

# POWER BI PROJECT

## BIKE SHOP

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### 1. Connecting & Shaping Data

The first step was to import and shape the data in Power Query Editor to prepare it for modeling and analysis. The data was added using a CSV file, then I checked that all parameters had been loaded correctly. In addition, in the calendar lookup table, I have added several columns such as start of the week, start of the month, and start of the quarter to allow visualization of the results over time. I have disabled refreshing for some tables in order to optimize the report.

AdventureWorks Report

PlikHomeTransformAdd ColumnViewToolsHelp

Close & Apply

New Source

Recent Sources

Enter Data

Data source settings

Manage Parameters

Refresh Preview

Advanced Editor

Properties

Choose Columns

Remove Columns

Keep Rows

Remove Rows

Sort

Split Column

Group By

Data Type: Date

Use First Row as Headers

Replace Values

Merge Queries

Append Queries

Combine Files

Text Analytics

Vision

Azure Machine Learning

Queries [15]

Testy [2]

Przekształć plik z: S...

Other Queries [9]

Territory Lookup

Product Lookup

Product Categorye...

Product Subcateg...

Customer Lookup

Calendar Lookup

Sales Data

Returns Data

Measure Table

fx

= Table.TransformColumnTypes("#Changed Type", {{"Start of Week", type date}}, "en-US")

	Date	Day Name	Start of Week	Start of Month	Start of Quarter	Month Name	Month	Start of Year	Year
1	01.01.2020	Wednesday	30.12.2019	01.01.2020	01.01.2020	January	1	01.01.2020	2020
2	02.01.2020	Thursday	30.12.2019	01.01.2020	01.01.2020	January	1	01.01.2020	2020
3	03.01.2020	Friday	30.12.2019	01.01.2020	01.01.2020	January	1	01.01.2020	2020
4	04.01.2020	Saturday	30.12.2019	01.01.2020	01.01.2020	January	1	01.01.2020	2020
5	05.01.2020	Sunday	30.12.2019	01.01.2020	01.01.2020	January	1	01.01.2020	2020
6	06.01.2020	Monday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
7	07.01.2020	Tuesday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
8	08.01.2020	Wednesday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
9	09.01.2020	Thursday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
10	10.01.2020	Friday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
11	11.01.2020	Saturday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
12	12.01.2020	Sunday	06.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
13	13.01.2020	Monday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
14	14.01.2020	Tuesday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
15	15.01.2020	Wednesday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
16	16.01.2020	Thursday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
17	17.01.2020	Friday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
18	18.01.2020	Saturday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
19	19.01.2020	Sunday	13.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
20	20.01.2020	Monday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
21	21.01.2020	Tuesday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
22	22.01.2020	Wednesday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
23	23.01.2020	Thursday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
24	24.01.2020	Friday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
25	25.01.2020	Saturday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
26	26.01.2020	Sunday	20.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
27	27.01.2020	Monday	27.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
28	28.01.2020	Tuesday	27.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
29	29.01.2020	Wednesday	27.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
30	30.01.2020	Thursday	27.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
31	31.01.2020	Friday	27.01.2020	01.01.2020	01.01.2020	January	1	01.01.2020	2020
32	01.02.2020	Saturday	27.01.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
33	02.02.2020	Sunday	27.01.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
34	03.02.2020	Monday	03.02.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
35	04.02.2020	Tuesday	03.02.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
36	05.02.2020	Wednesday	03.02.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
37	06.02.2020	Thursday	03.02.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020
38	07.02.2020	Friday	03.02.2020	01.02.2020	01.01.2020	February	2	01.01.2020	2020

Query Settings

PROPERTIES

Name

Calendar Lookup

APPLIED STEPS

Źródło

Nagłówki o podwyższonym p...

Zmieniono typ

Wstawiono nazwę dnia

Wstawiono początek tygodnia

Wstawiono początek miesiąca

Wstawiono początek kwartału

Zmieniono typ z ustawieniami...

Wstawiono nazwę miesiąca

Wstawiono miesiąc

Wstawiono początek roku

Wstawiono rok

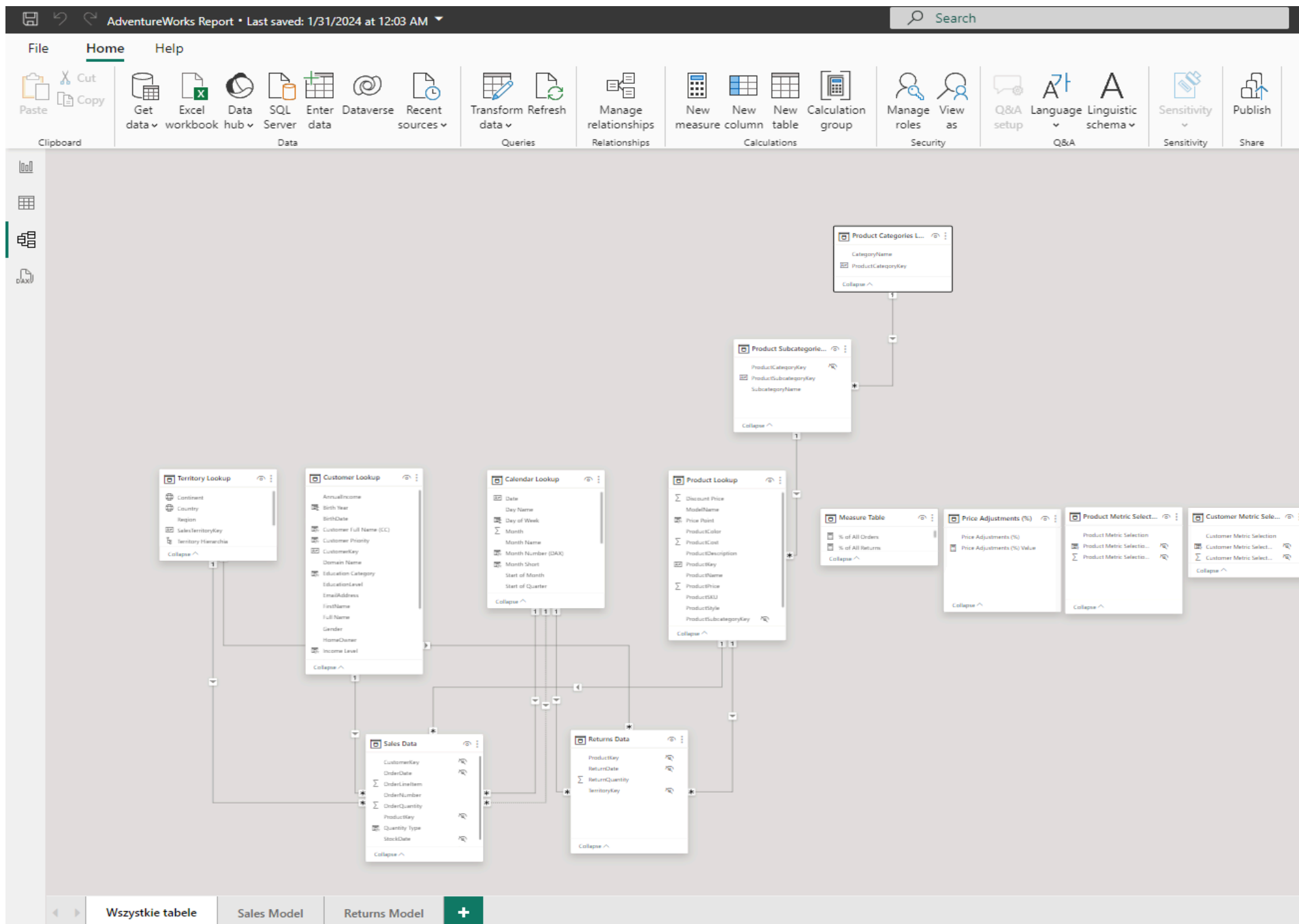
Zmieniono nazwy kolumn

Changed Type

Changed Type with Locale

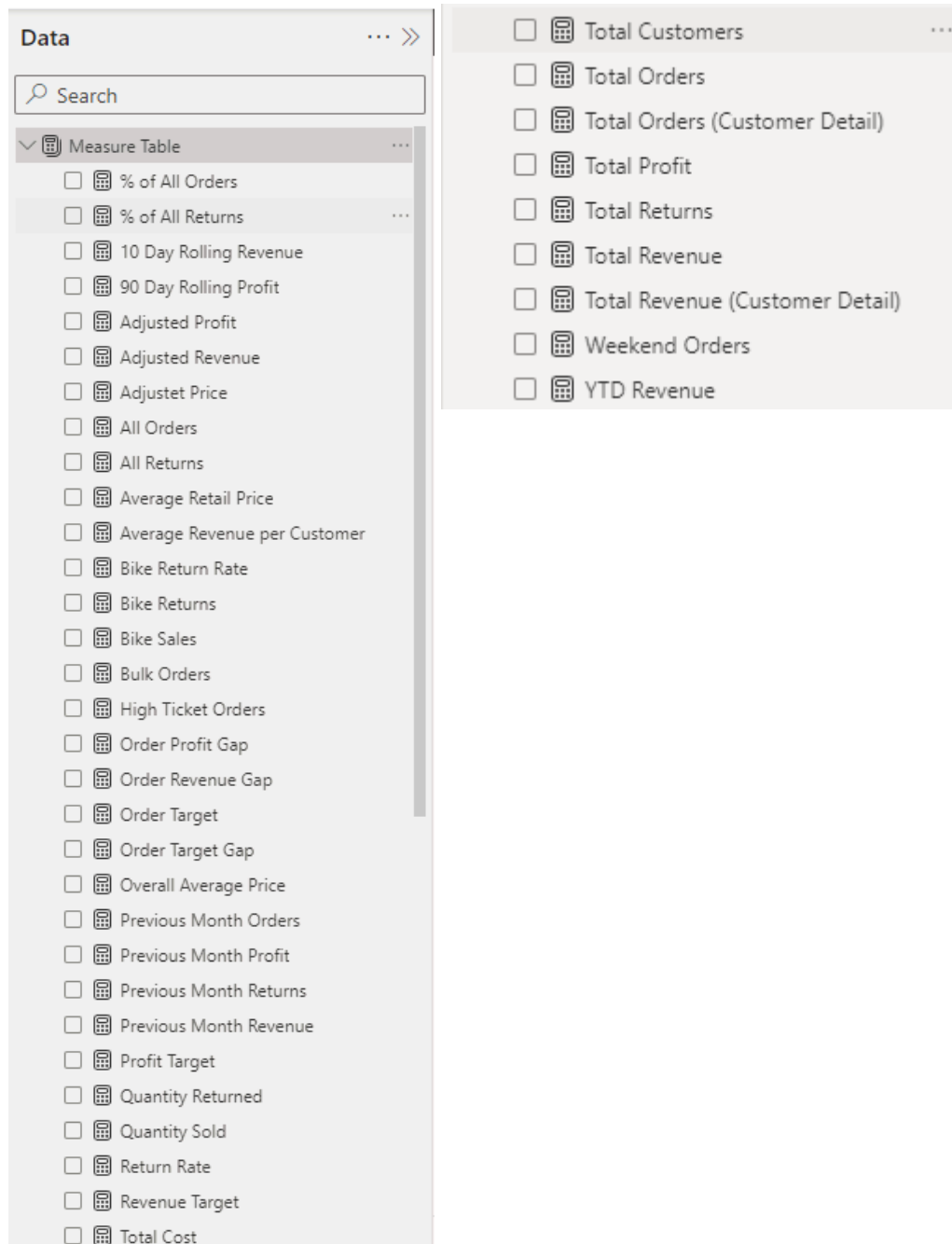
## 2. Data Modeling

Then I proceeded to create the data model. I identified the primary keys and foreign keys of the tables, and then started to create relationships between the tables according to one-to-many cardinality and one-way filters.



### 3. Calculating fields with DAX

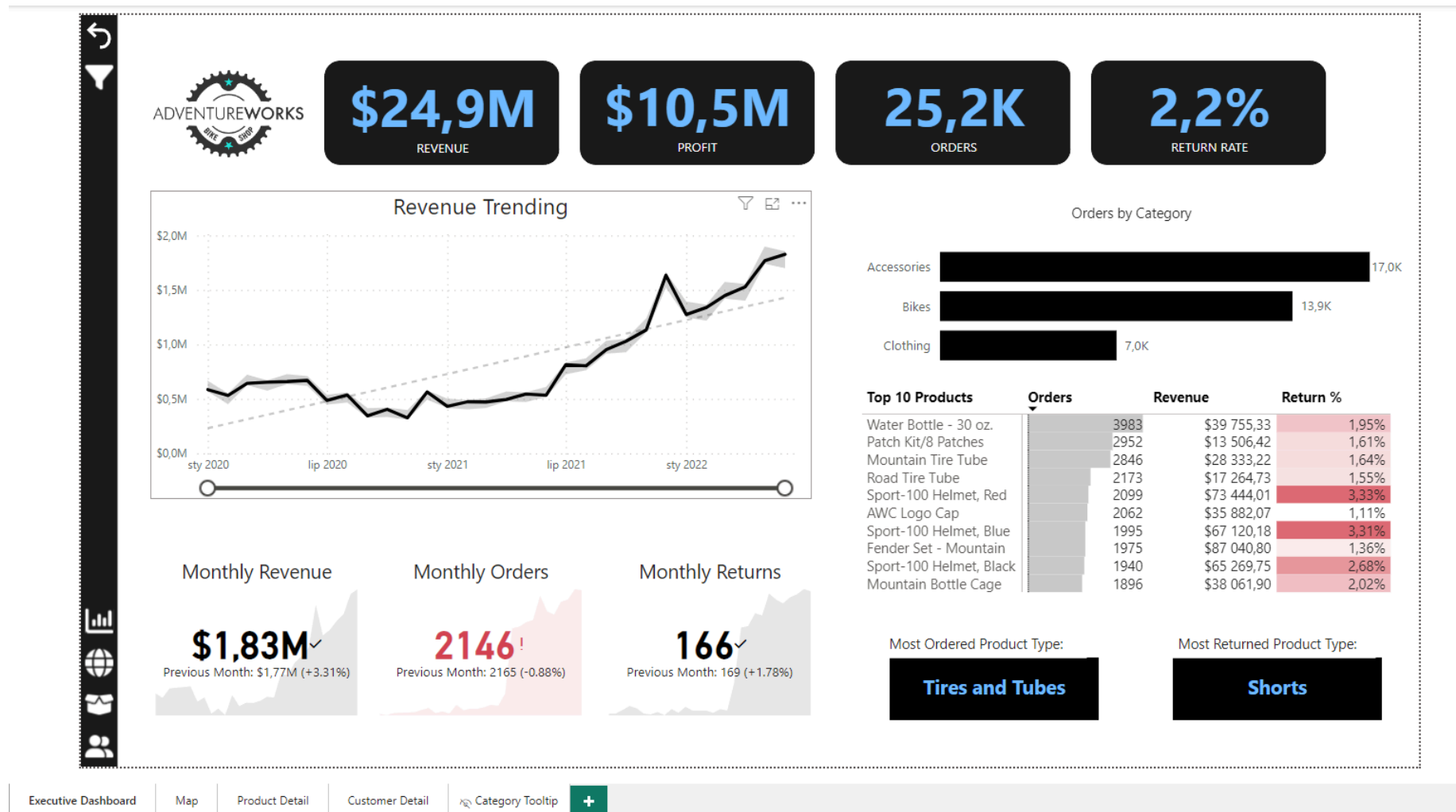
The next step was to use the DAX language to calculate measures that helped visualize key values and optimize the analysis process.



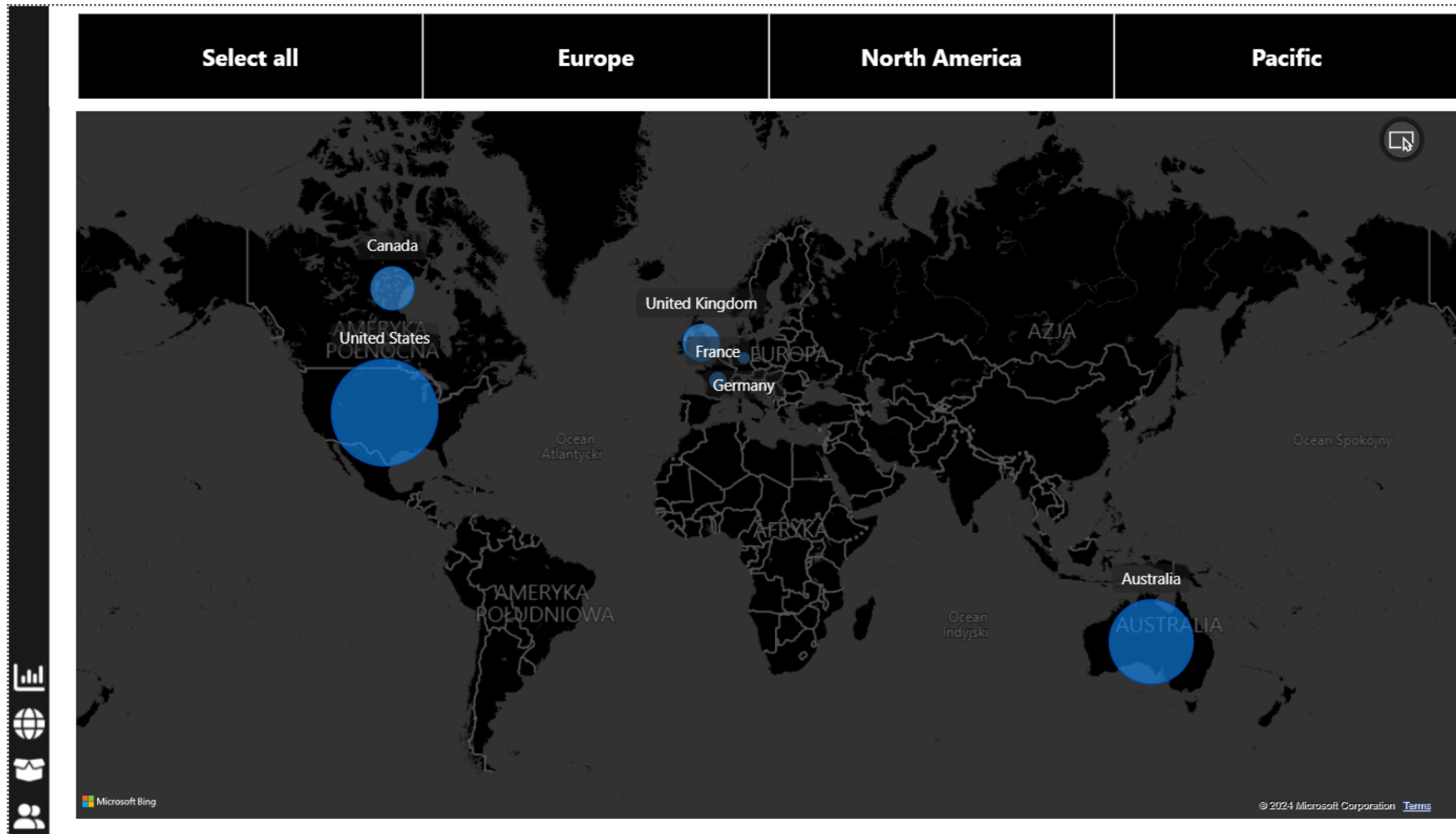
#### 4. Data Visualization

The final stage was to build an interactive report based on key data using charts, cards, donuts, tables, maps using appropriate filters, slicers, drill-down filters, as well as editing interactions between the various elements of the visualization.

On the Executive Dashboard view I focused on KPIs. The visualizations can be filtered by period, product category and also by region using the navigation panel. The user can also switch to individual tabs or clear all the applied filters.

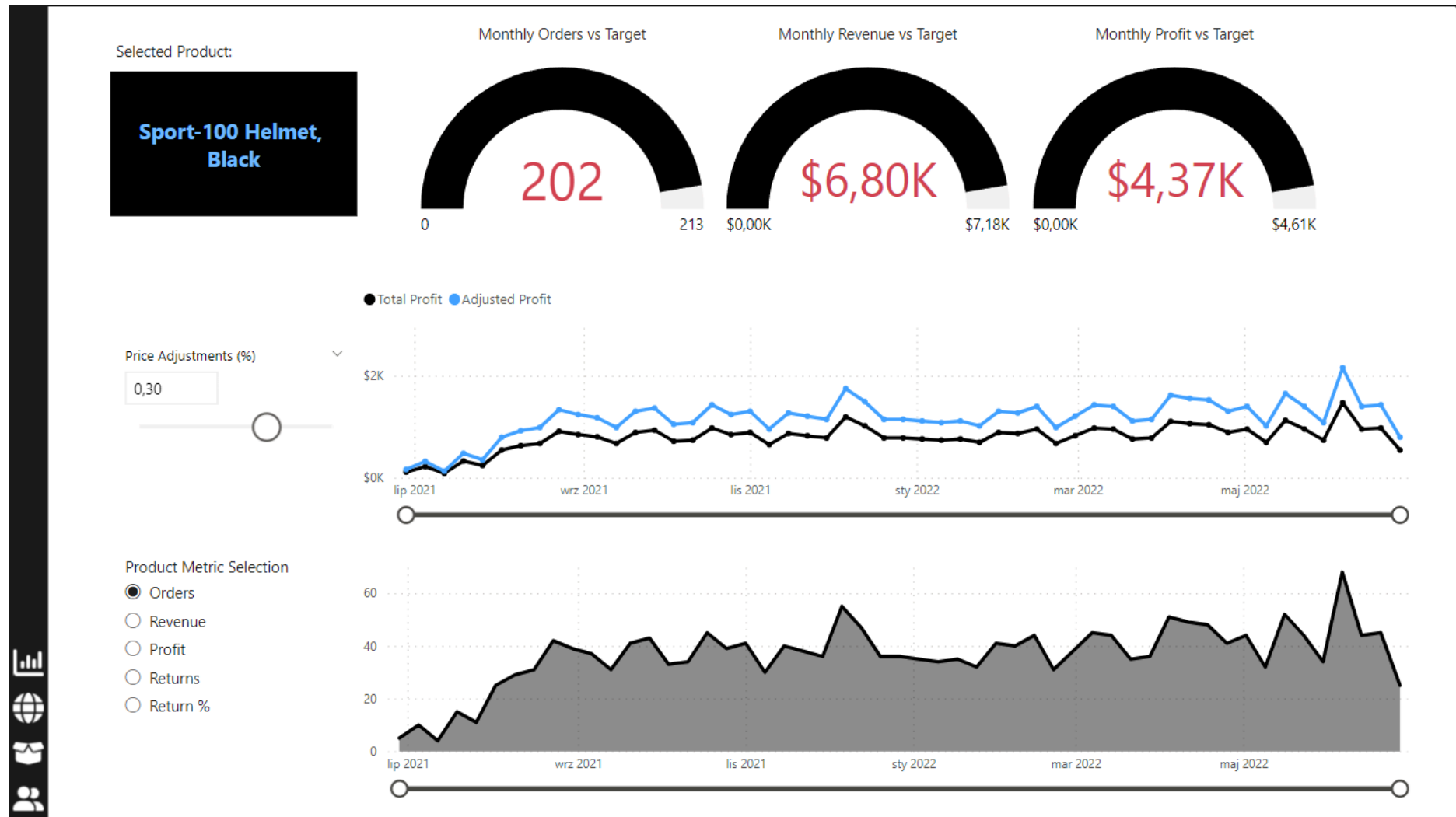


Another view is a map where we can see in which regions the shop sells its products. This has also helped to define roles by region for the presentation to individual regional managers.





Using drill-through filters, the user has the option to switch to a more detailed view of a product from the executive dashboard.



Last but not least is the customer detail view, where the user has the option, among other things, to filter by, the level of income or the profession, which allows the company to choose which groups make the most profit.

