



*Let's tell a story...*

# The path to successful visualizations/ dashboards

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It is very simple...

*“Successful dashboards is all about to meet end user expectations...”*

# The path to success...

## Dashboard/Report Design



### 01 VALUE

What value is expected to be delivered. What kind of questions does the report need to be able to answer and who is the audience.



### 02 REPORT

A report needs to serve a clear and defined purpose, have a consistent look and feel, and a structure that supports discovering insights.



### 03 PAGE

A page needs to stand on its own, have a visual framework that supports understanding the content, and be visually appealing.



### 04 CHART

A chart type needs to suit the presentation type (Comparison, Composition, Distribution, Relationship), reflect extent of variables and data points, be free of chart junk, and no high contrast elements.



### 05 PERFORMANCE

Each system has its own performance characteristics. By using the strengths and minimizing weak points end users get better user experience.

# VALUE

What do my end-users expect?

“

*“Even **one single data point** can provide value as long as it ignites action and the eager to explore insights further”*





# Finding the Value

- Who is the audience (end users)? That is a good start 😊
- Make sure you understand what value is expected by the audience  
No value → No interest and no success!
- Often starts with a soft value, i.e. “I want an overview of...”  
Soft value, this is often the main purpose of the report
- The soft value is built on multiple hard values,  
i.e. product sales, % of total sales, customer satisfaction etc.



VALUE



# What about data?



VALUE

No data = No value

Remember, time can be your worst enemy, do not let your audience wait!

Even if you only have fraction of your data available, you should still be able to create something...



# REPORT

A report needs to serve a clear and defined purpose



# Report design is very similar to designing a shop window

An example when you are not sure what end users are expecting...



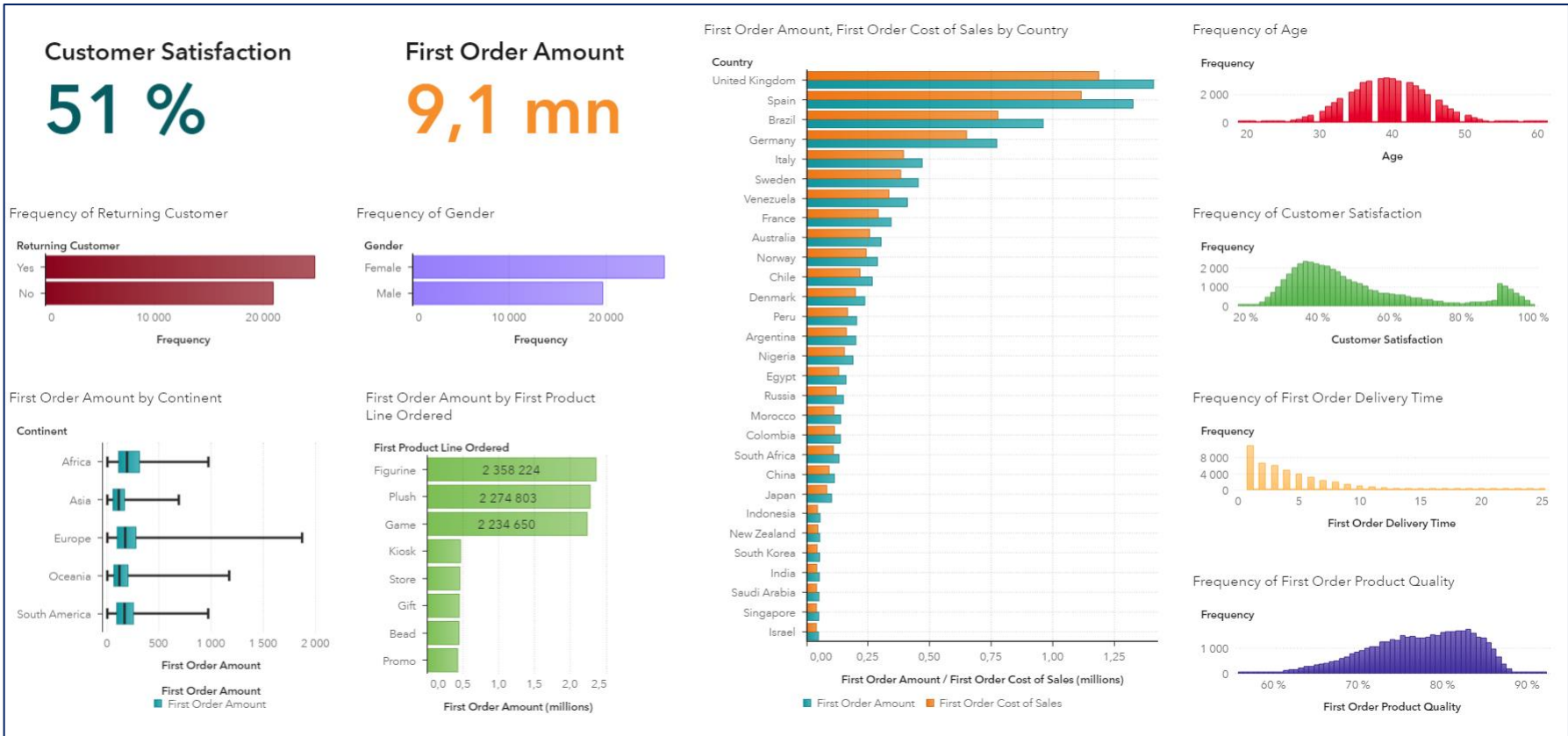
You know your audience and what they expect...



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You know your audience and what they expect...





# Some success factors...

## 1-4-4 rule is a good starting point...

1 Report

4 Pages/sections

4 charts per page/section

Please Note: **This a guidance**, not a law 😊 Some use-cases will require more visualizations than only 4 and/or more than 4 pages.

**However**, it doesn't hurt to guide end users towards a better end user experience = Less is more...

## Data interaction and navigation is vital for the overall end user experience.

Have a data interaction and navigation strategy in place before building your dashboard/report.

Do you have a general best practice in place that all end users are familiar with?





# PAGE

The visual framework that supports end users  
understanding the content



# Our main task is to avoid distracting our audience

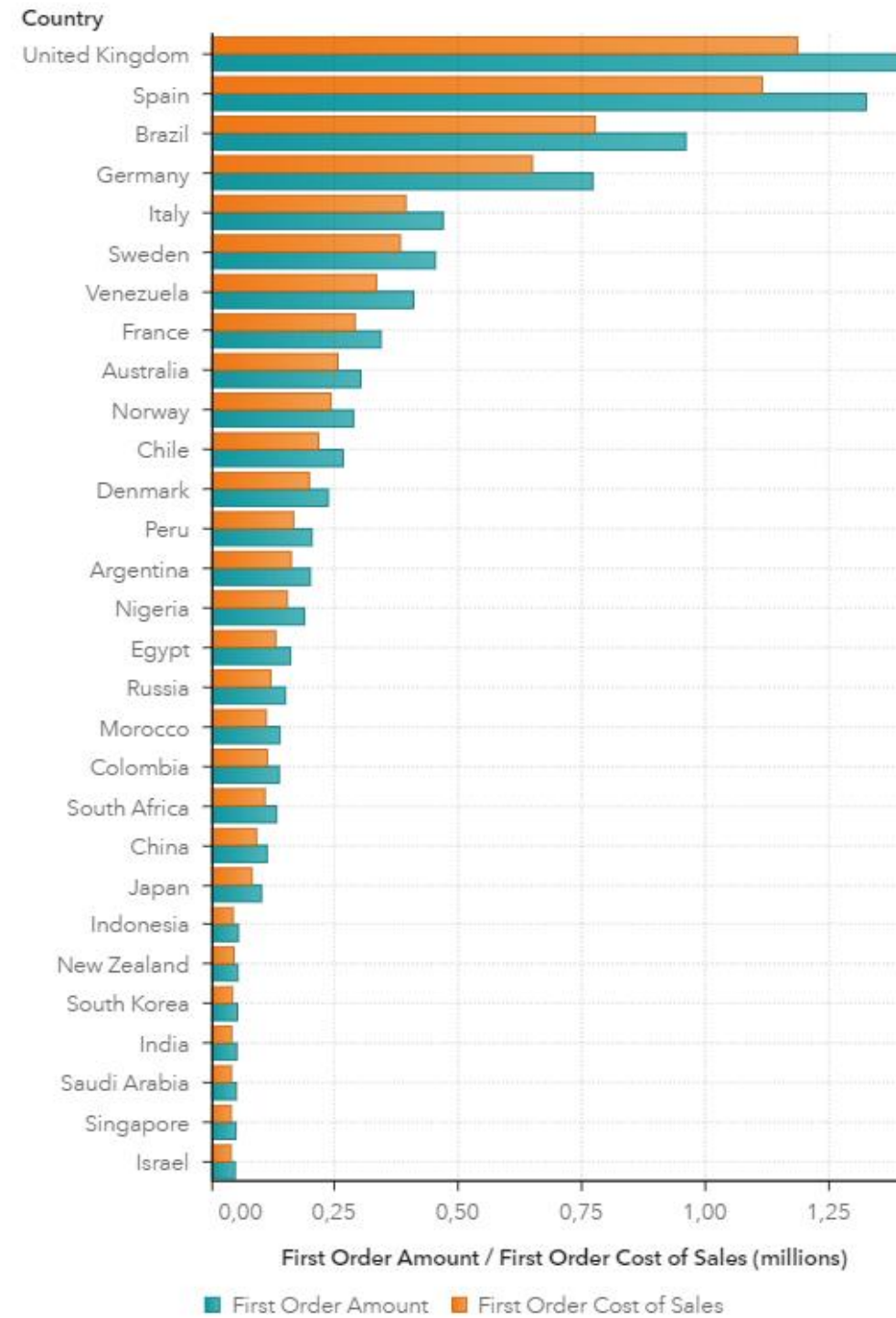
## Customer Satisfaction

51 %

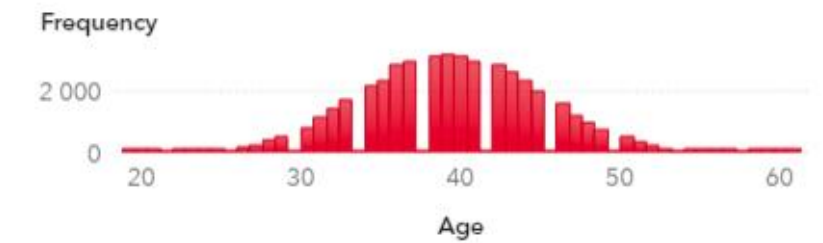
## First Order Amount

9,1 mn

First Order Amount, First Order Cost of Sales by Country



Frequency of Age



Frequency of Customer Satisfaction



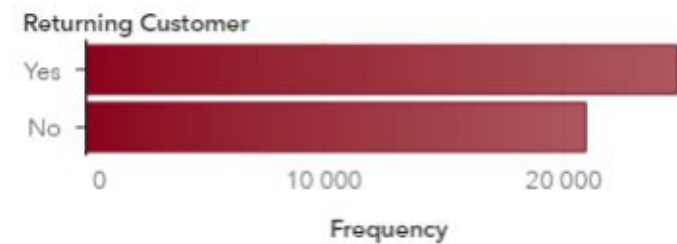
Frequency of First Order Delivery Time



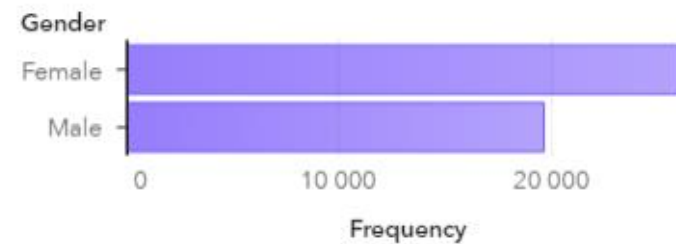
Frequency of First Order Product Quality



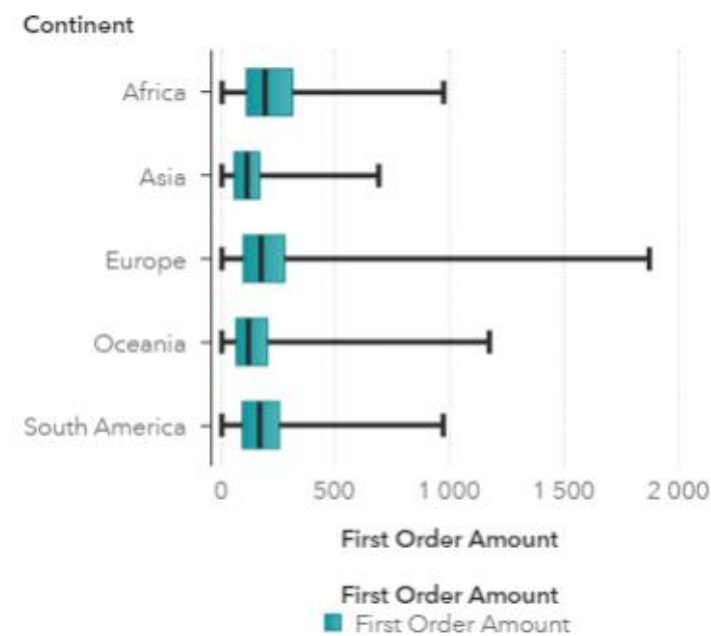
Frequency of Returning Customer



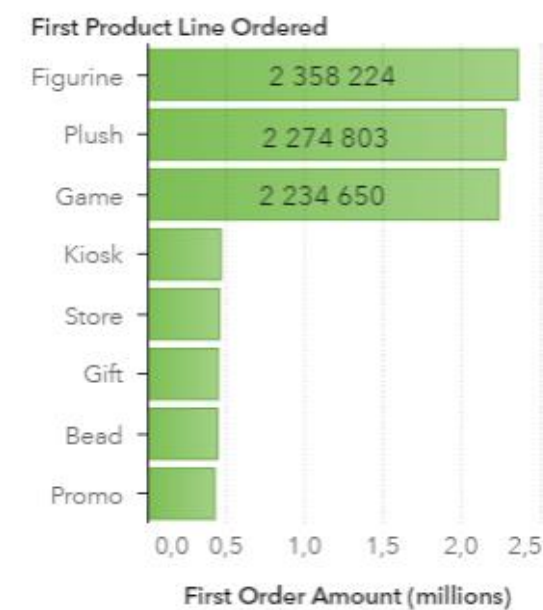
Frequency of Gender



First Order Amount by Continent



First Order Amount by First Product Line Ordered



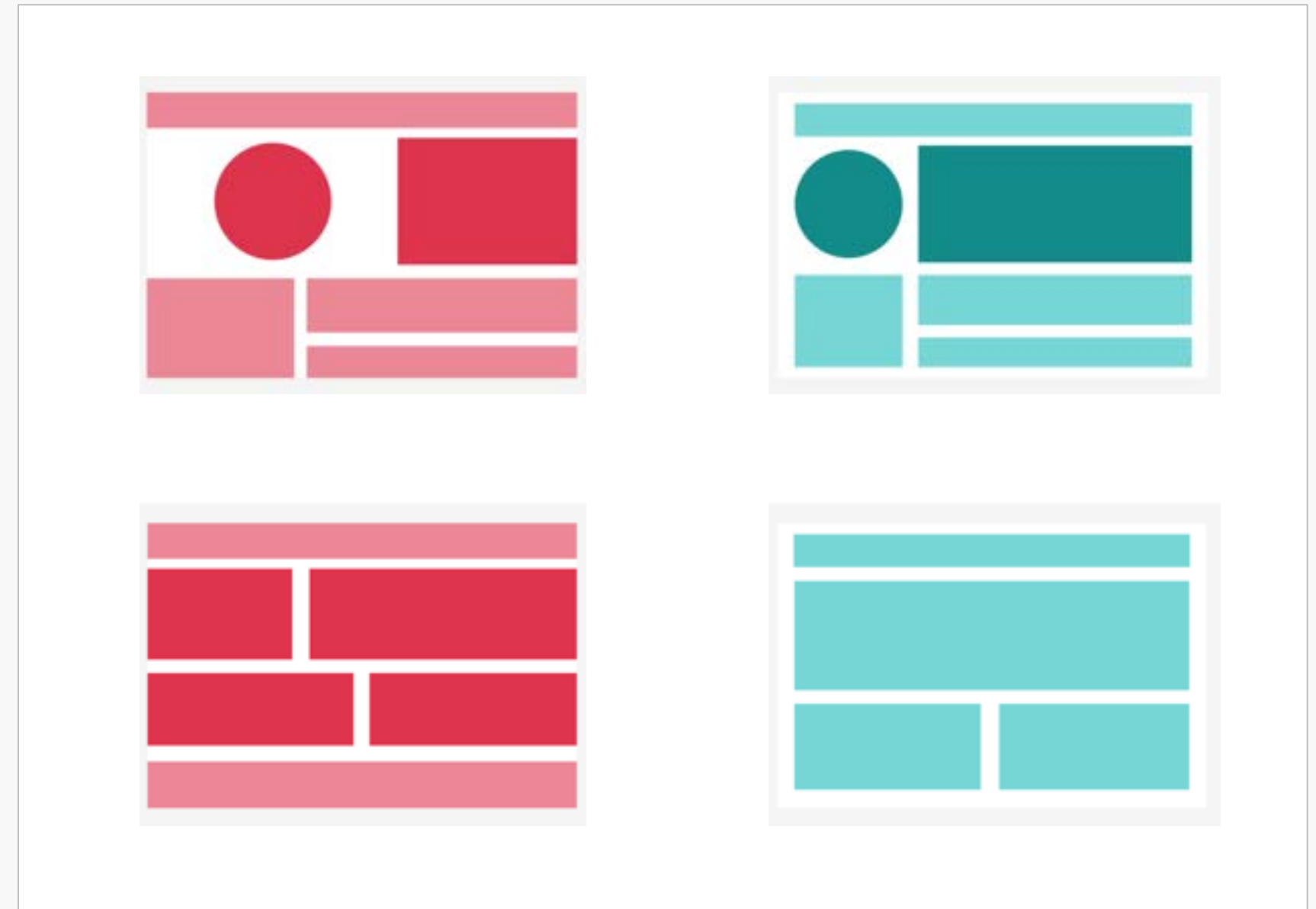
# Align to Grid

Keep all the report objects well arranged.

By aligning the elements of your contents, your report page will look organized and attractive.

Alignment creates a sharper design, making report objects visually connected.

And it makes the page easier on the eye, like reading a book.





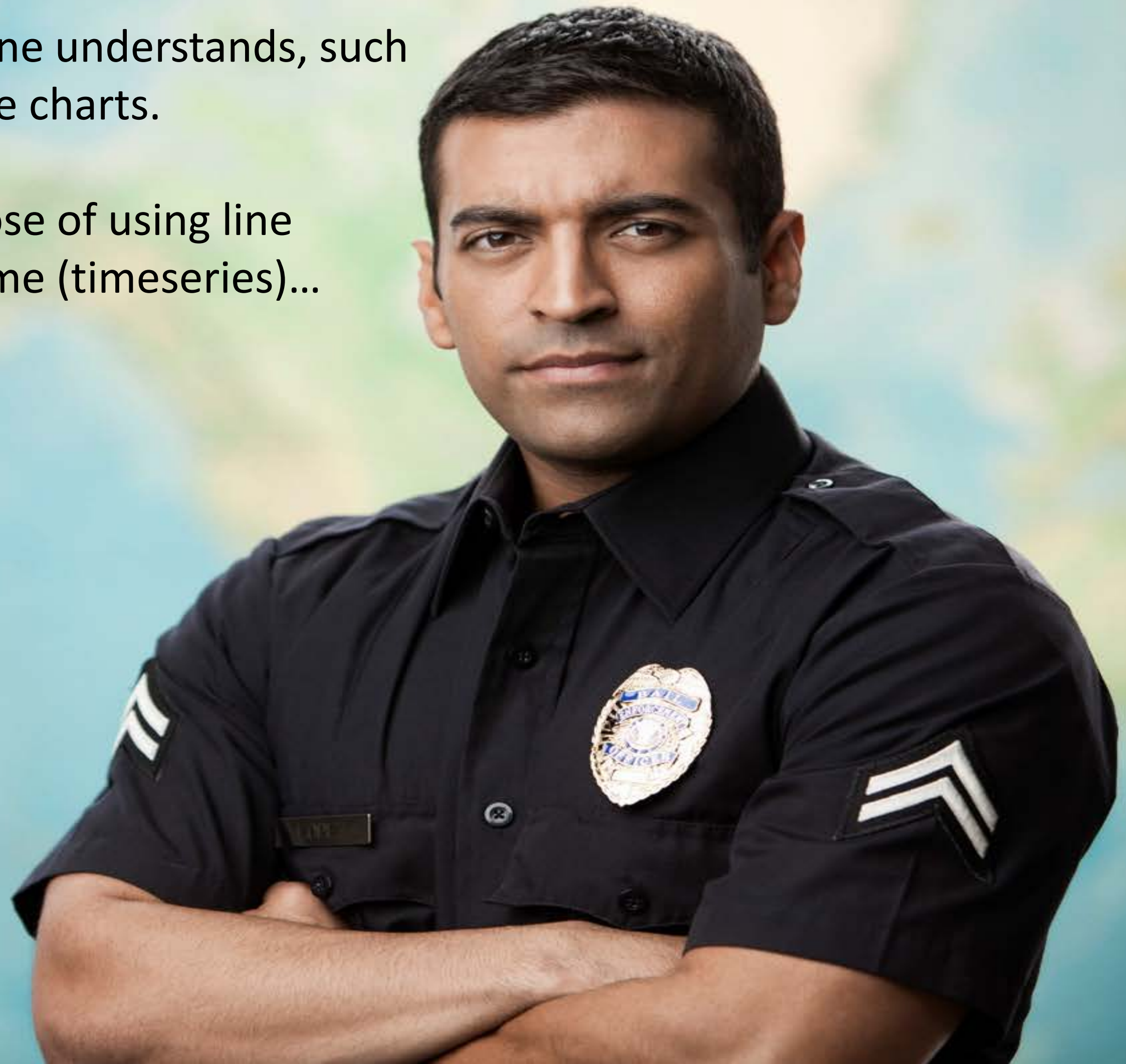
# CHART

No 1 mistake = audience are not able to interpret what is visualized

Use common chart that everyone understands, such as single value KPIs, bar and line charts.

Follow all basic rules: i.e. purpose of using line charts is to display data over time (timeseries)...

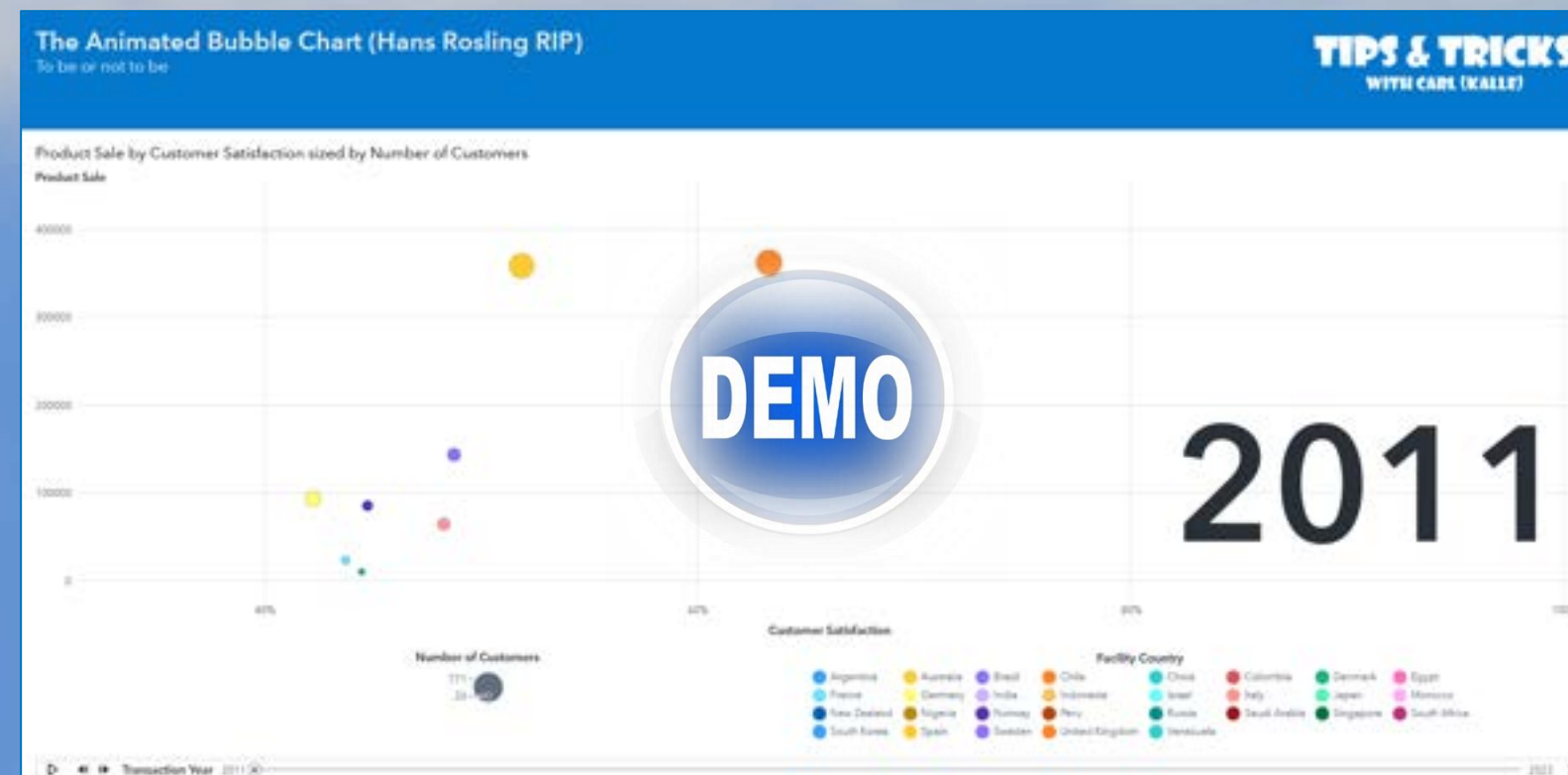
Watch your Y and X axis





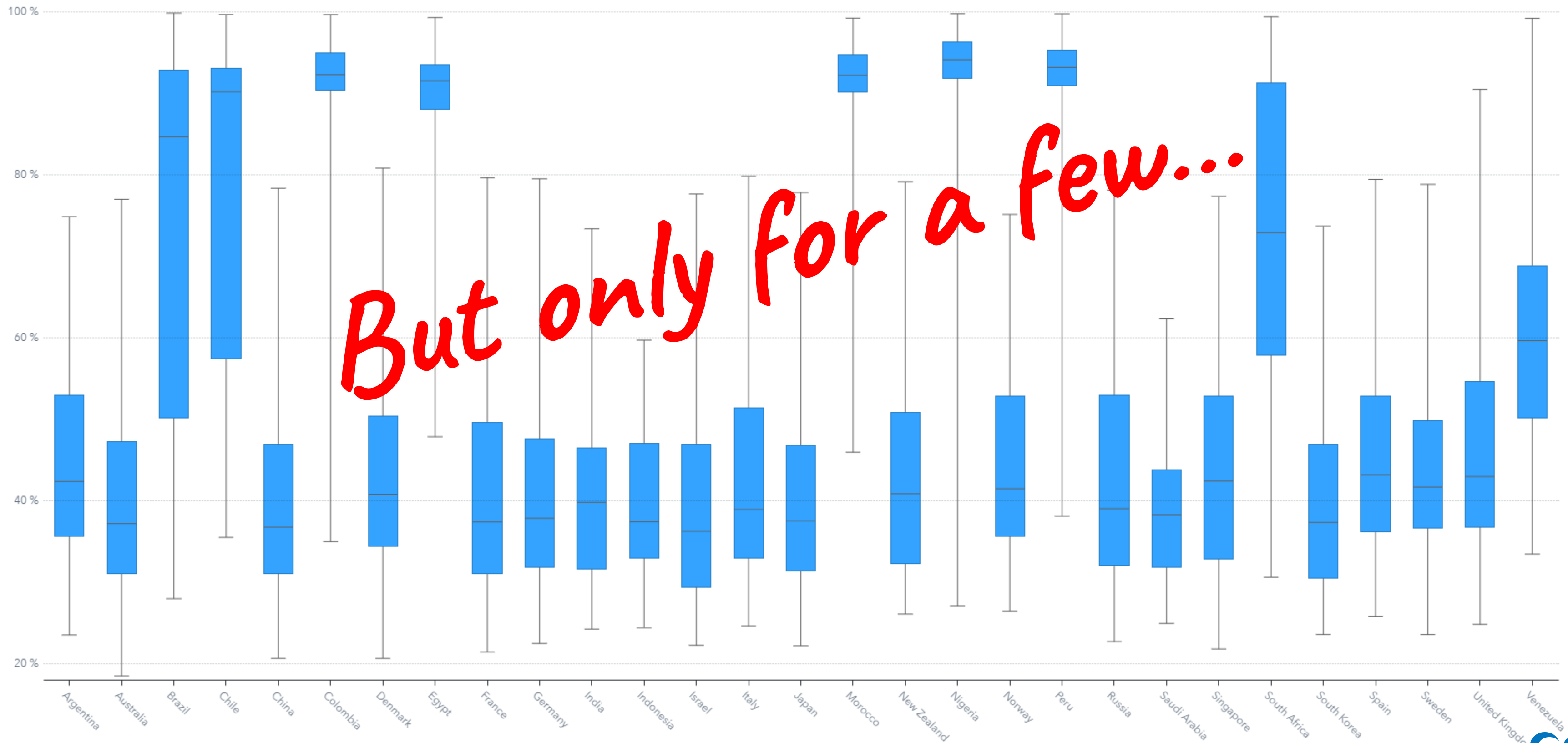
# BUT SOME CHARTS ARE SO COOL...

Do not try to  
complicate things... If  
a bar chart works,  
use it...



# THE BOX PLOT, PROBABLY THE BEST VISUALIZATION IN THE WORLD

Customer Satisfaction by Facility Country







# PERFORMANCE

Performance may have a heavy impact on end user experience



Remember: Everything you do will impact performance.

If you have detected a performance issue, do not wait, deal  
with it!



# Three phases

Application start and  
loading of report  
features

Opening the report

Loading report data

- Delete unused content
- Don't just add pages, modify existing pages

- Aggregate data if you can
- Do not try to fix data quality issues
- Use data optimization methods

# Is information quality important for you?

Bad information quality, such as poorly designed dashboards, can jeopardize all efforts you have done to ensure high data quality.

And, it can also jeopardize your trustworthiness !!!

Q&A

