BUDAPEST BI FORUM 2026

POWER BI & FABRIC · DATAVIZ · FINANCE ANALYTICS

One Model, Three Visual Stacks Compared

Finance reporting in Power BI: the same questions, one lean model, and the same P&L page built every way Power BI allows. Everything costs. Nothing always wins.

Michael Tenner · Daten-WG by platformimpulse · Köln

November 17, 2026 · Budapest · Danubius Hotel Helia

40 min · most of it live

Michael Tenner

Full Stack Power BI Engineer · Daten-WG by platformimpulse

Finance and controlling reporting on Power BI and Fabric. Builds the open-source visuals ChartKitchen and P&L Statement byDatenWG, writes the Daten-WG Knowledge Kitchen, and compares things that all cost money.

Slides & material
github.com/Losveratos/BI-Forum-Budapest-2026

LinkedIn
linkedin.com/in/michael-tenner-5b885970

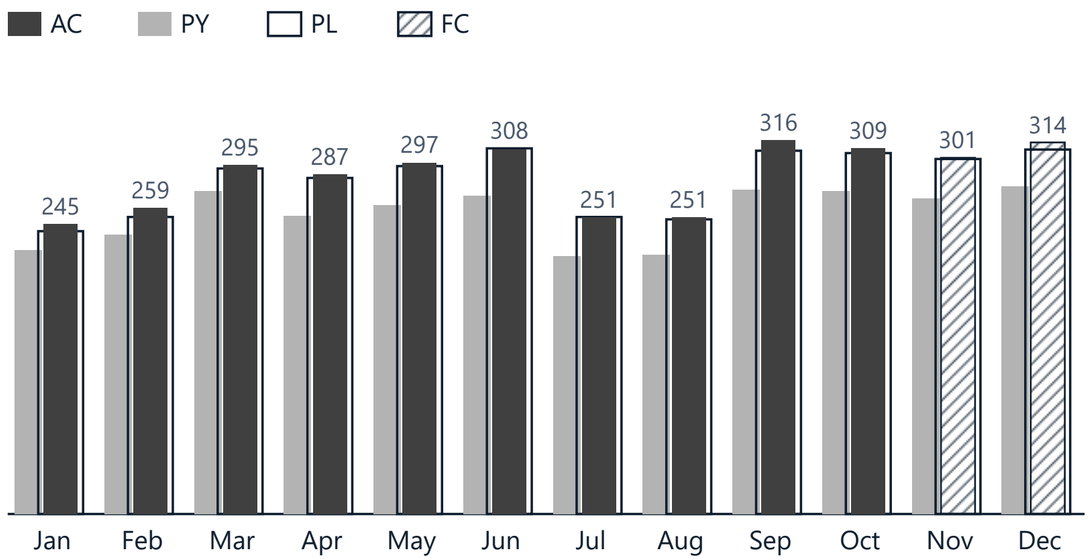


WHAT DO WE WANT TO SEE?

Actual. Then compared to something.

Previous year, plan, forecast. Not always all of them, but always the same four, and always the same way.

Revenue · landing 3,433 (AC Jan–Oct + FC Nov–Dec) vs PL 3,389, +1.3 %



AC

What happened

The number itself. Solid, dark, the only thing that is real.

VS PY

Better than last year?

Easiest comparison, least useful alone. Last year had its own one-offs.

VS PL

Did we keep the promise?

Plan or budget, the outline we committed to. The variance is the story.

FC

Where do we land?

Forecast fills the open months, hatched, because it is not real yet.

Demo model DWG Industries, net revenue, million EUR

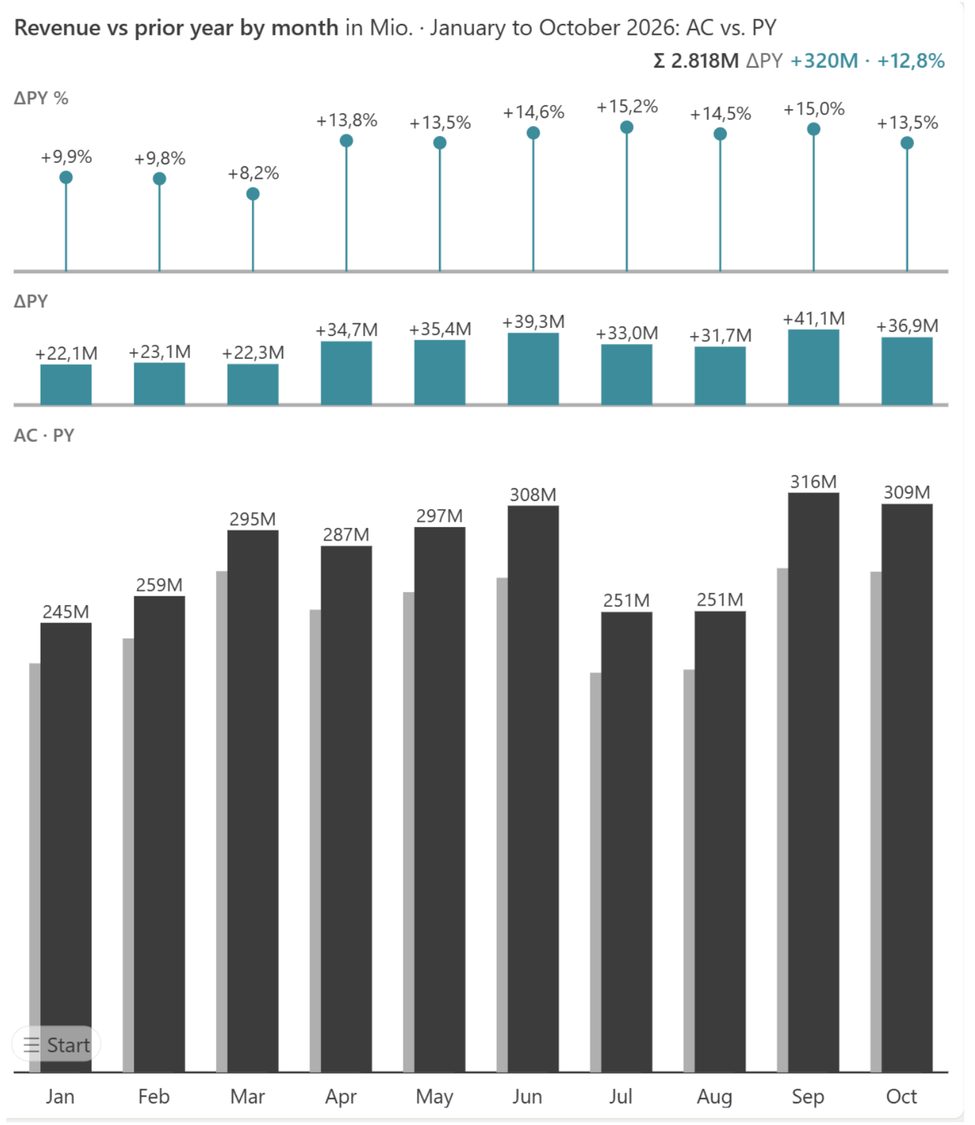
→ to add the next comparison

… IN TIME

Time runs as columns

Months left to right, the scenarios are the third axis. The ΔPY bars sit on the scale of the columns: +22 m is nine percent of the 245 m January column. The Δ % pins keep their own unit.

Time · revenue by month, AC vs PY · ΔPY and ΔPY % on top



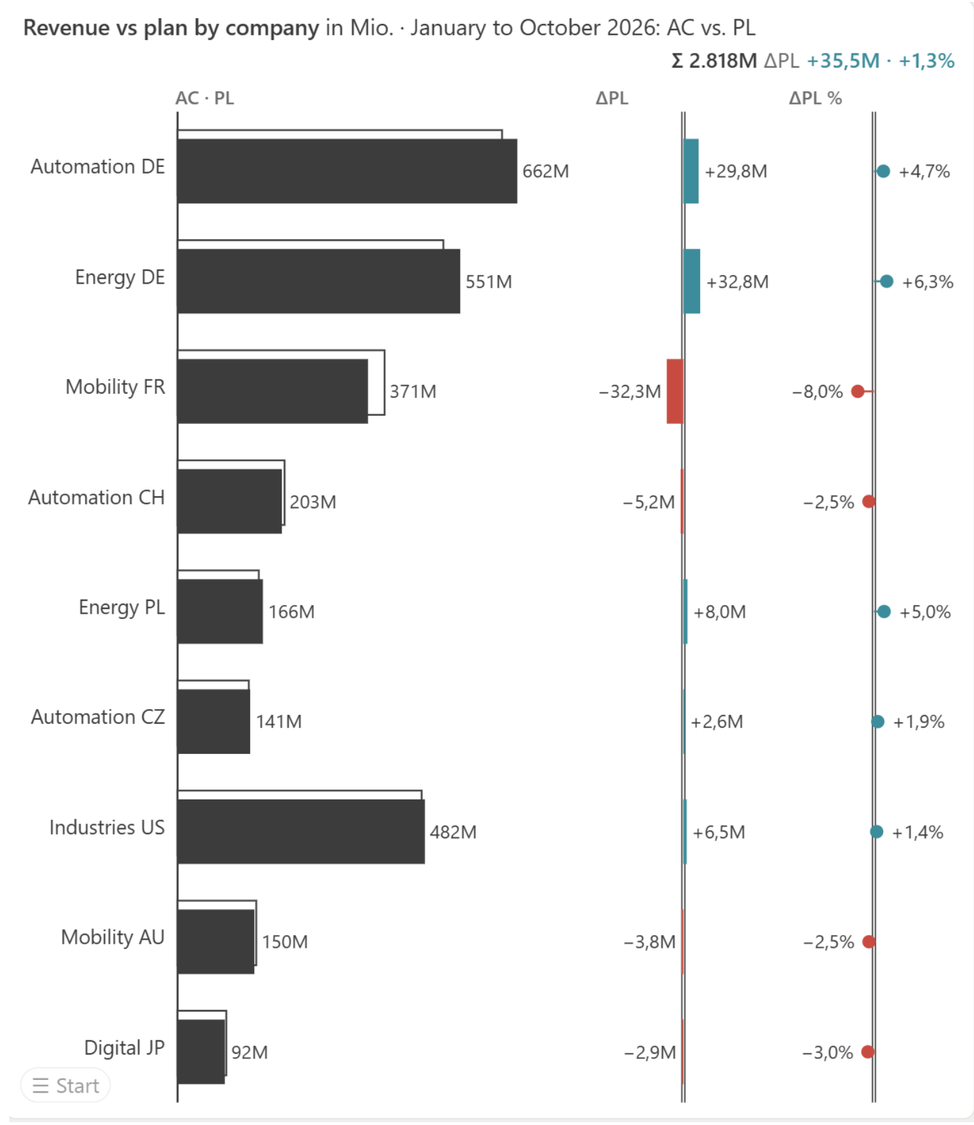
Own visual shown: ChartKitchen byDatenWG · page "Plan gap" of the demo report

… AND IN STRUCTURE

Structure runs as bars

Same visual, rotated, same notation: AC filled, PL outlined, ΔPL and ΔPL % beside. Four companies below plan, Mobility FR with −32.3 m. The variance column says so without a second chart.

Structure · revenue by company, AC vs PL · ΔPL and ΔPL % beside



Own visual shown: ChartKitchen byDatenWG · page "Plan gap" of the demo report

One visual, two directions, Δ on the base scale in each chart

THE NOTATION HAS A NAME

IBCS on one page

The SUCCESS rules. We are not members and not certified: inspiration, with the notation taken literally.

NOTATION · Simplify · Unify · Check

S
Simplify
no clutter, no decoration, no 3D

U
Unify
the notation: scenarios, variances, time, structure

C
Check
integrity: same scale, no truncated axes

COMPOSITION · Say · Express · Structure · Condense

S
Say
one message per page, as a sentence above the chart, highlighted in it

E
Express
the right chart type for the question

S
Structure
consistent, hierarchical, MECE

C
Condense
more information per page, small multiples



Δ on the base scale, or a scale band

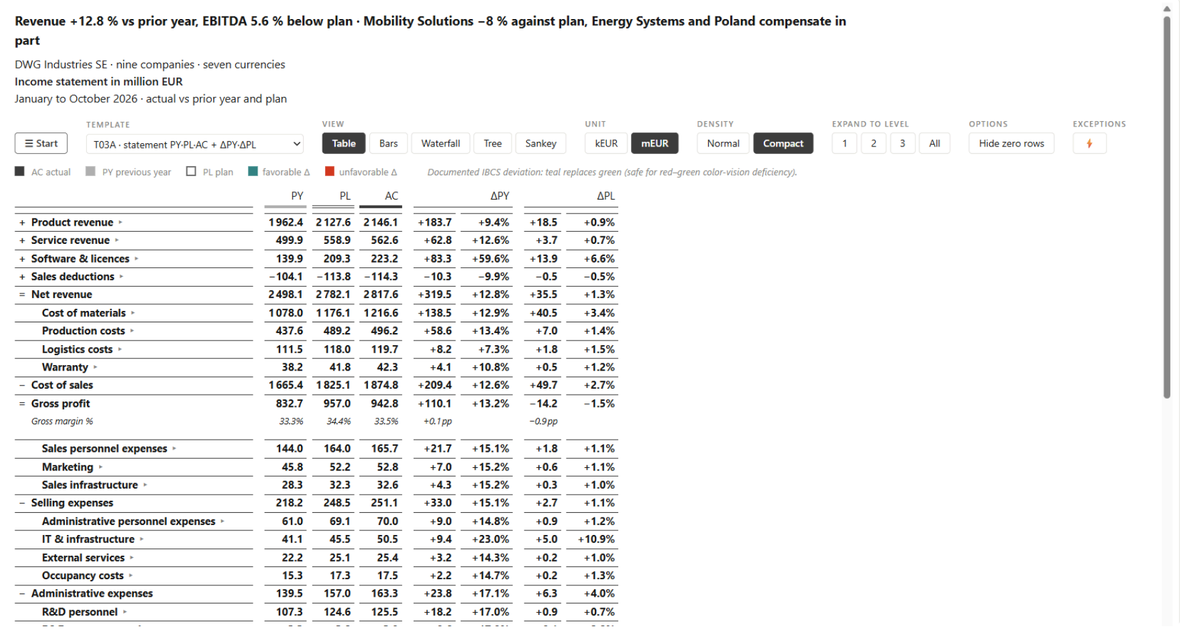
SUCCESS cards adapted from the IBCS® Standards 2.0 by the IBCS Association, CC BY-SA 4.0 (ibcs.com/standards); this slide is shared under the same licence · IBCS® is a registered trademark of the IBCS Institute

NOT A RANKING

A P&L is a calculation, not a structure

IBCS treats it as a calculation scheme: operators (+ − =), subtotals, a vertical calculation waterfall, never sorted by size. It needs a hierarchy, formulas and a sign.

P&L Statement byDatenWG · demo report, template T03A: PY, PL, AC, ΔPY, ΔPL



Revenue +12.8 % vs prior year, EBITDA 5.6 % below plan · Mobility Solutions −8 % against plan, Energy Systems and Poland compensate in part

DWG Industries SE · nine companies · seven currencies
Income statement in million EUR
January to October 2026 · actual vs prior year and plan

TEMPLATE: ☰ Start | T03A · statement PY-PL-AC + ΔPY-ΔPL
VIEW: Table | Bars | Waterfall | Tree | Sankey
UNIT: kEUR | mEUR
DENSITY: Normal | Compact
EXPAND TO LEVEL: 1 | 2 | 3 | All
OPTIONS: Hide zero rows
EXCEPTIONS

AC actual · PY previous year · PL plan · favorable Δ · unfavorable Δ
Documented IBCS deviation: teal replaces green (safe for red–green color-vision deficiency).

	PY	PL	AC	ΔPY		ΔPL	
+ Product revenue	1 962.4	2 127.6	2 146.1	+183.7	+9.4%	+18.5	+0.9%
+ Service revenue	499.9	558.9	562.6	+62.8	+12.6%	+3.7	+0.7%
+ Software & licences	139.9	209.3	223.2	+83.3	+59.6%	+13.9	+6.6%
+ Sales deductions	−104.1	−113.8	−114.3	−10.3	−9.9%	−0.5	−0.5%
= Net revenue	2 498.1	2 782.1	2 817.6	+319.5	+12.8%	+35.5	+1.3%
Cost of materials	1 078.0	1 176.1	1 216.6	+138.5	+12.9%	+40.5	+3.4%
Production costs	437.6	489.2	496.2	+58.6	+13.4%	+7.0	+1.4%
Logistics costs	111.5	118.0	119.7	+8.2	+7.3%	+1.8	+1.5%
Warranty	38.2	41.8	42.3	+4.1	+10.8%	+0.5	+1.2%
− Cost of sales	1 665.4	1 825.1	1 874.8	+209.4	+12.6%	+49.7	+2.7%
= Gross profit	832.7	957.0	942.8	+110.1	+13.2%	−14.2	−1.5%
Gross margin %	*33.3%*	*34.4%*	*33.5%*	*+0.1 pp*		*−0.9 pp*	
Sales personnel expenses	144.0	164.0	165.7	+21.7	+15.1%	+1.8	+1.1%
Marketing	45.8	52.2	52.8	+7.0	+15.2%	+0.6	+1.1%
Sales infrastructure	28.3	32.3	32.6	+4.3	+15.2%	+0.3	+1.0%
− Selling expenses	218.2	248.5	251.1	+33.0	+15.1%	+2.7	+1.1%
Administrative personnel expenses	61.0	69.1	70.0	+9.0	+14.8%	+0.9	+1.2%
IT & infrastructure	41.1	45.5	50.5	+9.4	+23.0%	+5.0	+10.9%
External services	22.2	25.1	25.4	+3.2	+14.3%	+0.2	+1.0%
Occupancy costs	15.3	17.3	17.5	+2.2	+14.7%	+0.2	+1.3%
− Administrative expenses	139.5	157.0	163.3	+23.8	+17.1%	+6.3	+4.0%
R&D personnel	107.3	124.6	125.5	+18.2	+17.0%	+0.9	+0.7%

Group P&L of DWG Industries, nine companies. Revenue **+12.8 % reported · +8.7 % organic at PY rates** (acquisition Digital JP +3.7 pp, FX +0.4 pp). Δ = AC − PL of the shown value; colour carries good or bad (IBCS).

FOUR THINGS A BAR CHART NEVER KNEW

- **Hierarchy and subtotals.** Net revenue is not in the fact table, it is the children added with their signs.
- **Formulas.** Gross profit, EBITDA, margins. Formula on formula.
- **The sign.** A cost row calculates with −1, shows positive, and "less" is favourable. One wrong and an overrun turns green.
- **Windows.** Month, YTD and full year from the same monthly rows, forecast hatched where actuals stop.

Management P&L, cost-of-sales format with D&A shown separately. Under IFRS 18 (from 2027) EBITDA becomes a disclosed MPM: one more formula row in the account dimension, not a new report.

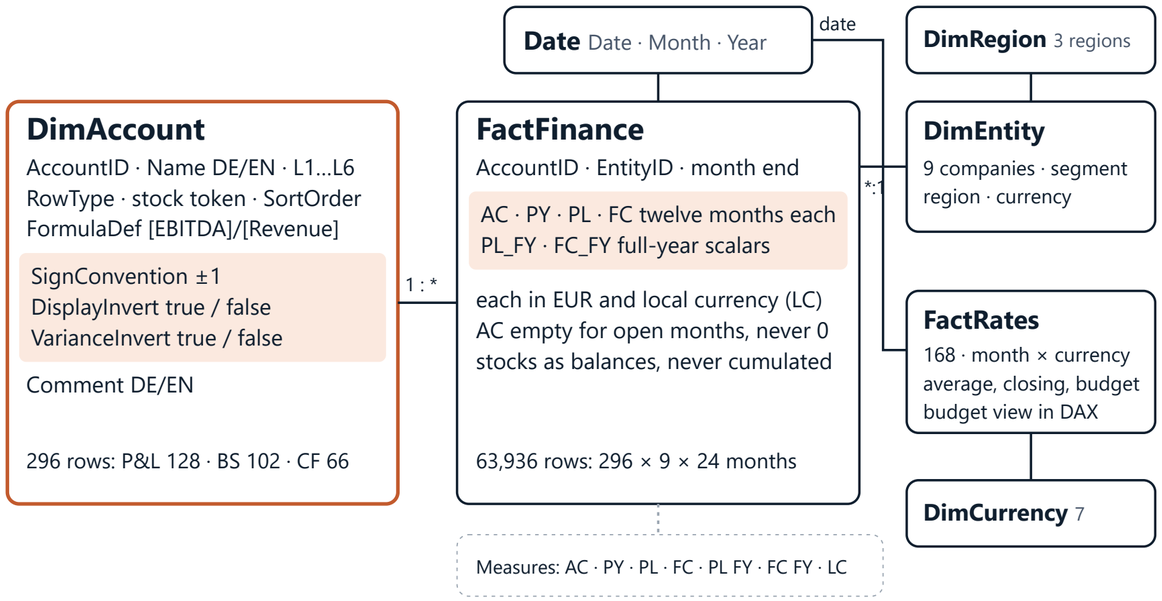
Every stack has to solve these four somewhere: in DAX, in a spec, or inside the visual. Where it lands decides cost, maintainability, and who can change it in two years.

ONE MODEL, ALREADY BUILT

The model answers the questions. The visuals only draw them.

One account dimension, one fact table at month grain, a date table, a rate table related to date and currency. Thin role measures, no time intelligence in the model. The same model under every rung.

Star schema, one snowflake branch (region) · DWG Industries, nine companies, seven currencies



RULE 1

Month grain, empty not zero

A 0 in November makes November an actual month. PY, PL and FC cover all twelve months.

RULE 2

Full year is a scalar

Repeated on every month row: MAX per account, company and year, then summed. SUM is twelve times too large.

RULE 3

Sign trio in the dimension

Cost row: −1 · shown positive · less is favourable. Three flags, three jobs: compute, display, judge. Get one wrong and an overrun turns green.

RULE 4

Thin measures, no YTD

One measure per role. The visual cuts month, YTD and FY from the last month with actuals. Forecast versions and restated PY are one more column or a version dimension in the fact; the visuals do not change.

Trap every rung inherits: ten actual months against twelve plan months; one flag in the date table (Period status = Actual) prevents it. Budget rate and FX effect are measures; a day-3 adjustment is one small fact table and one switch. · GitHub · A9–A11

HOW DOES THIS FIT POWER BI?

Every rung works. Each one pays differently.

Stack 1 · Core + SVG

1
Pure Power BI

Core visuals, no code, notation only approximated.

Copilot can build and edit it today (paid capacity F2+/P1+).

Rules: in your head

2
DAX only

Measures, a line table for subtotals, format strings.

Everything auditable, every change is a measure.

Rules: in DAX

3
SVG measures + UDF

Measures return SVG images in table cells.

UDFs GA since June 2026, IBCS packages on daxlib.org.

Rules: in DAX

Stack 2 · Deneb

4
Deneb (Vega) · HTML

The chart is a Vega-Lite spec: text, Git, templates.

Deneb and HTML Content (lite) are Microsoft-certified; full HTML Content is not.

> Microsoft announced native Vega-Lite for Power BI at FabCon 2026, no date yet. Specs written today stay portable.

Rules: in the spec

Stack 3 · Custom visual

5
Custom visual

Open: ChartKitchen, P&L Statement byDatenWG, free, you maintain it.

Paid: Zebra BI, Inforiver, graphomate, IBCS-certified, licence per reader.

Rules: inside the visual

Host

6
Fabric Apps

The same charts as React ports, outside the report canvas.

Preview, some regions, readers need Build permission on the model, no Git sync yet.

Rules: at risk of moving into app code

Not on the ladder, same model underneath: paginated reports for the close pack, Excel connected to the model for controllers.
Coding agents build visuals in hours today, which moves every rung · own visuals shown: ChartKitchen and P&L Statement byDatenWG

Same model under all six

NOW THE REPORT

Demo

- One report, one page per rung, one model: DWG Industries, nine companies, seven currencies.
- Same P&L page, same numbers. Switch the company slicer in each. Who is still right, who is still fast?
- Performance Analyzer on screen, DAX time and render time apart.
- Day three, 10:40: one booking changes, every rung shows the same new number, because none of them owns a number: net income 151.6 → 155.6 on every P&L page, stamp included.
- Every page states its data-as-of: actual to October, plan and forecast to December.


Rung 1 · core visuals


Rung 2 · DAX text


Rung 3 · SVG, UDF


Rung 4 · Deneb


Rung 5a · custom


Day 3 · one switch

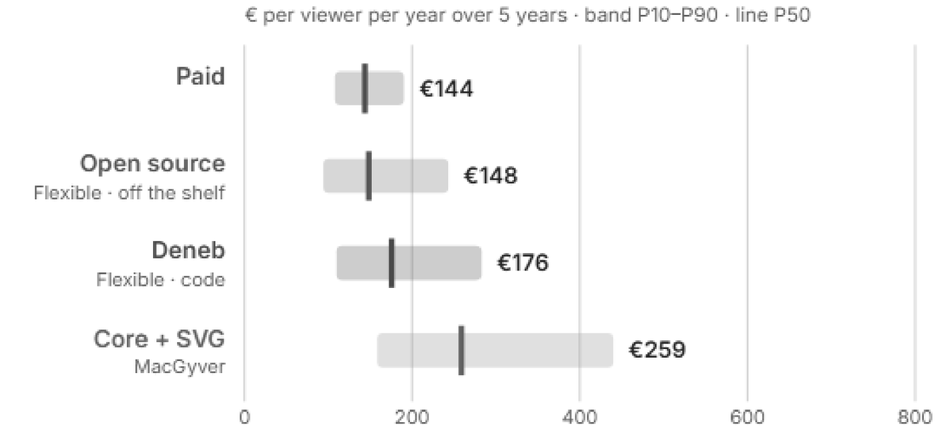
github.com/Losveratos/BI-Forum-Budapest-2026

WHAT DO WE HAVE TO CONSIDER?

Everything costs. Nothing always wins.

The Visual Standards Calculator: four approaches, three-point estimates, 1,500 scenarios, P10 to P90 per reader and year.

Live · preset "Finance with mandatory IBCS": 5 authors, 150 readers, 80 EUR anchor, 5 years · open the calculator ↗



Paid and Open source are indistinguishable within the band at about 144 EUR per reader and year; Deneb 1.2 times, Core + SVG 1.8 times as much. From about 176 readers for these 5 authors the licence per head costs more than the cheapest hours-based approach.

Hours at 125 EUR/h fully loaded · Power BI Pro/PPU or Fabric capacity excluded (same for every stack, larger than any difference shown) · list prices, no escalation, no discounting.

WHAT FLIPS THE RANKING

- **Negotiate below ~92 EUR** per user and year and Paid beats building it yourself at 150 readers.
- **Readers per creator.** Licences scale with heads, hours do not. Here the tipping point is 176 readers for 5 authors; it moves with the licence anchor.
- **Licence anchor.** 33, 80 or 170 EUR per user: Inforiver level, mixed, Zebra level. Anchors include support, add-ons and enterprise tiers; Zebra BI list price is about 65–70 EUR per user and year at 10–50 users.
- **A template library** for Deneb and Core: hours per chart drop to 0.6 and 0.7.
- **Red flags.** "Core visuals only" leaves Core. "IBCS certificate mandatory" leaves Paid.
- **Semantic models.** A visual is a tenant object, a DAX function lives per model: twenty models, Core +209 %.

Michael Tenner & Diana Ackermann · in the browser, settings travel in the link

SUMMARY · THREE STACKS: RUNGS 1–3 CORE + SVG, RUNG 4 DENEB, RUNG 5 CUSTOM VISUAL

Rules in the model. Pick the rung by who pays and who maintains.

Because the rules sit in the model, switching the visual later is a report rebuild, not a migration.

Ratings from calculator, demo and seven reviews; I build rung 5a, discount my ratings there.

Rung	IBCS fit (as shown today)	Platform risk	Cost per reader and year 150 readers, 5 authors	Maintainability	Self-service with AI	Export & audit trail	Avoid when
1 Pure Power BI rules in your head	●○○ no hatching, variance by hand	●●○ Q&A retires 02/2027	**€259** Core+SVG; a plain page is cheaper	●●○ every page hand-built; subtotals via a line table	●●● Copilot builds it (paid capacity)	●●● export, subscriptions, logic visible	IBCS mandatory for all reports
2 DAX only rules in DAX	●○○ numbers and colour only	●●● low	**€259**	●○○ every change a measure	●●○ agents write DAX, readers cannot	●●● all in the model; Excel export carries the bar as text	more than a handful of pages
3 SVG measures + UDF rules in DAX	●●○ notation yes, interaction no	●●○ Service rendering regressions	**€259**	●○○ per model: 20 models +209 %	●●○ UDF library helps authors	●●○ Excel export carries the SVG text, not the bar	many models, capacity at the limit
4 Deneb (Vega) · HTML rules in the spec	●●○ anything you spec, if you spec it	●●○ Deneb v2 = new visual, opt-in	**€176**	●●○ JSON in Git, templates to keep	●●○ agents yes, Copilot no, readers no	●●● Microsoft-certified	nobody will maintain JSON
5a Custom visual, open rules inside the visual	●●○ built for it, not certified	●●○ certification rules	**€148**	●●○ your repo, abandonment risk	●●● readers switch views, agents bind roles	●○○ no PDF/PPT export, no subscriptions: knock-out for a board pack	export or subscriptions are a must
5b Custom visual, paid rules inside the visual	●●● certified software; conformity still the author's job	●●○ vendor pricing	**€144** tips at 176 readers	●●● vendor roadmap and support	●●○ readers yes, closed to agents	●●○ export yes, logic closed	no licence budget, publish-to-web
6 Fabric Apps rules at risk in app code	●●○ same React ports, not shown	●○○ preview, no Git	capacity today, Pro/PPU announced	●○○ no Git sync yet	●●● built by coding agents	●○○ logic leaves the model; readers need Build on the model	audit wants the logic in the model

●●● strong · ●●○ workable · ●○○ weak or knock-out · sources: calculator v0.23, its audit, seven expert reviews, the demo

If your board pack is a PDF from the Service, rung 5a is out today.

YOUR DECISION

Your decision in four numbers

Readers per author, licence price, your hourly rate, PDF required?

1. **Rules first:** sign, FY scalar, currency, FX effect, close status go into the semantic model. Done once, every stack can be dropped later.
2. **PDF export or subscriptions mandatory** (board pack): rungs 1, 4 or 5b. Rung 5a is out today.
3. **Above ~35 readers per author**, IBCS mandatory, licence under ~92 EUR: 5b. Below: 4, or 5a if someone in-house can maintain the source.
4. **Not included:** Pro/PPU/Fabric capacity (same for all), training, change management. Horizon 3 years, 125 EUR/h.
5. **Send me your four numbers**, you get the calculator link with your preset.

Put the rules in the model this quarter. Pick the visual per audience. Re-decide when the reader count doubles.

Thank you

Michael Tenner · Daten-WG by platformimpulse · Köln

Slides, model & data
github.com/Losveratos/BI-Forum-Budapest-2026

Questions?

APPENDIX · A1 · THE CALCULATOR

Why Paid and Open source tie at 150 readers

Why this result, and what turns it · calculator, level 1, finance preset

WHY THIS RESULT, AND WHAT TURNS IT

1 · Ratio 1 : 30. Paid pays €58,000 in licences over 5 years. Open source saves that, but needs 528 more hours, valued at €66,000. The two weigh about the same here, so the result is a tie.

2 · Licence price. Anchor €80 per licensed user per year (list price before tiering). Parity with Open source at around **€92**. That is the negotiation ceiling, not the list price.

3 · Hours per chart. Panel values per reused chart: paid 1 h, open source 2 h, Deneb 2.5 h, Core 4 h (unmeasured). Open source would have to cut its hours by around **6%** to draw level; the switch "template library" cuts Deneb and Core by 30 to 40%.

What holds is the direction of these three levers, not the second digit. The number of viewers, the licence price and the hours per chart explain the gap almost completely; everything else shifts it by percentage points. Key statements for discussion

What holds: the order of magnitude per viewer and the number of viewers from which the licence dominates (structural). **What does not hold:** the order of Paid and Open source, which hangs on unmeasured hour assumptions; amounts to more than one digit, and the benefit side. Provenance of the 58 assumptions: 3 verified, 9 search snippets, 3 rules of thumb, 9 simulated panel, 34 authors' estimate (level 3).

THREE LEVERS EXPLAIN THE GAP

- **Ratio 1:30.** Paid pays 58,000 EUR in licences over five years. Open source saves that but needs 528 more hours, valued at 66,000 EUR. A tie.
- **Licence price.** Anchor 80 EUR per user and year. Parity with Open source at about 92 EUR: the negotiation ceiling, not the list price.
- **Hours per chart.** Panel values per reused chart: paid 1 h, open source 2 h, Deneb 2.5 h, Core 4 h, unmeasured.

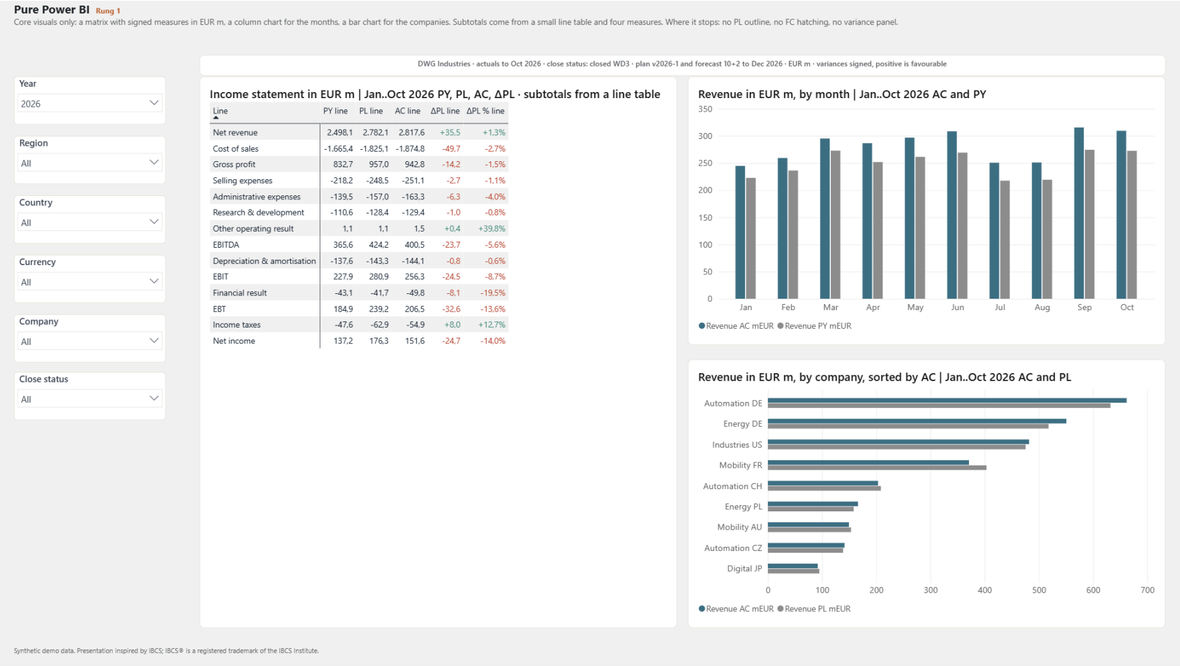
WHAT HOLDS, WHAT DOES NOT

The order of magnitude per reader and the reader count where licences dominate hold. The order of Paid and Open source hangs on unmeasured hour assumptions. Of 58 assumptions, 3 are verified, 9 search snippets, 3 rules of thumb, 9 simulated panel, 34 authors' estimates.

APPENDIX · A2 · RUNG 1

Pure Power BI: the one stack Copilot can touch

Core visuals · matrix with sign-aware measures and conditional formatting, column and bar chart



Demo report, rung 1: Gross profit, EBITDA and Net income come from a line table (pnl-lines) and four line measures; signed AC, PY, PL, ΔPL, data bars and font colour from rules. No plan outline, no variance panel.

PLUS

- Copilot builds and edits reports only with core visuals (paid capacity)
- No approval, no vendor, runs in Report Server, sovereign cloud, publish-to-web
- Best theme control, ALM and Git, drill, copy to PowerPoint

MINUS

- Notation only approximated: no hatching, no variance panels, no scenario outlines
- Deprecation is not zero: Q&A goes away in February 2027.
- Subtotals need a line table and four measures (rules in DAX); the plain matrix alone stops at the sum
- Every page is hand-built; nothing to reuse between reports

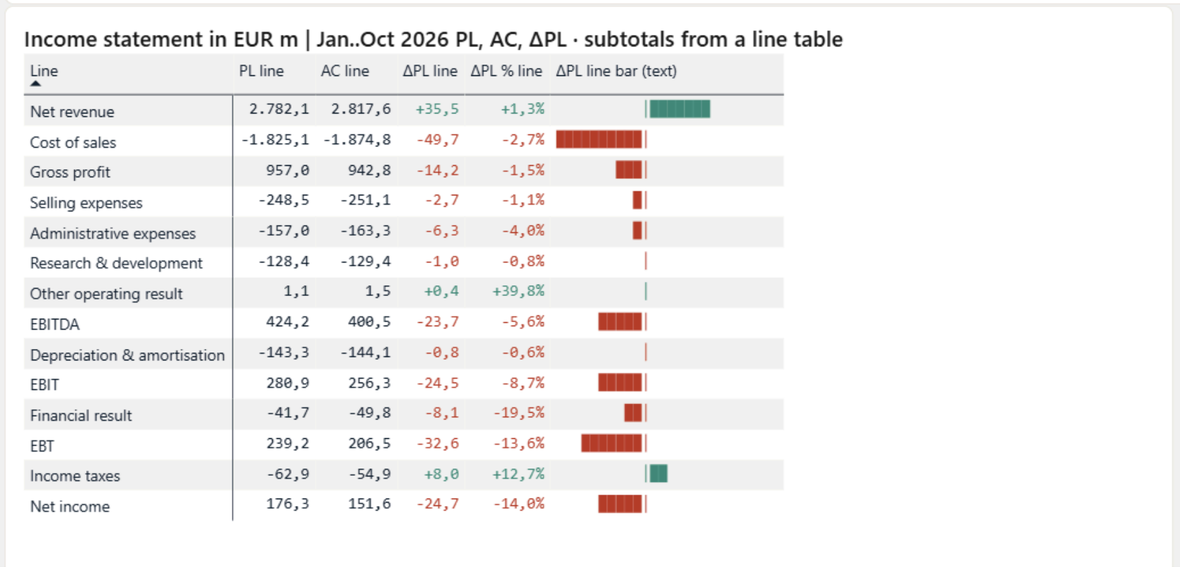
AVOID WHEN

IBCS is mandatory for all reports, or readers expect to switch views themselves.

APPENDIX · A3 · RUNG 2

DAX only: everything auditable, everything a measure

DAX only · unicode text bars and sparklines from measures, colour from a status measure



Income statement in EUR m | Jan..Oct 2026 PL, AC, ΔPL · subtotals from a line table

Line	PL line	AC line	ΔPL line	ΔPL % line	ΔPL line bar (text)
Net revenue	2.782,1	2.817,6	+35,5	+1,3%	
Cost of sales	-1.825,1	-1.874,8	-49,7	-2,7%	
Gross profit	957,0	942,8	-14,2	-1,5%	
Selling expenses	-248,5	-251,1	-2,7	-1,1%	
Administrative expenses	-157,0	-163,3	-6,3	-4,0%	
Research & development	-128,4	-129,4	-1,0	-0,8%	
Other operating result	1,1	1,5	+0,4	+39,8%	
EBITDA	424,2	400,5	-23,7	-5,6%	
Depreciation & amortisation	-143,3	-144,1	-0,8	-0,6%	
EBIT	280,9	256,3	-24,5	-8,7%	
Financial result	-41,7	-49,8	-8,1	-19,5%	
EBT	239,2	206,5	-32,6	-13,6%	
Income taxes	-62,9	-54,9	+8,0	+12,7%	
Net income	176,3	151,6	-24,7	-14,0%	

Demo report, rung 2: variance bar and month pattern are text (REPT and block characters), colour comes from a status measure; Gross profit, EBITDA and Net income come from the same line table as on rung 1. Cheap and portable, fragile in alignment, no scale band.

PLUS

- Everything lives in the model and shows up in an audit
- No visual dependency, survives every Power BI update
- Sign logic and subtotals reusable across pages: a line table and four line measures

MINUS

- Every change is a measure change, workaround upkeep
- Calculator assumptions for Core: maintenance 12 / 30 / 48 % per year, three breaking updates a year at 9.5 h each
- No real notation: no hatching, variance only as numbers or colour

AVOID WHEN

More than a handful of pages, or the team does not love DAX.

APPENDIX · A4 · RUNG 3

DAX + SVG + UDF: far, but handmade

SVG measures + UDF · hand-written SVG next to PowerofBI.IBCS 0.11.0 (daxlib.org), both rendered as image URLs in the matrix

Income statement in EUR m | Jan..Oct 2026 PL, AC, ΔPL · hand-written SVG next to PowerofBI.IBCS UDF, subtotals from a line table

Line	PL line	AC line	ΔPL line	ΔPL line SVG	ΔPL line UDF	ΔPL % line UDF
Net revenue	2.782,1	2.817,6	+35,5	+35.5	+35.5	+1.3
Cost of sales	-1.825,1	-1.874,8	-49,7	-49.7	-49.7	-2.7
Gross profit	957,0	942,8	-14,2	-14.2	-14.2	**-1.5**
Selling expenses	-248,5	-251,1	-2,7	-2.7	-2.7	-1.1
Administrative expenses	-157,0	-163,3	-6,3	-6.3	-6.3	-4.0
Research & development	-128,4	-129,4	-1,0	-1.0	-1.0	-0.8
Other operating result	1,1	1,5	+0,4	+0.4	+0.4	+39.8
EBITDA	424,2	400,5	-23,7	-23.7	-23.7	**-5.6**
Depreciation & amortisation	-143,3	-144,1	-0,8	-0.8	-0.8	-0.6
EBIT	280,9	256,3	-24,5	-24.5	-24.5	**-8.7**
Financial result	-41,7	-49,8	-8,1	-8.1	-8.1	-19.5
EBT	239,2	206,5	-32,6	-32.6	-32.6	**-13.6**
Income taxes	-62,9	-54,9	+8,0	+8.0	+8.0	+12.7
Net income	176,3	151,6	-24,7	-24.7	-24.7	**-14.0**

Demo report, rung 3: the hand-written ΔPL SVG (double line = plan) next to two one-call UDF measures from PowerofBI.IBCS: absolute variance bar and relative variance pin, scaled across all rows, bold on the total. The library needs model culture en-US and compatibility level 1702; size, tooltips and export stay the limits.

PLUS

- DAX user-defined functions GA since June 2026 (compatibility level 1702); SVG and IBCS packages on daxlib.org: DaxLib.SVG, PowerofBI.IBCS
- Full notation possible: hatching, outlines, variance bars, pins
- Text in the model: Git-able, diff-able, auditable

MINUS

- A waterfall costs about four times a plain chart; author estimate 2.2 / 3.5 / 5.5, no source
- Test every SVG measure in the Service before release; Excel export carries the SVG text, not the bar
- A function lives per model, a visual per tenant: at twenty models Core rises 209 percent
- UDFs: no display folders, no translations, no inherited OLS

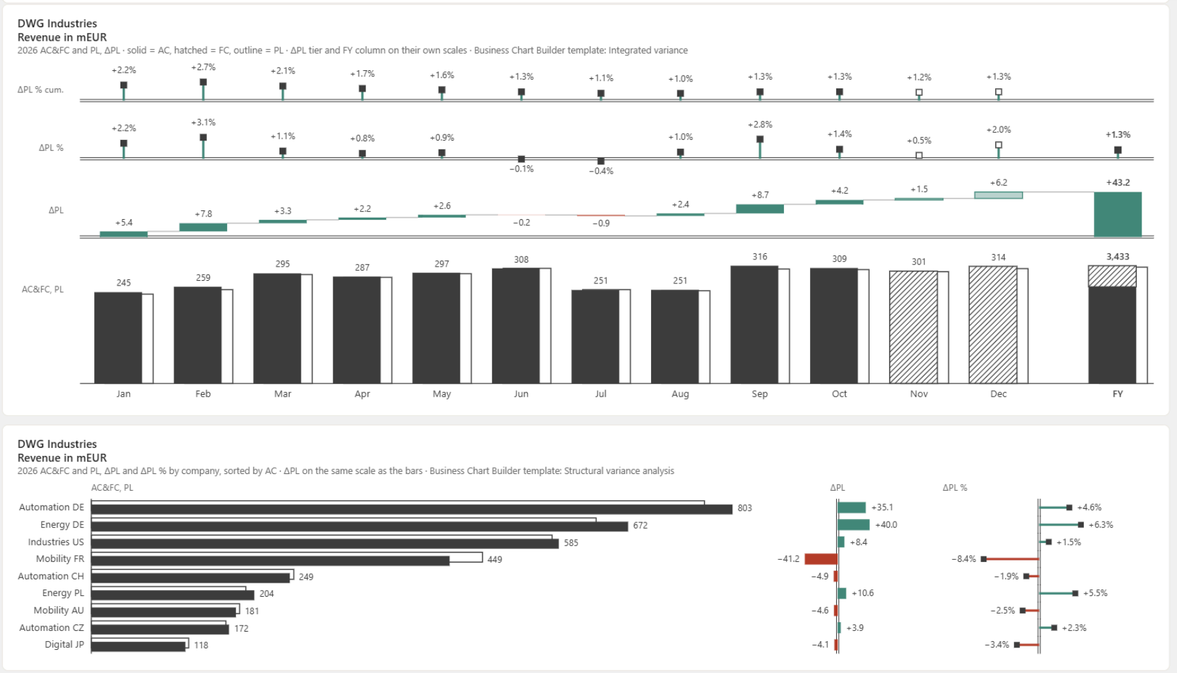
AVOID WHEN

Many semantic models, capacity at the limit, or the CU cost of DAX-rendered images is unmeasured in your tenant.

APPENDIX · A5 · RUNG 4

Deneb and HTML: flexibility paid in template upkeep

Deneb · Business Chart Builder templates 'Integrated variance' and 'Structural variance analysis' on the demo model



Demo report, rung 4: Vega-Lite specs, written as text and injected into the visual; Deneb comes from AppSource and is certified. The Business Chart Builder exports these templates.

PLUS

- Certified, on AppSource, free; passes "certified visuals only"
- Specs are text: diff-able, in Git, they survive the host visual
- Template libraries exist (vegaviz, DenebIBCS); coding agents write Vega well
- Vega-Lite announced as native Power BI feature at FabCon 2026 (no date): specs stay portable

MINUS

- About 35 hours of training per template builder
- Deneb 2.0 is a separate certified visual; v1 stays certified, migration via template export/import
- Copilot cannot edit it; drill 2 of 5, mobile 2 of 5
- Maintenance 10 to 27 percent, governance 8 to 44 hours a year; three incidents in 24 months
- Hierarchy, subtotals and formulas come pre-computed from DAX or get built into the spec

AVOID WHEN

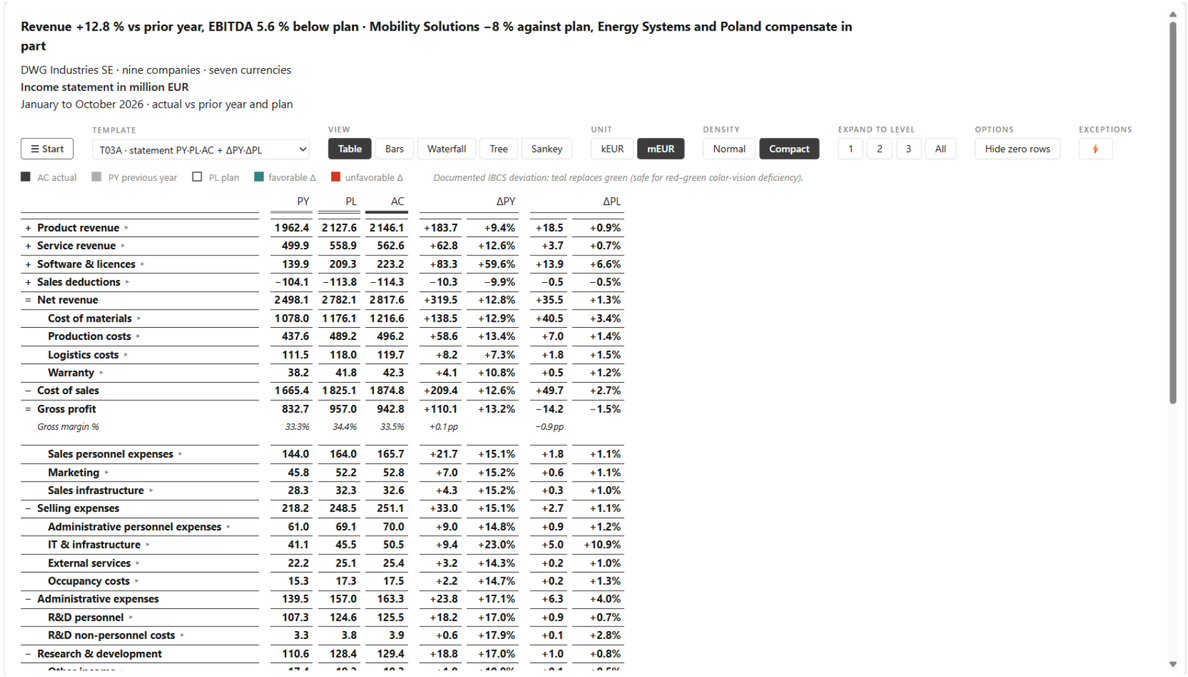
Nobody on the team will maintain JSON in two years, or interactive collapse and drill are required.

Facts from the calculator and its audit, 09/2026; Deneb release notes

APPENDIX · A6 · RUNG 5A

Custom visual, open: fastest build, your own upkeep

P&L Statement byDatenWG · template T03A on the demo model



Revenue +12.8 % vs prior year, EBITDA 5.6 % below plan · Mobility Solutions −8 % against plan, Energy Systems and Poland compensate in part

DWG Industries SE · nine companies · seven currencies
Income statement in million EUR
January to October 2026 · actual vs prior year and plan

☰ Start | TEMPLATE: T03A · statement PY-PL-AC + ΔPY-ΔPL | VIEW: Table · Bars · Waterfall · Tree · Sankey | UNIT: kEUR · mEUR | DENSITY: Normal · Compact | EXPAND TO LEVEL: 1 · 2 · 3 · All | OPTIONS: Hide zero rows | EXCEPTIONS

AC actual · PY previous year · PL plan · favorable Δ · unfavorable Δ · *Documented IBCS deviation: teal replaces green (safe for red–green color-vision deficiency).*

	PY	PL	AC	ΔPY		ΔPL	
+ Product revenue	1 962.4	2 127.6	2 146.1	+183.7	+9.4%	+18.5	+0.9%
+ Service revenue	499.9	558.9	562.6	+62.8	+12.6%	+3.7	+0.7%
+ Software & licences	139.9	209.3	223.2	+83.3	+59.6%	+13.9	+6.6%
+ Sales deductions	−104.1	−113.8	−114.3	−10.3	−9.9%	−0.5	−0.5%
= Net revenue	2 498.1	2 782.1	2 817.6	+319.5	+12.8%	+35.5	+1.3%
Cost of materials	1 078.0	1 176.1	1 216.6	+138.5	+12.9%	+40.5	+3.4%
Production costs	437.6	489.2	496.2	+58.6	+13.4%	+7.0	+1.4%
Logistics costs	111.5	118.0	119.7	+8.2	+7.3%	+1.8	+1.5%
Warranty	38.2	41.8	42.3	+4.1	+10.8%	+0.5	+1.2%
− Cost of sales	1 665.4	1 825.1	1 874.8	+209.4	+12.6%	+49.7	+2.7%
= Gross profit	832.7	957.0	942.8	+110.1	+13.2%	−14.2	−1.5%
Gross margin %	*33.3%*	*34.4%*	*33.5%*	*+0.1 pp*		*−0.9 pp*	
Sales personnel expenses	144.0	164.0	165.7	+21.7	+15.1%	+1.8	+1.1%
Marketing	45.8	52.2	52.8	+7.0	+15.2%	+0.6	+1.1%
Sales infrastructure	28.3	32.3	32.6	+4.3	+15.2%	+0.3	+1.0%
− Selling expenses	218.2	248.5	251.1	+33.0	+15.1%	+2.7	+1.1%
Administrative personnel expenses	61.0	69.1	70.0	+9.0	+14.8%	+0.9	+1.2%
IT & infrastructure	41.1	45.5	50.5	+9.4	+23.0%	+5.0	+10.9%
External services	22.2	25.1	25.4	+3.2	+14.3%	+0.2	+1.0%
Occupancy costs	15.3	17.3	17.5	+2.2	+14.7%	+0.2	+1.3%
− Administrative expenses	139.5	157.0	163.3	+23.8	+17.1%	+6.3	+4.0%
R&D personnel	107.3	124.6	125.5	+18.2	+17.0%	+0.9	+0.7%
R&D non-personnel costs	3.3	3.8	3.9	+0.6	+17.9%	+0.1	+2.8%
− Research & development	110.6	128.4	129.4	+18.8	+17.0%	+1.0	+0.8%

Template T04B adds integrated ΔPL bars and pins.

PLUS

- Bind the roles, the visual computes hierarchy, subtotals, formulas, sign trio and windows; one template click
- Five views from one binding: table, mega table, bars, driver tree, Sankey; readers switch themselves
- No licence, no telemetry, no external calls; agent guide for AI authors

MINUS

- Not Microsoft-certified: no PDF or PowerPoint export and no subscriptions in the Service, also when delivered through the org store
- Approval 8 / 24 / 60 hours; maintenance 12 to 32 percent; abandonment risk 3 to 13 percent a year
- 30,000-row window like every custom visual; fetchMoreData raises it to 1,048,576 rows

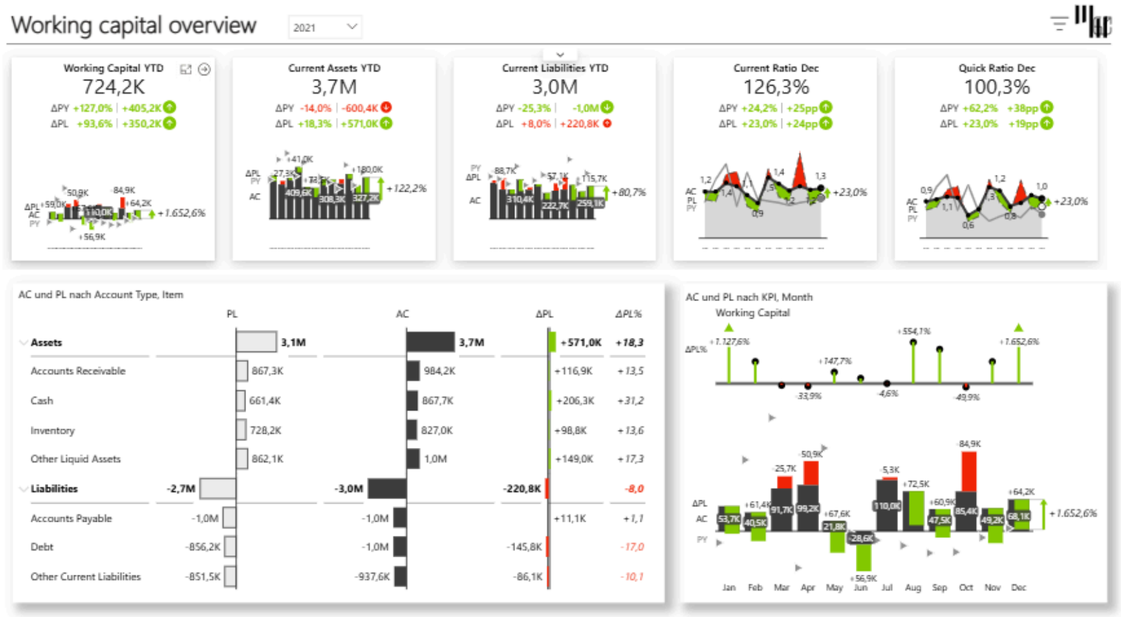
AVOID WHEN

The tenant allows certified visuals only and offers no organizational store, or nobody owns the visual's roadmap.

APPENDIX · A7 · RUNG 5B

Custom visual, paid: finished, certified, per head

Zebra BI · working capital overview: KPI cards, table with ΔPL waterfall, monthly bridge



Zebra BI for Power BI: 14-day trial, then team plans (list price about 65–70 EUR per user and year at 10–50 users, vendor page 11/2026; quotes differ). Inforiver and graphomate follow similar models. The same P&L page in one of them is still to capture.

PLUS

- IBCS-certified out of the box; the free visuals are not
- Finished: fastest path to a standard page, vendor support, roadmap; a 14-day trial to start with
- Readers switch views and comment without an author

MINUS

- Licence per user, tiered; list prices from the vendor page 11/2026, quotes differ
- In the finance preset the licence per head tips against you at 176 readers for 5 authors; the point moves with the price
- AppSource licence enforcement is absent in Report Server, sovereign cloud, publish-to-web and app-owns-data embedding; vendors with their own keys fill the gap
- Closed source: calculation logic not inspectable; price rises arrive as model changes

AVOID WHEN

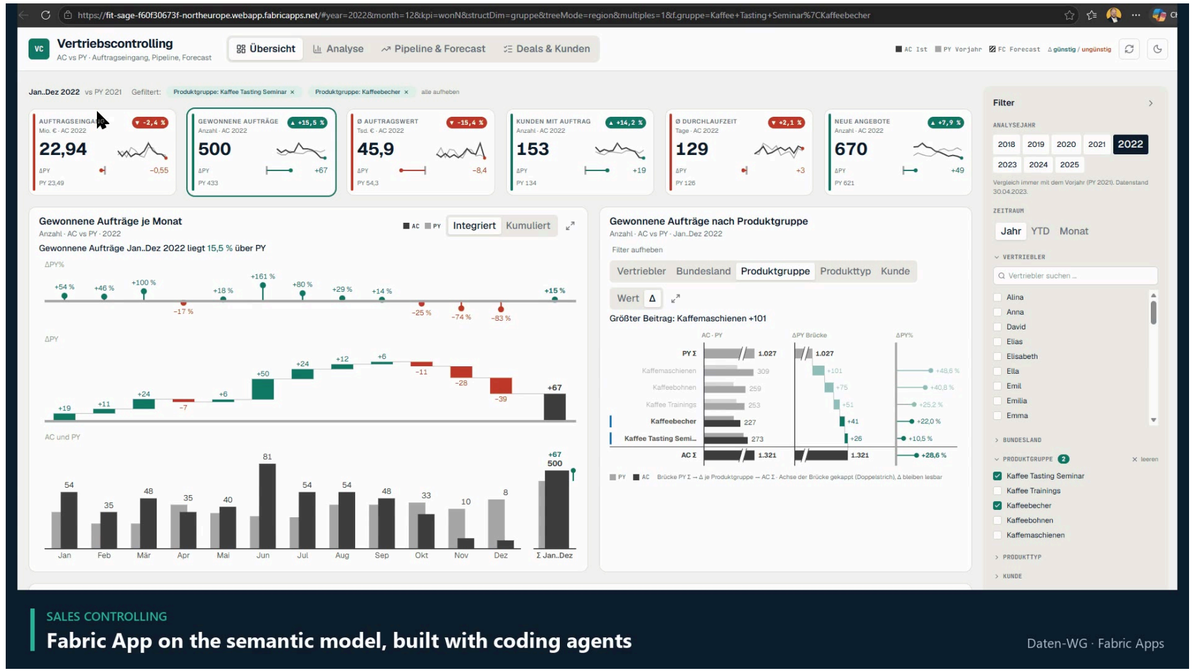
No licence budget, publish-to-web, or an audit wants to read the calculation. Report Server only with vendor licence keys.

Facts from the calculator and its audit, 09/2026; Zebra BI list price from the vendor page, 11/2026

APPENDIX · A8 · RUNG 6 · WHAT'S NEXT

Fabric Apps: the same visuals, outside the canvas

Sales controlling app · ChartKitchen as a React port in a Fabric App, live DAX on the semantic model



PLUS

- Zoom from one chart into small multiples, driver trees, details on demand, filter panels
- One spec, two targets: the dwg CLI writes report and app, same visuals, same DAX; a parity test fails when numbers differ (early preview, developed in public)
- Four apps in the demo workspace, about an hour each to build with coding agents

MINUS

- Every reader needs Build permission on the semantic model; preview, regional, not in Fabric Git
- Small F-SKUs throttle quickly
- When the model is weak, the app calculates in the browser: fast, invisible to auditors

AVOID WHEN

The audit wants the calculation logic in the model, or the capacity is already at the limit. Fabric Apps add what reports cannot. They do not replace your semantic model.

APPENDIX · A9 · QUESTIONS FOUR AND FIVE

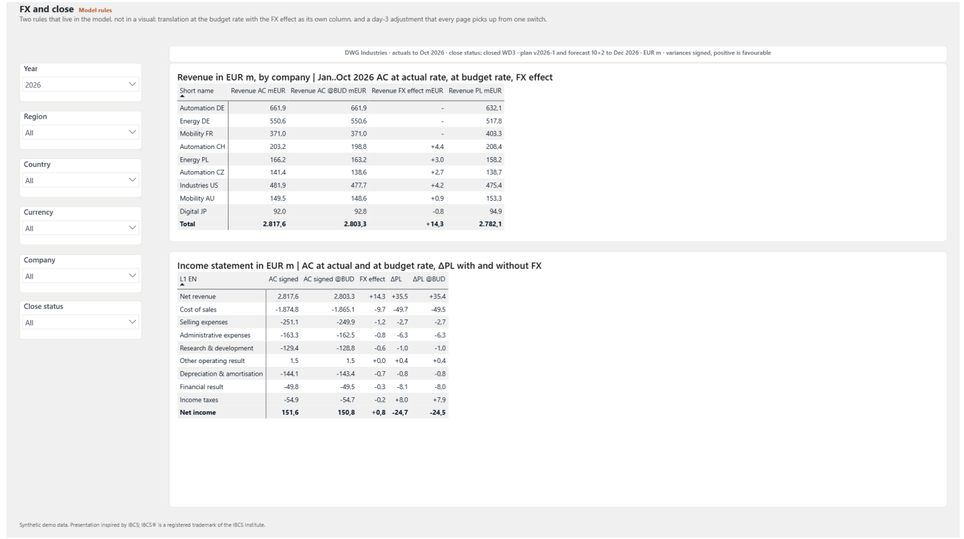
Currency: compute local, translate after

WHICH RATE FOR WHICH COMPARISON

Measure	Column	Rate type	Purpose
AC signed	AC	current, monthly average	reported actual
PL signed	PL	budget, fixed per plan year	plan, at budget rate
PY signed	PY	prior-year actual rate	prior year as reported then
AC signed @BUD	AC LC	budget, per currency and year	actual without currency moves
FX effect	[AC signed] − [AC signed @BUD]		its own line, not noise
ΔPL @BUD	[AC signed @BUD] − [PL signed @BUD]		operating variance
AC LC	AC	none	one currency in the filter, else blank

Income statement and cash flow at average rate, balance sheet at closing rate (IAS 21). Facts keep local currency; the rate table holds average, closing and budget rate per currency. Rates for every period and type, or DIVIDE goes blank silently; several currencies in one filter blank the local-currency measures on purpose.

FX and close · demo page, actual rate vs budget rate



FX and close Model rules

Two rules that live in the model, not in a visual: translation at the budget rate with the FX effect as its own column, and a day-3 adjustment that every page picks up from one switch.

DWG Industries · actuals to Oct 2026 · close status: closed WD3 · plan v2026-1 and forecast 10+2 to Dec 2026 · EUR m · variances signed, positive is favourable

Year: 2026 | Region: All | Country: All | Currency: All | Company: All | Close status: All

Revenue in EUR m, by company | Jan..Oct 2026 AC at actual rate, at budget rate, FX effect

Short name	Revenue AC mEUR	Revenue AC @BUD mEUR	Revenue FX effect mEUR	Revenue PL mEUR
Automation DE	661.9	661.9	-	632.1
Energy DE	550.6	550.6	-	517.8
Mobility FR	371.0	371.0	-	403.3
Automation CH	203.2	198.8	+4.4	208.4
Energy PL	166.2	163.2	+3.0	158.2
Automation CZ	141.4	138.6	+2.7	138.7
Industries US	481.9	477.7	+4.2	475.4
Mobility AU	149.5	148.6	+0.9	153.3
Digital JP	92.0	92.8	-0.8	94.9
Total	**2.817,6**	**2.803,3**	**+14,3**	**2.782,1**

Income statement in EUR m | AC at actual and at budget rate, ΔPL with and without FX

L1 EN	AC signed	AC signed @BUD	FX effect	ΔPL	ΔPL @BUD
Net revenue	2,817.6	2,803.3	+14.3	+35.5	+35.4
Cost of sales	-1,874.8	-1,865.1	-9.7	-49.7	-49.5
Selling expenses	-251.1	-249.9	-1.2	-2.7	-2.7
Administrative expenses	-163.3	-162.5	-0.8	-6.3	-6.3
Research & development	-129.4	-128.8	-0.6	-1.0	-1.0
Other operating result	1.5	1.5	+0.0	+0.4	+0.4
Depreciation & amortisation	-144.1	-143.4	-0.7	-0.8	-0.8
Financial result	-49.8	-49.5	-0.3	-8.1	-8.0
Income taxes	-54.9	-54.7	-0.2	+8.0	+7.9
Net income	**151,6**	**150,8**	**+0,8**	**-24,7**	**-24,5**

Synthetic demo data. Presentation inspired by IBCS. IBCS® is a registered trademark of the IBCS Institute.

IN THE DEMO · JAN–OCT 2026 · EUR M

Net revenue 2,817.6 at actual rates, 2,803.3 at budget rate: FX effect +14.3. Automation CH alone +4.4 (203.2 vs 198.8): the franc, not sales. Net income: FX effect +0.8; ΔPL −24.7 reported, −24.5 at budget rate.

Budget rate in the model: `fact-kurse[Kurs Budget]`, one rate per currency and year. Caveat: the demo plan in EUR was translated at actual rates in the generator, so ΔPL @BUD compares against the plan re-translated from local currency at the budget rate.

APPENDIX · A10 · HOW THE MODEL WAS BUILT

A generated group, reconciled to the cent

THE DATA

- **DWG Industries SE**, a fictional industrial group: four segments, three regions, nine companies, seven currencies (EUR, CHF, PLN, CZK, USD, AUD, JPY), about 3.4 bn EUR revenue in 2026
- Seven CSV files from one Python generator with a fixed seed, byte-identical on every run: `generate_demokit.py`
- **fact-abschluss**: 63,936 rows, account × company × month, AC/PY/PL/FC each in EUR and in local currency; values in base units, the visuals scale
- **dim-konten**: 296 lines, P&L 128, balance sheet 102, cash flow 66, names in German and English, sign trio, stock and opening tokens
- **fact-kurse**: 168 monthly rates, average and closing, plus one budget rate per currency and year
- **For the demo:** fact-nachbuchung (one day-3 booking, Mobility FR, +4.0 m), the switch close-status, and pnl-lines, 14 statement lines with Gross profit, EBITDA, EBIT, EBT, Net income
- Time: actual January 2025 to October 2026, forecast November and December, plan for both years; PY is the actual shifted by twelve months, at the rate of that month

THE WIRING

- Translation happens in the generator, not in DAX (the budget-rate view is the one exception): P&L and cash flow at average rate, balance sheet at closing rate (IAS 21); the cash-flow bridge is derived from balance-sheet movements, so every movement appears exactly once
- `build_model_tmdl.py` writes the TMDL: five dimensions, two fact tables, thin measures; the three demo tables and their measures were added by hand
- `reconciliation.txt` holds the acceptance values: FY 2026 forecast (FC 10+2) revenue 3,440 m and EBITDA 495 m recomputed from the CSVs; the balance sheet control row is zero in every filter
- The report spec `budapest.json` binds the English columns; `dwg check`: 6 pages, 8 tiles, 0 problems; `pbir validate --fields`: 236 fields resolved
- Page filter: Period status = Actual, so ten actual months never meet twelve plan months

WHY GENERATED

Synthetic data can be published, reconciled and regenerated. Real data could not be shown, and a hand-made sample would not survive a sign-trio check. Synthetic group: entities are third-party only, no intercompany, no elimination entity, NCI only in the balance sheet. The model does not consolidate, it reports.

APPENDIX · A11 · THE DAX THAT MATTERS

Six measures carry the whole statement

1 · ROLE MEASURES, ONE PER SCENARIO, NOTHING ELSE

```
AC = SUM ( 'fact-abschluss'[AC Wert] )
PY = SUM ( 'fact-abschluss'[PY Wert] )
PL = SUM ( 'fact-abschluss'[PL Wert] )
FC = SUM ( 'fact-abschluss'[FC Wert] )
```

No YTD, no sign, no time intelligence. The visual cuts month, YTD and full year itself.

2 · SIGN-AWARE BLOCKS FOR THE CHART TILES

```
Revenue AC =
CALCULATE (
    SUMX ( 'fact-abschluss',
        'fact-abschluss'[AC Wert]
          * RELATED ( 'dim-konten'[SignConvention] ) ),
    KEEPFILTERS ( 'dim-konten'[L1 EN] = "Net revenue" )
)
```

A plain SUM would add sales deductions instead of subtracting them.

3 · SUBTOTALS WITHOUT A CUSTOM VISUAL: A LINE TABLE

```
AC line =
VAR _Type = SELECTEDVALUE ( 'pnl-lines'[Line Type] )
VAR _Line = SELECTEDVALUE ( 'pnl-lines'[Line] )
VAR _Upto = SELECTEDVALUE ( 'pnl-lines'[Upto Sort] )
RETURN SWITCH ( _Type,
  "line",     CALCULATE ( [AC signed], KEEPFILTERS (
                TREATAS ( { _Line }, 'dim-konten'[L1 EN] ) ) ),
  "subtotal", CALCULATE ( [AC signed],
                KEEPFILTERS ( 'dim-konten'[L1 Sort] < _Upto ) ) )
```

A subtotal sums every line above it. PL, PY and ΔPL line work the same way.

4 · THE FULL-YEAR SCALAR: MAX PER ACCOUNT, COMPANY AND YEAR, THEN SUMMED

```
FC FY =
VAR _Scope =
    SUMMARIZE ( 'fact-abschluss',
        'fact-abschluss'[AccountID],
        'fact-abschluss'[EntityID],
        'dim-datum'[Jahr] )
RETURN
    SUMX ( _Scope, CALCULATE ( MAX ( 'fact-abschluss'[FC_FY] ) ) )
```

SUM would be twelve times too large. A plain MAX returns the largest single account-company cell, 215 m instead of 3,440 m.

5 · LOCAL CURRENCY ONLY WHEN IT MEANS SOMETHING

```
AC LC =
IF ( HASONEVALUE ( 'dim-gesellschaft'[Währung] ),
     SUM ( 'fact-abschluss'[AC LW Wert] ) )
```

Several currencies in the filter: blank on purpose. Adding CHF to JPY is not a number.

6 · STOCKS AT THE REPORTING DATE

`AC at reporting date` sums flows over the window, takes balance-sheet stocks at the last date and opening balances at the first date, driven by the account's `Zeitaggregation` token. That is what lets the balance sheet and the cash-flow bridge sit next to the P&L in one visual.

From `fact-abschluss.tmdl` of the demo model · Currency translation and security stay in the model. Time windows: the custom visual cuts them itself; on rungs 1–4 one flag in the date table does it.