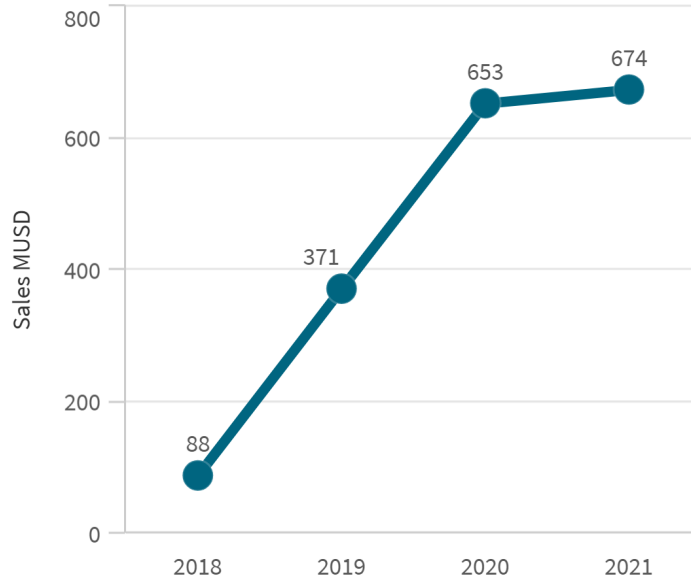


1

Studies show that people pay as much attention to the title as the graph. But writing good titles is hard...

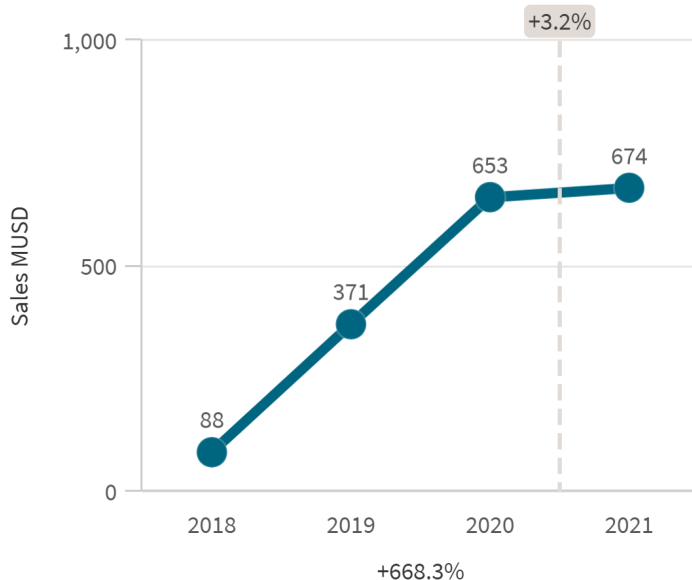
Sales per Year



- Capture the essence: in this case change over time
- Make the title dynamic

Sales up 3.2% in the last period

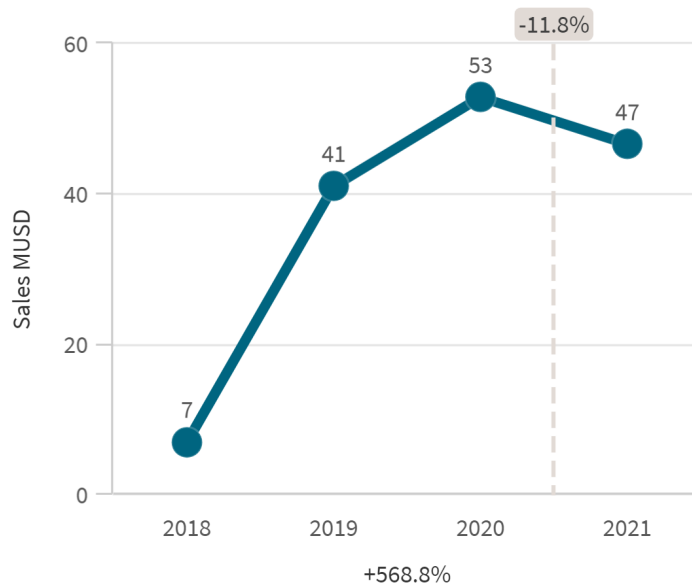
+668.3% from 2018 to 2021



So even if the data or the selection changes the titles are still accurate. Easy to setup in #Qlik Sense

Sales down 11.8% in the last period

+568.8% from 2018 to 2021

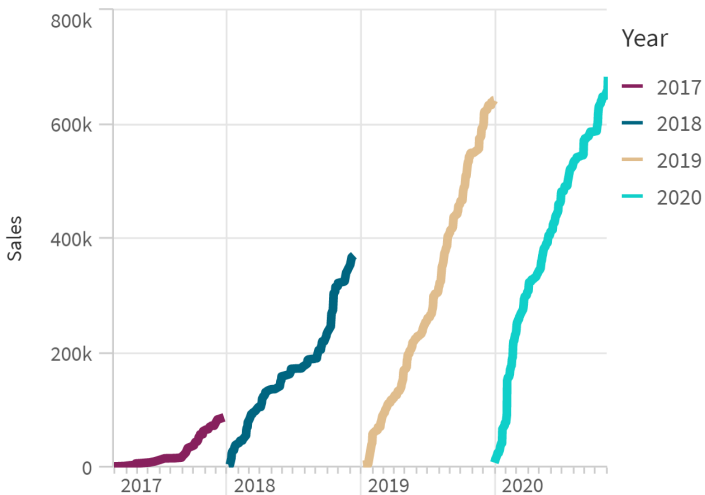


The easiest way to compare with last year is to use Year as a dimension, for instance in this case:

Dimension 1: OrderDate

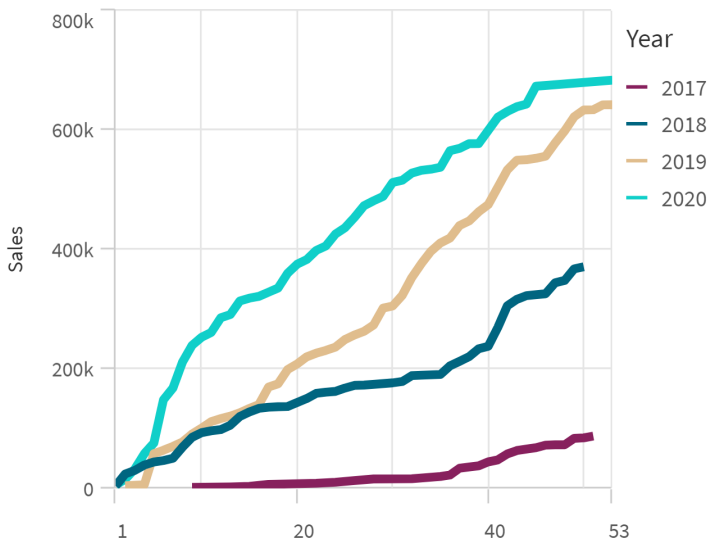
Dimension 2: Year

Measure: =Sum(Sales), full accumulation



To get the lines to overlap, the first dimension can't be the actual date, has to be something that is common between the years. For instance by using Quarters, Months, Weeks etc:

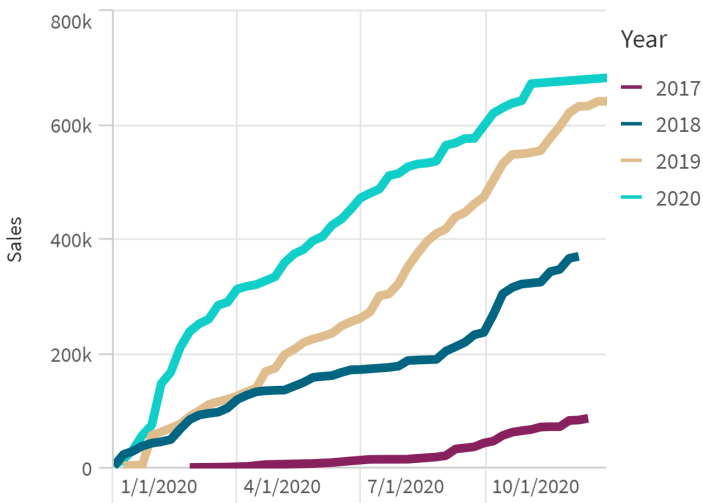
Dimension 1: Week



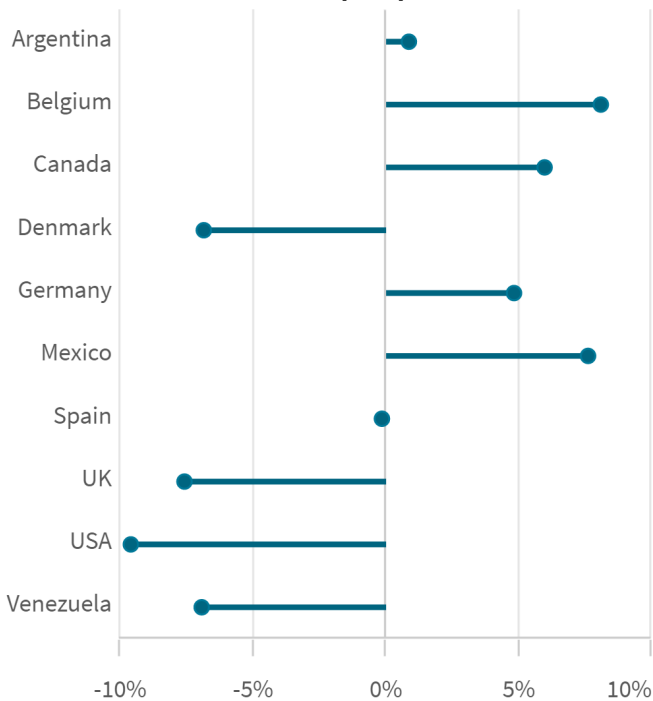
That is nice but perhaps we want to show the actual dates instead of weeks. Then we can cheat by adding days to the start date of the current year:

Dimension 1:

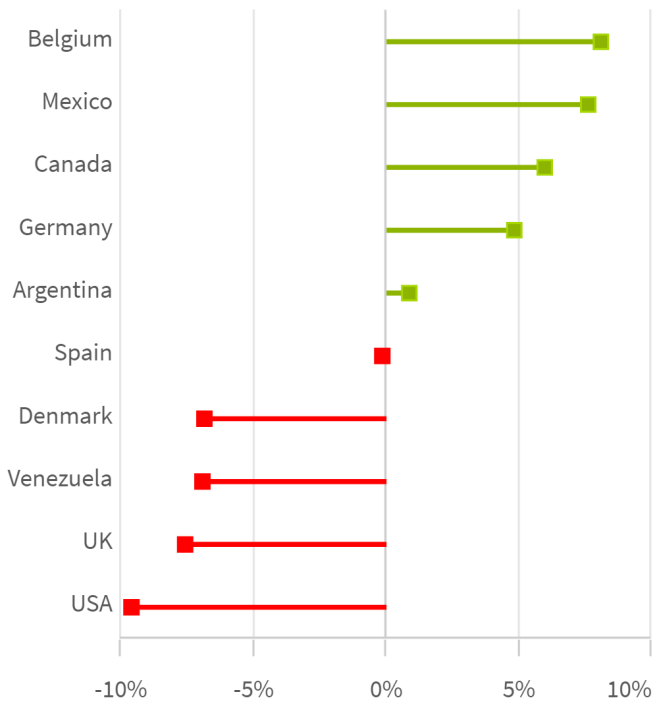
=date(makedate(2020,1,1) + 7 * (Week - 1))



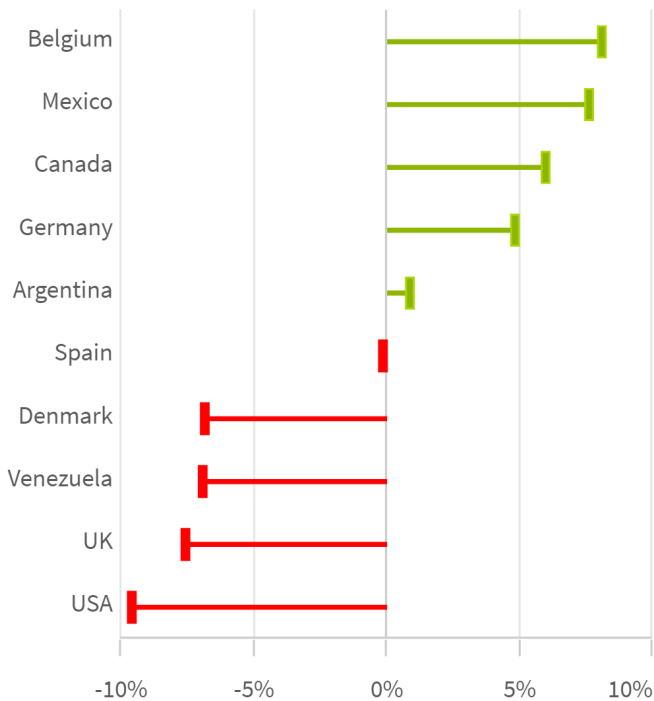
Add a combo chart, duplicate the measure as a circle marker.
Adjust the bar width et voilà!
A Lollipop chart.



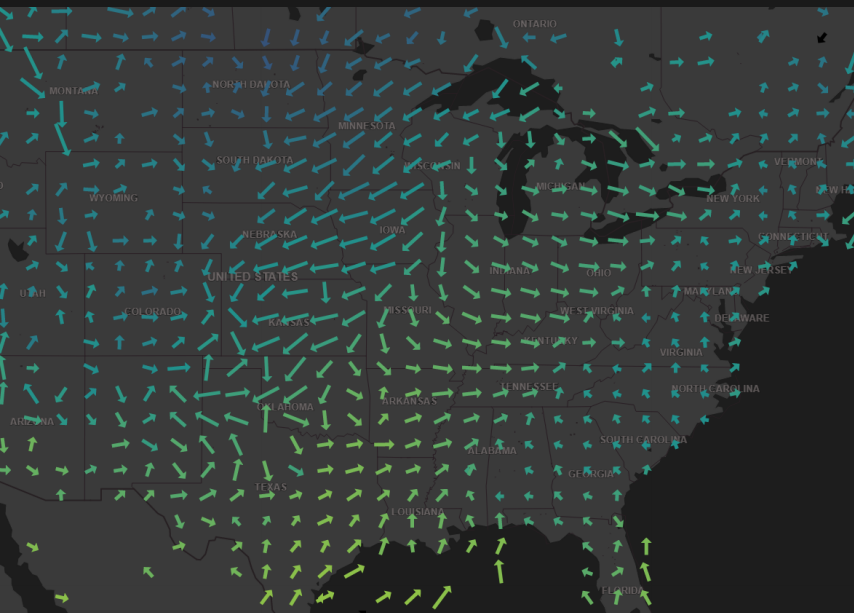
The Lollipop chart looks nice with squares too. Color by +/- and descending sorting order.



Lollipops with line markers is also a nice alternative, popular for showing variance.



Wind speed, direction and air temperature look nice with arrows in a grid. Here's how to do that in Sense.



Scale the tail length, color by temp and rotate by wind direction. A simple inline SVG with a triangle and a box fits:

```
= 'data:image/svg+xml,<svg
xmlns="http://www.w3.org/2000/svg"
height="30" width="200">' &
'<svg x="' & wind/2 & "'
style="fill:' & temp_color & "'>'
& '
'<rect x="10" y="10" width="' &
wind & '"' height="10" />' &
'<polygon points="0,15 15,0
15,30"/>' &
'</svg></svg>'
```

Nested svg for position and color.

Table with text color, higher values are darker and more red.

	Sun	Mon	Tue	Wed
Babywear	20	33	13	22
Bath Clothes	8	9	7	11
Children ´s wear	10	9	11	21
Ladies ´ Footwear	19	34	19	25
Men ´s Clothes	27	21	16	26
Men ´s Footwear	30	32	52	35
Sportwear	53	48	34	61
Womens wear	62	84	34	175

Compared with to a table with a plain text color.

	Sun	Mon	Tue	Wed
Babywear	20	33	13	22
Bath Clothes	8	9	7	11
Children ´s wear	10	9	11	21
Ladies ´ Footwear	19	34	19	25
Men ´s Clothes	27	21	16	26
Men ´s Footwear	30	32	52	35
Sportwear	53	48	34	61
Womens wear	62	84	34	175

Same color scheme, coloring the background instead.

	Sun	Mon	Tue	Wed
Babywear	20	33	13	22
Bath Clothes	8	9	7	11
Children ´s wear	10	9	11	21
Ladies ´ Footwear	19	34	19	25
Men ´s Clothes	27	21	16	26
Men ´s Footwear	30	32	52	35
Sportwear	53	48	34	61
Womens wear	62	84	34	175

Field overview with the value distribution with min, max, average and distinct count.

Table: Cars, rows: 406, fields: 10

Brand

34, ◻ AMC, ◻ Volvo, avg



Model

308, ◻ AMC Ambas, ◻ Volvo Die, avg



Cylinders

5, ◻ 3, ◻ 8, avg 5.2



Displacement

83, ◻ 68, ◻ 455, avg 179.8



Weight

356, ◻ 1613, ◻ 5140, avg 3042.2

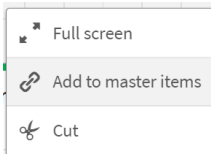


Acceleration

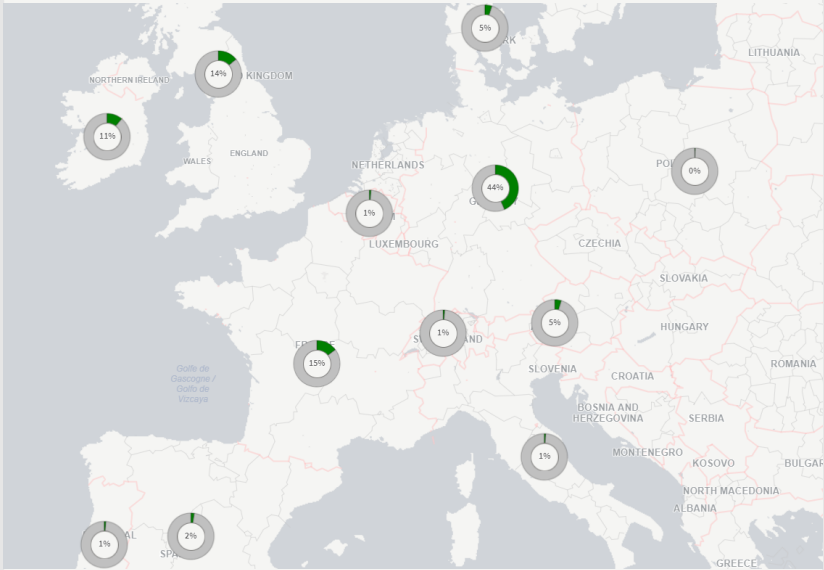
96, ◻ 8, ◻ 24.8, avg 16.2



Copy sheet from app, make the bar chart a master visualization and use it in the trellis container.

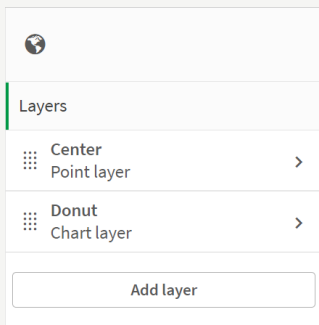


Donuts are nice with a space for the label in the center. Keep the number of slices to a minimum for better readability.

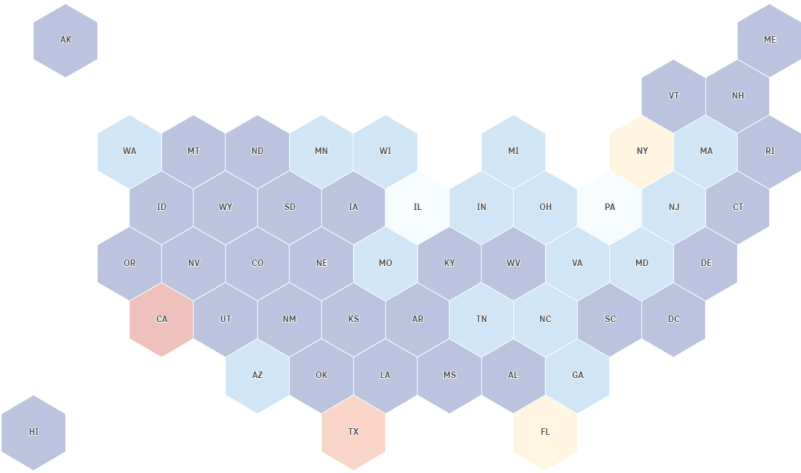


The map chart supports multiple layers, so first create a chart layer in pie chart mode.

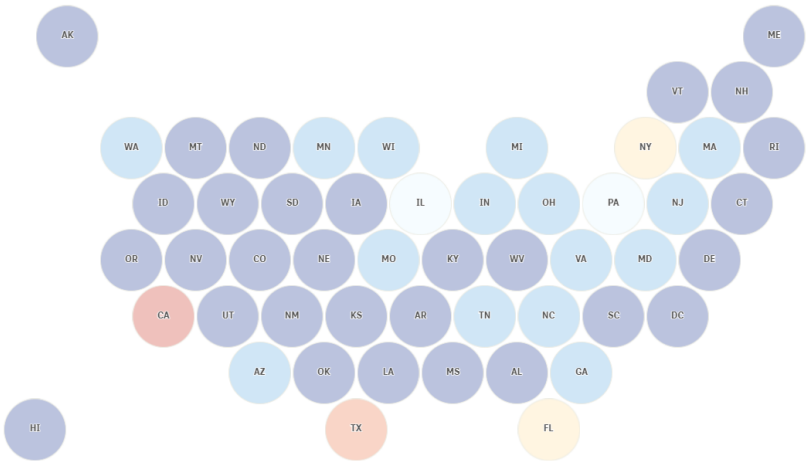
Then add a point layer with label and set point color same as land color



Hexagonal shapes for USA,
the positions of the states
are set with a spreadsheet.



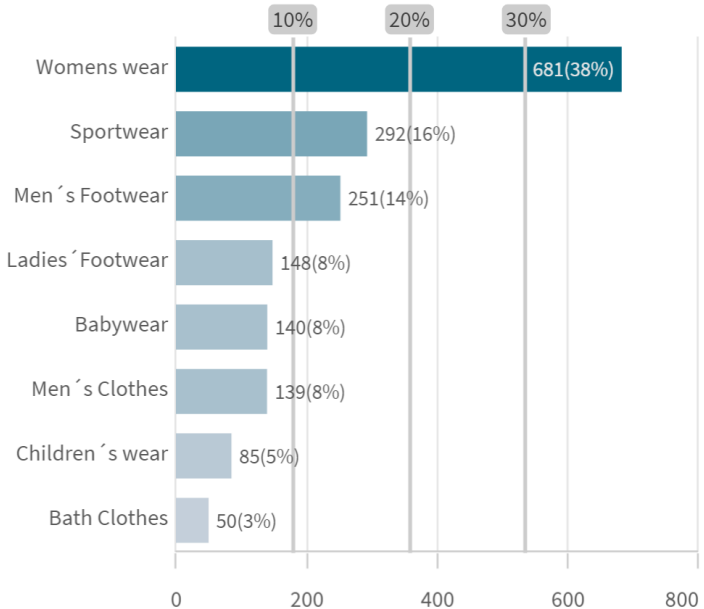
Can be used for any regions,
rectangles or circles are also
alternatives.



A second axis with percentage provides share of total together with actual value.

Second axis

Using reference lines



The second axis is built using the reference lines. The value labels are customized using dual.

▼ Reference lines

10% ▼

Show condition

fx

Label

10% *fx*

Show label

Reference line expression

fx

Show value

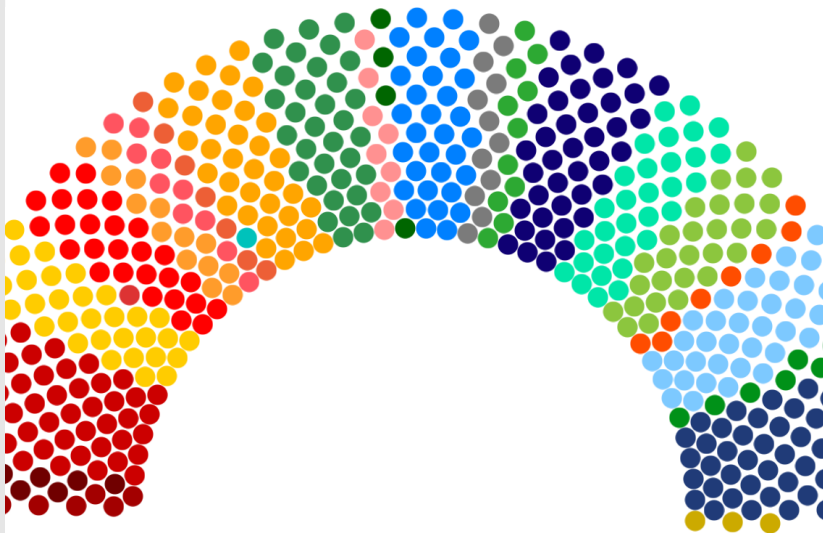
Color

Line type

Solid ▼

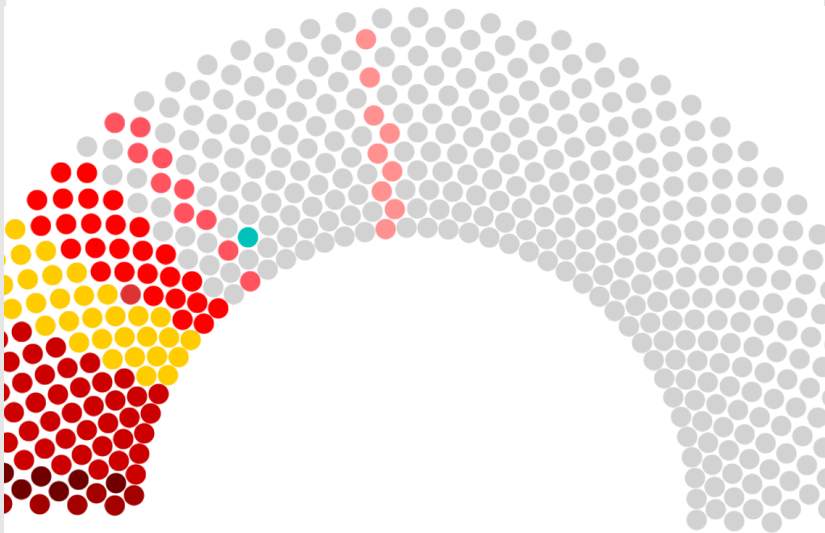
Colored background

Parliament diagrams are popular for election results and the seats in a plenary.



Simple to setup using the Qlik map chart and the point layer.

Aligning dots by hand is tedious,
instead just place the dots in
spokes of a half circle.



Every second spoke has an offset
to make the spacing more even.

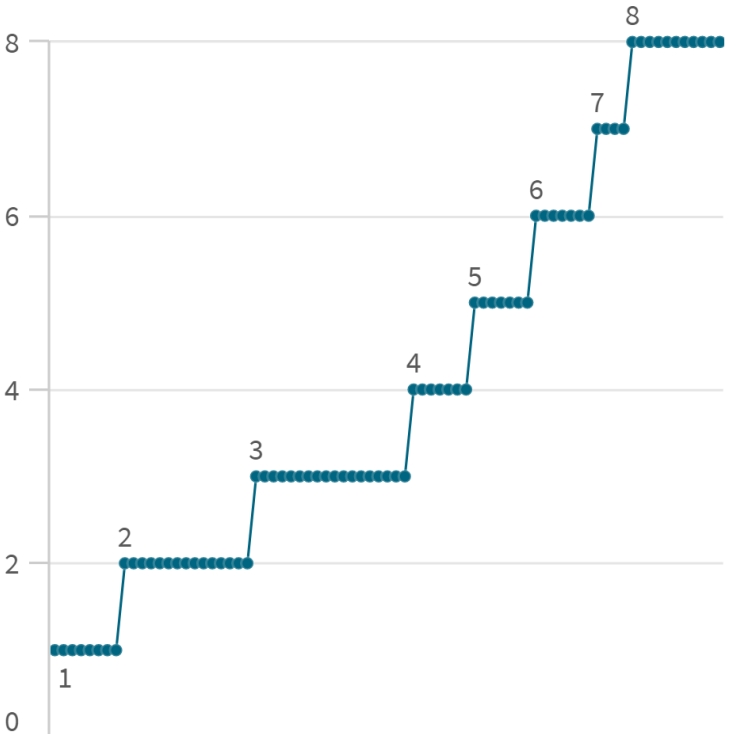
Grouping similar values using Above and text color...

Babywear	Ga-Ga Dress	29
	Aino Shoes	25
	Duck Trousers	22
	Baby Dark Lounge Suit	17
	Deuce shirt	15
	Duck Shirt	10
	Mehmet-Tröja	7
	Rodbye Troje	7
	Sapporoo Gloves	5
	Mehmet-Skor	1
	Mehmet-Napp	0
Bath Clothes	Rossi Bermuda Shorts	13
	Rossi Shorts	10
	Summer Shorts	7

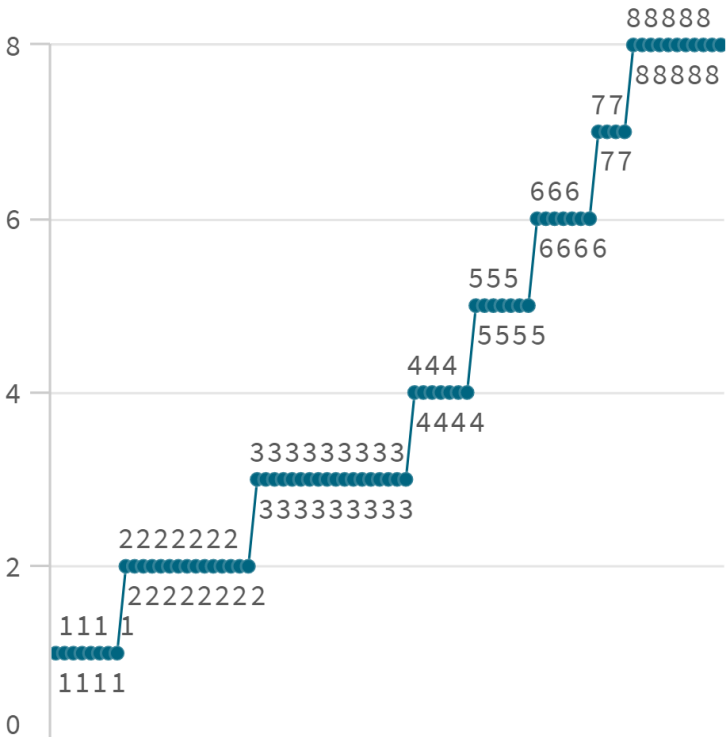
...compared to all visible, no grouping.

Babywear	Ga-Ga Dress	29
Babywear	Aino Shoes	25
Babywear	Duck Trousers	22
Babywear	Baby Dark Lounge Suit	17
Babywear	Deuce shirt	15
Babywear	Duck Shirt	10
Babywear	Mehmet-Tröja	7
Babywear	Rodbye Troje	7
Babywear	Sapporoo Gloves	5
Babywear	Mehmet-Skor	1
Babywear	Mehmet-Napp	0
Bath Clothes	Rossi Bermuda Shorts	13
Bath Clothes	Rossi Shorts	10
Bath Clothes	Summer Shorts	7

Point labels when value changes with Dual...



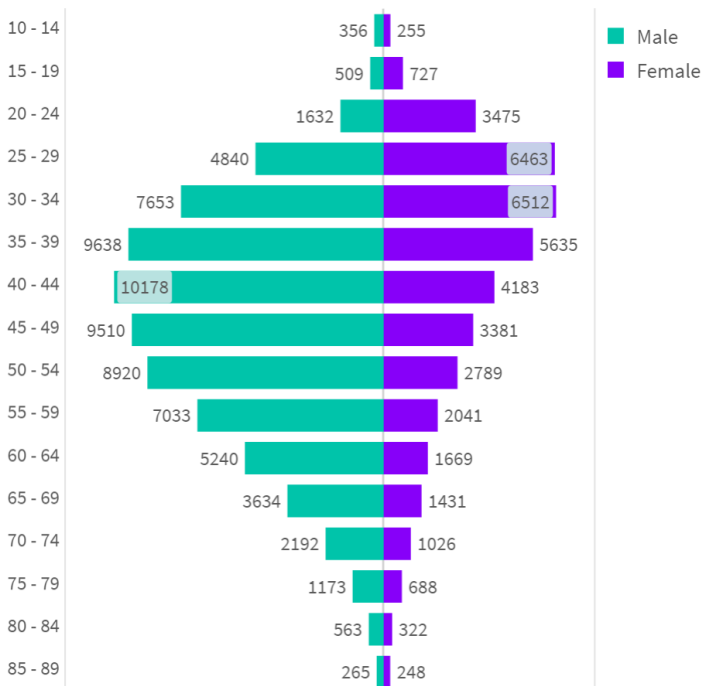
...compared with all labels and no grouping.



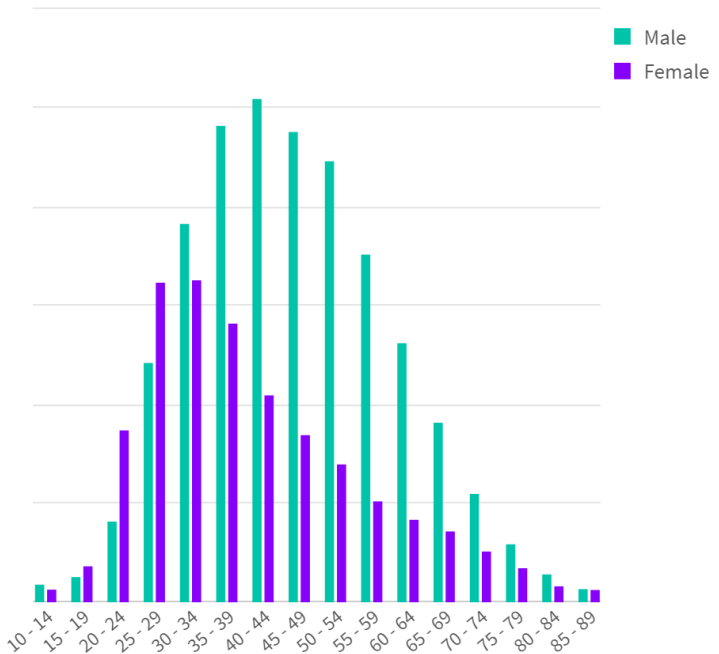
Making a Butterfly chart from a Bar chart

Age of male vs female actors

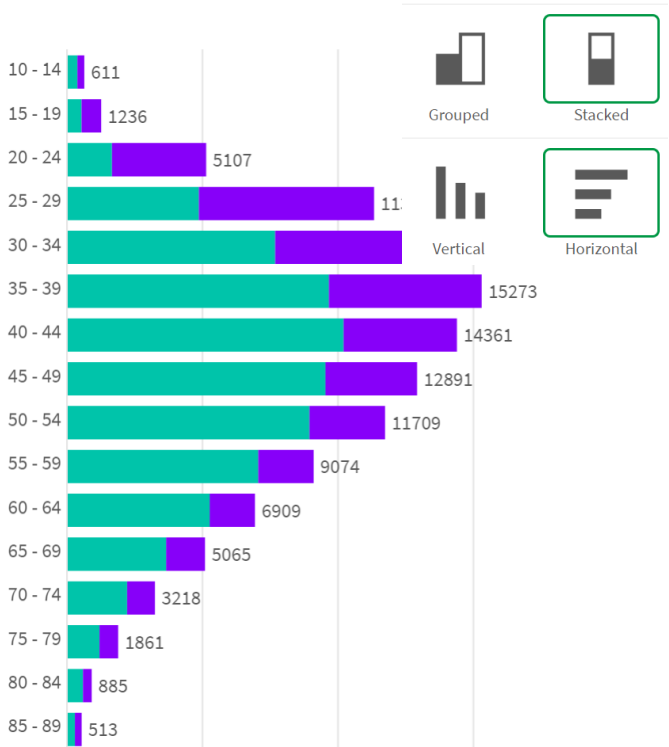
at time of film release. Source Wikidata.



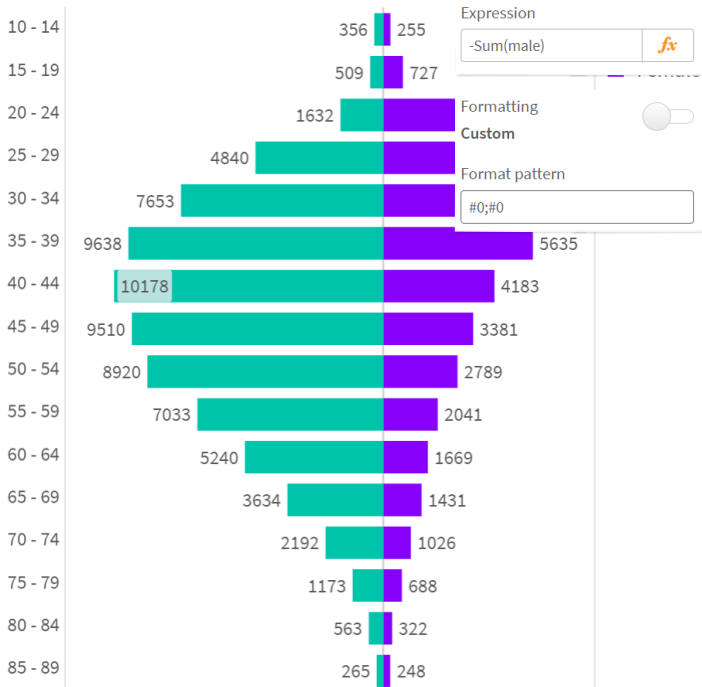
Start with a bar chart with two measures.



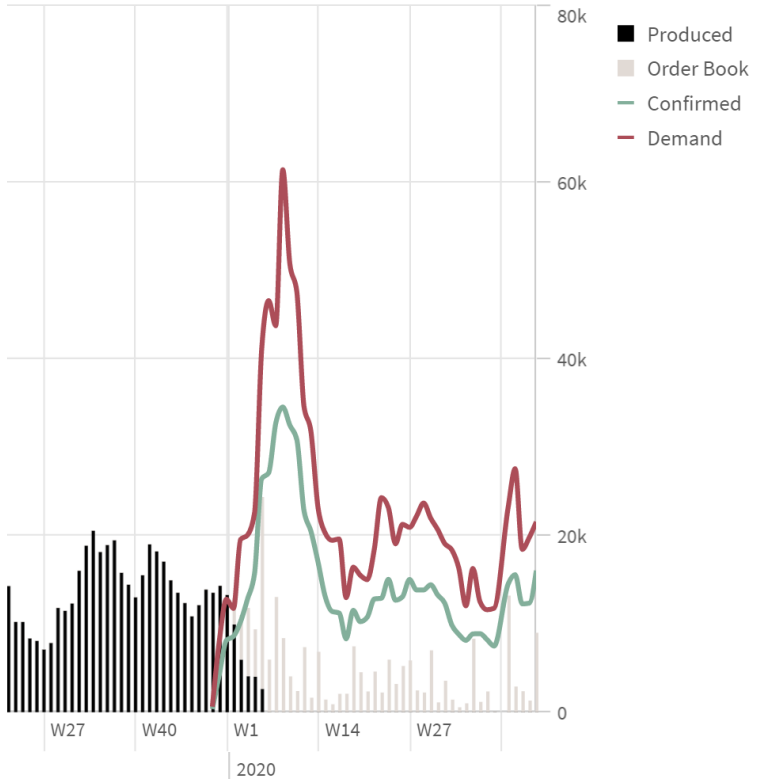
Stack it and set the chart horizontal.



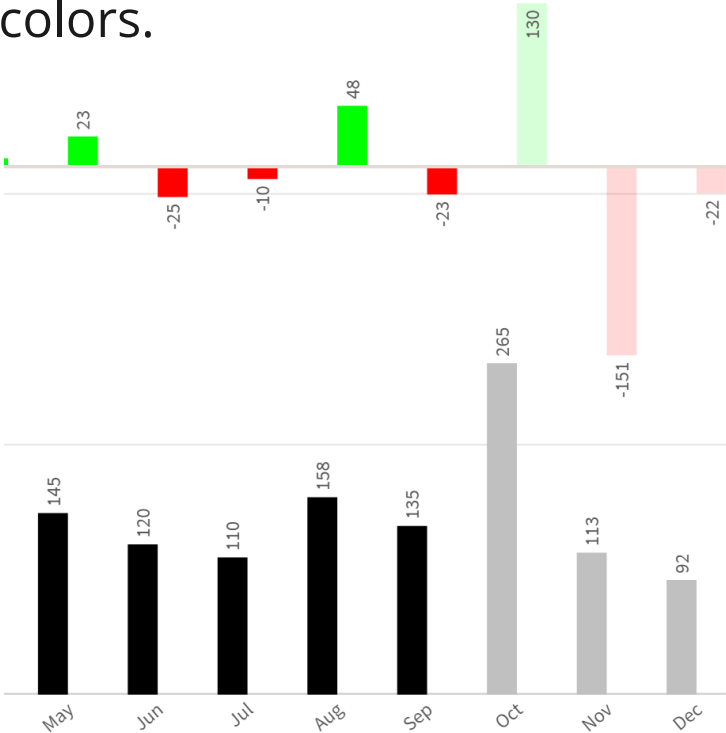
Make one measure negative and set number format.



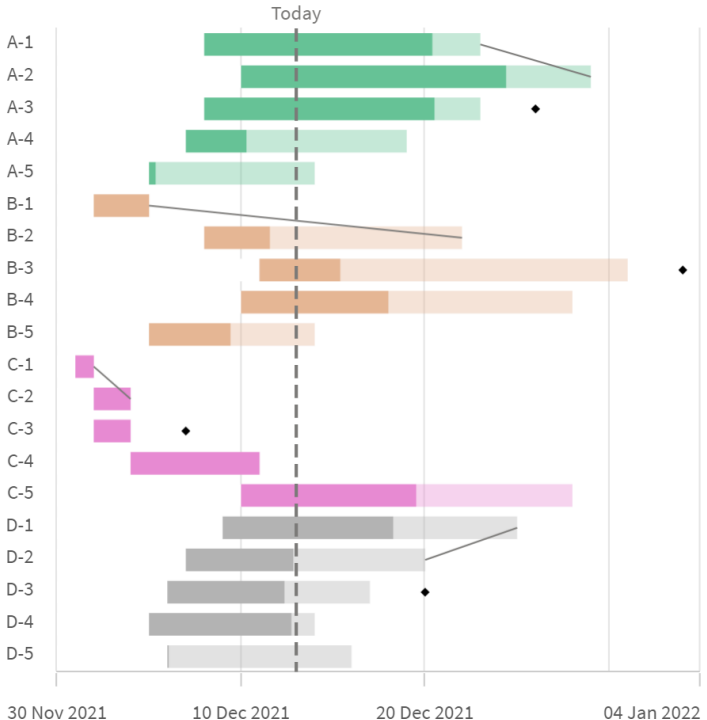
Colors per measure makes mixing easy.



Sales, forecast and variance in the same chart with individual colors.

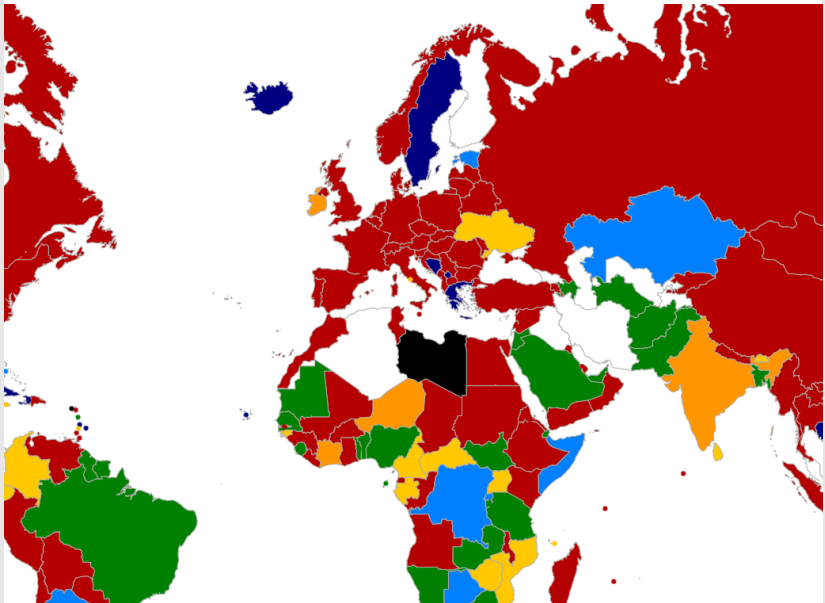


Offset bars for showing tasks in Gantt style



Consistent colors and Silent Legend makes apps easier to use and save space.

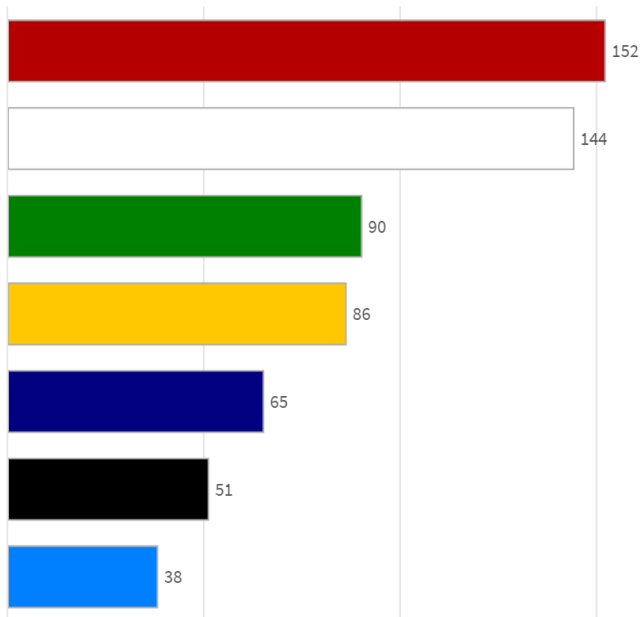
Main flag color per country



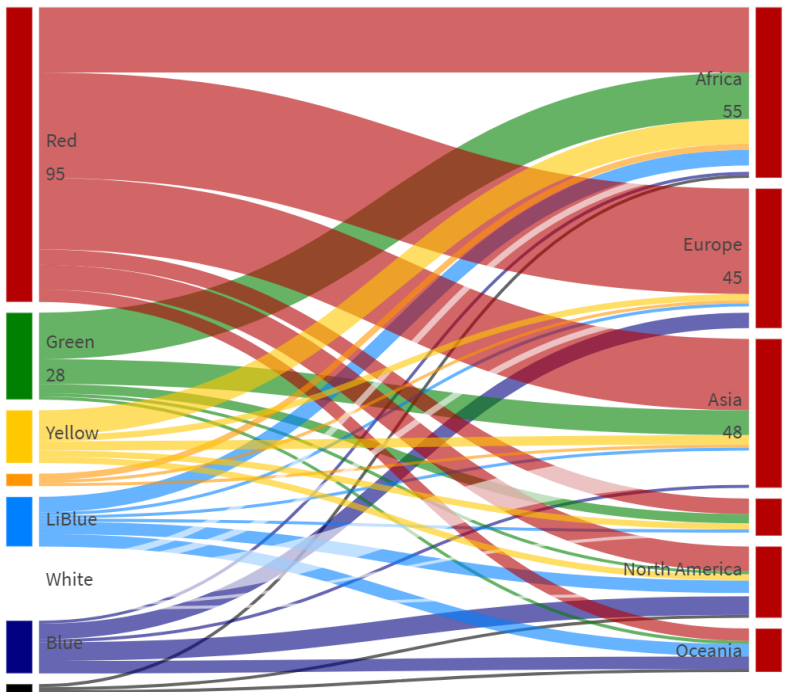
The user understands the meaning of the color without an explicit legend.

Red is the most popular flag color

Followed by white and green



Instead of color every chart ->
Use color in a master
dimension or measure



Color the master dimension

1. Set a single color

Dimension color







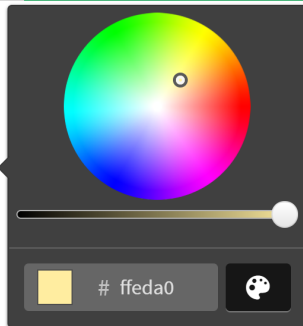
2. Or set color for each value

Edit dimension

Value colors

Class

Search	...
Class 1	
Class 2	
Class 3	
Class 4	



Same for a master measure

1. Set a single color

Measure color



2. Or create a color scale

Edit measure

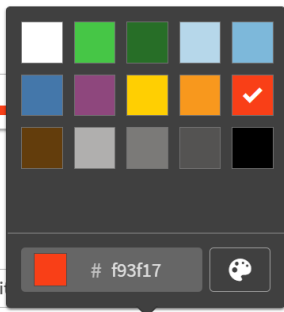
Segment colors

Select a template scheme

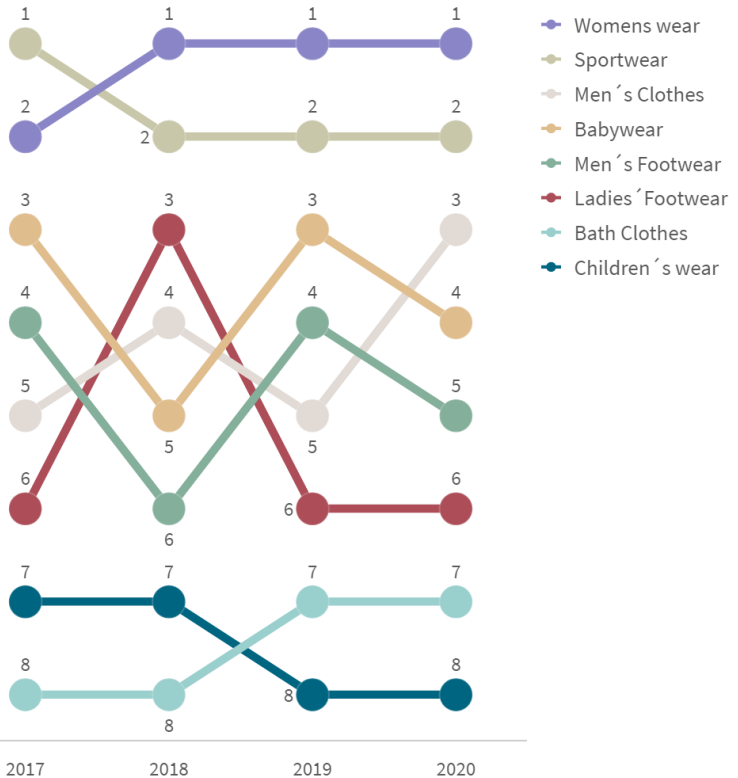
Basic

Segment format
Percentage

Add limit



Rank charts summarize and highlight trends over time.



Use rank and sum, negative for ascending order.

```
-rank(sum(Sales))
```



Maximize data points size and line width.

< Styling

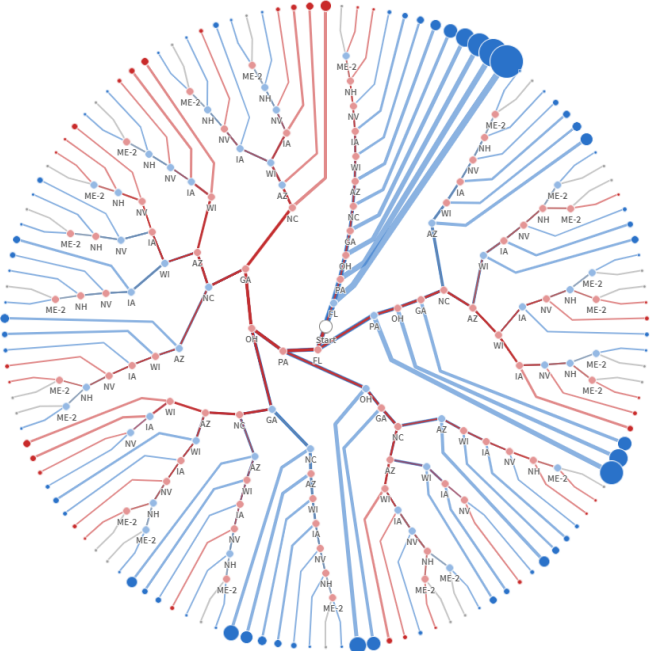
Data point size



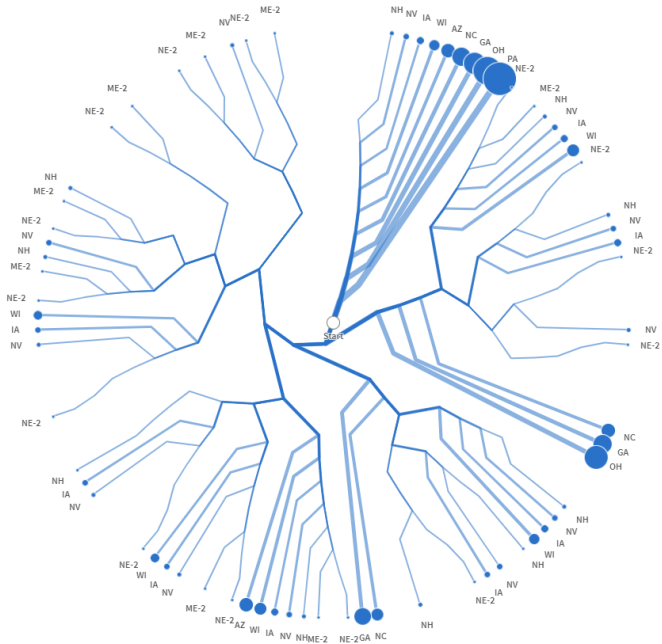
Line thickness









A Radial Dendrogram starts at the center and the paths go to the periphery.



Nice for overview and highlighting paths of certain type.



This radial Dendrogram is built with the map chart point and line layers.

 Radial Dendrogram
Layers
 Start Point layer >
 Breakpoints Point layer >
 OuterRing Point layer >
 Paths Line layer >
 OuterLabels Point layer >












The decision tree data is structured using *hierarchy*.

Inspired by

<https://observablehq.com/@observablehq/electoral-college-decision-tree> by Kenny

Rodden.

Sparklines adds context, useful to show trend over time.

Country	Q	New cases per million at 12/16/2021	Weekly trend since 1/21/2020
Australia		95	
Austria		393	
Brazil		16	
Canada		136	
Denmark		1,304	
Finland		309	
France		751	
Germany		509	
Norway		879	
South Africa		386	
South Korea		134	

Source: Our World in Data.


Pick a dimension, chart type and colors.


Representation
Mini chart ▼


Select dimension
WeeksAgo *fx* ▼

Type
Sparkline ▼

Colors ▼

Line color  ▼

Max value color  ▼

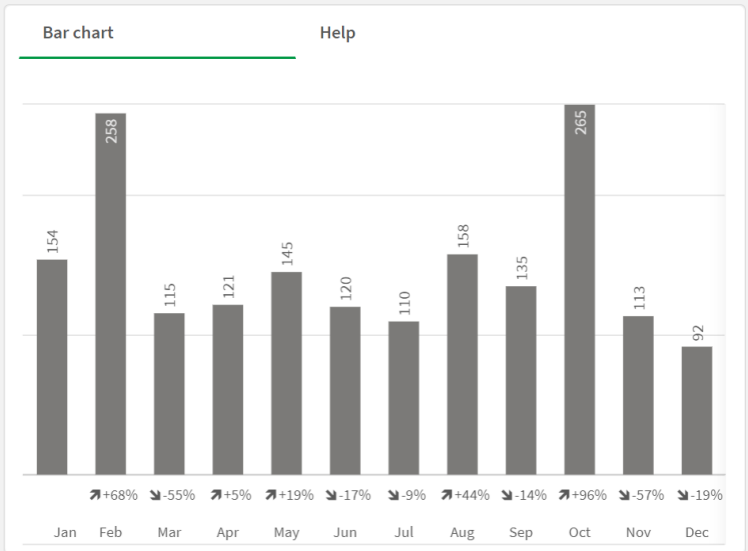
Min value color  ▼

Choose local axis if the trend is more important.

Y-axis
Local ▼

Auto ▼

Sometimes there is a need to provide more details to the chart, for instance the definitions and the source.

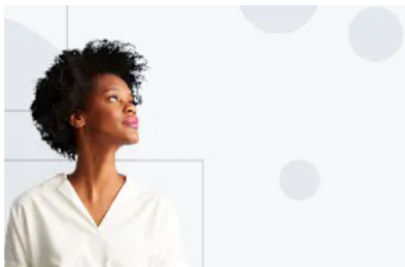


Instead of cluttering with text that is always visible, add the context help in container tab with a text & image object.

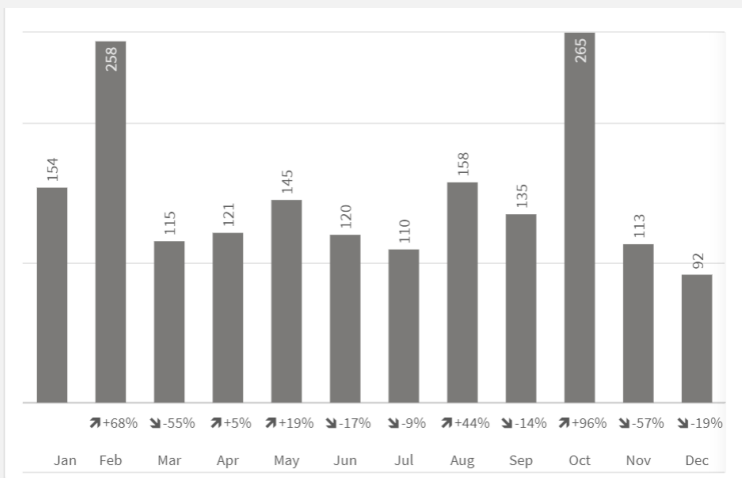
Bar chart

Help

A bar chart or bar graph is a chart or graph that presents categorical data with rectangular bars with heights or lengths proportional to the values that they represent. The bars can be plotted vertically or horizontally. A vertical bar chart is sometimes called a column chart. [Wikipedia](#).

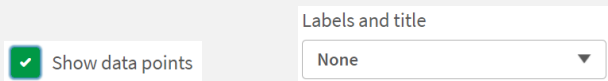


Placing variance on the x-axis helps the user to better grasp the change.

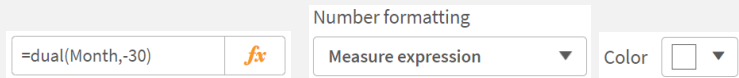


Here's how →

1. Create a combo chart with point labels on and x-axis off.



2. Add the label as a white line measure, use *dual* with the label and an offset.



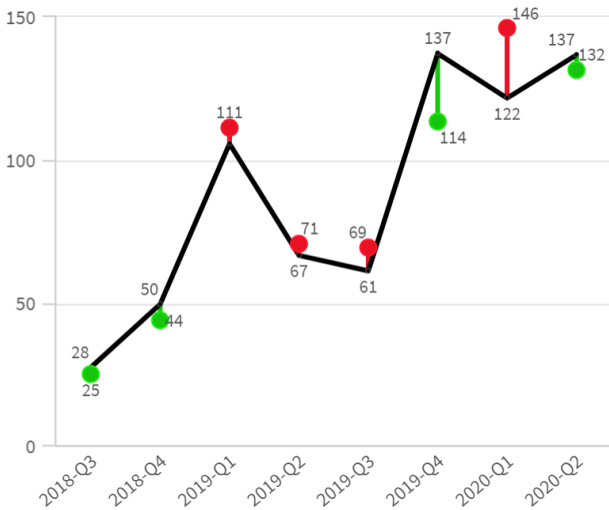
3. Fancy labels can include unicode symbols as an indicator.

```
=dual(' ' & num(sum(Sales)/Above(sum(Sales))-1, ' 📈+0%; 📉-0%' ) , -25)
```

Deviation Icicle Chart shows Actual - Forecast.

Deviation Icicle chart

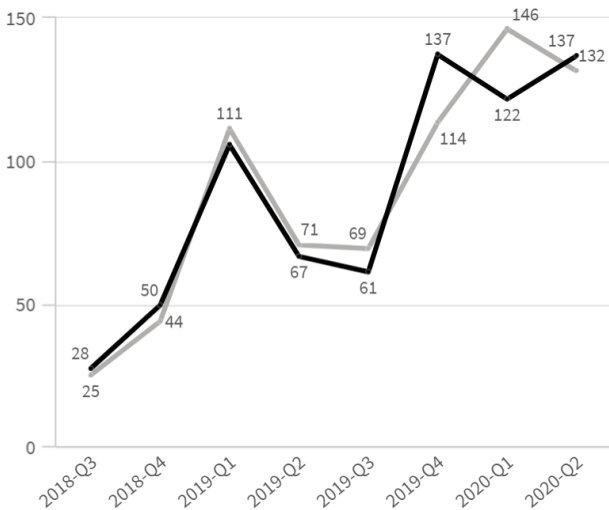
Red square : Deviation, Green square : Actual



1. Make a combo chart and add Actual (black) and Forecast color = $argb(0,0,0,0)$

Add Actual and Forecast

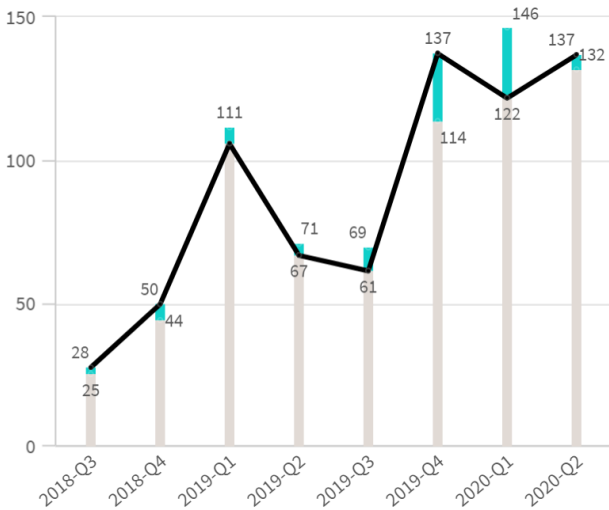
Turn on labels



2. Add bars for offset
 $=rangemin(Actual, Forecast)$ and
deviation $=fabs(Actual-Forecast)$

Add offset bar and deviation

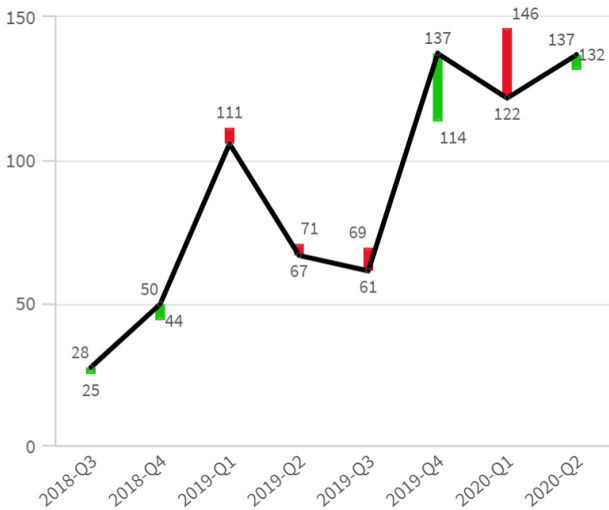
Min and deviation



3. Color offset bar transparent
= $argb(0,0,0,0)$ and deviation
red for - and green for +.

Offset transparent

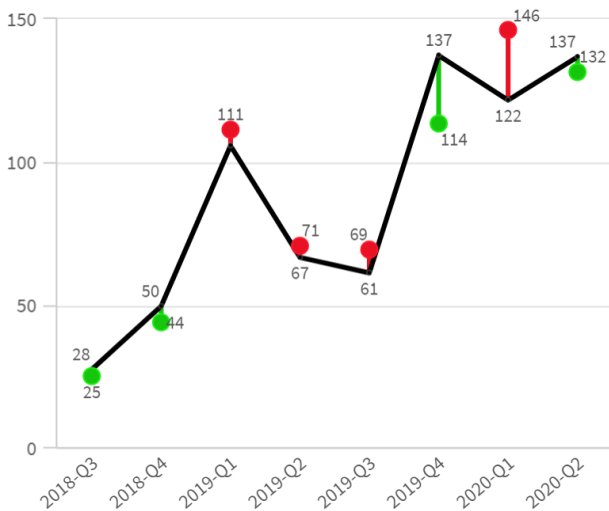
Color deviation

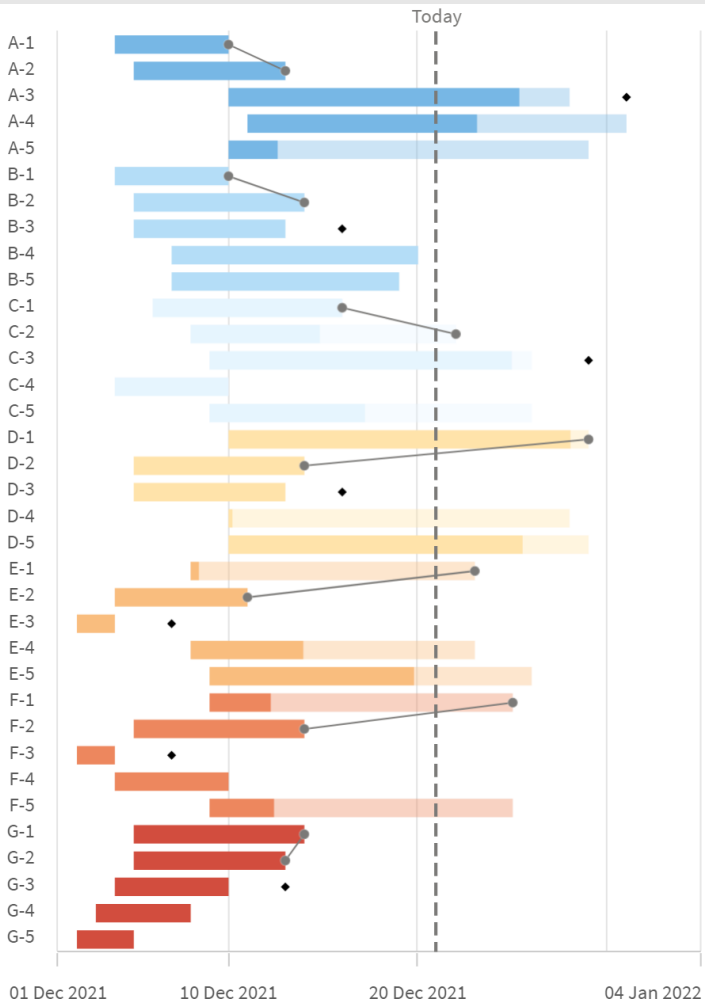


A marker layer for lollipops and a custom legend with unicode symbols.

Deviation Icicle chart

■ ■ : Deviation, ■ : Actual

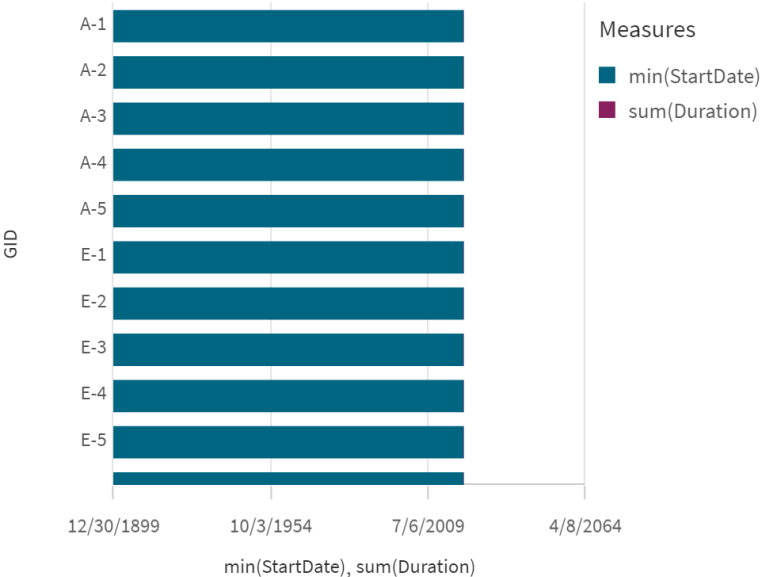




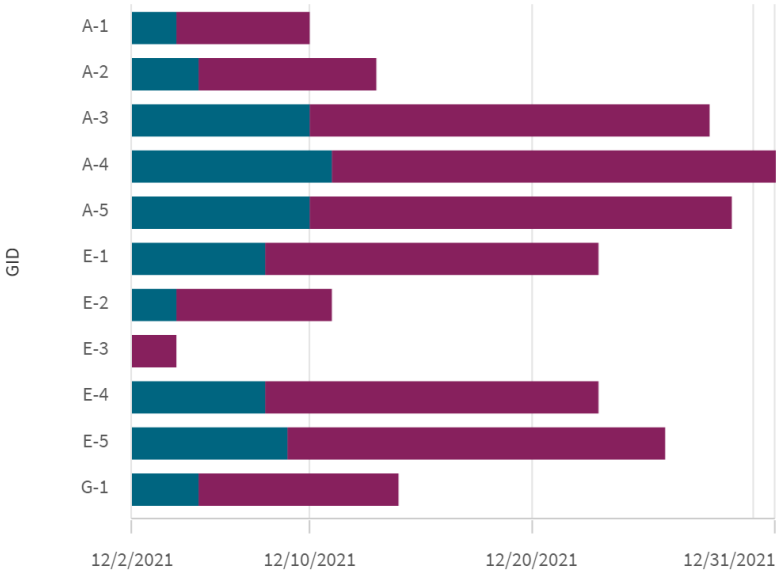
1. Typically the indata is a table with tasks with start, duration and completeness.

GID	Q	Start	Duration	Complete
A-1		04 Dec 2021	6	100%
A-2		05 Dec 2021	8	100%
A-3		10 Dec 2021	18	85%
A-4		11 Dec 2021	20	61%
A-5		10 Dec 2021	19	14%
E-1		08 Dec 2021	15	3%
E-2		04 Dec 2021	7	100%
E-3		02 Dec 2021	2	100%
E-4		08 Dec 2021	15	40%
E-5		09 Dec 2021	17	63%
F-1		09 Dec 2021	16	20%
F-2		05 Dec 2021	9	100%

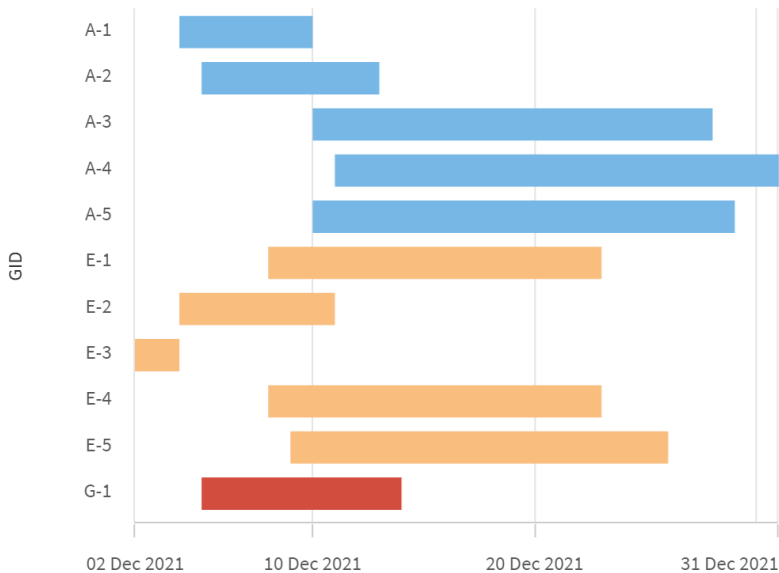
2. Add a stacked Combo chart and $=\text{min}(\text{Start})$ as first measure and Duration as second measure on same axis.



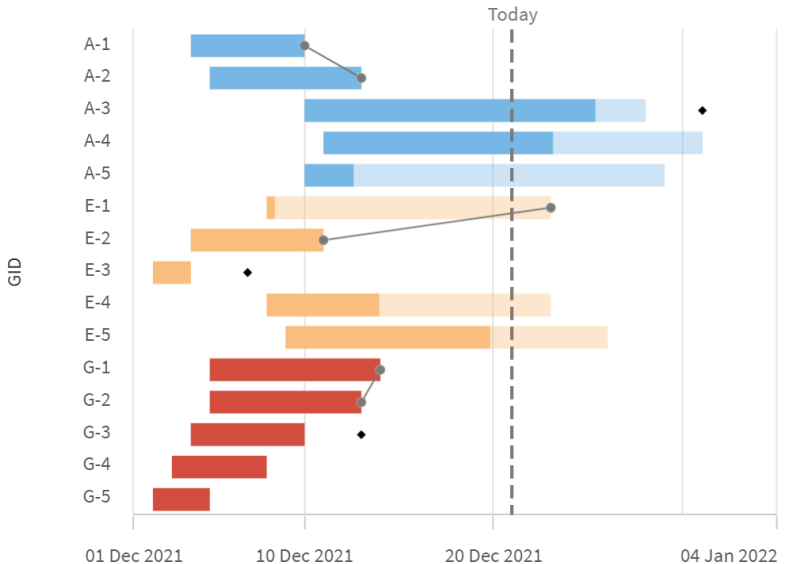
3. Set x-axis range to $=\text{min}(\text{Start})$ and $=\text{max}(\text{End})$.
Format dates, axis and turn off legend.



4. Make the first measure transparent: =argb(0,0,0,0).
Color the second measure by the task.



5. Add ref line for today, a 3rd measure for completion rate, markers for milestones and lines for dependencies.























Use Alternative dimensions or a drill down group to switch between groups and tasks.

And use Custom tooltip to tailor the popup.

Inspired by work of Matthew Fryer.

Table indicators are handy for setting the context such as rank, trend and classification.

With Indicators

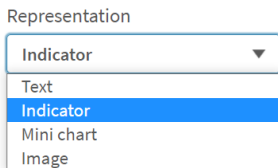
Category 	Sales	Var	Discount%
Babywear 	140	9 	7.1% 
Bath Clothes	 50	1 	5.6% 
Children ´s wear	85	15 	3.7% 
Ladies ´Footwear	148	9 	4.7% 
Men ´s Clothes	139	13 	7.2% 
Men ´s Footwear	251	-30 	7.3% 
Sportwear	292	11 	6.2% 
Womens wear	 681	-76 	5.7% 

Compare with a table without visual cues.

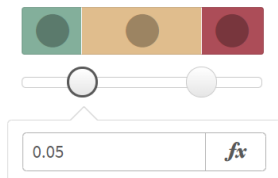
Without indicators

Category	Q	Sales	Var	Discount%
Babywear		140	9	7%
Bath Clothes		50	1	6%
Children ´s wear		85	15	4%
Ladies ´Footwear		148	9	5%
Men ´s Clothes		139	13	7%
Men ´s Footwear		251	-30	7%
Sportwear		292	11	6%
Womens wear		681	-76	6%

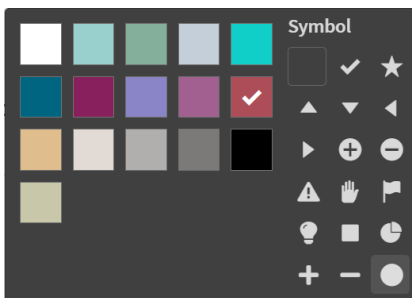
1. Switch measure to Indicator








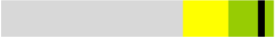


2. Add limits



3. Pick icons and color



Custom mini charts are easy to make with SVG. A few lines produces the images below.

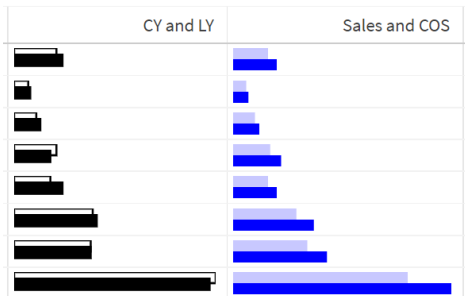
Category	Q	Sales/Forecast	%
Babywear		94%	
Bath Clothes		99%	
Children ´s wear		85%	
Ladies ´ Footwear		94%	
Men ´s Clothes		92%	
Men ´s Footwear		113%	
Sportwear		96%	
Womens wear		112%	

Here's the expression for the bullet chart. Four rectangles, the marker has a dynamic position.

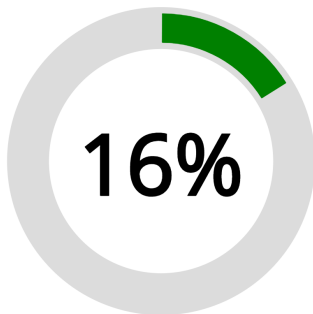
```
= 'data:image/svg+xml,<svg
xmlns="http://www.w3.org/2000/svg" height="10"
width="123">' &
'<rect x="0" y="0" width="100" height="10"
style="fill:rgb(216, 216, 216)" />' &
'<rect x="80" y="0" width="20" height="10"
style="fill:yellow"/>' &
'<rect x="100" y="0" width="20" height="10"
style="fill:rgb(151, 204, 3)" />' &
'<rect x="' & round(column(1)*100) & '" y="0"
width="3" height="10" style="fill:rgb(0, 0,
0)" />' &
'</svg>'
```

The label is shown at hover as a popup.

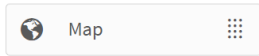
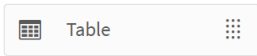
Double bars and overlapping bars is even easier.



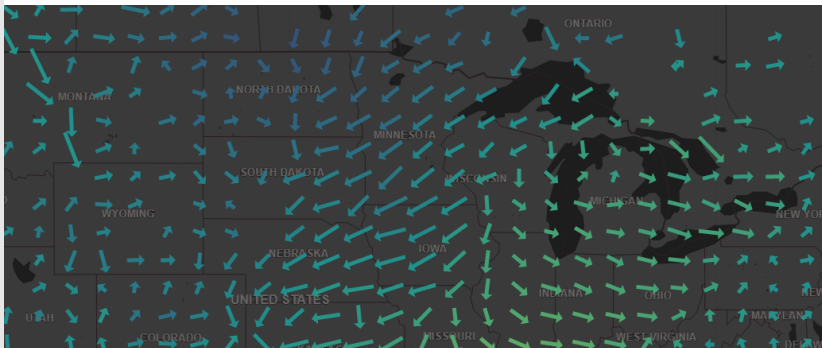
Circles and text are simple to layout.



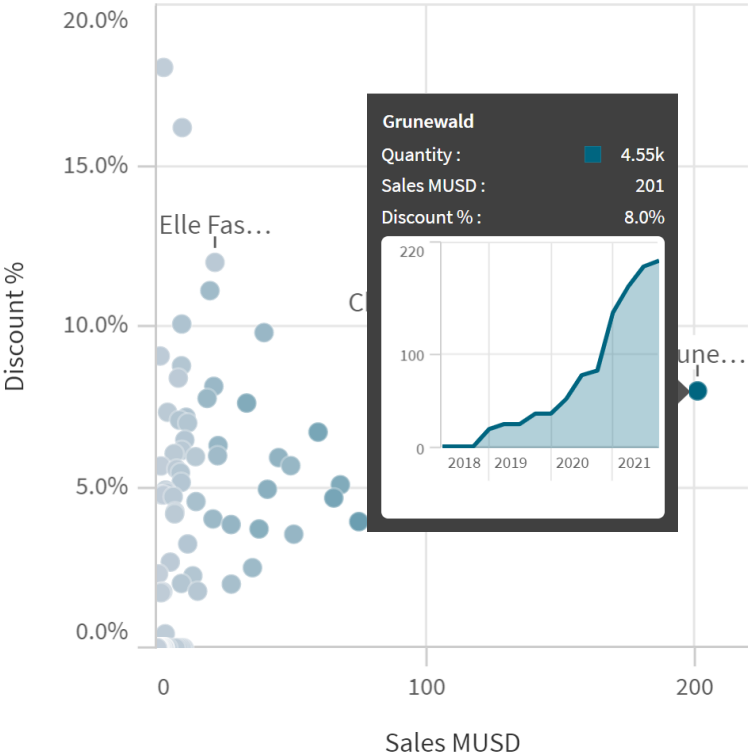
Dynamic images with inline SVG can be used where images by url is supported.



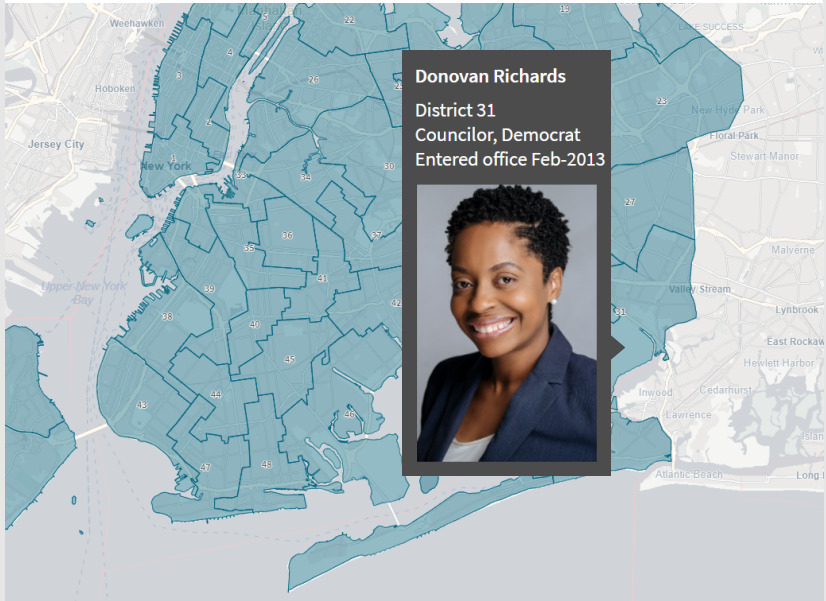
Try out in the table, the map background layer and the map point layer.



Charts in tooltips for overview first and details on demand.



New York City Council Members & Districts

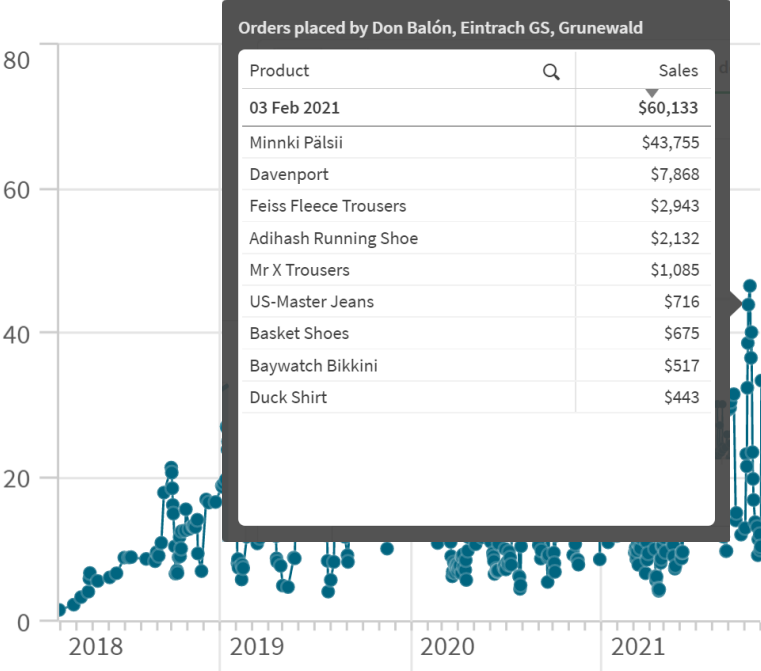


Donovan Richards

District 31
Councilor, Democrat
Entered office Feb-2013



Sales details for a specific day.



Overview map and detailed map.

