Calculation Groups and their Conditional Formatting

„Make your data shine!“

2023

SPEAKER

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Data Meerkat

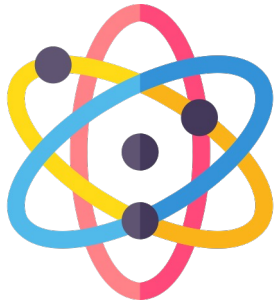
They make it possible to create a generic expression that will be applied against any input measure. Moreover, that measures can be expanded or completely overwritten.

How to imagine that?

Let me explain that

Re-usable

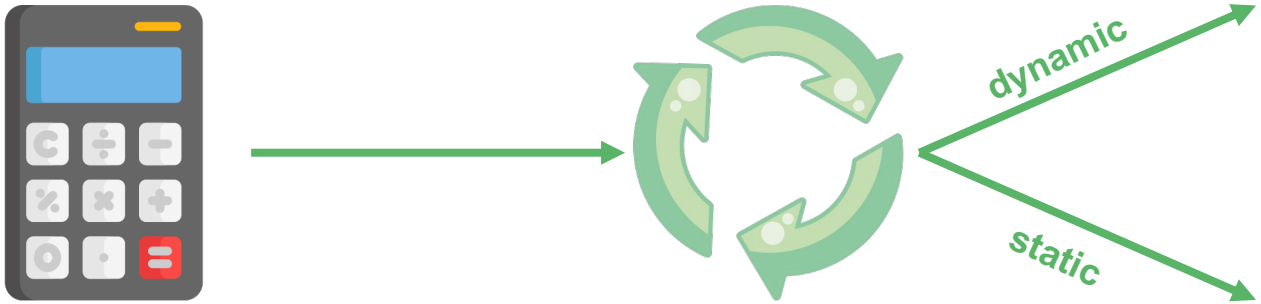
Formattable



Respecting
Data Types

Dynamic but also Static

Little demonstration...




```
CALCULATE(
        <INSERTED MEASURE>,
        DATESYTD(DateKey[Date])
)
```

```
AVERAGE(Sales[Quantity])
```

```
SUM(Sales[Quantity])
```

Dynamic but also Static

Dynamic only if we want. Otherwise, they can be static and permanent.

Dynamic

- SELECTEDMEASURE()
- SELECTEDMEASURENAME()
- SELECTEDMEASUREFORMATSTRING()
- ISSELECTEDMEASURE()

Static

- [measureName]

Re-usable

It never ends with a single measure... Mostly you need to have other modifications for it.

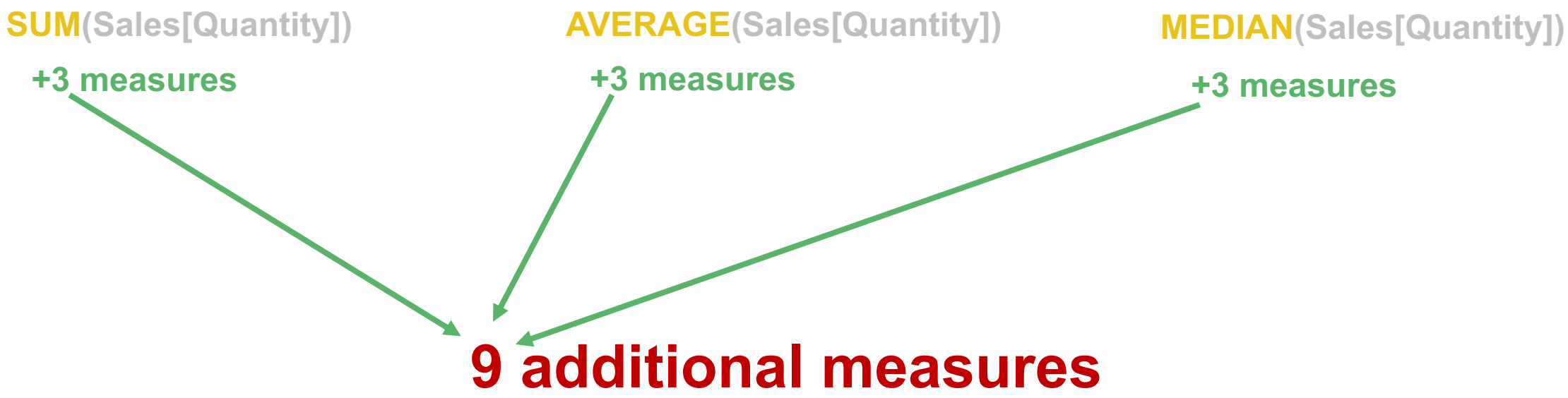
```
YTD = CALCULATE(
        SUM(Sales[Quantity]),
        DATESYTD(DateKey[Date])
)
```

```
IY = CALCULATE(
        SUM(Sales[Quantity]),
        SAMEPERIODLASTYEAR(DateKey[Date])
)
```

```
T12M = CALCULATE(
        SUM(Sales[Quantity]),
        WINDOW( -12, REL, 0, REL,
                ALLSELECTED(
                        DateKey[Year],
                        DateKey[Month]
                )
        )
)
```

Re-usable

Nothing needs to be created twice. Just think in patterns.



Re-usable

Not more than once! Just once, but properly!

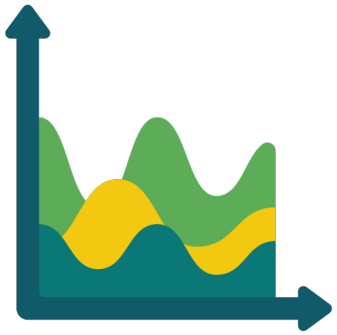
```
YTD = CALCULATE(
        SELECTEDMEASURE(),
        DATESYTD(DateKey[Date])
)
```

```
IY = CALCULATE(
        SELECTEDMEASURE(),
        SAMEPERIODLASTYEAR(DateKey[Date])
)
```

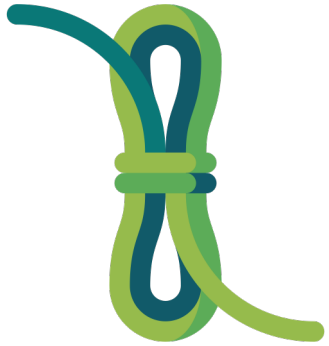
```
T12M = CALCULATE(
        SELECTEDMEASURE(),
        WINDOW( -12, REL, 0, REL,
                ALLSELECTED(
                        DateKey[Year],
                        DateKey[Month]
                )
        )
)
```

Formattable? Really?

Of course! Don't let them tell you they can't be formatted!



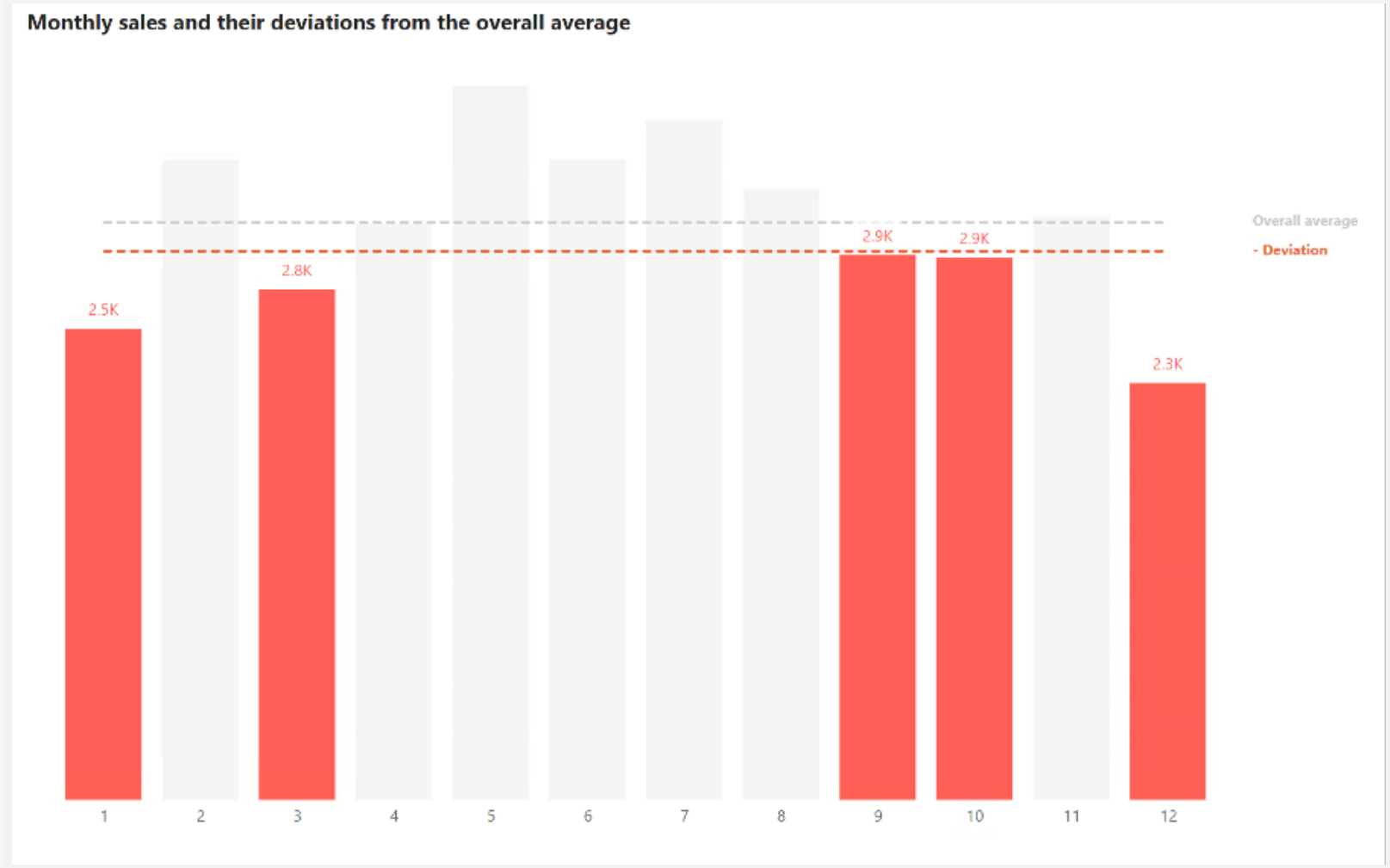
Visual



Format
String

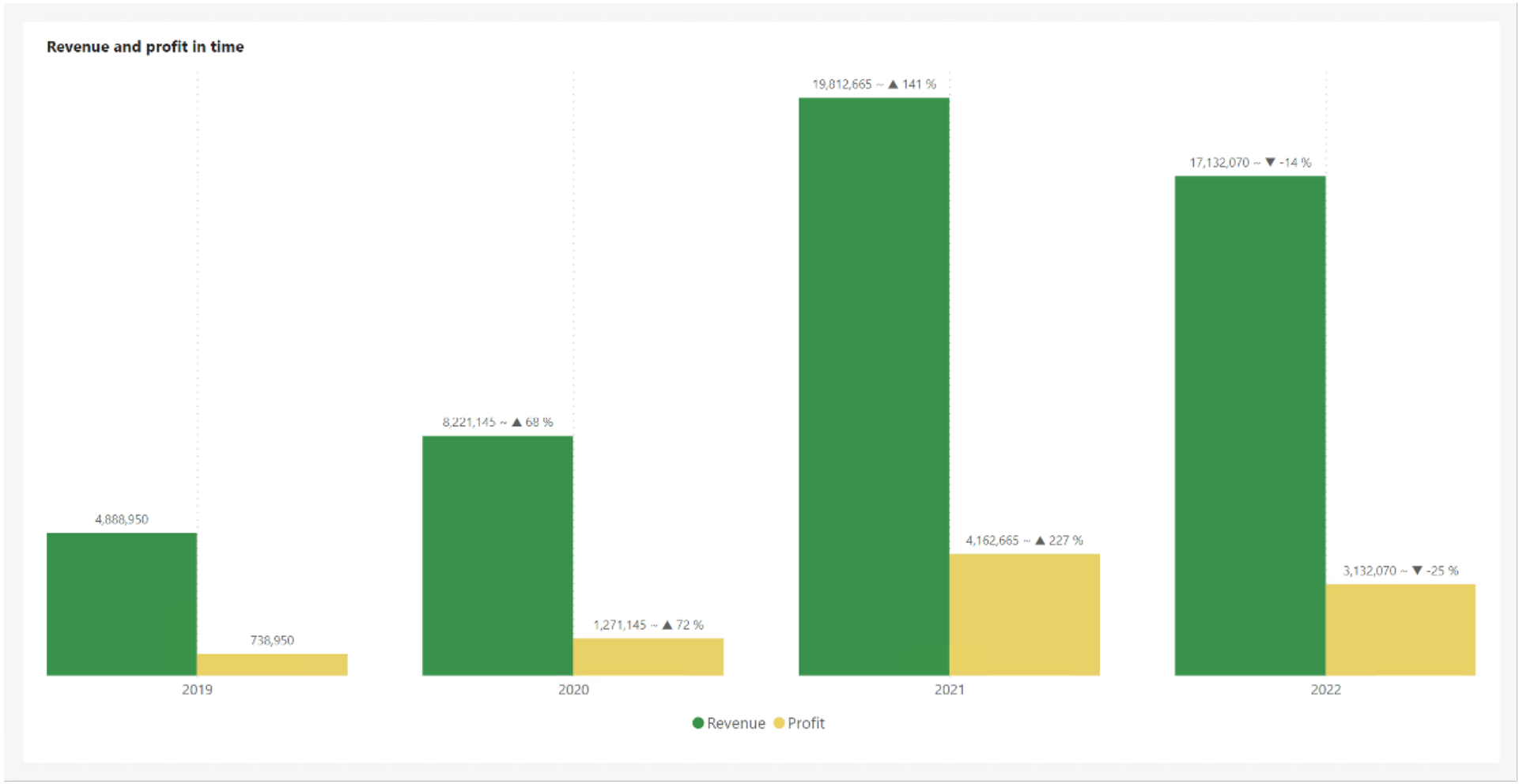
Visual formatting

It doesn't matter if it's conditional or selectable, calculation groups can do it all!



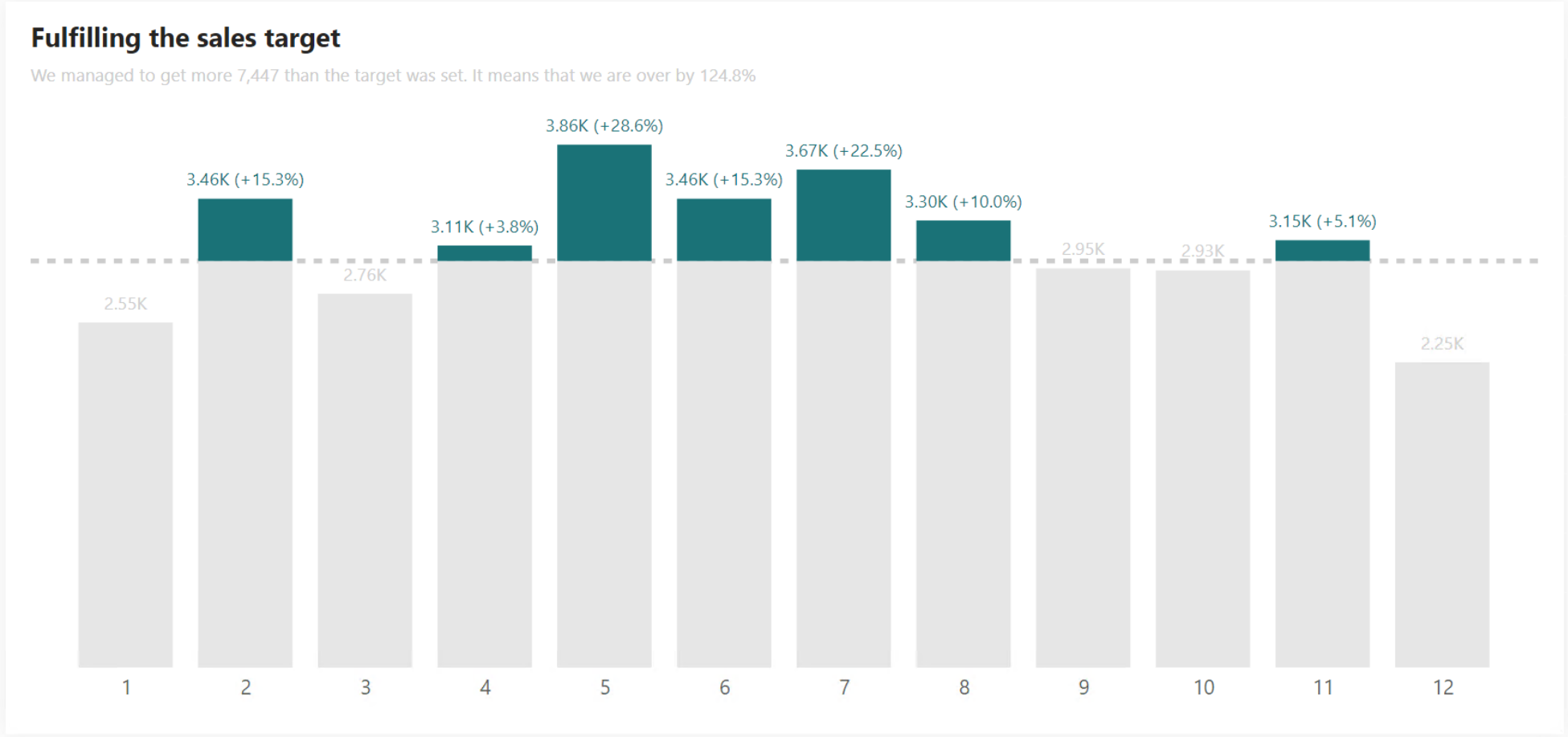
They can modify everything

To answer many different questions at once



And it can be even better

A very simple way, so to say more than just a classic visual



Respecting data types

This is very important to maintain dynamic ordering

25.5.2023

DATE

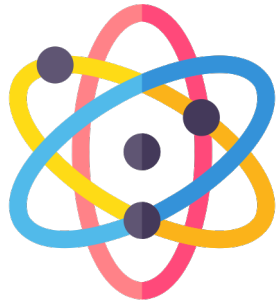
dd/mm/yyyy = 25/05/2023

mmm = May

d/m/yy = 25/5/23

This can also be done by measure…

Measures	Calculation Groups
By function FORMAT() / Dynamic Format	By FORMAT STRING EXRPESSION
Set each sparately	Re-usable at will



Format string definition

But I remind you that the output will still respect the input format

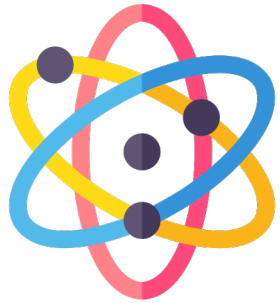
04.25.2023

Format	Result
dd/mm/yyyy	25/04/2023
dd/mmm/yy	25/Apr/23
d	25
mmmm	April
m	4
ddd	Tue

1234.9

Format	Result
0.00	1234.90
#.0#	1234.9
#,0.0	1 234.9
#,,,,,0	1234
0,,,,,0	0,,,,1,234
.00	.90

```
FORMAT( 100, "🤑;🤣;🤬" )   🤑
FORMAT(-100, "🤑;🤣;🤬" )   🤣
FORMAT(   0, "🤑;🤣;🤬" )   🤬
```



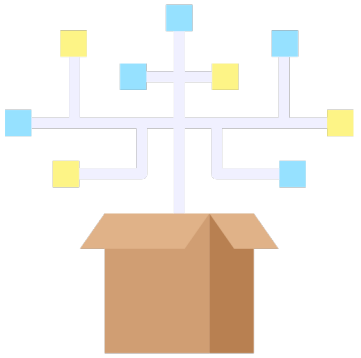
DEMO

Each coin has two sides

And nothing can be only positive

It can be very Confusing

It can be one visual focused



Not editable directly in Power BI Desktop

Confusement

Their behavior can raise many unwanted questions

How to apply them only to one measure in the visual?

How can I distinguish it from typical tables when they have the same icon?

Why do they show something completely different in another chart?

Confusement

Their behavior can raise many unwanted questions

How to apply them only to one measure in the visual?

If there are more measures in the visual, it is not possible to selectively say which measure will be affected. It can be limited directly in the Item or by using another measure that applies the influence of the Calculation Group to itself through the TREATAS function.

How can I distinguish it from typical tables when they have the same icon?

Unfortunately, it cannot be seen with the naked eye because a standard table can have the same columns. It is good to distinguish calculation groups using a naming convention.

Why do they show something completely different in another chart?

Items can be created for a single visual purpose and are not created generically. Their influence can thus lead to unexpected results. Sometimes we only get the "correct" result by combining several calculation groups. It is, therefore, a good idea to completely hide such groups from users and set them as private.

THANK YOU FOR THE ATTENTION

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