



Lonneke Opsteegh

- Human movement scientist & Organizational Psychologist
- PhD in medical sciences



• *And now...*



- Data communication specialist
- Teaching, - templates - design consultancy

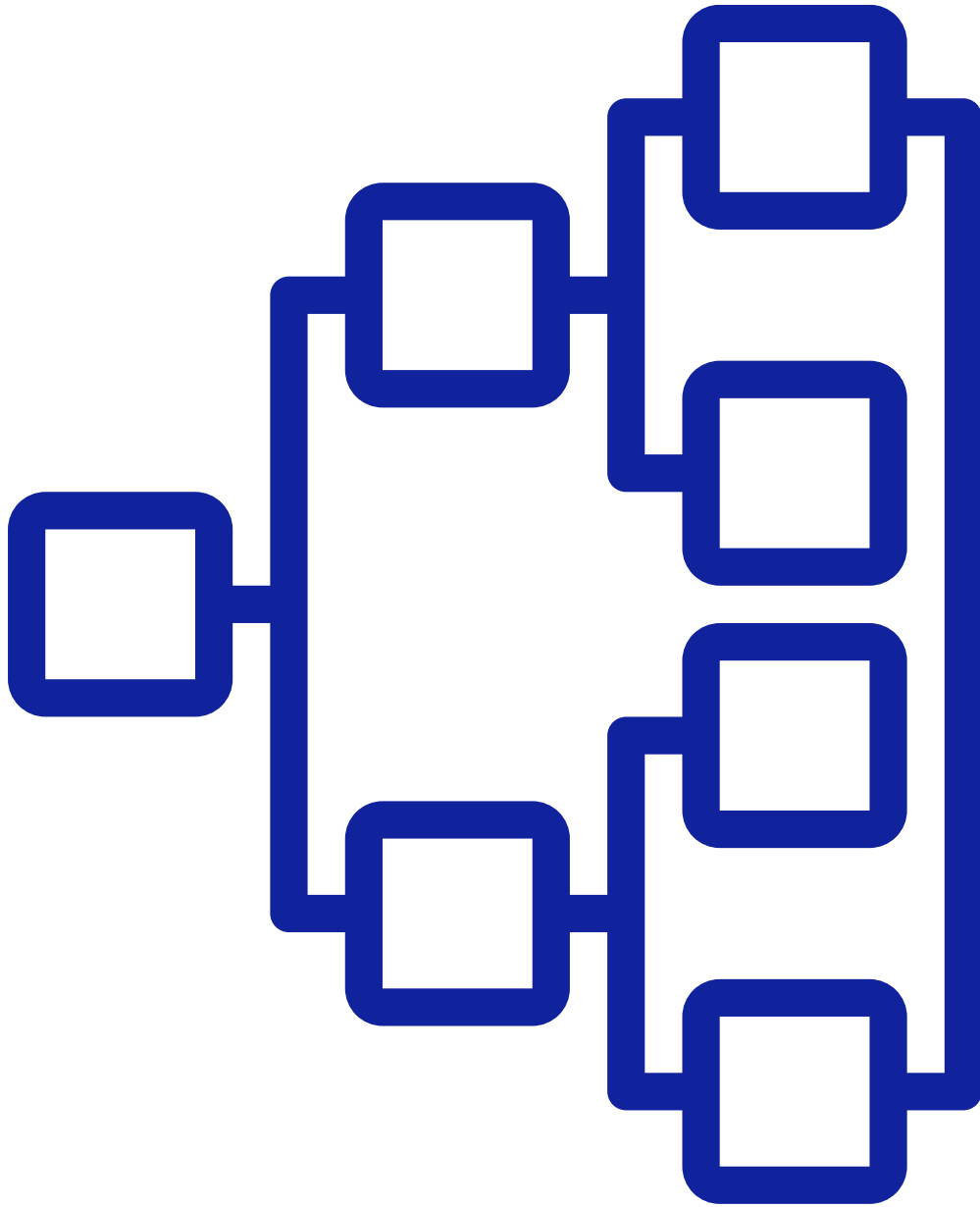


CONSISTENCY



INTRA-DASHBOARD
INTER-DASHBOARD
INTRA-CLIENT
INTER-CLIENT

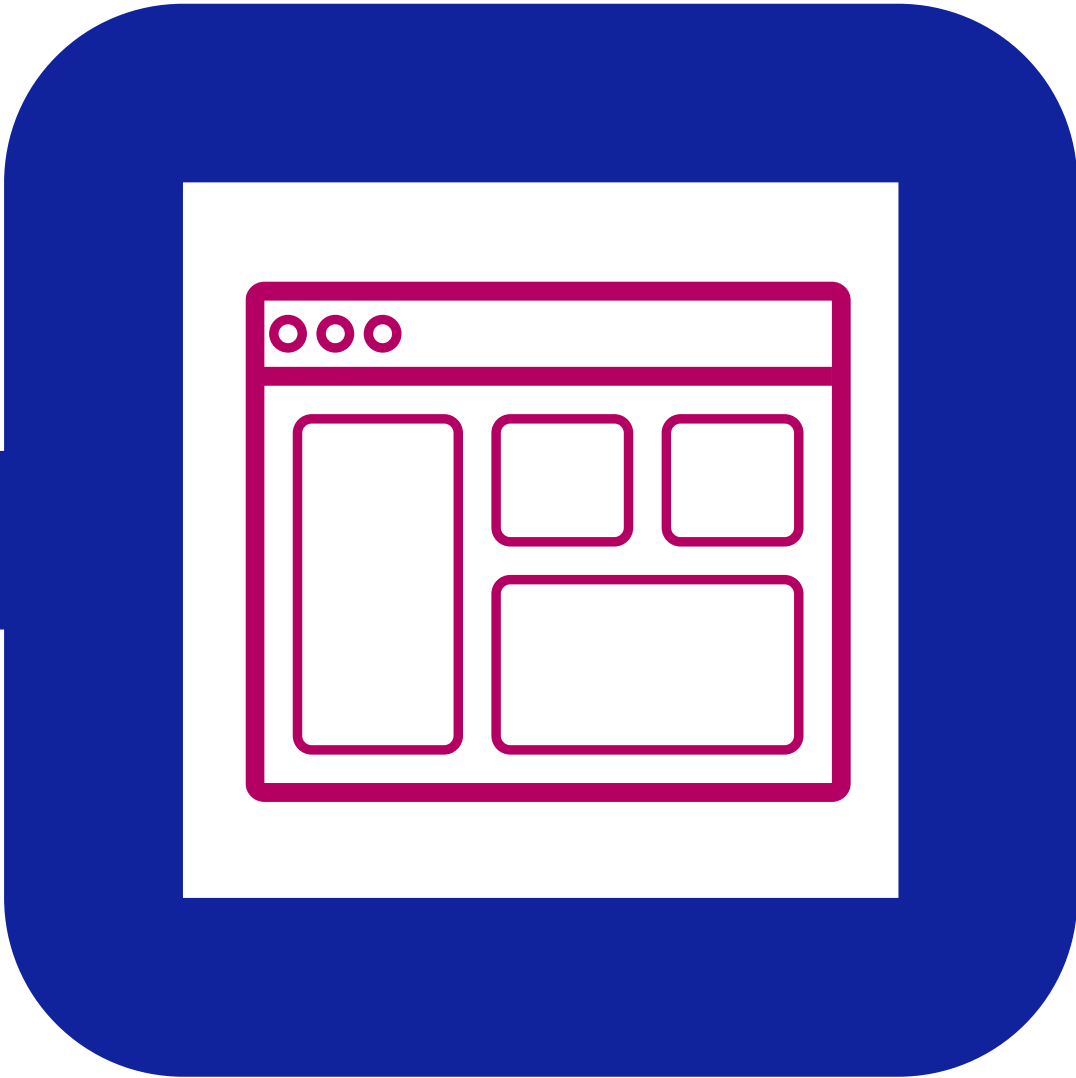




The overview

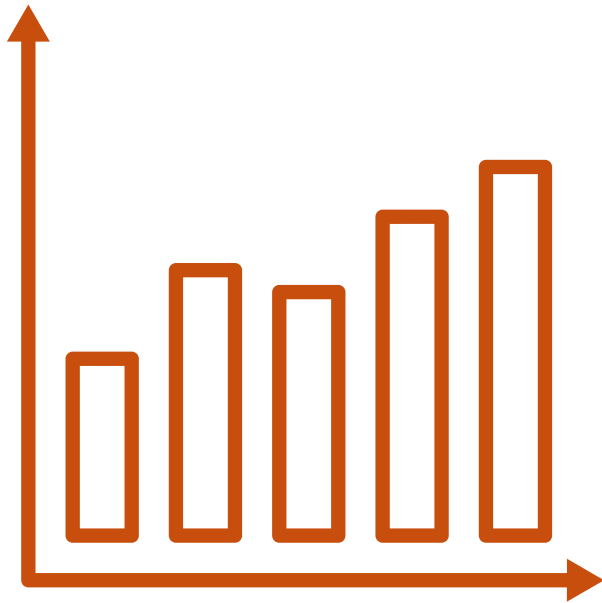


The overview

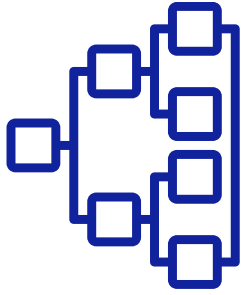


One page

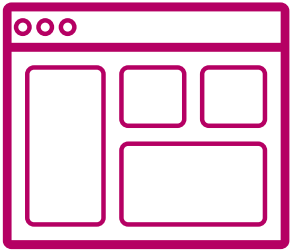




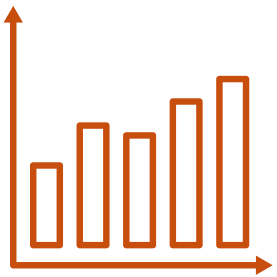
Graphs



The overview



One page



Graphs





The first layer: the overview

3 layers of design

Three layers of design

OVERVIEW



TAB

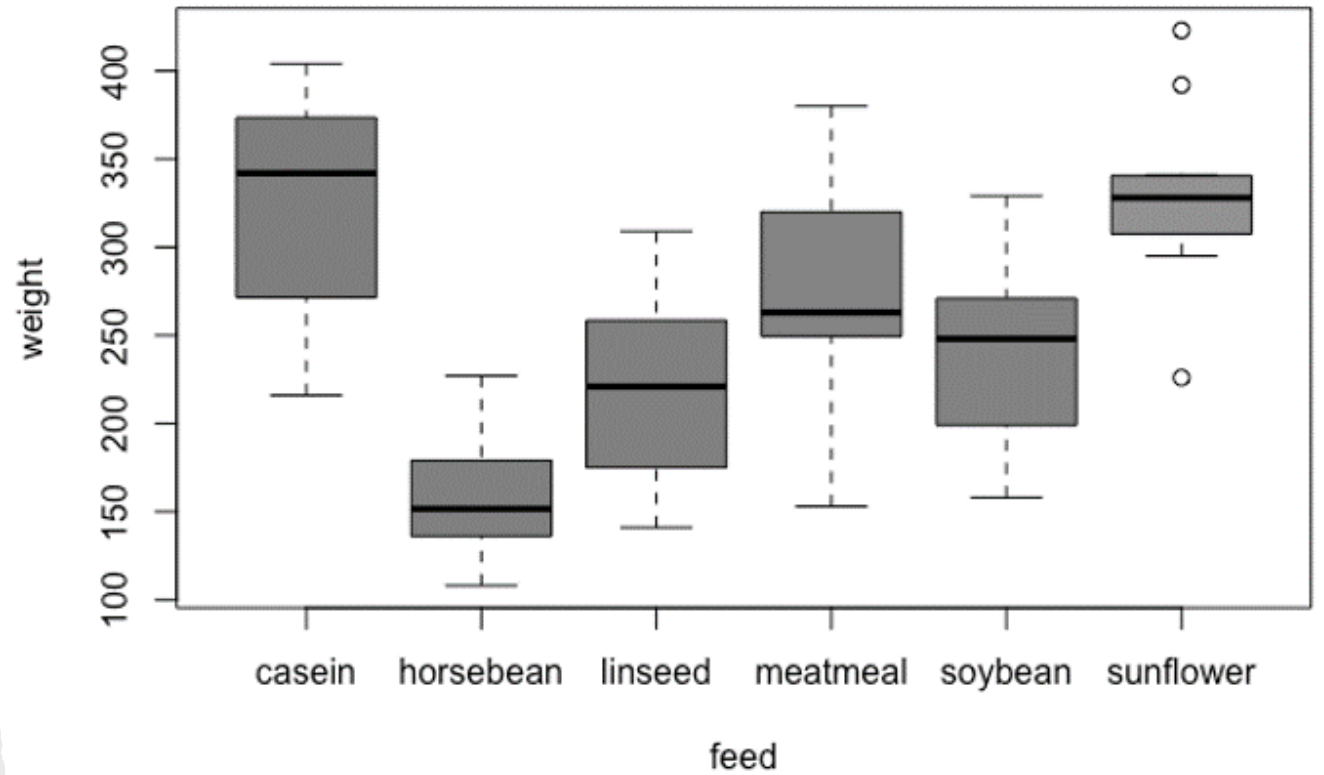


GRAPH



- The end-user
- Information structure
- Colours
- Font types
- Company style

Who is your audience?



~~Data~~ USER-centered design

Your end user is crucial for

- choice of visuals
- amount of detail in analyses and visuals
- Structure of your information



~~Data~~ USER-centered design

- Similar or diverse audience?
- Math nightmares?
- Experience with graphs and/or BI?
- Mental state?
- Details needed?
- Kind of display/ screen?
- How can they resist?



Information structure

AS
I WANT TO
SO THAT I

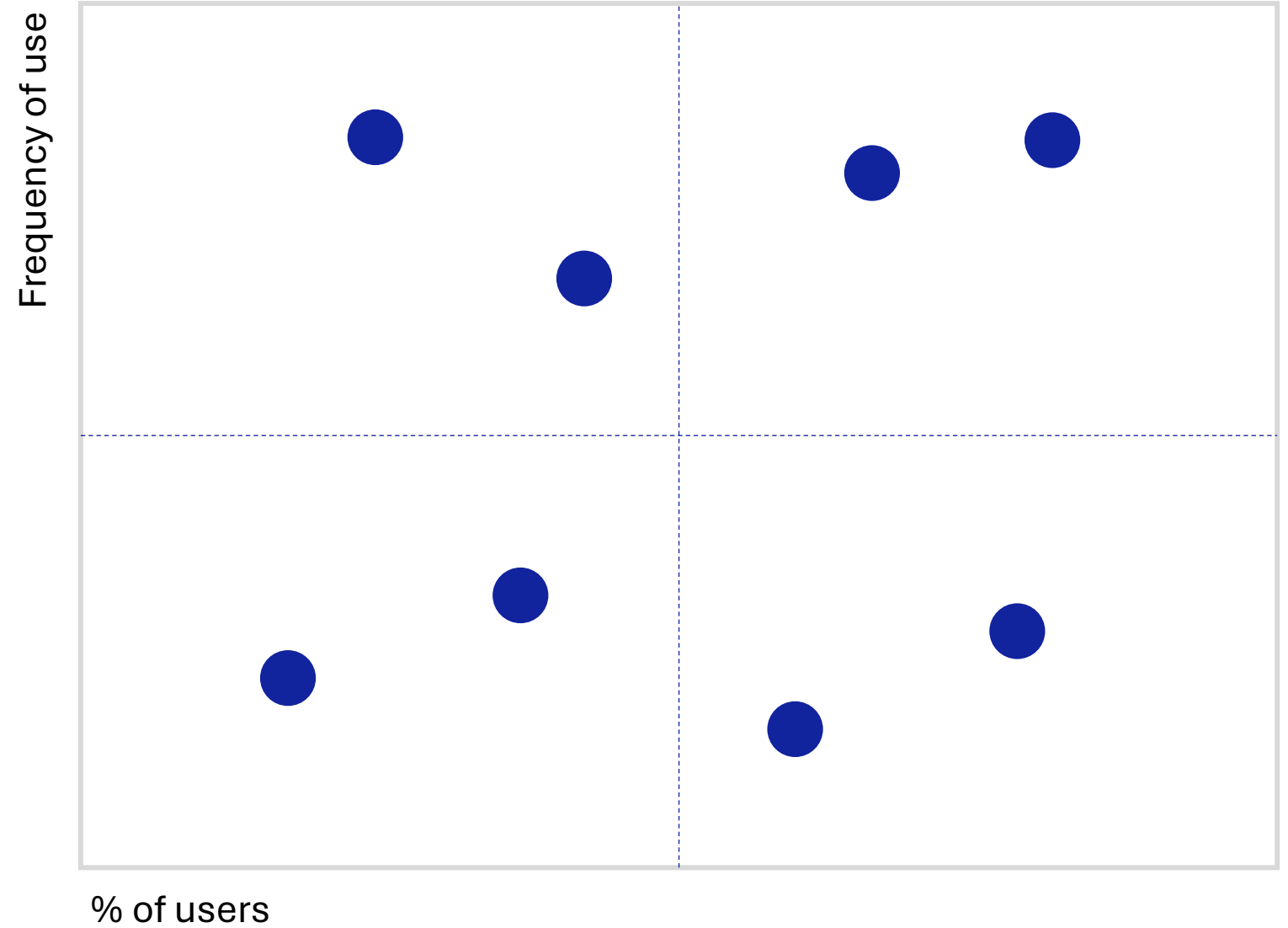
HR manager,
know how long an employee has been on
sick leave
can make sure I meet the legal
requirements / deadlines

Diversity & inclusion

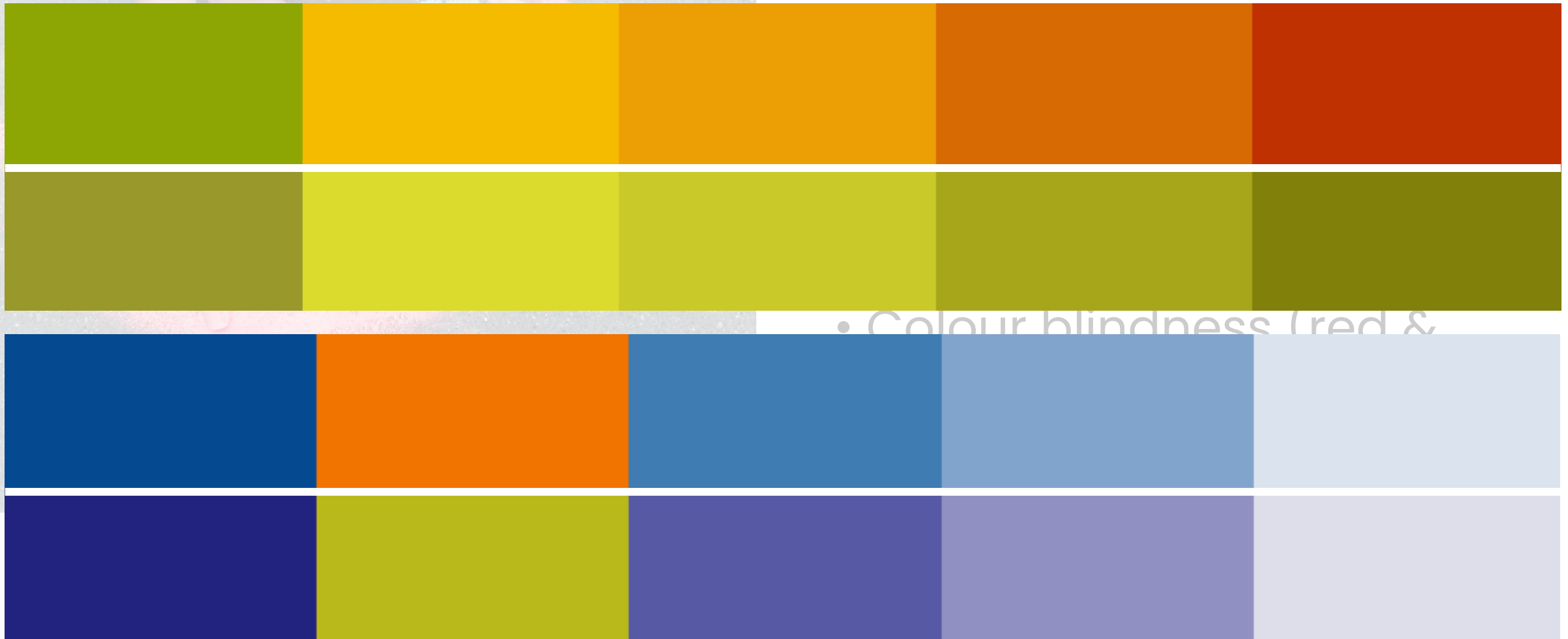
Contact & info



Priorities



Colour



• Colour blindness (red &



Using the company style

- Logo and colours, but rarely fonts...
- Website inspiration

Shadows | rounded corners | navigation | shapes
| Style and placement of titles | tone of voice



Font types

serif Sans-serif

Corbel	Arial	Consolas	Segoe	Tahoma
861.911	861.911	861.911	861.911	861.911
111.999	111.999	111.999	111.999	111.999
111.999	111.999	111.999	111.999	111.999
111.111	111.111	111.111	111.111	111.111
999.999	999.999	999.999	999.999	999.999

Calibri	Candara	Courier New	Verdana	Lucida Sans Unicode
861.911	861.911	861.911	861.911	861.911
111.999	111.999	111.999	111.999	111.999
111.999	111.999	111.999	111.999	111.999
111.111	111.111	111.111	111.111	111.111
999.999	999.999	999.999	999.999	999.999

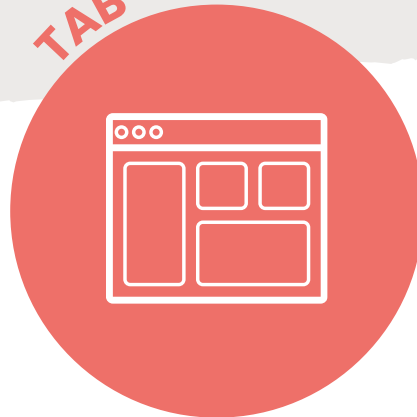
Three layers of design

OVERVIEW



- The end-user
- Information structure
- Colour choice
- Font type
- Company style

TAB



- Placement visuals
- Grid
- Filters

GRAPH



Placement of visuals



TOP real estate

Filters

Logo

Navigation

Information on
source and
date/time update

graph

Top 3 clients

Least imporant

graph

graph

3 KPI's
(bv scorecard)

TOP real estate

TITLE

Navigation

3 KPI's
(bv scorecard)

Top 3 clients

Filters

Graph

Graph

Graph

Least imporant

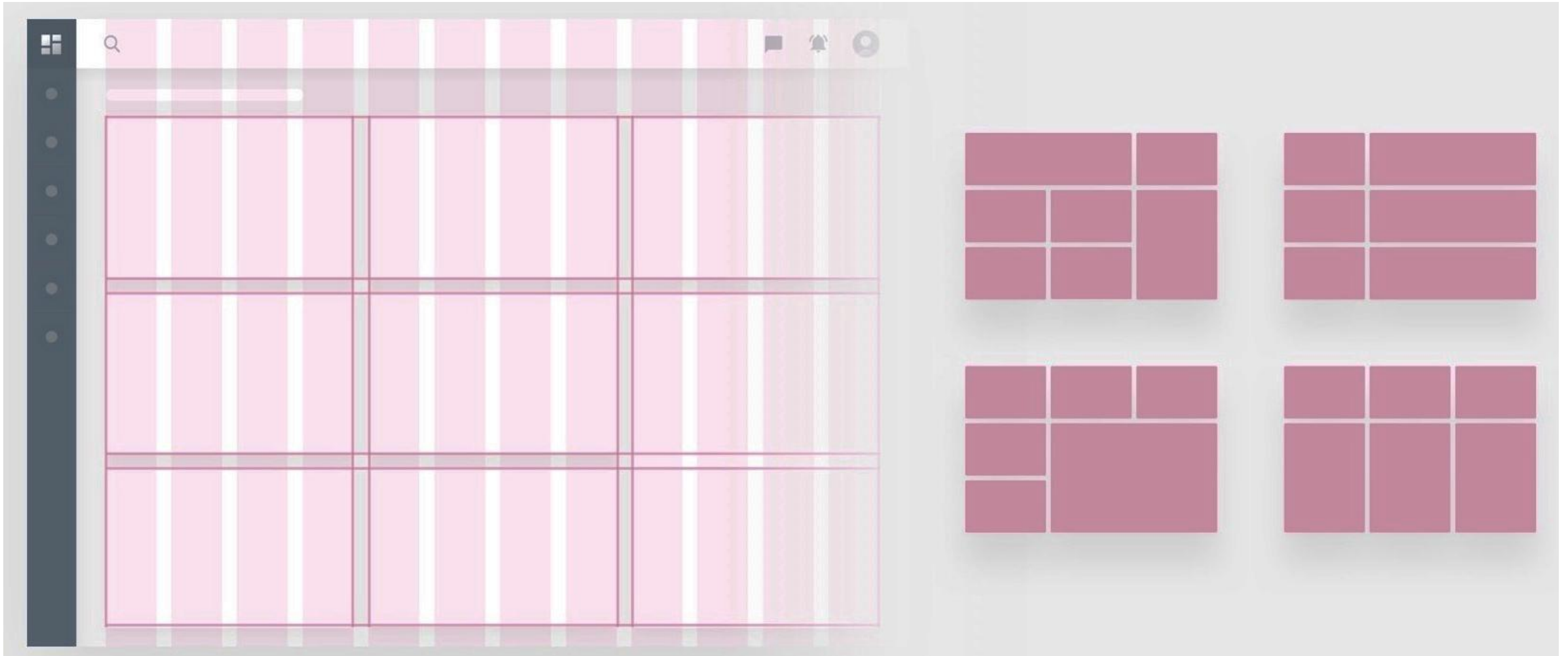
Graph

Table

Logo

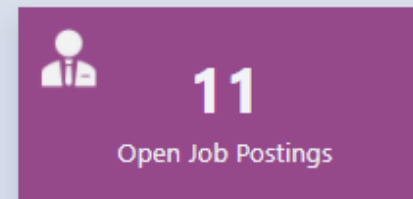
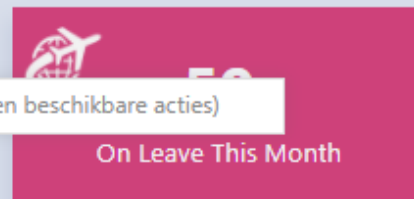
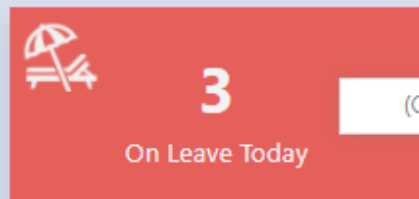
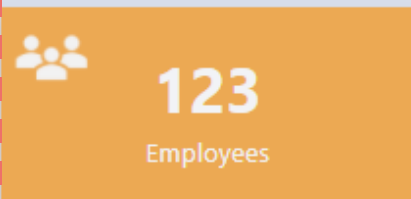
Information on source and date/time update

Grid



HR Management Dashboard

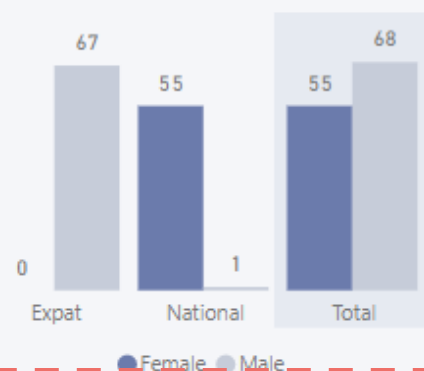
OVERVIEW AS OF TODAY



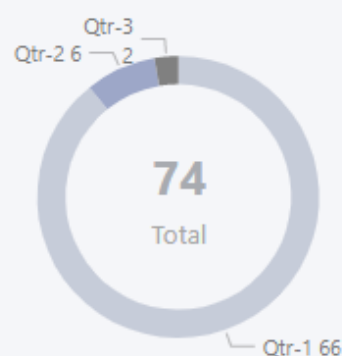
Employees by Unit

Home Organization	Active Employees
Administration Unit- CIO	8
Application Administration Unit	7
Application Services Unit	8
Audio Visual Support Services Unit	22
Data Center Unit	6
Enterprise Applications& Integ.Sec.	1
Infrastructure&Core Techno. Section	1
IT Help Desk Unit	12
IT Project Management Unit	3
IT Support Service Section	1
IT Support Services - Admin. Unit	14
IT Support Services-Academic A.Unit	13
IT Support Services-Student A.Unit	10
Network & Info. Security Unit	11
Web Services Unit	6

Employees per Nationality en Gender



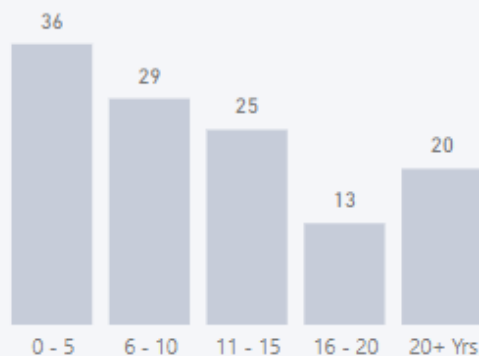
Approved Sick Leave Requests by Quarter



Employees by Grade



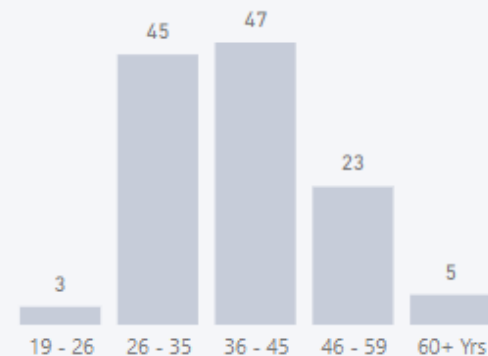
Employees per Service Years Range



Employees per Employee Class



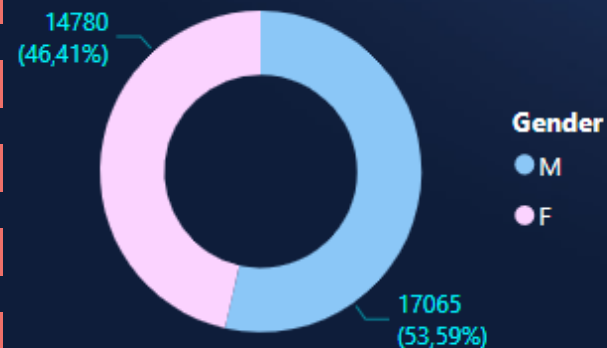
Employees per Age Range



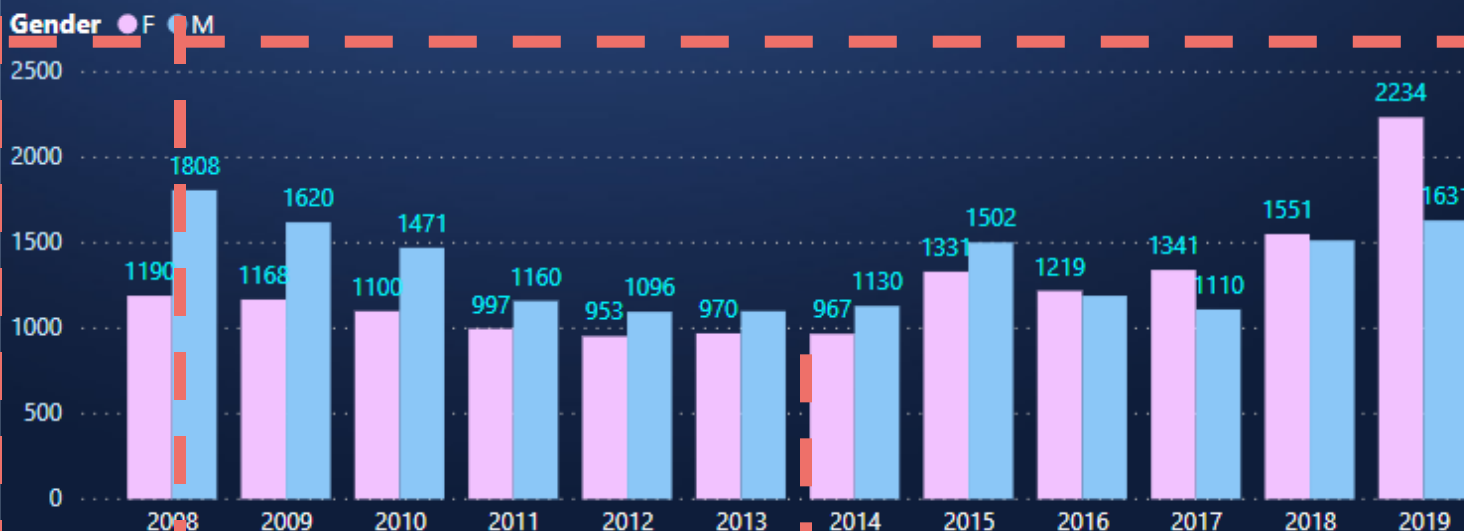
Employees per Job Category en Nationality



Number of Volunteers per Gender



Number of Volunteers over Time



Total Volunteers

31845

Female Volunteers

46,41%

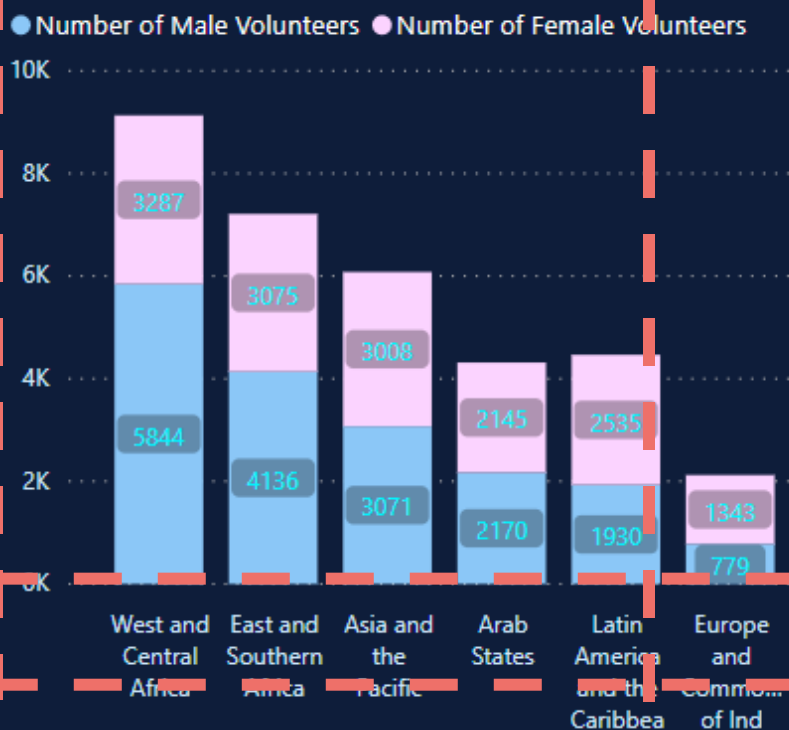
Gender

Alle

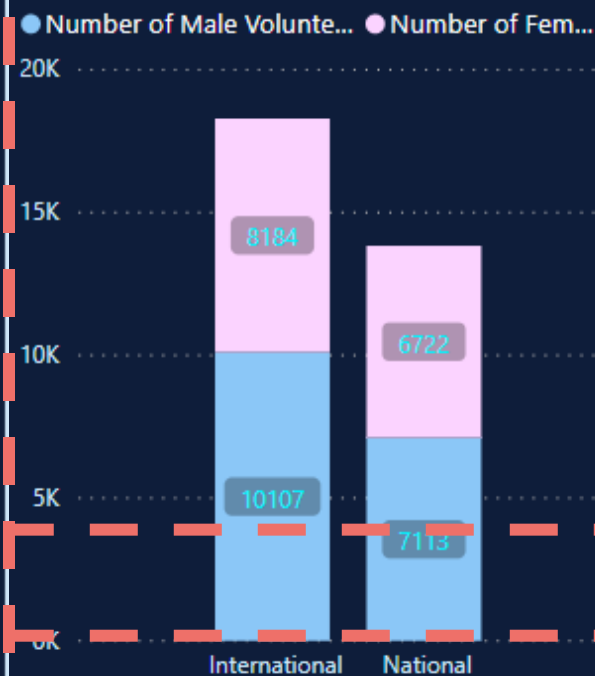
Year

Alle

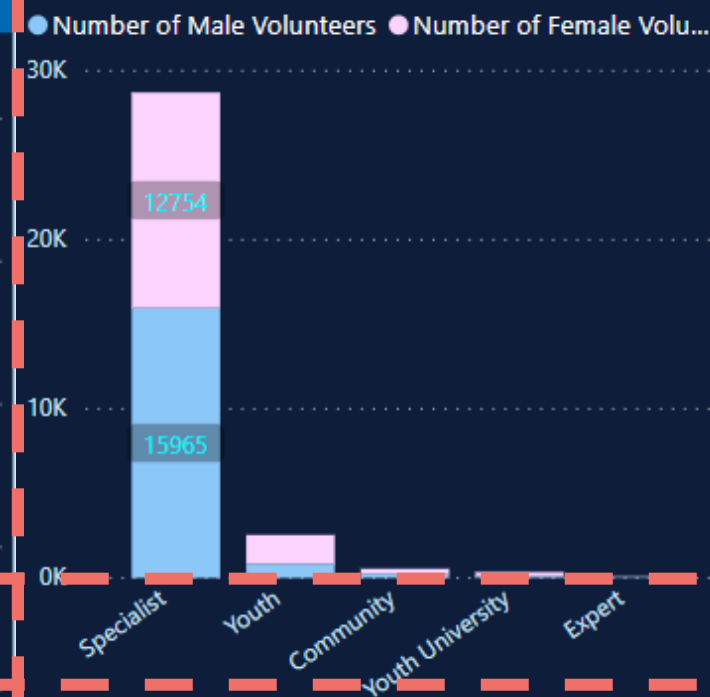
Number of Volunteers by Region



Number Volunteers by Assignment Type



Number of Volunteers by Type



Age

8 93

Country

Alle

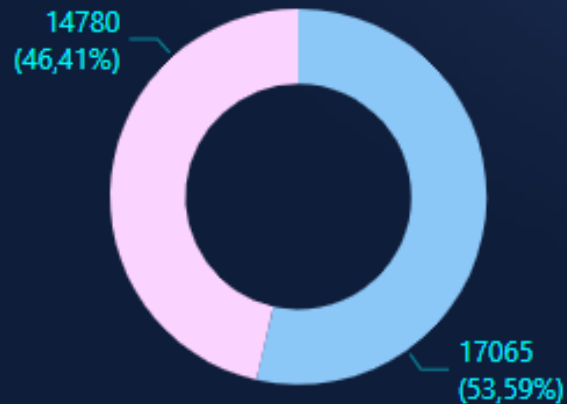
Region

Alle

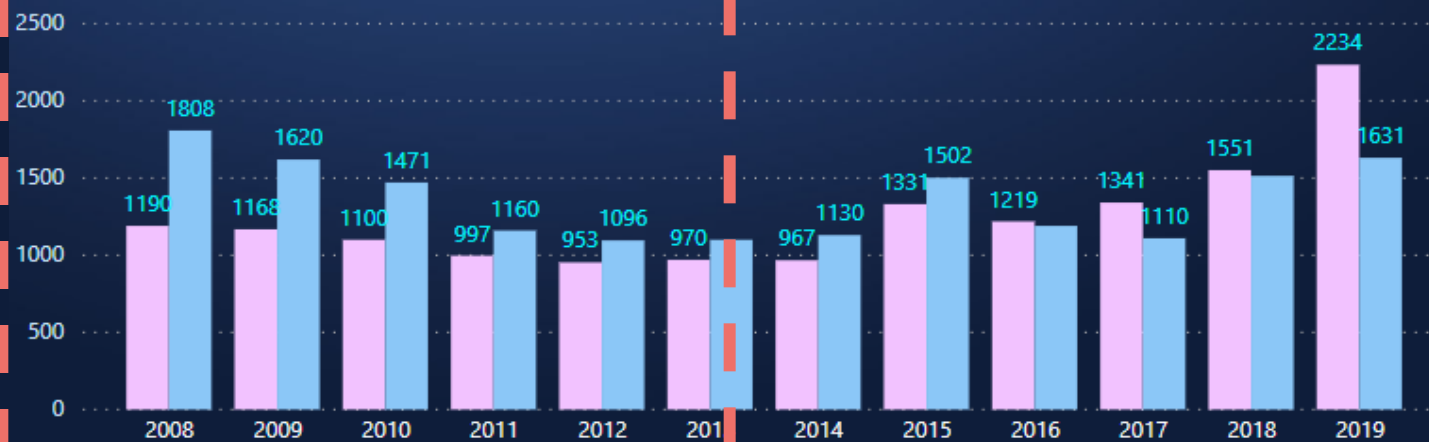
Organization

Alle

MALE and FEMALE volunteers



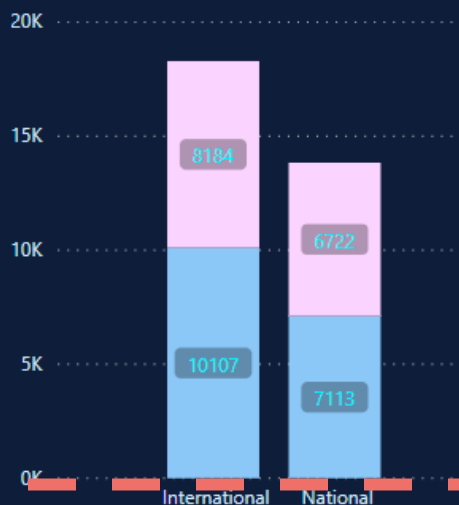
Volunteers over Time



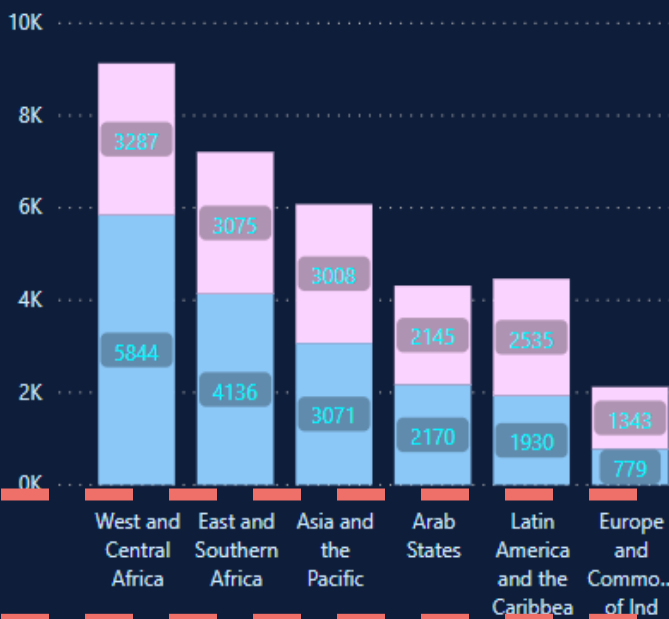
Total Volunteers

31845

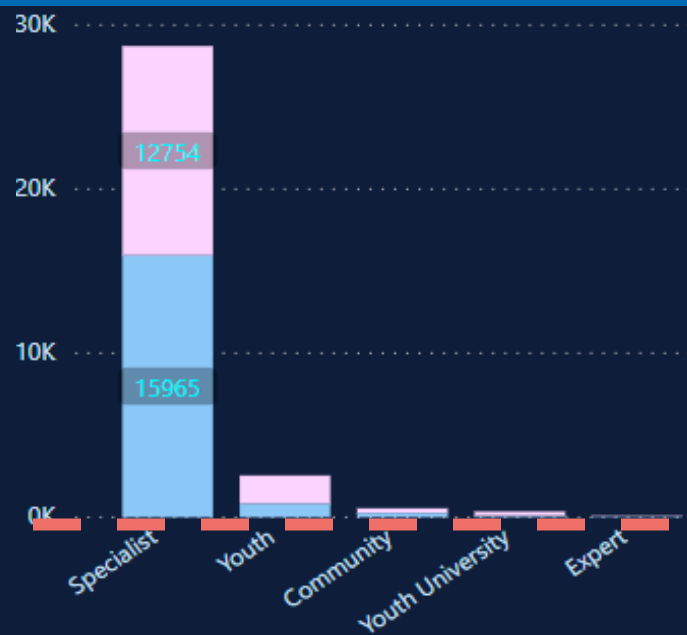
Assignment Type



Volunteers by Region



Volunteers by Type



Gender

Alle

Year

Alle

Age

8 93

Country

Alle

Region

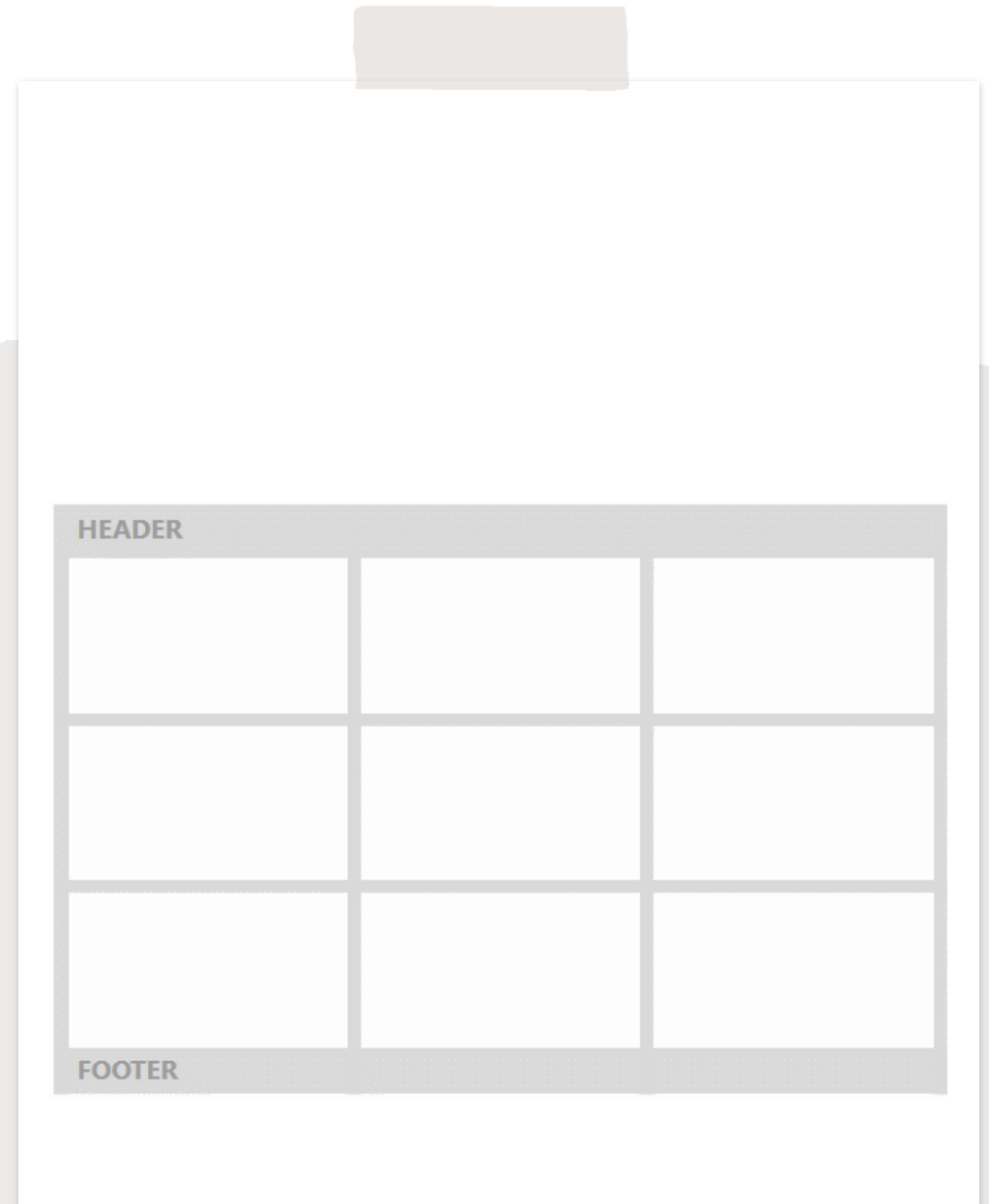
Alle

Organization

Alle

Prepare grid

- Create grid with shapes
 - Alignment: distribute horizontal and vertical
 - Space for header/ footer/ margins
 - Optional: room for filters
- Group shapes, name
- Place graphs, then hide grid



Roompot KPI overview

Month

All

Product

All

Roompot

Aantal orders deze maand

6.37K!

Zelfde periode vorig jaar: 8.49K (-25.02%)



Winst deze maand

€ 21.86K✓

Zelfde periode vorig jaar: € 27.6K (+20.82%)



Omzet deze maand

€ 3.22M✓

Zelfde periode vorig jaar: € 4.25M (+24.41%)



Aantal orders deze maand

6.37K!

Zelfde periode vorig jaar: 8.49K (-25.02%)



Aantal orders deze maand

6.37K✓

Zelfde periode vorig jaar: 8.49K (+25.02%)



Aantal orders deze maand

6.37K!

Zelfde periode vorig jaar: 8.49K (-25.02%)



Winst deze maand

€ 21.86K✓

Zelfde periode vorig jaar: € 27.6K (+20.82%)



Omzet deze maand

€ 35.63M!

Zelfde periode vorig jaar: € 4.25M (-737.38%)



Aantal orders deze maand

6.37K✓

Zelfde periode vorig jaar: 8.49K (+25.02%)



Click on the
arrow for more
information

Kasparov

BMW

ELHO

ITC Rubis

Kapimex

Peute

Roompot

Sitech

Producten

Filters

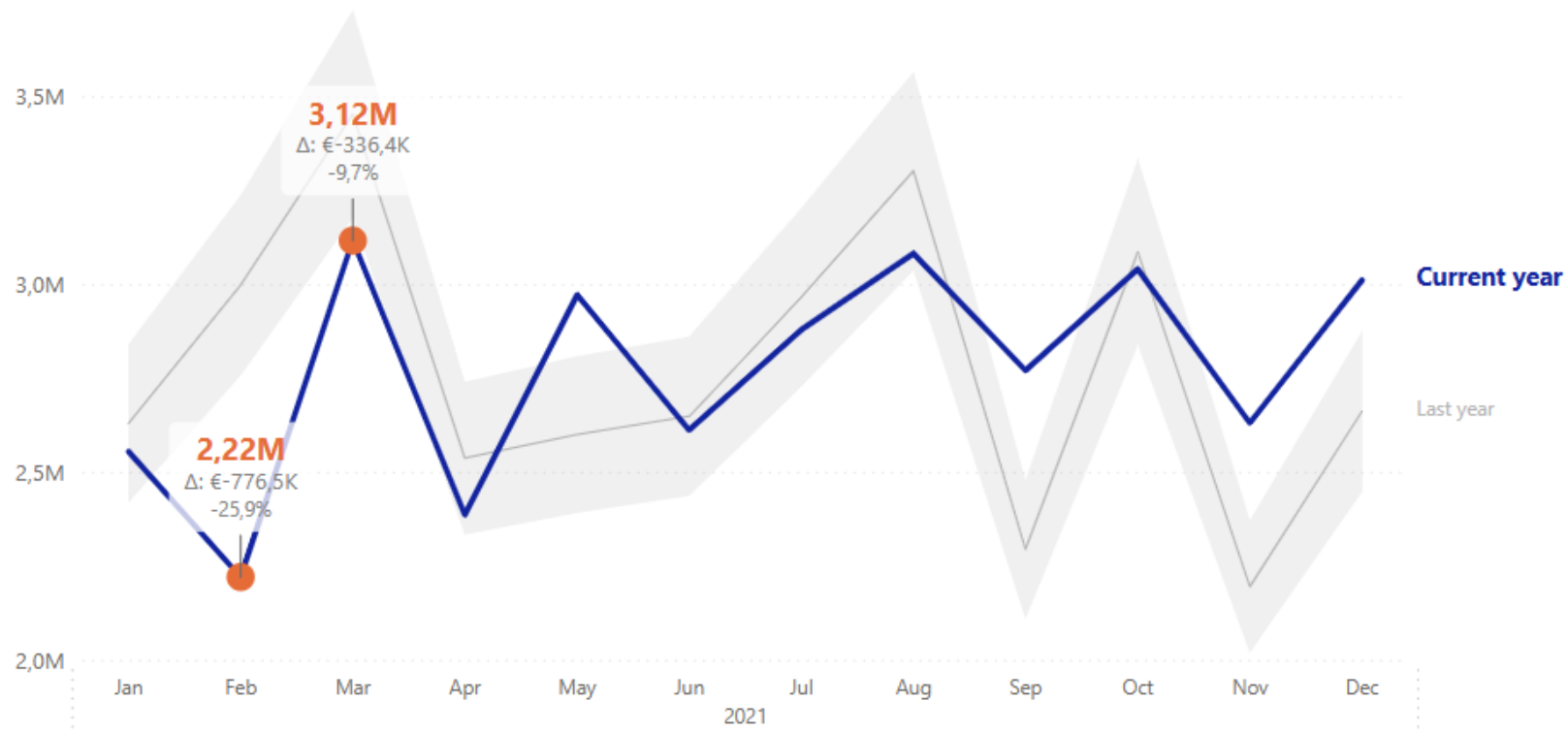
- List / dropdown / slider / tiles/ text
- Clear & activate filters
- Filter synchronisation
- Summary of activated filters

<https://youtu.be/QaOG42ic2wl>
<https://youtu.be/hVJ-6KRueOQ>

The screenshot displays a BI tool interface with a metadata tree on the left and a context menu open over it. The metadata tree includes sections for 'Metadata', 'Functions', and 'DMV'. Under 'Metadata', there are dropdowns for 'Demo dashboard' and 'Model', followed by a search bar. The tree lists various objects like '_measures', 'Cha...', 'City', 'City', 'con...', 'con...', 'Cur...', 'Cus...', 'Dat...', 'err...', and 'Hig...'. The context menu, which appears to be for a measure, contains the following options: 'Define Filter Dump Measure', 'Define Filter Dump Measure (All tables)', 'Define All Measures', 'Define All Measures (All tables)', 'Show Objects That Reference Table', 'Hide Hidden Objects', and 'Preview Data'. On the right side of the interface, there is a search input with the number '1' and the text 'Enter', and a table with columns for 'Results' and 'art', showing rows with values '45:49' and '45:51'.

Sales in comparison to last year

What months are we not reaching our last years' sales?



Channel

Multiple selections

Warehouse Code

Multiple selections

Customer Names

All

Product Name

All

Filter selection

Channel = Wholesale, Export
Warehouse = AXW291, FLR025, GUT930

Clear all slicers

Activated filters =

Activated Filters

```
VAR MaxFilters = 3
```

```
RETURN
```

```
IF (
```

```
    I VAR MaxFilters = 3
    V RETURN
    V IF (
    V     ISFILTERED ( Channels[Channel] ),
    V     VAR ___f = FILTERS ( Channels[Channel] )
    V     VAR ___r = COUNTROWS ( ___f )
    R     VAR ___t = TOPN ( MaxFilters, ___f, Channels[Channel] )
    & IF     VAR ___d = CONCATENATEX ( ___t, Channels[Channel] , ", " )
    I     VAR ___x = "Channels = " & ___d
    V     & IF(___r > MaxFilters, ", ... [" & ___r & "
    V     items selected]") & " "
    V     RETURN ___x & UNICHAR(13) & UNICHAR(10)
    V )
```

```
RETURN ___x & UNICHAR(13) & UNICHAR(10)
```

```
)
```

```
-- this continues for the other columns in the data model
```



On to the third layer

3 layers of design

Three layer of design

OVERVIEW



- The end-user
- Information structure
- Colour choice
- Font types

TAB



- Placement visuals
- Grid
- Filters

GRAPH



- Pick your graph



Expand your graph
vocabulary with

Graph specials

The ones you might have
seen, but never use...

The right chart

Pick based on your key message



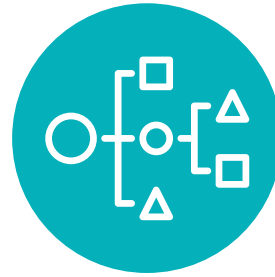
Comparison of categories



Trend over time



Part to whole



Relations & hierarchies



Geographical information



distribution



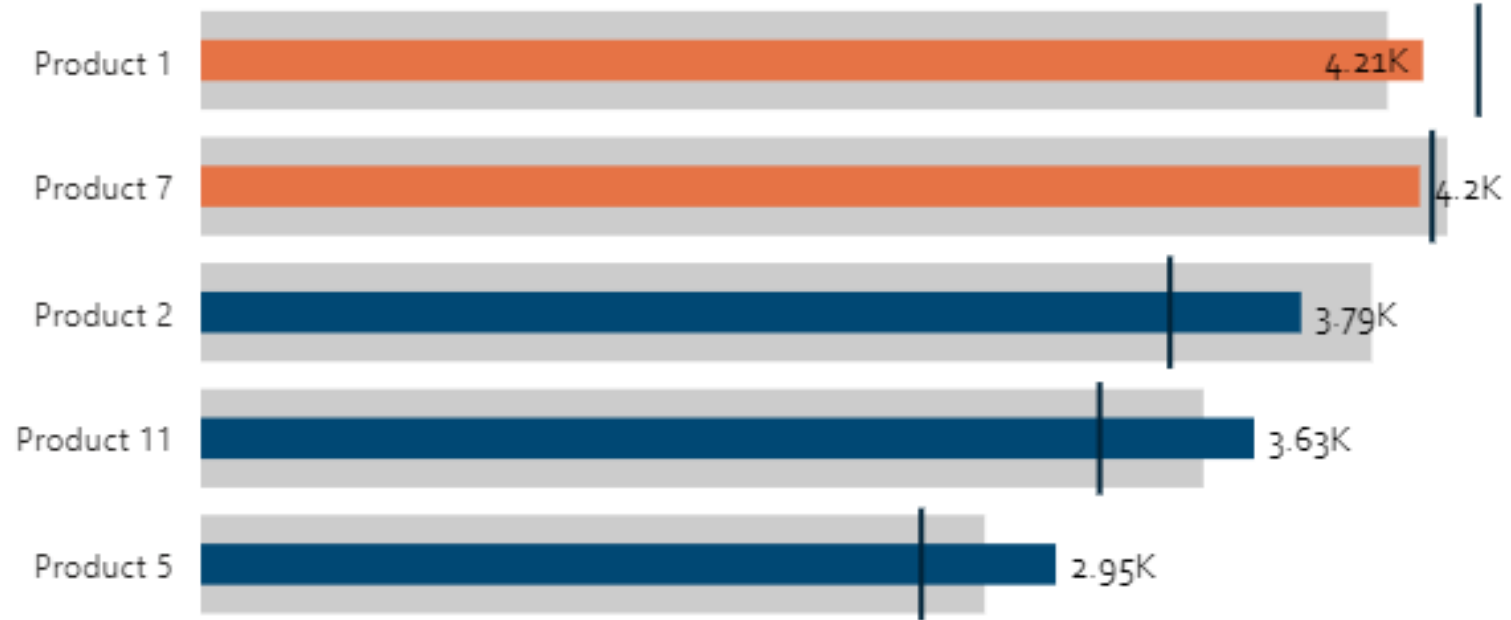
Single value

- ✓ Space-efficient
- ✓ Clear & direct
- ✓ Meet requirements of end-user
- ✓ Core visuals when possible, custom when needed

Specials

The right chart

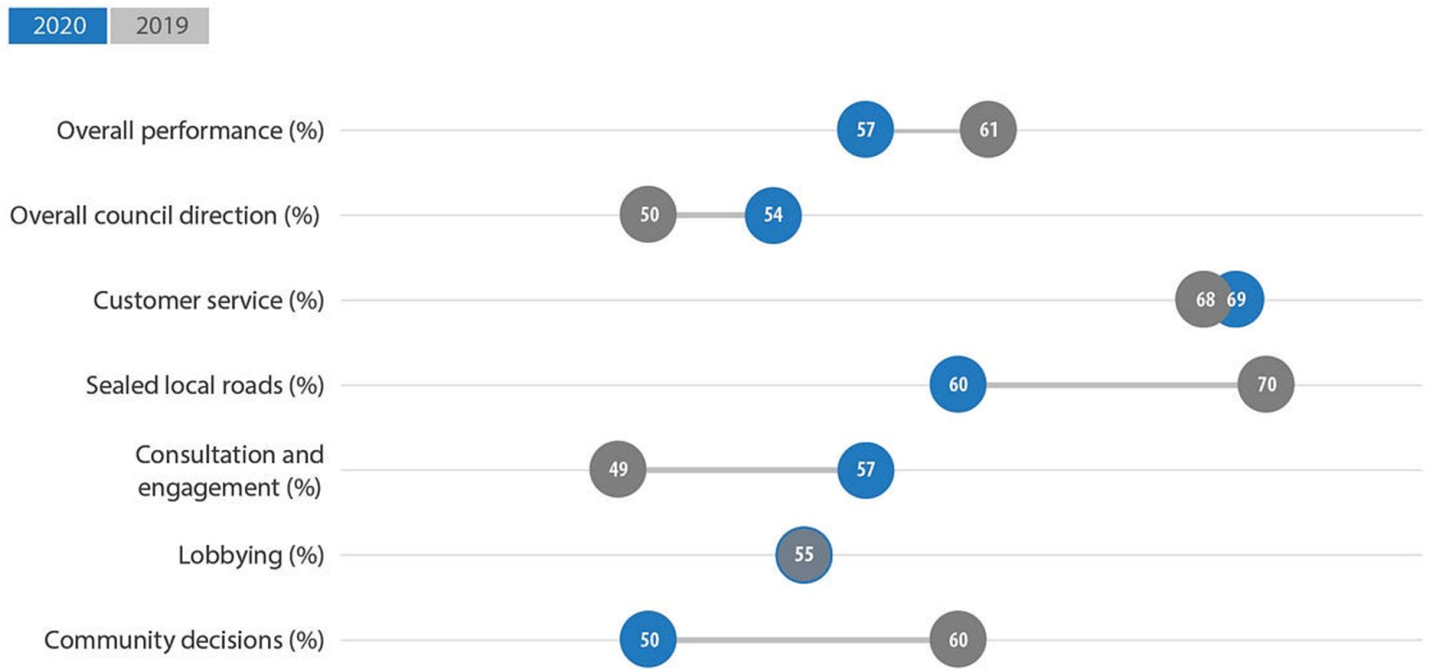
- bullet chart



Specials

The right chart

- bullet chart
- dumbbell dot plot



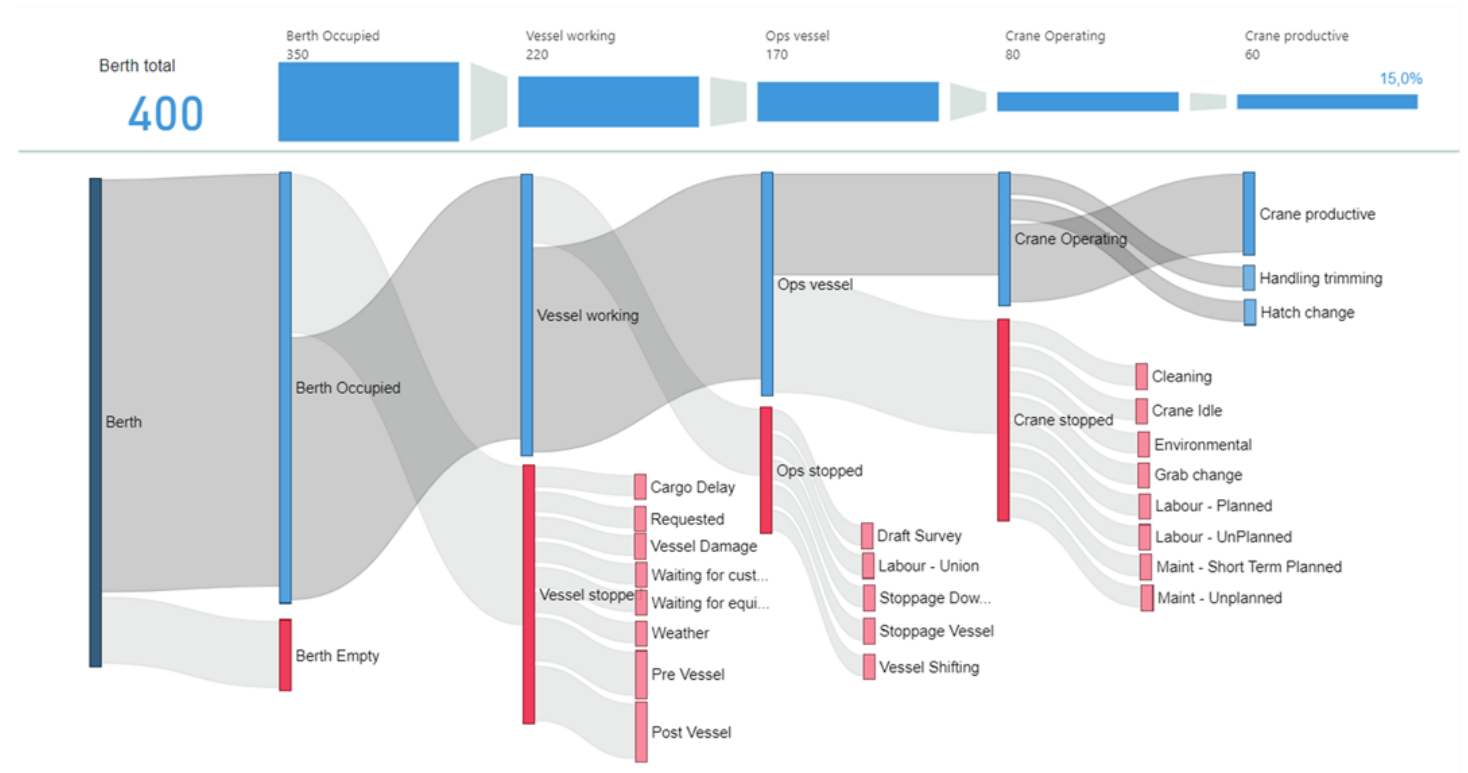
2020 2019

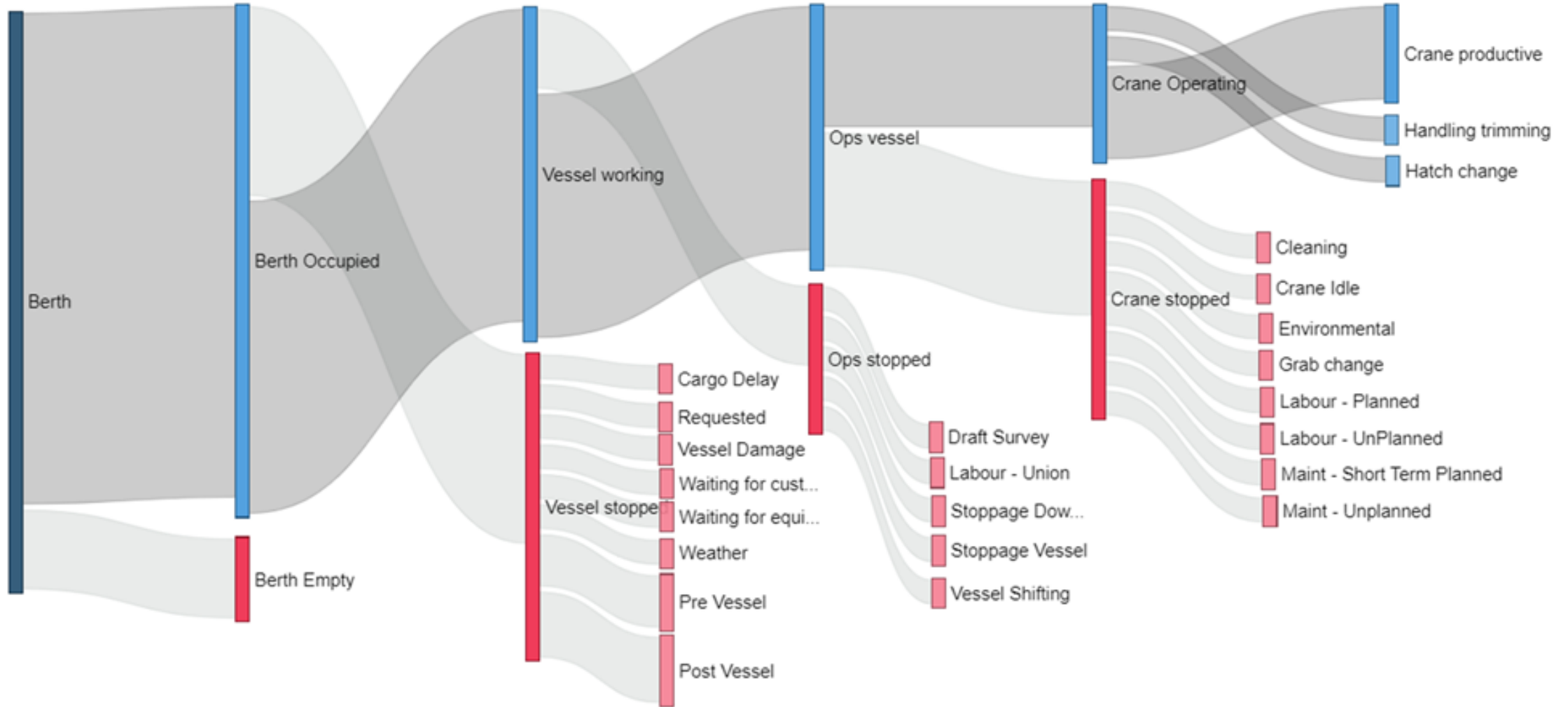


Specials

The right chart

- bullet chart
- dumbbell dot plot
- sankey diagram

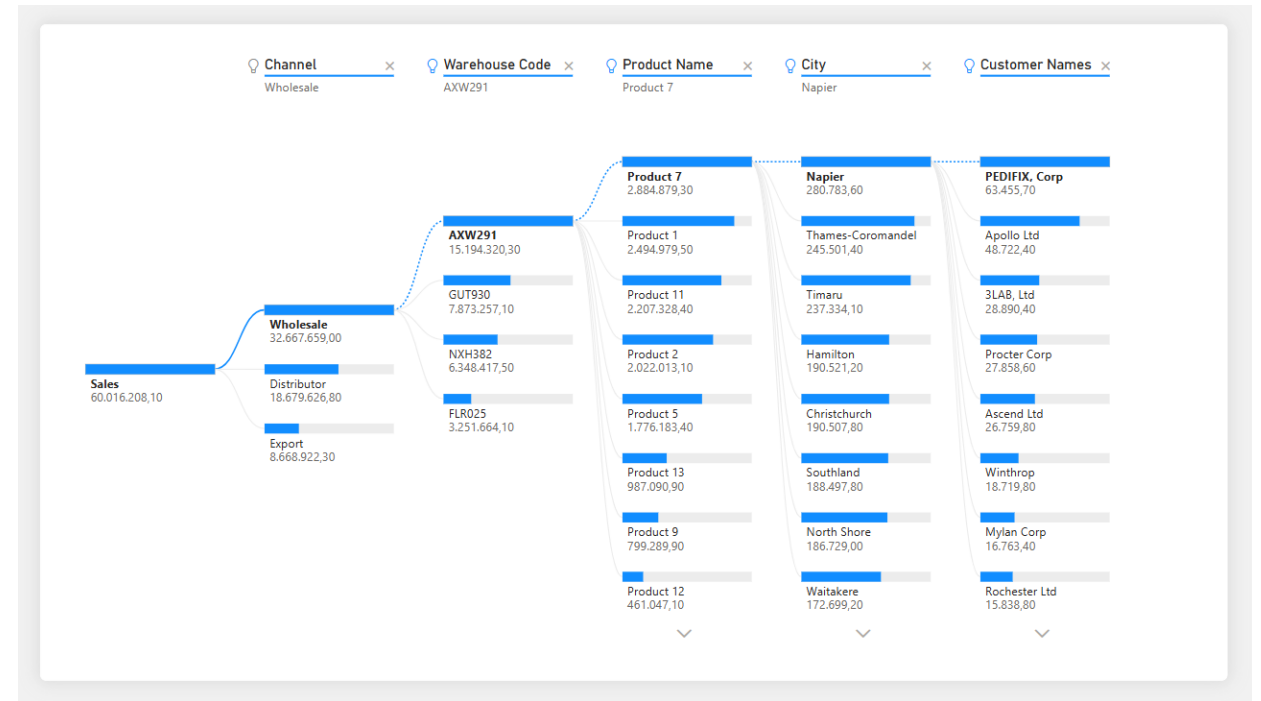




The right chart

Specials

- bullet chart
- dumbbell dot plot
- sankey diagram
- decomposition tree



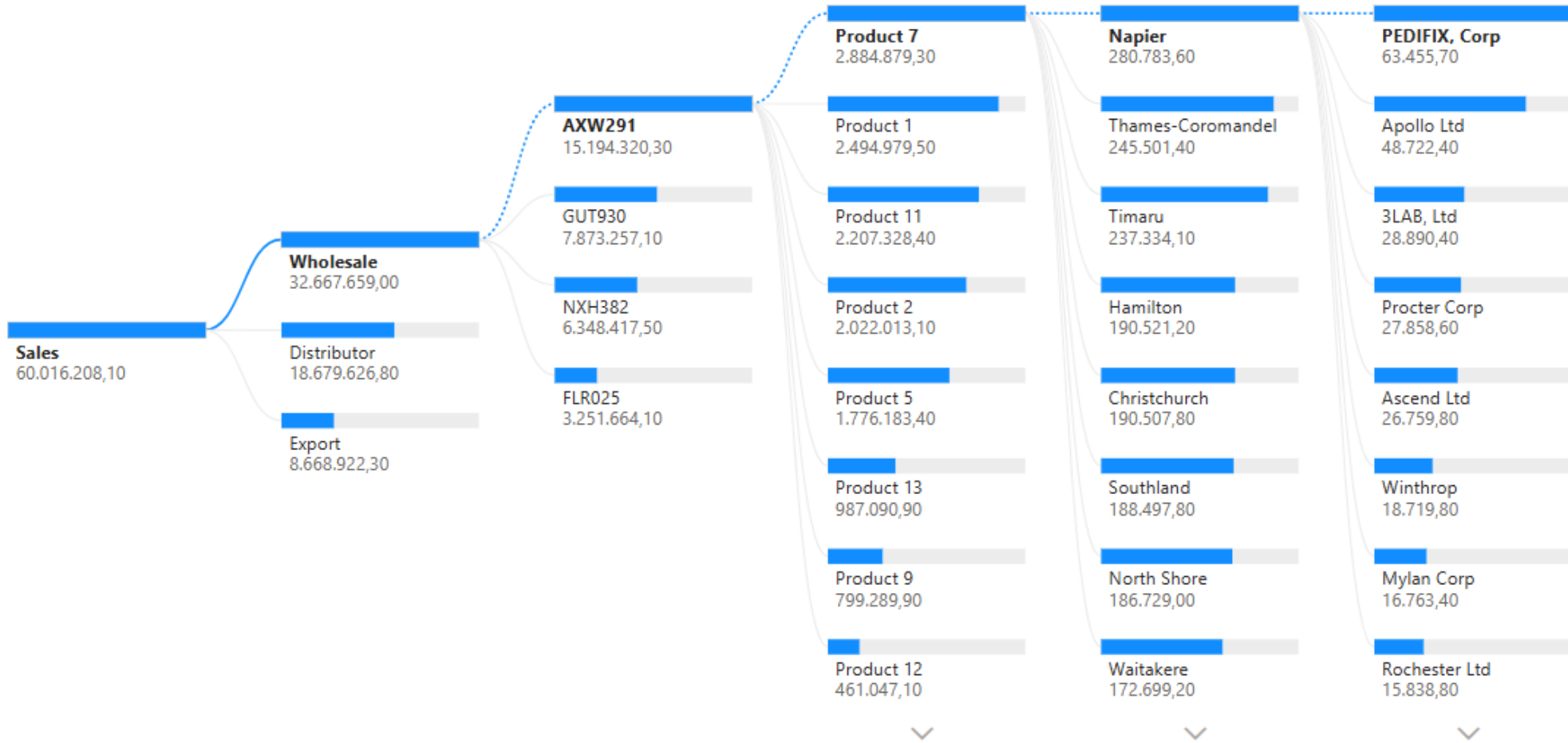
Channel ×
Wholesale

Warehouse Code ×
AXW291

Product Name ×
Product 7

City ×
Napier

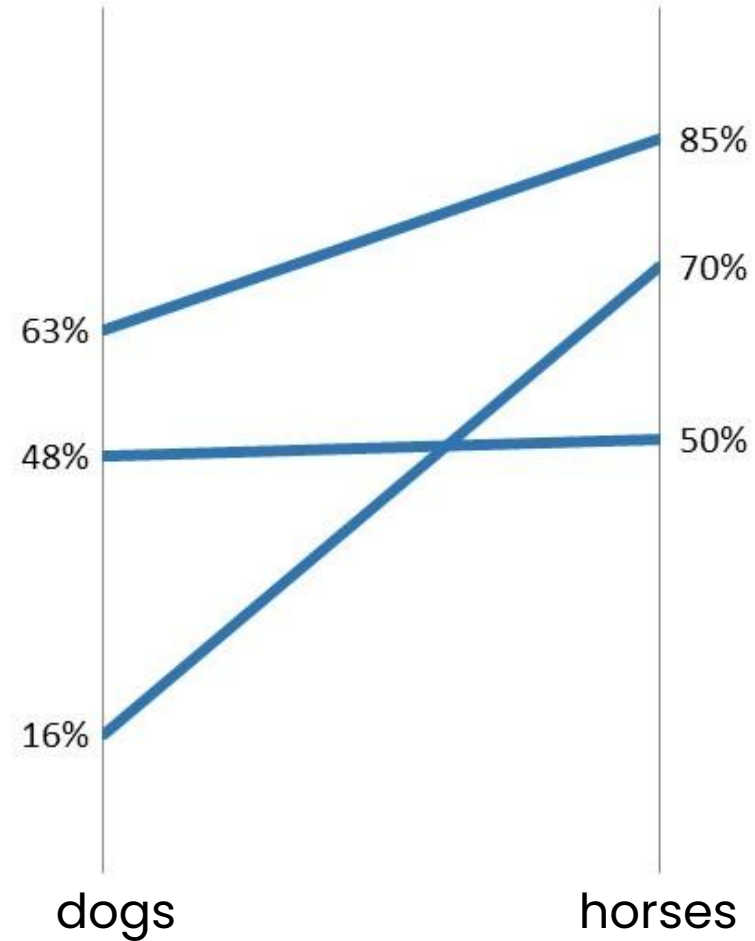
Customer Names ×



Specials

The right chart

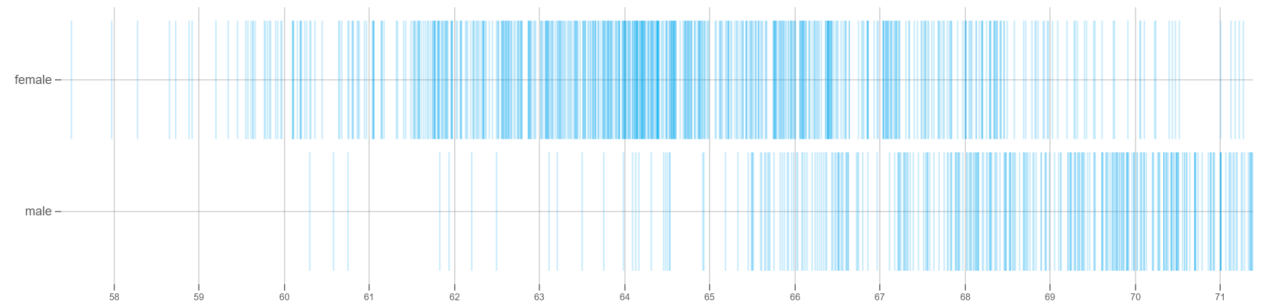
- bullet chart
- dumbbell dot plot
- sankey diagram
- decomposition tree
- slope graph



Specials

The right chart

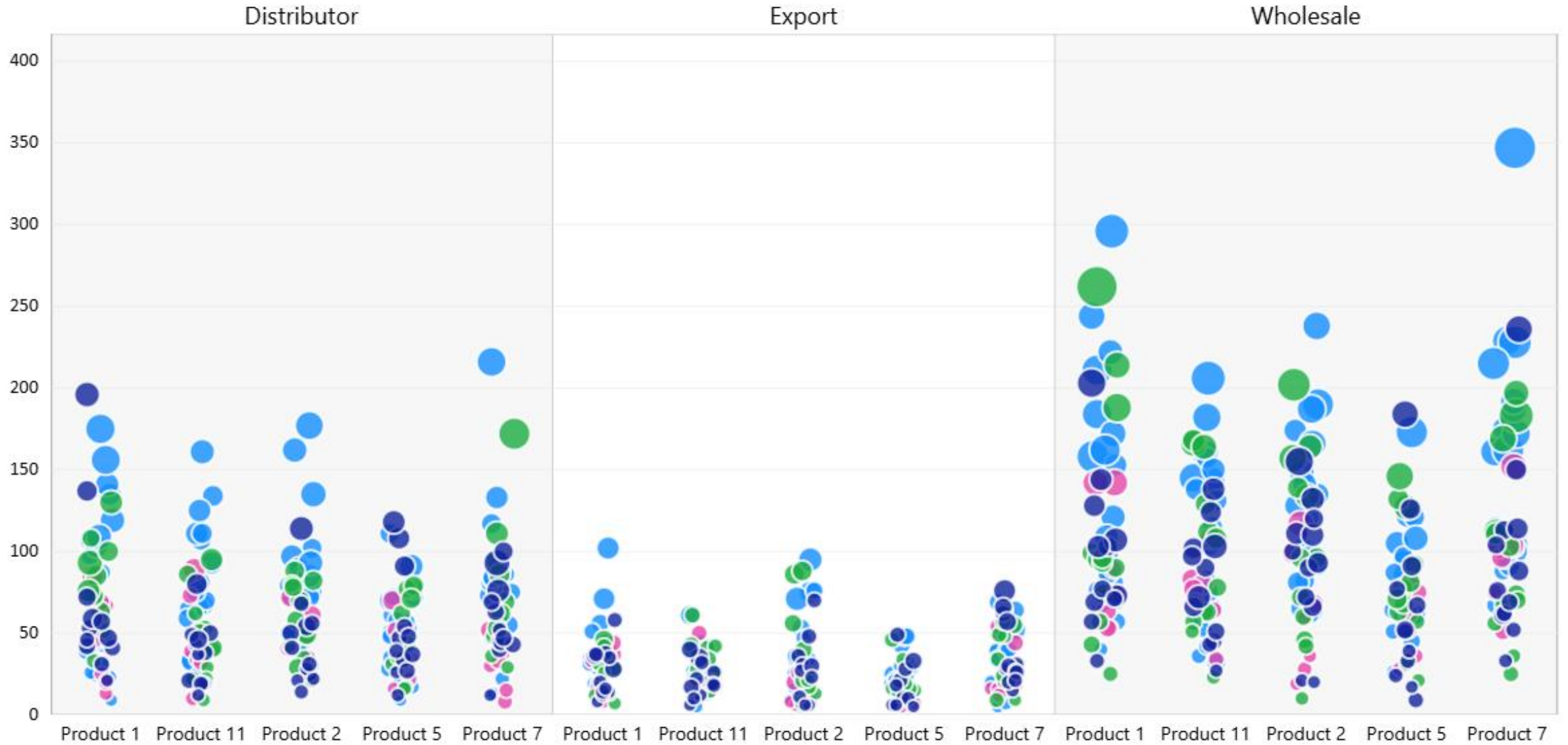
- bullet chart
- dumbbell dot plot
- sankey diagram
- decomposition tree
- slope graph
- strip plot



Dot plot/ strip plot with jitter effect

Warehouse ● AXW291 ● FLR025 ● GUT930 ● NXH382

Total profit ● 0M ● 0,3M



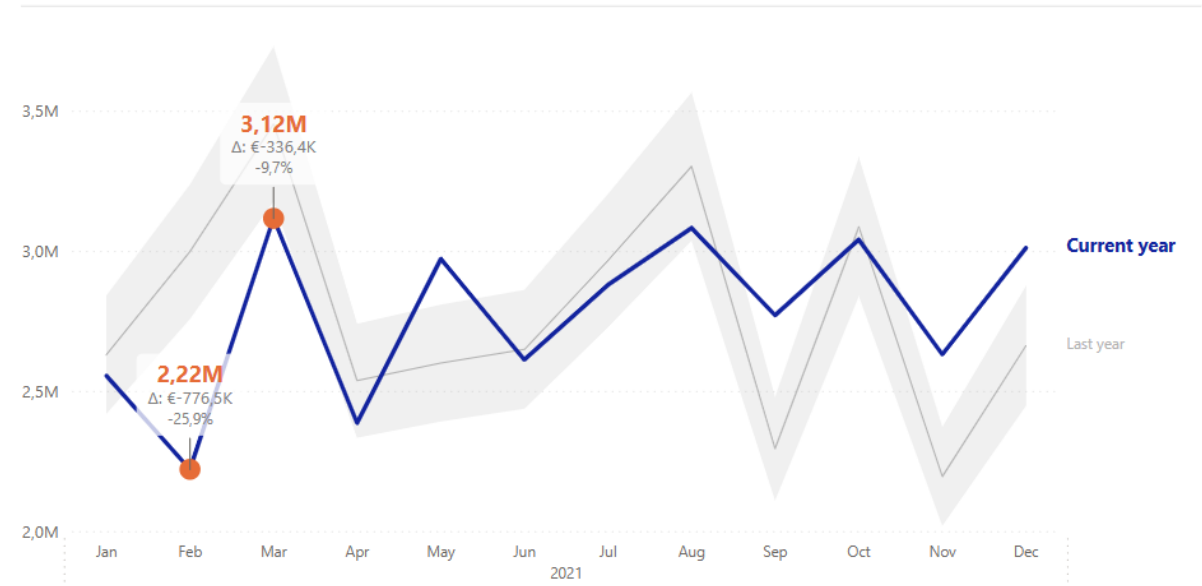
Specials

The right chart

- bullet chart
- dumbbell dot plot
- sankey diagram
- decomposition tree
- slope graph
- strip plot
- line chart with area band

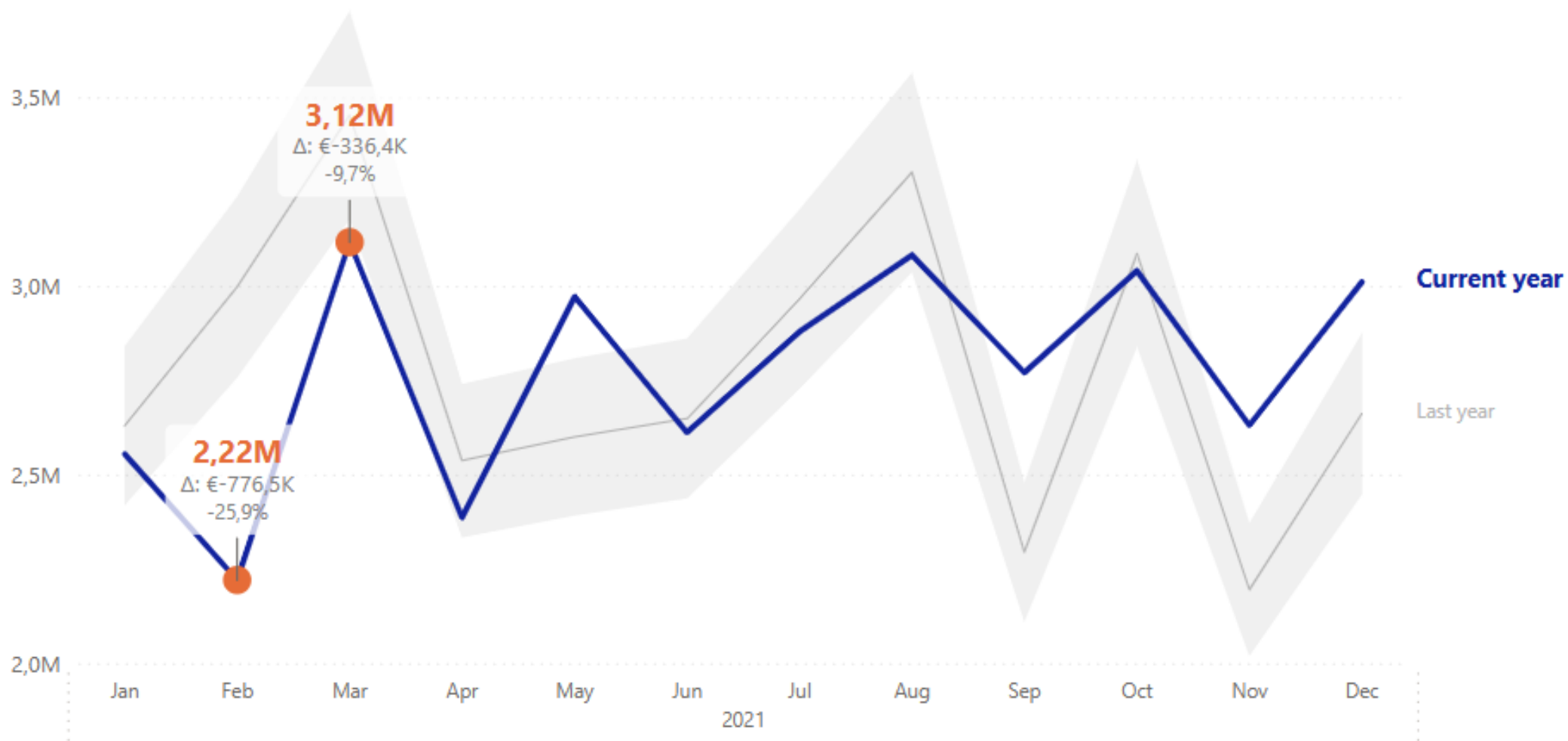
Sales in comparison to last year

What months are we not reaching our last years' sales?



Sales in comparison to last year

What months are we not reaching our last years' sales?



Specials

The right chart

- bullet chart
- dumbbell dot plot
- sankey diagram
- decomposition tree
- slope graph
- strip plot
- line chart with area band

Month	AXW291	FLR025	GUT930	NXH382
Jan	2.703.257,91	539.334,52	1.234.973,75	1.172.714,67
Feb	2.259.926,08	539.863,82	1.375.562,13	1.069.827,46
Mar	✓ 2.924.885,74	412.216,49	1.315.734,88	1.019.505,90
Apr	1.474.813,71	398.603,77	909.525,27	637.395,52
May	1.579.049,90	500.179,39	786.976,71	756.319,72
Jun	1.563.093,45	340.557,25	808.183,75	667.429,28
Jul	1.954.306,65	🚩 305.088,39	958.470,44	691.440,94
Aug	2.372.035,37	627.590,14	1.260.829,45	948.917,65
Sep	2.465.221,38	489.391,38	1.023.129,53	992.363,87
Oct	2.742.645,87	599.175,98	1.610.355,05	1.098.414,01
Nov	2.637.014,47	515.463,76	1.023.222,73	959.116,72
Dec	2.549.150,27	639.054,31	1.163.040,74	1.173.772,73

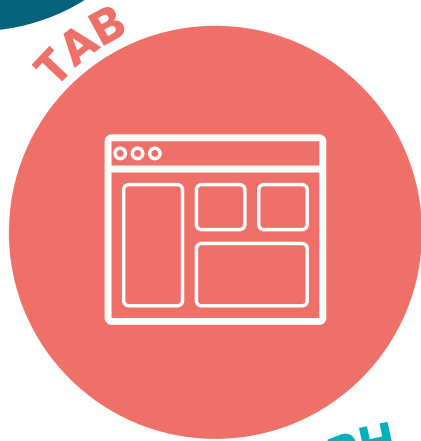
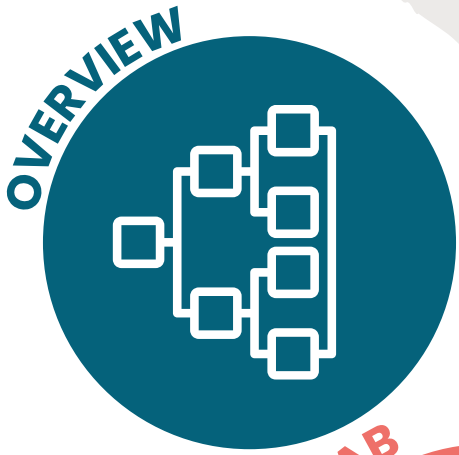
- table! → with conditional formatting...





Bonus Layer: finalizing!

- Wireframe
- Grid
- Interaction
- Colours & fonts
- Filters
- Switches (content and graph type)
- Tooltips
- Layovers / instructions
- TEST TEST TEST!



Keep in mind...

- Involve the end user in the entire process
- Create an information structure and prioritize
- Use the company style for recognition and familiarity
- Pay attention to accessibility
- Keep your design calm, with a clear grid
- Place charts in a logical order
- Select graphs that match your key message
- Be consistent in EVERYTHING YOU DO

THANK YOU

Session Feedback



Event Feedback



Lonneke Opsteegh
www.statstories.nl

