

Microsoft Power BI Desktop

Oct 2020



Power BI Version: 2.84.981.0 (20.08) (x64)

Contents

- Power BI Desktop Installation
- Intro – What is Power BI Desktop
- Power BI Desktop View
- The Three Views
 - Report View
 - Data View
 - Modelling View
- Data – Create and Connect
- Transform & Clean Data
- Create a Model
- Create Report / Visualisations



Power BI Desktop Installation

Software Download

Power BI Desktop

<https://powerbi.microsoft.com/en-us/desktop/>

The image shows a browser window displaying the Power BI Desktop download page. The page has a dark background with white text. At the top, it says "Go from data to insight to action with Power BI Desktop". Below this, it says "Create rich, interactive reports with visual analytics at your fingertips—for free." There are two buttons: a yellow "Download free >" button and a green-outlined button that says "See download or language options >". A green arrow points from the "Power BI Desktop" text in the left margin to the green-outlined button. Below the browser window, there is a tablet displaying the Power BI Desktop interface. The interface shows a dashboard for "Microsoft | Skateboard Store" with various visualizations including a bar chart for "Return Rate", a map for "Net Sales (Forecast) by Location", and a line chart for "What If? Analysis Forecast". The right sidebar shows the "Visualizations" and "Fields" panes.

Power BI Desktop—Interactive R... x +

powerbi.microsoft.com/en-us/desktop/

Go from data to insight to action
with Power BI Desktop

Create rich, interactive reports with visual analytics at your fingertips—
for free.

Download free >

See download or language options >

Sales & Returns Analysis - Power BI Desktop

File Home Insert Modeling View Help

Undo Paste Copy Cut Format painter Get data Excel Power BI SQL Enter data Recent sources Transform Refresh data Channel New visual Text box More visuals New measure Quick measure measure Publish

Microsoft | Skateboard Store

Last Refresh: Jun 30th, 2019 / Chicago, IL, USA

OneNote Office 365

Return Rate 24%

What If... We Decreased Our Return Rate by 10%

Net Sales (Forecast) \$30,772

Extra Profit \$0

Net Sales (Forecast) by Location

"What If?" Analysis Forecast

Visualizations Fields

Search

Analysis DAX Design DAX % Return Rate Age Associated Product Association Calendar Customer Details Issues and Promotions Product Sales Stable Store Tooltip Info Tooltip Info2

Product is OneNote

Net Sales Returns Return Rate Market Basket Analysis Net Sales Tooltip Returns Tooltip Category Breakdown Key Influencers

Request demo



What is Power BI Desktop?

What is Power BI Desktop?

- **Free** application
- **connect to, transform, and visualize** your **data**
- Connect to **multiple different sources of data**
- **Combine** them (often called modelling) into a **data model**.
- This data model lets you build **visuals**, and collections of visuals you can **share as reports**, with other people inside your organization.
- Most users who work on business intelligence projects use **Power BI Desktop** to create reports, and then use the **Power BI service** to share their reports with others.

What is Power BI Desktop?

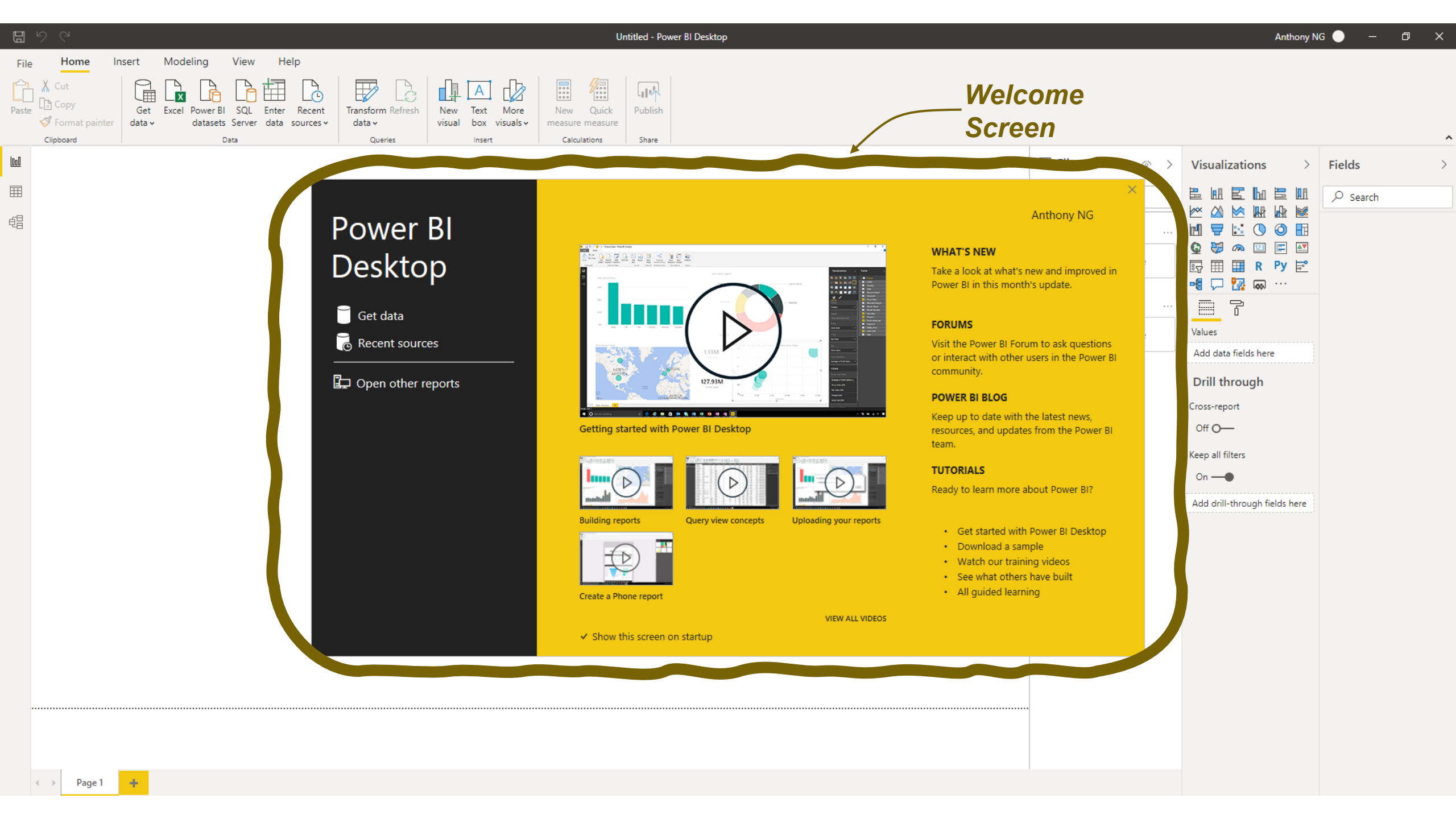
- The most common uses for Power BI Desktop are as follows:
 - **Connect** to data
 - **Transform and clean** that data, to create a data model
 - Create **visuals**, such as charts or graphs, that provide visual representations of the data
 - Create **reports** that are collections of visuals, on one or more report pages
 - **Share** reports with others by using the Power BI service

What is Power BI Desktop?

- People most often responsible for such tasks are often considered ***data analysts*** (sometimes referred to as *analysts*) or **business intelligence professionals** (often referred to as *report creators*).
- However, many people who don't consider themselves an analyst or a report creator use Power BI Desktop to **create compelling reports**, or to pull data from various sources and build data models, which they can **share** with their co-workers and organizations.



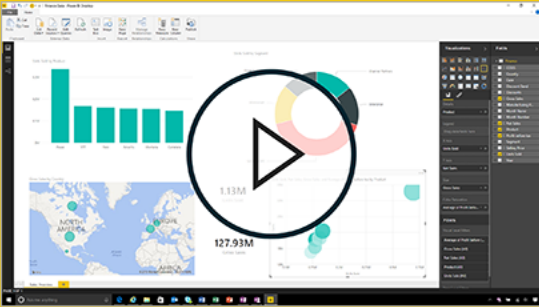
Power BI Desktop View – Welcome Splash Screen



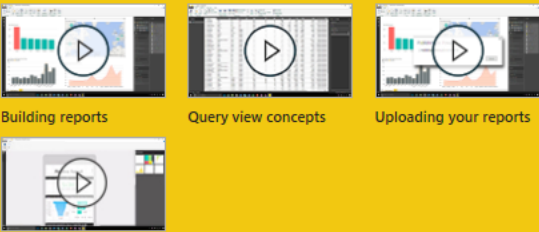
Welcome
Screen

Power BI Desktop

- Get data
- Recent sources
- Open other reports



Getting started with Power BI Desktop



Building reports Query view concepts Uploading your reports Create a Phone report

✓ Show this screen on startup

[VIEW ALL VIDEOS](#)

- WHAT'S NEW**
Take a look at what's new and improved in Power BI in this month's update.
- FORUMS**
Visit the Power BI Forum to ask questions or interact with other users in the Power BI community.
- POWER BI BLOG**
Keep up to date with the latest news, resources, and updates from the Power BI team.
- TUTORIALS**
Ready to learn more about Power BI?

- Get started with Power BI Desktop
- Download a sample
- Watch our training videos
- See what others have built
- All guided learning

Welcome Screen

Quick starts by
Getting data
Or extract data
from recently
uses data
sources

**Demo /
Training
Videos**

Notice board
providing
information on
latest Power BI
update,
Power BI
forum,
Blog
And tutorials.

Start Power BI
by **opening
other**
(previously
created)
reports

Power BI Desktop

- Get data
- Recent sources
- Open other reports

Getting started with Power BI Desktop

Building reports

Query view concepts

Uploading your reports

Create a Phone report

[VIEW ALL VIDEOS](#)

☒ Show this screen on startup

Anthony NG

WHAT'S NEW
Take a look at what's new and improved in Power BI in this month's update.

FORUMS
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TUTORIALS
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Power BI Desktop View – The Three Views

File

Home

Insert

Modeling

View

Help

Paste

Cut

Copy

Format painter

Clipboard

Get data

Excel

Power BI datasets

SQL Server

Enter data

Recent sources

Data

Transform data

Refresh

Queries

New visual

Text box

More visuals

Insert

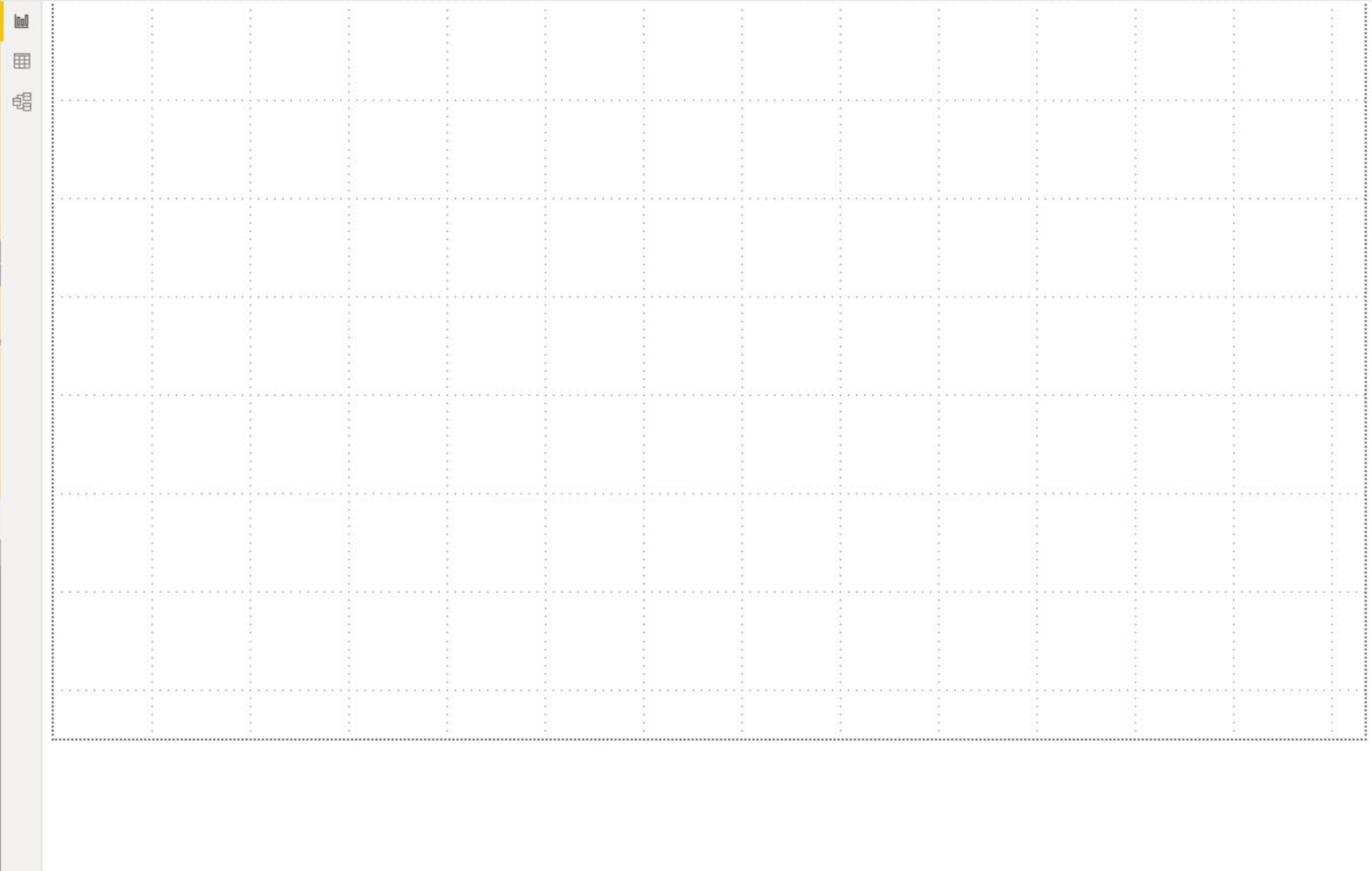
New measure

Quick measure

Calculations

Publish

Share



Filters

Visualizations

Fields

Search

Filters on this page

Add data fields here

Filters on all pages

Add data fields here

Visualizations

Values

Add data fields here

Drill through

Cross-report

Off

Keep all filters

On

Add drill-through fields here

Fields

Search

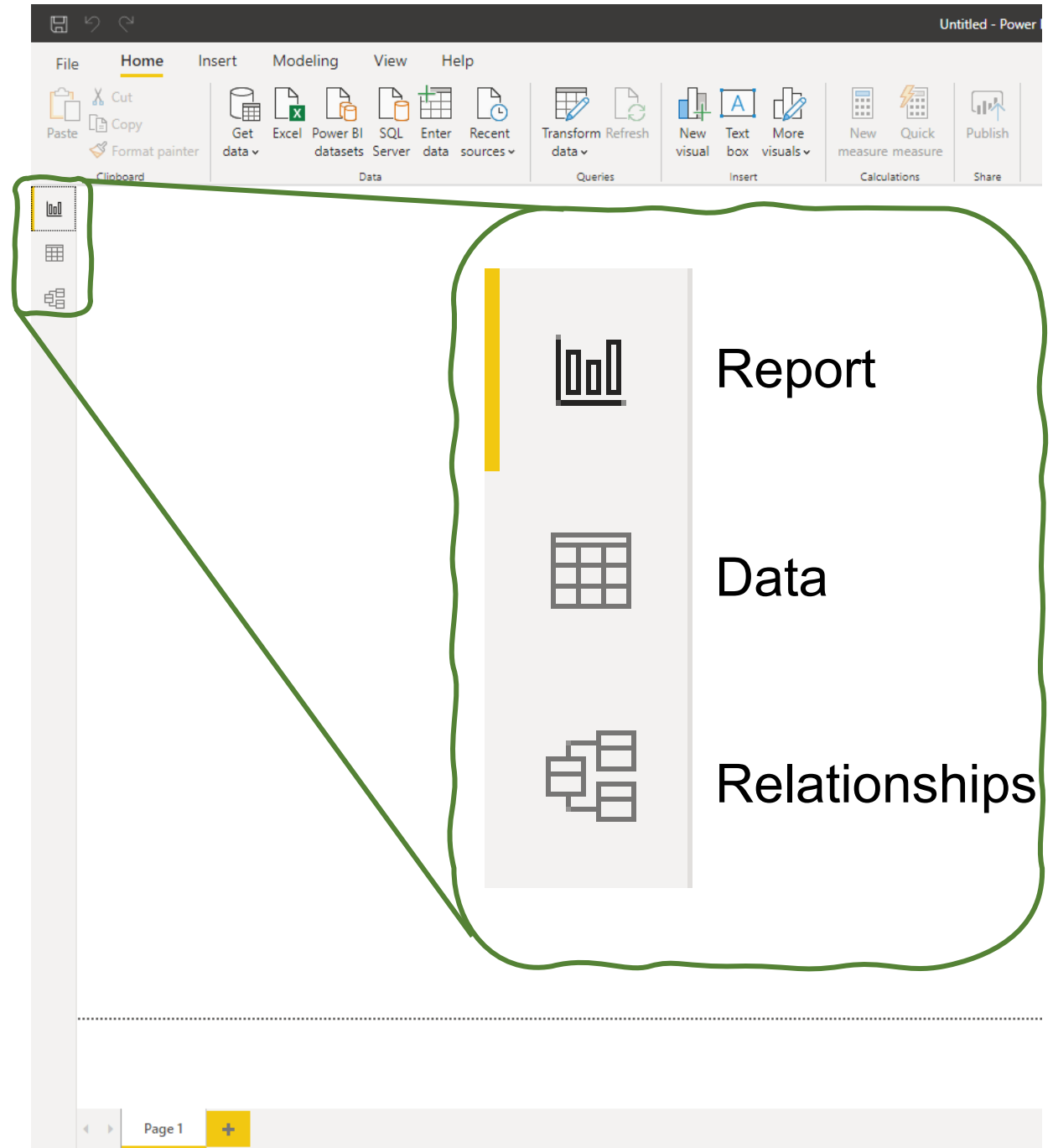
The Three Views

Report

Data View

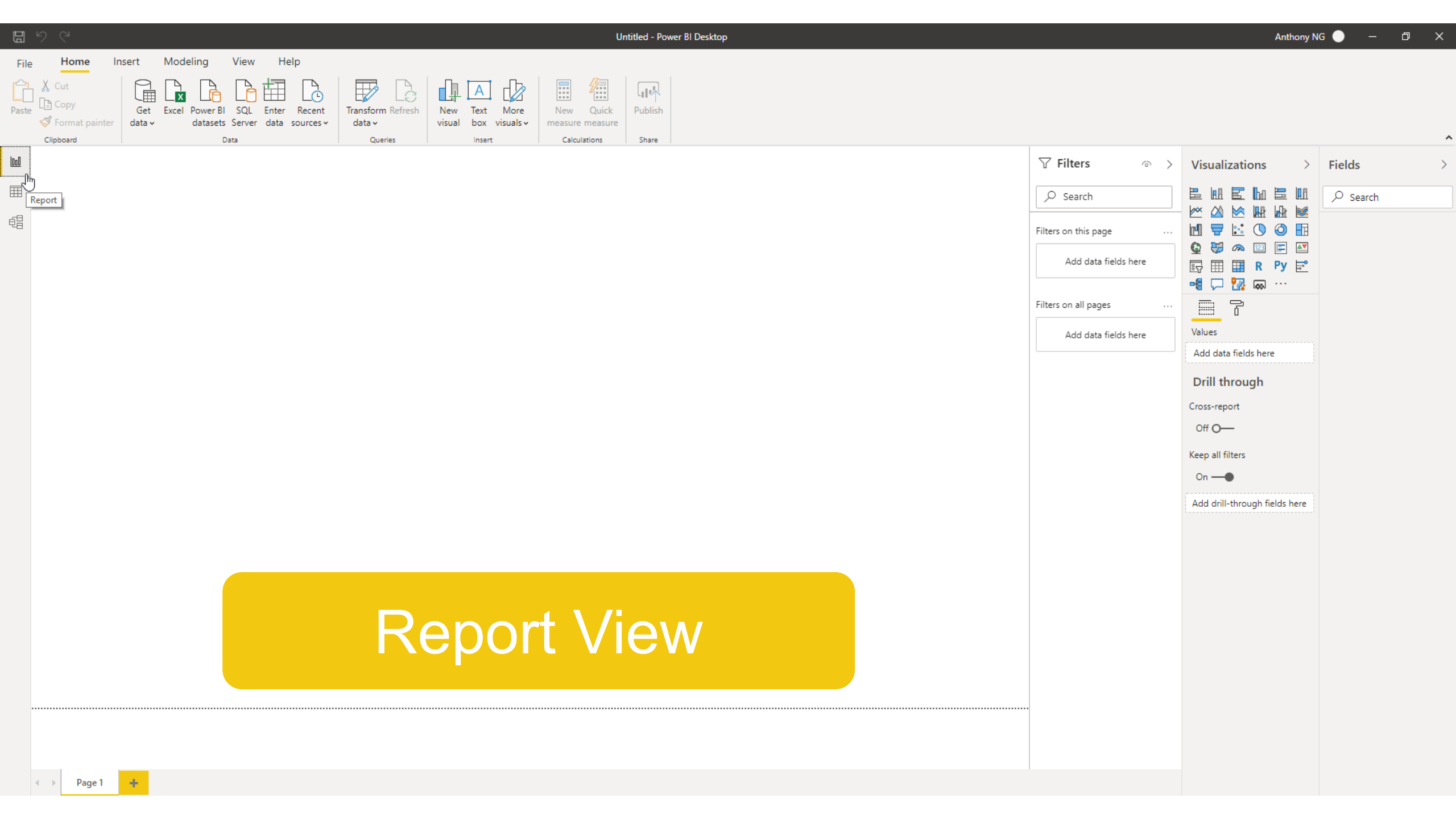
Model View (Relationship View)

NB: These are subject to change as Power BI is still under active development. Watch out for the [monthly feature update](#)





The Three Views – Report View



File Home Insert Modeling View Help

Clipboard

Paste

Cut

Copy

Format painter

Get data

Excel

Power BI datasets

SQL Server

Enter data

Recent sources

Transform data

Refresh

New visual

Text box

More visuals

New measure

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Filters

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Visualizations

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Values

Add data fields here

Drill through

Cross-report

Off

Keep all filters

On

Add drill-through fields here

Fields

Search

Report View

Title Bar

Ribbon

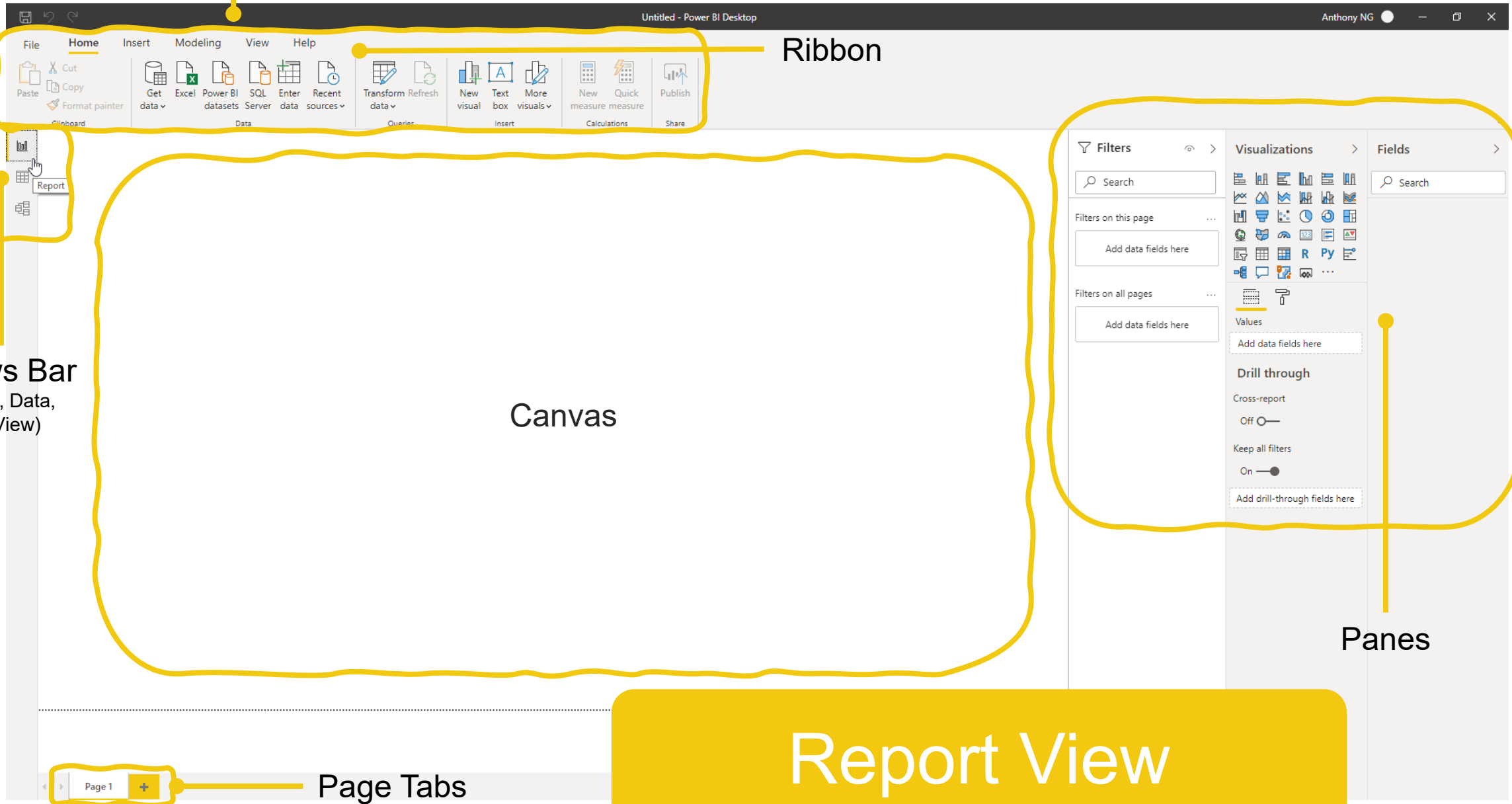
Views Bar
(Report, Data,
Model View)

Canvas

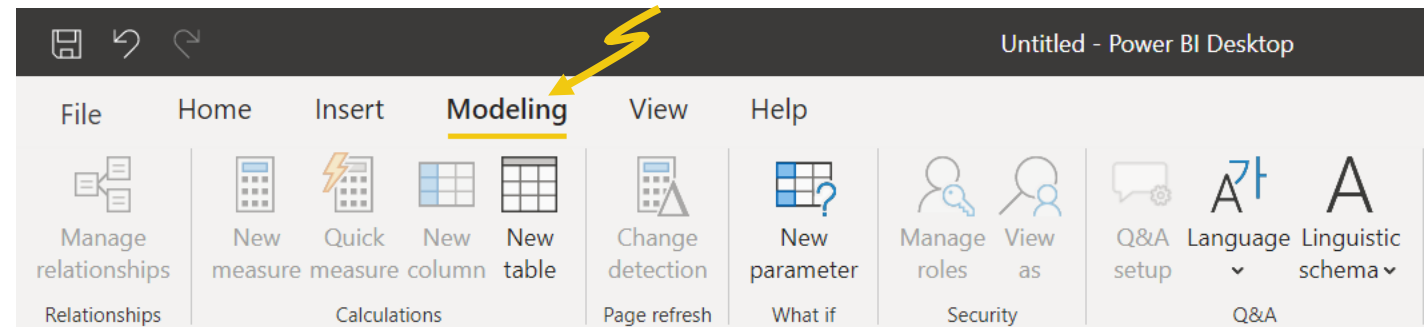
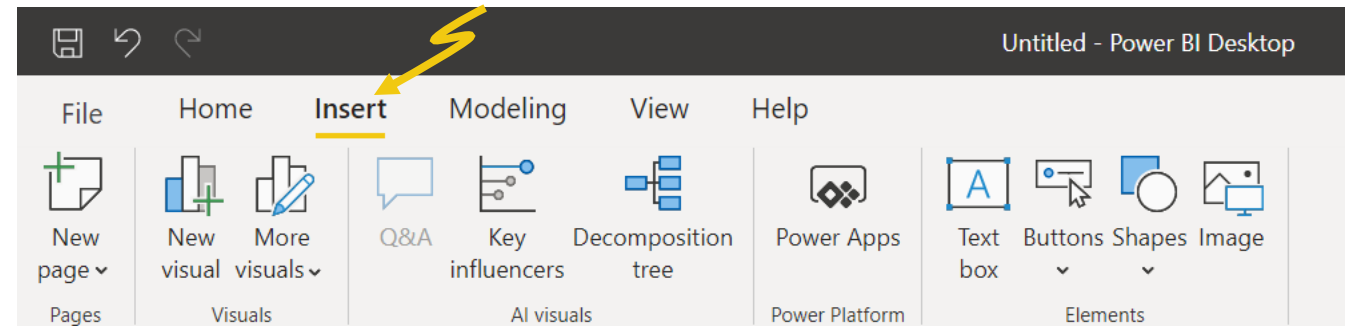
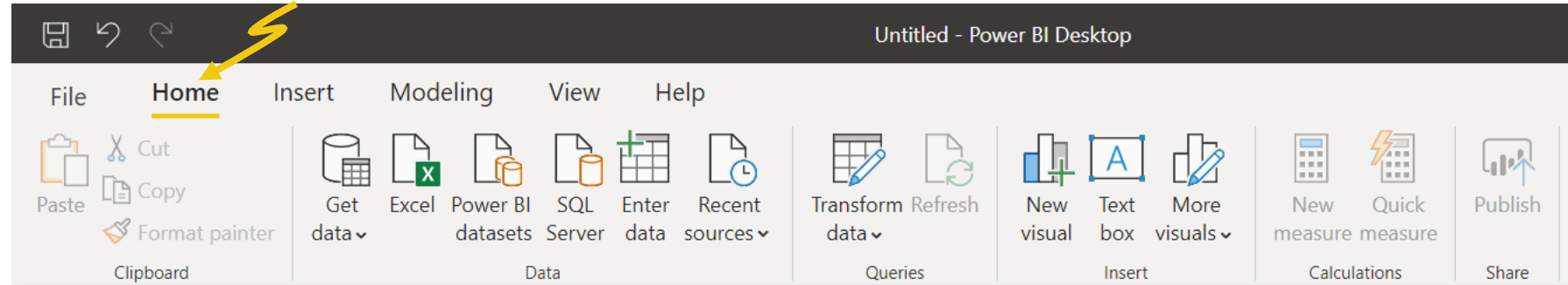
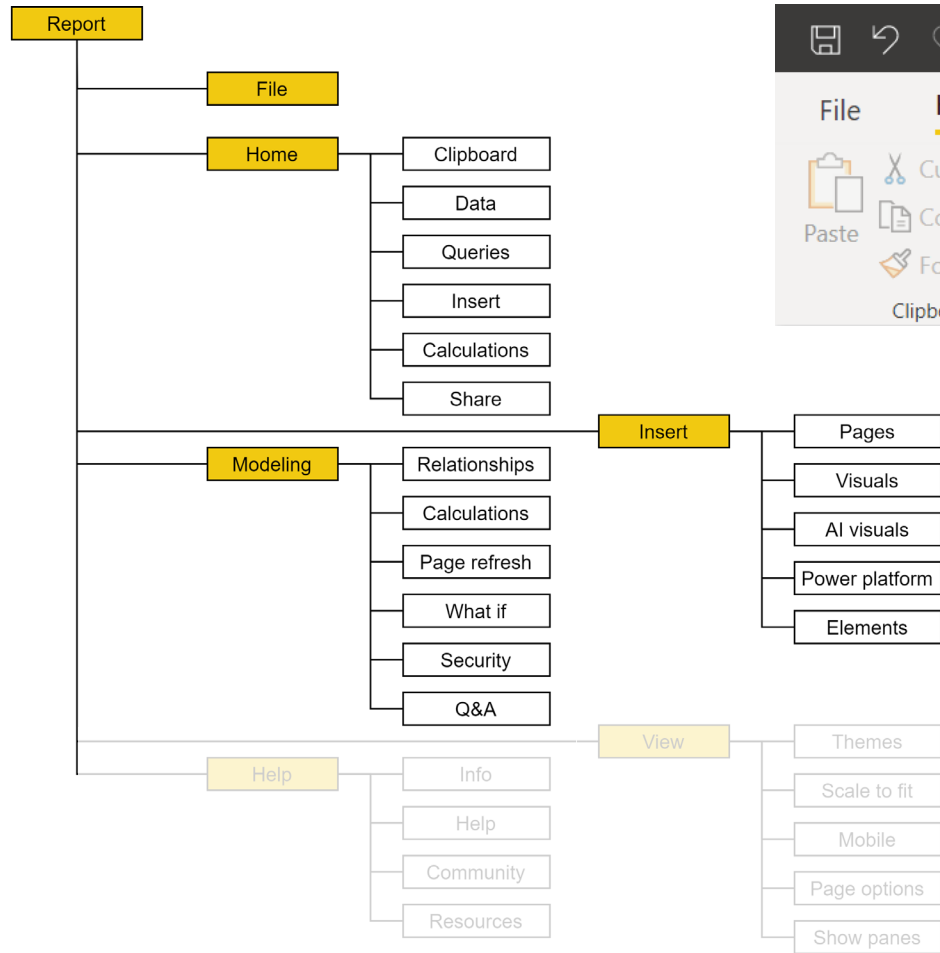
Panes

Page Tabs

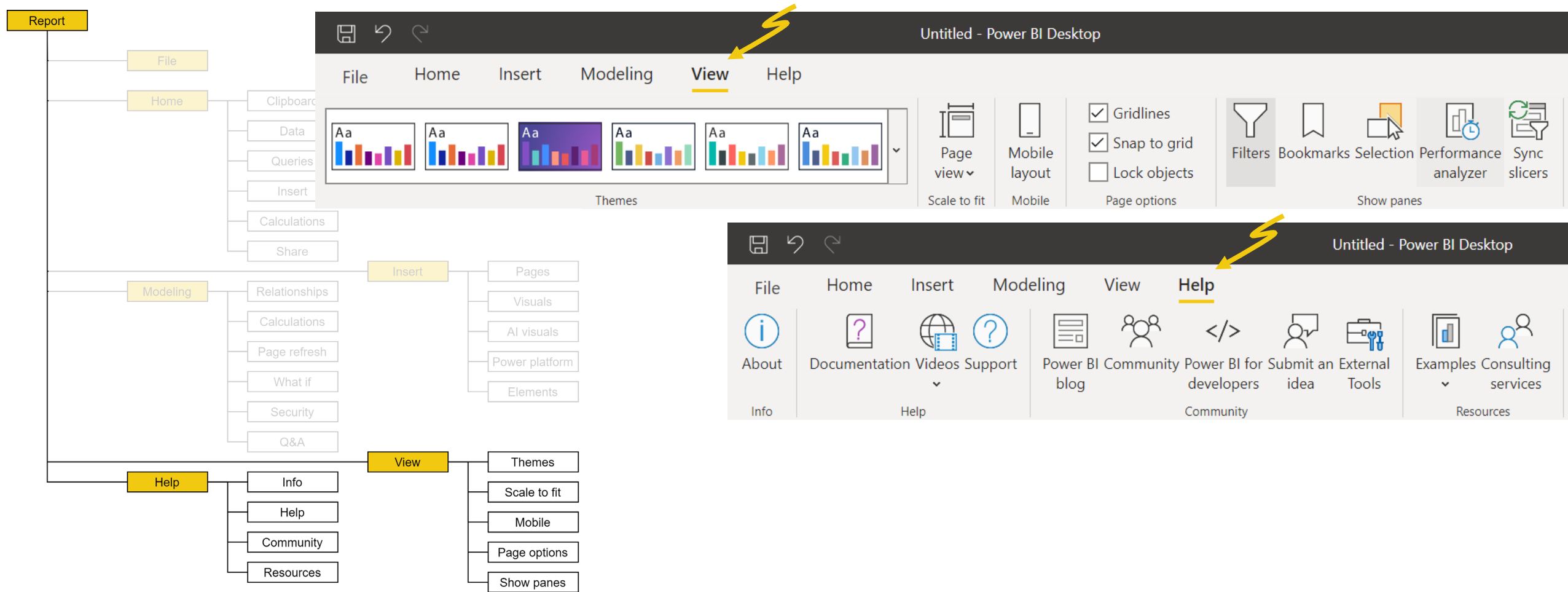
Report View



Ribbon – Report View



Ribbon – Report View

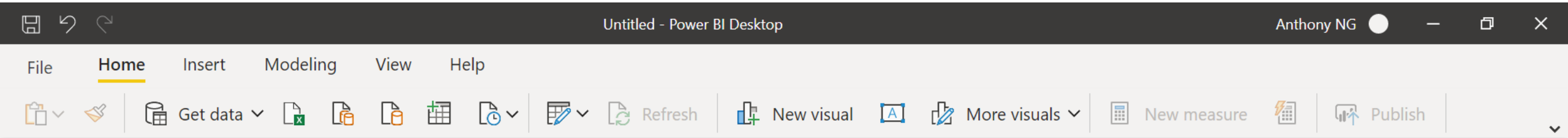




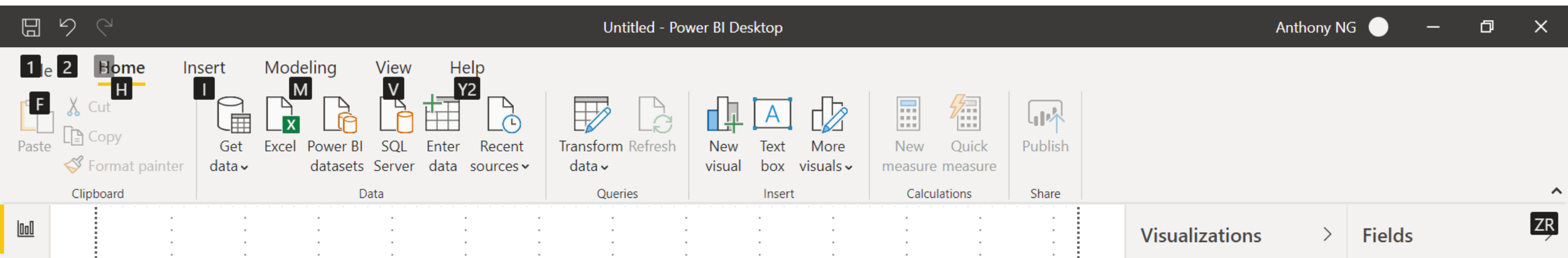
Special Features

- Collapsed view
- Short cut key
- Permanent vs contextual tabs
- File menu
- Panes
- Canvas

Ribbon – Collapsed View




Alt + Window Key to activate keytips




Ribbon – Permanent vs Contextual Tabs

Report View

- File
 - Home
 - Insert
 - Modeling
 - View
 - Help
- 
- Contextual

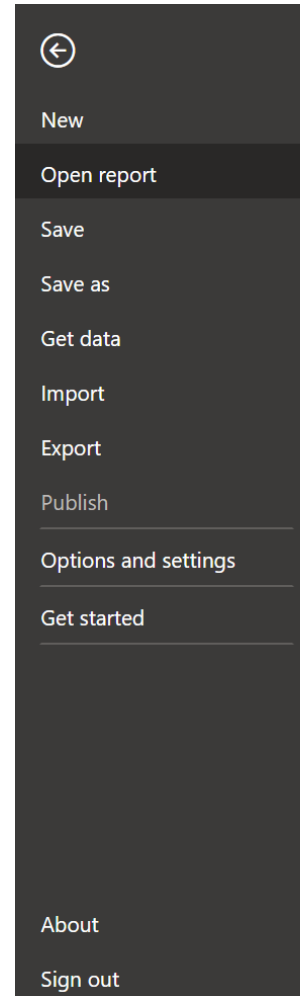
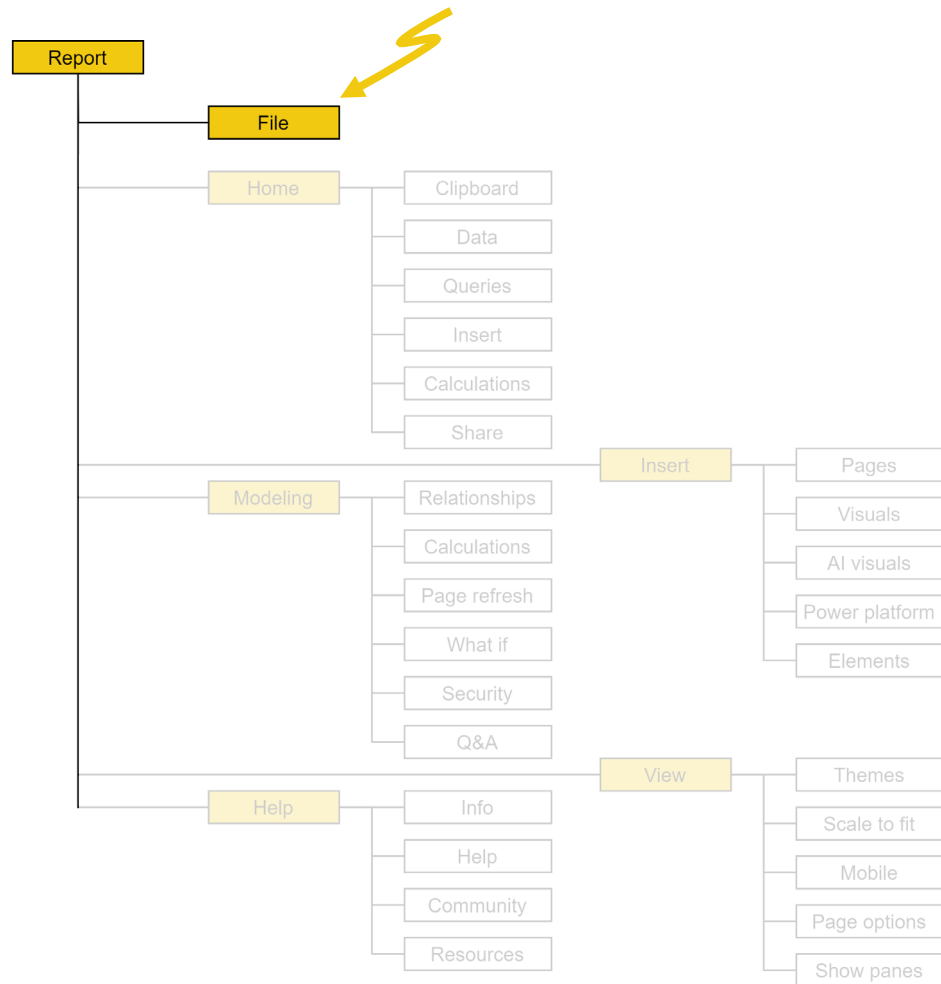
Data View

- File
 - Home
 - Help
- 
- Permanent tabs

Model View

- File
- Home
- Help

File Menu



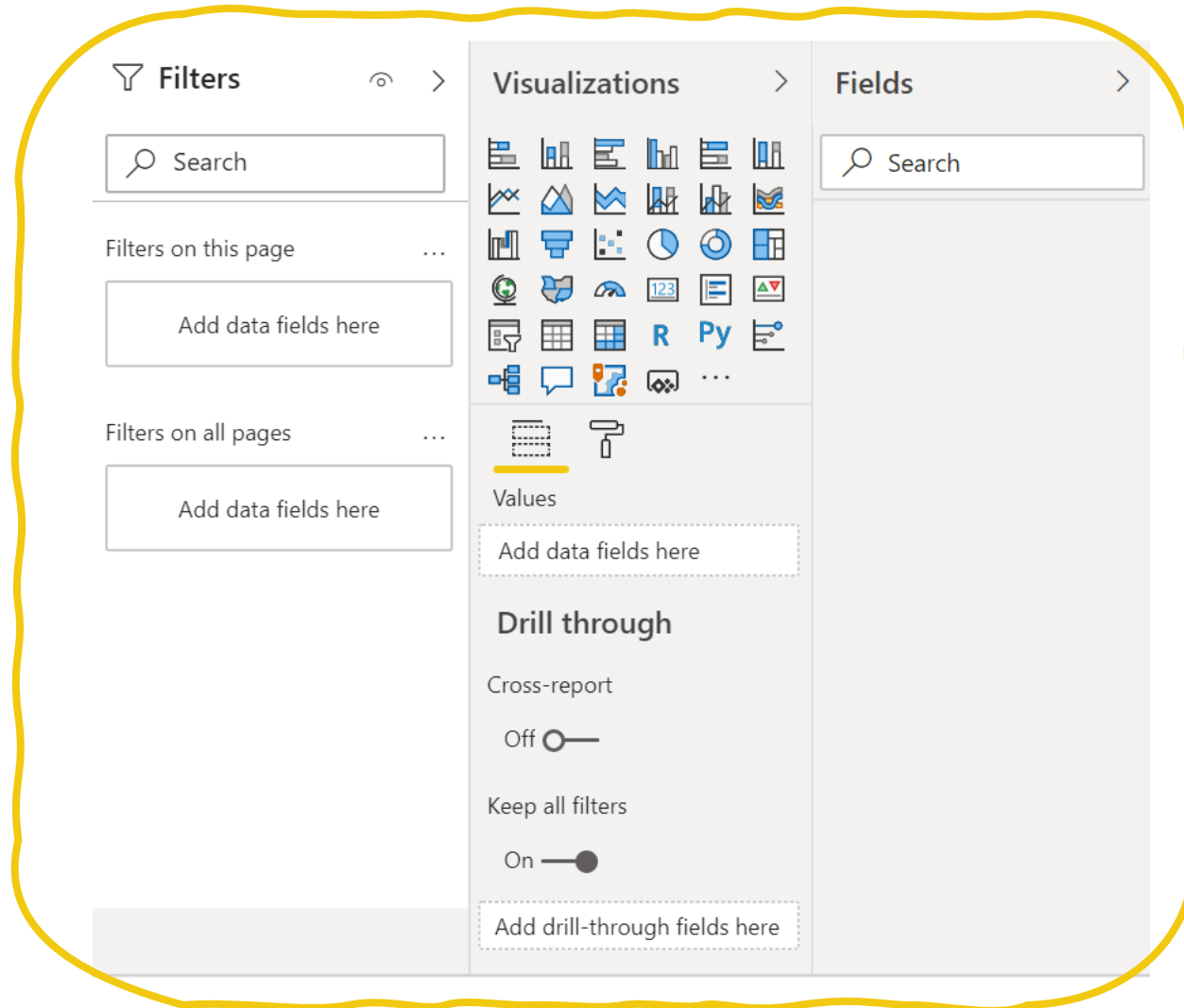
Open report

Recent reports

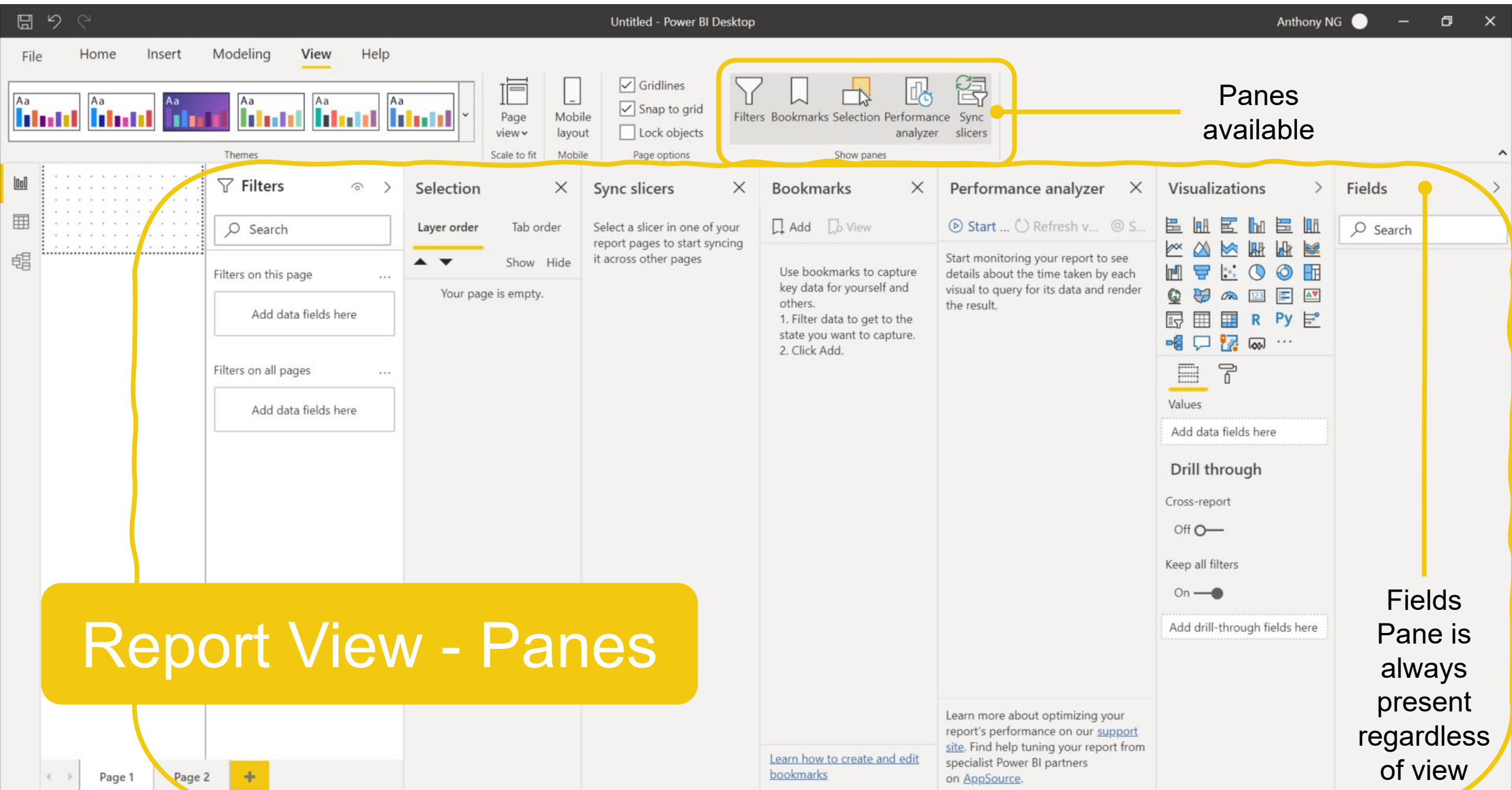
Browse reports

	Name	Opened	
	E-Commerce Data (Kaggle).pbix C: > Users > anthonym > Desktop > Power BI > sample pbix...	11 hours ago	
	States for Retirement.pbix C: > Users > anthonym > Desktop > Power BI > sample pbix...	14 hours ago	
	VideoGameSales.pbix C: > Users > anthonym > Downloads > VideoGameSales.pbix	18 hours ago	
	Coffee Dashboard.pbix C: > Users > anthonym > Desktop > Power BI > sample pbix...	18 hours ago	
	Coffee Dashboard.pbix C: > Users > anthonym > Downloads > Coffee Dashboard.p...	19 hours ago	
	states.pbix C: > Users > anthonym > Desktop > data > states.pbix	19 hours ago	
	ALERT Template 2.pbix C: > Users > anthonym > Desktop > IETL > SBM > 2020-08 ...	A day ago	
	ALERT.pbix C: > Users > anthonym > Desktop > IETL > SBM > 2020-08 ...	5 days ago	

Panes



- **Filters, Visualizations and Fields** panes are normally visible



Report View - Panes

Panels available

Fields Pane is always present regardless of view



File

Home

Insert

Modeling

View

Help



Copy

Format painter

Clipboard



Get data



Excel



Power BI datasets



SQL Server



Enter data



Recent sources



Transform data



Refresh data



New visual



Text box



More visuals



New measure



Quick measure



Publish

Calculations

Share

Data

Queries

Insert

Coffee Quality

Average Score by Country



Altitude & Total Score

5K

4K

Score

Country Name	Acidity	Aroma	Balance	Body	Flavour
Brazil					
Burundi					
China					
Colombia					
Costa Rica					
Ecuador					
El Salvador					
Ethiopia					
Guatemala					
Haiti					
Honduras					
India					
Indonesia					
Ivory Coast					
Japan					
Kenya					

Report View - Canvas

Home



Tooltip_AverageScore



Tooltip_Scatter



Tooltip_Matrix



VideoGameSales



SPOTIFY



COVID





File

Home

Insert

Modeling

View

Help



Paste



Cut



Copy



Format painter

Clipboard



Get data



Excel



Power BI datasets



SQL Server



Enter data



Recent sources

Data



Transform data



Refresh data

Queries



New visual



Text box



More visuals

Insert



New measure



Quick measure

Calculations



Publish

Share



Filters



Search

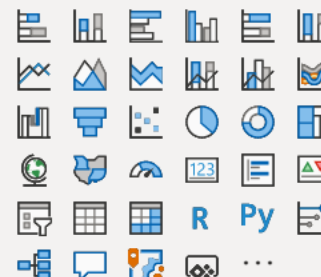
Filters on this page

Add data fields here

Filters on all pages

Add data fields here

Visualizations



Values

Add data fields here

Drill through

Cross-report

Off

Keep all filters

On

Add drill-through fields here

Fields



Search

Sheet1

☐ Σ aged_65_ol...☐ Σ aged_70_ol...☐ Σ cardiovasc...☐ continent✓ ☐ date☐ Σ diabetes_pr...☐ extreme_po...☐ female_smo...☐ Σ gdp_per_ca...☐ Σ handwashin...☐ Σ hospital_be...☐ Σ human_dev...☐ iso_code☐ Σ life_expecta...☐ location

Report View with Data Loaded





The Three Views – Data View



File Home Help



Paste



Cut



Copy



Get data



Excel



Power BI datasets



SQL Server



Enter data



Recent sources



Transform data



Refresh data



Manage relationships



New measure



Quick measure



New column



New table



Manage roles



View as



Publish

Clipboard

Data

Queries

Relationships

Calculations

Security

Share

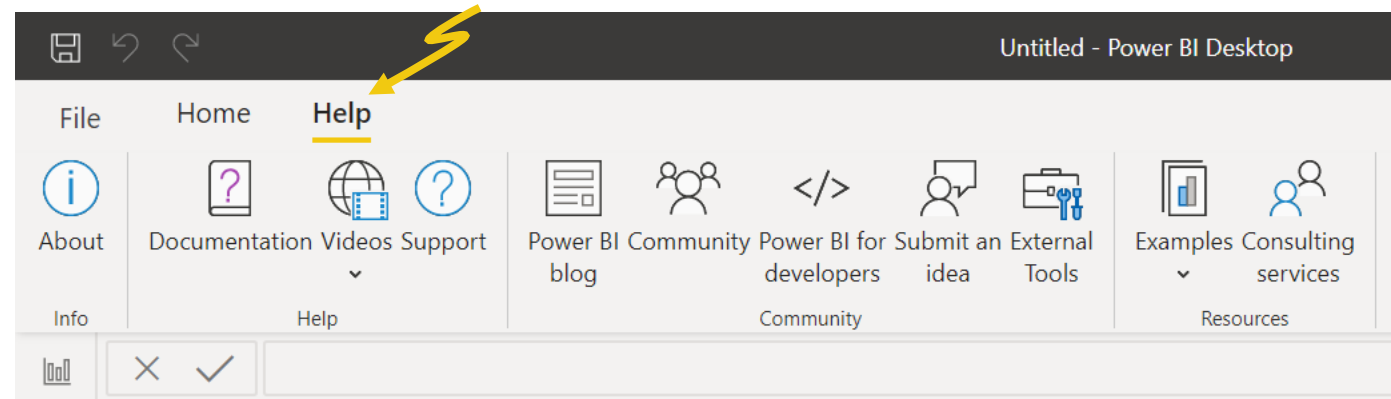
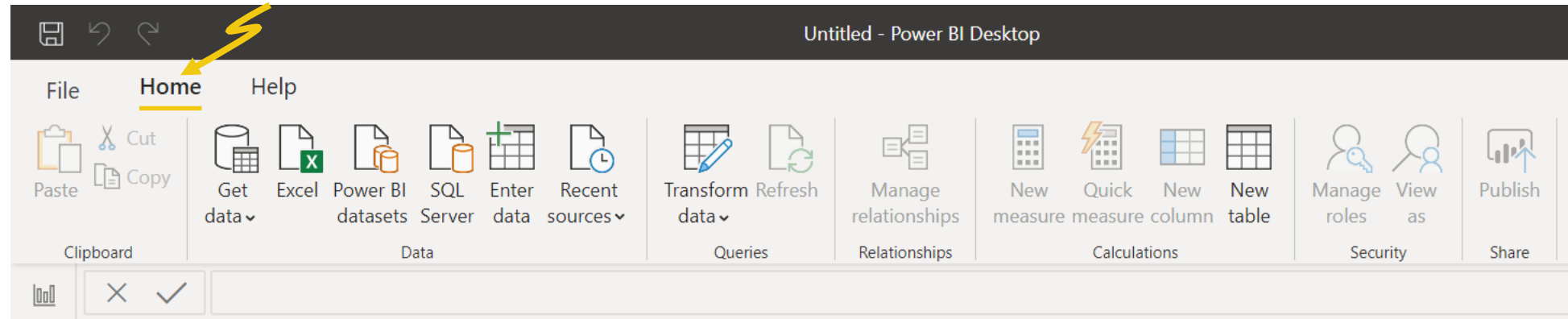
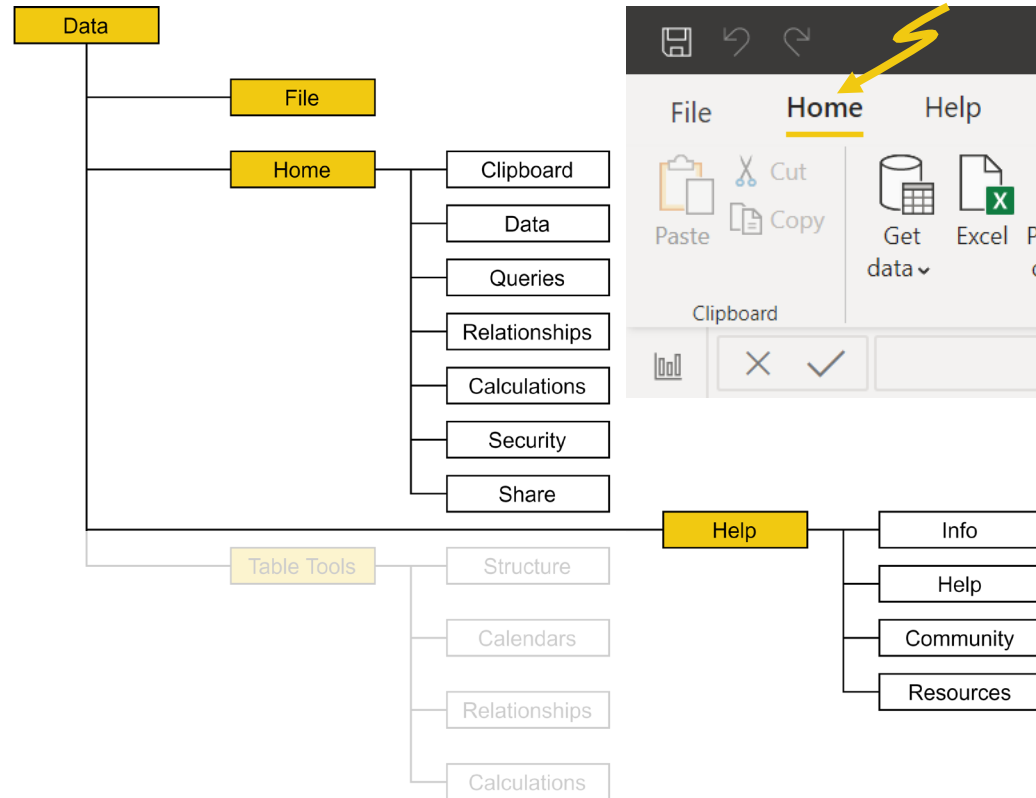


Data View

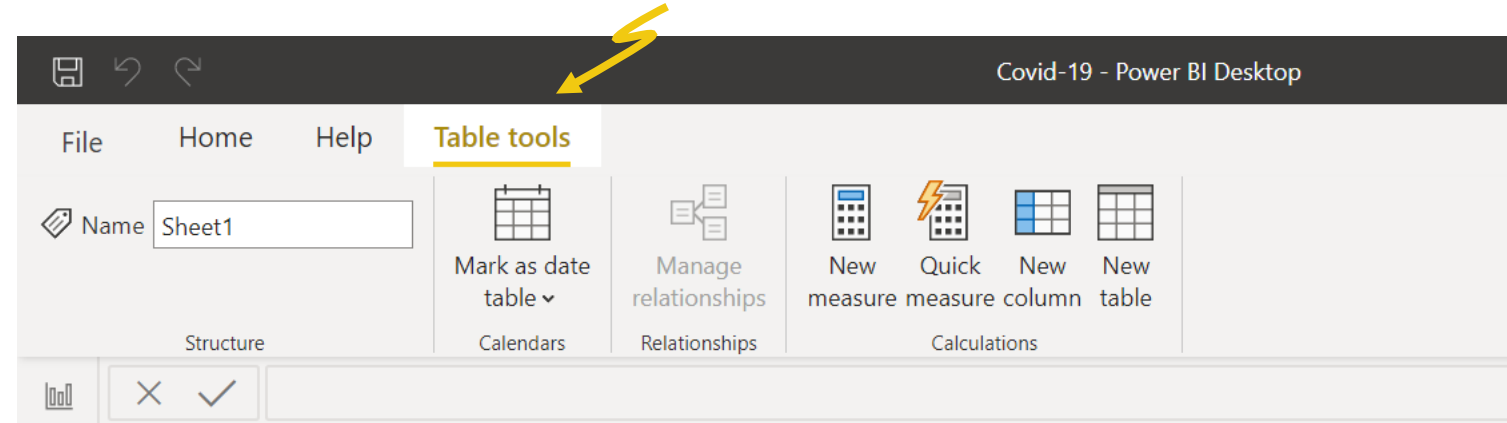
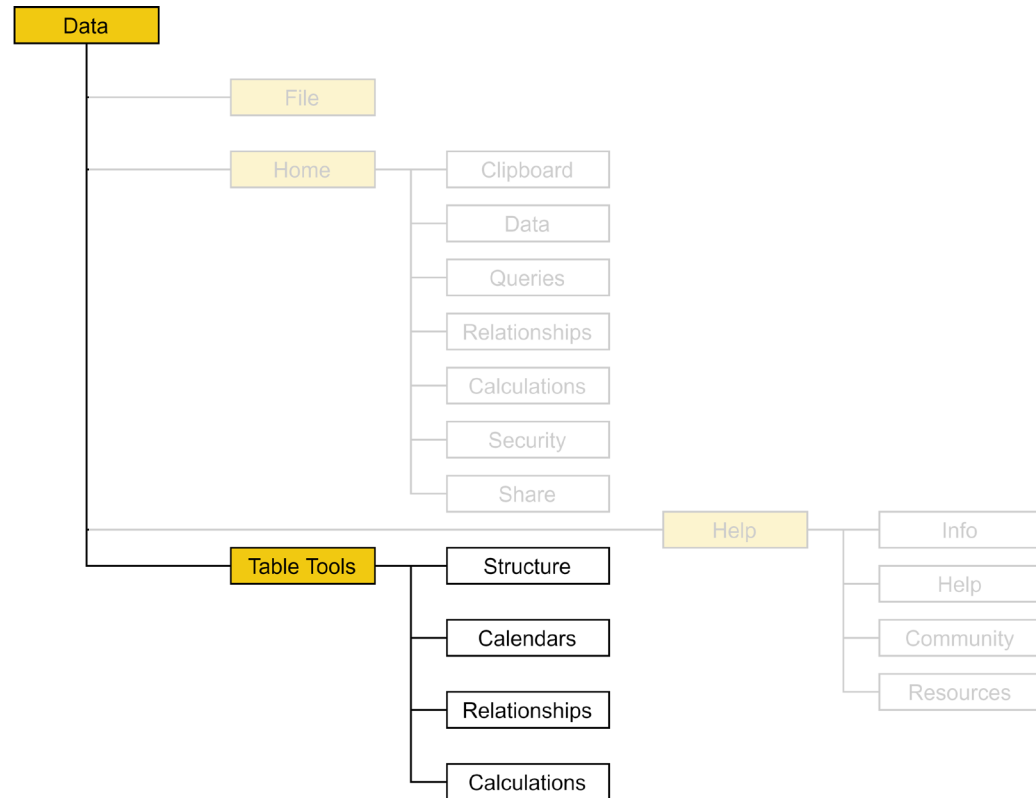
Fields

Search

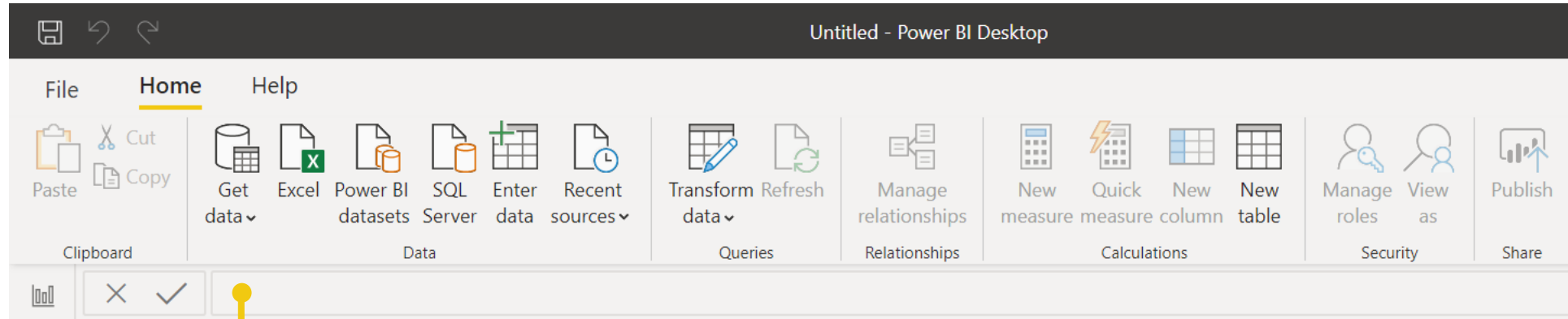
Ribbon – Data View



Ribbon – Data View



Ribbon – Data View



Formula Bar



File

Home

Help

Table tools



Name Sheet1

Mark as date
table ▾

Calendars

Manage
relationships

Relationships



New

measure



Quick

measure



New

column



New

table

Calculations

Structure



iso_code ▾	continent ▾	location ▾	date ▾	total_cases ▾	new_cases ▾	new_cases_smoothed ▾	total_deaths ▾	new_deaths ▾	new_deaths_sm
BLR	Europe	Belarus	Monday, 6 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Tuesday, 7 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Wednesday, 8 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Thursday, 9 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Friday, 10 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Saturday, 11 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Sunday, 12 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Monday, 13 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Tuesday, 14 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Wednesday, 15 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Thursday, 16 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Friday, 17 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Saturday, 18 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Friday, 24 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Saturday, 25 January 2020	0	0	0	0	0	
BLR	Europe	Belarus	Sunday, 26 January 2020	0	0	0	0	0	

Fields

Search

^ Sheet1

Σ aged_65_older
Σ aged_70_older
Σ cardiovasc_death_rate
continent
▸ date
Σ diabetes_prevalence
extreme_poverty
female_smokers
Σ gdp_per_capita
Σ handwashing_facilities
Σ hospital_beds_per_thousand
Σ human_development_index
iso_code
Σ life_expectancy
location

Data View - Canvas



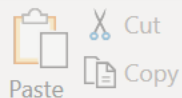
The Three Views – Modelling View



File

Home

Help



Clipboard



Get data ▾



Excel



Power BI datasets



SQL Server



Enter data



Recent sources ▾

Data



Transform data ▾



Refresh

Queries



Manage relationships

Relationships



Manage roles

Security



View as



Q&A setup



Language ▾

Q&A

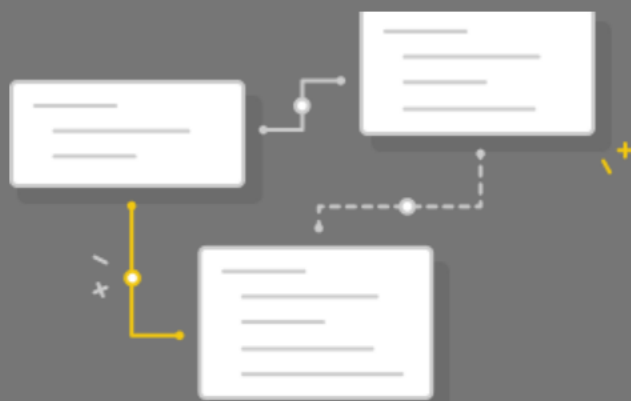


Linguistic schema ▾



Publish

Share



Set up your layout

Drag tables to the canvas to add them to your layout or select Auto layout and we'll do it for you.

Auto layout



All tables



Properties >



Fields >

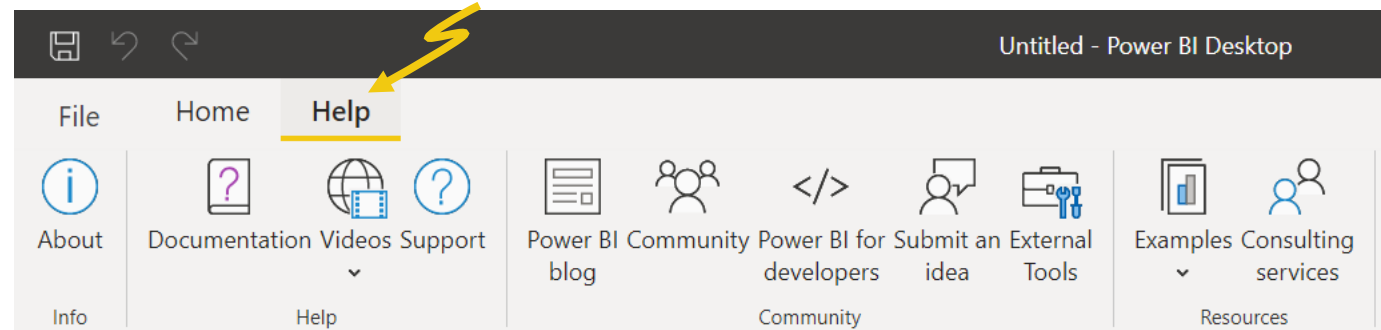
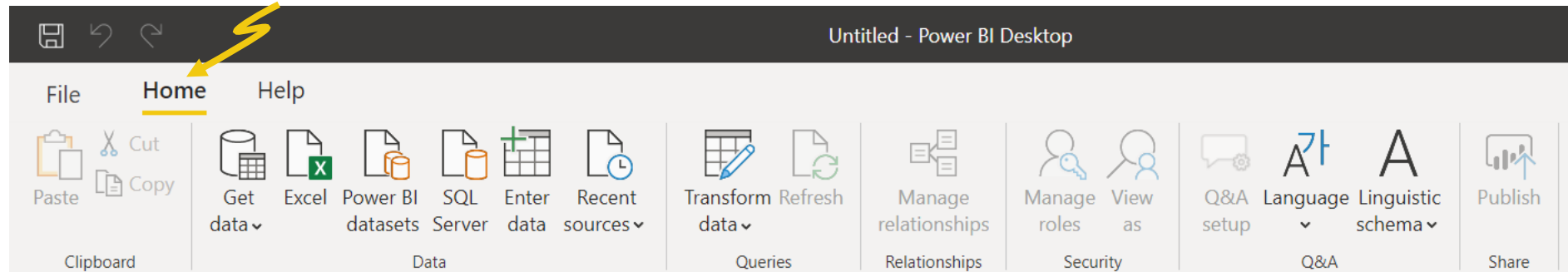
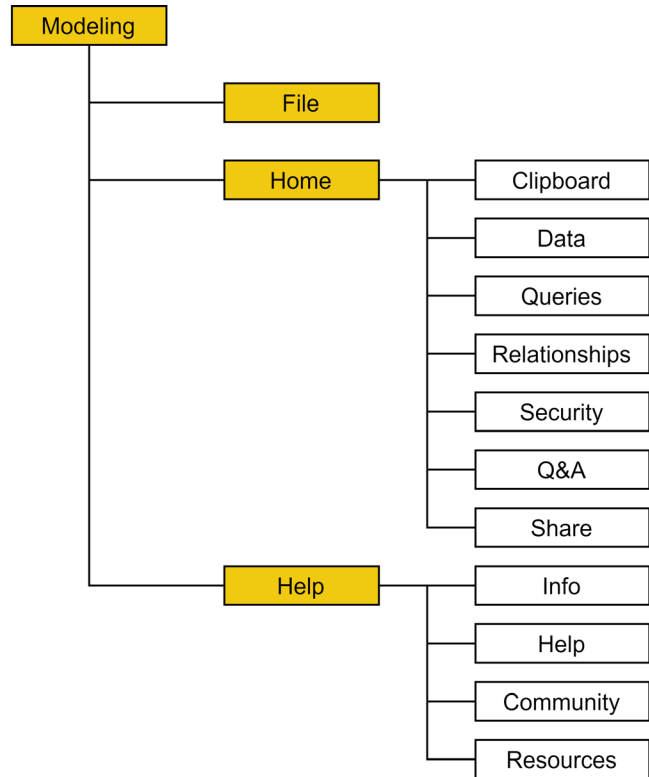


Select one or more model objects to set their properties.

Modelling View



Ribbon – Modeling View



File

Home

Help



Clipboard



Get data



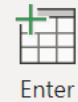
Excel



Power BI datasets



SQL Server

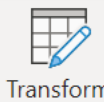


Enter data

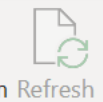


Recent sources

Data

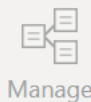


Transform data



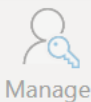
Refresh

Queries



Manage relationships

Relationships

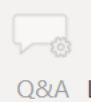


Manage roles



View as

Security

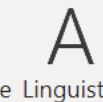


Q&A setup

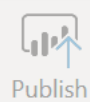


Language

Q&A

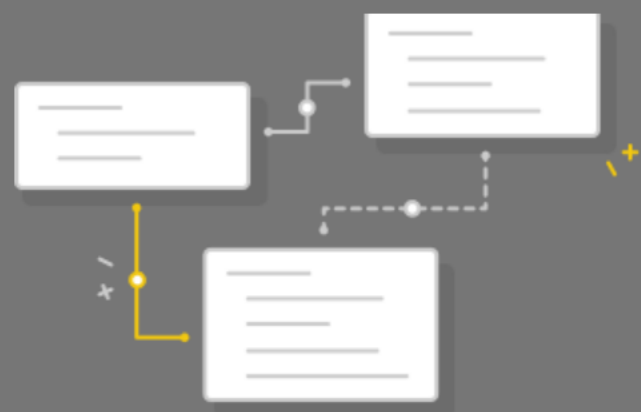


Linguistic schema



Publish

Share



Set up your layout

Drag tables to the canvas to add them to your layout or select Auto layout and we'll do it for you.

Auto layout

All tables +

Properties

Select one or more model objects to set their properties.

Properties Pane

Fields

Search



File

Home

Help



Paste

Cut

Copy

Get
data ▾

Excel

Power BI
datasetsSQL
ServerEnter
dataRecent
sources ▾Transform
data ▾Refresh
data ▾Manage
relationshipsManage
rolesView
asQ&A
setupLanguage
▾Linguistic
schema ▾

Publish

Clipboard

Data

Queries

Relationships

Security

Q&A

Share



Dim_Country

Country

Country Name

1



*

Fact_Coffee Beans

Acidity

Aftertaste

altitude_mean_meters

Aroma

Balance

Body

Clean.Cup

Colour

Company

Country Origin

Properties



General

Name

Fact_Coffee Beans

Description

Enter a description

Synonyms

Fact_Coffee bean

Row label

Select a row label ▾

Is hidden

No



Fields



Search

Dim_Country

Fact_Coffee Beans

GIF

Measure Table

SparkBI Services

Modelling View - Canvas

All tables

