

MAKE BI

Top 5 DAX tricks for super effective Power BI dashboards

Andrej Lapajne, Zebra BI





Andrej Lapajne

Founder, Zebra BI

data visualization
dashboards
business intelligence
financial reporting
Power BI
Excel
IBCS



Agenda

1. DEMO
2. Resources + download links
3. Q&A

YES, we *will* send you the PPT 😊

... and PBIX examples

... and DAX code

File Home View Modeling Help

Clipboard: Paste, Cut, Copy, Format Painter

External data: Get Data, Recent Sources, Enter Data, Edit Queries, Refresh

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Custom visuals: From Marketplace, From File

Themes: Switch Theme

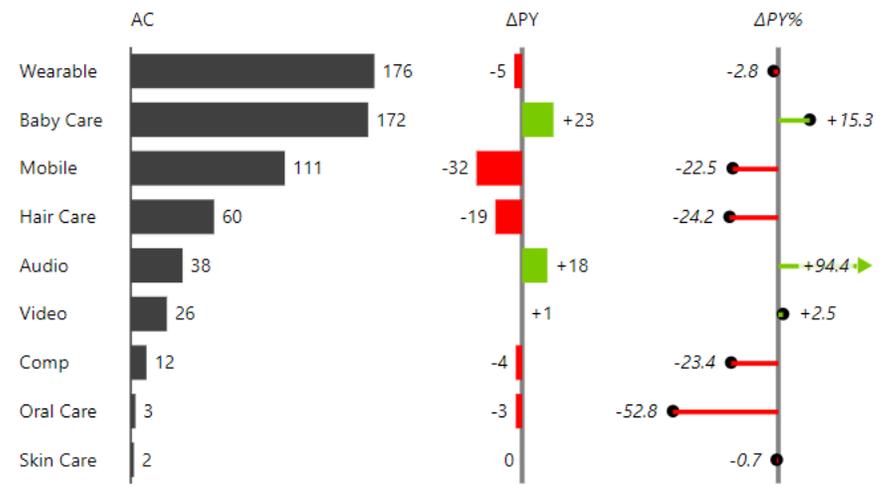
Relationships: Manage Relationships

Calculations: New Measure, New Column, New Quick Measure

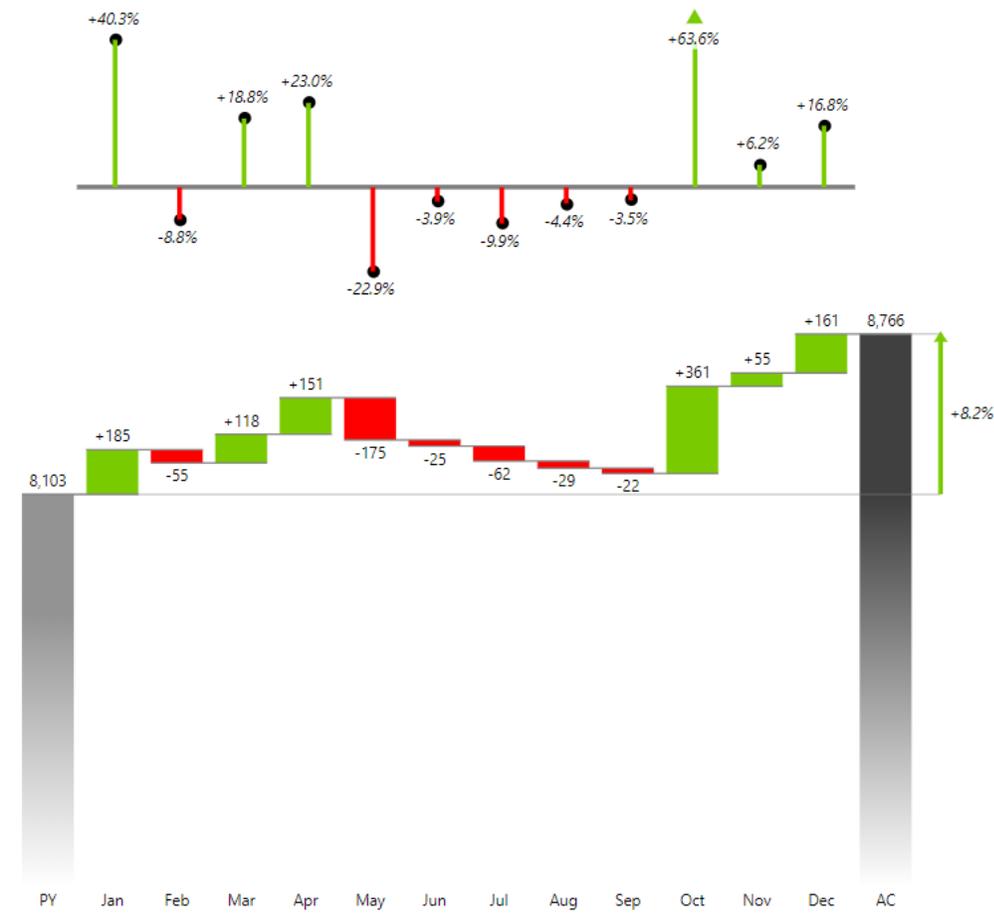
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Revenue | Sep | 2018 | Monthly | YTD

AC and PY by Group (in K)



AC and PY by Month (in K)



Visualizations

Fields

Search

- Sales
- BusinessUnits
- Calendar
- Customers
- KPIs
- Period Calculation
- Products
- Salespersons

Values

Add data fields here

Filters

Page level filters

Add data fields here

Report level filters

Add data fields here

Drillthrough

Cross-report

Off

Keep all filters

Off

Add drillthrough fields here

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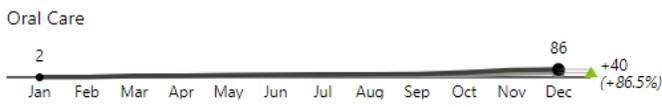
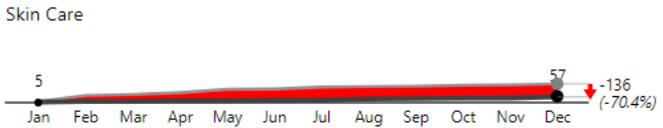
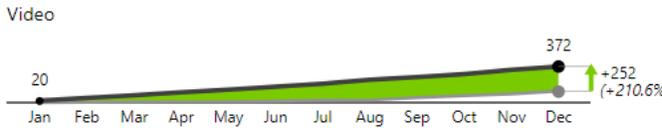
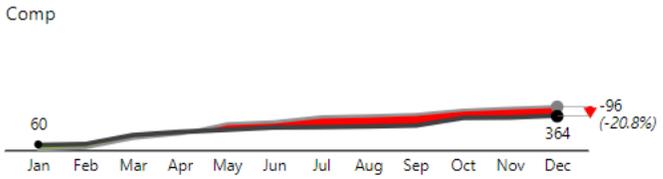
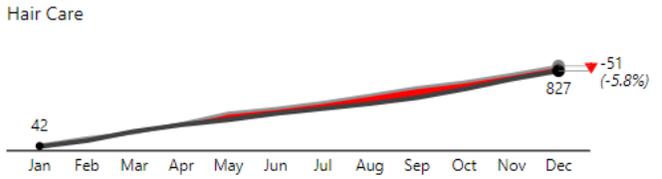
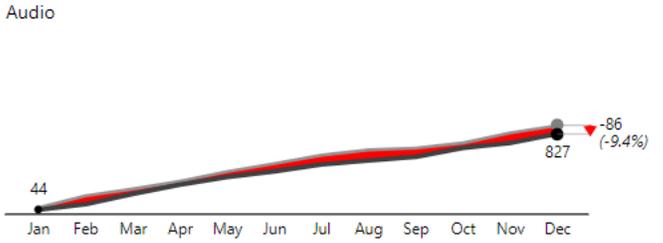
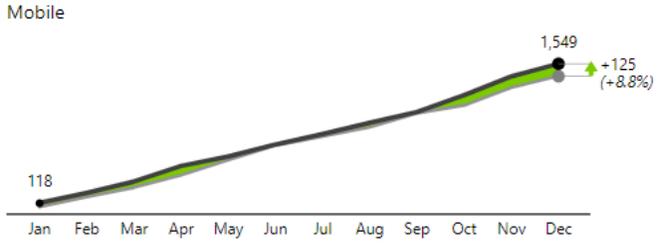
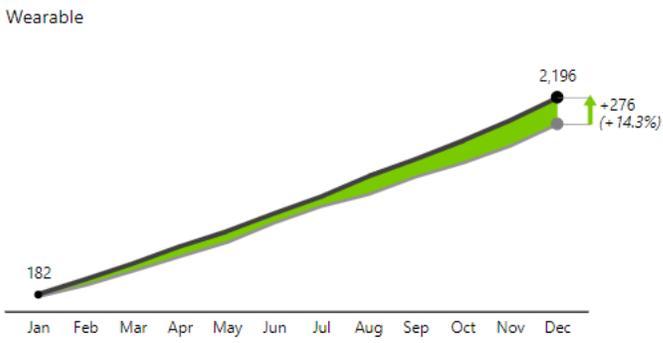
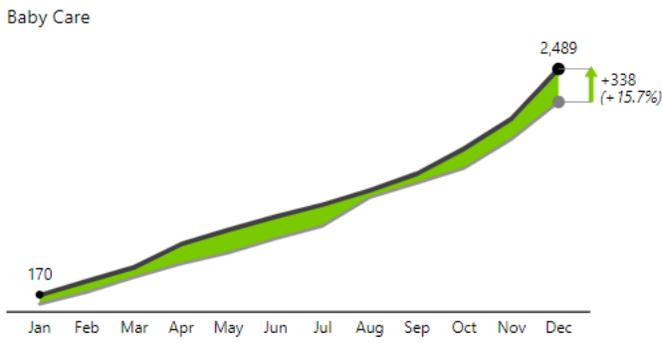
Clipboard External data Insert Custom visuals Themes Relationships Calculations Share

Get Data Recent Sources Enter Data Edit Queries Refresh New Page New Visual Ask A Question Buttons Image Text box From Marketplace From File Switch Theme Manage Relationships New Measure New Column New Quick Measure Publish

Revenue Dec 2018 Monthly **YTD**

AC and PY by Division, Group (in K)

	AC	ΔPY
Electronics	5,307	+471
Wearable	2,196	+276
Video	372	+252
Mobile	1,549	+125
Audio	827	-86
Comp	364	-96
Personal care	3,459	+192
Baby Care	2,489	+338
Oral Care	86	+40
Hair Care	827	-51
Skin Care	57	-136
Total	8,766	+663



Visualizations

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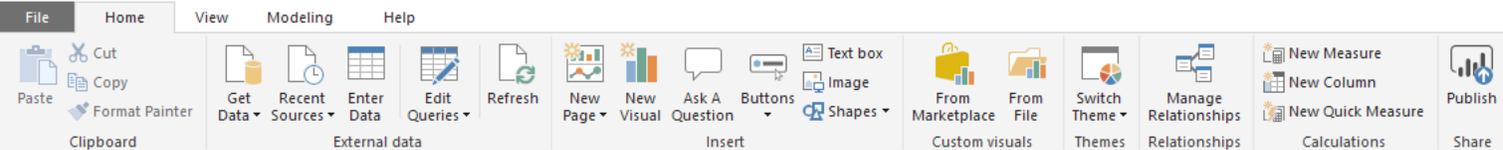
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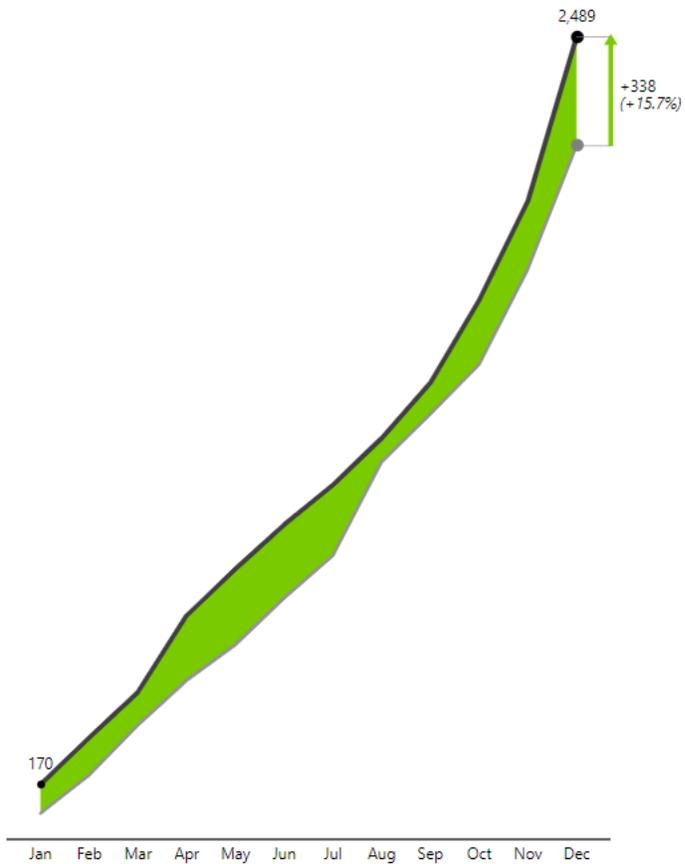


Revenue ▼ Dec ▼ 2018 ▼ Monthly **YTD**

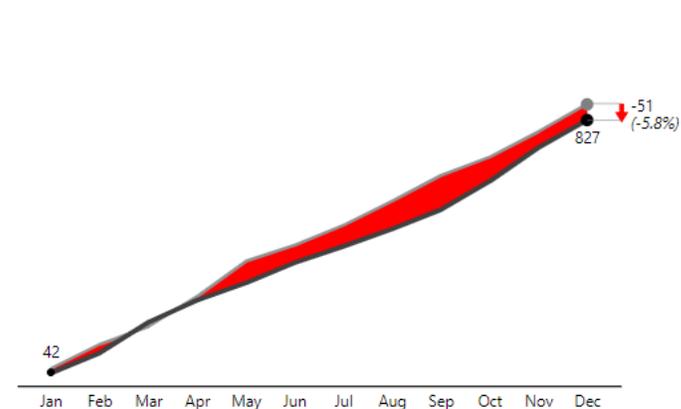
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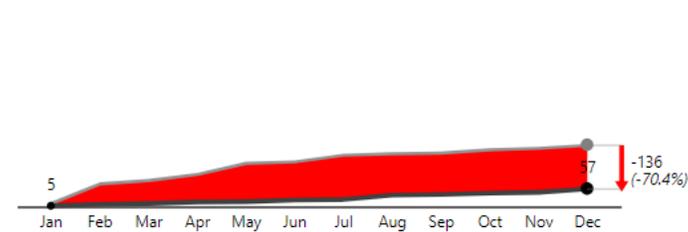
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Hair Care



Skin Care



Oral Care



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Revenue | Sep | 2018 | **Monthly** | YTD

AC and PY by Division, BusinessUnit (in K)

	PY	Δ PY	Δ PY%	AC	Δ PL	Δ PL%	PL
Electronics	384.5	-22.1	-5.7	362.4	+15.5	+4.5	346.9
Wearables	180.9	-5.1	-2.8	175.8	+12.1	+7.4	163.7
Tablets	94.6	-41.7	-44.2	52.8	+10.5	+25.0	42.3
Speakers	19.3	+18.2	+94.4	37.5	+6.5	+21.1	31
Accessories	13.4	-3.4	-25.4	10	+0.7	+7.8	9.3
Laptops	0.2	+1.2	+713.3	1.4	+0.3	+26.3	1.1
Monitors	0.4	-0.4					
Desktop PC	1.5	-1	-67.4	0.5	0	-7.7	0.5
Cameras	1.4	+2.6	+187.3	4	-0.1	-2.8	4.1
Games	0.6	-0.2	-26.2	0.4	-0.2	-32.3	0.7
Lighting	23.6	-1.8	-7.7	21.8	-5.6	-20.3	27.4
Smartphones	48.6	+9.5	+19.6	58.1	-8.7	-13.0	66.8
Personal care	236.9	+0.1	+0.0	237	-15.3	-6.1	252.3
Hair Care BU	79.4	-19.2	-24.2	60.1	+4.7	+8.5	55.4
Skin Care BU	2.1	0	-0.7	2.1	+0.5	+28.8	1.6
Oral Care BU	6.6	-3.5	-52.8	3.1	-0.8	-19.9	3.9
Baby Care BU	148.9	+22.8	+15.3	171.6	-19.7	-10.3	191.4

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Revenue Sep 2018 Monthly YTD

AC and PY by ProductGroupID, Product, ProductCategoryID

	PY	AC	PL	ΔPY	ΔPY%	ΔPL	ΔPL%
> Etcer	57.7K	93.3K	95.5K	+35.6K	+61.7	-2.2K	-2.3
> Erton	20.7K	38.6K	32.4K	+17.9K	+86.6	+6.3K	+19.4
> Product Group 105	9.0K	16.5K	15.4K	+7.5K	+83.4	+1.0K	+6.6
> Product Group 104	7.8K	14.1K	9.6K	+6.3K	+81.3	+4.4K	+46.1
> Product Group 103	3.3K	6.3K	5.2K	+3.0K	+92.9	+1.1K	+21.3
> Product Group 108	50.0	806.7	1.0K	+756.7	+1,513.5	-198.9	-19.8
> Product Group 109	600.0	982.5	1.1K	+382.5	+63.7	-99.0	-9.2
> Product Group 106	45.0	0.0	0.0	-45.0	-100.0		
> Hatimshy	19.5K	37.0K	27.4K	+17.4K	+89.3	+9.6K	+35.0
> Murilach	14.4K	26.4K	29.3K	+12.0K	+83.2	-2.9K	-9.9
> Llysstai	25.2K	30.6K	34.2K	+5.4K	+21.5	-3.6K	-10.4
> Denangkin	0.0	1.7K	1.7K	+1.7K		+5.1	+0.3
> Tild	7.3K	7.8K	5.0K	+466.3	+6.3	+2.8K	+56.1
> Imosa	44.8K	44.4K	56.1K	-356.5	-0.8	-11.7K	-20.8
> Sayev	16.4K	13.6K	14.1K	-2.8K	-17.0	-517.2	-3.7
> Riser	14.2K	11.4K	10.4K	-2.8K	-20.0	+1.0K	+9.7
> Product Group 127	320.6	6.5K	5.5K	+6.2K	+1,929.6	+963.2	+17.4
> Product Group 123	0.0	534.6	473.5	+534.6		+61.1	+12.9
> Product Group 125	720.8	887.0	227.0	+166.2	+23.1	+660.1	+290.8
> Product Group 130	225.0	0.0	0.0	-225.0	-100.0		
> Product Group 128	1.4K	1.2K	2.0K	-227.6	-16.1	-764.0	-39.1
> Product Group 126	3.8K	1.3K	1.3K	-2.5K	-66.3	-27.3	-2.1
> Product Group 124	3.5K	487.2	284.1	-3.0K	-86.0	+203.1	+71.5
> Product Group 121	4.3K	507.0	592.0	-3.8K	-88.1	-85.0	-14.4
> Claent	9.8K	4.2K	4.4K	-5.6K	-57.3	-183.8	-4.2
> Ormtan	286.4K	257.6K	250.0K	-28.8K	-10.1	+7.6K	+3.0
> Tadinu	46.4K	17.3K	27.6K	-29.1K	-62.8	-10.3K	-37.3
> Athush	58.5K	15.5K	11.2K	-43.0K	-73.6	+4.2K	+37.6
Total	621.4K	599.4K	599.2K	-22.0K	-3.5	+176.9	+0.0

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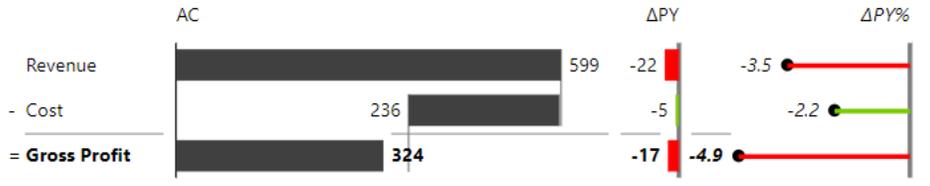
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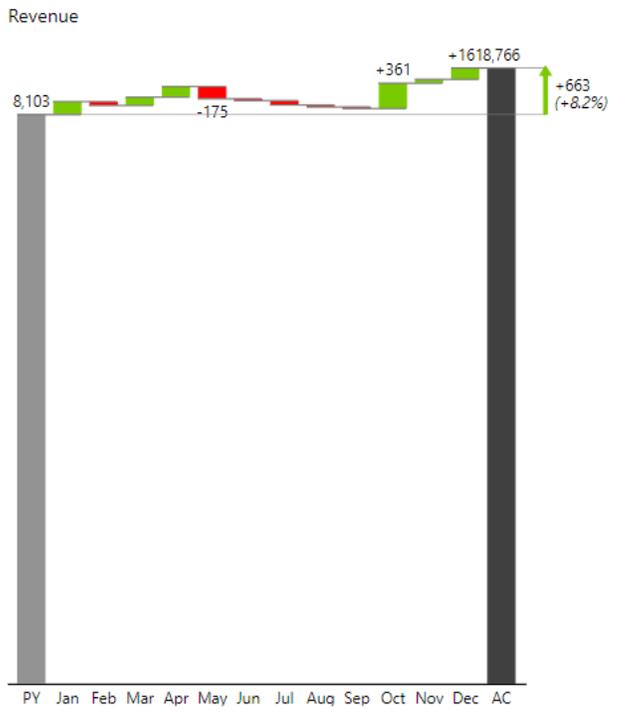
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Sep 2018 Monthly YTD

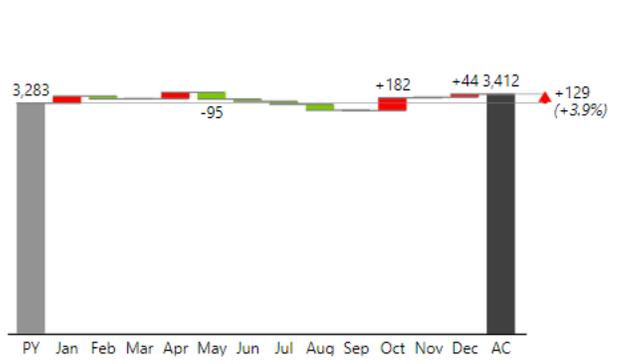
AC and PY by KPI (in K)



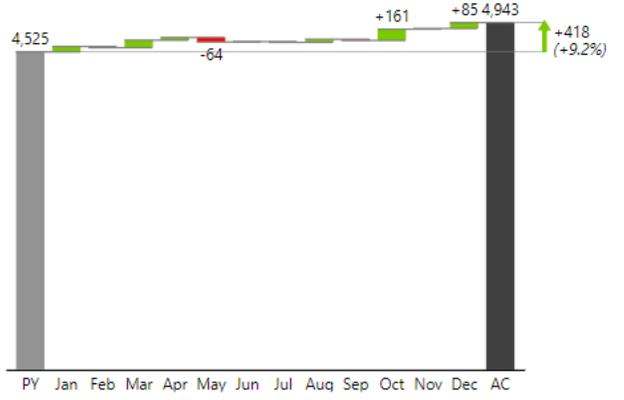
AC and PY by KPI, Month (in K)



Cost



Gross Profit



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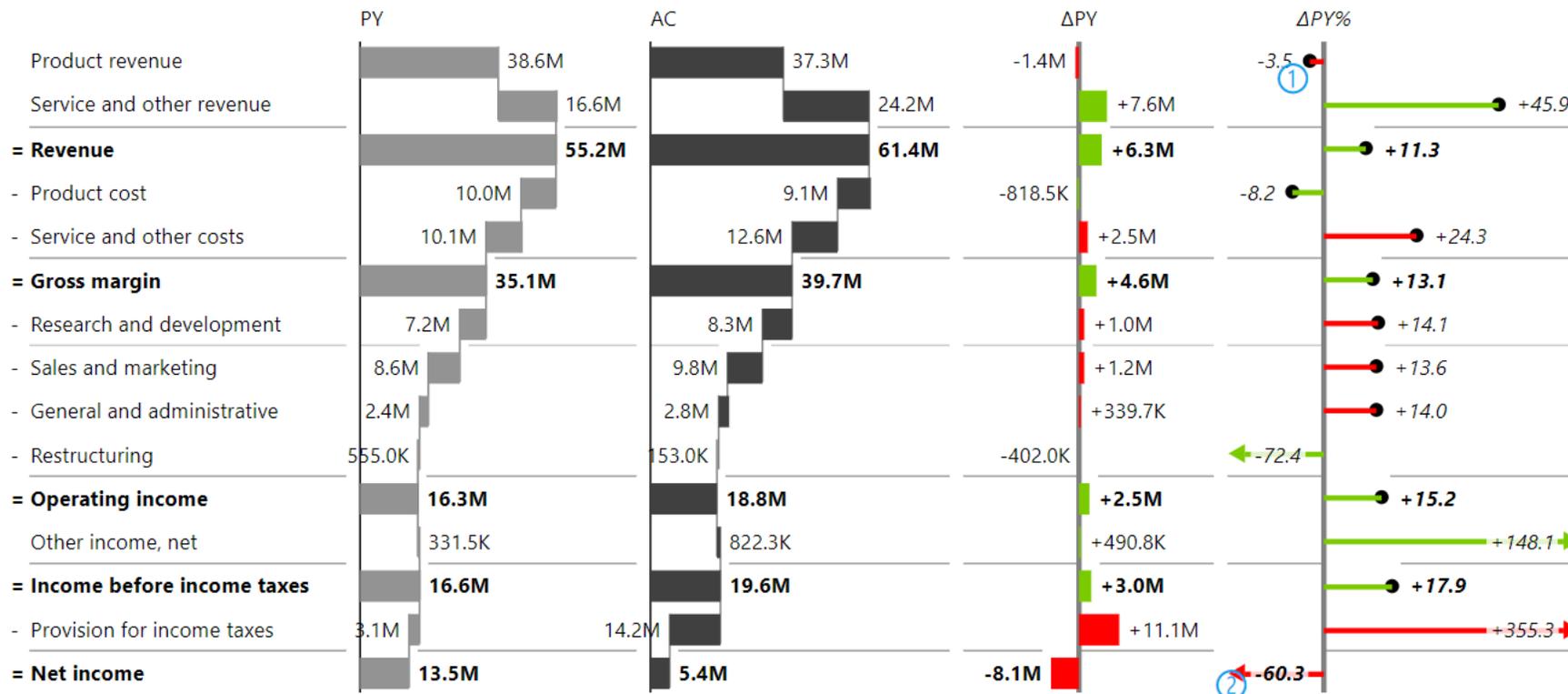
- Cross-report
- Off
- Keep all filters
- Off

Income Statement compared to Previous Year

Income statement in mUSD

Jul 2018 Monthly YTD

Value AC and Value PY by Account



① **Service and other revenue** ▲+35,4%
 Lorem ipsum dolor sit amet, consectetur
 adipiscing elit. Aenean commodo ligula
 eget dolor. Aenean massa.

② **Provision for income taxes** ▲+1.9 bnUSD
 Satoque penatibus dolor sit amet, conse
 ctetur adi piscing elit. Aenean commodo
 ligula eget dolor. Aenean massa. Cum sociis
 natoque penatibus et magnis dis parturi.

↖ Move mouse over values to show the details

DAX used in this session (1/2)

```
// basic calendar table with fixed date range (returns 1 column with dates):
Calendar = CALENDAR("2016-01-01; "2018-12-31")
// calendar table with first and last date extracted from specific tables in your PBI model:
Calendar = CALENDAR(FIRSTDATE(Sales[Date]); LASTDATE(Sales[Date]))

// easy automatic calendar table with a Date column (PBI extracts min/max dates from your model):
Calendar = CALENDARAUTO()
// Automatic calendar with financial year (FY) starting on a different month:
Fiscal Calendar = CALENDARAUTO(3) // FY closes with March

// Full automatic calendar table with most useful columns:
Calendar = ADDCOLUMNS ( CALENDARAUTO () ;
    "Year"; YEAR([Date]);
    "MonthNo"; MONTH([Date]);
    "Month"; FORMAT([Date];"mmm");
    "Quarter"; FORMAT([Date];"\QQ");
    "YearMonth"; FORMAT([Date];"YYYY-MM");
    "WeekdayNo"; WEEKDAY([Date];2); //1-Sun..Sat, 2-Mon..Sat
    "Weekday"; FORMAT([Date];"ddd") )
```

DAX used in this session (2/2)

```
// filtered measures for actual and plan if you have multiple datatypes/scenarios in your fact table  
marked as "AC" and "PL" in a separate column titled "Scenario":
```

```
Revenue AC filtered = CALCULATE(SUM(Sales[Revenue]); Sales[Scenario]="AC")
```

```
Revenue PL filtered = CALCULATE(SUM(Sales[Revenue]); Sales[Scenario]="PL")
```

```
// Measure that returns previous year (PY) values:
```

```
Revenue PY = CALCULATE([Revenue AC]; DATEADD('Calendar'[Date]; -1 ; YEAR))
```

```
// Measure that returns the selected or minimum ID from the YTD switch called "Period Calculation":
```

```
SelectedCalc = MIN('Period Calculation'[CalcID])
```

```
// Switch statement that returns monthly or YTD values based on the "Period Calculation" slicer:
```

```
Revenue AC = SWITCH ([SelectedCalc];
```

```
    1, [Revenue AC filtered];
```

```
    2, CALCULATE([Revenue AC filtered]; DATESYTD('Calendar'[Date])))
```

```
// Switch statement that returns a different measure based on the "KPI" slicer selection:
```

```
KPI value = SWITCH( [SelectedKPI];
```

```
    1; SUM(Sales[Revenue]);
```

```
    2; SUM(Sales[Cost]);
```

```
    3; SUM(Sales[Gross Profit]) )
```



Zebra BI visuals are **not** in AppSource (**yet**).

Please download from:

<https://zebra.bi/pbi>

Resources

Help

<https://zebrabi.com/pbi-help/>

Webinar recordings

<https://zebrabi.com/webinars/>

 **20 hours !**
of recorded material



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Questions?

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