

Start with PowerBI

"From Rookie to Rock"

Learn &
Practice

Develop faster with TDML

Part 2: Reuse Semantic Model



What is TDML?

An integrated code editor



TDML = Tabular Model Definition Language



The script TDML allows you to:

- ✓ Manage your data model more easily
- ✓ Share your code
- ✓ Modify, optimize, and improve your code with its integrated editor
- ✓ Manage your project versions

In these Patou Tips, we will examine the first 3 points.



Resources on GitHub

[Patou-Tips/#50 Patou Tips \(Develop faster with TDML - Reuse Semantic Model\) at main · PatouTips/Patou-Tips](https://github.com/Patou-Tips/50_Patou_Tips/tree/main#Reuse_Semantic_Model)

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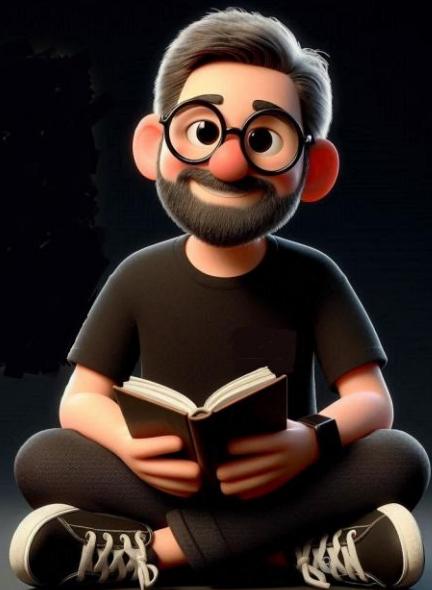
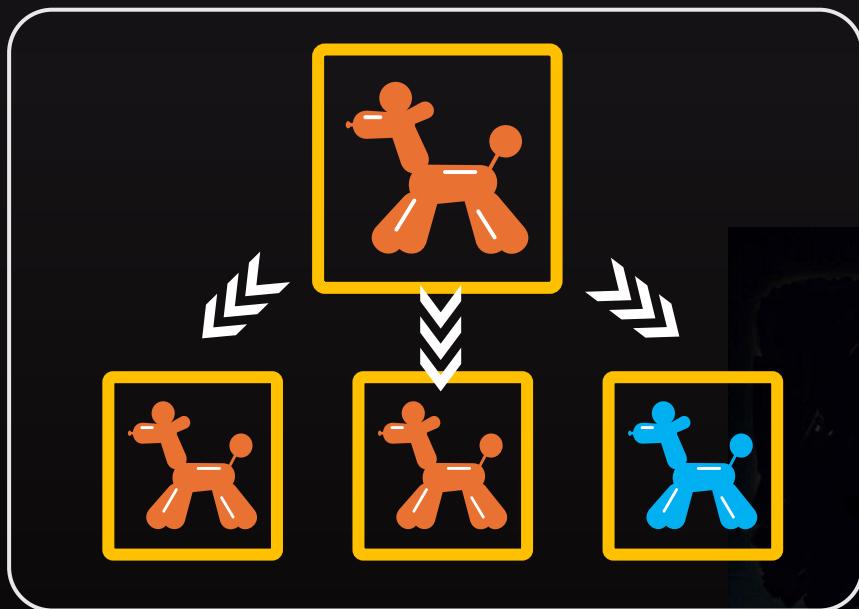
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Patou Tips #50

Develop faster with TDML

Part 2

Reuse Semantic Modelability



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Reuse Semantic Model

2 Use cases (1/2)

In every Power BI project, the two use cases we will describe are frequently encountered:

Use case 1 Moving objects from one project to another one



Use case 2 Quickly modifying the properties of an object



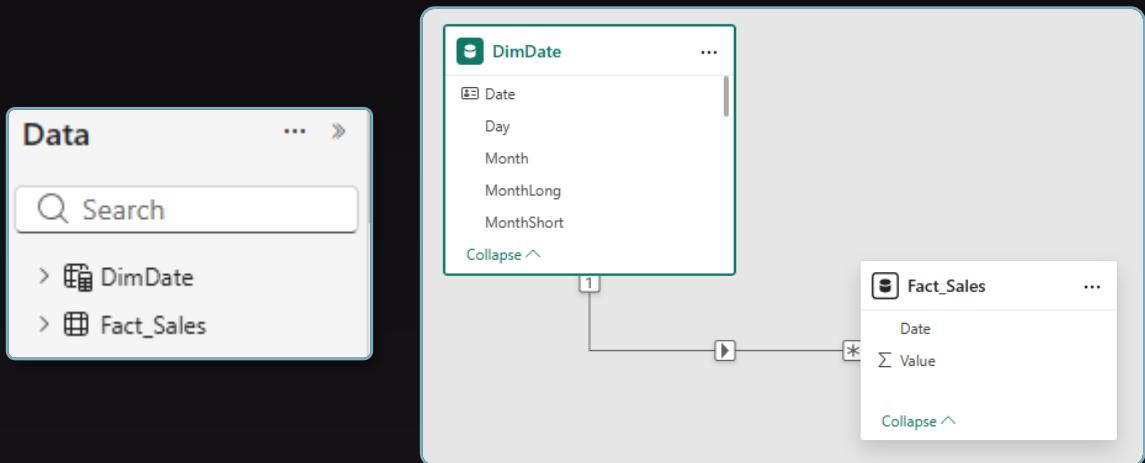


Reuse Semantic Model 2 Use cases (2/2)

Here is a Power BI project with two tables:

- ✓ A date dimension table (see the previous section, Patou Tips #49) created from a DAX formula, "DimDate"
- ✓ A sales fact table, "Fact_Sales".

These two tables are linked by a one-to-many relationship (modeling view) on the Date value.



Reuse Semantic Model

Step 1: Generate the code



Use case 1: Moving objects from one project to another one

The screenshot shows the Power BI Data view interface. On the left, there's a code editor window with a yellow border containing DAX code for creating a DimDate table. The code includes columns for Date, IsHidden, IsKey, FormatString, LineageTag, SummarizeBy, IsNameInferred, and SourceColumn. A circled number '3' is placed near the bottom of this window. To the right of the code editor is a large orange arrow pointing towards a white box labeled 'Semantic model'. This box contains a list of semantic model components: Cultures (1), Expressions (0), Functions (0), Measures (0), Perspectives (0), Relationships (0), Roles (0), and Tables (1). A circled number '2' is placed above the 'Tables' item. At the top of the interface, there are tabs for 'Apply' and 'Preview', and a 'share feedback' button.

- 1 Go in the **TDML View**
 - 2 Drag and drop the "Semantic model" in the "**TDML View window**"
 - 3 A code appears in the **TDML View window** and includes all the characteristics of the Semantic Model.

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Reuse Semantic Model

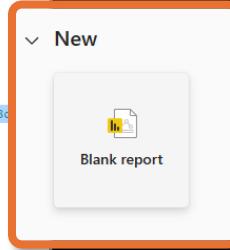
Step 2: Reproduce the code



Use case 1: Moving objects from one project to another one

1

```
1 createOrReplace
2
3   table DimDate
4     + lineageTag: 723ffede-04e5-48af-9cf8-2975c961bca8
5     + dataCategory: Time
6
7       column Date
8         + isKey
9         + formatString: General Date
10        + lineageTag: 4f0b183d-a93f-4b76-93d6-a1b0942448c1
11        + summarizeBy: none
12        + isNameInferred
13        + sourceColumn: [Date]
14
15       + annotation SummarizationSetBy = Automatic
16
17       column Year
18         + formatString: 0
19         + lineageTag: 53f72a62-40b7-4911-91c3-5d4d4d54b771
20         + summarizeBy: sum
21         + isNameInferred
22         + sourceColumn: [Year]
23
24       + annotation SummarizationSetBy = Automatic
25
26       column YearSemester
27         + lineageTag: fad97932-5b2f-4afb-a125-4769aa8652f4
28         + summarizeBy: none
29         + isNameInferred
30         + sourceColumn: [YearSemester]
```



3

```
1 createOrReplace
2
3   table DimDate
4     + lineageTag: 723ffede-04e5-48af-9cf8-2975c961bca8
5     + dataCategory: Time
6
7       column Date
8         + isKey
9         + formatString: General Date
10        + lineageTag: 4f0b183d-a93f-4b76-93d6-a1b0942448c2
11        + summarizeBy: none
12        + isNameInferred
13        + sourceColumn: [Date]
14
15       + annotation SummarizationSetBy = Automatic
16
17       column Year
18         + formatString: 0
19         + lineageTag: 53f72a62-40b7-4911-91c3-5d4d4d54b771
20         + summarizeBy: sum
21         + isNameInferred
22         + sourceColumn: [Year]
23
24       + annotation SummarizationSetBy = Automatic
25
26       column YearSemester
27         + lineageTag: fad97932-5b2f-4afb-a125-4769aa8652f4
28         + summarizeBy: none
29         + isNameInferred
30         + sourceColumn: [YearSemester]
```

- 1 Select all the code (ctrl + A) and copy it (ctrl + C)
- 2 Create a new PowerBI project
- 3 Paste the code (ctrl + V) in the TDML View window

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Reuse Semantic Model

Step 3: That's all folks!



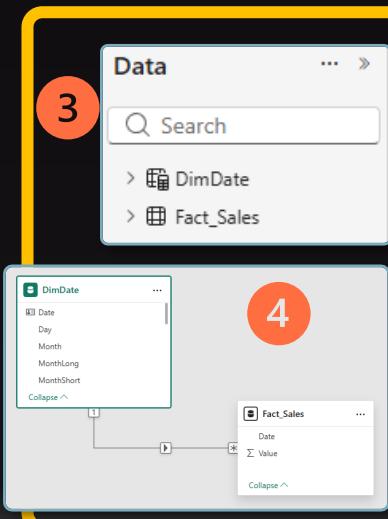
Use case 1: Moving objects from one project to another one

Click on the Apply button (1), then to the Refresh button (2).

One or more calculated tables need to be manually refreshed.

Changes applied to the model.

```
1 createOrReplace
3     table DimDate
152         hierarchy 'Date Hierarchy'
159             level Month
162
163     partition DimDate Calculated
164         mode import
```



All the Semantic Model is here; the tables (3), the modeling (4) and in PowerQuery all the operations created (5) in the Sales table.

Queries [1]

Fact_Sales

Date	Value
01/01/2023	10
01/02/2023	12
01/03/2023	13
01/04/2023	15
01/05/2023	17
01/06/2023	20
01/07/2023	24
01/08/2023	27
01/09/2023	22
01/10/2023	15
01/11/2023	14
01/12/2023	19

Query Settings

Properties

APPLIED STEPS

- Source
- Navigation
- Changed Type
- Promoted Headers
- Changed Type1
- Unpivoted Other Columns
- Removed Columns
- Renamed Columns
- Changed Type2
- Renamed Column1

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Reuse Semantic Model

Step 1: Save and duplicate script

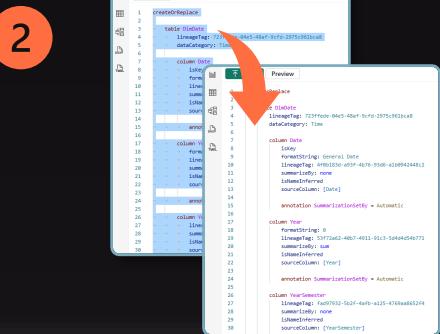


Use case 2: Quickly modifying the properties of an object

In this use case, the modification will consist of renaming the DimDate dimension to "Dim_Date". However, many other modifications are possible; it's just a simple example.



Before modifying a property, back up your script. By double-clicking the tab in the bottom left corner, rename the "Script 1" tab to "Backup 1". You can ultimately create many scripts—pretty cool, right?



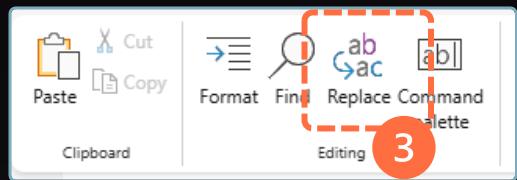
Select all the code (**ctrl + A**) and copy it (**ctrl + C**).
Create a new script and paste the code (**ctrl + V**) in the TDML View window

Reuse Semantic Model

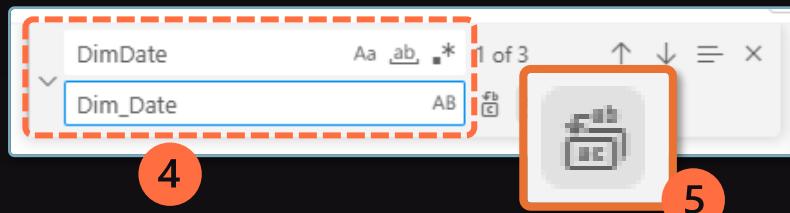
Step 2: Modify script



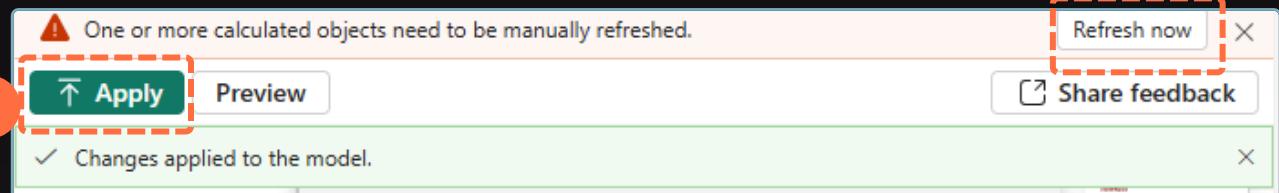
Use case 2: Quickly modifying the properties of an object



Click on the button "find and replace"



Replace "DimDate" by "Dim_Date (4)" and click on the button "replace all (5)"



Click on the Apply button (6), then to the Refresh button (7).

Reuse Semantic Model

Step 3: That's all folks!



Use case 2: Quickly modifying the properties of an object

8

The screenshot shows the Power BI Model Editor interface. On the left, there is a toolbar with a green 'Apply' button and a red 'Preview' button. A large orange arrow points from the 'Preview' button to a comparison panel on the right. The panel is divided into two sections: 'Before' (top) and 'After' (bottom). Both sections show the same Power BI model script. Below the script, there are two tabs: 'Data' (selected) and 'Model'. Under 'Data', there are two tabs: 'Tables' (selected) and 'Model'. A search bar is present. At the bottom, there is a list of tables: 'DimDate' and 'Fact_Sales'. The 'Before' and 'After' sections show identical code for the DimDate table, indicating no changes were made.

```
1 model Model
2 culture: 'en-us'
3 defaultSource: 'PowerBI_V3'
4 source: 'PowerBI_V3'
5 dataAccess: 'Open'
6 legacyRedirects
7 returnErrorValuesAsNull
8
9+ table DimDate
10 lineageTag: '723ffede-04e5-48af-9cf8-2975c961bca8'
11 dataCategory: Time
12
13 column Date
14 isKey
15
16
17
18
19
20
21
22
23
24
25
```

```
1 model Model
2 culture: 'en-us'
3 defaultSource: 'PowerBI_V3'
4 source: 'PowerBI_V3'
5 dataAccess: 'Open'
6 legacyRedirects
7 returnErrorValuesAsNull
8
9+ table DimDate
10 lineageTag: '723ffede-04e5-48af-9cf8-2975c961bca8'
11 dataCategory: Time
12
13 column Date
14 isKey
15
16
17
18
19
20
21
22
23
24
25
```

Click on the "preview" button, a panel appear and show the difference before and after the script.

Before

After

Data

Tables Model

Search

> DimDate

> Fact_Sales

This use case is very practical and the best solution for modifying repeated terms across multiple tables or measures. Great!

Coming soon, in 2026!



Patrice Fayard

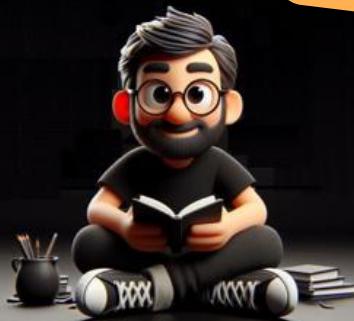
Business Intelligence WORKBOOK

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Easy to do it...

Patou Tips #5



Create a **Customized Chart** (for income statement)



To practice downloadable free resources in GitHub



Patou Tips #5
Create a
Customized
Chart
(for income
statement)

Easy to do it...

Patou Tips #6



Create
Customized Icon



(with PowerPoint for PowerBI)



Patou Tips #6
Create
Customized Icon

Easy to do it...

Patou Tips #7



Create an **Age Pyramid Chart** (for Human Ressources)



To practice downloadable free resources in GitHub



Patou Tips #7
Create an Age
Pyramid Chart
(for Human
Ressources)

Easy to do it...

Patou Tips #12



Calculate the correct evolution for KPI



Patou Tips #23

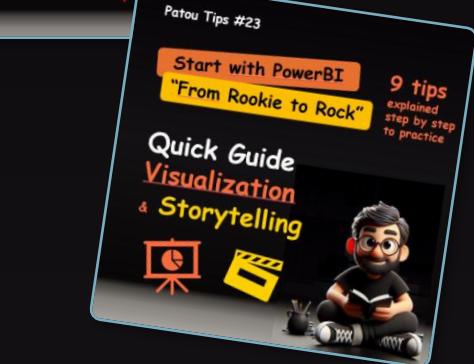


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9 tips explained step by step to practice

Quick Guide
Visualization & Storytelling



Patou Tips #23
Quick Guide Visualization &
Storytelling



Resources on GitHub
<https://github.com/Patou-Tips/Patou-Tips>

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Patou Tips



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