

100 POWER BI TIPS FOR REAL DOERS

For all those who not only learn Power BI - but really use it.
From the first data import to the smart DAX - condensed practical knowledge for your everyday life.



Data preparation & Power Query

Clean up data like a pro

1. choose the right plug

Use the correct data connection - for example "SQL Server" instead of ODBC if you are accessing SQL. Runs faster, can do more, saves nerves.

2. muck out early

Filter what you don't need right at the beginning - e.g. only the current year. This makes everything leaner and faster.

3. rake monster all the way to the back

Sorting, grouping, merging? Only at the very end. That way, Power Query doesn't have to go through everything again and again.

4. start with mini data set

Too slow? Then work with just a few lines (e.g. "Keep first 100 lines") - you can delete the filter later.

5. check data types

Make sure that the text, number or date is really what it should be - otherwise there will be problems with calculations and visualizations later on.

6. switch on data profile

With one click you can see: How many zero values are there? Which values occur frequently? Ideal for recognizing errors or outliers right away.

7. take out everything you don't need

Superfluous columns? Get rid of them. Test data? Out. The tidier your dataset, the better for model and performance.

8. cleverly combine: Merge vs. append

Merge = columns next to each other (e.g. add product information). Append = Stack tables (e.g. merge monthly files).

9. smoothing cross tables

Do you have months as columns? Then use "Unpivot". This turns columns into rows - and your evaluations finally become flexible.

10. grouping for the abbreviation

If you only need totals anyway, then pre-calculate them in Power Query - this saves computing power in the model later.

11. refer instead of copy

You want to reuse a query? Use "Reference" instead of "Duplicate". Changes are then automatically applied everywhere.

12. name steps meaningfully

Not "Step 3", but "Date filtered" or "Currency conversion". Helps you (and others) to understand.

13. use folder structure

If there are many queries: Sort them into groups. E.g. by "Facts", "Dimensions", "Auxiliary queries". That makes it clearer.

14. do not forget the order

Some steps change automatically (e.g. types by grouping). Go through your steps regularly and check everything.

15. build column from example

Simply tell Power Query what you want by example - e.g. "Only the zip code". The rest is almost automatic.

16. classifications equal in PQ

For example, if you divide customers into "Top", "Medium", "Low" - do this directly in the Power Query Editor. Saves DAX and loading time.

17. parameters = more flexibility

Create a parameter for things like file paths or threshold values. Change it once - and everything adjusts automatically.

18. repetitions as a function

Do you do the same data cleanup often? Build yourself a function - and use it everywhere. Saves time and nerves.

19. build future-proof queries

Avoid fixed names or formats. Instead, use flexible patterns so that your report continues to run with new data.

20. dataflows? Mega practical!

Store your Power Query logic in the cloud - via dataflows. This allows multiple reports to use the same tidy data.



Visualization & report design

Build reports like a designer

21. take the appropriate diagram

Choose the visualization that suits your data. Bars for comparisons, lines for trends, maps for regions. So people immediately understand what you want to show - without any extra explanation.

22. uniform layout rocks

Use a recognizable layout on all pages - e.g. title at the top, filters on the left, charts on the right. This gives your report structure and helps everyone to find their way around immediately.

23. don't overload!

Keep it clear: 5-7 visuals per page is a good rule of thumb. Too much at once can be overwhelming - focus on one key message per page.

24. make it interactive

Use slicers, drilldowns or Q&A visuals so that your users can discover for themselves what's in the data. This increases engagement - and is more fun.

25. fine-tune interactions

If visuals influence each other, this can help - or confuse. Specifically set which diagrams are allowed to filter each other - and is more fun.

26. details on click

Show additional information via tooltips or drill-through to extra pages. This keeps your main report lean, but if you want more, you can get it with one click.

27. colors with statement

Use conditional formatting to highlight important values - e.g. green for target reached, red for alarm. This makes it immediately apparent where action is required.

28. clear titles & axes

Avoid cryptic labels like "Value" - say what's what ("Sales by region, Q1/2024"). Good labels save explanations.

29. stay true to color

Use a uniform color scheme. If "costs" are orange once, then please use it everywhere. This makes your report more professional - and easier to read.

30. use themes & save time

Download a ready-made design theme or build your own. One click - and your entire report will look clean and uniform.

31st correct order counts

Don't sort your categories alphabetically if it doesn't make sense. For example, please sort months by calendar, not A-Z.

32. drilldowns per hierarchy

Create hierarchies (year > quarter > month) so that you can jump from the rough to the detailed. Makes your charts more interactive and easier to understand.

33. clever use of filters

Use the filters at the right level - sometimes for the entire report, sometimes just for one page or a single visual. This keeps everything under control.

34. groups instead of chaos

Summarize similar data - e.g. "Top 5 products" and "Rest". This makes your visuals clearer and helps with storytelling.

35. create magic with bookmarks

Use bookmarks to switch between views or show additional information. Your report almost becomes a small app.

36. test in full screen

Take a look at your visuals in presentation mode. Does everything fit? Is it legible on the projector or large monitor? It's better to test beforehand than to wonder afterwards.

37. also think about your cell phone

Design a mobile layout - especially the most important KPIs. Otherwise your great dashboard will quickly look like a data mess on your smartphone.

38. custom visuals with a sense of proportion

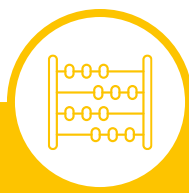
Use custom visuals if they bring real added value. But test whether they are stable beforehand - sometimes less is more.

39. use analysis extras

Trend lines, target values or key influencers - many visuals have built-in analysis functions. Use them to add more meaning directly.

40. do not forget navigation

Give your pages descriptive names ("Sales overview" instead of "Page 1"). For many pages: Include a table of contents or buttons - this makes it more user-friendly.



DAX formulas & Calculations

Calculate like a DAX professional

41. measures vs. calculated columns

Understand the difference: columns provide fixed values per row, measures calculate flexibly depending on the filter. For almost everything you need in Visuals: a measure is better.

42. master CALCULATE()

CALCULATE is your DAX superpower. It allows you to dynamically adjust the filter context for a calculation - the basis for everything from comparative values to top N evaluations.

43. clever use of FILTER()

FILTER in CALCULATE is like a special filter: you can use it to select "only sales over €100", for example. Ideal for complex conditions that go beyond simple filters.

44. SUMX vs. SUM

SUM is simple - SUMX goes deeper. SUMX calculates line by line and is perfect for "quantity x price", for example. Use it selectively, because it can be slow on large tables.

45. the X family

You always need AVERAGEX, MAXX, MINX & Co. if you want to calculate something at row level. If you can do it without X - great, it's usually faster.

46. divide instead of "/"

Always use DIVIDE() instead of normal / - this way you avoid annoying errors when dividing by 0. You can even define what comes back when it pops.

47. understand ALL()

Use ALL to remove filters - perfect for percentage-of-total calculations. Example: Turnover of one category in relation to the total turnover of all categories.

48. RELATED & LOOKUPVALUE

RELATED fetches data from linked tables. LOOKUPVALUE is like SVERWEIS - useful, but not quite as performant. If possible, it is better to model relationships clearly.

49. use time intelligence

Use TOTALYTD, SAMEPERIODLASTYEAR & Co. for everything to do with time comparisons. Prerequisite: You need a clean, marked date table (coming soon).

50. date table? Must!

Create your own date table with year, month etc. and mark them. This way, time functions work correctly and you avoid chaos with auto-date tables.

51. use VAR

With VAR you can name sub-steps in DAX. This makes formulas much easier to read and helps you with testing. Spoil yourself with clarity and less bracket chaos.

52. context change under control

A measure in a column behaves differently than in the visual - read up on the difference between row and filter context. CALCULATE helps you to consciously control this.

53. test step by step

Test DAX formulas in small steps. Display intermediate values in KPIs or use DAX Studio to quickly find out what's wrong.

54. use iterators sparingly

Don't chase SUMX & Co. over huge tables. If you can do it with SUM, use SUM. If you need X functions: filter first, then iterate. Saves power and nerves.

55. LOOKUPVALUE? Only if necessary

Yes, LOOKUPVALUE can be practical. But rather slow with large tables. If you can: use RELATED with a clean model relationship.

56. check data types

TEXT is not NUMBER. DAX is strict about this. Use VALUE(), FORMAT(), ISBLANK() etc. to make sure you are comparing apples with apples - not oranges.

57. BLANK instead of 0

Better no value than a wrong one. BLANK shows "something is missing here" - much more meaningful than a 0. Use ISBLANK() to deliberately handle empty values.

58. formatting in the frontend

Do formatting (currency, % etc.) in the UI rather than in DAX with FORMAT(). This keeps the values calculable and makes your model cleaner and more flexible.

59. Build modular measures

Build small building block measures that you can incorporate into other formulas. Saves time, minimizes errors - and if you change something, you only have to do it once.

60. learning from others

Use dax.guide, blogs, forums and sample PBIX from the community. Many problems have already been solved - you just need to know where to look. Learn by rebuilding!



Modeling & Performance

Building models like an architect

61. better star than chaos

Build your model in a star schema - i.e. a fact table in the middle, surrounded by your dimensions such as customers, products, etc. This keeps everything clean, fast and maintainable.

62. avoid spaghetti models

Keep your network of relationships lean and clear. Less criss-crossing, more clarity. This will help you find your way later on.

63. keys that hold

Relationships only work with unique keys. Make sure that IDs in dimensions are unique - otherwise things get shaky.

64. hands off "both directions"

Bidirectional relationships only if there's really no other way. They make things complicated - and sometimes wrong. Simple filter paths are your friend.

65. auto date off, own in

Switch off the automatic date hierarchy. Use your own, clean date table instead. More control, less clutter.

66. measures first!

Calculated columns make your model fat. It is better to always write a measure for evaluations - this is dynamic and saves memory.

67. preparation is everything

Calculate what you can in Power Query. The less your model has to calculate, the better it will run later.

68. do you really need that?

Tidy up mercilessly. Everything you don't need - out! Every unnecessary gap slows down your model.

69. performance problems? Check it out!

Use the performance analyzer to find out which visual is slowing you down. This allows you to make targeted optimizations before anyone complains.

70. don't forget the number check

Test your measures before you present them. Is the sum correct? Is it what you expect? Better safe than sorry.

71. only see what you are allowed to see

With Row-Level Security, you only show each person the data they are supposed to see. RLS provides systematic data protection.

72. keep RLS clean

Keep your security roles up to date - and check whether anyone is seeing too much. Security is not a one-off catch.

73. workspaces with a plan

Separate development and production into separate work areas. This way, only what is finished goes live.

74. share reports via apps

Use Power BI apps to elegantly share entire report packages. Published once, up-to-date for everyone.

75 "Publish on the web"? No thanks!

Only use this for public data. Internal data belongs in secure workspaces - otherwise it might end up on Google.

76. schedule update

Set up regular refreshes - so that your users always see the latest data. And communicate how up-to-date they are!

77. stay tuned even after the go-live

Keep an eye on performance, even when the report is finished. Small changes can have a big impact.

78. report pages not overloaded

Too many visuals on one page? That kills performance. Better to split up and focus.

79. do not forget data protection

Sensitive information? Then use masking, access rights and export bans. Security is not optional.

80. document like a pro

Describe your tables, columns and measures directly in the model. You'll thank yourself later - and so will your colleagues.



Resources & Community

Learning like a Power nerd

81. rock Microsoft Learn

Work your way through the official Microsoft learning paths. Interactive, free and super structured - ideal if you prefer to learn systematically. The perfect starting point, especially for beginners.

82. documentary is your friend

Regularly click through the Power BI documentation on Microsoft Docs. The explanations are well-founded, up-to-date and often worth their weight in gold if you want to know how a feature really works.

83. start guided learning

Check out the official Guided Learning Course - a complete power BI crash course with a common thread. Great if you want to go through everything once without losing track.

84. use community

Register in the Power BI Community. There you will find help, exchange, examples and often the solution to your problem - faster than you think.

85. YouTube is the university

Subscribe to Power BI channels such as "Guy in a Cube" or "Curbal" - they explain features, DAX and Power Query better than many a course. Ideal for joining in & rebuilding.

86. read the blogs of professionals

The MVPs are busy blogging - from SQLBI to Pirate BI. Read their articles, get tips and best practices directly from the real BI world.

87. think in groups

Look for local or virtual Power BI user groups. There you will get a real exchange of experiences, workshops - and often the decisive "aha" moment.

88. stealing inspiration allowed

Browse through the Data Stories Gallery. You'll find crazy reports from others - and you can learn design tricks and DAX formulas.

89. books never hurt

Take a look at Power BI books or eBooks. They are often very well structured and explain many things more clearly than pure documentation. Particularly good: SQLBI, Gil Raviv or Microsoft Press.

90. read monthly updates

Power BI is constantly being developed. Take a look at the monthly desktop updates in the official blog or on YouTube - you won't miss a single new feature.

91. learn to love DAX tools

Use sites like dax.guide or tools like DAX Studio & Tabular Editor. They help you to write DAX faster and with fewer errors - and save you a lot of stress.

92. patterns instead of toil

Google DAX Patterns - these are proven solutions for common problems. From Moving Average to Top-N with "Other", everything is included.

93. browse community posts

Many questions have already been asked - and ingeniously answered. Read how others have solved problems. You'll be amazed at how much knowledge is out there.

94. set certification as a goal

PL-300 is the official Power BI certification. Even if you don't want to take it, the course material is a great guide to what you should know as a professional.

95. create your own playground

Create a test project where you can simply do what you want. Try out DAX, create visuals - without risk, without pressure.

96. understanding terms

What is a dataflow again, what is an app? Take the time to check the Power BI terminology from time to time - it will help you in everyday life and when Googling.

97. ask others for best practices

Ask specifically for tips: in the team, in the community or online. This way, you will learn what has really proven itself in practice.

98. sharing knowledge = learning more

Write a post, explain your report to the team or help someone in the community. When you explain something, you learn it twice.

99. take webinars & courses with you

Register for Power BI webinars or watch free online courses. Great for new features or for targeted learning of individual topics.

100. patience & practice

Last but not least: stay cool. You don't have to be able to do everything at once. Start small, try out a lot - the rest will come with time.



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Not enough yet?

