



POWER BIBLE

By the community, for the community

Introduction

As a Power BI developer, I feel the need for a best practice handbook. Rules that help aligning all Power BI developers. Therefore I did research on LinkedIn and other sources to set up a list of rules for the community by the community. I've categorized them by subject, so it'll be easier to find the right rule to apply.

Reporting and Visualization

1. Always use 'Theme files' to define the style of the reports. Use background images to create logical alignment between visuals.
2. Never use Pie-Charts in reports. For better comparison between values, use Bar-Charts.
3. For interactions between graphs, use filter and not Highlight. Not very useful and readable.
4. Keep everything at a glance. Make sure the user can identify KPI's within a split-second.
5. Design your dashboard/report for specific groups of users. Design it for a target.
6. KISS (Keep It Simple Stupid) Use light backgrounds, don't add information that is useless or irrelevant, Limit the usage of visual effects!
7. Make sure your graphs start at zero.
8. Hide tab when using drill through.
9. Add a "last refreshed" field to your report.
10. Add measure definitions as tool tips to visuals.

DAX

1. Format the DAX syntax to readable code. (with for example: <https://www.daxformatter.com>)
2. Use bi-directional filtering with care; bi-directional filtering will reduce performance.
3. Make sure that all of your fact tables only contain measures. This will show your table on top of the others / Put measures in an isolated table.
4. Use prefixes for measures (~ for average; # for counts; % for percentage; €/ \$ for money) make them explicit!
5. Use explicit measures over implicit measure to prevent mistakes like count / distinctcount.
6. Try to use variables (VAR) in your measures to avoid code duplication and to make your DAX more readable.
7. Don't apply two-way relationships to all in data relationship.
8. Start with base measures then layer further measures on top.
9. Comment/Document complicated DAX formulas.
10. Use measures over calculated columns. (Measure = CPU / Calculated Columns = Memory)
11. Create a Date dimension with one of the following DAX formulas.
 - a. "Date = CALENDARAUTO()"
 - b. "Date = CALENDAR('FromDate';'ToDate')"
12. Always create a view on the date table when reporting over more than one type of date. ("Date2 = 'Date'")
13. Tag the date table as Date table. It will replace the internal time intelligence logic.

M-Query

1. Remove unnecessary surrogate keys from the model to enhance compression.
2. Remove unused fields from the model to decrease memory usage.
3. In query edit mode; use relate over duplicate. Since data will only be extracted from the source once.
4. Always edit the query before load and apply.
5. Get your heavy lifting done in Power Query to avoid Sistine Chapel type DAX measures.
6. Realize a structure of folders in Power Query. Create folders like: Dimensions, Facts, Reference, Functions.
7. Keep your data load M queries as short as possible by combining renames /column deletes in single statements.
8. Rename M query steps like custom columns to something more understandable.

Sharing and Security

1. Always use workspace for each kind of stakeholder. (for example, financial; sales; management)
2. Prefer Dynamic Row Level Security over Simple Row Level Security.
3. Always use apps to distribute reports and dashboard to the end-users.
4. Use AD groups when sharing with many users.
5. Very careful with publish to web! Do Not publish in the wrong workspace!

Maintenance/Developing

1. Never develop in the online environment of Power BI; always in Power BI desktop.
2. Create one Power BI file including the dataset; use other Power BI files to connect to this dataset online.
3. Make regular incremental backups whilst developing. Consider the actual workspace as PROD and your own workspace as DEV.