

# Semantic Showdown



# Who are these clowns?



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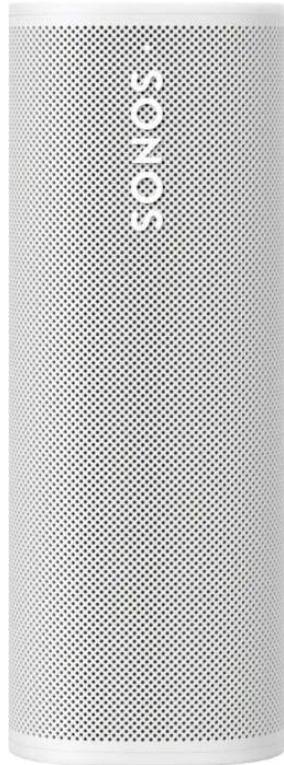


data lab



Tabular Editor

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# What is Tabular Editor

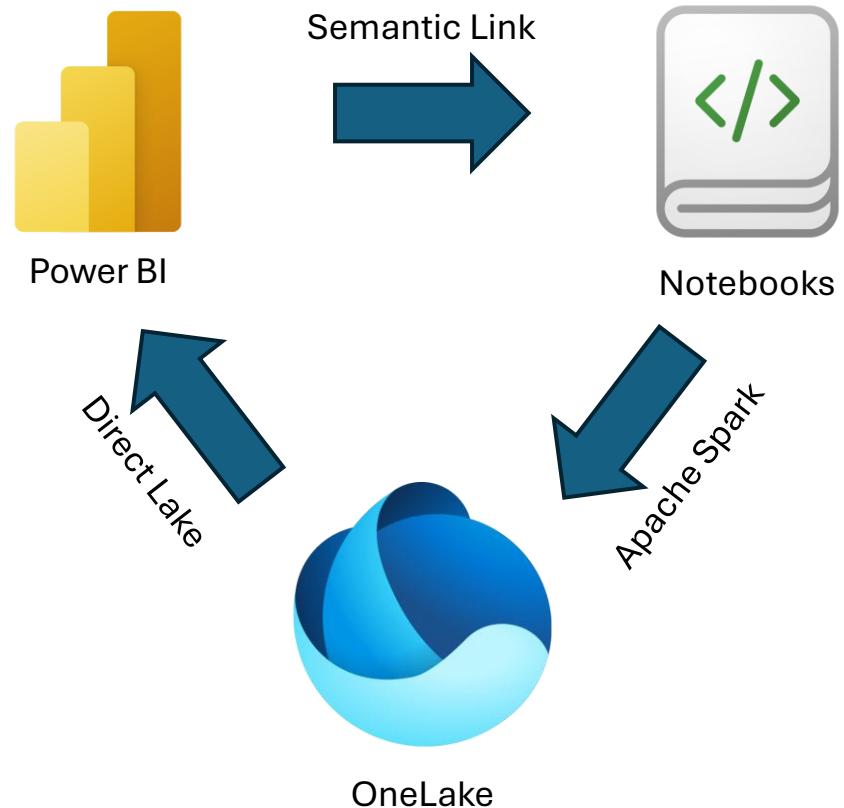
- Both open-source and paid version. The examples we show today will work in both versions.
- Paid version offers amongst others:
  - Rich DAX editor with IntelliSense and syntax highlighting and **debugger**
  - Code actions (helps optimize DAX)
  - Shortcuts for refactoring
  - DAX scripts for editing multiple DAX objects
  - Built-in tools: DAX Optimizer, VertiPaq Analyzer, DAX query experience
  - Perspective / translations editor
  - Dependency tracker

# What is Semantic Link

Semantic Link is a feature in Microsoft Fabric that allows you to connect from Fabric Notebooks to Power BI Semantic Models.

This feature **only** exists and works in Fabric.

- Write DAX, Python, SQL and informative queries directly against your Semantic Model.
- Data as well as metadata.
- Operate and automate tasks like refreshes, partitioning, creation of items etcetera.
- More than only Semantic Models , automation of Fabric tasks in general.
- Open-source extension Semantic Link Labs to do even more!



# Semantic Link – Use cases

|  |   |   |  |
|--|---|---|--|
| <b>Power BI general</b>  | <b>Semantic Models</b>  | <b>Direct Lake</b>  | <b>Capacities</b>  |
| <ul style="list-style-type: none"><li>• Documenting Power BI items</li><li>• Move Power BI items across workspaces</li><li>• Detect broken reports</li><li>• Rebind reports</li><li>• Set a report theme</li><li>• Migration of report-level measures to the semantic model</li><li>• Tenant Settings tracking</li></ul> | <ul style="list-style-type: none"><li>• Best Practice Analyzer</li><li>• Vertipaq Analyzer</li><li>• Semantic model edits (TOM)</li><li>• Metadata translations</li><li>• Semantic model refresh</li><li>• Visualize a refresh</li><li>• Semantic model backups</li><li>• Run DAX with impersonation</li><li>• Manage Query Scale Out</li></ul> | <ul style="list-style-type: none"><li>• Migration to Direct Lake</li><li>• Check Direct Lake guardrails</li><li>• Warm the cache for Direct Lake</li><li>• Analyze Delta tables for Direct Lake</li><li>• Fallback to DirectQuery diagnostics</li><li>• Update connection of a Direct Lake semantic model</li></ul> | <ul style="list-style-type: none"><li>• Migration from P SKUs to F SKUs</li><li>• Migration from FT SKUs to F SKUs</li><li>• Capacity management</li></ul> |

# Tabular Editor vs Semantic Link

| Feature / Use Case      | Tabular Editor                    | Semantic Link Labs   |
|-------------------------|-----------------------------------|----------------------|
| Scope                   | Semantic Models                   | All Fabric Artefacts |
| User interface          | UI-first                          | Code-first           |
| Scripting language      | C#                                | Python               |
| Mode                    | Offline / Online                  | Online               |
| Saves                   | On-demand                         | Immediate            |
| License                 | Free / Paid 3 <sup>rd</sup> party | Fabric Capacity      |
| Creator                 | Tabular Editor                    | Microsoft            |
| Co-authoring            | No                                | Yes                  |
| Multiple models editing | No                                | Yes                  |

# The plan

- 6 rounds
- Marc represents Semantic Link
- Jay represents Tabular Editor

Tabular  
Editor

Semantic  
Link



# Use case **1**:

## Create / maintain measures

- Create measures
- Change measure definitions
- Validate if measures already exist



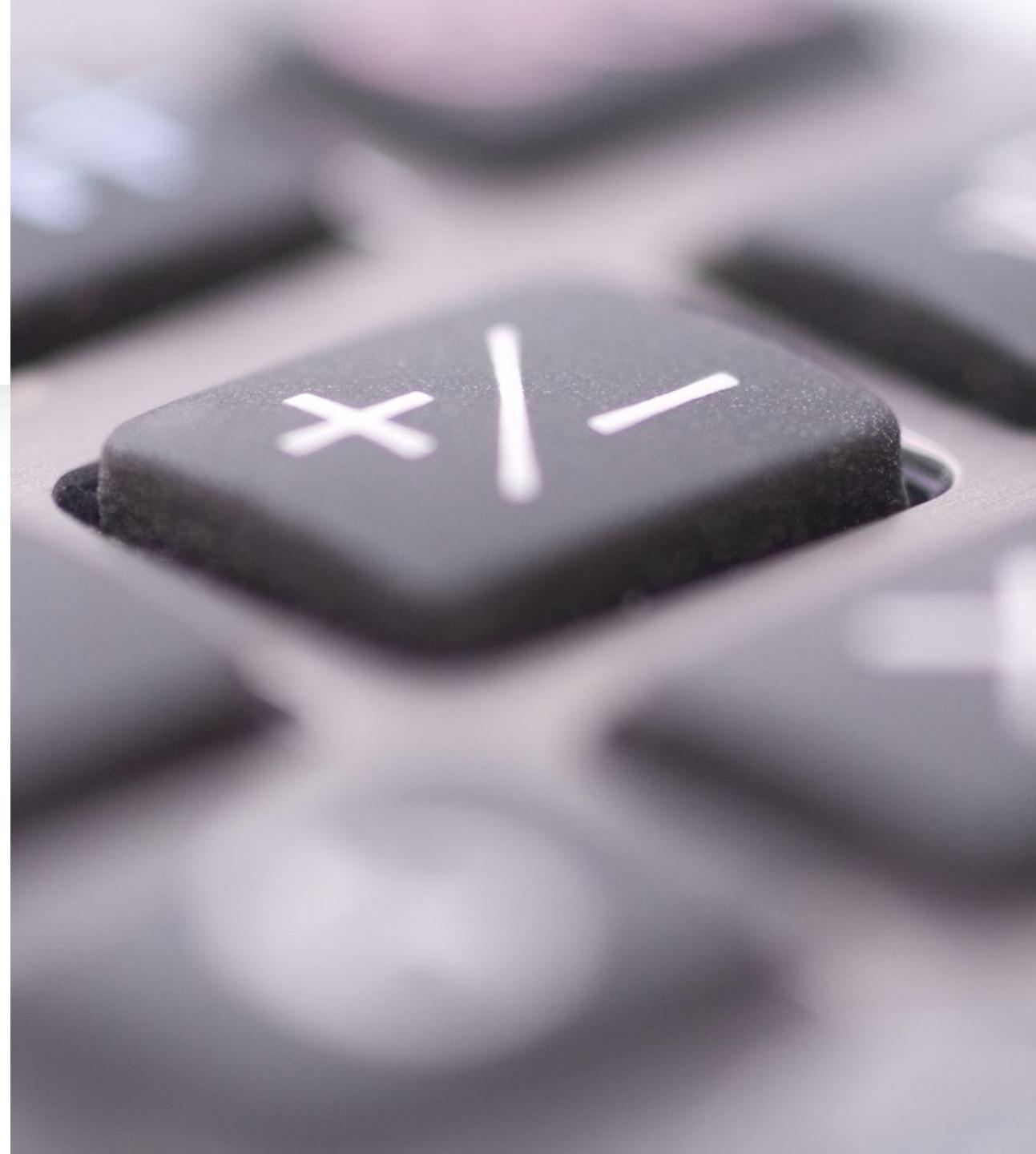
## Use case **2**: Relationships creation / editing

- Update relationships
- Generate / create semantic models  
based on platform generated keys



# Use case **3**: Visual calculations

- Additional visual level calculations which enriched the report
- Track definitions
- Find deviation from defined measures / definitions



## Use case 4: Theme file updates

- Applying a new theme without downloading the report and manual actions
- Applying an organizational team to all reports in a workspace



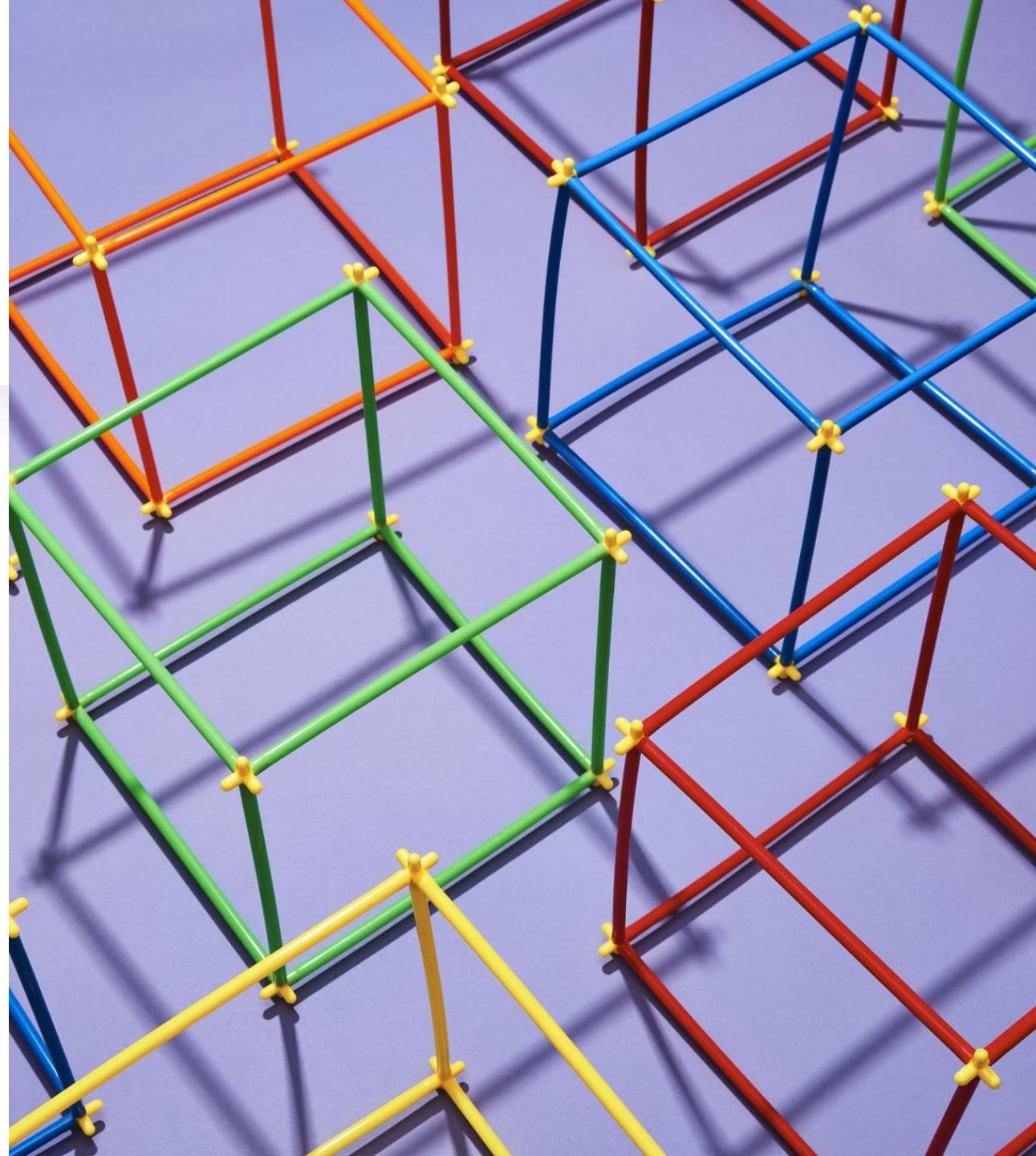
# Use case **5**:

## Automation of repetitive modeling tasks

From technical platform names, to  
names matching user expectations

*E.g. camelCase to user friendly names*

- Table renaming
- Column renaming



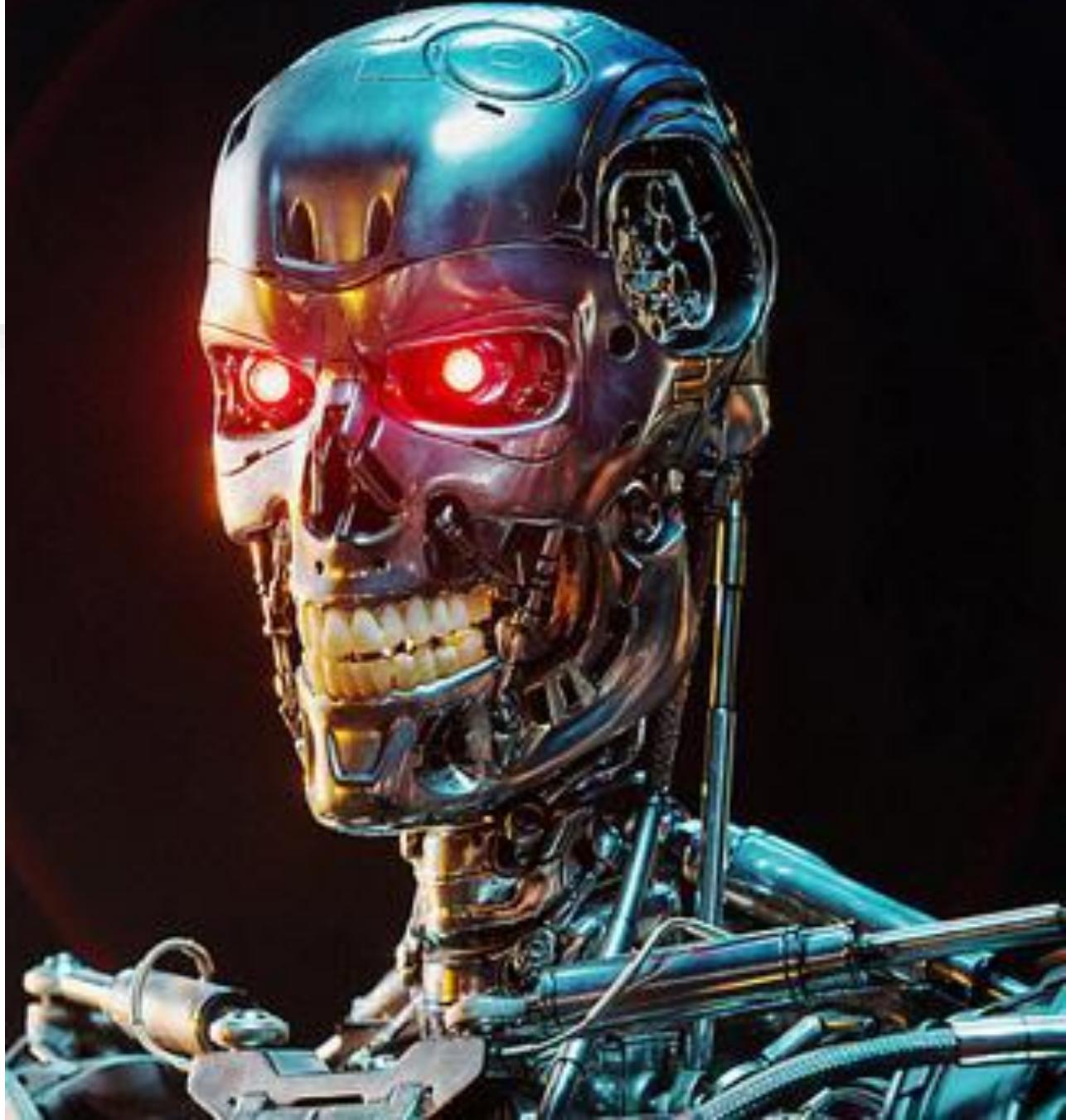
# Use case **6**:

## Automation of repetitive generic tasks

- Refresh only certain partitions automatically (import models)
- Clear cache (DirectLake)
- Run Best Practice Analyzer (in bulk)



Bonus 🎉





# U Can't Touch This

- After you have edited the model with either tool, sometimes you can't download it.
- Should be resolved over time.
- Our guidance: be careful and think of Mc Hammer's "U Can't Touch This".
- No auto fix-up of measures if you change names of things they refer to.





Feedback ➤

Slides & scripts / examples we used can be found here:  
<https://github.com/marcelijveld/Slide-decks/>

