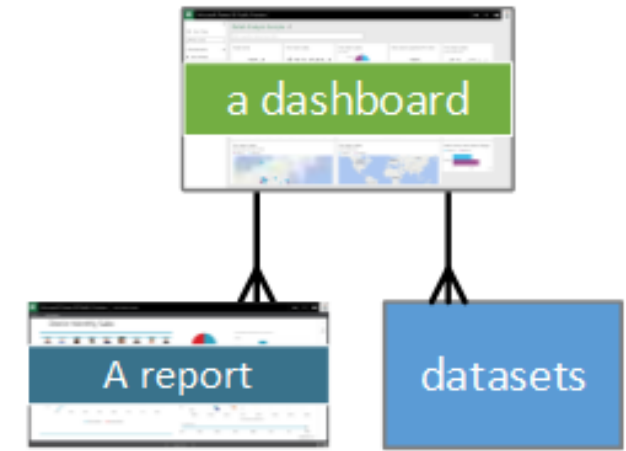
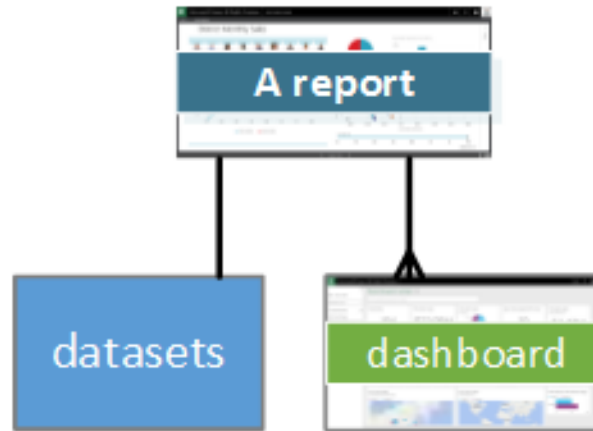
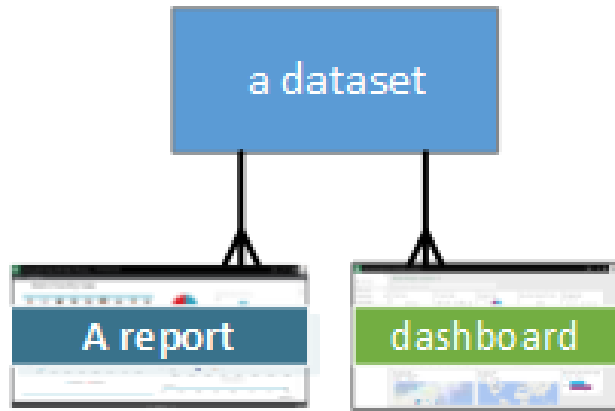
The screenshot shows the Power BI service interface for a workspace named 'My workspace'. The left sidebar contains navigation options like Home, Favorites, Recent, Create, Datasets, Goals, Apps, Shared with me, Discover, Learn, Workspaces, My workspace, and Get data. The main area displays a table of content items under the 'All' tab. The table columns are Name, Type, Owner, Refreshed, Next refresh, and Endorsement. The last two rows, representing a Report and a Dataset named 'stackedchart_Financial', are highlighted with a red box.

Name	Type	Owner	Refreshed	Next refresh	Endorsement
sample1	Report	Sucharita Das	6/7/21, 3:48:48 PM	—	—
sample1	Report	Sucharita Das	6/7/21, 5:16:39 PM	—	—
sample1	Dataset	Sucharita Das	6/7/21, 5:16:39 PM	N/A	—
sample1.pbix	Dashboard	Sucharita Das	—	—	—
sample_report1	Report	Sucharita Das	6/7/21, 3:48:48 PM	—	—
stackedchart_Financial	Report	Sucharita	6/11/21, 5:01:54 PM	—	—
stackedchart_Financial	Dataset	Sucharita Das	6/11/21, 5:01:54 PM	N/A	—

Power BI service: My workspace and workspaces



Power BI service: datasets, reports, dashboards



Dataset:

- can be used in many workspaces
- can be used in many reports
- visualizations from that one dataset can display on many different dashboards.

Report:

- is contained in a single workspace
- can be associated with multiple dashboards within that workspace
- uses data from one dataset (Power BI Desktop can combine more than one data source into a single dataset in a report).

Dashboard:

- is associated with a single workspace
- can display visualizations from many different datasets
- can display visualizations from many different reports
- can display visualizations pinned from other tools (for example, Excel)

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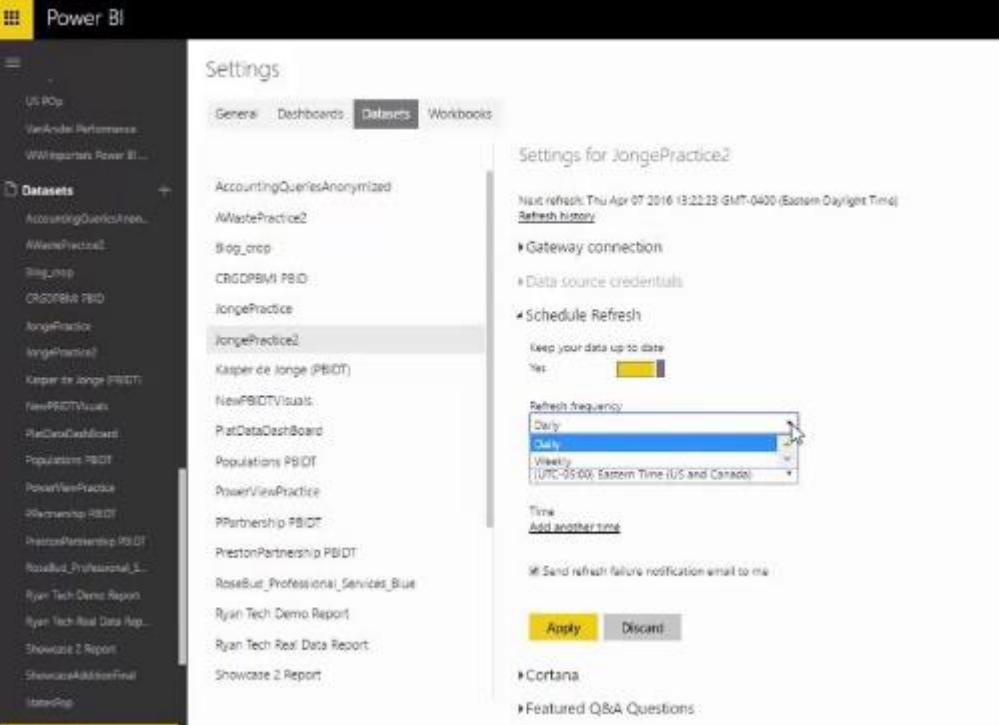
The screenshot displays the Microsoft Power BI interface. At the top, the title bar reads "Power BI My workspace" and "Продажи товаров | Data updated 11/13/20". The main workspace contains two visualizations:

- OrderQuantity by Цвет and Категория:** A stacked bar chart showing the quantity of orders grouped by color (Цвет) and category (Категория). The categories are Accessories (blue), Shoes (purple), and Clothing (orange). The colors on the x-axis are Black, Yellow, Red, Silver, Blue, Multi, and White. The y-axis represents OrderQuantity, ranging from 0 to 60.
- Выручка by Страна:** A pie chart showing revenue (Выручка) by country (Страна). The data is as follows:

Страна	Revenue (€)	Percentage (%)
United States	29.6M	31.98%
Australia	23.1M	24.80%
United Kingdom	11.4M	12.50%
Germany	12.0M	12.74%
France	6.6M	7.08%
Canada	8.1M	8.60%

The right sidebar contains the "Filters" and "Visualizations" panels. The "Filters" panel shows filters for "OrderQuantity is (All)", "Категория is (All)", and "Цвет is (All)". The "Visualizations" panel shows the current chart type (Stacked Bar Chart) and the fields used: "Axis" is "Цвет", "Legend" is "Категория", and "Values" is "OrderQuantity".

Raporti värskendamine:



Microsoft on-premises data gateway

Keep your dashboards and reports up to date by connecting to your on-premises data sources—without the need to move the data.

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