

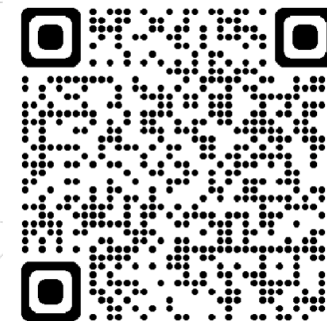
# Calculation Groups and their Conditional Formatting

*„Make your data shine!“*

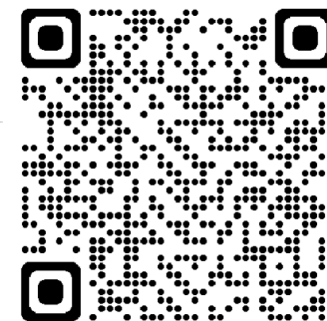
2023

# SPEAKER

LINKEDIN



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**Data  
Brothers**



**Microsoft®**  
Most Valuable  
Professional



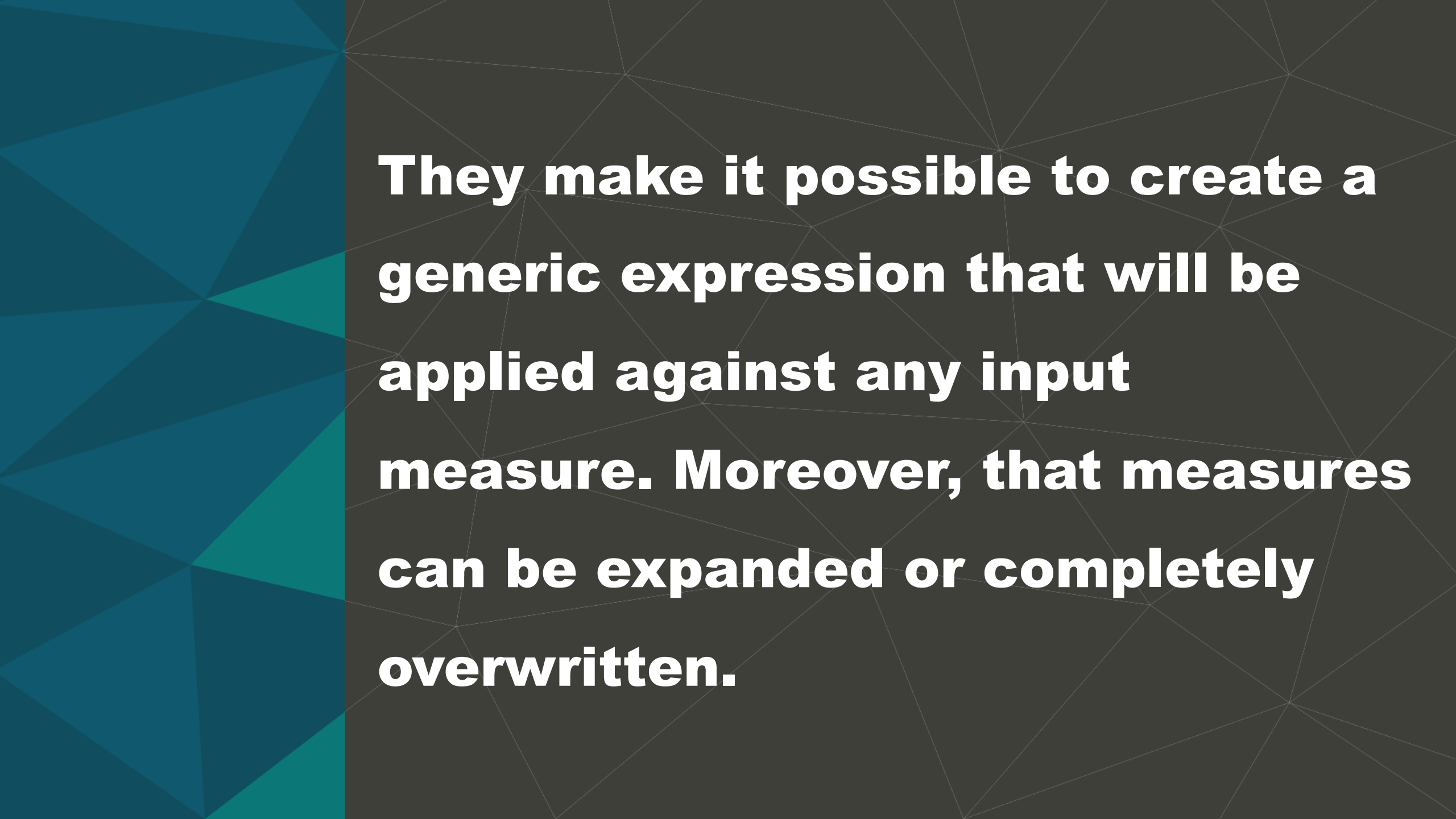
JAK NA  
**POWER BI**



**Power BI**  
kafíčko



**Data  
Meerkat**



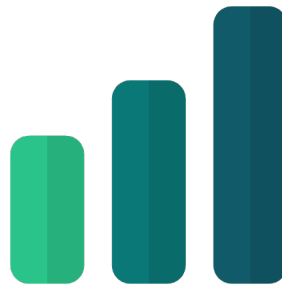
**They make it possible to create a generic expression that will be applied against any input measure. Moreover, that measures can be expanded or completely overwritten.**

# How to imagine that?

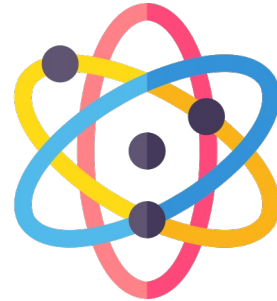
Let me explain that



**Re-usable**



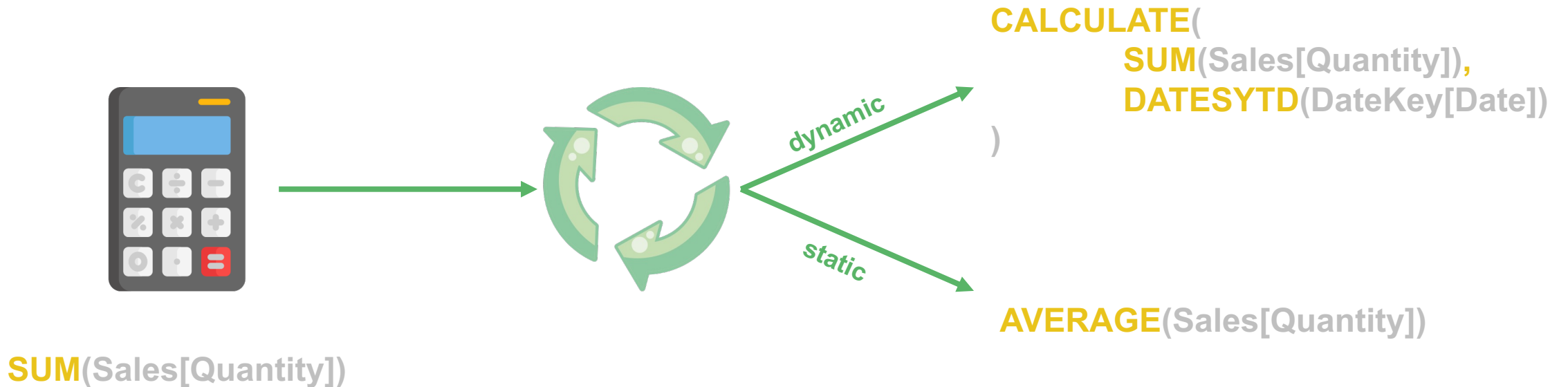
**Formattable**



**Respecting  
Data Types**

# Dynamic but also Static

Little demonstration...



# 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

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

```
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.

**SUM**(Sales[Quantity])

+3 measures

**AVERAGE**(Sales[Quantity])

+3 measures

**MEDIAN**(Sales[Quantity])

+3 measures

**9 additional measures**





# Re-usable

Not more than once! Just once, but properly!

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

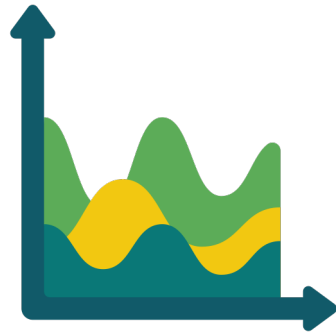
```
IY = CALCULATE(  
    SELECTEDMEASURE(),  
    SAMEPERIODLASTYEAR(DateKey[Date])  
)
```

```
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

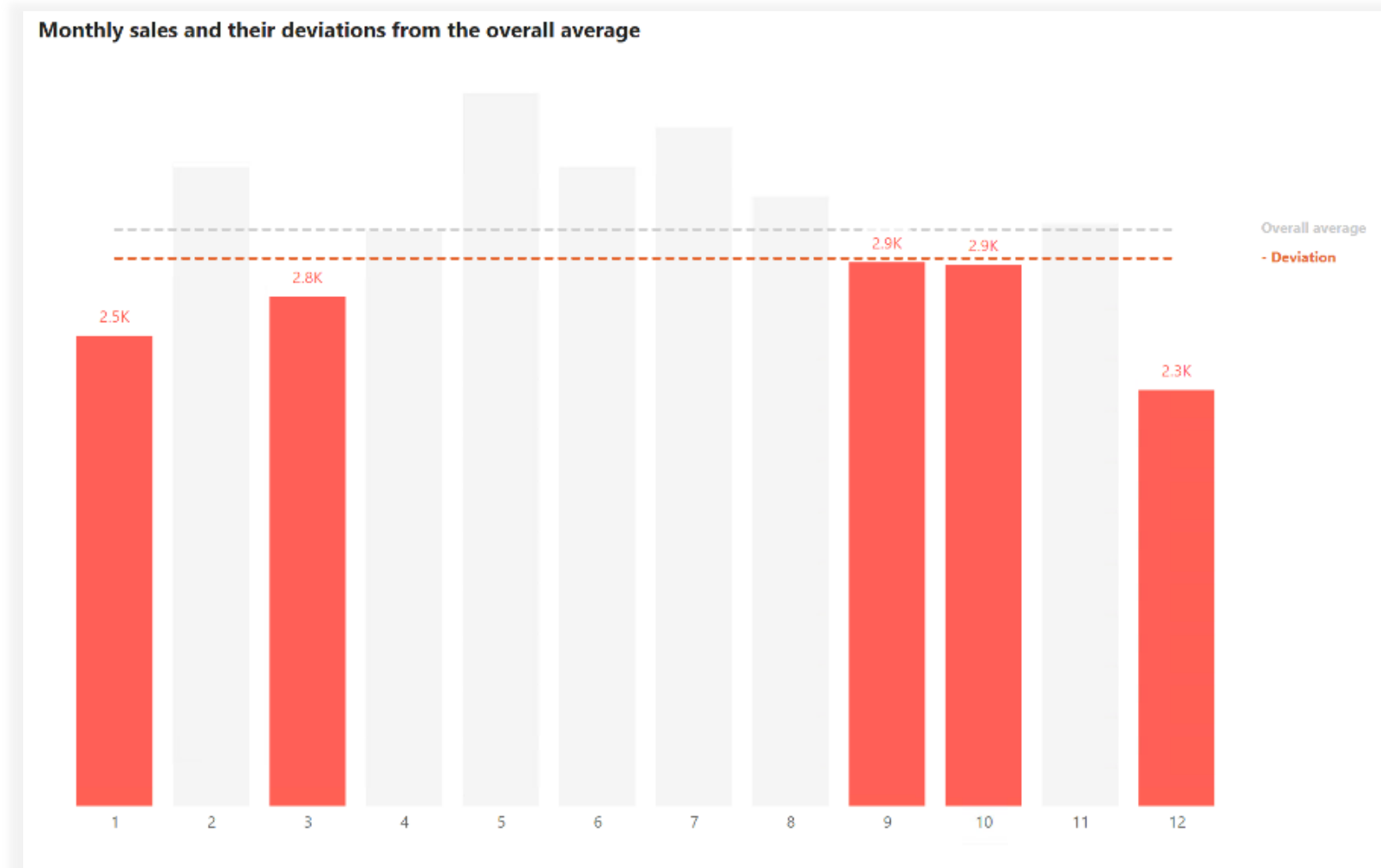


Format  
String



# Visual formatting

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

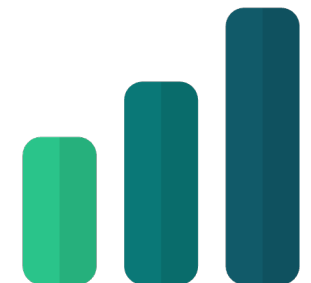
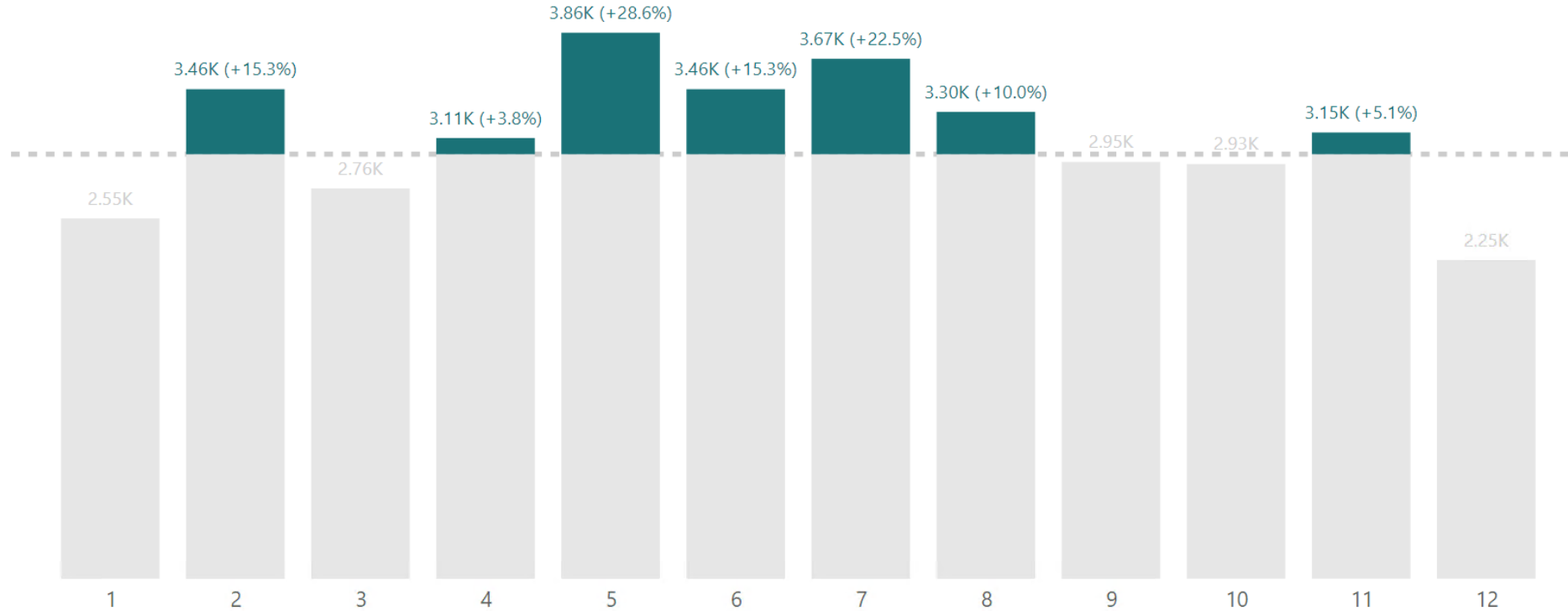


# And it can be even better

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

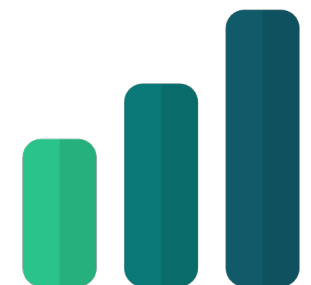
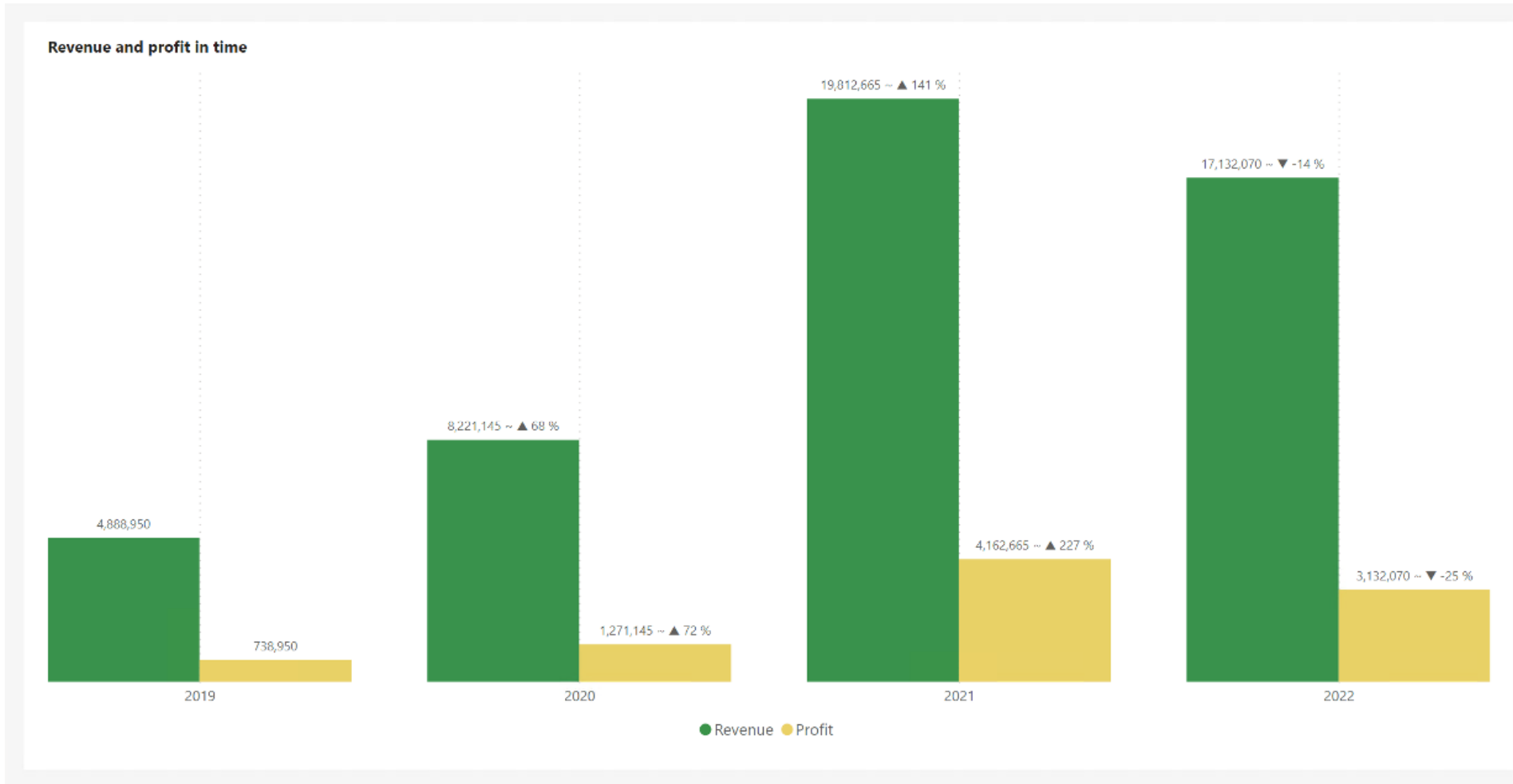
## Fulfilling the sales target

We managed to get more 7,447 than the target was set. It means that we are over by 124.8%



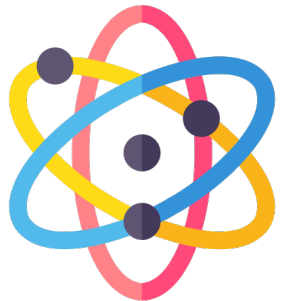
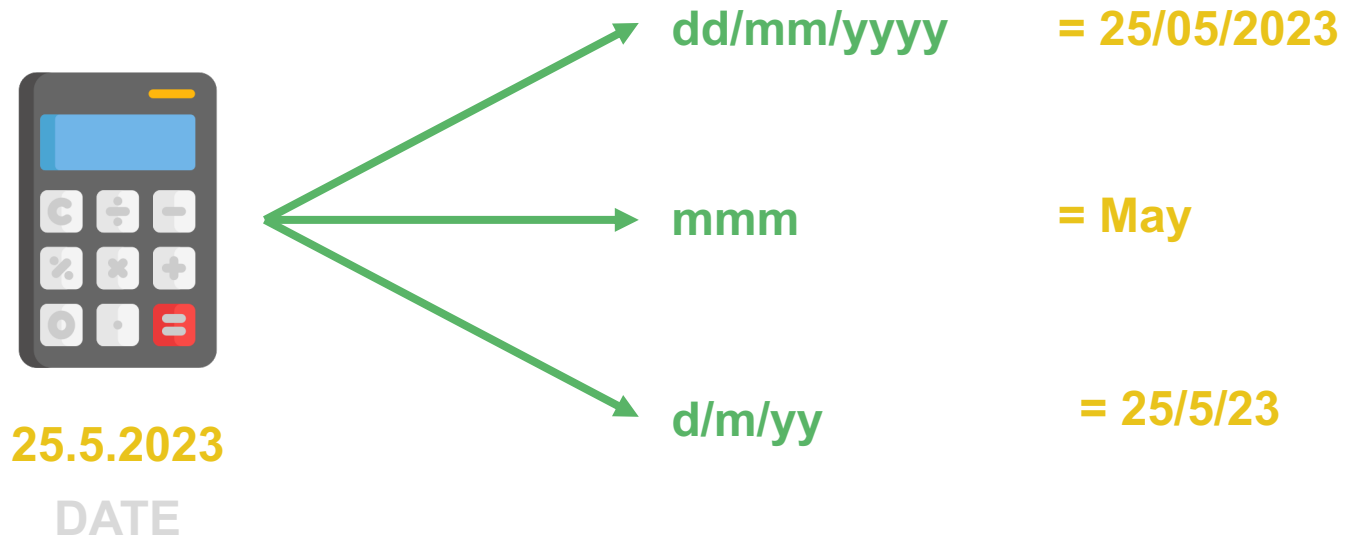
# They can modify everything

To answer many different questions at once



# Respecting data types

This is very important to maintain dynamic ordering



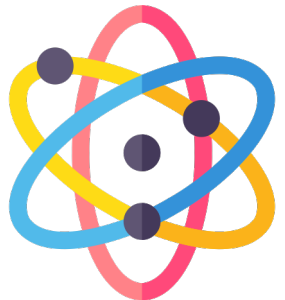
# This can also be done by measure...

## Measures

By function FORMAT()  
Set each separately  
Native Support  
Output will be TEXT  
Easier to understand within  
Self-Service

## Calculation Groups

By FORMAT STRING EXPRESSION  
Re-usable at will  
External tool is required  
Respects data type  
More complex to understand within  
Self-Service





# Format string definition

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

04.25.2023

1234.9

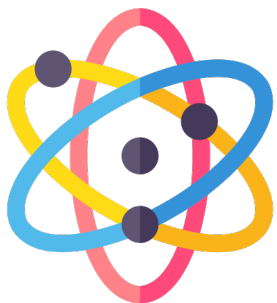
| Format     | Result     |
|------------|------------|
| dd/mm/yyyy | 25/04/2023 |
| dd/mmm/yy  | 25/Apr/23  |
| d          | 25         |
| mmmm       | April      |
| m          | 4          |
| ddd        | Tue        |

| 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, "💰💰;🤪;😡&\$!#%" ) 😡

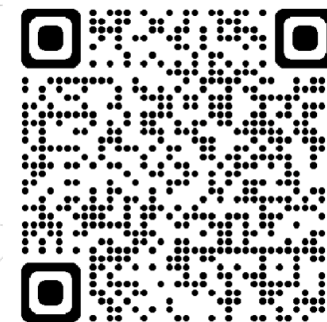




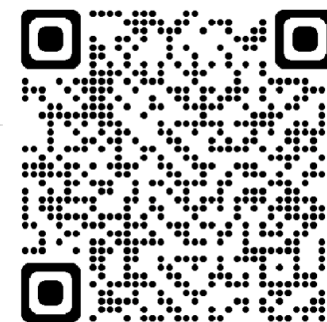
**DEMO**

# THANK YOU FOR THE ATTENTION

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**Data  
Meerkat**

**Special thanks to**



**and to ALL OF YOU HERE**