

The background is a solid blue color with a faint, light-colored world map centered at the top. Below the map, there are several lines of faint, illegible text that appear to be from a newspaper or document, including the words "The Nobel" and "114 years".

# Show, don't tell

Visueel communiceren met data

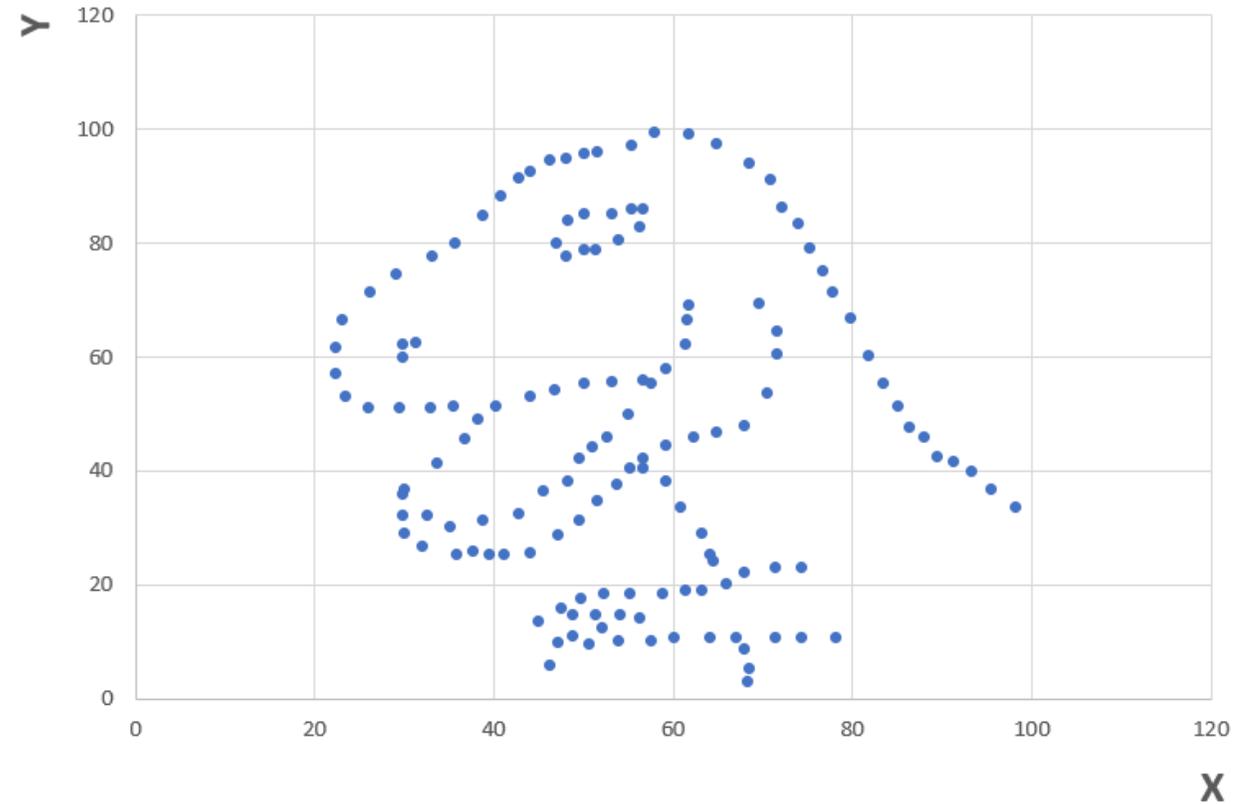
*Koen Van den Eeckhout - Baryon*

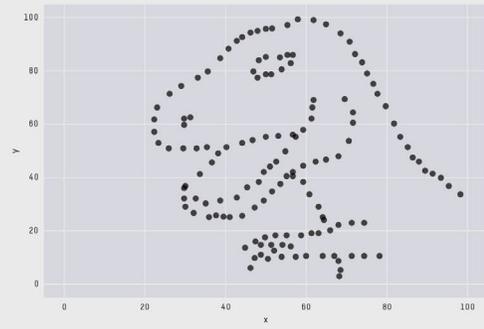
**Alle slides en links:**

[baryon.be/dataviz-resources](https://baryon.be/dataviz-resources)

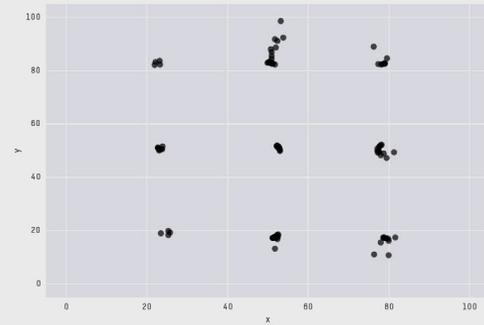
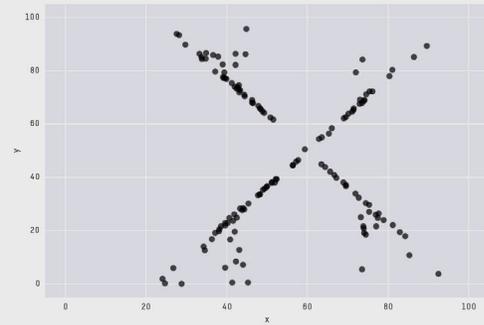
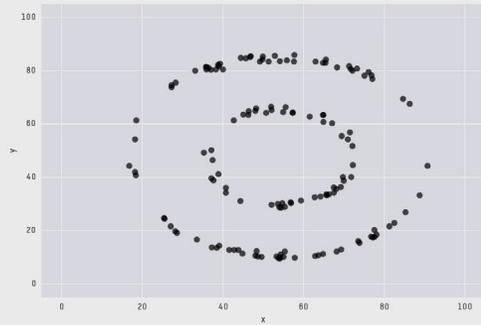
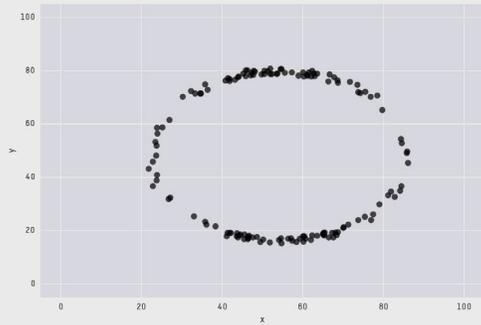
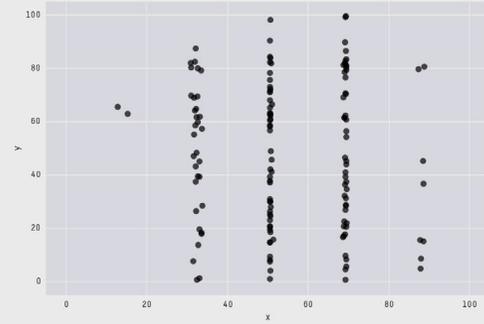
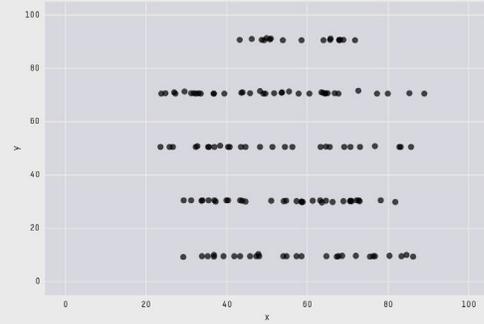
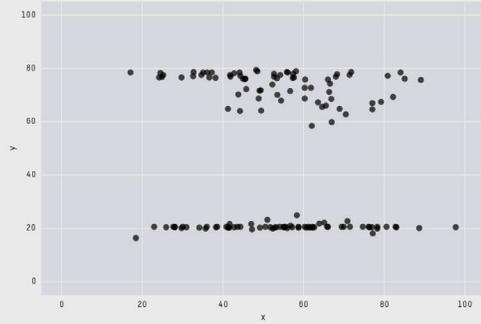
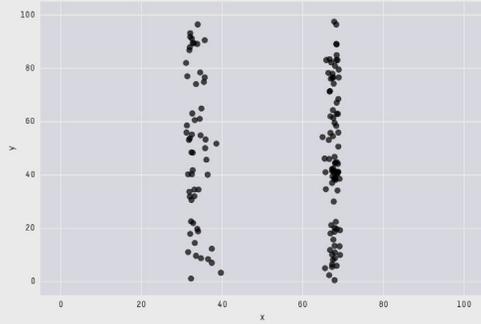
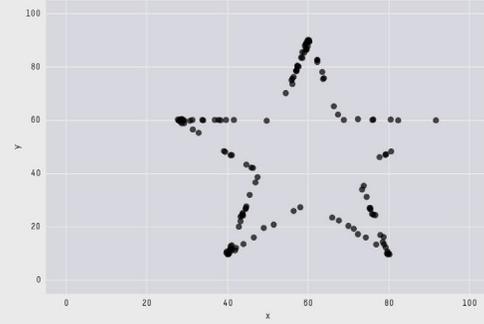
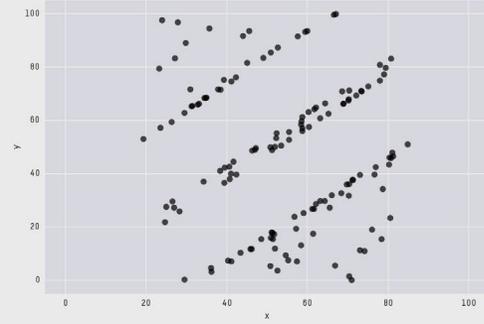
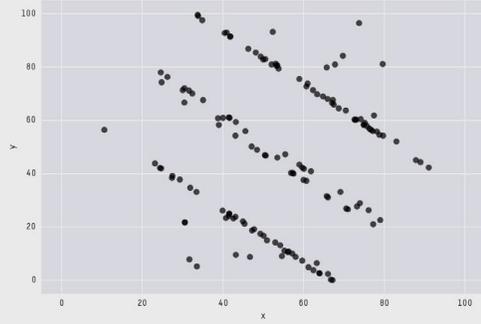
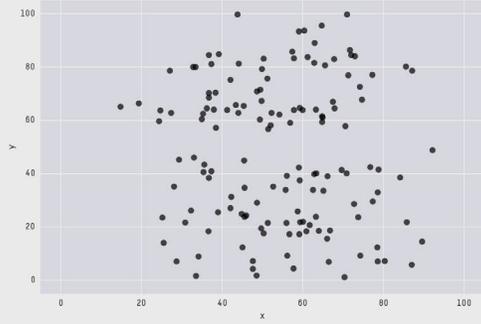
| <b>x</b> | <b>y</b> |
|----------|----------|
| 55.3846  | 97.1795  |
| 51.5385  | 96.0256  |
| 46.1538  | 94.4872  |
| 42.8205  | 91.4103  |
| 40.7692  | 88.3333  |
| 38.7179  | 84.8718  |
| 35.641   | 79.8718  |
| 33.0769  | 77.5641  |
| 28.9744  | 74.4872  |
| 26.1538  | 71.4103  |
| 23.0769  | 66.4103  |
| 22.3077  | 61.7949  |
| 22.3077  | 57.1795  |
| 23.3333  | 52.9487  |
| 25.8974  | 51.0256  |
| 29.4872  | 51.0256  |
| 32.8205  | 51.0256  |
| 35.3846  | 51.4103  |
| 40.2564  | 51.4103  |
| 44.1026  | 52.9487  |
| 46.6667  | 54.1026  |

**X Mean: 54.26**  
**Y Mean: 47.83**  
**X SD : 16.76**  
**Y SD : 26.93**  
**Corr. : -0.06**





X Mean: 54.26  
Y Mean: 47.83  
X SD : 16.76  
Y SD : 26.93  
Corr. : -0.06



# Waarom data visueel maken?



## INFORMATIE- DICHTHEID

beter om grote  
hoeveelheden data  
samen te vatten

# Inleiding

**2004 - 09**

Burgerlijk ingenieur natuurkunde

**2009 - 13**

Doctoraat fysica

**2013 - 15**

Post-doctoraal onderzoeker

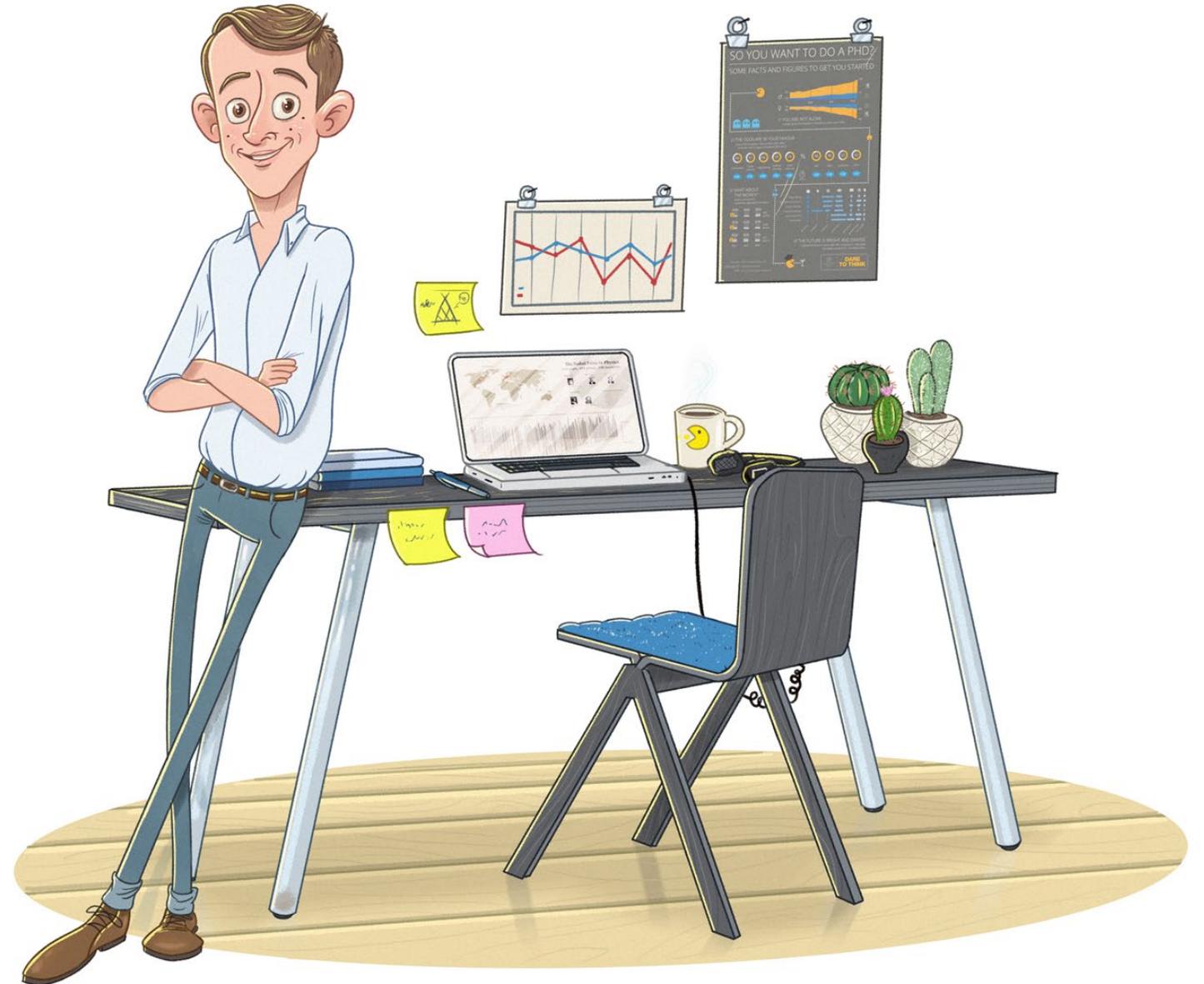
**2015 - 18**

Subsidieconsultant  
Oprichting [Baryon](#)

**2019 - nu**

Voltijds informatiedesigner  
bij Baryon

[koen@baryon.be](mailto:koen@baryon.be)



## Inleiding

## Principes van datavisualisatie

## Grafieken ontwerpen

## Storytelling

Het belang van datavisualisatie

De eigenschappen van een goede datavisual

Signaal-ruisverhouding

Grafiektypes

Workflow en tools

Componenten

Objectieve versus subjectieve datavisualisatie

Grafieken beter maken

# Waarom data visueel maken?



## AANTREKKELIJK

beter om de  
aandacht van de  
kijker te trekken

## INFORMATIE- DICHTHEID

beter om grote  
hoeveelheden data  
samen te vatten



**Late Edition**  
 Today, clouds giving way to some sunshine, morning rain, high 63. Tonight, clear early, increasing clouds late, low 44. Tomorrow, rain, high 52. Weather map appears on Page B16.

## JOB LOSSES SOAR; U.S. VIRUS CASES TOP WORLD



Since the coronavirus descended on Brooklyn Hospital Center three weeks ago, the staff has handled over 800 potential cases.

### New Data Shows Staggering Toll of Outbreak

This article is by **Ben Casselman, Patricia Cohen and Tiffany Hua**.  
 More than three million people filed for unemployment benefits last week, sending a collective shudder throughout the economy that is unlike anything Americans have experienced.  
 The alarming numbers, in a report released by the Labor Department on Thursday, provide some of the first hard data on the economic toll of the coronavirus pandemic, which has shut down whole swaths of American life faster than government statistics can keep track.  
 Just three weeks ago, barely 200,000 people applied for jobless benefits, a historically low number. In the half-century that the government has tracked applications, the worst week ever, with 695,000 so-called initial claims, had been in 1982.  
 Thursday's figure of nearly 3.3 million set a grim record. "A large part of the economy just collapsed," said Ben Horowitz, executive director of IHS Markit, a business data and analytics firm.  
 The numbers provided only the first hint of the economic calamity in progress. Even comparatively optimistic forecasters expect millions more lost jobs, and with them foreclosures, evictions and bankruptcies. Thousands of businesses have closed in response to the pandemic, and many will never reopen. Some economists say the decline in gross domestic product this year could rival the worst years of the Great Depression.  
 And there was fresh evidence on Thursday of the relentless course of the virus itself. Cases in the United States now exceed 80,000, the most of any nation, even China and Italy, according to a New York Times database. More than 1,600 deaths across the country have been linked to the virus.  
 At least 160 million people are



### Under Trump, Unfilled Posts Hinder Action

By **JENNIFER STEINHAUER and ZOLAN KANNO-YOUNG**  
**WASHINGTON** — Of the 75 senior positions at the Department of Homeland Security, 20 are either vacant or filled by acting officials, including Chad F. Wolf, the acting secretary who recently was unable to tell a Senate committee how many respirators and protective face masks were available in the United States.  
 The National Park Service, which like many federal agencies is full of vacancies in key posts, tried this week to fill the job of a director for the national capital region after borders of visitors flooded to see the cherry blossoms near the National Mall, creating a potential public health hazard as the coronavirus continues to spread.  
 At the Department of Veterans Affairs, workers are scrambling to order medical supplies on Amazon after its leaders, lacking experience in disaster response, failed to prepare for the onslaught of patients at its medical centers.  
 Ever since President Trump came into office, a record high turnover and unfilled jobs have emptied offices across wide sections of the federal bureaucracy. Now, current and former administration officials and disaster experts say the coronavirus has exposed those failings as never before.  
 Continued on Page A17

### Online Class With No Way To Get There

By **NIXIA STEWART**  
**Allia Phillips** was excited about picking up an iPad from her school in Harlem last week. She did not want to miss any classes and hoped to land on the fourth-grade honor roll again.  
 On Monday, the first day that New York City public schools began remote learning, the 10-year-old placed her iPad on a tray she set up over her pillow on a twin bed in a studio that she shares with her mother and grandmother inside a homeless shelter on the Upper West Side.  
 And then, Allia saw nothing. "I went downstairs to find out that they don't have any internet," said Keasha Phillips-Lewis, Allia's mother. "You're screwing up my daughter's education. You want to screw me up? Fine. But not my daughter's education."  
 The Department of Education, which runs the largest school system in the country with more than 1.1 million students, began attempting to teach all students through remote learning this week because schools were closed to slow the spread of the coronavirus. Shattering the vast system, which includes 1,800 schools, was a serious challenge for the city, and the large-scale, indefinite school closures are uncharted territory, altering the lives and work of millions.  
 Continued on Page A18

### Courage at a Brooklyn Hospital, At the Front of an Invisible War

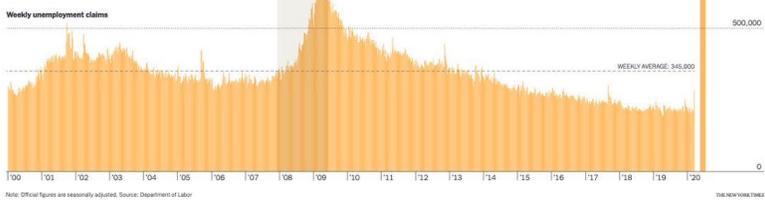
By **SHERI FINK**  
 It was not even 9 in the morning and Dr. Sylvie de Souza, green N95 mask, which was supposed to form a seal against her face, was already aghast.  
 In freezing rain on Monday, she stepped in clings between the emergency department she chairs at the Brooklyn Hospital Center and a tent outside, keeping a sharp eye on the trainee doctors, nurses and other staff members who would screen nearly 100 walk-in patients for the coronavirus that day.  
 Inside her E.R., more than a dozen people showing signs of infection waited for evaluation in an area used just a few weeks ago for stitches and casts. Another dozen  
 lay on gurneys arranged one in front of the next, like a New York City car park. One man on a ventilator was waiting for space in the intensive care unit.  
 Minutes before paramedics wheeled in a heart attack patient, Dr. de Souza pointed to beds reserved for serious emergencies, separated by a newly constructed wall from the suspected virus cases. "This is our safe area," she told a reporter. Then she corrected herself: "This is thought to be safe." There was really no way  
 Continued on Page A14

### No Crowd, but I'll Take You Out to the Ballgame

By **DAN BARRY**  
 Professional baseball greeted a new season this afternoon with an Opening Day game for the ages, an exciting masterpiece that vividly unfolded on the sun-dappled field of the imagination. The crack of the bat could almost be heard in the white silence, was a serious challenge for the city, and the large-scale, indefinite school closures are uncharted territory, altering the lives and work of millions.  
 Continued on Page A18

### A Fan Writes a Fantasy for Opening Day

From the moment the first batter tipped his helmet — and a herd flew out — to the walk-off home run by lathered punch-batter, this 11-inning affair redefined what missed part of last season after no one cared about the outcome; the distraction was reward enough.  
 Don't misunderstand: This game between the New York Yankees and the Cincinnati Reds mattered, but in ineffable ways beyond the columns of wins and losses. It mattered so much that complaints about baseball's slow pace yielded to the universal wish that this game would last forever.  
 "I could've played into the night" and the redeemed Yankees left fielder Sammy Sosa, who missed part of last season after sneezing so hard that he strained a ligament in his back. "I didn't  
 Continued on Page A13



Note: Official figures are seasonally adjusted. Source: Department of Labor

**BUSINESS B1-9**  
**Armed With Sewing Machines**  
 With hospitals desperate for masks, people are pulling out their sewing machines to fill the void. PAGE B4

**A Gusher Can't Be Contained**  
 A chaotic mismatch between supply and demand for oil means the world is running out of places to store it. PAGE B9



**INTERNATIONAL A18-20**  
**Maduro Is Indicted in U.S.**  
 Pleda prosecutors accused the Venezuelan president, whom the U.S. no longer recognizes, of participating in a narco-terrorism conspiracy. PAGE A29

**Natanayahu Rival Relents**  
 The Israeli prime minister was set to maintain power after his rival reversed course, citing the pandemic. PAGE A19

**Brushing Aside a Slaughter**  
 Russia and China, which often revel in grudges against other countries, are employing selective memory to address a massacre that occurred on their border in 1900. PAGE A18

**NATIONAL A21-23**  
**New Focus on Health System**  
 The pandemic gives added urgency to a central issue that was already a main talking point for Joseph R. Biden Jr. and other Democrats. PAGE A21

**Starting Over in Foster Care**  
 A lawsuit led New Mexico to remake its failing system into one advocates hope will serve as a national model. PAGE A22

**SPORTSFRIDAY B11-15**  
**Slow to Embrace a Delay**  
 Atlanta's question why U.S. Olympic leaders took so long to join calls to postpone the Tokyo Games. PAGE B11

**WEEKEND ARTS C1-16**  
**For Pint-Size Paleontologists**  
 Pledge donors' quest to uncover a peek at two pages reprinted from The New York Times for Kids. PAGE C8

**It's Virtually Perfect**  
 Donald Judd's installation, below, at the Guggenheim Gallery is impressive, in person or, for now, online. PAGE C13



**OBITUARIES A24-25**  
**Chronicler of U.S. History**  
 Richard Reeves's books on Nixon, Clinton and others could be as unsparring as his column. He was 83. PAGE A24

**Globetrotters' Dean of Drabble**  
 Fred 'Crazy' Neal dazzled fans with his ball-handling wizardry in more than 6,000 games. He was 77. PAGE A25

**EDITORIAL, OP-ED A26-27**  
**Paul Krugman** PAGE A27



# Waarom data visueel maken?



## AANTREKKELIJK

beter om de  
aandacht van de  
kijker te trekken

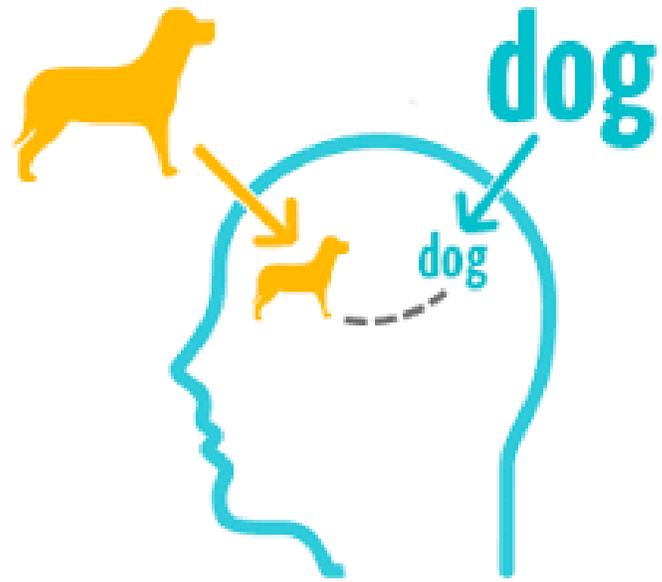
## INFORMATIE- DICHTHEID

beter om grote  
hoeveelheden data  
samen te vatten

## DUAL CODING

beter om de aandacht  
van de kijker  
vast te houden





## DUAL CODING THEORIE

een combinatie van  
**visuele stimuli** (afbeeldingen) en **verbale stimuli** (woorden)  
stimuleert het brein om connecties te leggen

# Meester App

ONDERWIJSTECHNOLOGIE ANNO 2018

WETENSCHAPS-  
CAFÉ

25 SEPTEMBER  
★ 2018



• BLENDED LEARNING •



• FLIPPING THE CLASSROOM •



• MOOCs •



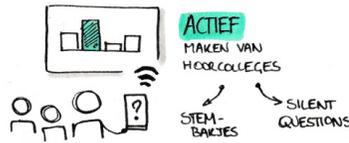
• VIRTUAL REALITY •



• DIGIBORD •

POPULAIRE TYPES ONDERWIJSTECHNOLOGIE

↑ GROE-  
POTENTIEEL!



ENKEL LEERKRACHT

OF



OF

ENKEL TECHNOLOGIE

OF



OF

LEERKRACHT + TECH

BESTE OPTIE!

**PROFESSIONALISERING**

DE SLEUTEL OM LEERMOTIVATIE DOOR ONDERWIJSTECHNOLOGIE TE DOEN STUIGEN



**VALKUILEN**

- DUUR
- TIJDSINTENSIEF
- NIET ELKE LEERLING HEEFT TOEGANG
- HOE BEST INZETTEN?
- BLOKKEN VAN 50 MINUTEN
- OVERVOLLE LEERPLANNEN
- AFLEIDING

LOOP ROND ALS LEERKRACHT EN LEG DE VORDELEN UIT

• ONGELUKHEID VERSTERKEN

• MINDSET EN EXPERTISE

ZELDEN EEN PROBLEEM!



**Tammy SCHELLENS**

UNIVERSITEIT GENT



**Els DE LATTER**

ARTEVELDEHOGESCHOOL

! meer cafés op  
WWW.WETENSCHAPS.CAFE.BE

Sketchnoting:  
@koen\_vde  
www.baryon.be

## SKETCHNOTING

eenvoudige tekeningen combineren met kleine hoeveelheden tekst = een goeie manier om te noteren

# Waarom data visueel maken?



## AANTREKKELIJK

beter om de  
aandacht van de  
kijker te trekken

## INFORMATIE- DICHTHEID

beter om grote  
hoeveelheden data  
samen te vatten

## KENNISBORGING

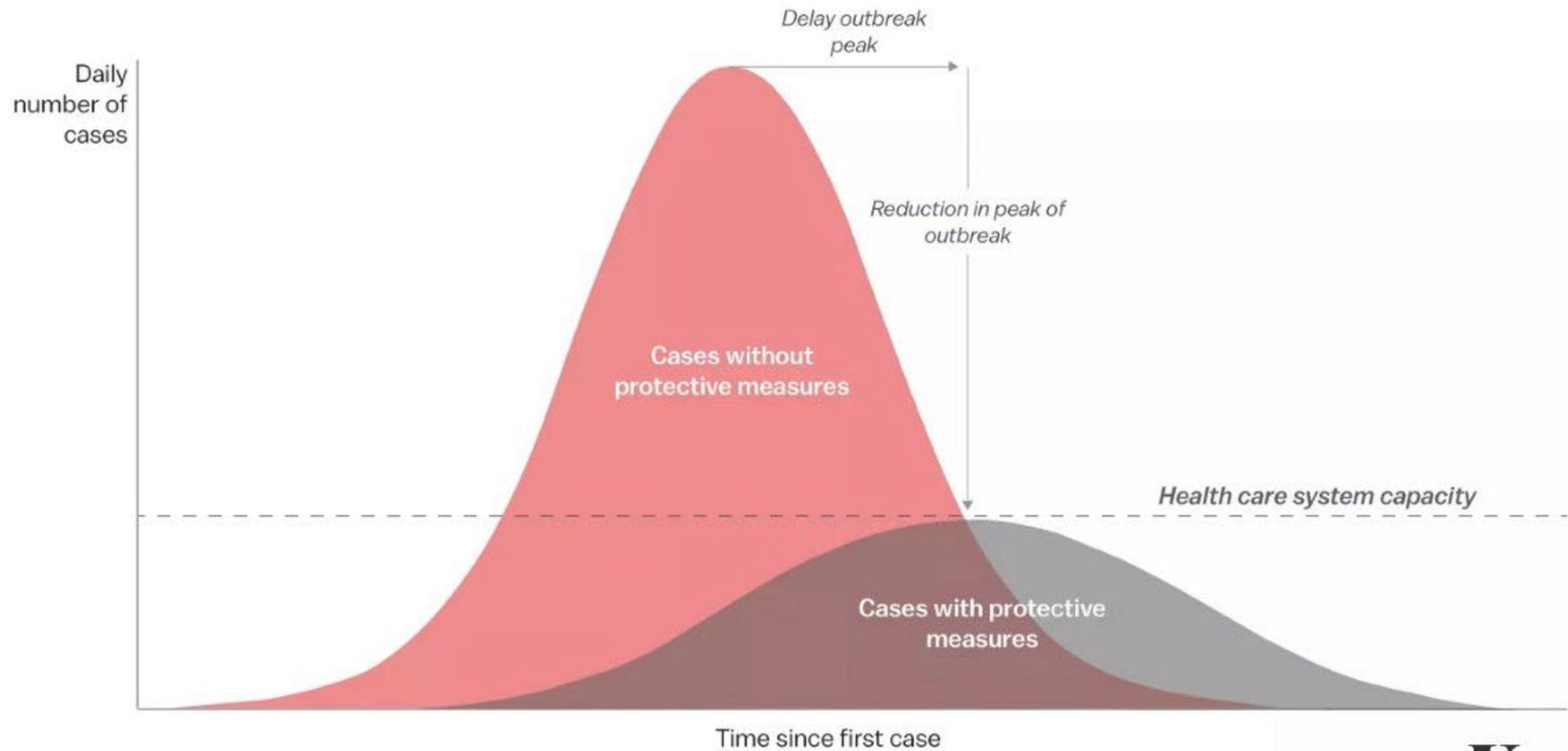
makkelijker om  
informatie  
te onthouden

## DUAL CODING

beter om de aandacht  
van de kijker  
vast te houden



## Flattening the curve



Source: CDC

**Vox**

## How should I protect myself?

There are some basic precautions you can take, which are the same as what you should be doing every day to stave off other respiratory diseases. You've seen the guidance before: Wash your hands. Cover your nose and mouth when you sneeze. And when you stay home from work or school and drink lots of fluids.

The CDC recommends washing with soap and water for at least 20 seconds after using the bathroom, before eating and after blowing your nose or sneezing. It also advises not to touch your eyes, nose, or mouth and to clean objects and surfaces you touch often.

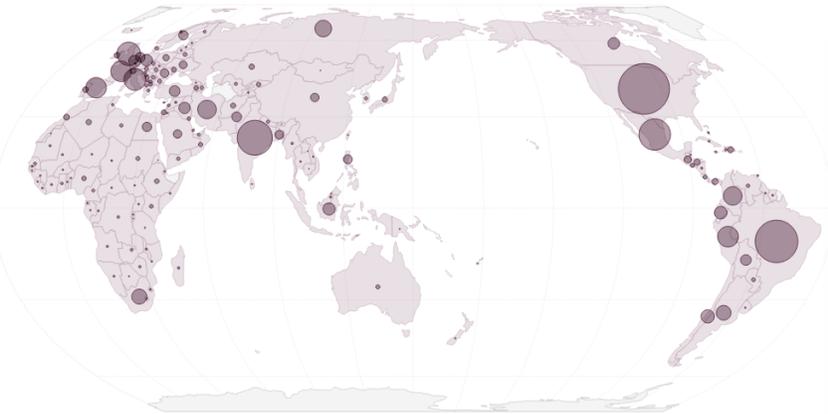
[Read more about preparing for coronavirus here.](#)

[Return to top](#)

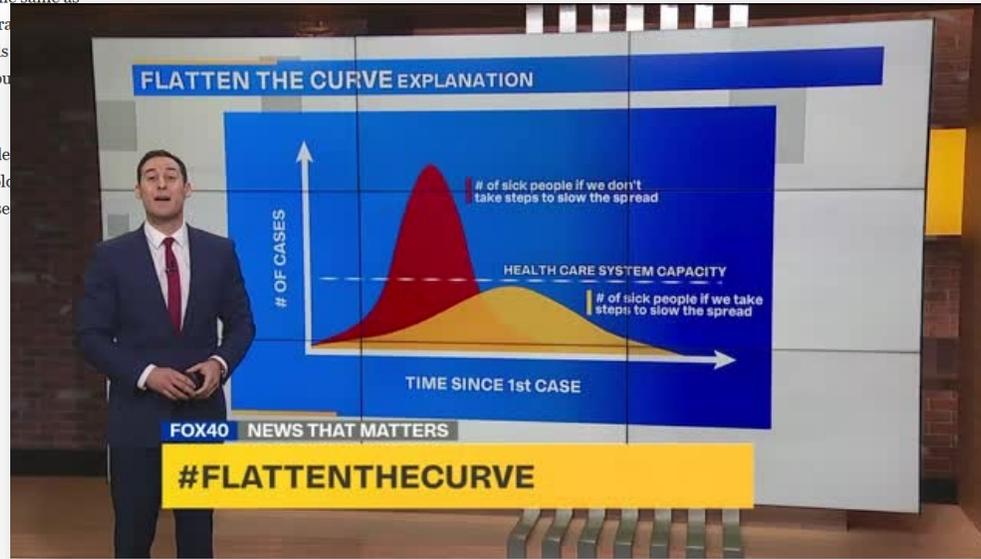
## Where has it spread in the world?

Reported deaths: **997,000**  
Reported cases: **33,087,000**

Deaths Cases Adjusted for population Raw numbers



| Country  | Change from Sept. 21 |          |      |         |
|----------|----------------------|----------|------|---------|
|          | Reported cases ▼     | Total    | Pct. | Deaths  |
| U.S.     | 7,082,976            | ▲272,069 | +4%  | 204,370 |
| India    | 6,074,702            | ▲587,122 | +11% | 95,542  |
| Brazil   | 4,732,309            | ▲187,680 | +4%  | 141,741 |
| Russia   | 1,154,299            | ▲49,251  | +4%  | 20,299  |
| Colombia | 813,056              | ▲47,980  | +6%  | 25,488  |
| Peru     | 800,142              | ▲31,247  | +4%  | 32,142  |
| Mexico   | 730,317              | ▲29,737  | +4%  | 76,430  |



# Why outbreaks like coronavirus spread exponentially, and how to “flatten the curve”

Health

By Harry Stevens March 14, 2020

### PLEASE NOTE

The Washington Post is providing this story for free so that all readers have access to this important information about the coronavirus. For more free stories, [sign up for our daily Coronavirus Updates newsletter.](#)

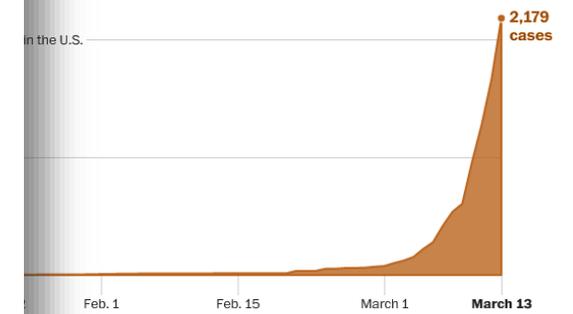
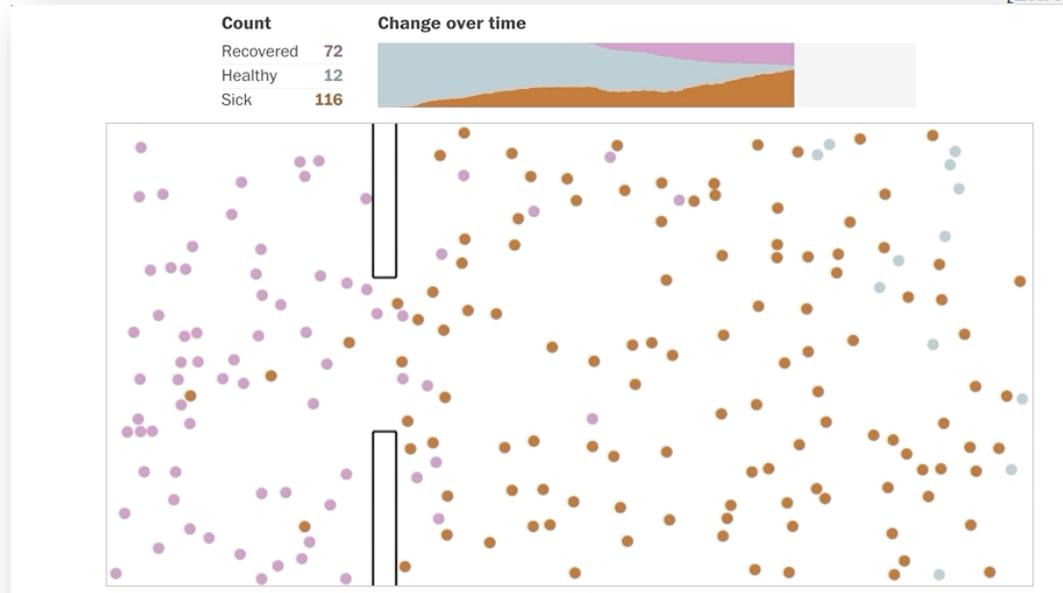
After the first case of covid-19, the disease caused by the new strain of coronavirus, was announced in the United States, reports of further infections trickled in slowly. Two months later, that trickle has turned into a steady current.

[\[Lea en español | Leggi in italiano | اقرأ هذا المقال بالعربية | Lire en](#)

[日本語で読む | به فارسی بخوانید | Leia em português |](#)

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[Prečitajte si po Slovensky | বাংলায় পড়ুন | हिंदी में पढ़ें](#)



explore the number of cases over time.

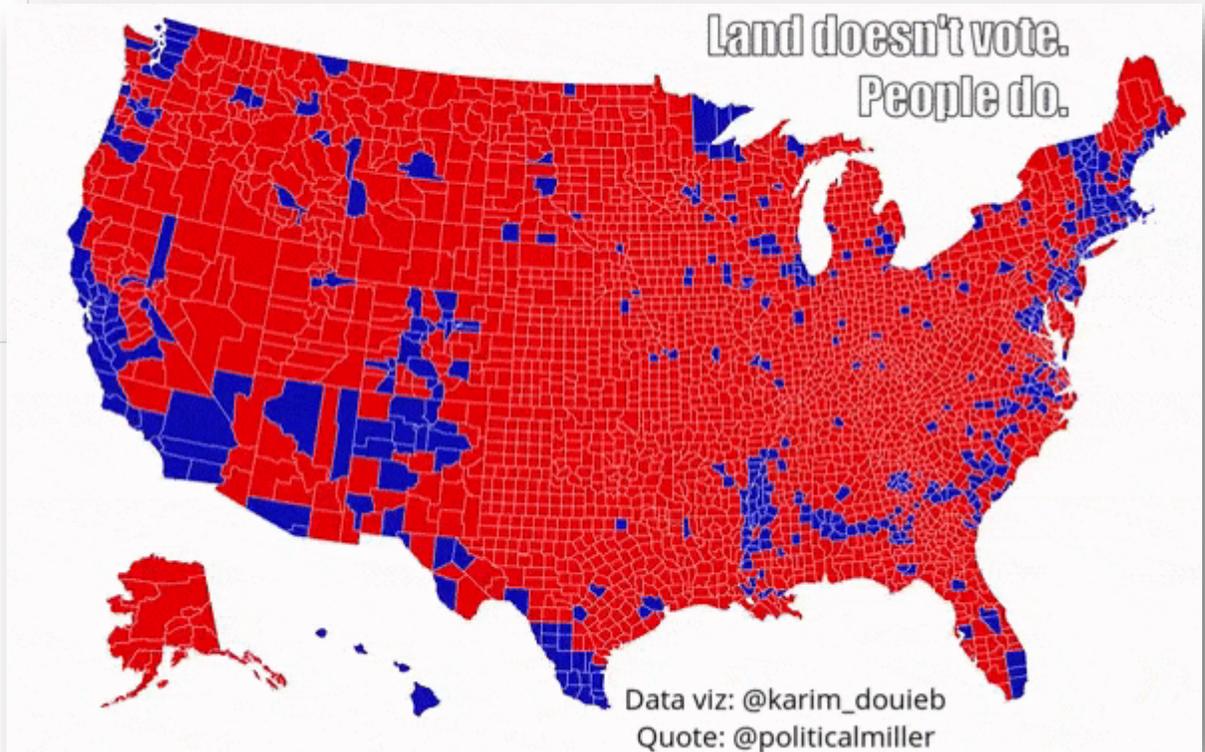
called **exponential curve** has experts worried. If the of cases were to continue to double every three days, there would be about a hundred million cases in the United States by May.



Donald J. Trump   
@realDonaldTrump



6:05 AM · Oct 1, 2019



The background features a semi-transparent orange overlay. In the upper portion, a world map is visible with several red dots indicating specific locations. Below the map, there are several newspaper clippings, one of which has the headline "The Nobel Prize" and "114 years, 108 prizes". In the lower portion, a bar chart is partially visible, showing multiple vertical bars of varying heights.

# Principes van datavisualisatie

# Wat is een goede datavisualisatie?

Groepsoefening (20 minuten)

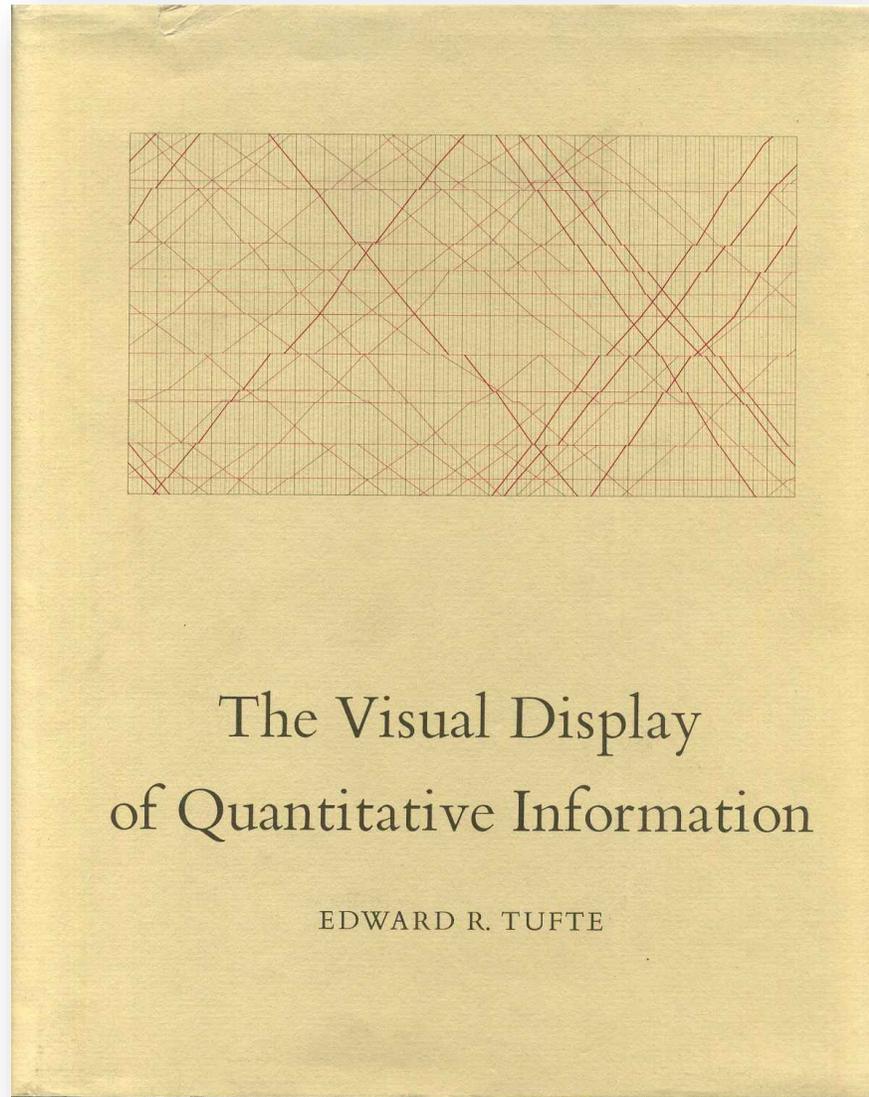
Als groep, kies jullie **meest** en **minst favoriete datavisualisatie** en leg uit **waarom**

# Wat is een goede datavisualisatie?

Bespreking

[Whimsical board](#)

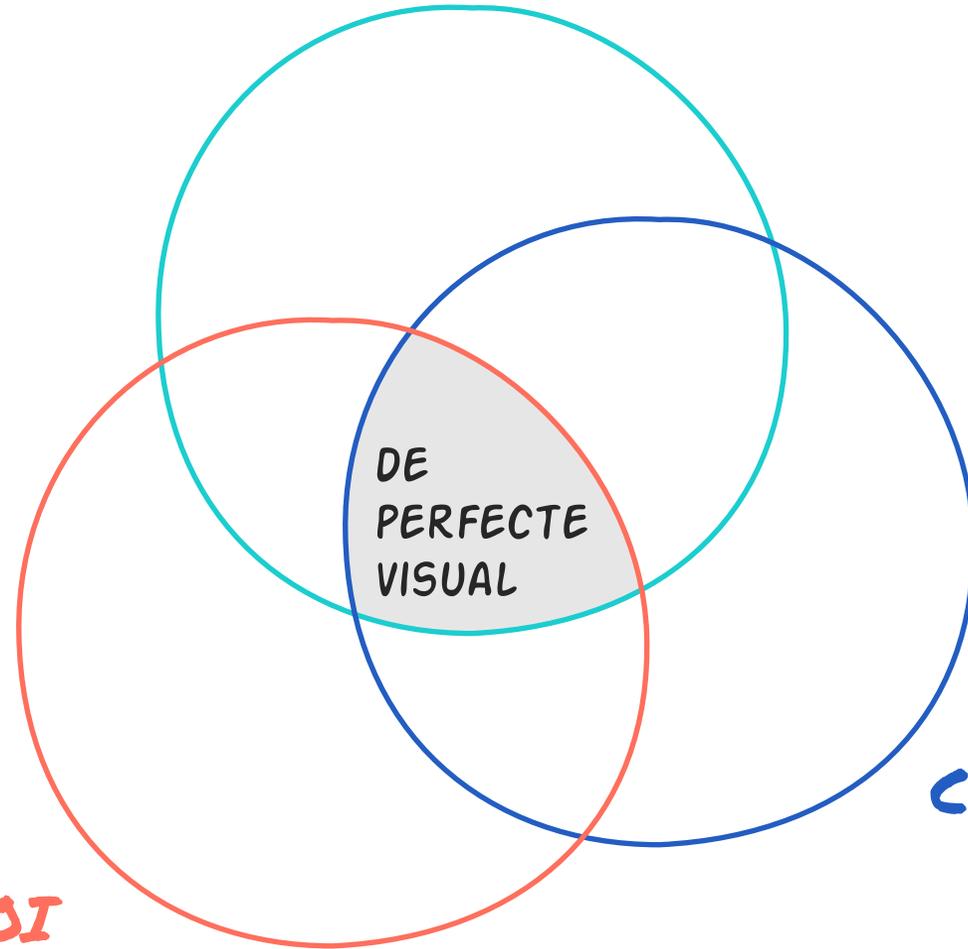
**Helder, correct en mooi**



“

Excellence in statistical graphics consists of complex ideas communicated with **clarity, precision, and efficiency.**”

**HELDER**

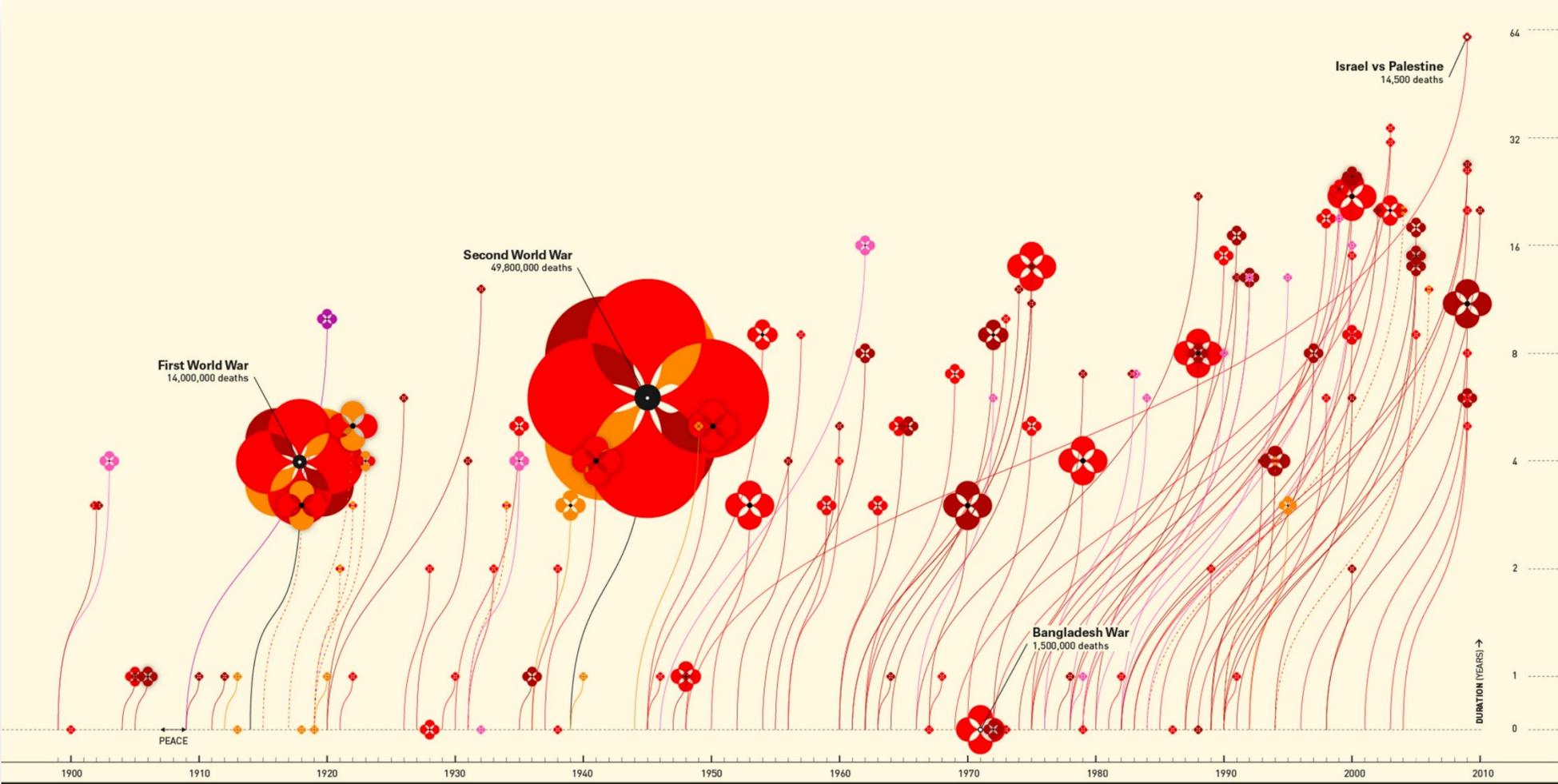


**MOOI**

**CORRECT**

DE  
PERFECTE  
VISUAL

COMPLEXE  
DATA-KUNST



POPPY DIAGRAM



The remembrance poppy commemorates soldiers who have died in war. Each poppy in the diagram depicts a war of the last century (with more than 10,000 deaths). The stem grows from the year when the war started. The poppy flowers in the year the war ended. Its size shows the number of deaths.

NUMBER OF DEATHS IN THOUSANDS (POPPY'S SIZE)



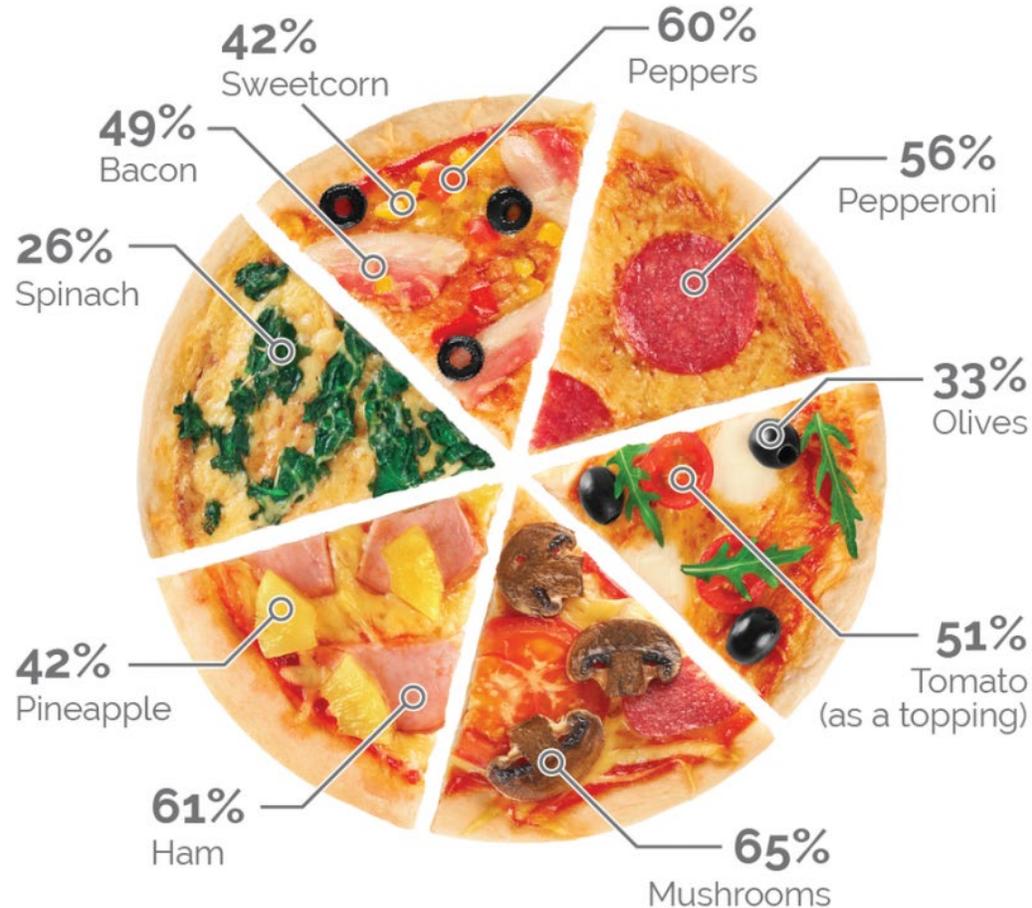
REGIONS INVOLVED IN WARS (POPPY'S COLOUR)



helder  
correct  
mooi

## Mushroom is the UK's most liked pizza topping

Generally speaking, which of the following toppings do you like on a pizza? Select as many as you like



Other items not depicted include: onions (62%), chicken (56%), beef (36%), chillies (31%), jalapeños (30%), pork (25%), tuna (22%), anchovies (18%). 2% of people say they only like Margherita pizzas

MOOI  
MAAR FOUT

helder

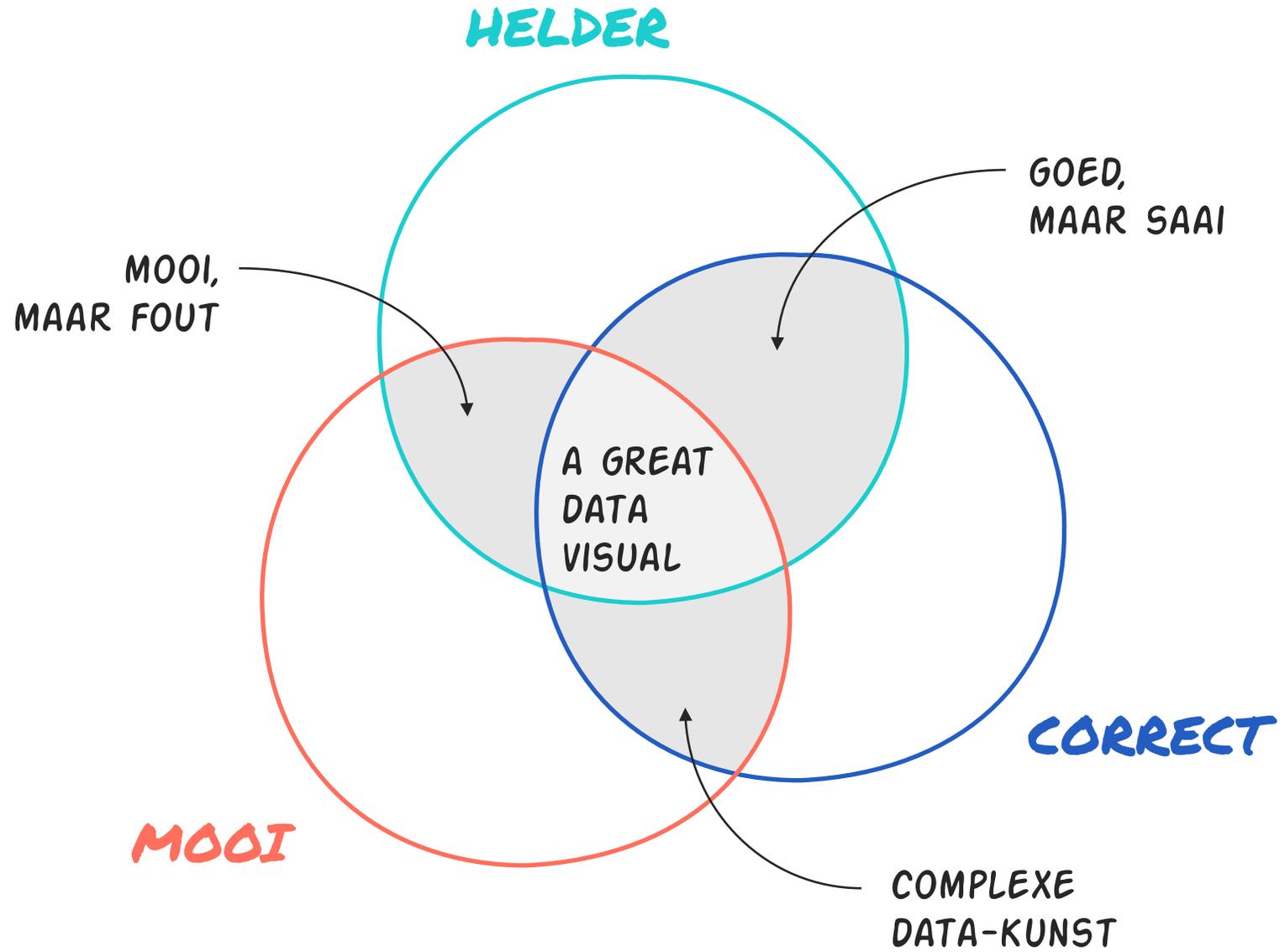
correct

mooi



GOED,  
MAAR SAAI

helder  
correct  
mooi





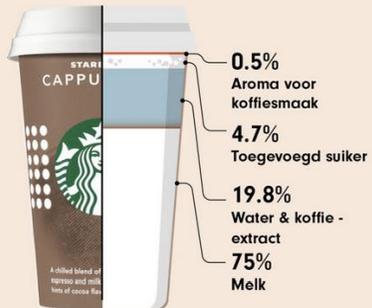
**Harro Schwencke** • 2nd  
 Food Innovator | Upfront is Hiring!  
 1h •

Ijskoffies in 2021, wat een onzin.....

Ooit begonnen als koffie gekoeld met ijsblokjes, inmiddels door Big Foo ...see more

[See translation](#)

### Koude melk.



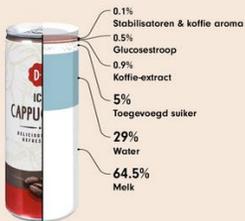
1. 75% Melk
2. 8.5g Suiker/100ml
3. % Koffie extract?

### "Espresso"



1. 75% Melk
2. 9g Suiker/100ml
3. Geen espresso
4. GEEN ESPRESSO!

### ?????



1. 64.5% Melk
2. 8.6g Suiker/100ml
3. 0.9% Koffie-extract
4. 29% Water



### STATUS QUO.



70 Kcal/100ml

### Hoe wij het doen.



7 Kcal/100ml

# "Espresso"



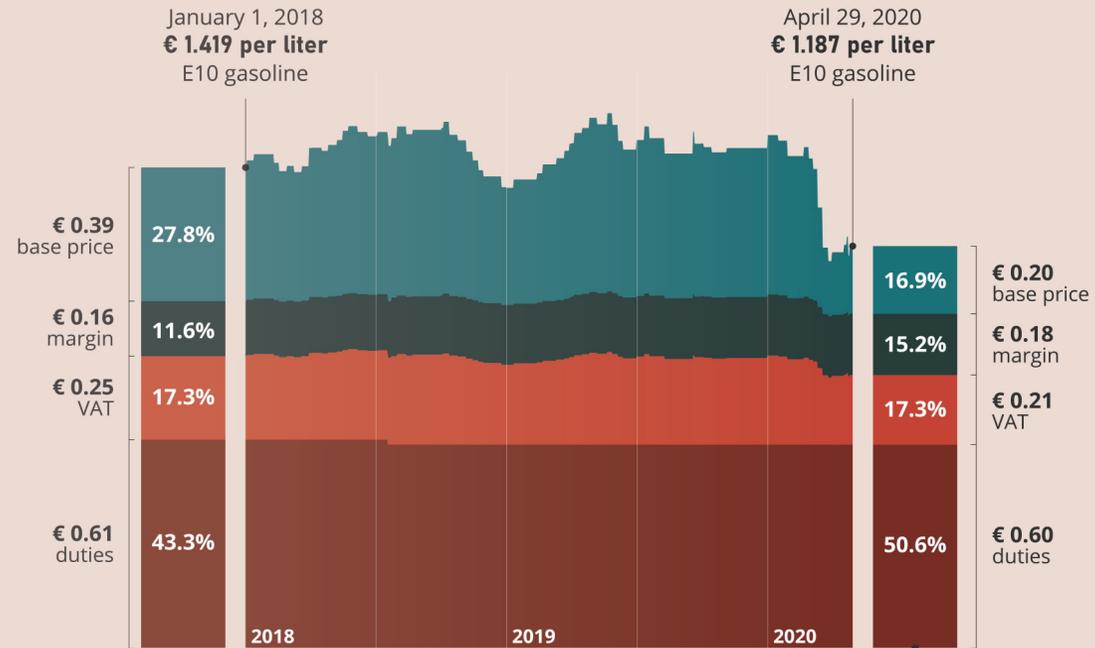
1. 75% Melk
2. 9g Suiker/100ml
3. Geen espresso
4. GEEN ESPRESSO!

78 • 8 comments

Love Comment Share Send

# Oil Time Low

Crude oil prices are at their lowest point since 1998, dropping over 85% in the past few months. But at the pump, we pay for more than just the oil.

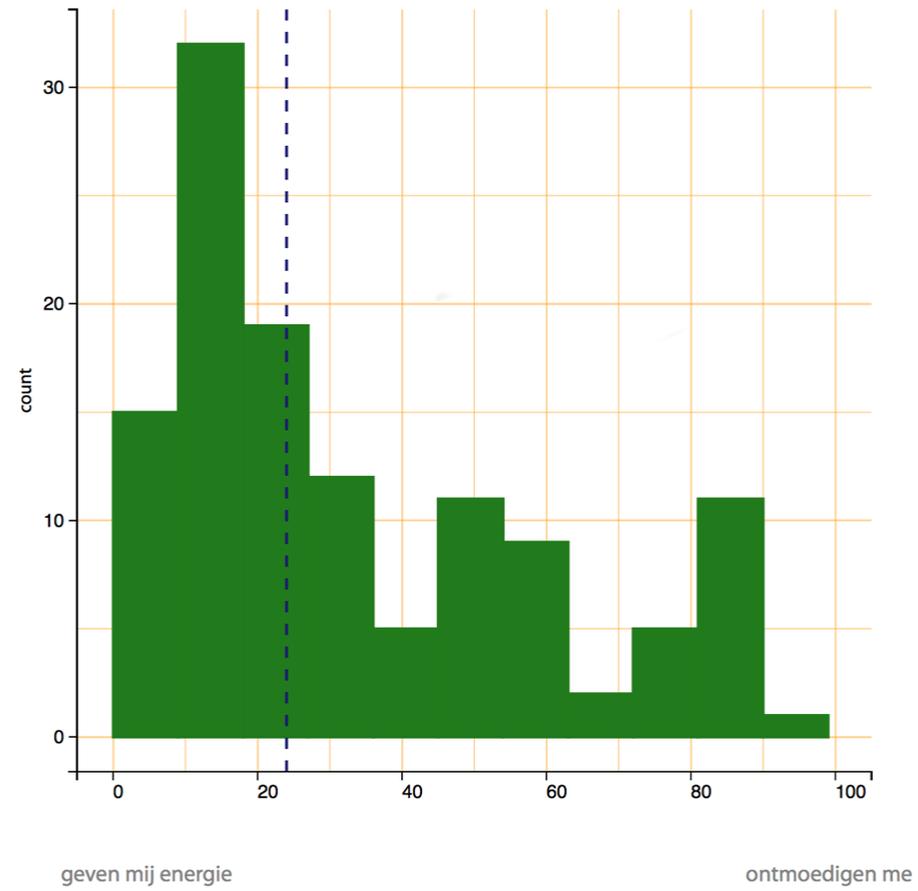


In Belgium, over 2/3 of the pump price consists of duties and taxes

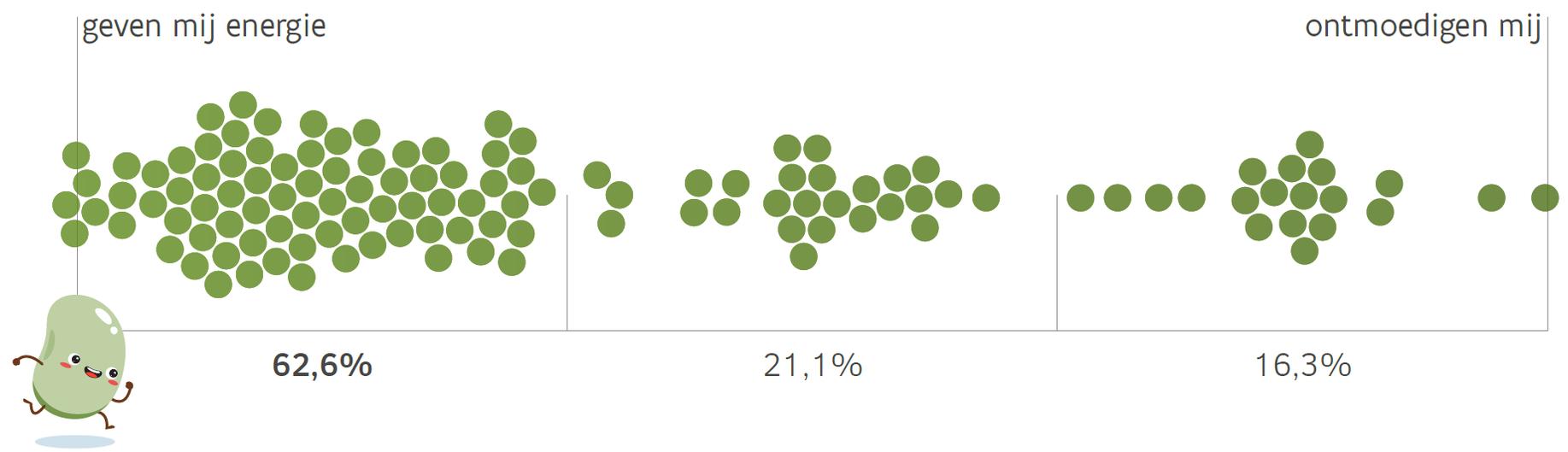
Source: Belgian Petroleum Federation, FOD Economie, Statbel

A #MakeoverMonday visualization by Koen Van den Eeckhout (@koen\_vde)

## 7. Situaties zoals in mijn verhaal ...



### Situaties zoals in mijn verhaal...



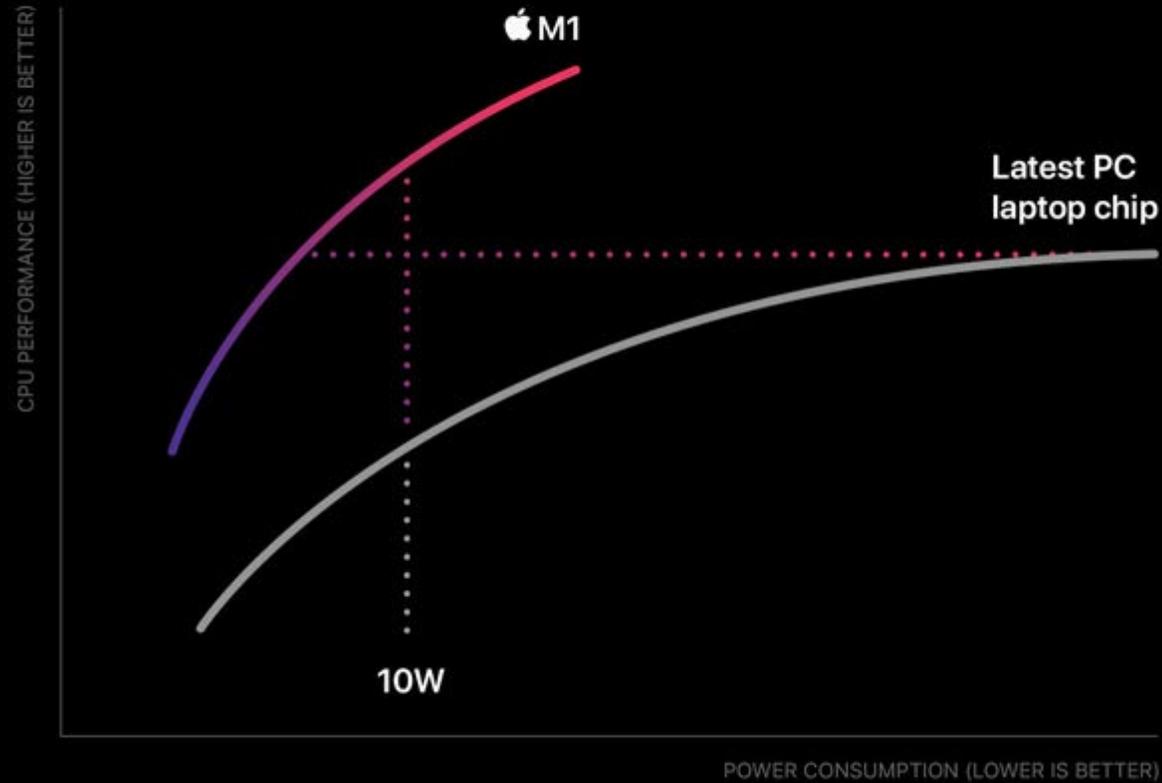
# Signaal-ruisverhouding



GPS

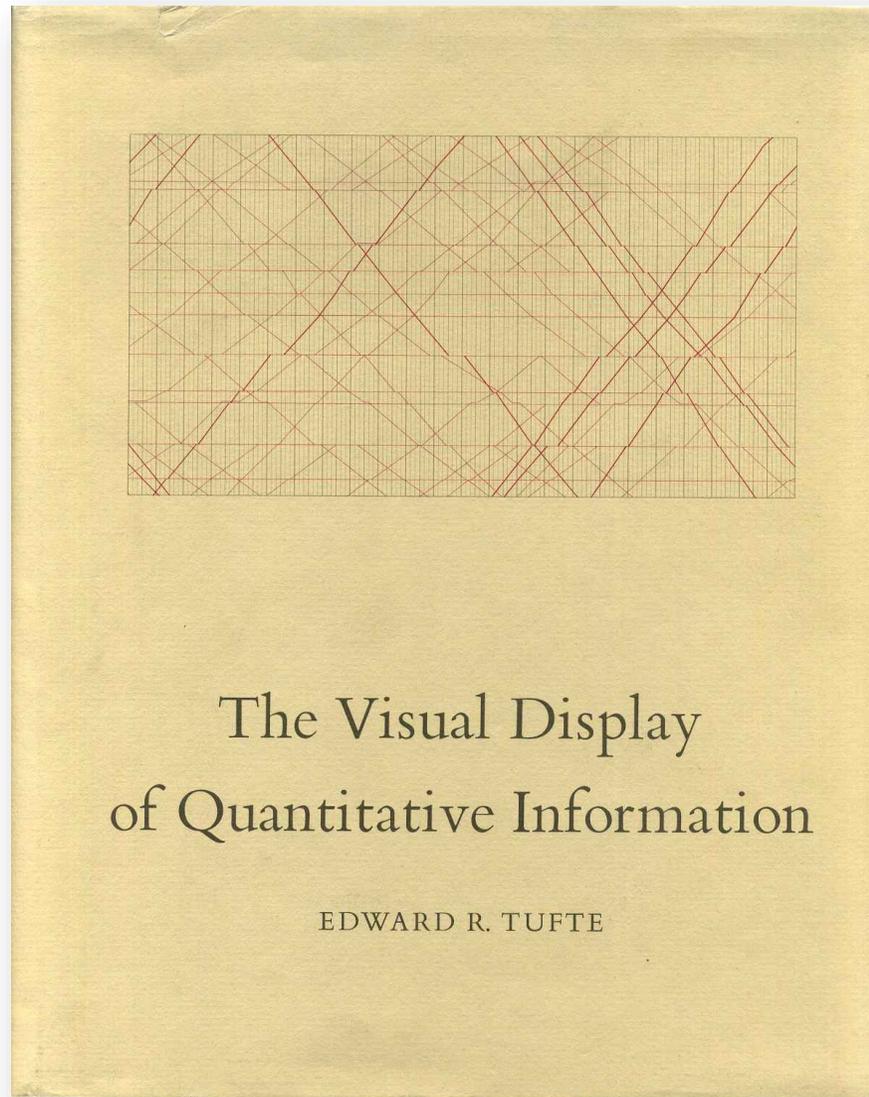


## CPU performance vs. power

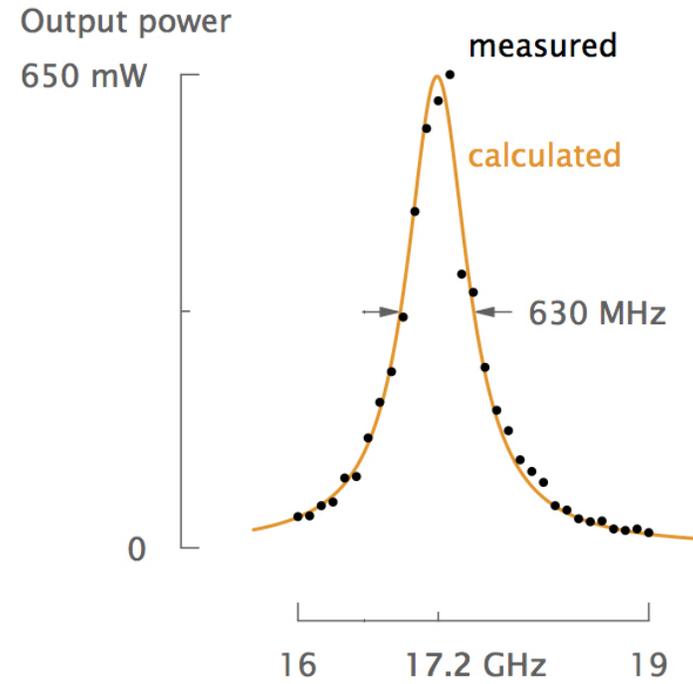
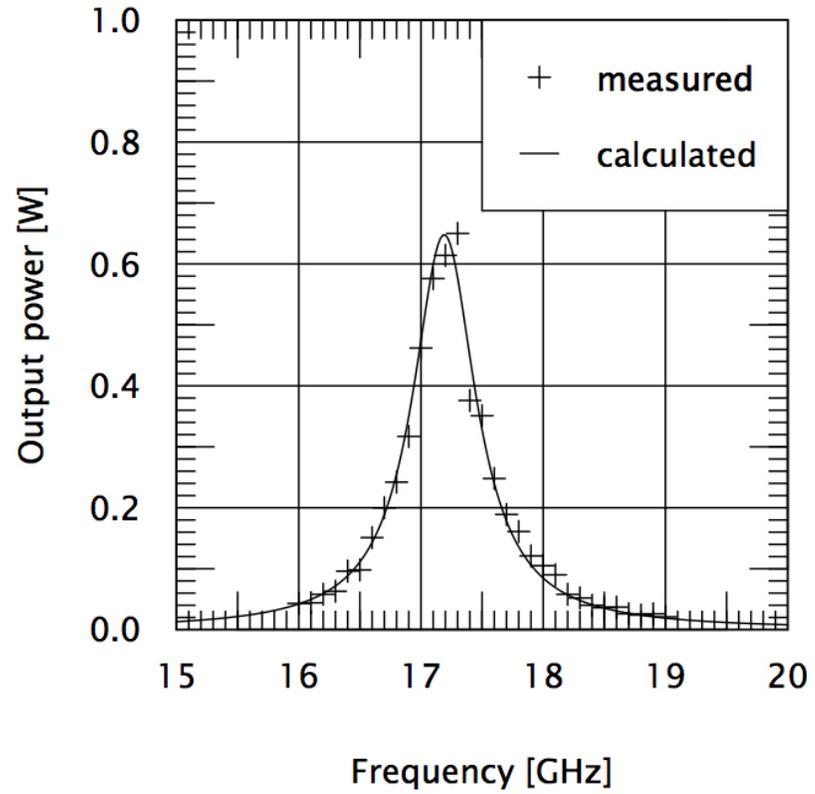


Up to  
**2x**  
faster CPU  
performance<sup>1</sup>

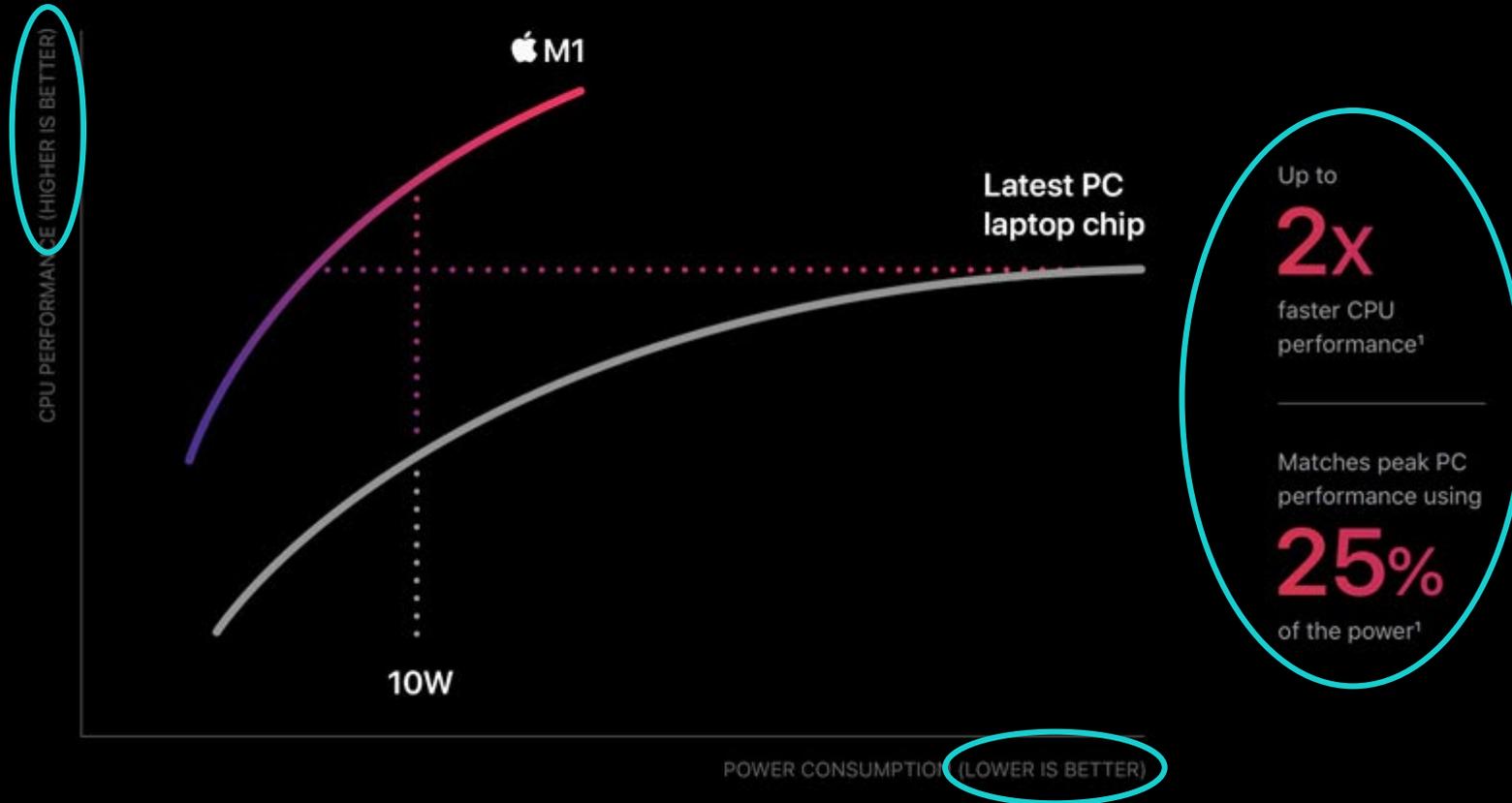
Matches peak PC  
performance using  
**25%**  
of the power<sup>1</sup>

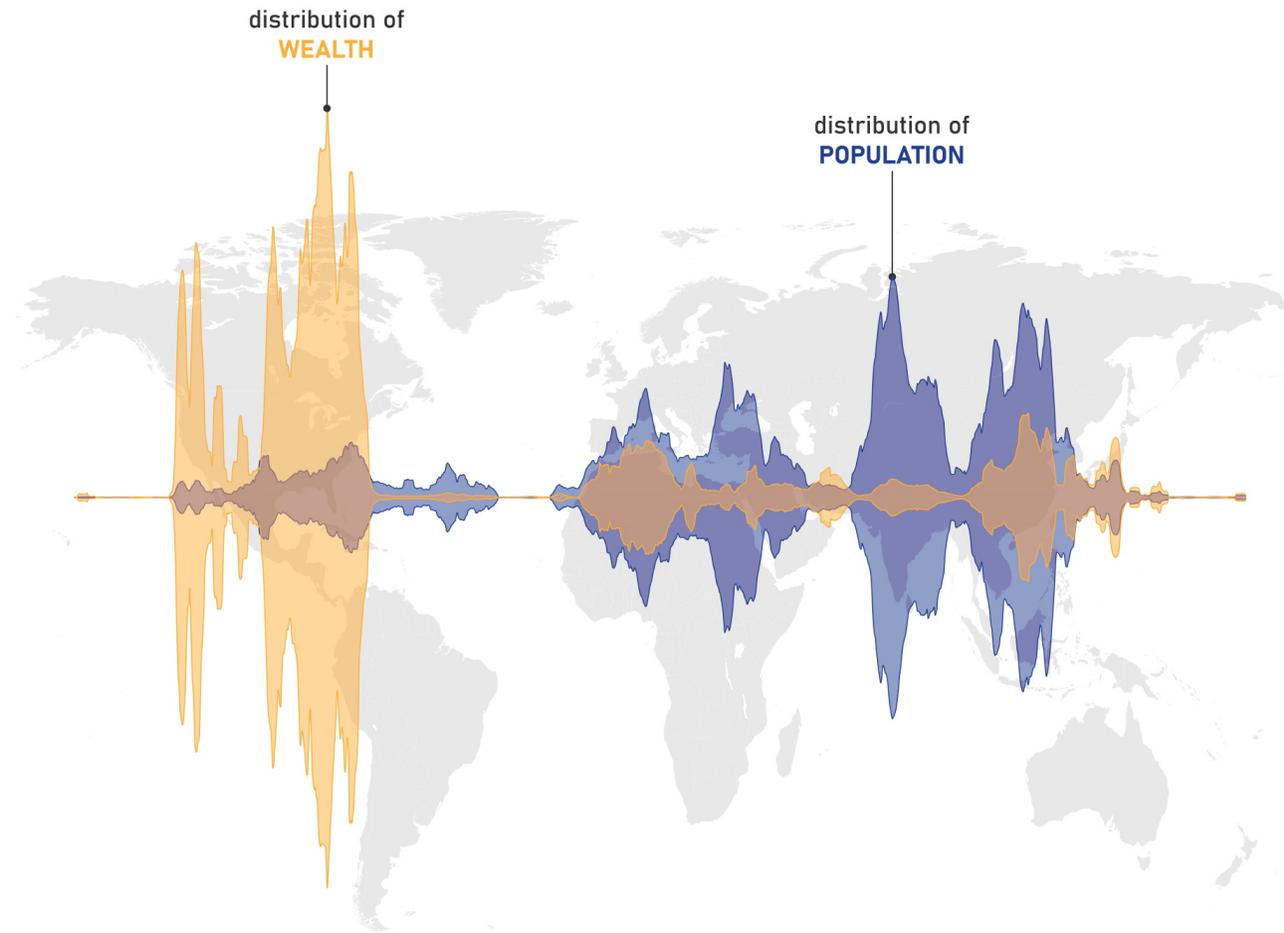


“Maximaliseer de **data-inkt verhouding**”



## CPU performance vs. power





## The Wealthy West

Inequality is not just limited to North versus South

**Source:** Credit Suisse Global Wealth Report 2019; Socioeconomic Data and Applications Center - Gridded Population of the World v.11

A #MakeoverMonday visualization  
by **Koen Van den Eeckhout** (@koen\_vde)

ankleat13 3 points · 14 days ago  
↓ Seriously how does this have so many awards it's doesn't even make sense.

Reply Give Award Share Report Save

Craigmm114 680 points · 14 days ago  
↓ Am I reading this wrong or is this a terrible representation? Europe is completely skewed since it is right above Africa which would definitely mess it up.

Reply Give Award Share Report Save

willjoke4food 256 points · 14 days ago  
↓ This is extremely useless visualisation

Reply Give Award Share Report Save

d80hunter 35 points · 14 days ago  
↓ You wasn't supposed to look that hard and notice the fine details, it is a reactionary click bait graph. The keywords "wealth inequality" and "west" with the data shown sure make it seem that way.

Reply Give Award Share Report Save

Specialey 36 points · 14 days ago  
↓ I cannot read the graph, it's either that I'm graphically illiterate or this is a terribly made graph

Reply Give Award Share Report Save

BillyBuckets 17 points · 14 days ago  
↓ The second one.

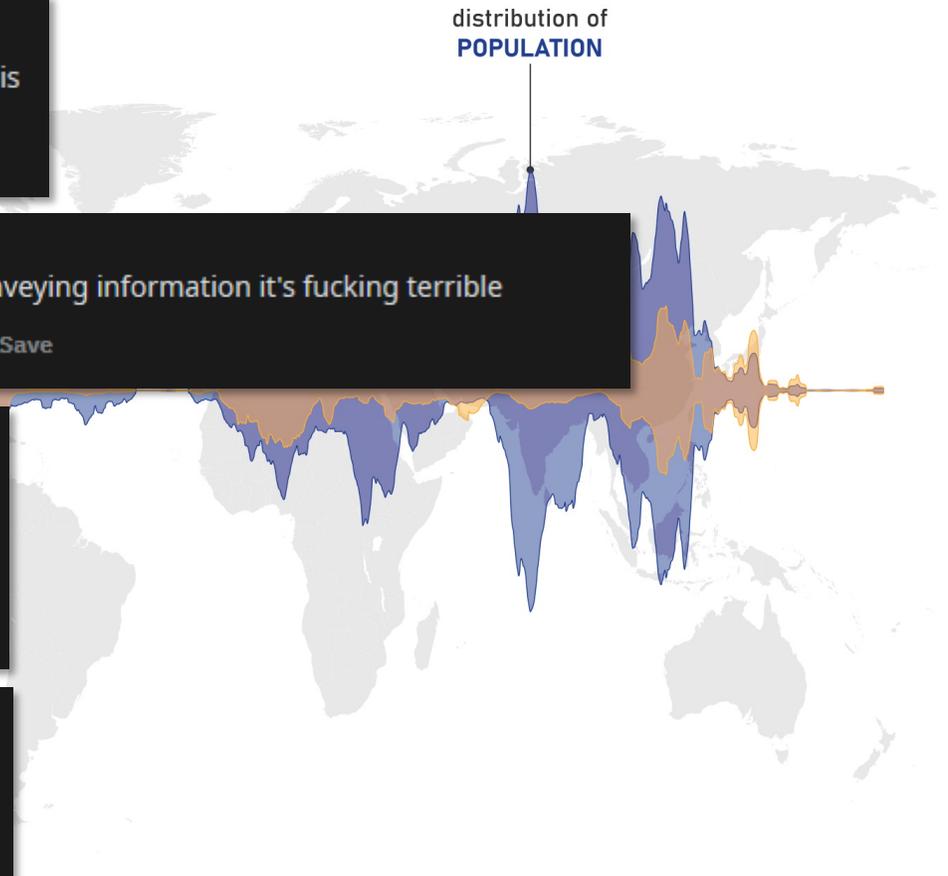
Reply Give Award Share Report Save

Pikesmakker 8 points · 14 days ago  
↓ This presentation is fucking terrible

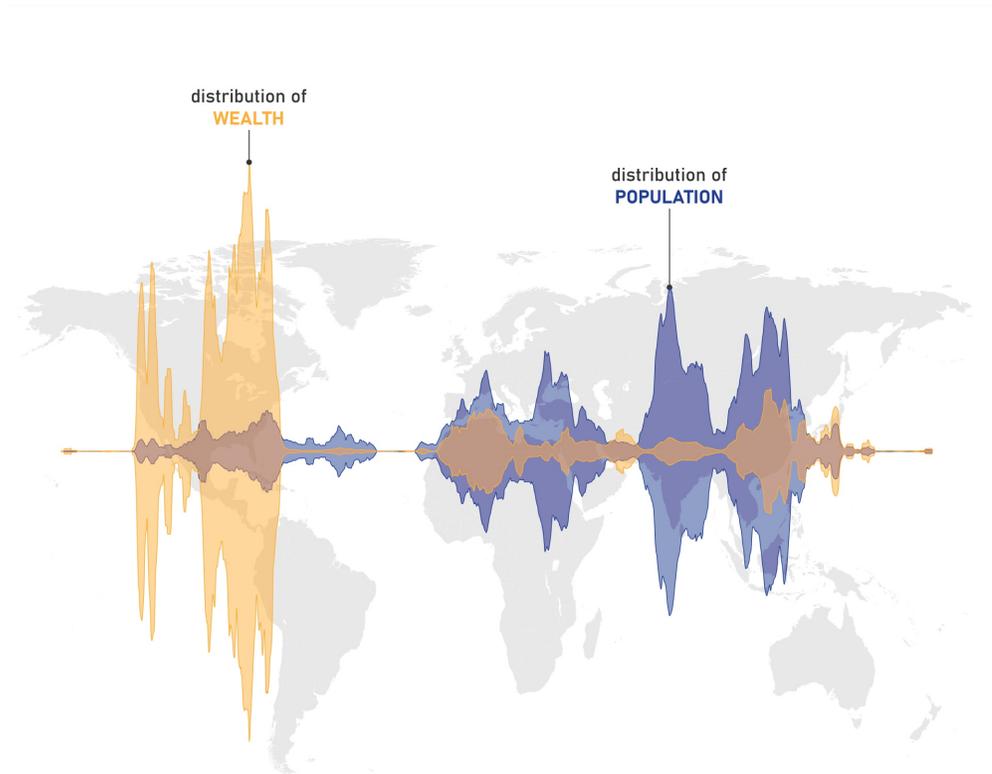
Reply Give Award Share Report Save

bodie\_ 4 points · 13 days ago  
↓ This graph is horrendous. I've read more than a hundred comments and no-one is able to explain how it's supposed to be read.

Reply Give Award Share Report Save



zation  
n\_vde)

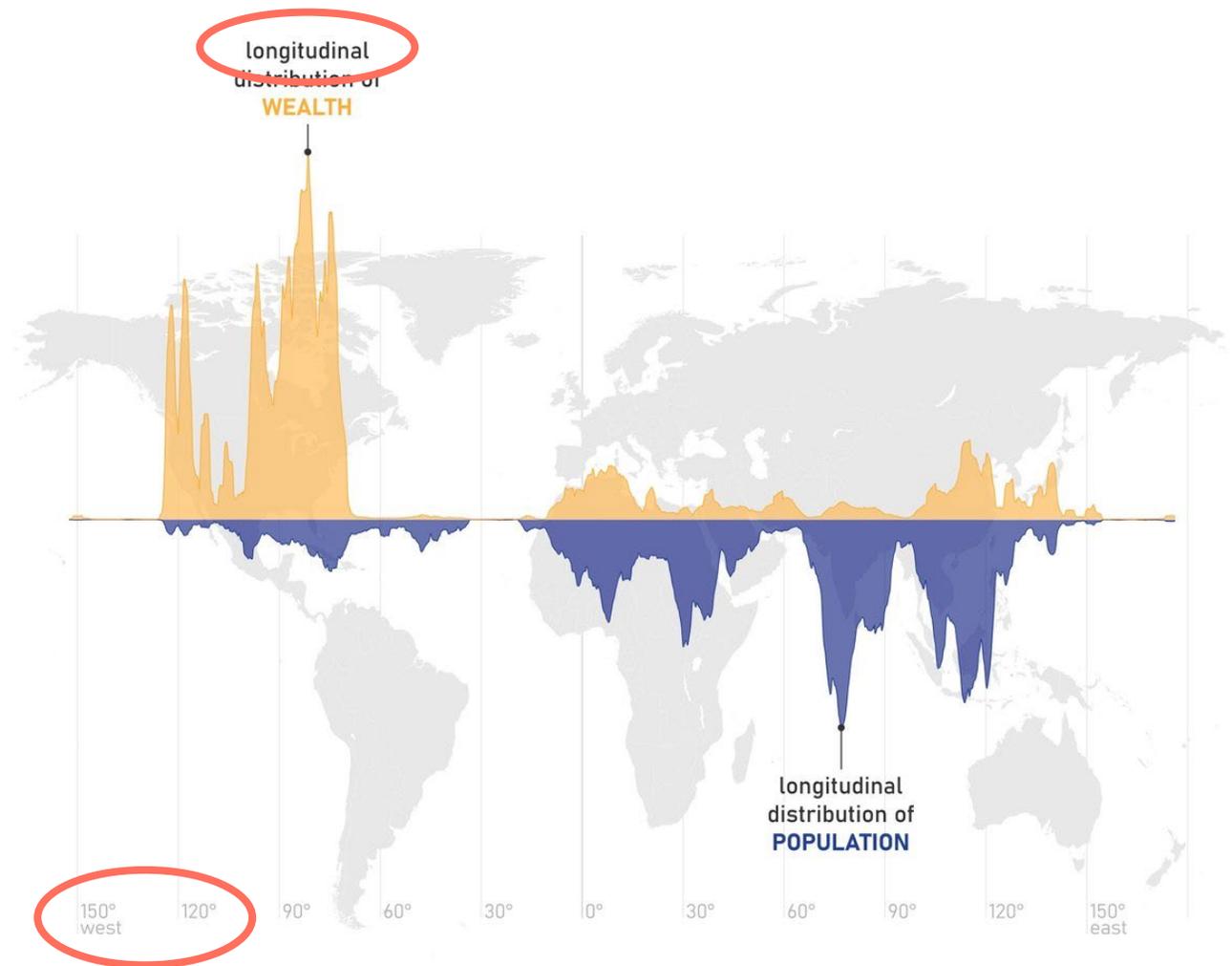


## The Wealthy West

Inequality is not just limited to North versus South

Source: Credit Suisse Global Wealth Report 2019; Socioeconomic Data and Applications Center - Gridded Population of the World v.11

A #MakeoverMonday visualization by **Koen Van den Eeckhout** (@koen\_vde)

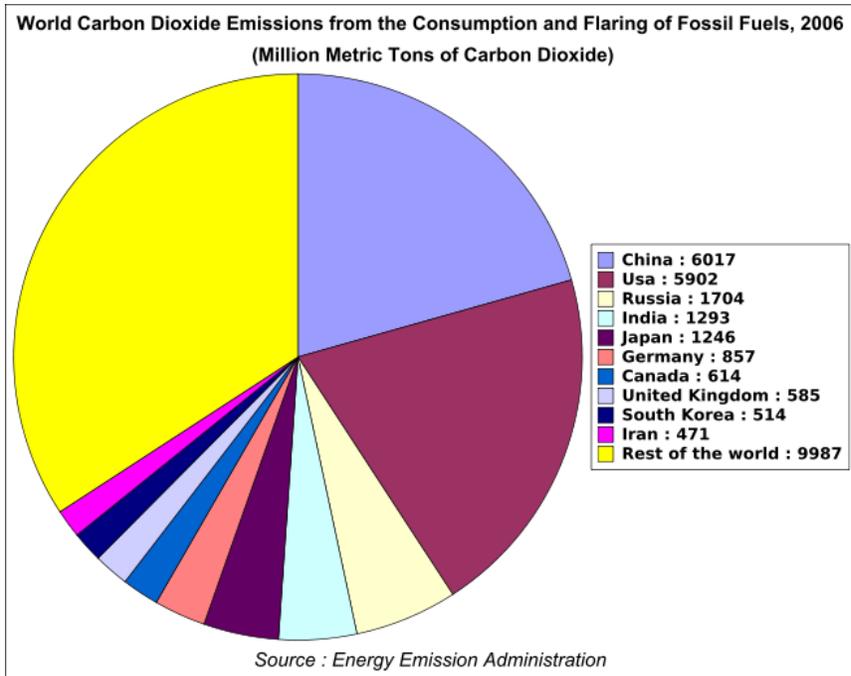


## The Wealthy West

Inequality is not just limited to North versus South

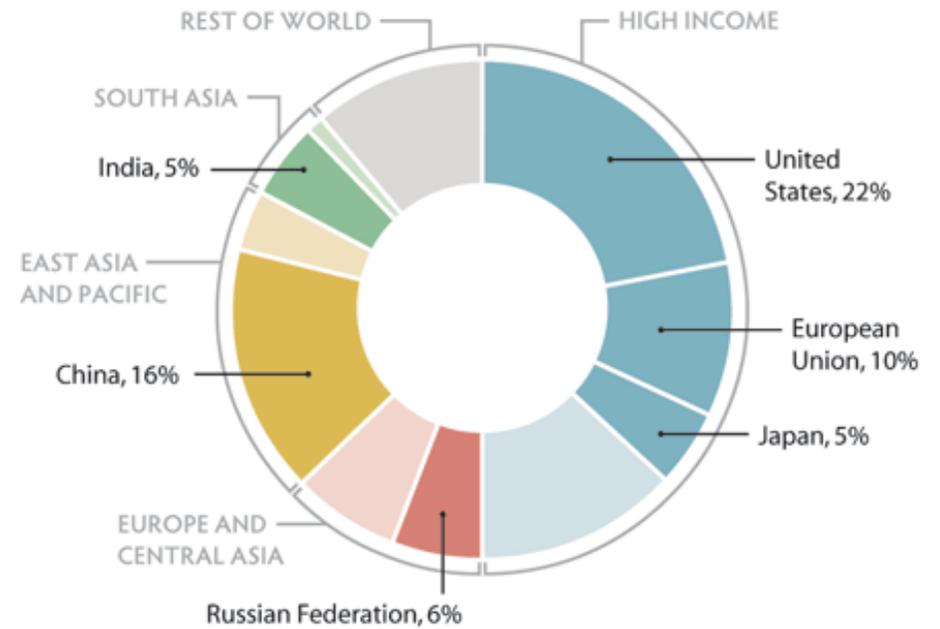
Source: Credit Suisse Global Wealth Report 2019; Socioeconomic Data and Applications Center - Gridded Population of the World v.11

A #MakeoverMonday visualization by **Koen Van den Eeckhout** (@koen\_vde)

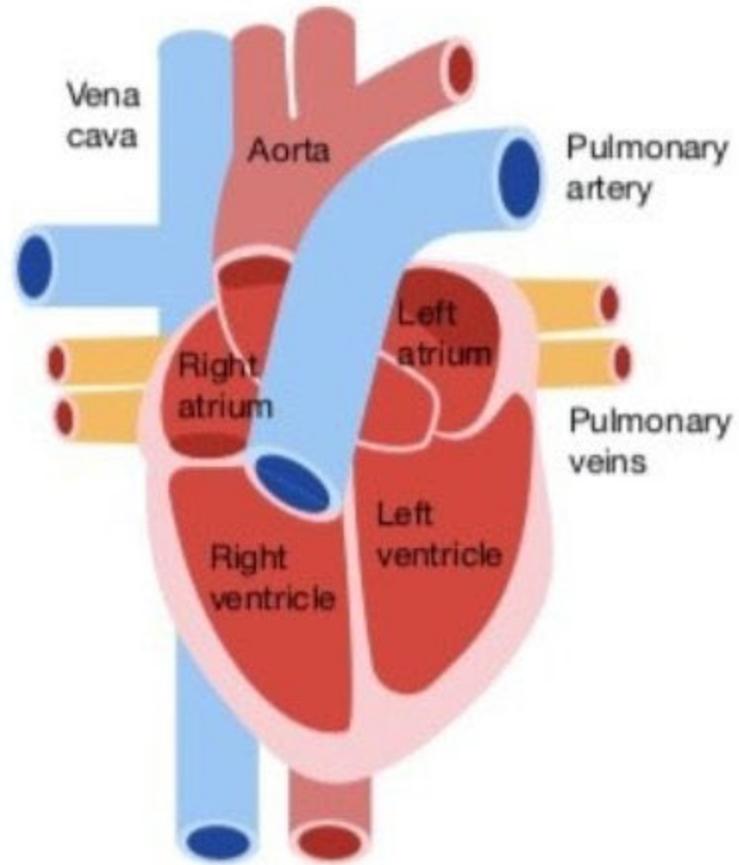


## GLOBAL SHARE OF CO<sub>2</sub> EMISSIONS

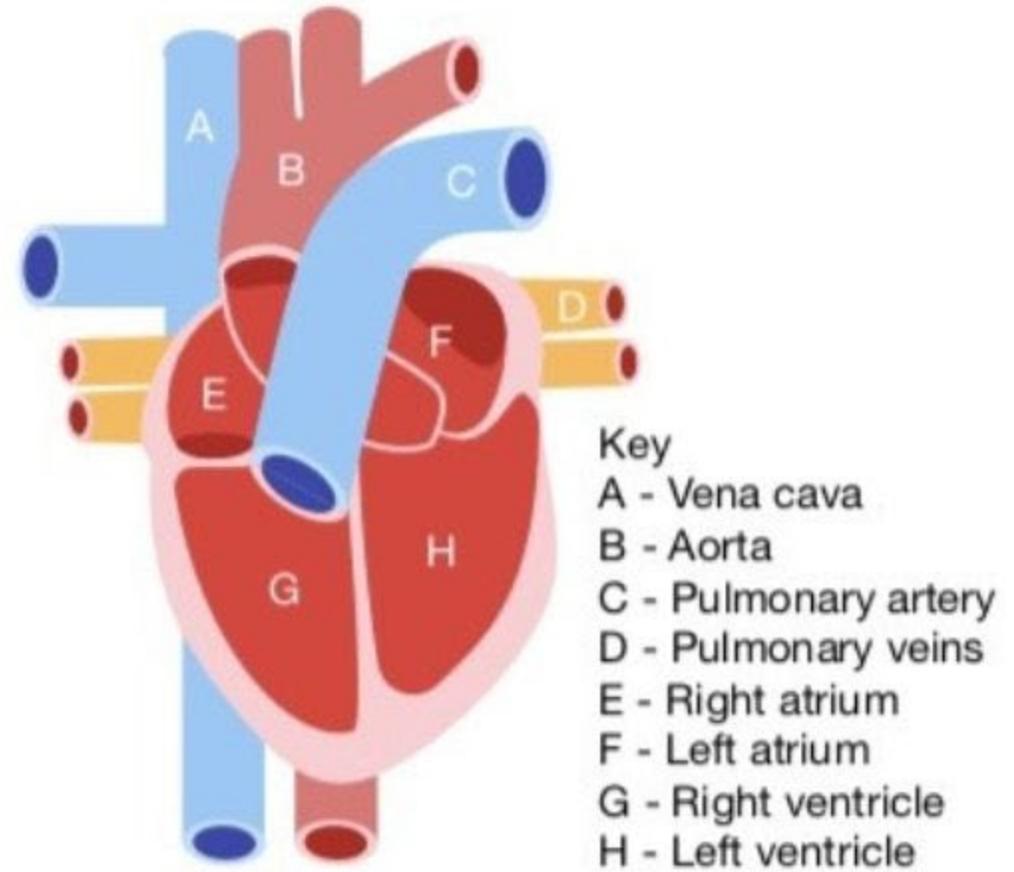
Carbon dioxide emissions are dominated by just five countries, and the European Union:

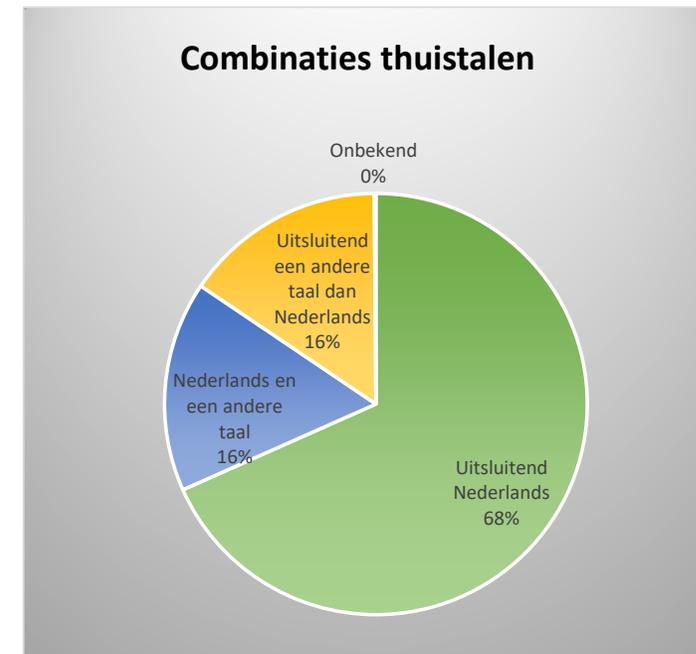
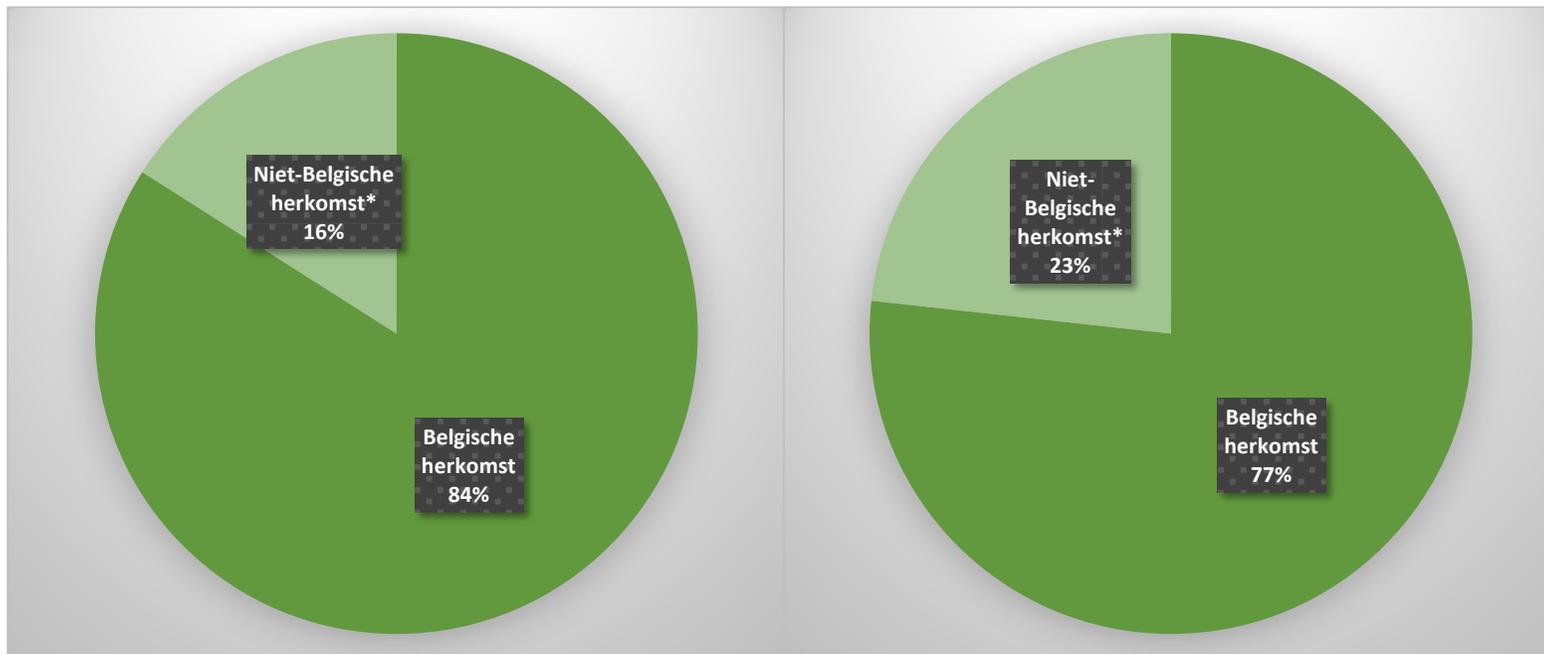


a)



b)





# Signaal-ruisverhouding

verwijder ruis en afleiding  
voeg nuttige annotaties toe  
plaats labels dicht bij de data

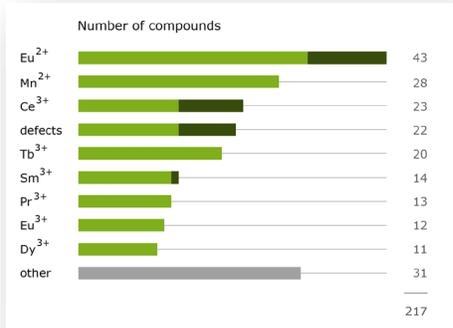


# Grafieken ontwerpen

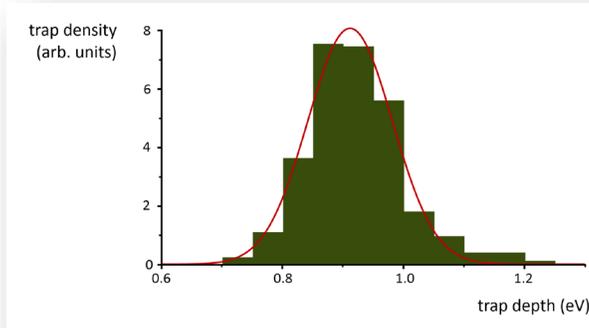
# Grafiektypes

# Wat willen we tonen?

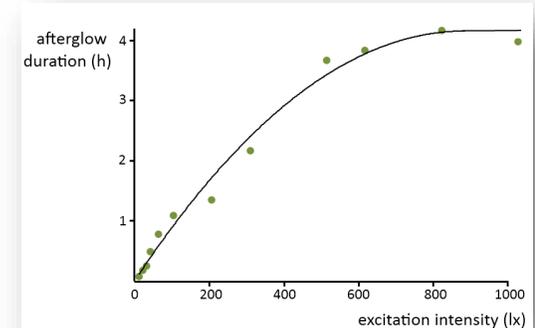
## vergelijking



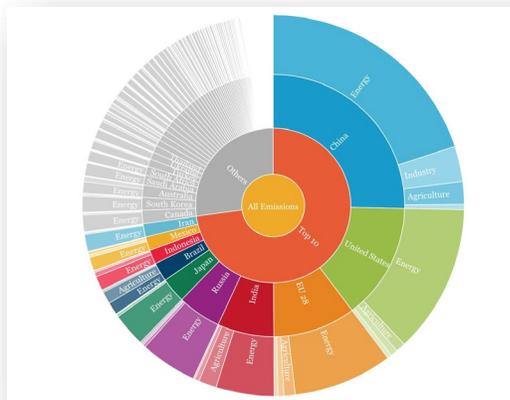
## verdeling



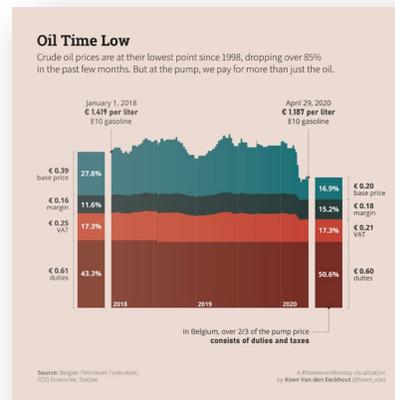
## correlatie



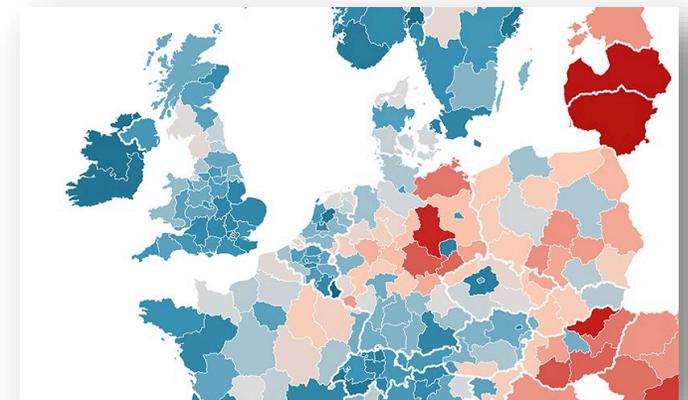
## hiërarchie



## evolutie

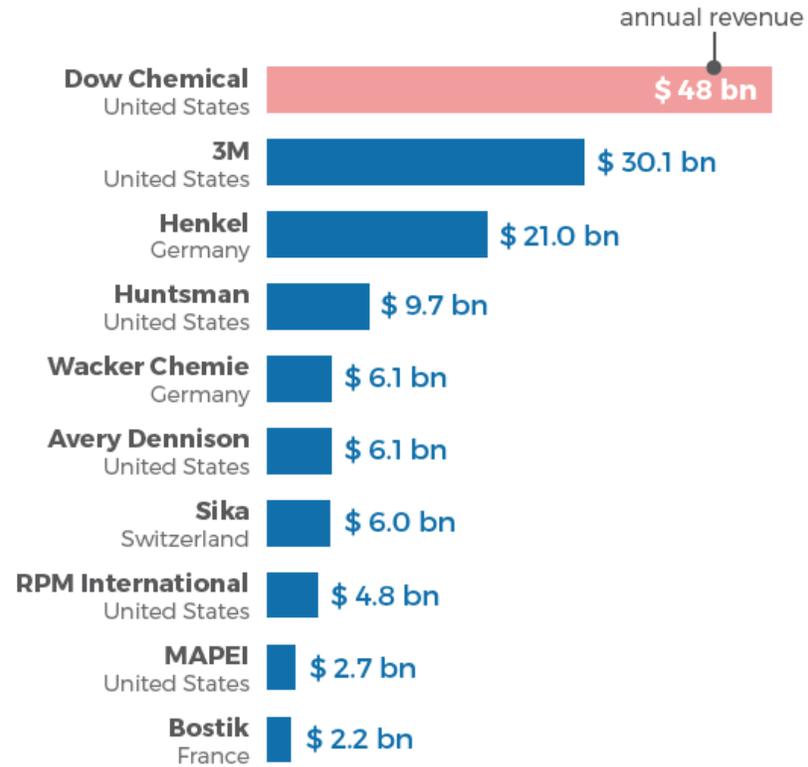


## ruimtelijke verdeling



# Klassieke grafiektypes

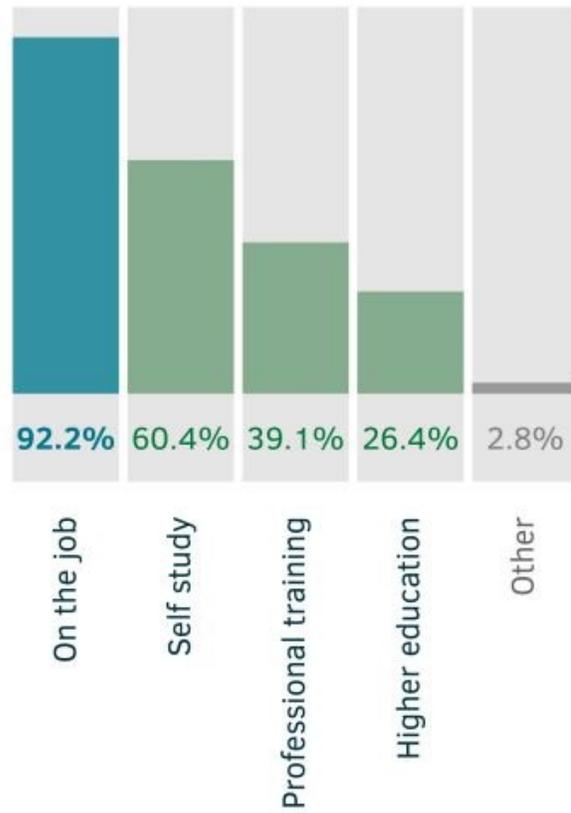
## Staadtdiagram: vergelijking



# Probleem

Weinig plaats in het staafdiagram

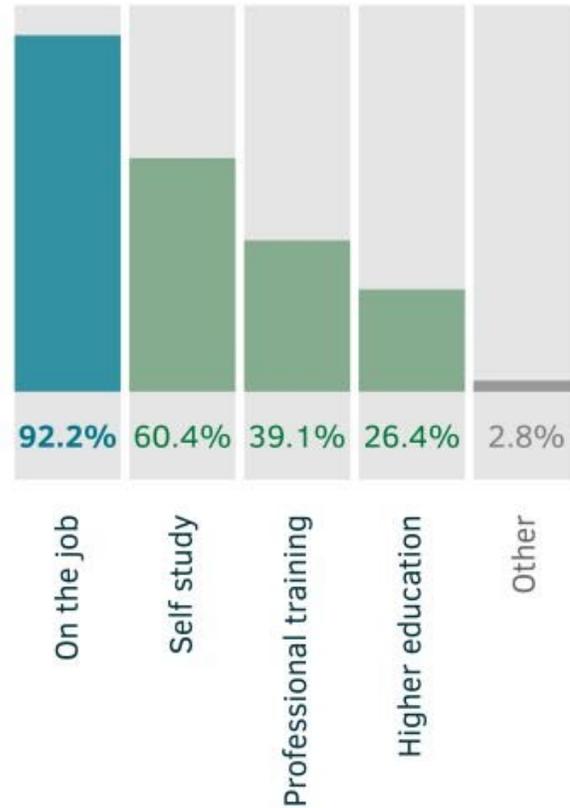
Where did you learn your skills?



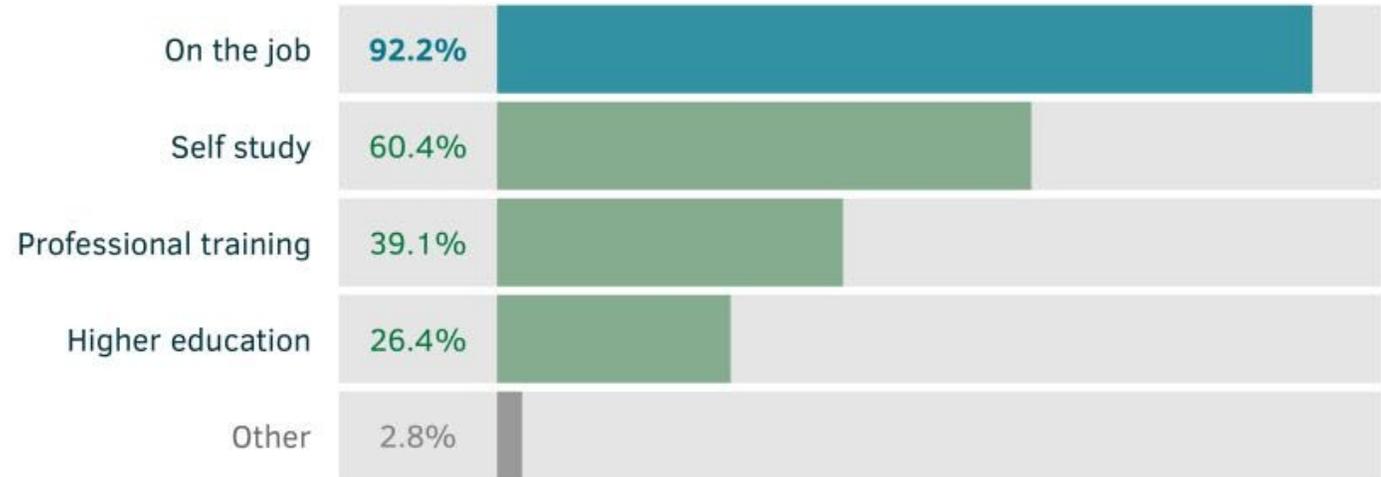
# Oplossing

Gebruik een horizontaal staafdiagram

Where did you learn your skills?

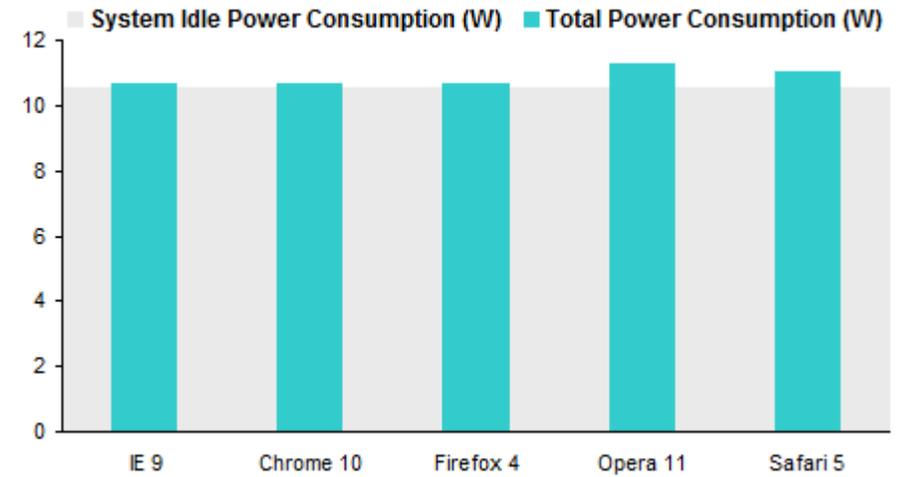
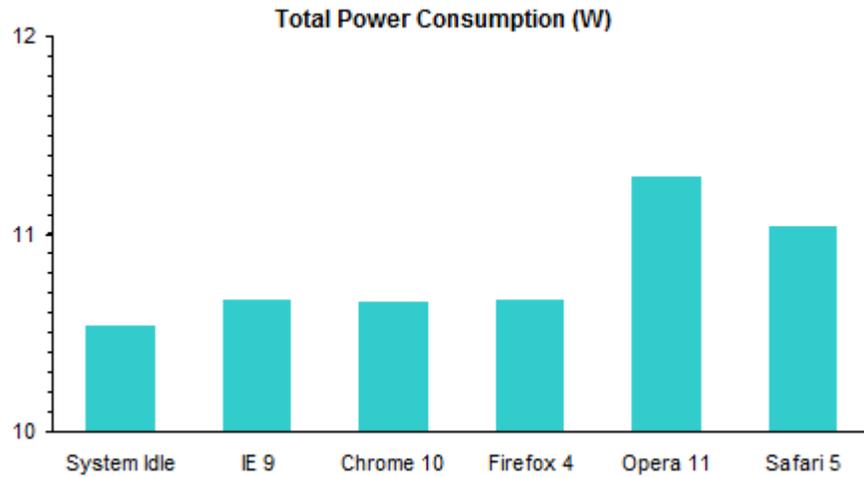


Where did you learn your skills?



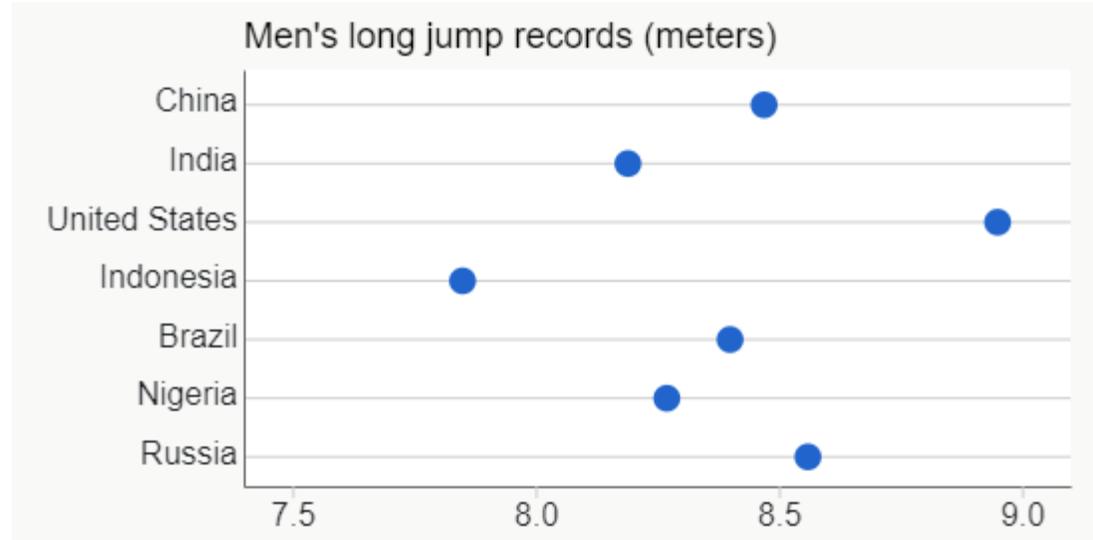
# Probleem

Staafdiagram begint niet vanaf 0



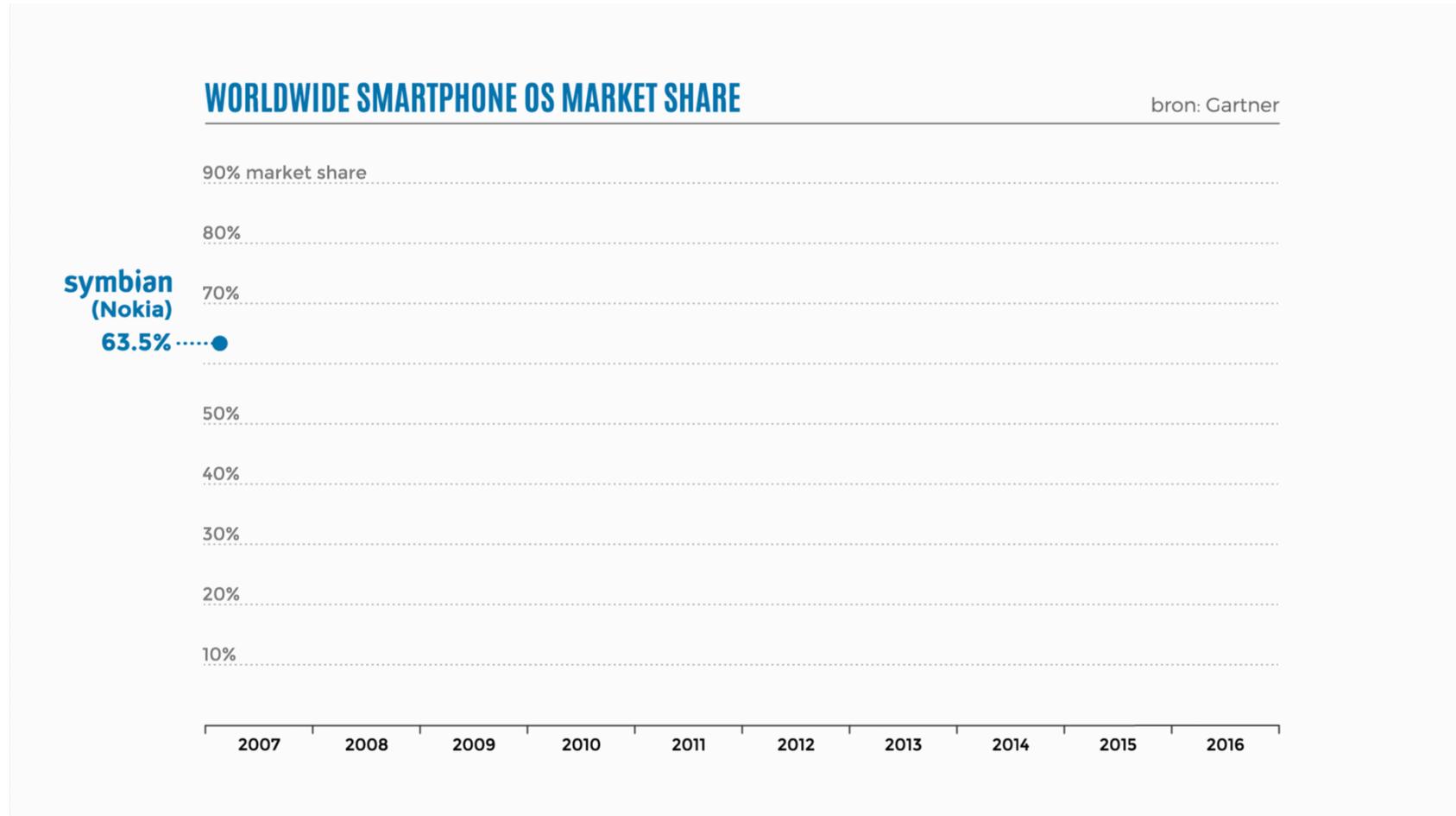
# Oplossing

Gebruik een alternatief, zoals een dot plot



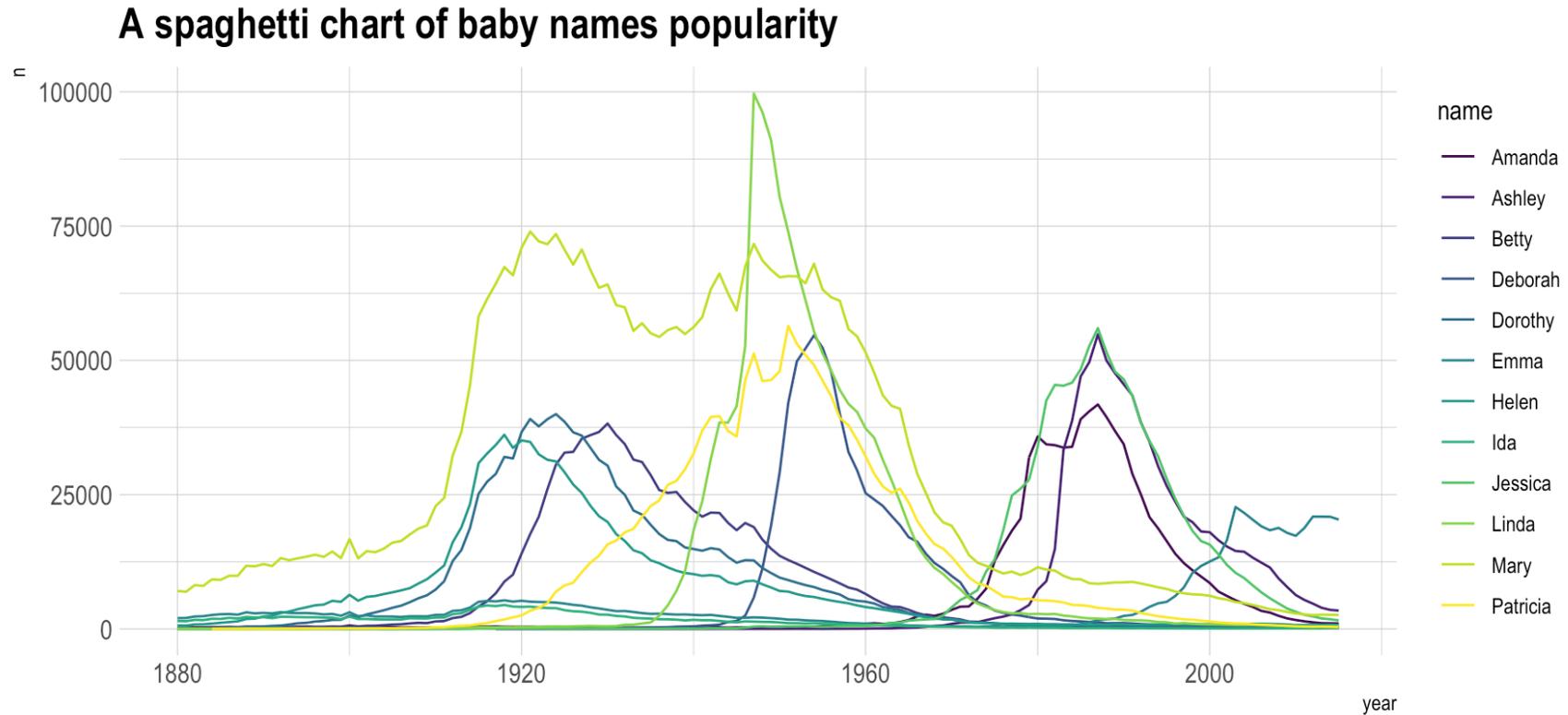
# Klassieke grafiektypes

## Lijndiagram: evolutie



# Probleem

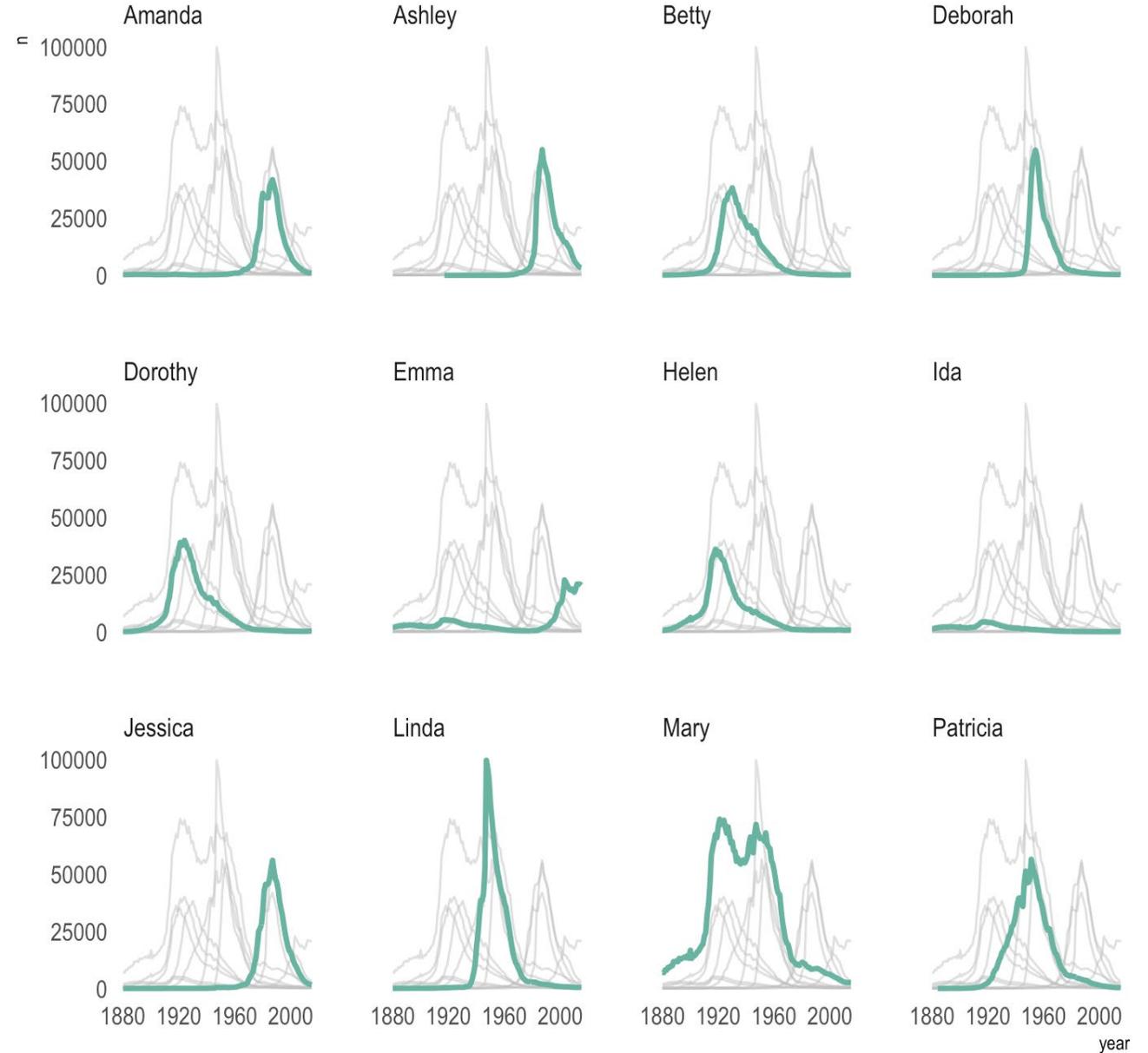
Lijndiagram 'spaghetti'



# Oplossing

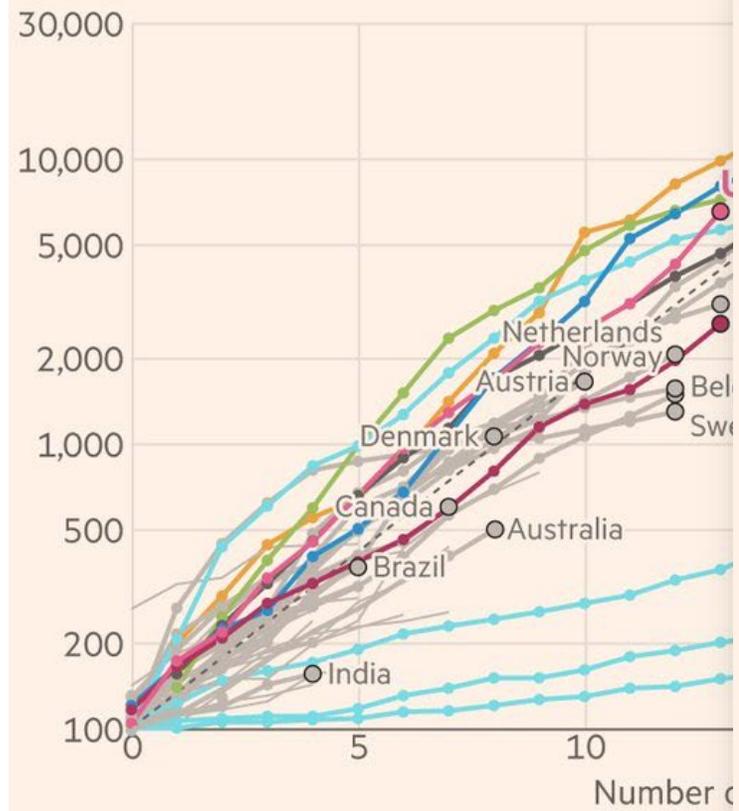
Laat één van de lijnen er meer uitspringen

A spaghetti chart of baby names popularity



Most western countries are on track to reach 10,000 cases by the end of the year and Singapore have limited the spread of the virus.

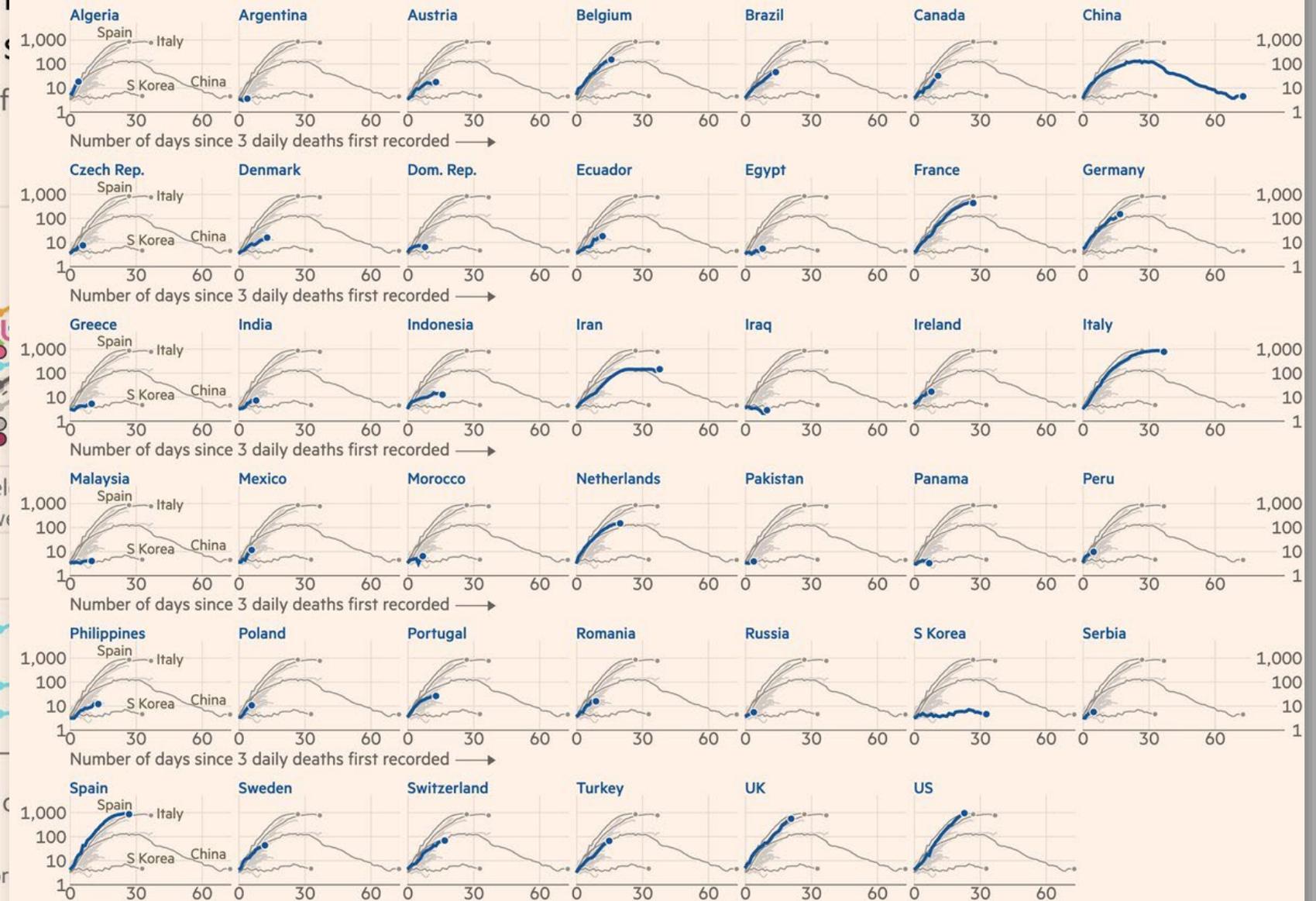
Cumulative number of cases, by number of days since 3 daily deaths first recorded



FT graphic: John Burn-Murdoch / @jburnmurdoch  
 Source: FT analysis of Johns Hopkins University, CSSE; Worldometers; FT research. Data updated April 05, 19:00 GMT  
 © FT

### Daily death tolls are still accelerating in most countries

Daily deaths with coronavirus (7-day rolling average), by number of days since 3 daily deaths first recorded

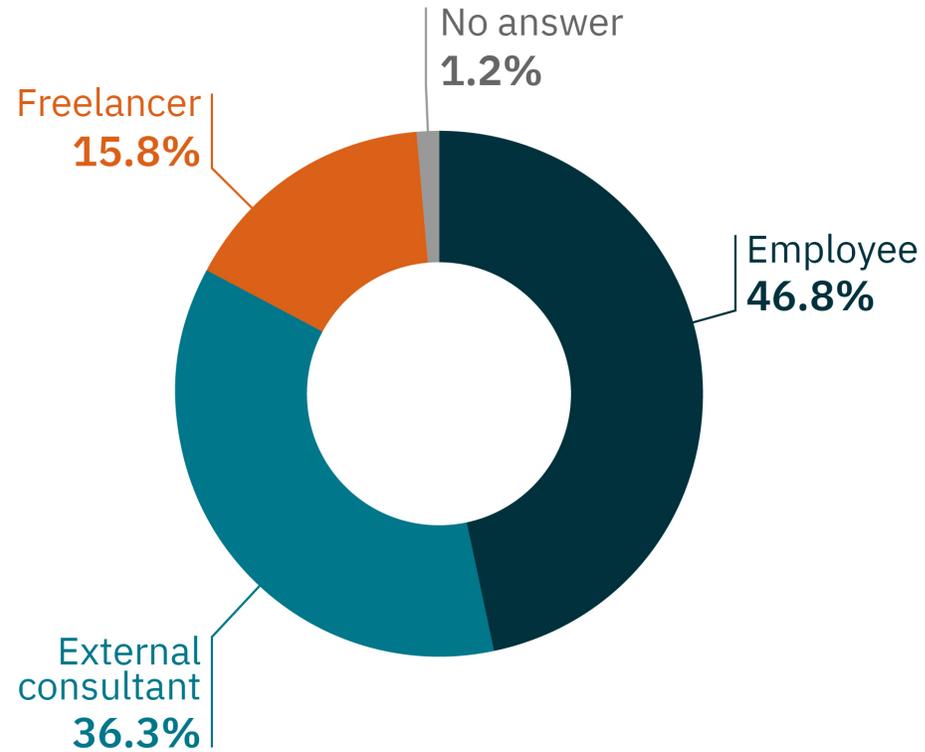


FT graphic: John Burn-Murdoch / @jburnmurdoch  
 Source: FT analysis of European Centre for Disease Prevention and Control; Worldometers; FT research. Data updated April 05, 19:00 GMT  
 © FT

# Klassieke grafiektypes

Taartdiagram: verdeling

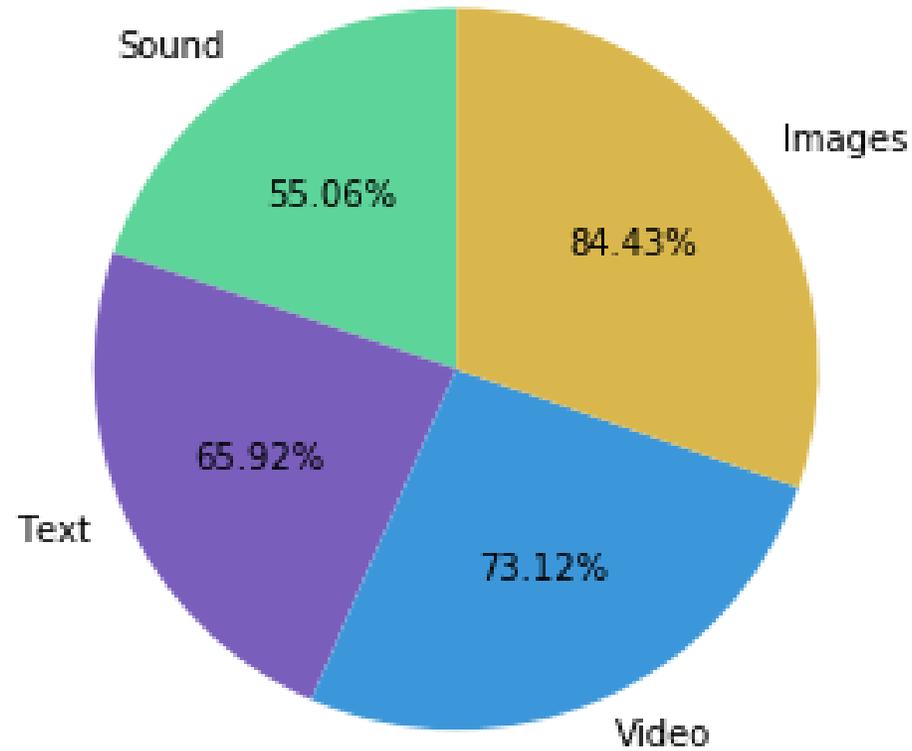
Type of employment



# Probleem

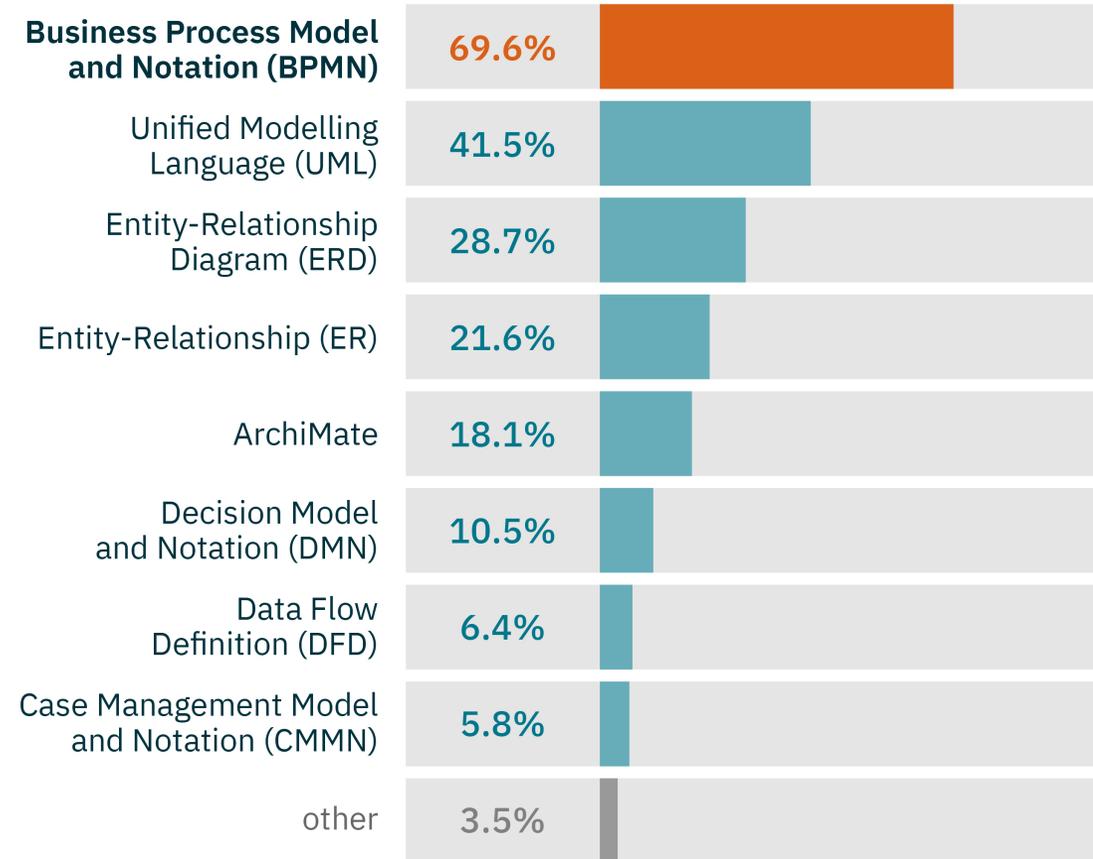
Het totaal is niet gelijk aan 100%

~~X~~ What apps do users use each week?



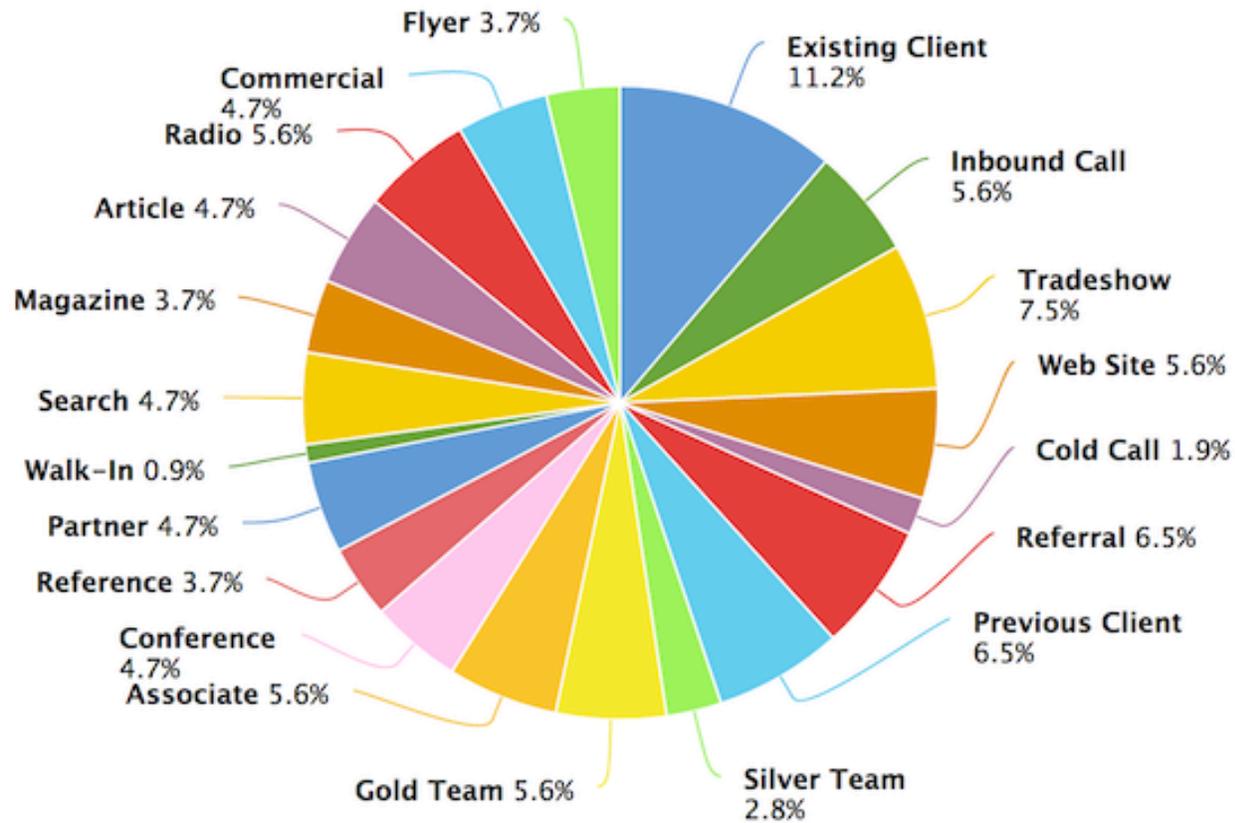
# Oplossing

## Gebruik een staafdiagram



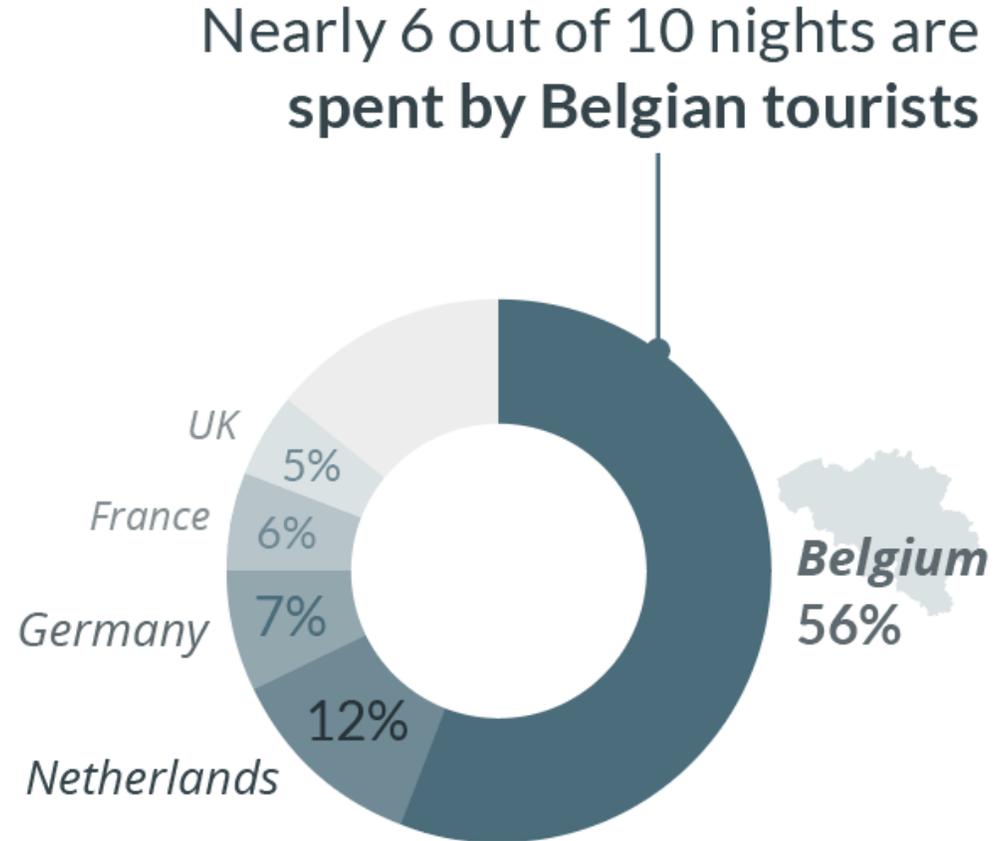
# Probleem

Te veel categorieën



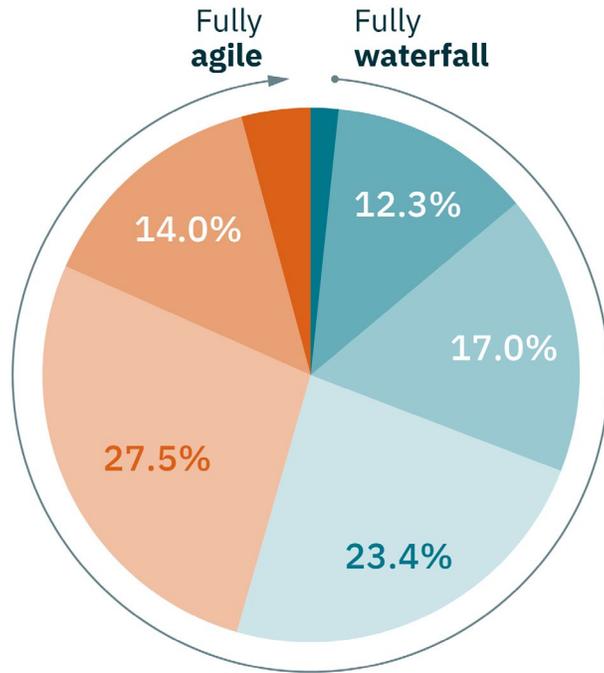
# Oplossing

Groeppeer minder belangrijke categorieën



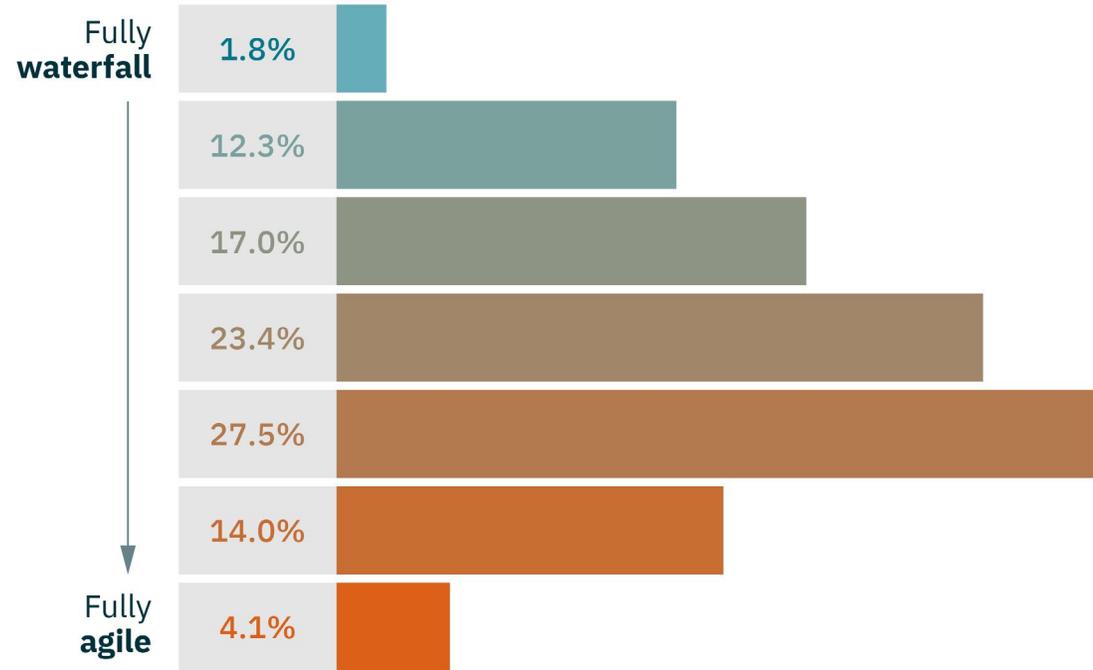
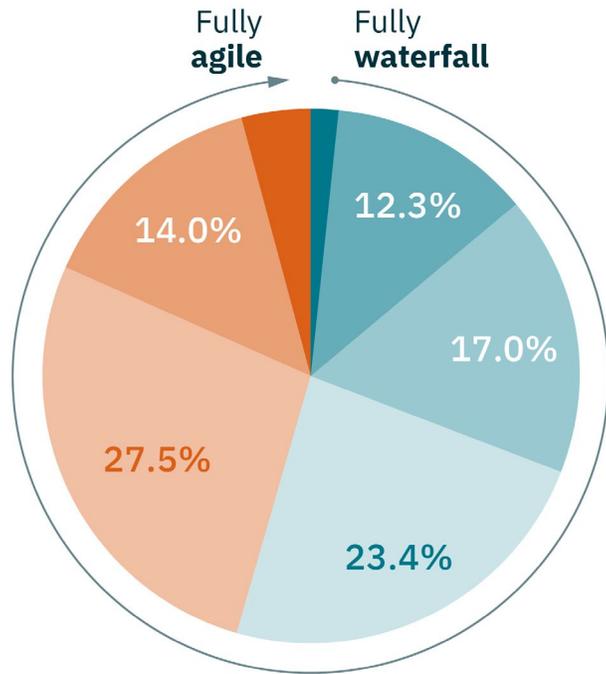
# Probleem

Moeilijk om onderling te vergelijken



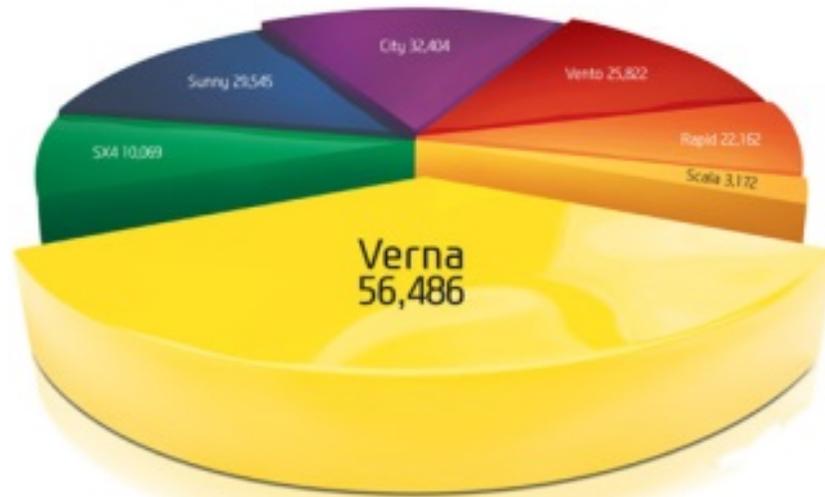
# Oplossing

Gebruik een staafdiagram



# Probleem

3D taartdiagram geeft een vertekend beeld



JAN-DEC 2012  
Cumulative Sales Figures  
Source: SIAM Data

The new **FLUIDIC**  
**VERNA**  
It sets you thinking

## The chartbuster rules.

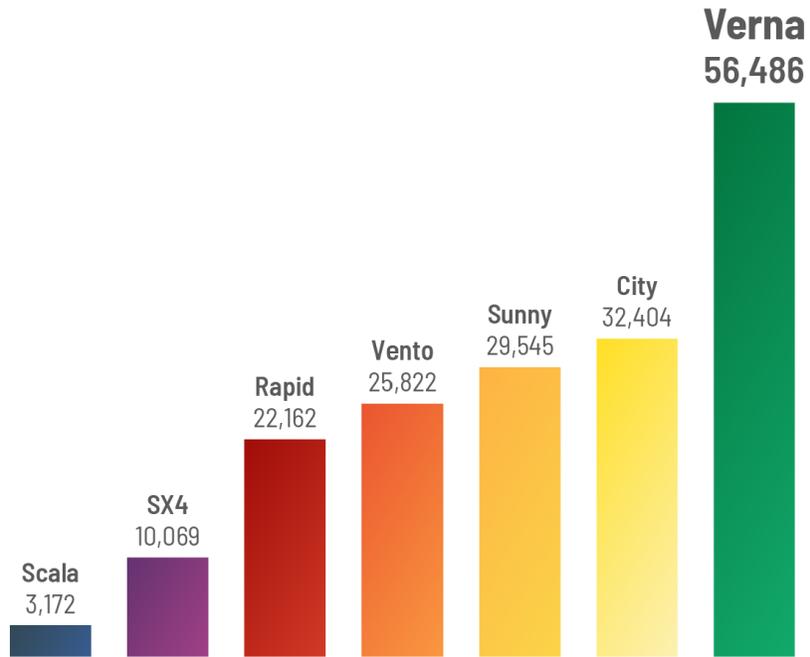
The Verna stays the undisputed No. 1 in its segment.

With its inimitable styling and superior design, the Verna has emerged as the largest selling car in its segment by a large margin. And it's not just the car that's made us the leader, it's also discerning people like you. No wonder the competition's been left behind. Far far behind.



# Oplossing

Gebruik een staafdiagram



JAN-DEC 2012 Cumulative Sales Figures  
Source: SIAM Data

The new **FLUIDIC**  
**VERNA**  
It sets you thinking

## The chartbuster rules.

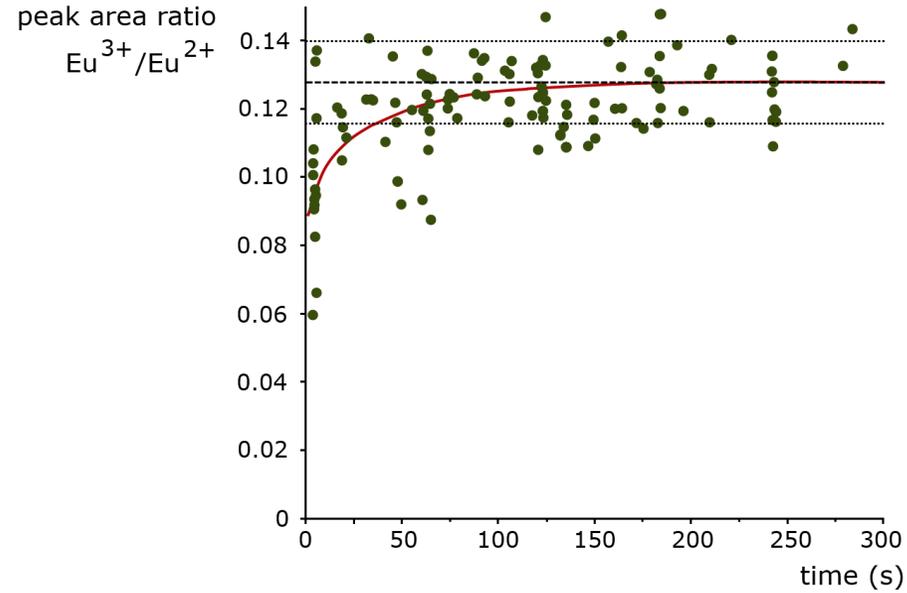
The Verna stays the undisputed No. 1 in its segment.

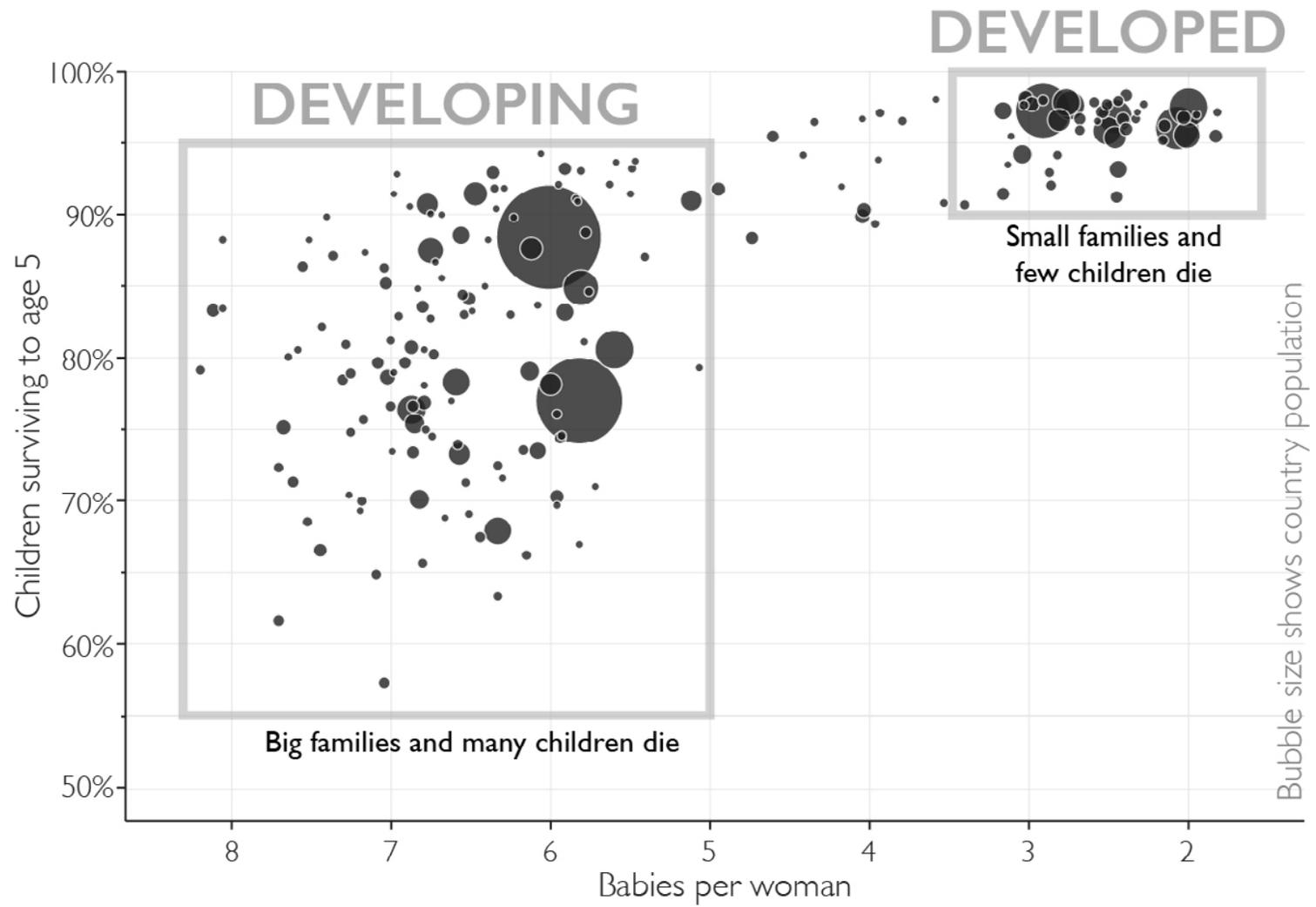
With its inimitable styling and superior design, the Verna has emerged as the largest selling car in its segment by a large margin. And it's not just the car that's made us the leader, it's also discerning people like you. No wonder the competition's been left behind. Far far behind.



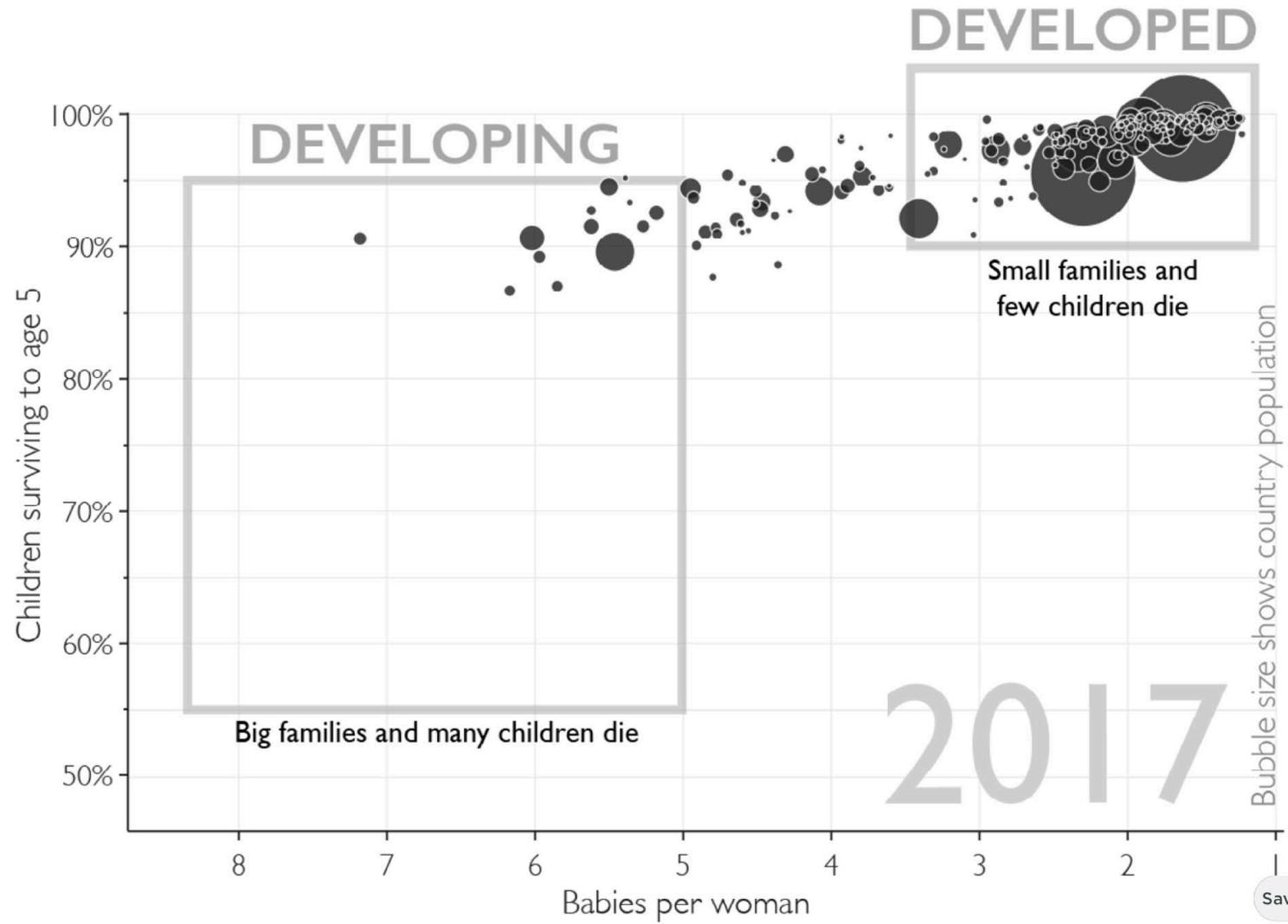
# Klassieke grafiektypes

## Scatterplots: correlatie en verdeling





Sources: UN-IGME & UN-Pop[1,3]



Sources: UN-IGME, UN-Pop[1,3] & Gapminder[6]

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[www.datavizcatalogue.com](http://www.datavizcatalogue.com)

# Treemap



## Description

Treemaps are an alternative way of visualising the hierarchical structure of a [Tree Diagram](#) while also displaying quantities for each category via area size. Each category is assigned a rectangle area with their subcategory rectangles nested inside of it.

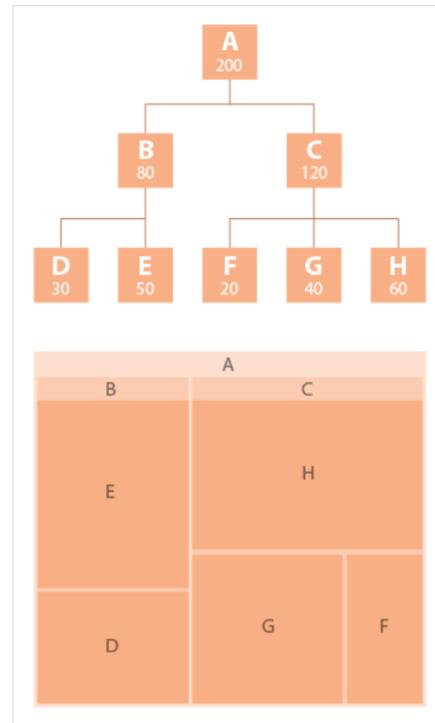
When a quantity is assigned to a category, its area size is displayed in proportion to that quantity and to the other quantities within the same parent category in a part-to-whole relationship. Also, the area size of the parent category is the total of its subcategories. If no quantity is assigned to a subcategory, then it's area is divided equally amongst the other subcategories within its parent category.

The way rectangles are divided and ordered into sub-rectangles is dependent on the tiling algorithm used. Many tiling algorithms have been developed, but the "squarified algorithm" which keeps each rectangle as square as possible is the one commonly used.

Ben Shneiderman originally developed Treemaps as a way of visualising a vast file directory on a computer, without taking up too much space on the screen. This makes Treemaps a more compact and space-efficient option for displaying hierarchies, that gives a quick overview of the structure. Treemaps are also great at comparing the proportions between categories via their area size.

The downside to a Treemap is that it doesn't show the hierarchal levels as clearly as other charts that visualise hierarchal data (such as a Tree Diagram or Sunburst Diagram).

## Anatomy



## Functions

- Comparisons
- Hierarchy
- Part-to-a-whole
- Proportions

## Similar Charts



[Circle Packing](#)



[Marimekko Chart](#)



[Sunburst Diagram](#)

## Tools to Generate Visualisation

[AnyChart \(code\)](#)

[amCharts \(code\)](#)

[D3 \(code\)](#)

[Datamatic](#)

[Google Charts \(code\)](#) or [Google Docs](#)

[Infogram](#)

[jChartFX \(JavaScript plugin\)](#)

[JSCharting \(JS Library\)](#)

[RAWGraphs](#)

[Slemma](#)

[Vega \(code\)](#)

[Vizzlo](#)

[ZingChart \(code\)](#)

## Examples

[Region-wise Literacy Rates in 2015, World Population - FusionCharts](#)

[Top 10 Chinese Exports to the World - AnyChart](#)

[Treemap - Datamatic](#)



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## 1) Choose your chart

What would you like to show?



|                                      |   |   |   |   |  |                                       |   |   |   |  |
|--------------------------------------|---|---|---|---|--|---------------------------------------|---|---|---|--|
| <br>barchart<br>one measure          | <br>grouped bar<br>two variables              | <br>diverging stacked bar<br>opposing variables | <br>deviation bar<br>delta between                      | <br>line chart<br>continuous time             | <br>dot-line chart<br>aggregated in time       | <br>area chart<br>one measure         | <br>100% stacked bar<br>one category + 100% | <br>100% stacked column<br>one timestamp + 100% | <br>100% stacked area<br>continuous time + 100% | <br>100% bar chart<br>adding up to 100%          |
| <br>floating bar<br>delta between    | <br>stacked bar<br>one category + total       | <br>panel bar<br>multiple categories            | <br>lollipop<br>like bar but thinner                    | <br>column chart<br>one measure               | <br>stacked column<br>like column + total      | <br>stacked area<br>like area + total | <br>100% stacked bar<br>category in time    | <br>100% stacked column<br>multiple categories  | <br>Sankey diagram<br>flow                      | <br>waffle chart<br>100 blocks filled            |
| <br>dumbbell<br>two groups           | <br>proportional<br>sizing                    | <br>x/y coordinate plot<br>measure combination  | <br>vertical waterfall<br>visual calculation            | <br>deviation column<br>above or below target | <br>deviation line<br>versus cumulative target | <br>waterfall<br>change in time       | <br>tree map<br>nested part to whole        | <br>100% waterfall<br>breakdown                 | <br>parallel set<br>part to multiple whole      | <br>Marimekko chart<br>plus extra variable       |
| <br>bullet graph<br>bad/ok/good      | <br>parallel coordinate<br>multi variate data | <br>pictograph<br>using icons                   | <br>visual diagram<br>data columns legend numbers graph | <br>timeline<br>order of events               | <br>sparklines<br>mini trend                   | <br>slopegraph<br>two time stamps     | <br>nested area<br>parts inside other parts | <br>Pareto chart<br>80 / 20 analysis            | <br>pie chart<br>not recommended                | <br>donut chart<br>not recommended               |
| <br>radial column<br>not recommended | <br>radial bar<br>not recommended             | <br>radar chart<br>not recommended              | <br>gauge<br>not recommended                            | <br>dot plot<br>before and after              | <br>cycle plot<br>repeating time series        | <br>horizon graph<br>high and low     | <br>funnel chart<br>conversion              | <br>Venn diagram<br>overlapping                 | <br>flow chart<br>step by step                  | <br>Gantt chart<br>planning                      |
| <br>dot matrix<br>frequency count    | <br>age distribution<br>two categories        | <br>histogram<br>per interval                   | <br>frequency polygon<br>distribution                   | <br>route map<br>direction                    | <br>symbol map<br>classes                      | <br>flow map<br>movement              | <br>organization chart<br>hierarchical      | <br>arc diagram<br>relations                    | <br>bump chart<br>rank over time                | <br>sorted stream graph<br>rank + size over time |
| <br>error bars<br>uncertainty        | <br>box plot<br>with median                   | <br>violin<br>box plot + density                | <br>ridgeplot<br>distributions over time                | <br>choropleth map<br>value by region         | <br>isopleth map<br>value by area              | <br>dot map<br>distribution           | <br>heatmap<br>use color to show            | <br>network diagram<br>relations + hierarchie   | <br>risk map<br>visualizing risk                | <br>scatterplot<br>correlation                   |
| <br>number<br>single big number      | <br>table<br>multiple numbers                 | <br>deviation box<br>focus on data              | <br>in bar labeling<br>more accuracy                    | <br>hexbin map<br>value by hex                | <br>bubble map<br>not recommended              | <br>chart on map<br>not recommended   | <br>dendrogram<br>clustering                | <br>sunburst<br>nested groups                   | <br>chord diagram<br>relations                  | <br>bubble<br>not recommended                    |

Use this chart for: analysing communicating monitoring confusing

## 2) Design your chart

Let your data speak

|  |   |
|--|---|
| <b>do's</b>  | <b>don'ts</b>   |
| <b>Show in context</b><br>Rank your data in a relevant way so patterns and outliers become visible.                              | <b>Misleading design</b><br>A truncated axis in a column or bar chart distorts the relative size of the columns.          |
| <b>relevant ranking</b><br>Enrich your chart with target or benchmarks, to give the values more meaning.                         | <b>cutting of Y axis</b><br>Multiple Y-axis give a false meaning to lines crossing or to the space between lines.         |
| <b>target or benchmark</b>   | <b>multiple Y axis</b>  |
| <b>Support easy comparison</b><br>When you have more than 4 series, change your chart to small multiples.                        | <b>Beauty over accuracy</b><br>Do not use 3D to make a chart prettier, it will make it harder and more confusing to read. |
| <b>small multiple</b><br>Gridlines make it easier to compare lengths of columns and bars and help to see the steepness of lines. | <b>3D effect</b><br>Although fluid lines might look nice, they are not representing the data properly.                    |
| <b>gridlines</b>   | <b>fluid lines</b>  |
| <b>Visual hierarchie</b><br>De-emphasize all non-data elements like axis and legend. The data is more important.                 | <b>Too much</b><br>The human brain can only process a maximum of 4 series in a chart.                                     |
| <b>less is more</b>  | <b>more than 4 series</b><br>Things that are the same, should have the same color.  |
| <b>emphasize</b><br>Highlight the most important element, to make it stand out.  | <b>too much or meaningless color</b>  |
| <b>Show and tell</b><br>Create a title to name the insight in the chart.   | <b>Hard to read</b><br>Show as little decimals as possible. Always show the same number of decimals.                      |
| <b>descriptive title</b><br>Labels and annotation help your data to tell a story.  | <b>too much details</b><br>Text and numbers that are not horizontal aligned are harder to read.                           |
| <b>annotation</b>  | <b>align text other than horizontally</b>   |

Copyright: gartner and chart design: www.Chart.Guide - Poster version: 4.0.2

Find more tips to choose and design your Perfect Chart at:

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info@Chart.Guide /ChartGuide @Chart\_Guide /ChartGuide

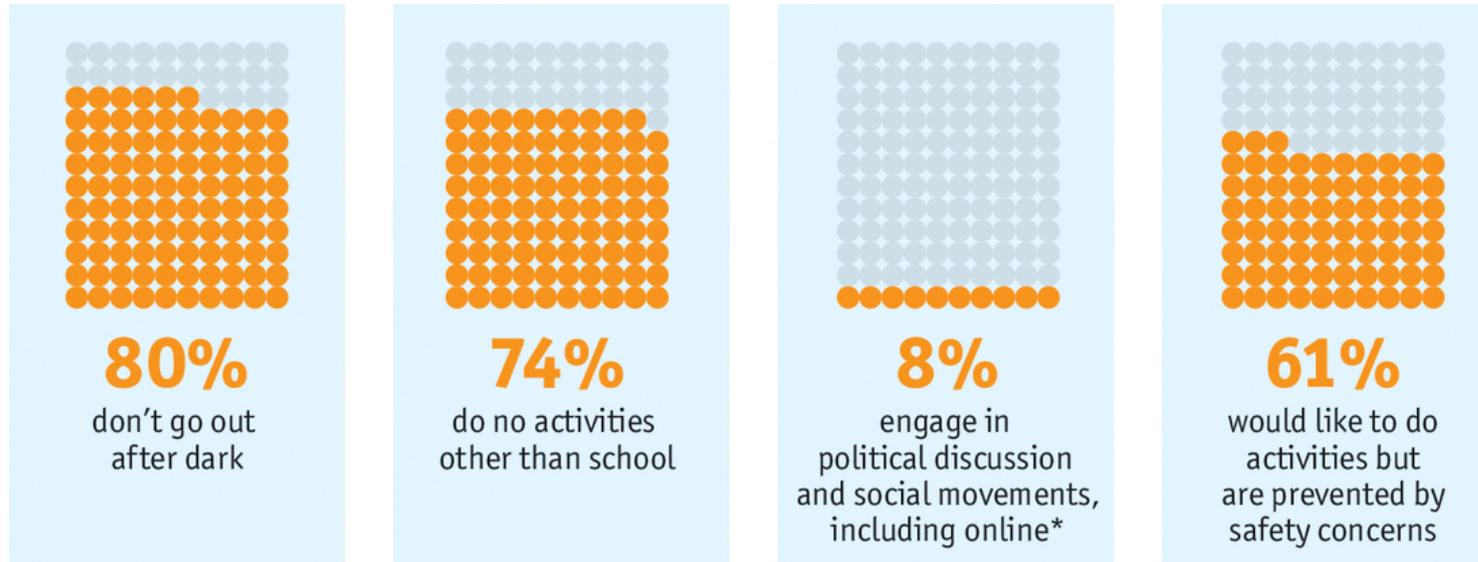
<https://chart.guide/>

# Minder klassieke grafiektypes

## Wafeldiagram

### Subdued

Of 120 surveyed Syrian teenagers:



Source: Mercy Corps

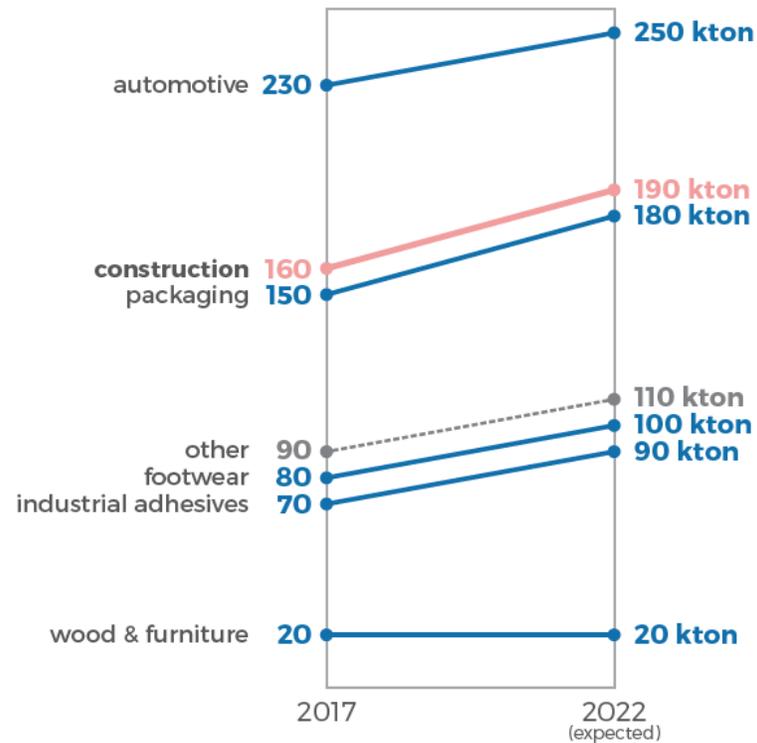
\**Economist* estimate based on the report

Economist.com

# Minder klassieke grafiektypes

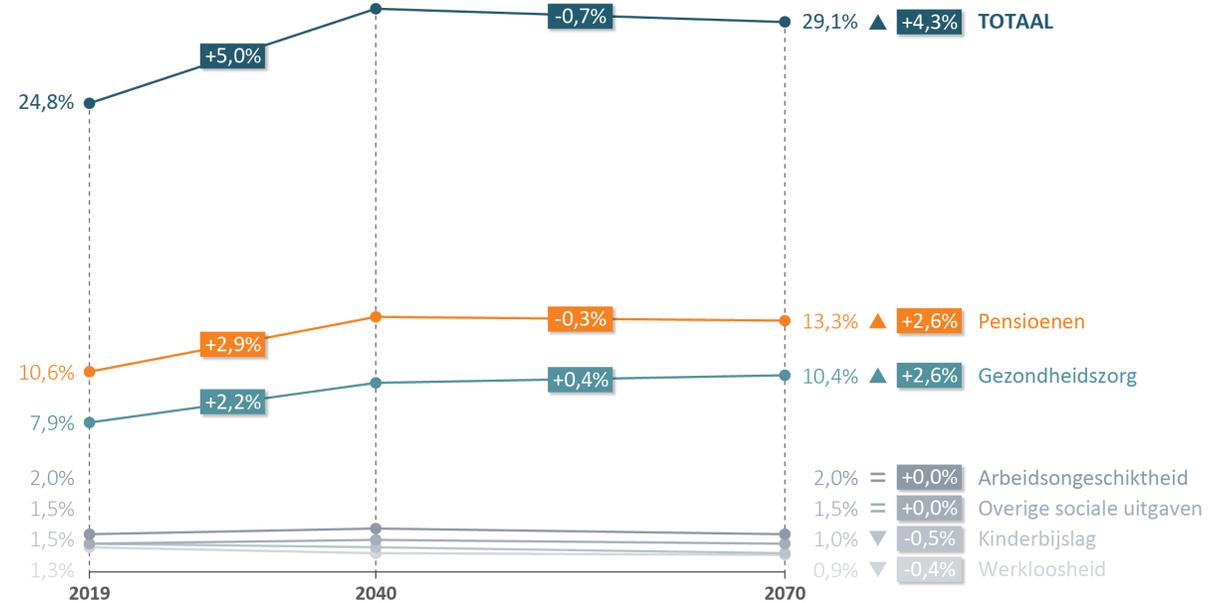
## Slopegraph

The market demand for construction sealants is the second largest and fastest growing



Evolutie van de budgettaire kosten van de vergrijzing op lange termijn

volgens het SCV-referentiescenario van juli 2020  
in procent van het bbp en procentpunt van het bbp

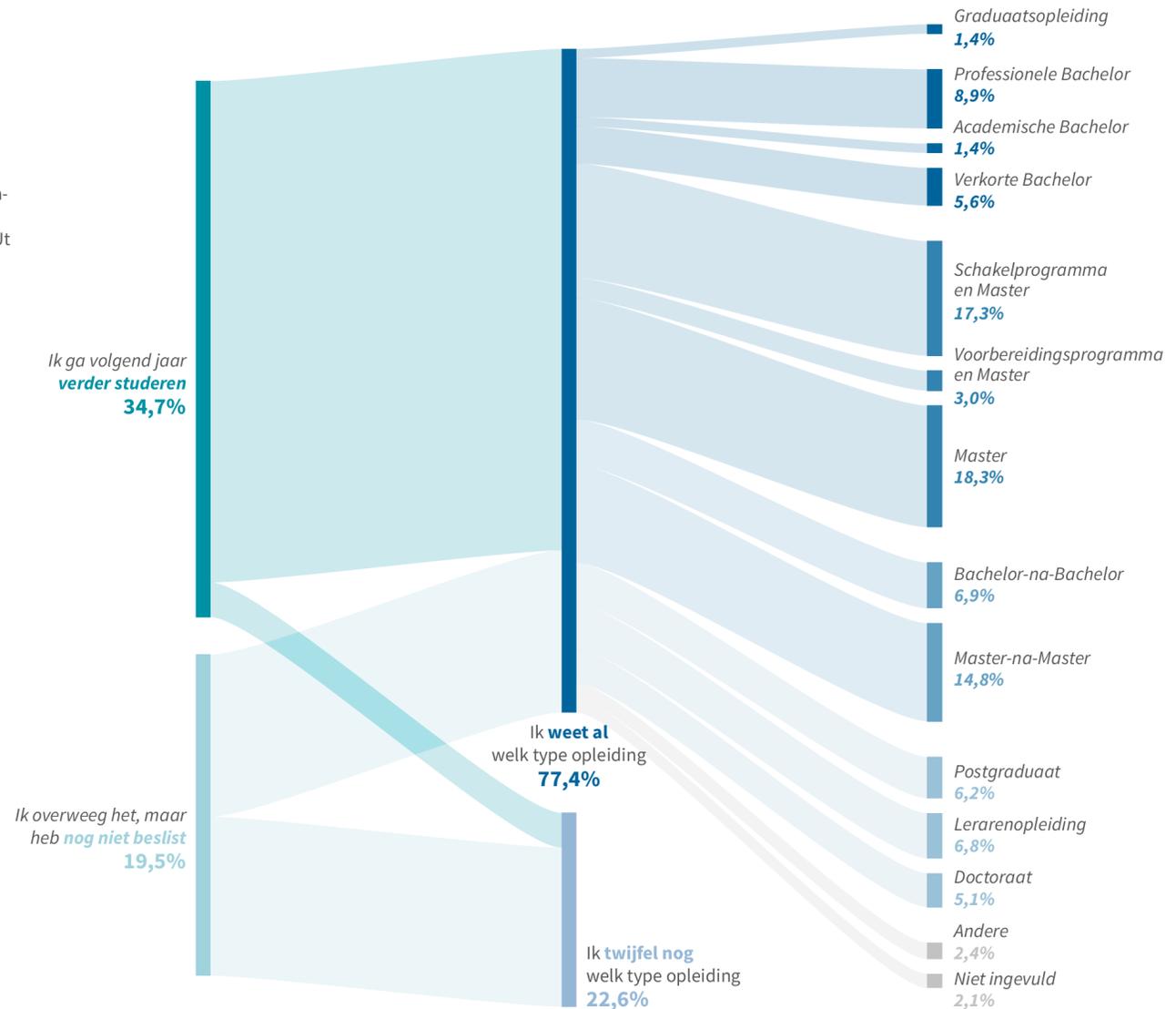


# Minder klassieke grafiektypes

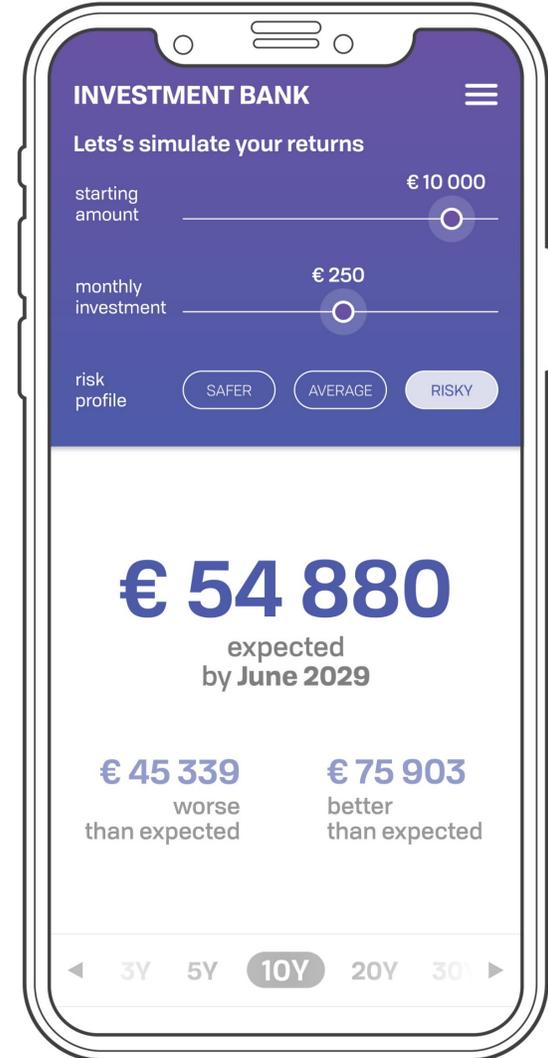
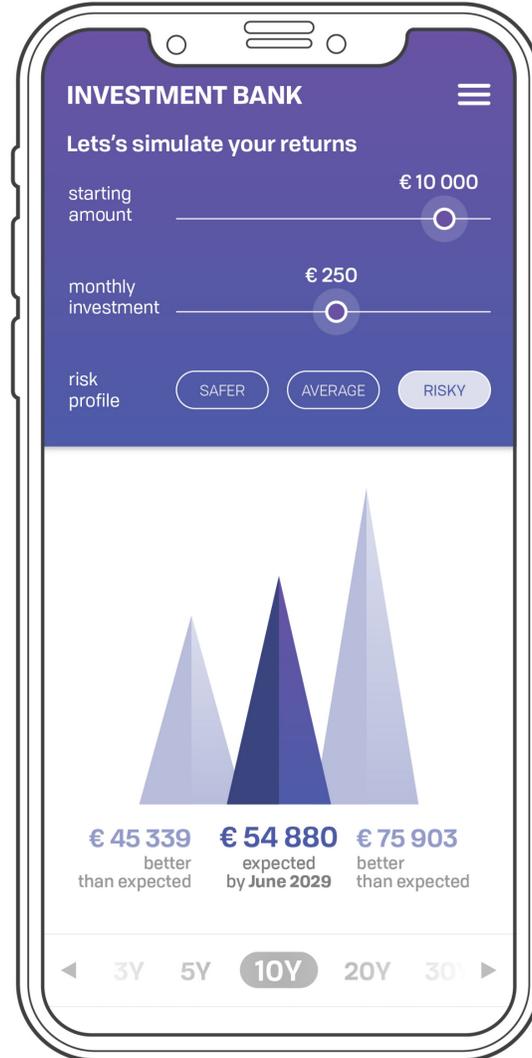
## Sankey diagram

### Opleidingstype

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exercitation ullamcorper suscipit lobortis nisl ut aliquip



# Heb ik echt een grafiek nodig?



# Misschien is een tabel voldoende?

UPDATED JAN. 12, 2021, AT 12:03 AM

## Club Soccer Predictions

Forecasts and Soccer Power Index (SPI) ratings for 39 leagues, updated after each match.

See also: [How this works](#) [Global club soccer rankings](#)

England: Premier League

Standings

Matches



**PREMIER LEAGUE**  
2020-21

**England**

Updated Jan. 4, 2021, at 4:56 p.m.

| TEAM                      | TEAM RATING |           | AVG. SIMULATED SEASON |      | END-OF-SEASON PROBABILITIES |           |                 |                    |
|---------------------------|-------------|-----------|-----------------------|------|-----------------------------|-----------|-----------------|--------------------|
|                           | SPI         | OFF. DEF. | GOAL DIFF.            | PTS. | EVERY POSITION              | RELEGATED | QUALIFY FOR UCL | WIN PREMIER LEAGUE |
| <b>Man. City</b> 29 pts   | 93.7        | 2.9 0.2   | +49                   | 83   | ↓ 20th 1st ↓                | <1%       | 97%             | 69%                |
| <b>Liverpool</b> 33 pts   | 88.6        | 2.6 0.4   | +36                   | 74   |                             | <1%       | 80%             | 15%                |
| <b>Man. United</b> 33 pts | 84.5        | 2.5 0.6   | +23                   | 72   |                             | <1%       | 70%             | 10%                |
| <b>Tottenham</b> 29 pts   | 81.6        | 2.3 0.6   | +23                   | 65   |                             | <1%       | 39%             | 2%                 |
| <b>Chelsea</b> 26 pts     | 85.8        | 2.4 0.5   | +25                   | 64   |                             | <1%       | 33%             | 1%                 |
| <b>Leicester</b> 32 pts   | 79.1        | 2.1 0.6   | +14                   | 64   |                             | <1%       | 29%             | 1%                 |
| <b>Aston Villa</b> 26 pts | 78.5        | 2.2 0.7   | +16                   | 60   |                             | <1%       | 18%             | <1%                |
| <b>Everton</b> 29 pts     | 74.5        | 2.0 0.7   | +3                    | 58   |                             | <1%       | 10%             | <1%                |
| <b>Arsenal</b> 23 pts     | 80.5        | 2.2 0.6   | +8                    | 57   |                             | <1%       | 8%              | <1%                |

Meer info: [fivethirtyeight.com](https://www.fivethirtyeight.com)

| Company   | LatestWeek Volume | PriorWeek Volume | Change     | % Change | Volume Trend Last 31 days as of 31-10-2018  |
|---|-------------------|------------------|------------|----------|---|
|    | 16,356,600        | 8,707,400        | 7,649,200  | 87.85%   |    |
|    | 195,375,400       | 103,700,700      | 91,674,700 | 88.40%   |    |
|    | 198,068,600       | 174,145,400      | 23,923,200 | 13.74%   |    |
|    | 60,965,900        | 29,933,500       | 31,032,400 | 103.67%  |    |
|    | 6,393,500         | 8,870,600        | 2,477,100  | 27.92%   |    |
|    | 288,745,200       | 199,505,500      | 89,239,700 | 44.73%   |   |
|  | 52,925,900        | 50,509,900       | 2,416,000  | 4.78%    |  |
|  | 228,612,200       | 161,738,200      | 66,874,000 | 41.35%   |  |

## Unemployment rate in selected countries

January-August 2020, sorted by the unemployment rate in January.

| country       | Jan<br>▲    | Feb         | Mar         | Apr          | May          | Jun          | Jul          | Aug          |
|---------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| Japan         | 2.4%        | 2.4%        | 2.5%        | 2.6%         | 2.9%         | 2.8%         | 2.9%         | 3.0%         |
| Netherlands   | 3.0%        | 2.9%        | 2.9%        | 3.4%         | 3.6%         | 4.3%         | 4.5%         | 4.6%         |
| Germany       | 3.4%        | 3.6%        | 3.8%        | 4.0%         | 4.2%         | 4.3%         | 4.4%         | 4.4%         |
| Mexico        | 3.6%        | 3.6%        | 3.2%        | 4.8%         | 4.3%         | 5.4%         | 5.2%         | 5.0%         |
| <b>US</b>     | <b>3.6%</b> | <b>3.5%</b> | <b>4.4%</b> | <b>14.7%</b> | <b>13.3%</b> | <b>11.1%</b> | <b>10.2%</b> | <b>8.4%</b>  |
| South Korea   | 4.0%        | 3.3%        | 3.8%        | 3.8%         | 4.5%         | 4.3%         | 4.2%         | 3.2%         |
| Denmark       | 4.9%        | 4.9%        | 4.8%        | 4.9%         | 5.5%         | 6.0%         | 6.3%         | 6.1%         |
| Belgium       | 5.1%        | 5.0%        | 5.0%        | 5.1%         | 5.0%         | 5.0%         | 5.0%         | 5.1%         |
| Australia     | 5.3%        | 5.1%        | 5.2%        | 6.4%         | 7.1%         | 7.4%         | 7.5%         | 6.8%         |
| <b>Canada</b> | <b>5.5%</b> | <b>5.6%</b> | <b>7.8%</b> | <b>13.0%</b> | <b>13.7%</b> | <b>12.3%</b> | <b>10.9%</b> | <b>10.2%</b> |
| Finland       | 6.8%        | 6.9%        | 7.0%        | 7.3%         | 7.5%         | 7.8%         | 8.0%         | 8.1%         |

Source: [OECD](#) • [Get the data](#) • Created with [Datawrapper](#)

| Day       | Fat | Carbs | Protein |
|-----------|-----|-------|---------|
| Monday    | 70g | 94g   | 81g     |
| Tuesday   | 65g | 85g   | 95g     |
| Wednesday | 88g | 71g   | 105g    |
| Thursday  | 57g | 102g  | 78g     |
| Friday    | 73g | 96g   | 84g     |
| Average   | 74g | 85g   | 88g     |

| Name (Symbol)       | Div  | Vol  | Yld | P/E | Day Last | % Change |
|---------------------|------|------|-----|-----|----------|----------|
| SkyHighCorp (SHC)   | --   | 3143 | --  | 76  | 21.25    | +0.25    |
| LowDownInc (LDI)    | 2.35 | 2735 | 5.7 | 18  | 41.00    | -0.50    |
| ValueNowInc (VNI)   | 1.00 | 1894 | 4.5 | 12  | 22.00    | +0.10    |
| DoinBadlyCorp (DBC) | --   | 7601 | --  | --  | 33.50    | -0.75    |

|              |             |
|--------------|-------------|
| Proportional | Tabular     |
| 390,209,000  | 390,209,000 |
| 112,371,000  | 112,371,000 |

| <input type="checkbox"/> Invoice | Invoice date | Due date   | Status  | Amount     |
|----------------------------------|--------------|------------|---------|------------|
| <input type="checkbox"/> #09293  | 05/10/2019   | 05/10/2019 | Unpaid  | \$2,350.00 |
| <input type="checkbox"/> #98273  | 05/10/2019   | 05/10/2019 | Paid    | \$750.83   |
| <input type="checkbox"/> #19293  | 05/10/2019   | 05/10/2019 | Pending | \$1,200.00 |
| <input type="checkbox"/> #12839  | 05/11/2019   | 05/11/2019 | Paid    | \$2,500.00 |
| <input type="checkbox"/> 81727   | 05/11/2019   | 05/11/2019 | Unpaid  | \$3,200.00 |

56px



# Pauze

Alle slides en alle links:

<https://baryon.be/dataviz-resources>

# Workflow en tools

# Workflow

data-analyse en -voorbereiding

grafiek maken

design verbeteren

# Workflow

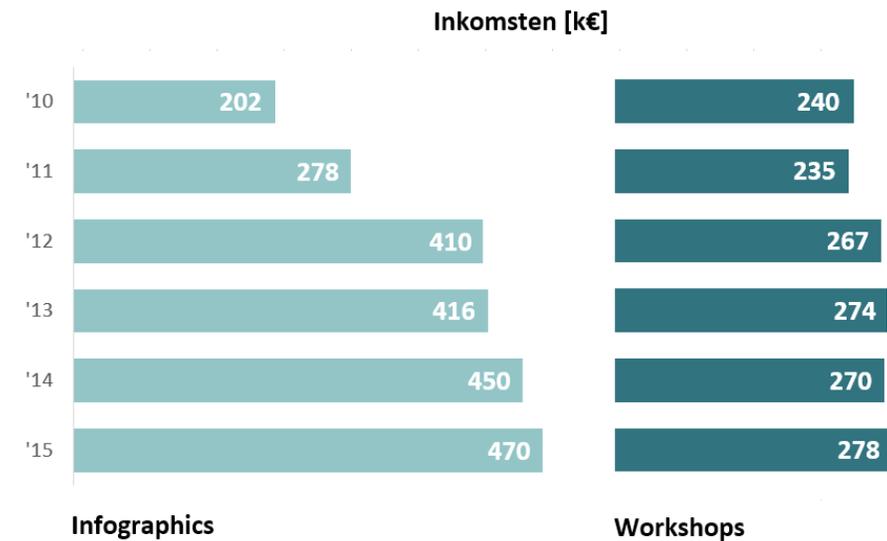
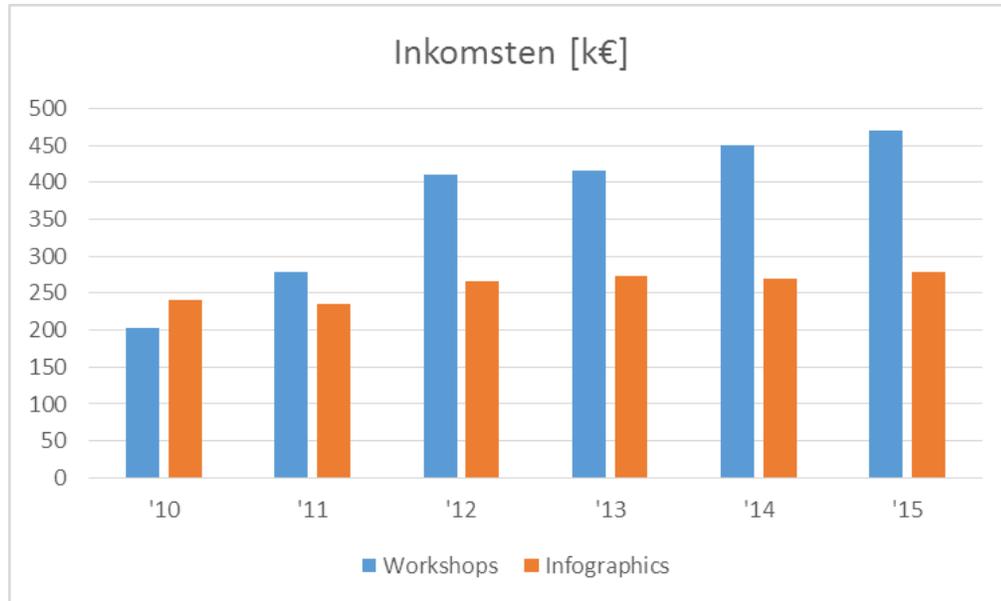
data-analyse en -voorbereiding

**grafiek maken**

design verbeteren

# Beschikbare tools

## Excel



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- Try our samples

|    |                              |      |         |    |   |   |                    |         |    |  |             |   |
|----|------------------------------|------|---------|----|---|---|--------------------|---------|----|--|-------------|---|
| no | ALTTONAKI, Mr. Ilmari Rudolf | male | 20 - 29 | 20 | 0 | 0 | SOTON/O.Q. 3101287 | 7.9200  | 10 |  | Southampton | Salo, Finland Astoria, OR                         |
| no | Ali, Mr. Ahmed               | male | 20 - 29 | 24 | 0 | 0 | SOTON/O.Q. 3101311 | 7.0500  | 10 |  | Southampton |   |
| no | Ali, Mr. William             | male | 20 - 29 | 25 | 0 | 0 | SOTON/O.Q. 3101312 | 7.0500  | 10 |  | Southampton | Argentina   |
| no | Allen, Mr. William Henry     | male | 30 - 39 | 35 | 0 | 0 | 373450             | 8.0500  | 10 |  | Southampton | Lower Clapton, Middlesex or Erdington, Birmingham |
| no | Allum, Mr. Owen George       | male | 10 - 19 | 18 | 0 | 0 | 2223               | 8.3000  | 10 |  | Southampton | Windsor, England New York, NY                     |
| no | Andersen, Mr.                | male | 30 - 39 | 32 | 0 | 0 | C 4001             | 22.5250 | 20 |  | Southampton | Bergen, Norway                                    |

1309 records in your data have been successfully parsed!

Your data seems ready to go. But if you want to stack it anyway, click [here](#)

Choose a Chart

**Scatter Plot**  
Dispersion

A scatter plot, scatterplot, or scattergraph is a type of mathematical diagram using Cartesian coordinates to display values for two variables for a set of data. The data is displayed as a collection of points, each having the

**Contour Plot**  
Dispersion

**Convex Hull**  
Dispersion

**Hexagonal Binning**  
Dispersion

**Scatter Plot**  
Dispersion

**Voronoi Tessellation**  
Dispersion

**Beeswarm Plot**  
Distribution

**Box plot**  
Distribution

**Circular Dendrogram**  
Hierarchy

# Programmeren

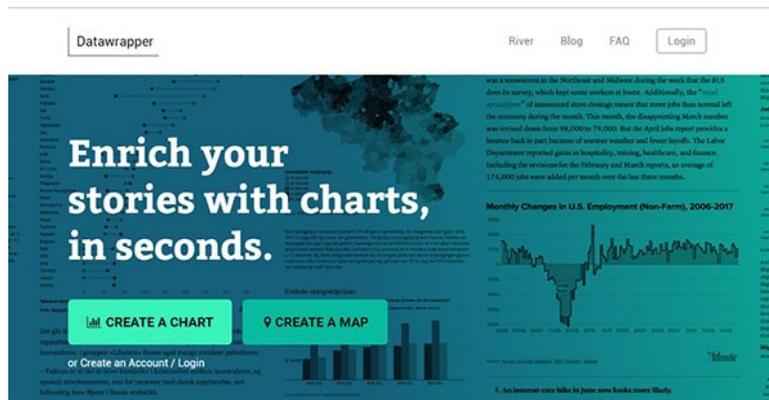
Python, R, JavaScript,...

## Data-Driven Documents



# Interactieve visuals

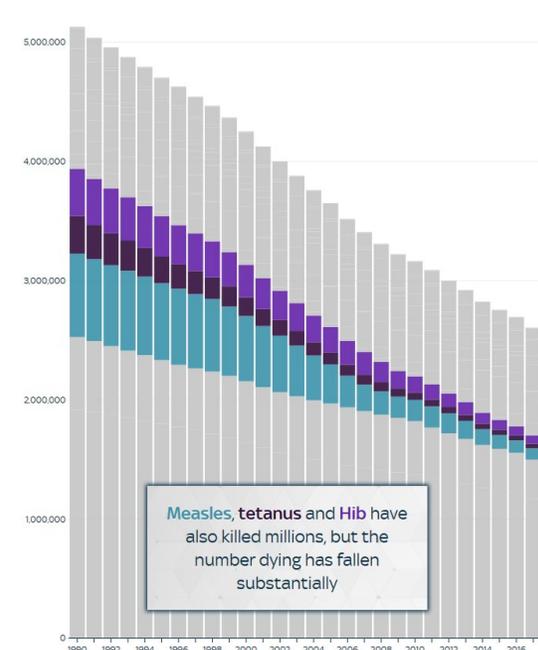
Datawrapper  
datawrapper.de



LocalFocus  
localfocus.nl



Flourish  
flourish.studio



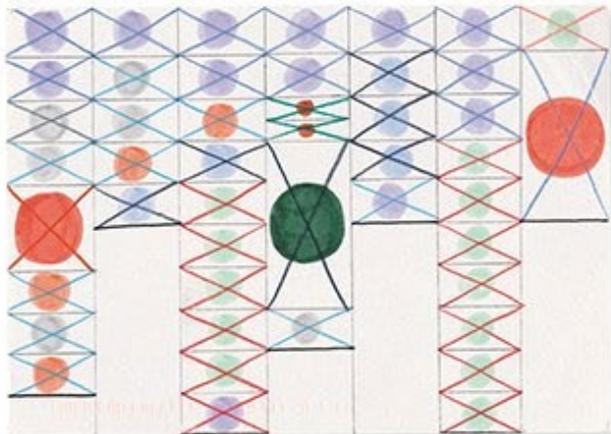
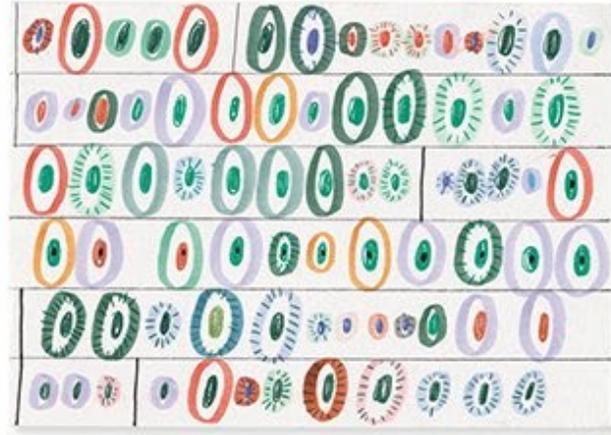
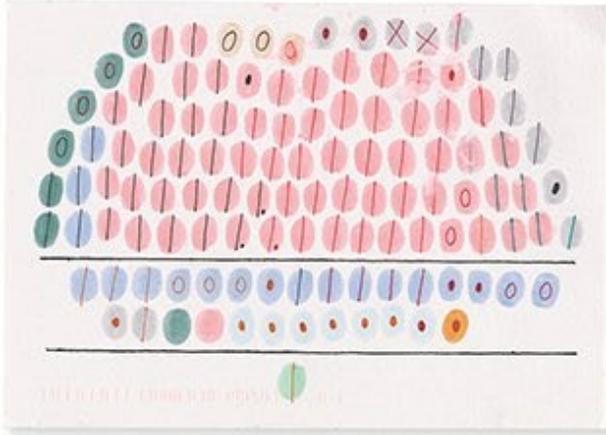
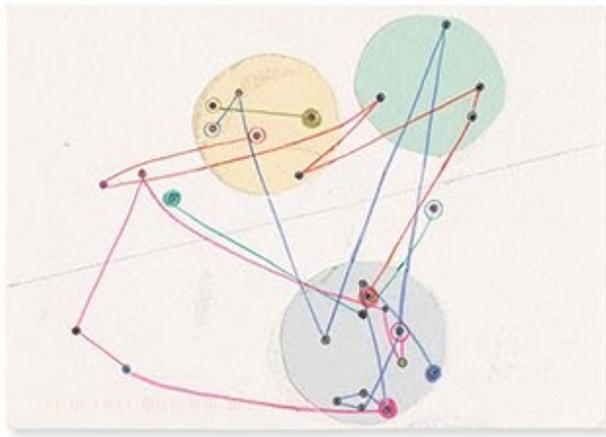
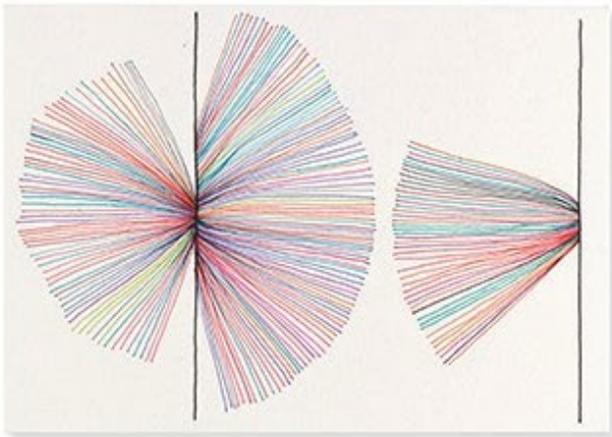
<https://baryon.be/files/MM/2020/W04/>

<https://baryon.be/data-visualization-tools-datawrapper/>

# Peak Month of Flu Viruses



Mona Chalabi



POLLUTION



**Fish Pills**  
These pills represent the relative amounts of four pharmaceutical drugs found in fish pulled from Chicago's North Shore Channel and tested by Baylor scientists.

The traditional foe of water quality is waste from factories and farms, but now environmental regulators are eyeing a new pollution source: our medicine chests. Fish caught downstream from sewage treatment plants in five U.S. cities contained traces of pharmaceuticals and toiletries, Baylor University researchers found in a recent study. You'd have to eat tons of fish for such small concentrations to affect human health, but the products could pose a threat to marine life. To assess the risk, the EPA has expanded monitoring to 160 sites, with results due in 2011.

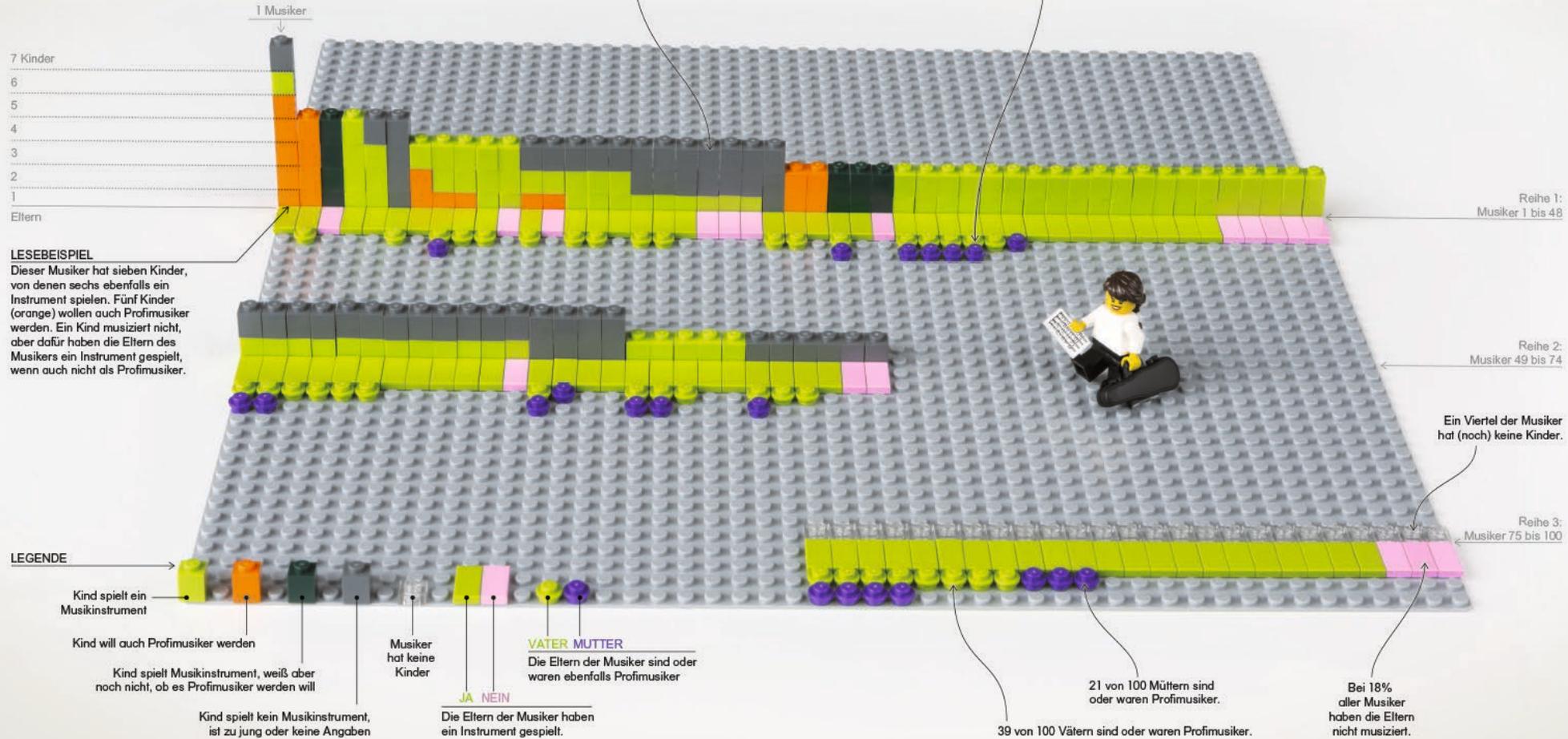
\*PHARMACEUTICALS PRODUCED IN CHINA  
AND EXPORTED TO THE U.S. ARE NOT REGULATED BY THE FDA  
AND DO NOT HAVE AN FDA APPROVED LABEL. HEALTH  
CARE PROVIDERS SHOULD BE AWARE OF THIS.

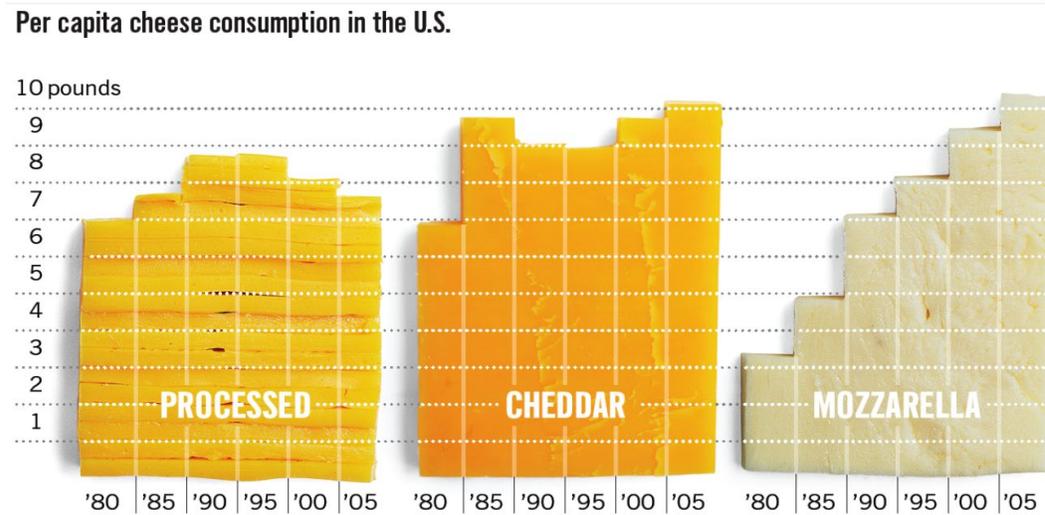
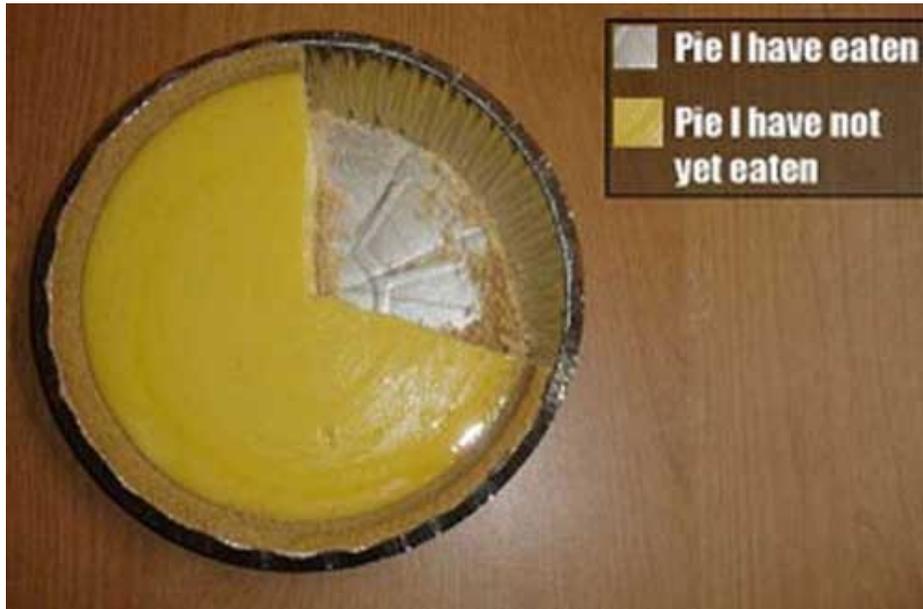
## Die Kinder und Eltern der Musiker

100 Musiker des Orchesters waren bereit, uns etwas über ihre Familien-situation mitzuteilen. 75 Musiker sind Eltern und haben zusammen 171 Kinder. In Deutschland kamen 2012 im Schnitt 1,38 Kinder je Frau zur Welt. Mit je 1,71 Kindern liegen unsere Musiker damit weit über dem Durchschnitt.

Bei 16% aller Musiker, die Kinder haben, musizieren die Kinder nicht.

Bei 16% aller Musiker sind beide Elternteile ebenfalls Profimusiker.



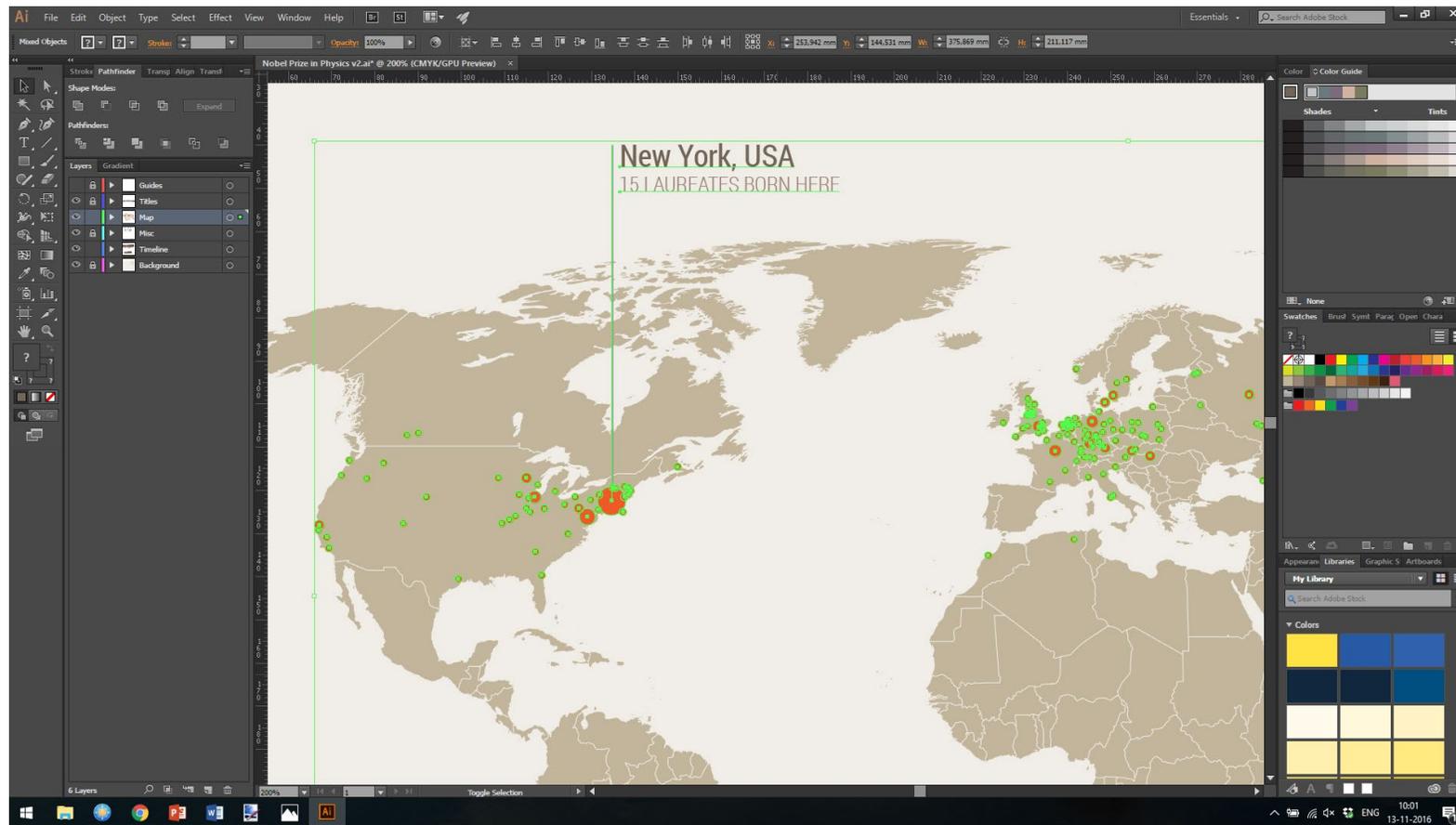


# Workflow

data-analyse en -voorbereiding

grafiek maken

**design verbeteren**

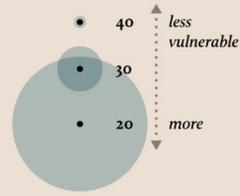


## Adobe Illustrator

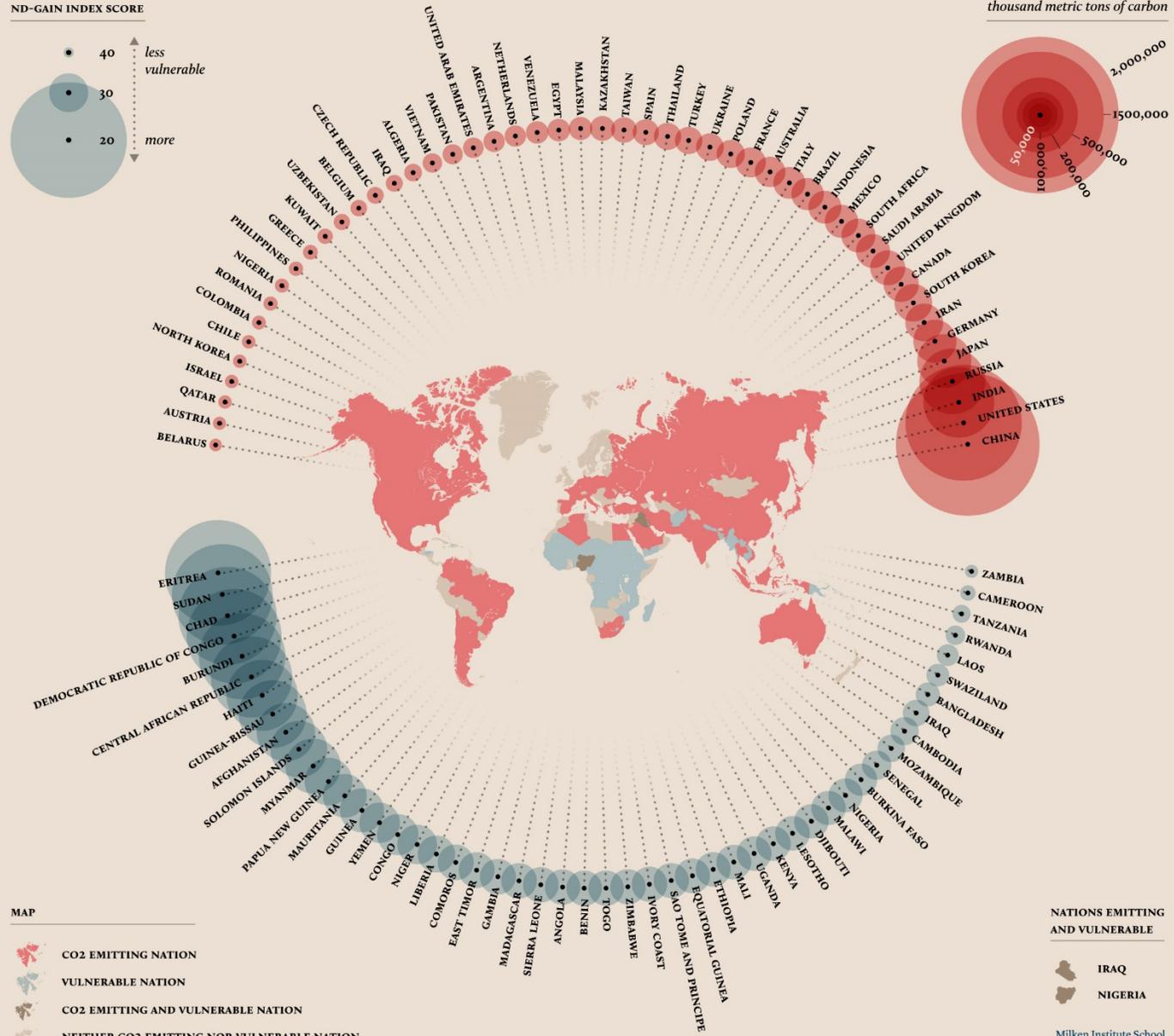
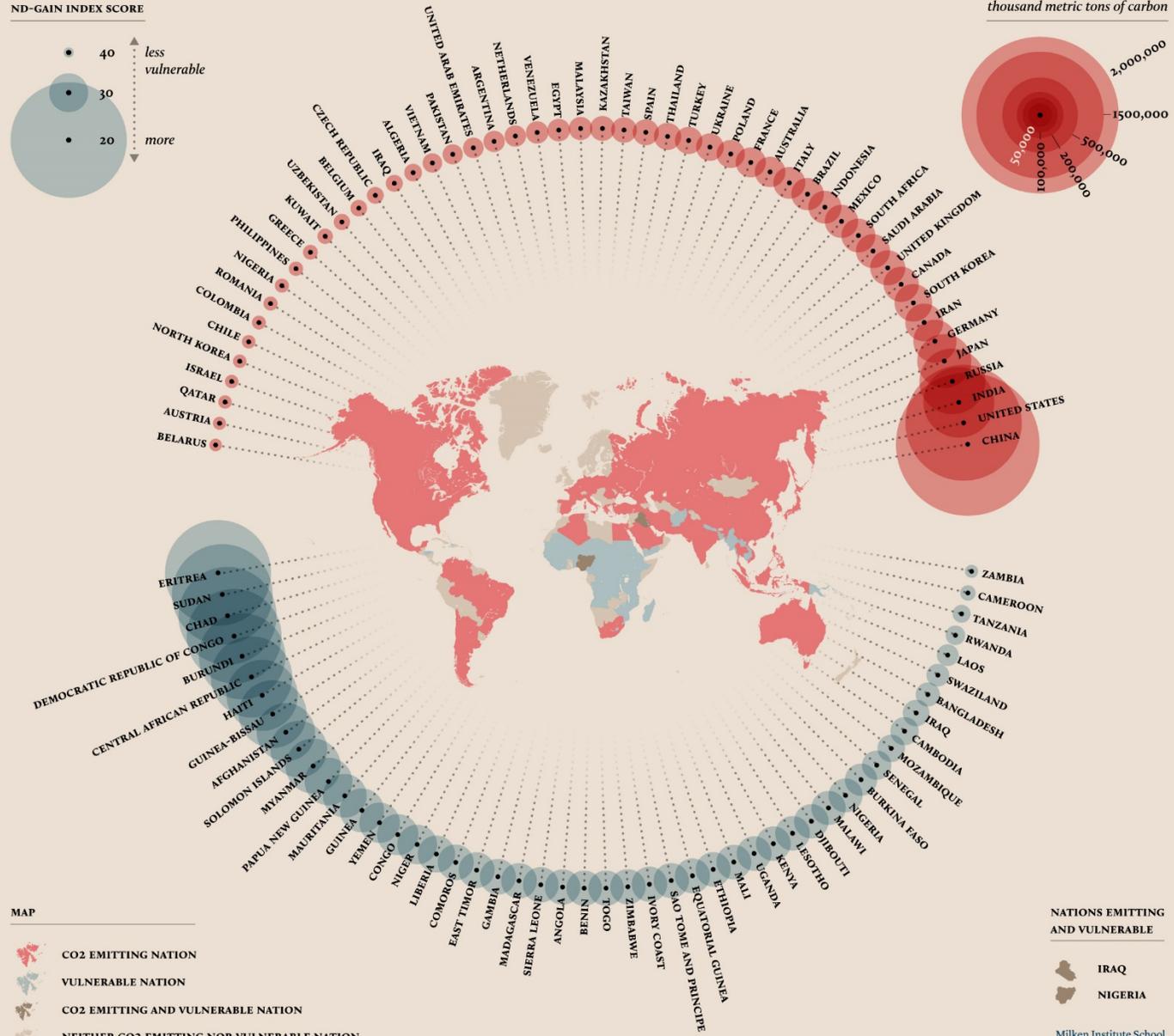
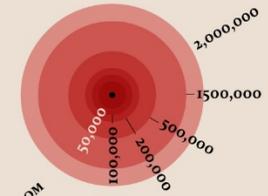
“industry standard”  
extreem krachtig  
steile leercurve  
vrij duur abonnement

# CO2 EMISSION VS. VULNERABILITY TO CLIMATE CHANGE, BY NATION (2010)

ND-GAIN INDEX SCORE



EMITTED CO2  
thousand metric tons of carbon





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|  |   |  |                                     |
|--|---|--|-------------------------------------|
| <b>GNU/Linux</b><br>Linux based Free Desktop Systems | <b>Windows</b><br>Microsoft's Windows Desktop | <b>macOS (10.11-10.15)</b><br>disk image (dmg) | <b>Source Archive</b><br>xz tarball |
|--|---|--|-------------------------------------|

### Release Notes

Inkscape 1.0.1 is mainly a stability and bugfix release. It also comes with a few new features that hadn't been stable enough to make it into Inkscape 1.0.

### New Features

## Inkscape 1.0.1

All Platforms

Responsible People

Manager: [Marc Jeanmougin](#)

Revisions

Alternatief: **Inkscape**

<https://inkscape.org/release/inkscape-1.0.1/>

# Beschikbare tools

Online

**Canva**

[canva.com/create/infographics](https://canva.com/create/infographics)



**Infogram**

[infogram.com](https://infogram.com)



**Piktochart**

[piktochart.com](https://piktochart.com)



Automatisch opslaan  duval union - unfair index - test.pptm - Opgeslagen Zoeken Koen Van den Eeckhout

Bestand Start Invoegen Tekenen Ontwerpen Overgangen Animaties Diavoorstelling Controleren Beeld Ontwikkelaars Help Acrobat

Plakken Nieuwe Dia's opnieuw gebruiken Indeling Opnieuw instellen Sectie

Klembord Dia's Lettertype Alinea Tekeningen Tekenen Bewerken Adobe Acrobat Spraak Designer

1

2

3

4

5

**WEBSITE**

on-offline convergence

search and navigation

visitor attraction

**MOBILE**

mobile functionality

**DIGITAL MARKETING**

search engine visibility

other channel visibility

ab content

**SOCIAL MEDIA**

conversion from social media

engagement on social media

customer contact on social media

duval union innovative marketing

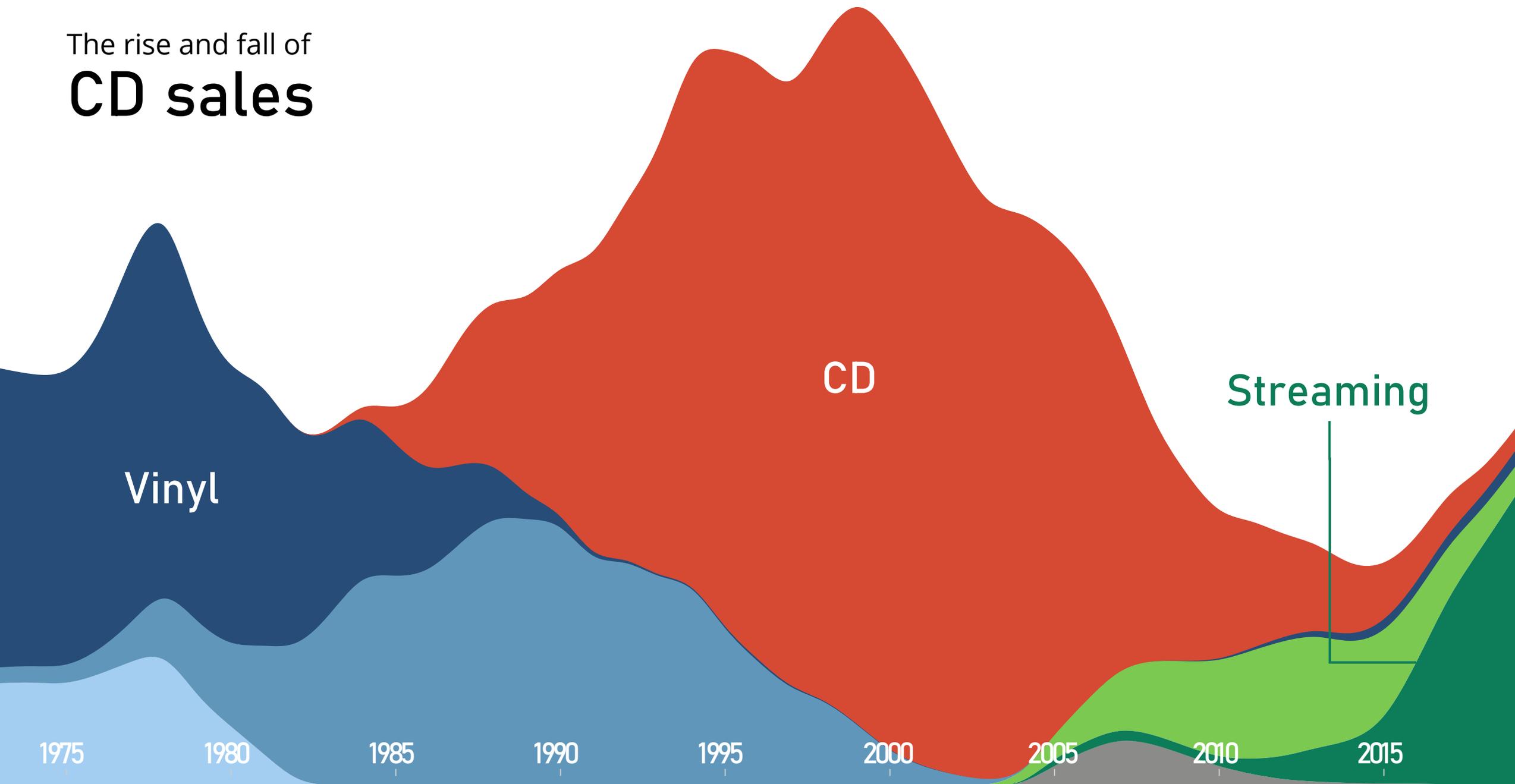
Dia 4 van 5 Nederlands (standaard) 116%

08:06 14-10-2020

Alternatief: **PowerPoint** of gelijkaardig



# The rise and fall of CD sales



# Componenten

**kleuren**

afbeeldingen

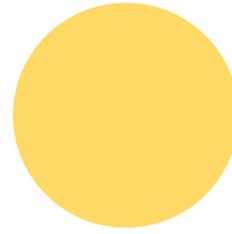
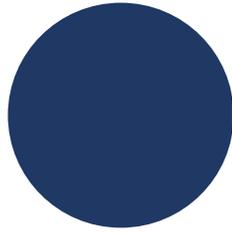
lettertypes

THE IMPORTANCE OF  
**COLOUR**



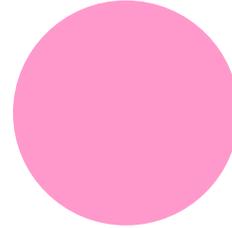
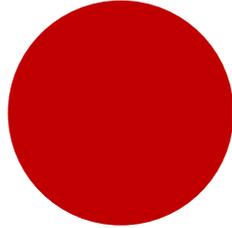
STEPHENWILDISH.CO.UK

*vertrouwen,  
stabiliteit*



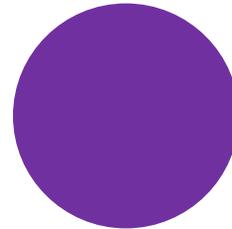
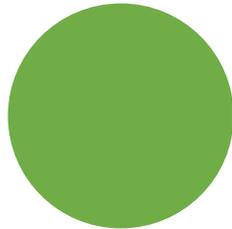
*vrolijkheid,  
warmte*

*energie,  
passie*



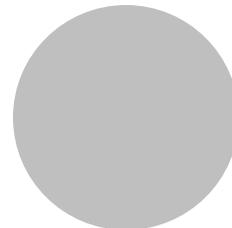
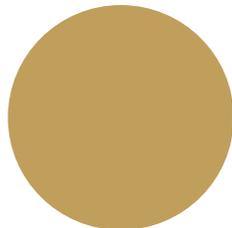
*gevoeligheid,  
liefde*

*vriendelijkheid,  
natuur*



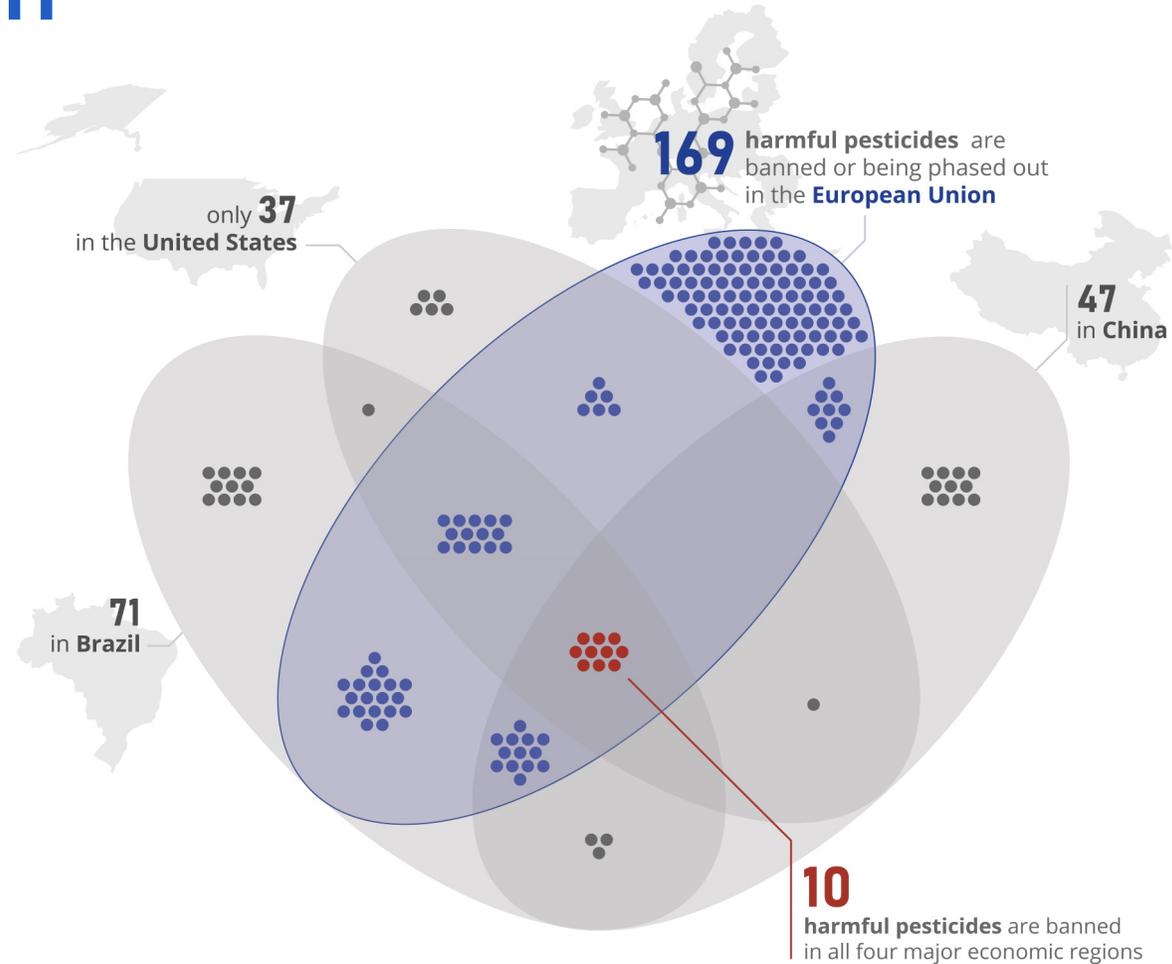
*rijkdom,  
mysterie*

*geschiedenis,  
intelligentie*



*neutraliteit,  
kalmte*

# Accentkleuren



**Europe leads the way**  
in banning harmful pesticides

Source: Donley, N. The USA lags behind other agricultural nations in banning harmful pesticides. *Environ Health* 18, 44 (2019) doi:10.1186/s12940-019-0488-0

A #MakeoverMonday visualization  
by **Koen Van den Eeckhout** (@koen\_vde)

Inspired by David McCandless' *Reasons for Being*  
visualization: [informationisbeautiful.net](http://informationisbeautiful.net)



Welcome!

## VISUALIZATION TYPES

Bar Charts

Column Charts

Line &amp; Area Charts

Pie &amp; Donut Charts

Scatterplots

## What to consider when choosing colors for data visualization

Data Visualisation can be defined as representing numbers with shapes – and no matter what these shapes look like (areas, lines, dots), they need to have a color. Sometimes colors just make the shapes visible, sometimes they encode data or categories themselves. We'll focus mostly on the latter in this article. But we'll also take a general look at colors and what to consider when choosing them:

---

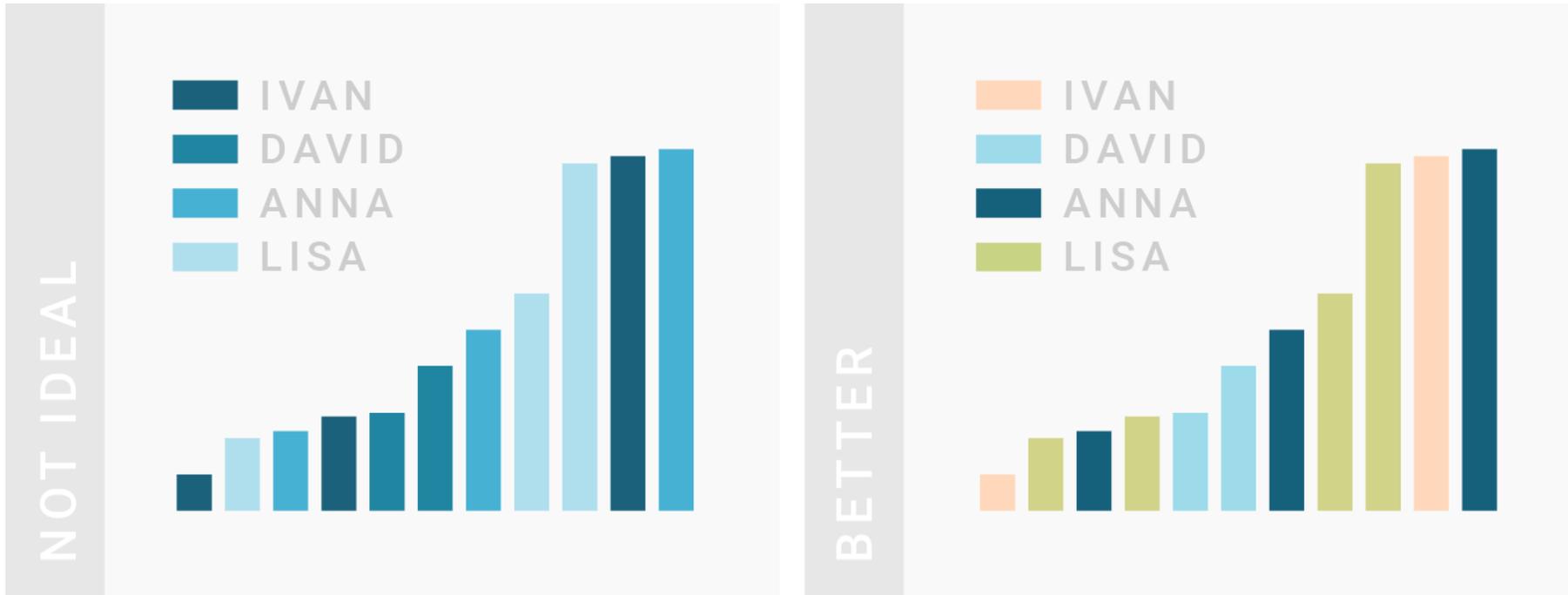
<https://academy.datawrapper.de/article/140-what-to-consider-when-choosing-colors-for-data-visualization>



use consistent colors

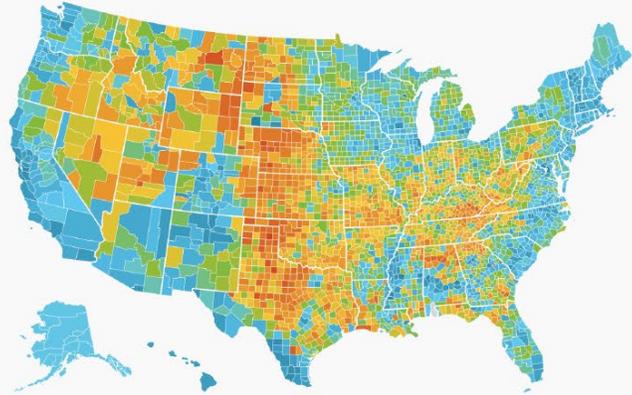


use logical colors



don't use gradient colors for categories

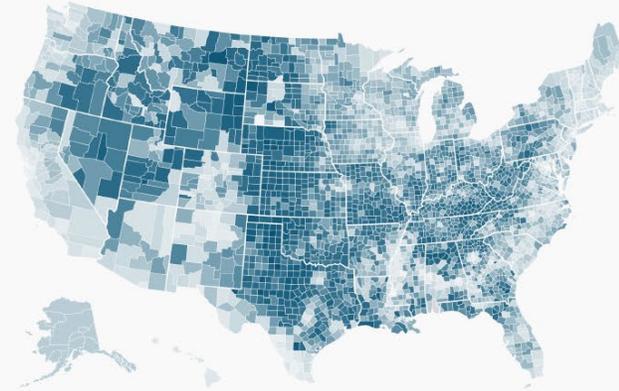
NOT IDEAL



HUE-BASED GRADIENT



BETTER

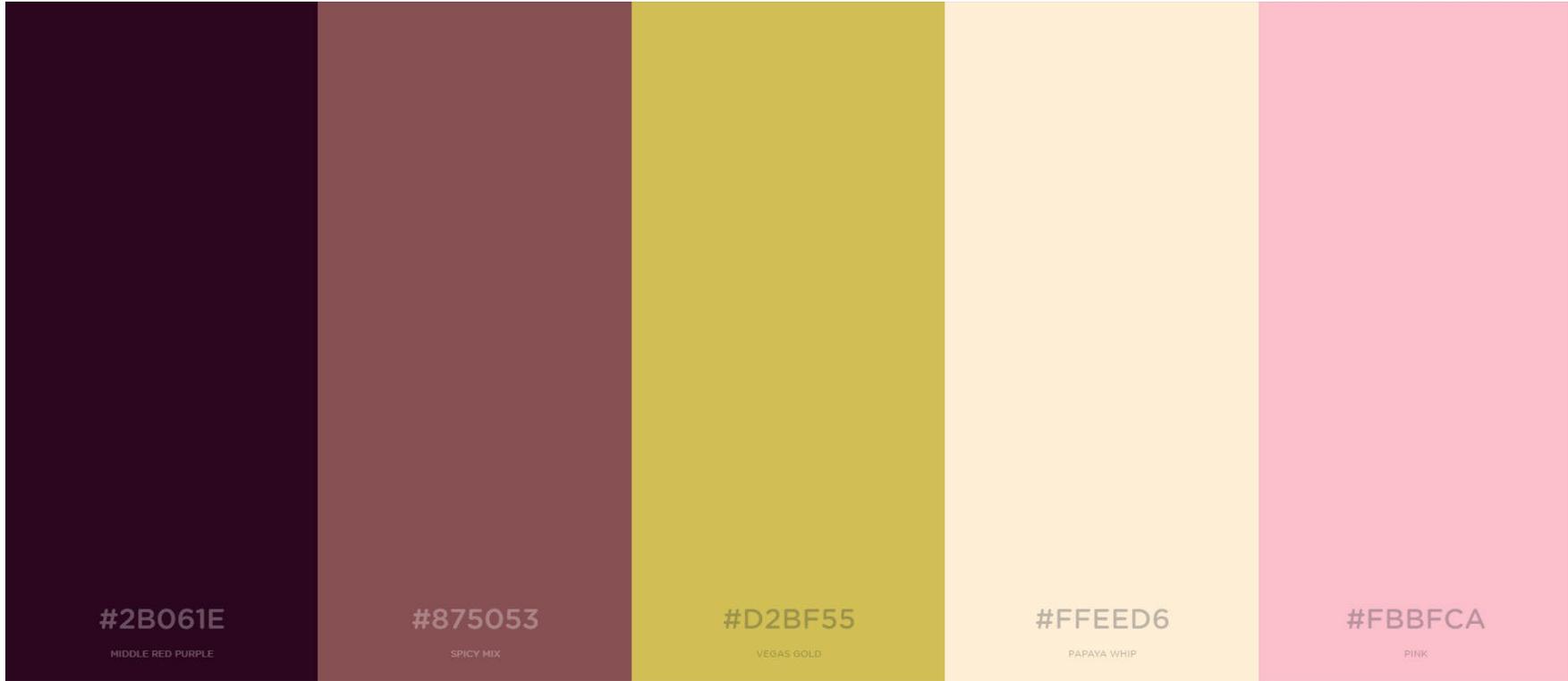


LIGHTNESS-BASED GRADIENT



rainbow gradients can confuse readers

Press the spacebar to generate color schemes!



# Componenten

kleuren

**afbeeldingen**

lettertypes

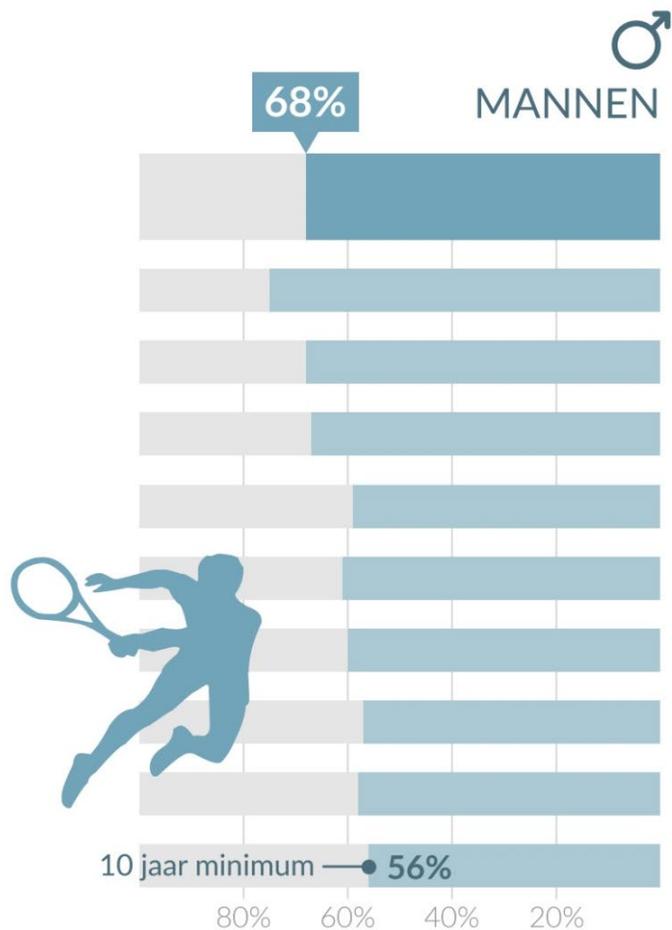
🔍 research

Results for "research"

8,721 icons 197 collections



[thenounproject.com](https://thenounproject.com)





Resources, Free, ... research



Filters

Free

Vectors

4,262 Resources



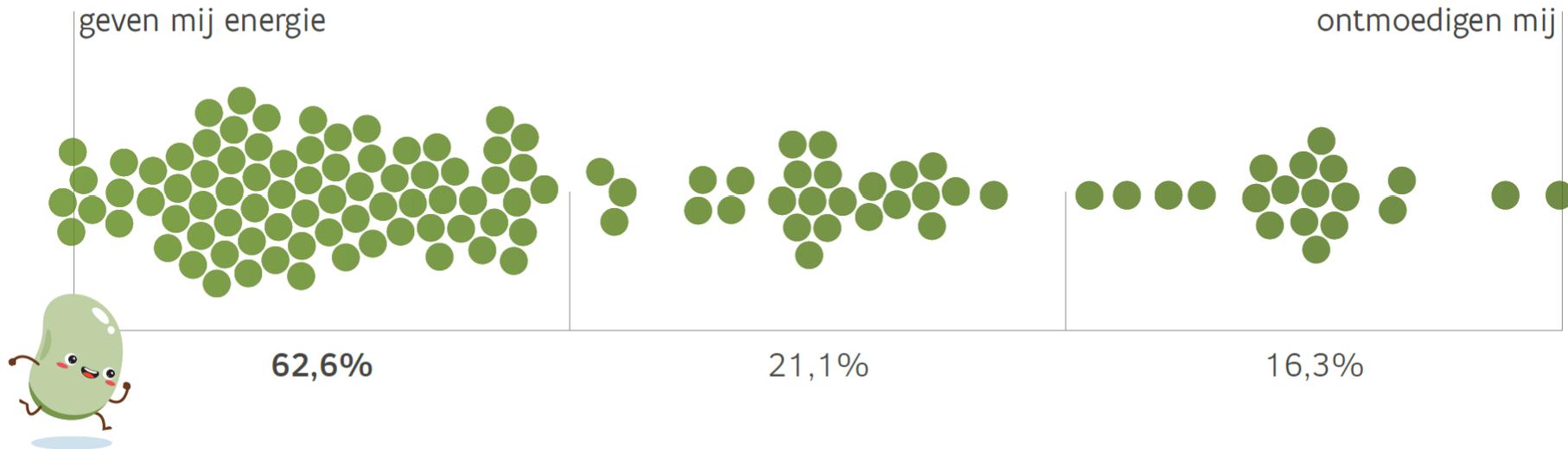
Copyright complaint Download problems?

**Free Download 900**  
Free license with attribution

## Situaties zoals in mijn verhaal...

geven mij energie

ontmoedigen mij





# Fotografie

[unsplash.com](https://unsplash.com)

[pixabay.com](https://pixabay.com)

[picography.co](https://picography.co)

[burst.shopify.com](https://burst.shopify.com)

[reshot.com](https://reshot.com)

# Componenten

kleuren

afbeeldingen

**lettertypes**

# Serif

perfect for body text

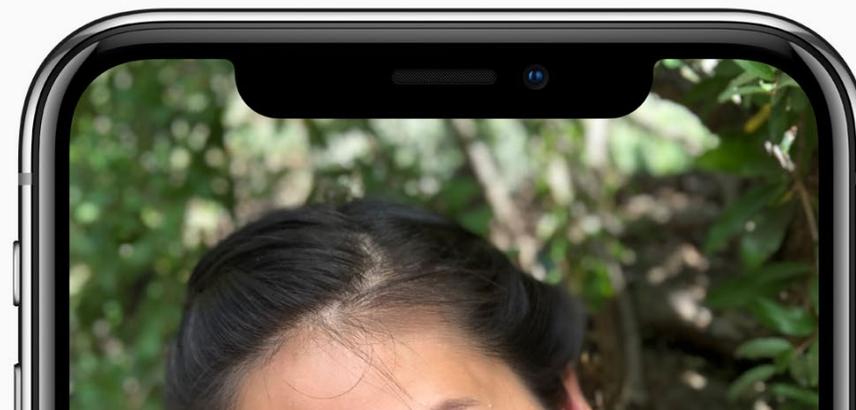


# Sans serif

perfect for titles

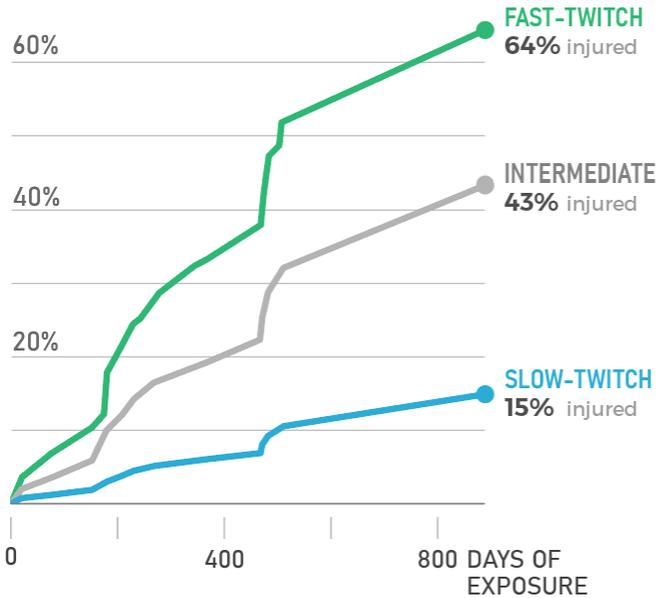
TrueDepth Camera

Front facing.  
Forward thinking.



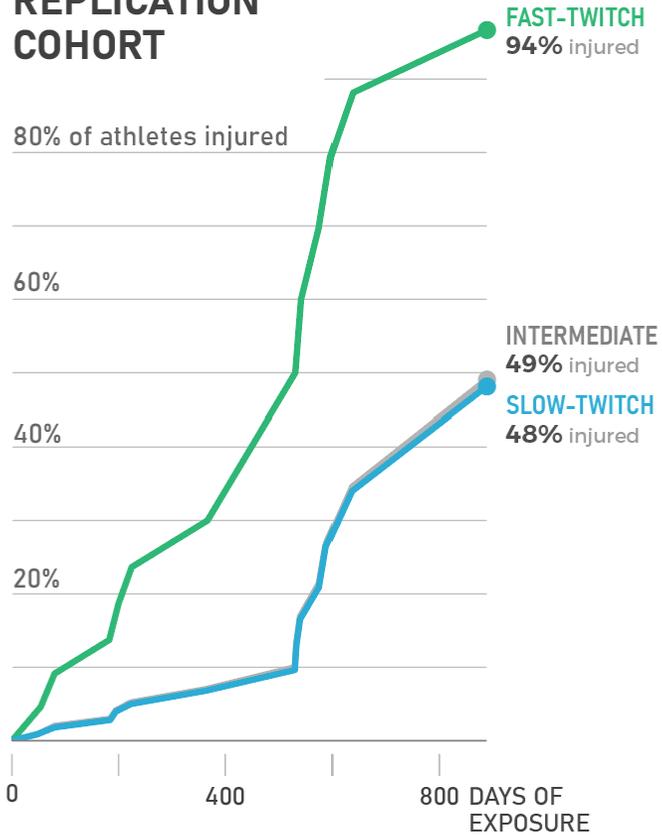
## ORIGINAL COHORT

80% of athletes injured



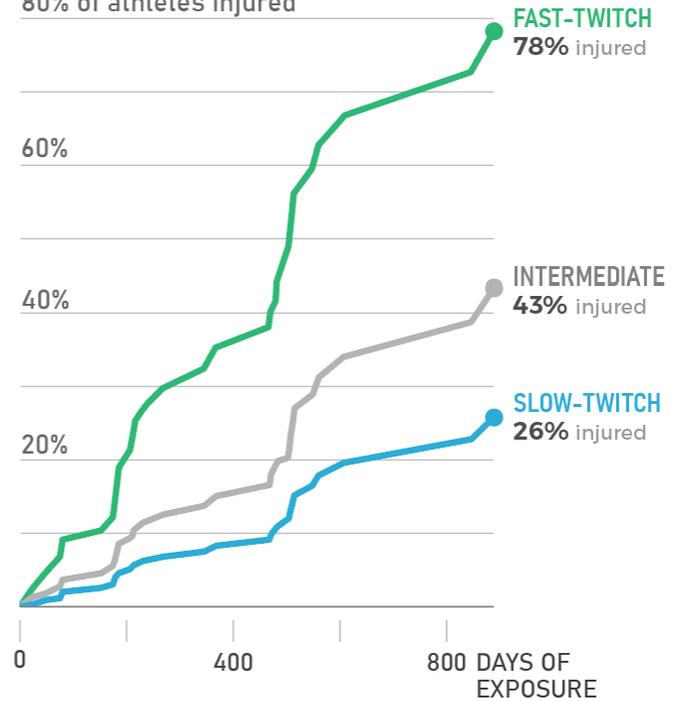
## REPLICATION COHORT

80% of athletes injured



## COMBINED COHORT

80% of athletes injured



Preview    Fonts    Size  
Type your text here    20    Show variants    Medium    Submit    More options

1. Thinking Of Betty by StereoType

*Thinking of Betty*

2. Bebas Neue by Dharma Type

**BEBAS NEUE**

3. Beautiful Mess by Britney Murphy Design

*Beautiful Mess*

4. Sunset Clouds by Billy Argel

*Sunset Clouds*

5. Gillie & Hilda by dcoxy - Greg Medina

*Gillie & Hilda*

6. Queen of Heaven by Mist's Fonts

*Queen of Heaven*

[dafont.com](https://dafont.com)

Google Fonts

Viewing 809 of 809 font families

Roboto  
Christian Robertson (12 styles)

All their  
equipment and  
instruments are  
alive.

Lato  
Łukasz Dziedzic (10 styles)

A shining crescent  
far beneath the  
flying vessel.

Shrikhand  
Jonny Pinhorn (1 style)

***A red flair  
silhouetted the  
jagged edge of  
a wing.***

Prociono  
Barry Schwartz (1 style)

It was going to be a  
lonely trip back.

Open Sans  
Steve Matteson (10 styles)

I watched the  
storm, so  
beautiful yet  
terrific.

Oswald  
Vernon Adams (3 styles)

**Mist enveloped the  
ship three hours out  
from port.**

[fonts.google.com](https://fonts.google.com)



# Storytelling

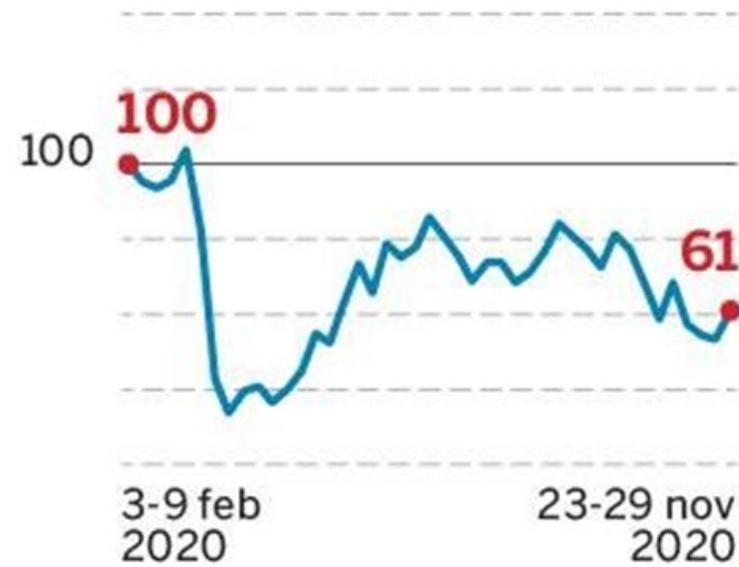
# Objectieve versus subjectieve datavisualisatie

# Welke visual wil je?



## Aantal geldafhalingen aan automaten

(index, 3 feb = 100)

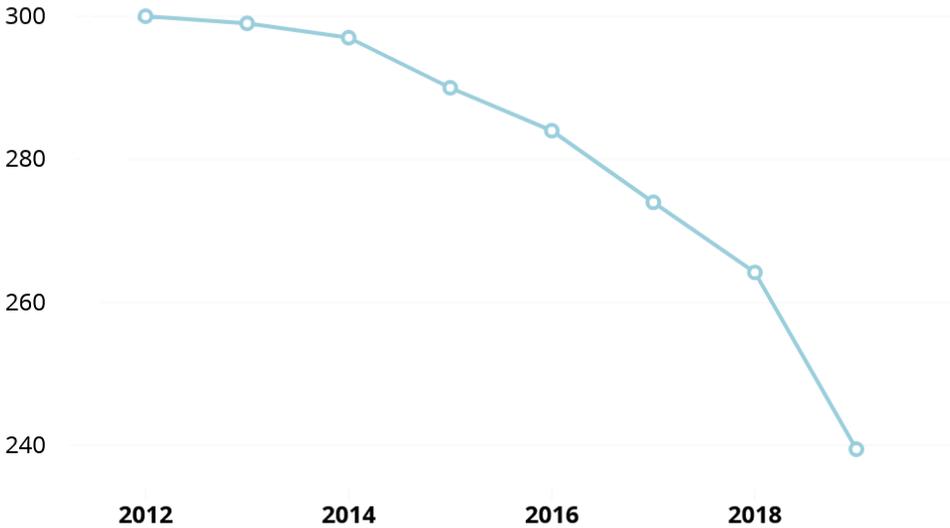


DS Infografiek | Bron: Febelfin

Bron: [De Standaard](#),  
22 december 2020

### CASH WITHDRAWALS

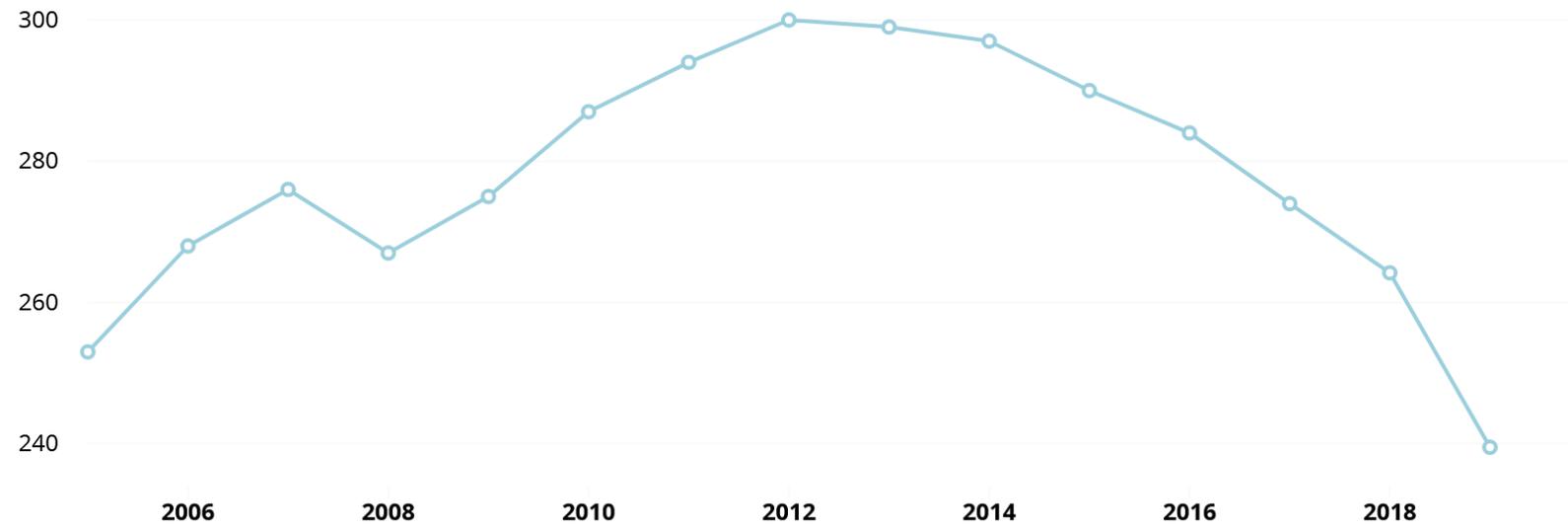
[close](#)



*Febelfin-Enquête / Vademecum T10.5*

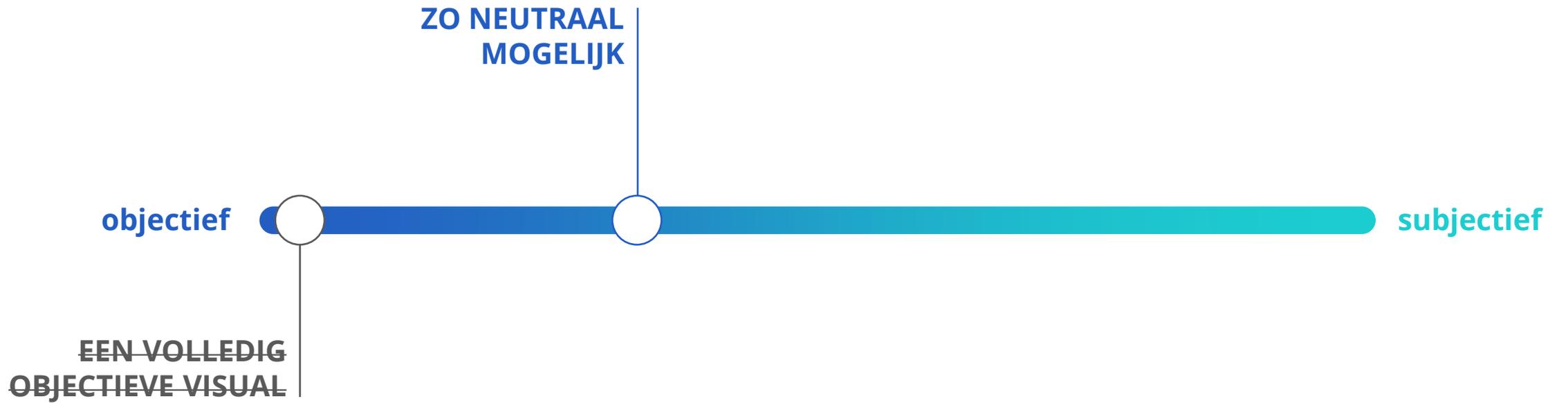
## CASH WITHDRAWALS

close



*Febelfin-Enquête / Vademecum T10.5*

# Welke visual wil je?



# Het afgelopen jaar groeide de Vlaamse bevolking met 40.000 inwoners

6.589.069 inwoners  
van het Vlaamse Gewest  
op 1 januari 2019



## Natuurlijke loop

62.420  
overlijdens

62.862  
geboorten



## Internationale migratie

51.912  
emigraties

80.423  
immigraties



## Binnenlandse migratie

22.680  
emigraties

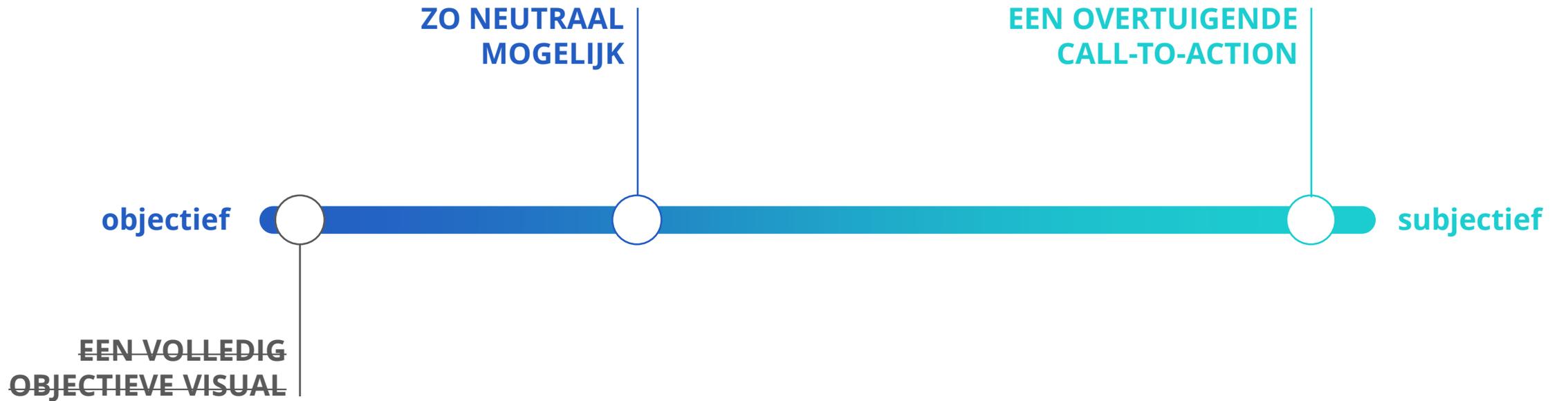
34.520  
immigraties

6.629.143 inwoners  
van het Vlaamse Gewest  
op 1 januari 2020

Bron: Statbel, bewerking Statistiek Vlaanderen

STATISTIEK  
VLAANDEREN

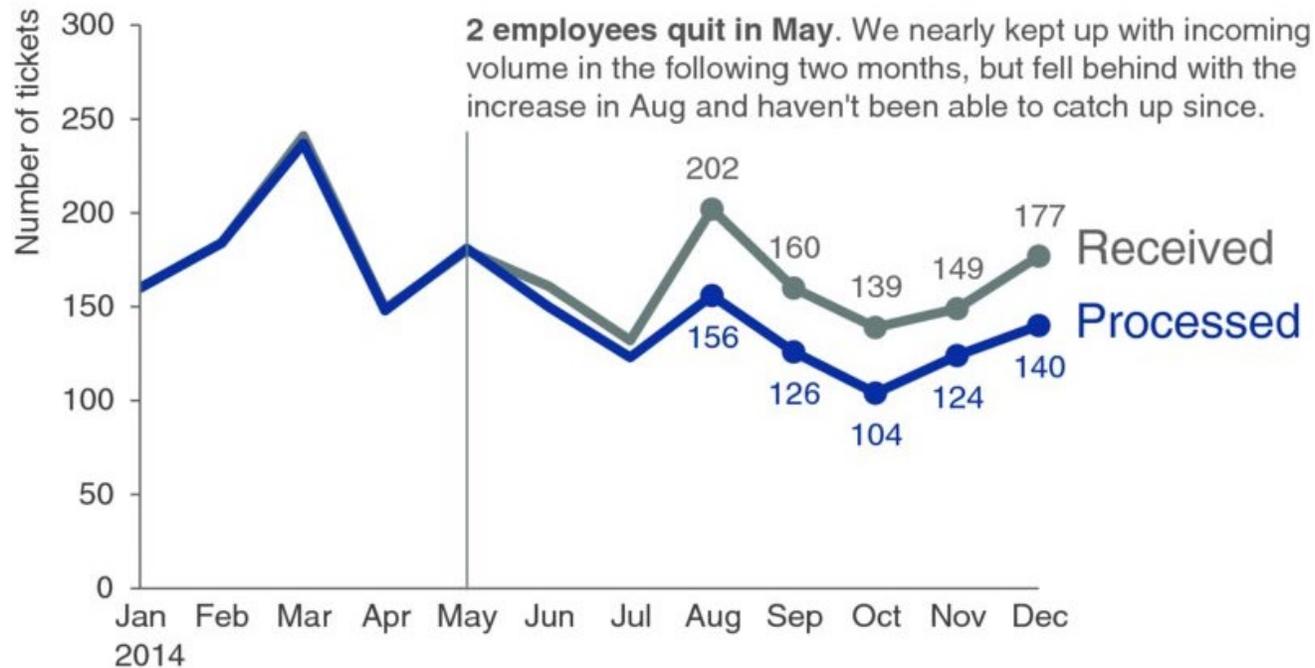
# Welke visual wil je?



# Please approve the hire of 2 FTEs

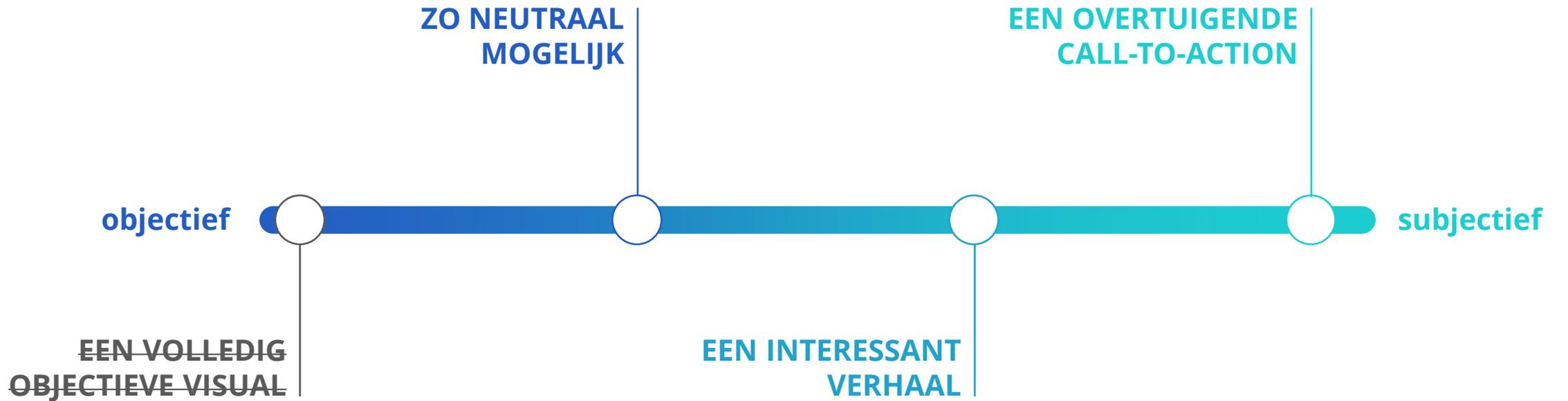
to backfill those who quit in the past year

## Ticket volume over time



Data source: XYZ Dashboard, as of 12/31/2014 | A detailed analysis on tickets processed per person and time to resolve issues was undertaken to inform this request and can be provided if needed.

# Welke visual wil je?



# Een verhaal vertellen

**identificeer je boodschap**  
**zoek interessante 'outliers'**  
**wees selectief**

maak bewuste kleurkeuzes  
gebruik annotaties

# Cecil Powell

## Facts

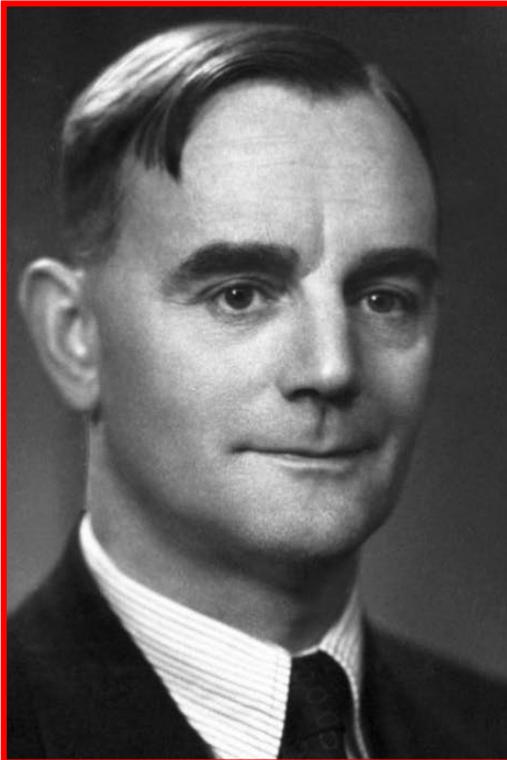


Photo from the Nobel Foundation archive.

Cecil Frank Powell

The Nobel Prize in Physics 1950

Born: 5 December 1903 Tonbridge, United Kingdom

Died: 9 August 1969, Italy

Affiliation at the time of the award: Bristol University, United Kingdom

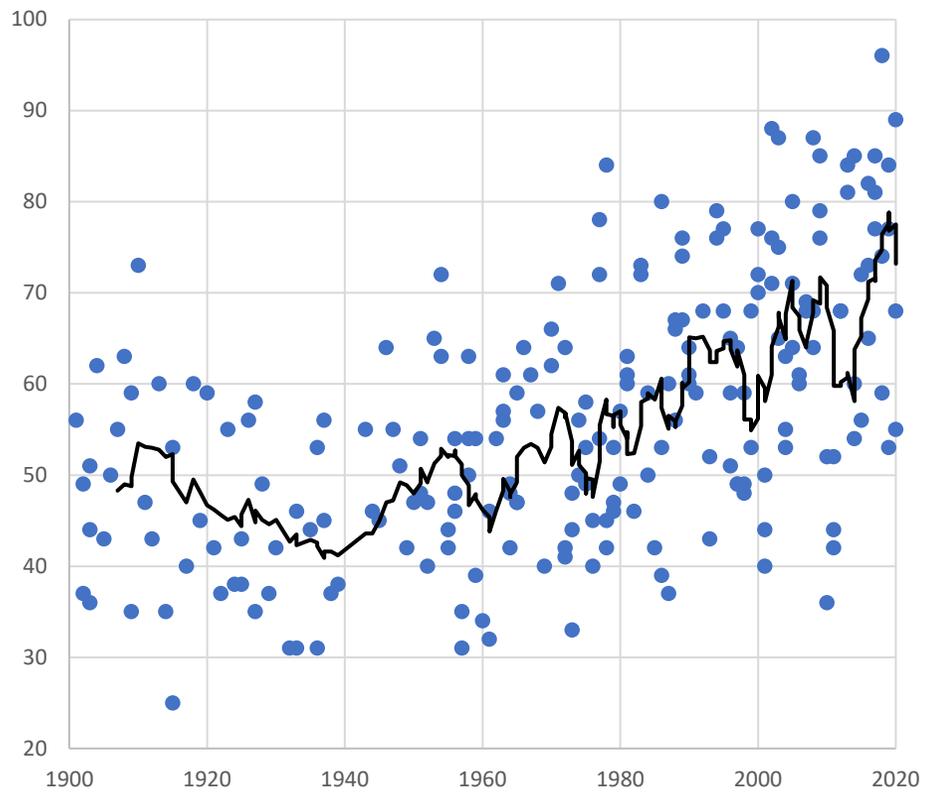
Prize motivation: "for his development of the photogr method of studying nuclear processes and his discove regarding mesons made with this method."

Prize share: 1/1

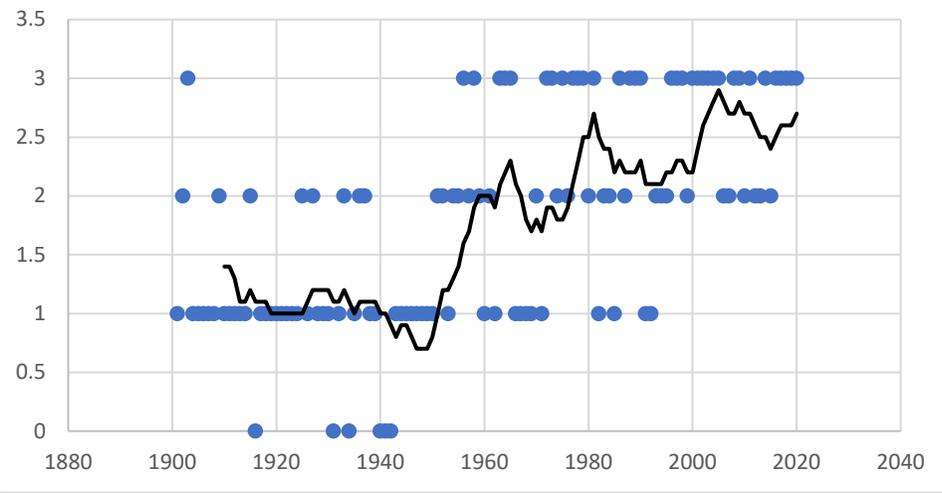
*full name*  
*year of award*  
*date of birth*  
*place of birth*  
*date of death*  
*prize share*  
*picture*  
*--*  
*gender*

|    | A                          | B                | C    | D   | E      | F    | G        | H     | I  | J                     | K                     | L          | M   | N             |
|----|----------------------------|------------------|------|-----|--------|------|----------|-------|--|-----------------------|-----------------------|------------|-----|---------------|
| 1  | firstname                  | surname          | born | die | gender | year | category | share | name_of_university                                   | city_of_university    | country_of_university | born_month | age | age_get_prize |
| 2  | Wilhelm Conrad             | Röntgen          | DE   | DE  | male   | 1901 | physics  | 1     | Munich University                                    | Munich                | Germany               | Mar        | 78  | 56            |
| 3  | Hendrik A.                 | Lorentz          | NL   | NL  | male   | 1902 | physics  | 2     | Leiden University                                    | Leiden                | the Netherlands       | Jul        | 75  | 49            |
| 4  | Pieter                     | Zeeman           | NL   | NL  | male   | 1902 | physics  | 2     | Amsterdam University                                 | Amsterdam             | the Netherlands       | May        | 78  | 37            |
| 5  | Henri                      | Becquerel        | FR   | FR  | male   | 1903 | physics  | 2     | École Polytechnique                                  | Paris                 | France                | Dec        | 56  | 51            |
| 6  | Pierre                     | Curie            | FR   | FR  | male   | 1903 | physics  | 4     | École municipale de physique et de chimie inc        | Paris                 | France                | May        | 47  | 44            |
| 7  | Marie                      | Curie            | PL   | FR  | female | 1903 | physics  | 4     |  |                       |                       | Nov        | 67  | 36            |
| 9  | Lord                       | Rayleigh         | GB   | GB  | male   | 1904 | physics  | 1     | Royal Institution of Great Britain                   | London                | United Kingdom        | Nov        | 77  | 62            |
| 10 | Philipp                    | Lenard           | SK   | DE  | male   | 1905 | physics  | 1     | Kiel University                                      | Kiel                  | Germany               | Jun        | 85  | 43            |
| 11 | J.J.                       | Thomson          | GB   | GB  | male   | 1906 | physics  | 1     | University of Cambridge                              | Cambridge             | United Kingdom        | Dec        | 84  | 50            |
| 12 | Albert A.                  | Michelson        | PL   | US  | male   | 1907 | physics  | 1     | University of Chicago                                | Chicago IL            | USA                   | Dec        | 79  | 55            |
| 13 | Gabriel                    | Lippmann         | LU   |     | male   | 1908 | physics  | 1     | Sorbonne University                                  | Paris                 | France                | Aug        | 76  | 63            |
| 14 | Guglielmo                  | Marconi          | IT   | IT  | male   | 1909 | physics  | 2     | Marconi Wireless Telegraph Co. Ltd.                  | London                | United Kingdom        | Apr        | 63  | 35            |
| 15 | Ferdinand                  | Braun            | DE   | US  | male   | 1909 | physics  | 2     | Strasbourg University                                | Strasbourg            | Germany (now France)  | Jun        | 68  | 59            |
| 16 | Johannes Diderik           | van der Waals    | NL   | NL  | male   | 1910 | physics  | 1     | Amsterdam University                                 | Amsterdam             | the Netherlands       | Nov        | 86  | 73            |
| 17 | Wilhelm                    | Wien             | RU   | DE  | male   | 1911 | physics  | 1     | Würzburg University                                  | Würzburg              | Germany               | Jan        | 64  | 47            |
| 18 | Gustaf                     | Dalén            | SE   | SE  | male   | 1912 | physics  | 1     | Swedish Gas-Accumulator Co.                          | Lidingö Stockholm     | Sweden                | Nov        | 68  | 43            |
| 19 | Heike                      | Kamerlingh Onnes | NL   | NL  | male   | 1913 | physics  | 1     | Leiden University                                    | Leiden                | the Netherlands       | Sep        | 73  | 60            |
| 20 | Max                        | von Laue         | DE   | DE  | male   | 1914 | physics  | 1     | Frankfurt-on-the-Main University                     | Frankfurt-on-the-Main | Germany               | Oct        | 81  | 35            |
| 21 | William                    | Bragg            | GB   | GB  | male   | 1915 | physics  | 2     | University College                                   | London                | United Kingdom        | Jul        | 80  | 53            |
| 22 | Lawrence                   | Bragg            | AU   | GB  | male   | 1915 | physics  | 2     | Victoria University                                  | Manchester            | United Kingdom        | Mar        | 81  | 25            |
| 23 | Charles Glover             | Barkla           | GB   | GB  | male   | 1917 | physics  | 1     | Edinburgh University                                 | Edinburgh             | United Kingdom        | Jun        | 67  | 40            |
| 24 | Max                        | Planck           | DE   | DE  | male   | 1918 | physics  | 1     | Berlin University                                    | Berlin                | Germany               | Apr        | 89  | 60            |
| 25 | Johannes                   | Stark            | DE   | DE  | male   | 1919 | physics  | 1     | Greifswald University                                | Greifswald            | Germany               | Apr        | 83  | 45            |
| 26 | Charles Edouard            | Guillaume        | CH   | FR  | male   | 1920 | physics  | 1     | Bureau International des Poids et Mesures (In Sèvres |                       | France                | Feb        | 77  | 59            |
| 27 | Albert                     | Einstein         | DE   | US  | male   | 1921 | physics  | 1     | Kaiser-Wilhelm-Institut (now Max-Planck-Inst Berlin  |                       | Germany               | Mar        | 76  | 42            |
| 28 | Niels                      | Bohr             | DK   | DK  | male   | 1922 | physics  | 1     | Copenhagen University                                | Copenhagen            | Denmark               | Oct        | 77  | 37            |
| 29 | Robert A.                  | Millikan         | US   | US  | male   | 1923 | physics  | 1     | California Institute of Technology (Caltech)         | Pasadena CA           | USA                   | Mar        | 85  | 55            |
| 30 | Manne                      | Siegbahn         | SE   | SE  | male   | 1924 | physics  | 1     | Uppsala University                                   | Uppsala               | Sweden                | Dec        | 92  | 38            |
| 31 | James                      | Franck           | DE   | DE  | male   | 1925 | physics  | 2     | Goettingen University                                | Göttingen             | Germany               | Aug        | 82  | 43            |
| 32 | Gustav                     | Hertz            | DE   | DE  | male   | 1925 | physics  | 2     | Halle University                                     | Halle                 | Germany               | Jul        | 88  | 38            |
| 33 | Jean Baptiste              | Perrin           | FR   | US  | male   | 1926 | physics  | 1     | Sorbonne University                                  | Paris                 | France                | Sep        | 72  | 56            |
| 34 | Arthur H.                  | Compton          | US   | US  | male   | 1927 | physics  | 2     | University of Chicago                                | Chicago IL            | USA                   | Sep        | 70  | 35            |
| 35 | C.T.R.                     | Wilson           | GB   | GB  | male   | 1927 | physics  | 2     | University of Cambridge                              | Cambridge             | United Kingdom        | Feb        | 90  | 58            |
| 36 | Owen Willans               | Richardson       | GB   | GB  | male   | 1928 | physics  | 1     | London University                                    | London                | United Kingdom        | Apr        | 80  | 49            |
| 37 | Louis                      | de Broglie       | FR   | FR  | male   | 1929 | physics  | 1     | Sorbonne University Institut Henri Poincaré          | Paris                 | France                | Aug        | 95  | 37            |
| 38 | Sir Chandrasekhara Venkata | Raman            | IN   | IN  | male   | 1930 | physics  | 1     | Calcutta University                                  | Calcutta              | India                 | Nov        | 82  | 42            |
| 39 | Werner                     | Heisenberg       | DE   | DE  | male   | 1932 | physics  | 1     | Leipzig University                                   | Leipzig               | Germany               | Dec        | 75  | 31            |
| 40 | Erwin                      | Schrödinger      | AT   | AT  | male   | 1933 | physics  | 2     | Berlin University                                    | Berlin                | Germany               | Aug        | 74  | 46            |
| 41 | Paul A.M.                  | Dirac            | GB   | US  | male   | 1933 | physics  | 2     | University of Cambridge                              | Cambridge             | United Kingdom        | Aug        | 82  | 31            |
| 42 | James                      | Chadwick         | GR   | GR  | male   | 1935 | physics  | 1     | Liverpool University                                 | Liverpool             | United Kingdom        | Oct        | 83  | 44            |

Average age



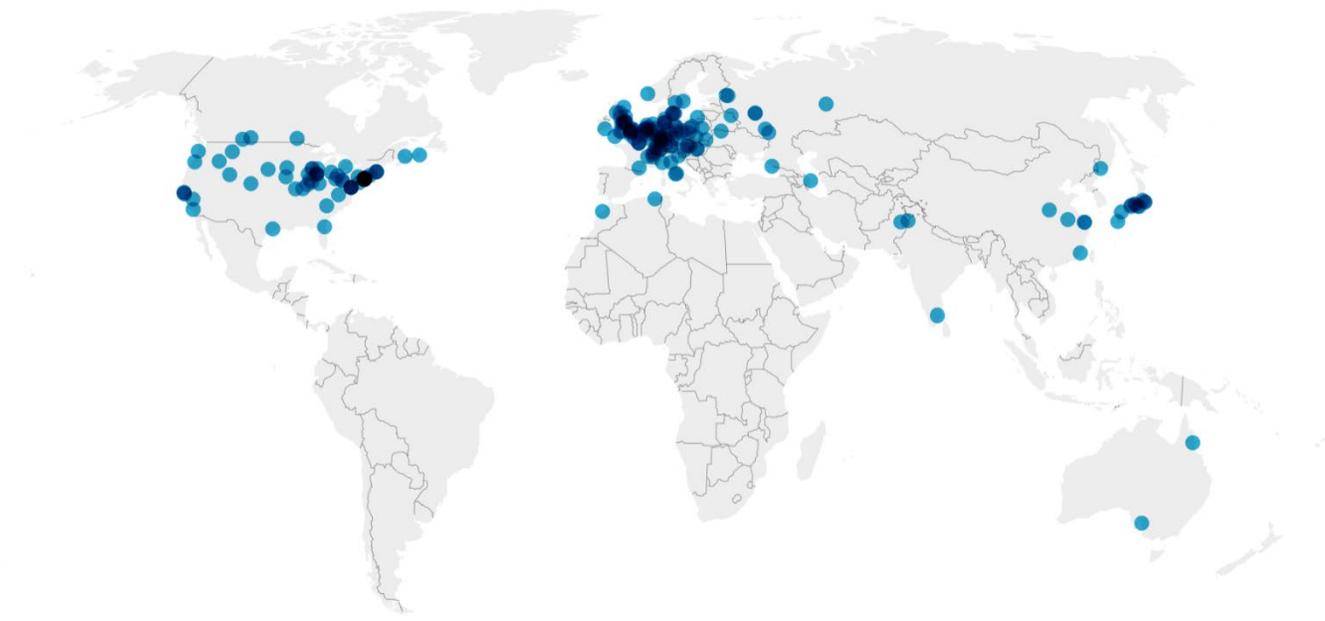
Number of laureates



gender balance

|   |     |
|---|-----|
| M | 212 |
| F | 4   |

Laureate birth place



# The Nobel Prize in Physics

114 years, 108 prizes, 198 laureates



25 YOUNGEST LAUREATE



William Lawrence Bragg  
1915

88 OLDEST LAUREATE



Raymond Davis Jr.  
2002

2 HIGHEST NUMBER OF PRIZES WON



John Bardeen  
1956, 1972

Laureates' gender

MALE 196  
FEMALE 2



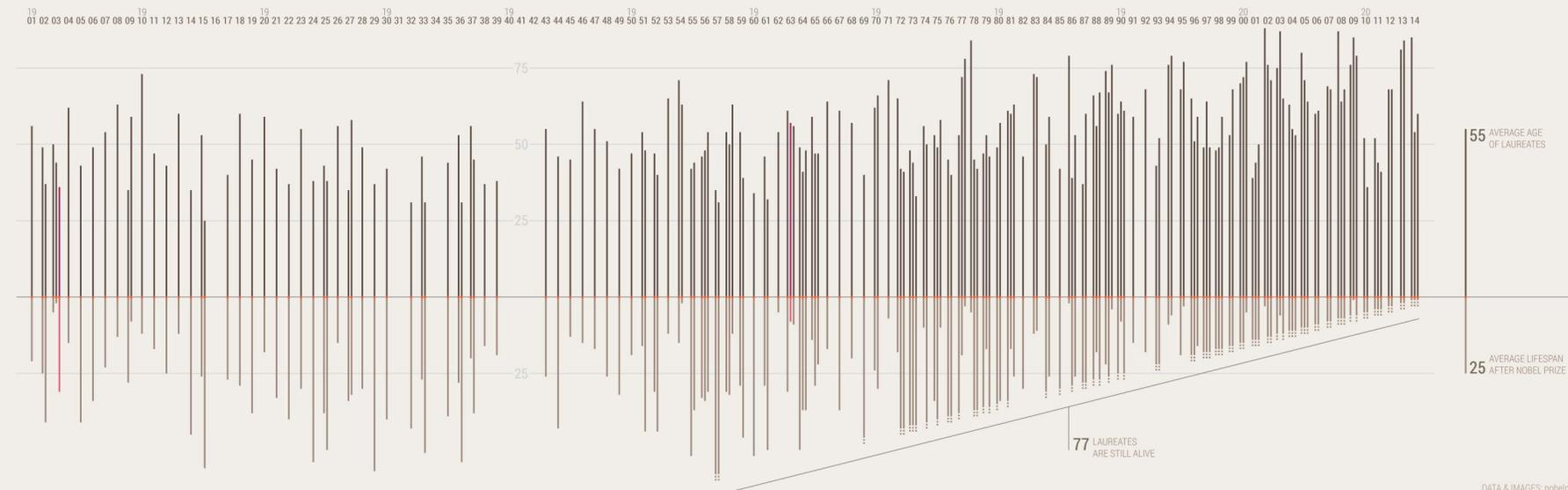
Marie Skłodowska-Curie  
1903



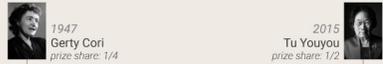
Maria Goeppert-Mayer  
1963

Most successful research domains

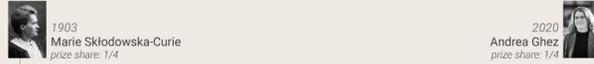
- PARTICLE PHYSICS 34
- ATOMIC PHYSICS 28
- CONDENSED MATTER 28
- INSTRUMENTATION 20
- NUCLEAR PHYSICS 17
- ELECTROMAGNETISM 14
- ASTROPHYSICS 13
- QUANTUM MECHANICS 11
- OPTICAL PHYSICS 10
- SUPERCONDUCTIVITY 9
- SUPERFLUIDITY 8
- ELECTRODYNAMICS 8
- SEMICONDUCTORS 8



DATA & IMAGES: nobelprize.org  
VISUALIZATION & DESIGN: baryon.be



**Medicine**  
210 men, 12 women (5.4%)



**Physics**  
212 men, 4 women (1.9%)



**Chemistry**  
179 men, 7 women (3.8%)



**Literature**  
101 men, 16 women (13.7%)



**Peace**  
90 men, 28 organisations, 17 women (12.6%)



**Economics**  
84 men, 2 women (2.3%)

## Women of the Nobel Prize

The Nobel Prize exists since 1901. In those 120 years, the Prize was awarded 876 times to a man, but only 58 times to a woman. 2009 was a record year, with 5 women winning a Prize.

In 2020, 4 women received the Prize: Andrea Ghez won the Physics Prize for the discovery of a super-massive compact object at the centre of our galaxy, Emmanuelle Charpentier and Jennifer Doudna the Chemistry Prize for the development of a method for genome editing (CRISPR), and Louise Glück won the Nobel Prize in Literature.

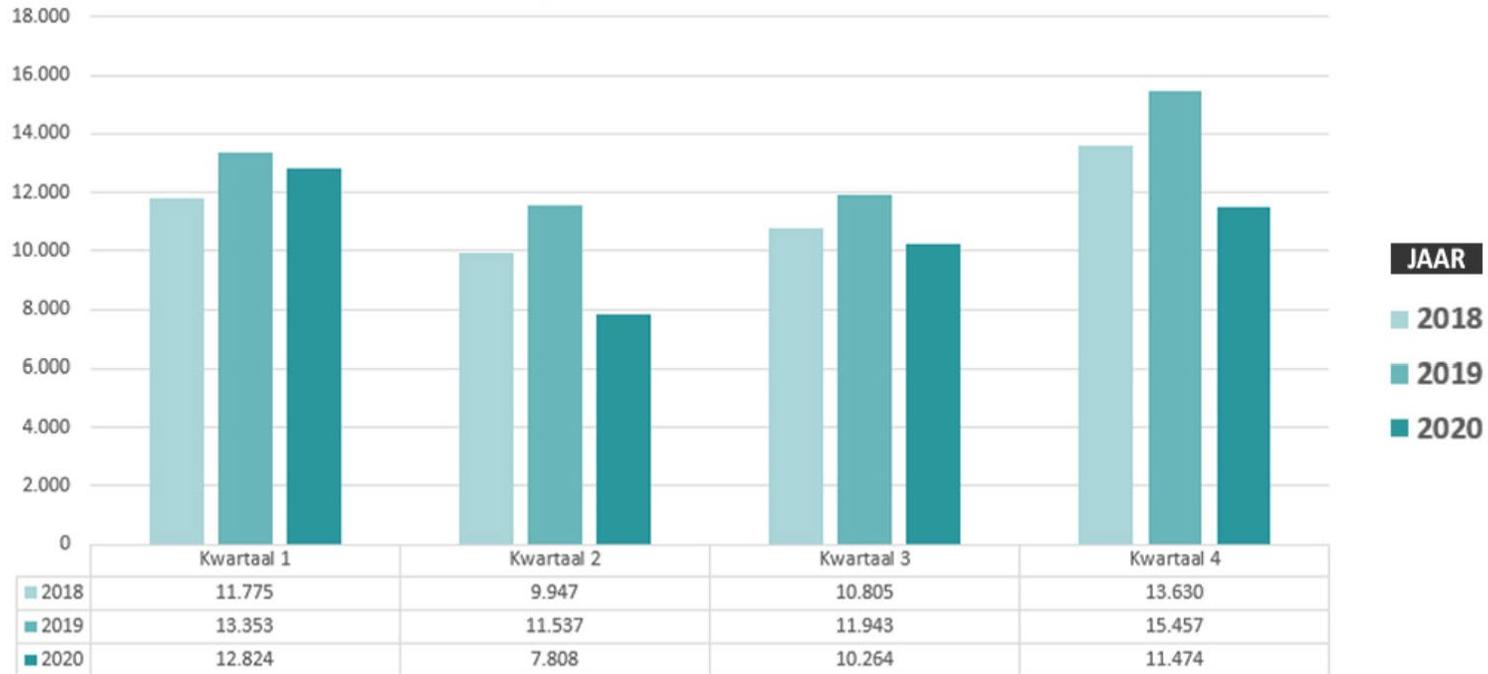
Source: nobelprize.org  
Infographic design: Koen Van den Eeckhout (@koen\_vde | www.baryon.be)

**1903**  
Marie Skłodowska-Curie  
prize share: 1/4

**2020**  
Andrea Ghez  
prize share: 1/4

**Physics**  
212 men, 4 women (1.9%)

## Instroom Vlaams Gewest per kwartaal

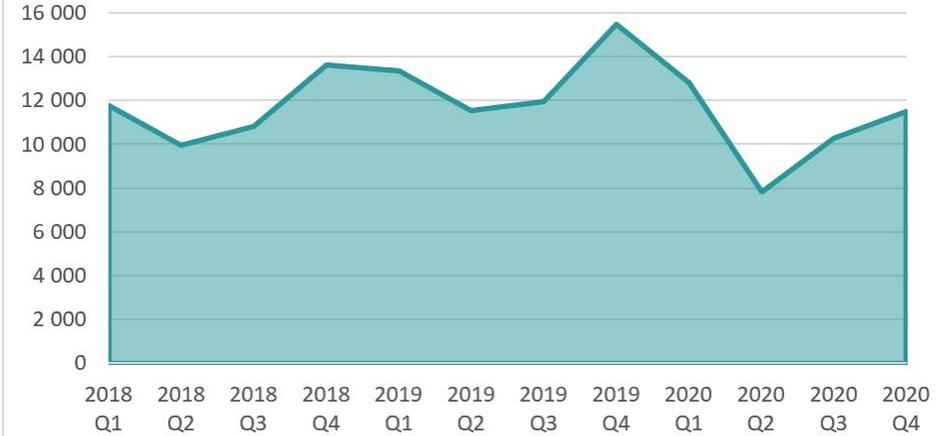


Potentieel doelpubliek inburgeraars voor het volgen van een inburgeringstraject. Noot: er zijn geen instroomcijfers ter beschikking van het Brussels Gewest.

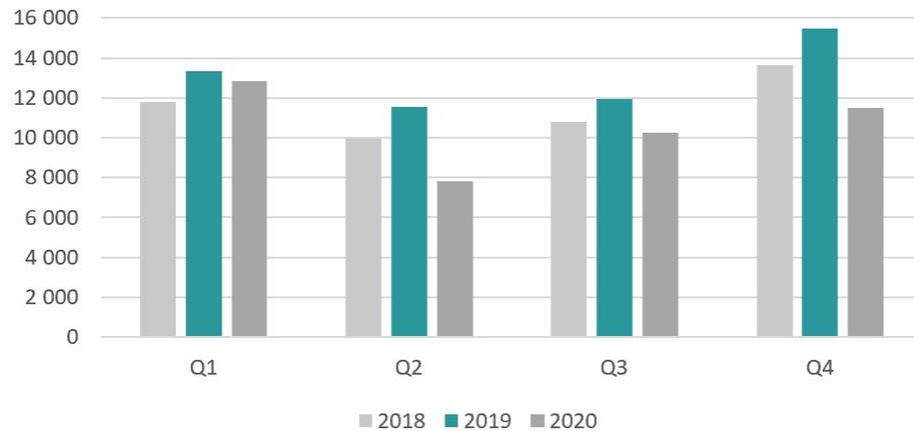
### Instroom is het grootst in het eerste en laatste kwartaal



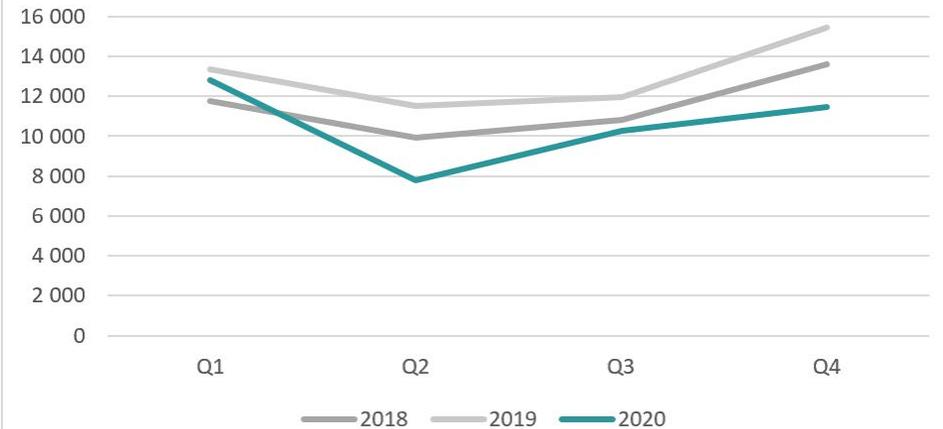
### Corona zorgde voor een tijdelijke dip in de instroom



### Instroom was voor elk kwartaal het grootst in 2019



### Instroom in 2020 op laagste niveau in de afgelopen drie jaar



# Een verhaal vertellen

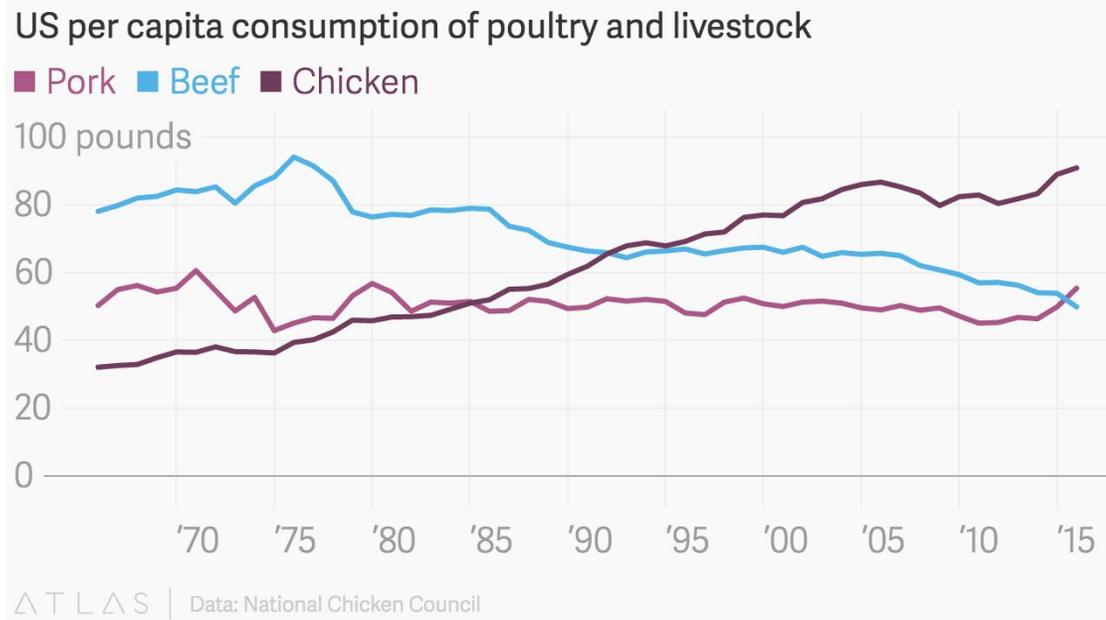
identificeer je boodschap  
zoek interessante 'outliers'  
wees selectief

**maak bewuste kleurkeuzes**  
gebruik annotaties

~~data~~

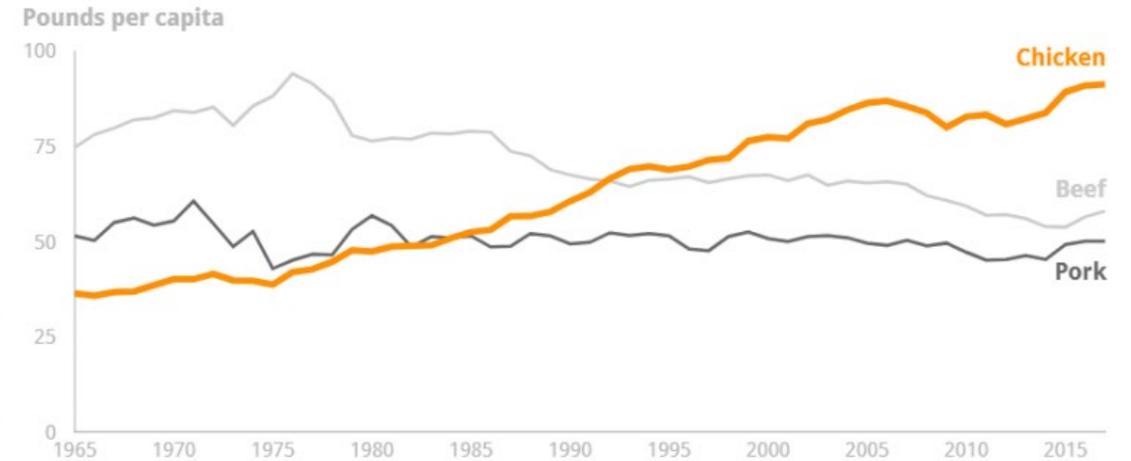


verhaal



### Americans are eating more chicken than ever before

U.S. per capita consumption of chicken has more than doubled since 1965.



Source: [National Chicken Council](#)

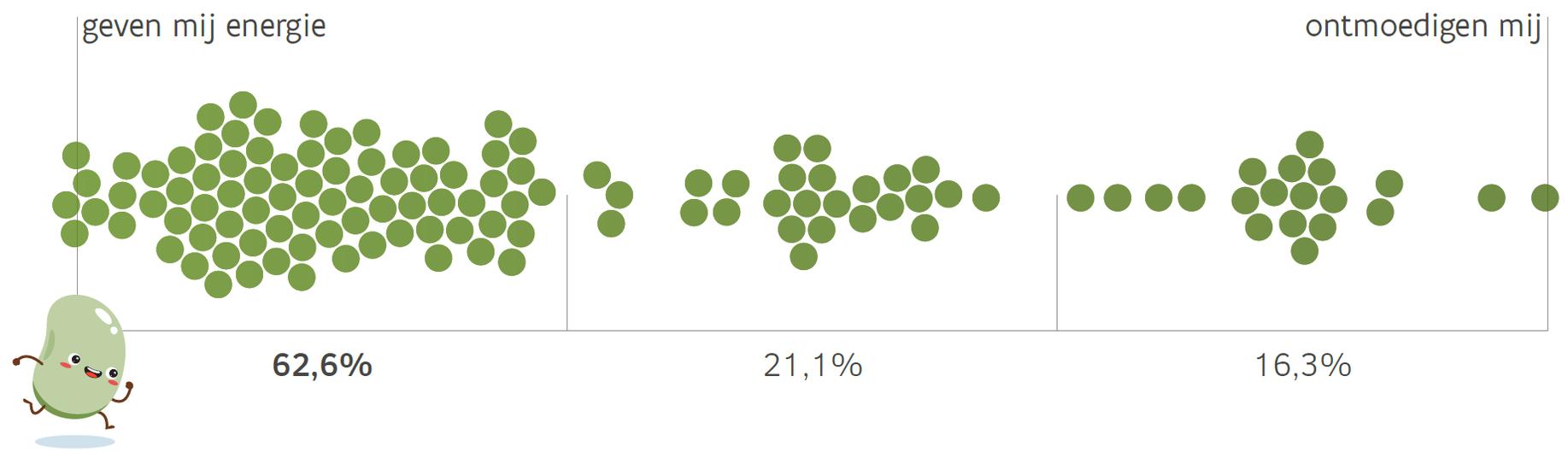
Created by Marc Soares for #MakeoverMonday

# Een verhaal vertellen

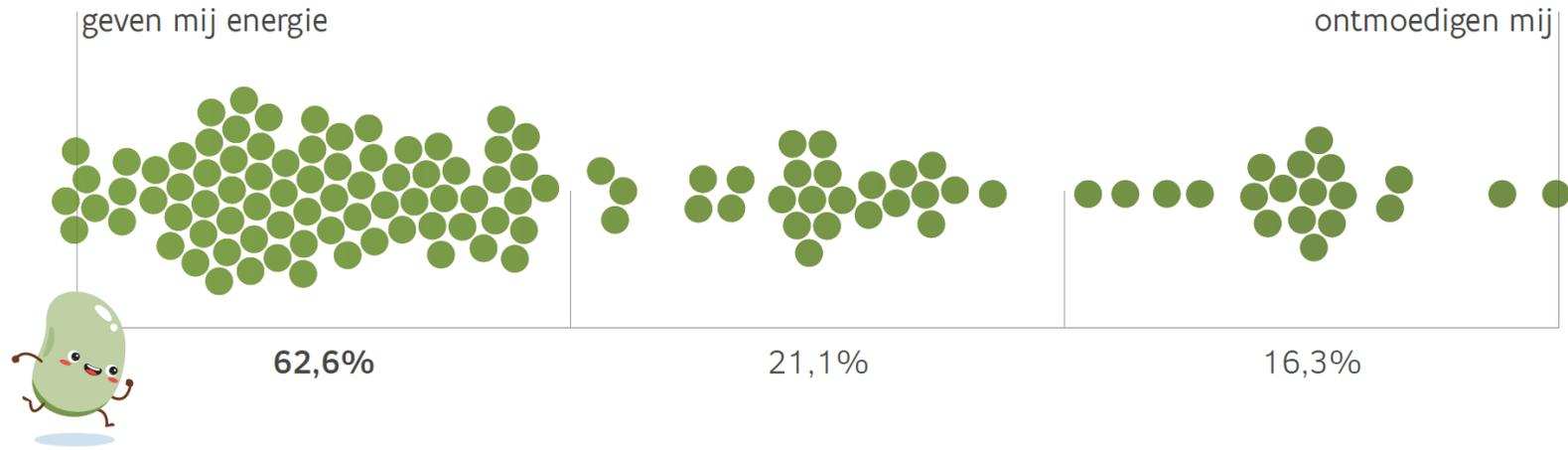
identificeer je boodschap  
zoek interessante 'outliers'  
wees selectief

maak bewuste kleurkeuzes  
**gebruik annotaties**

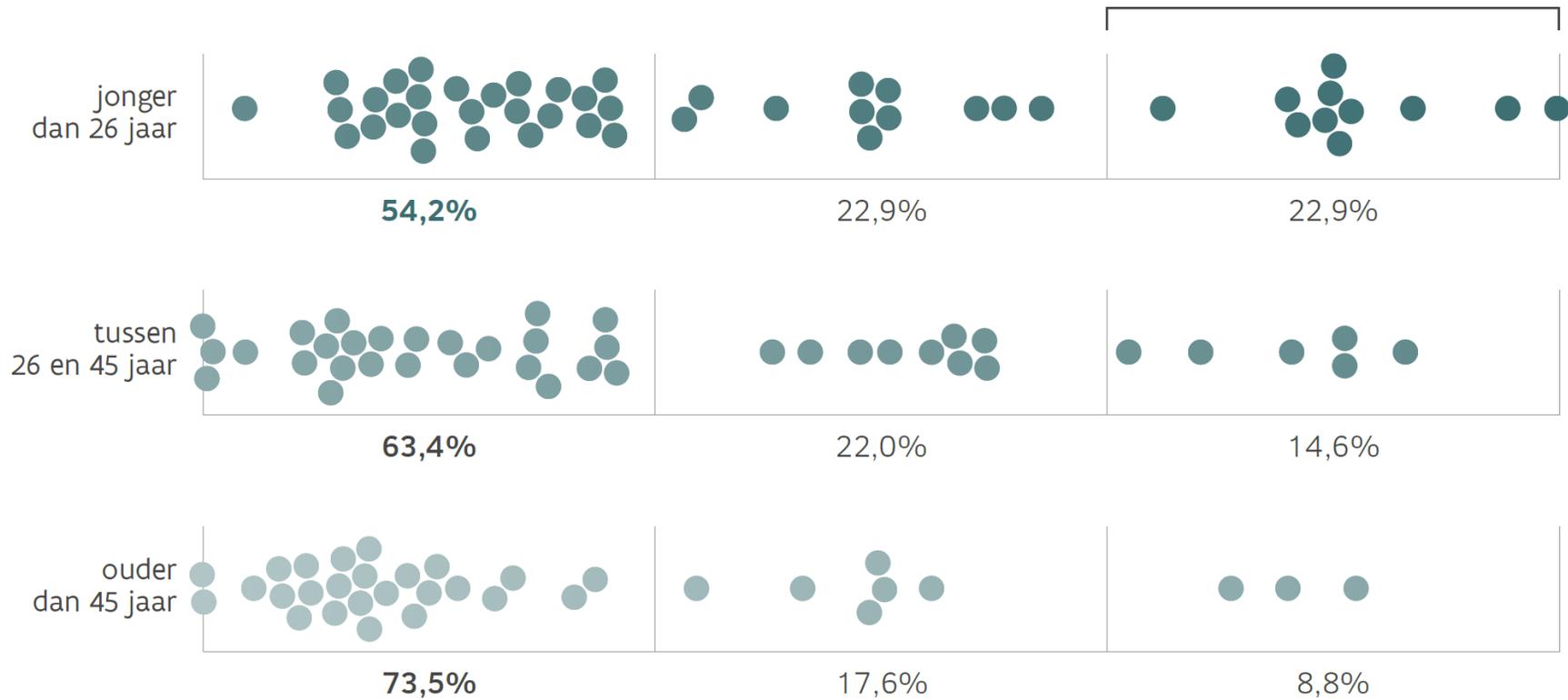
### Situaties zoals in mijn verhaal...



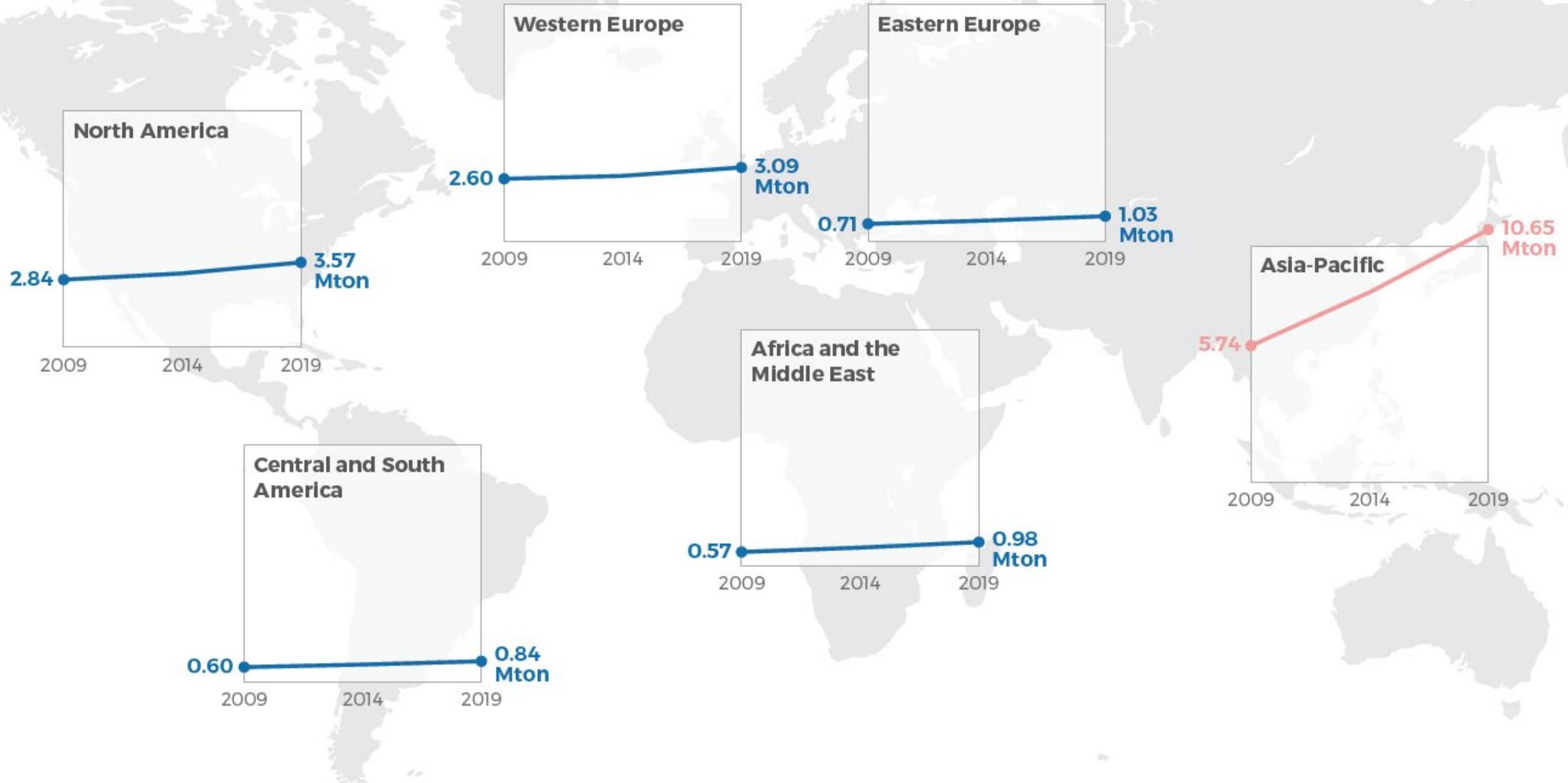
## Situaties zoals in mijn verhaal...



Jongere respondenten geven vaker aan **ontmoedigd te zijn** door de situaties in hun verhaal.

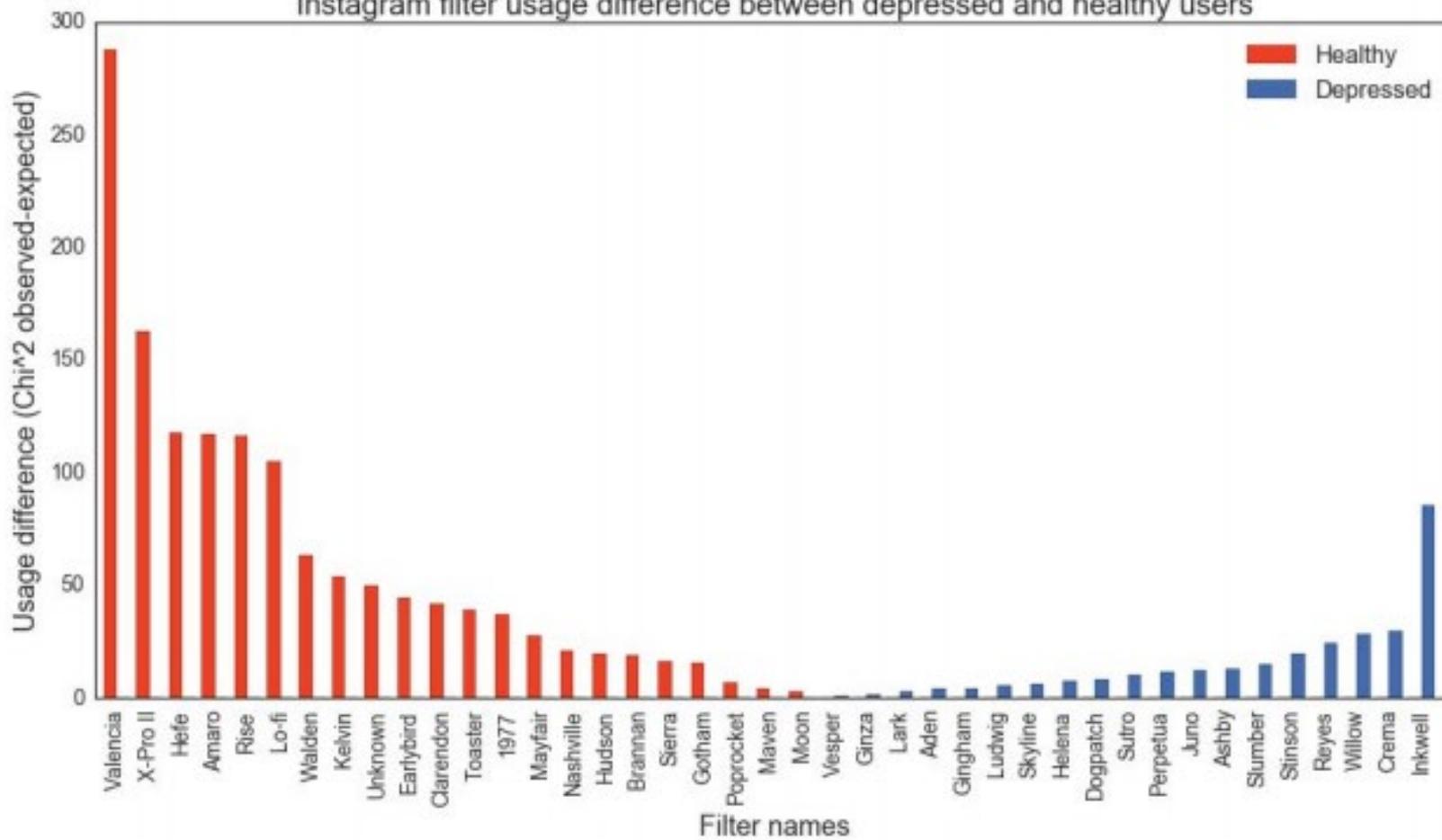


# Asia-Pacific will continue to be the biggest demand region



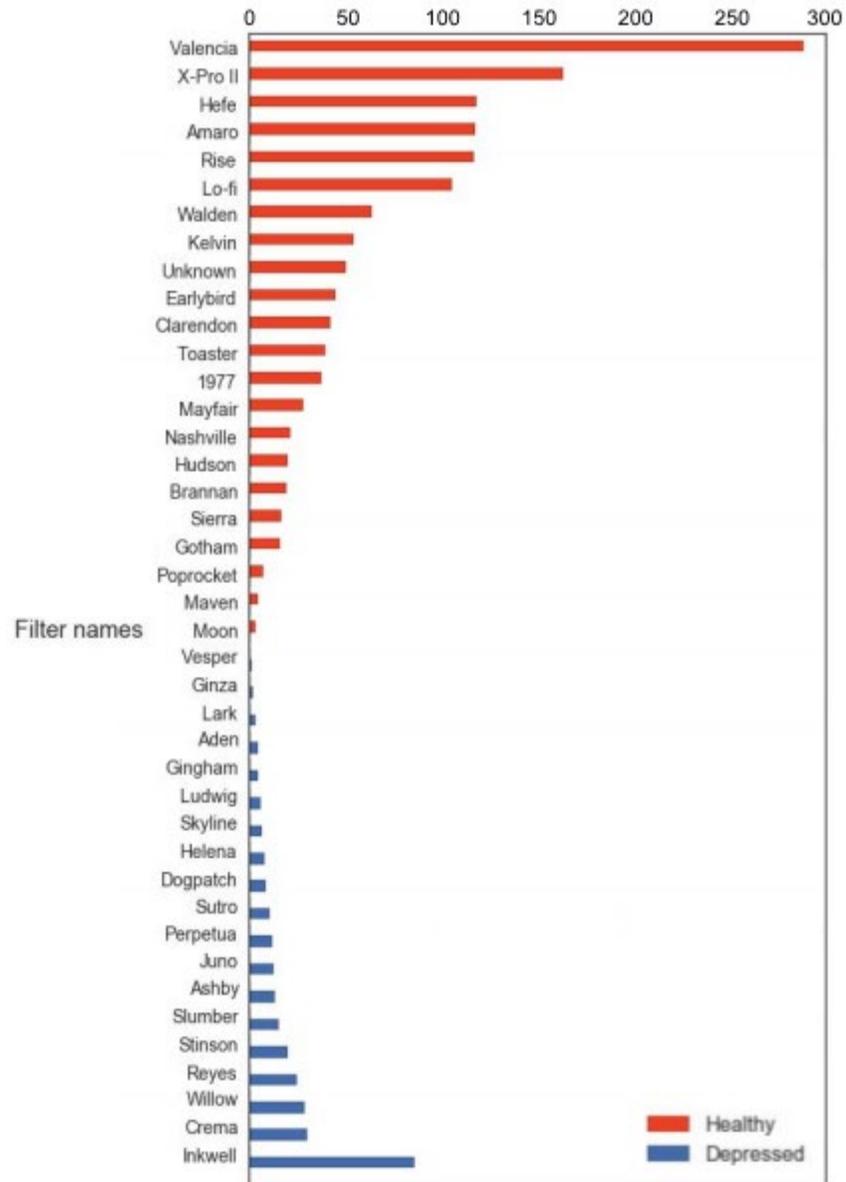
# Grafieken beter maken

Instagram filter usage difference between depressed and healthy users

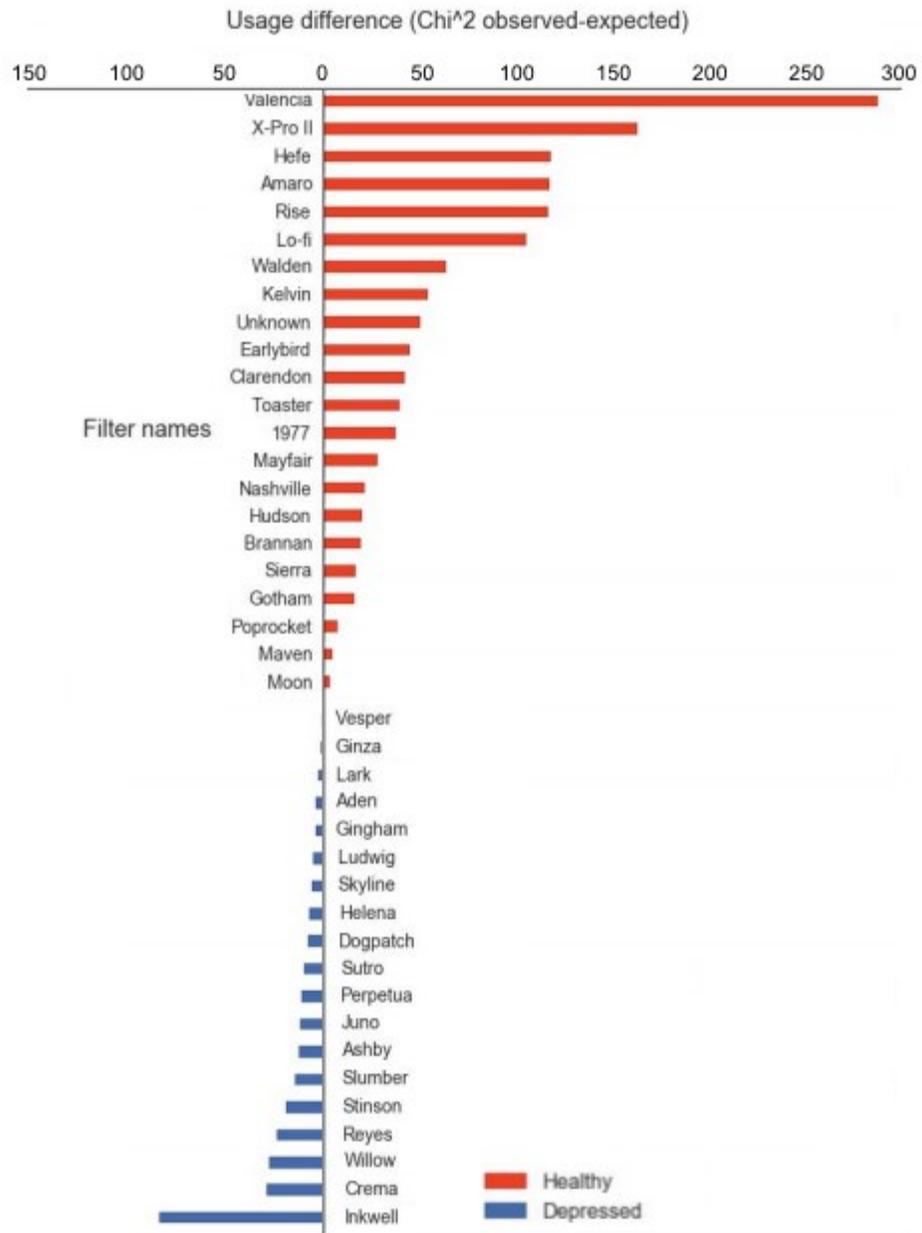


# Instagram filter usage difference between depressed and healthy users

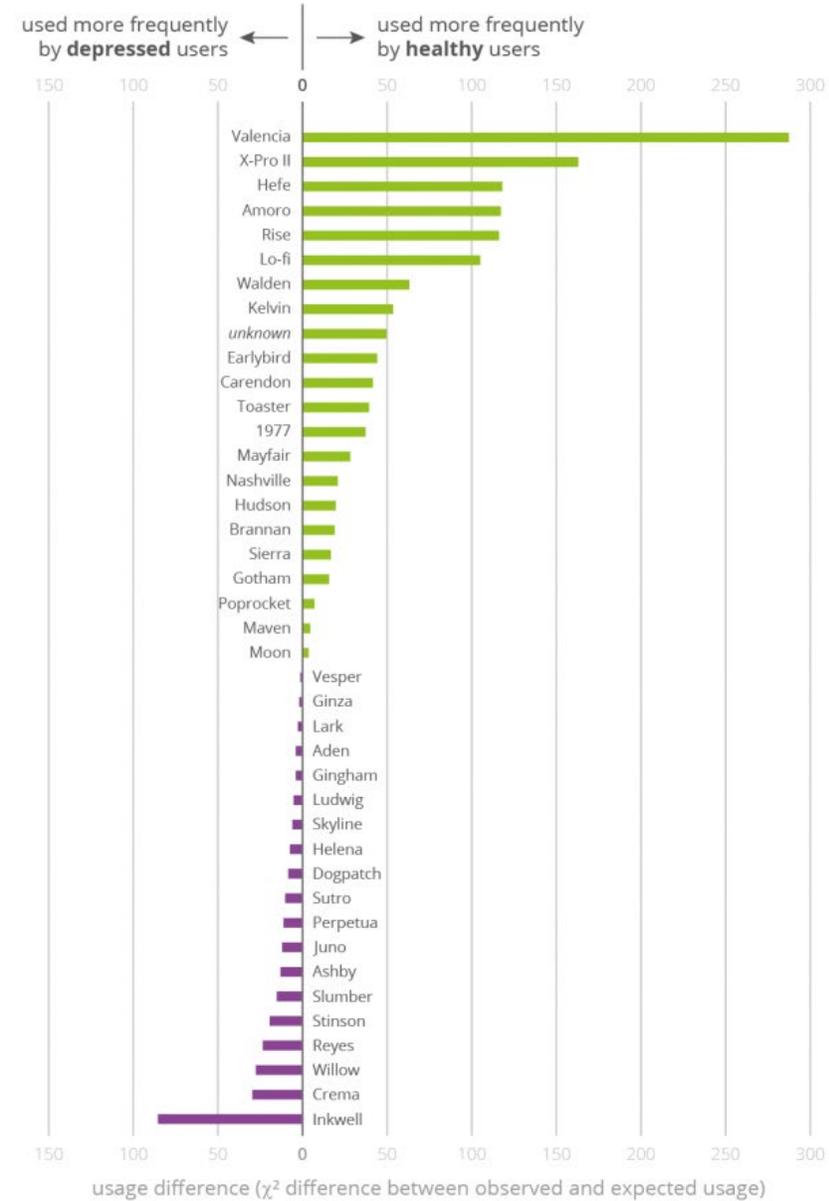
Usage difference (Chi<sup>2</sup> observed-expected)



# Instagram filter usage difference between depressed and healthy users

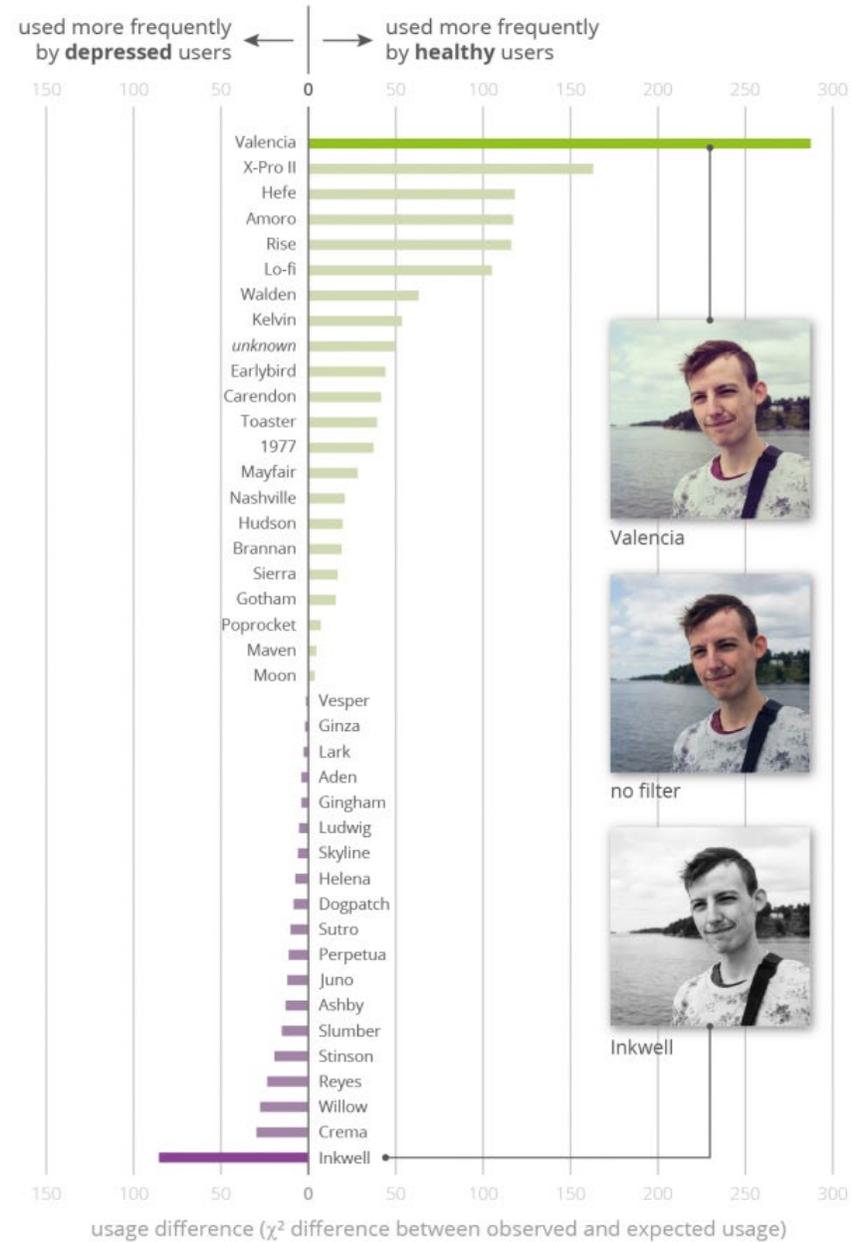


## Instagram filter usage difference between depressed and healthy users\*

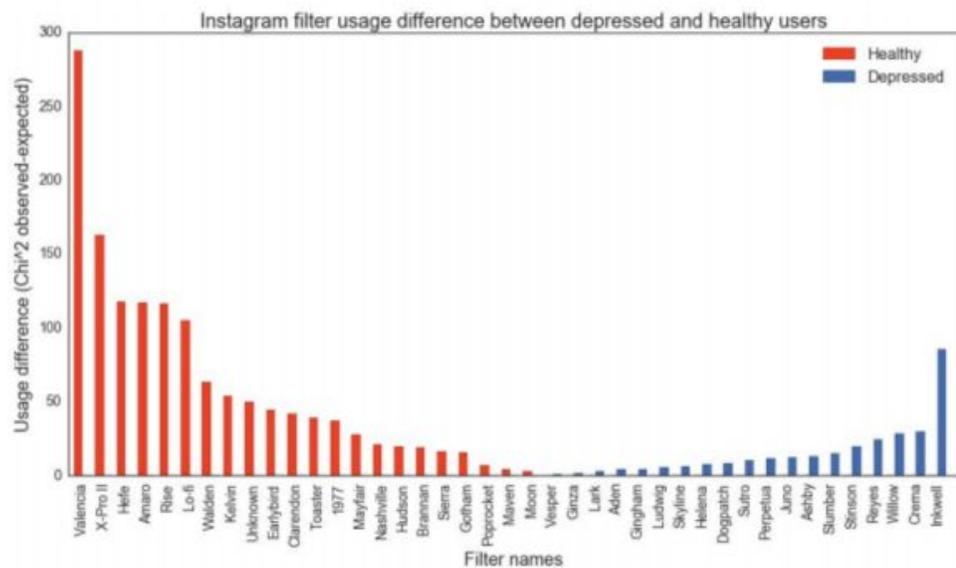


\* Source: Instagram photos reveal predictive markers of depression, Reece and Danforth, arXiv:1608.03282

# Healthy and depressed Instagram users tend to choose different photo filters\*

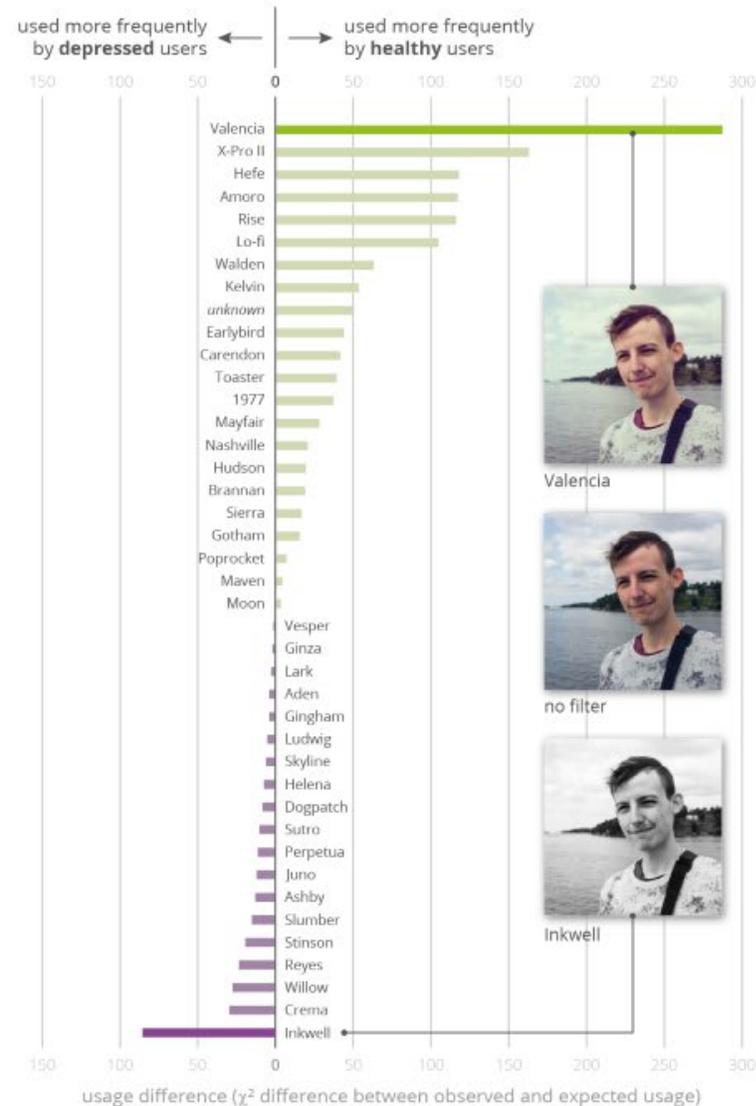


\* Source: Instagram photos reveal predictive markers of depression, Reece and Danforth, arXiv:1608.03282



ORIGINAL

### Healthy and depressed Instagram users tend to choose different photo filters\*

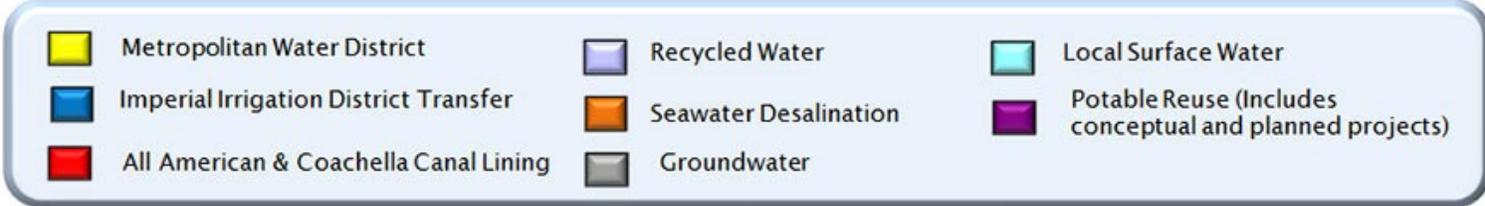
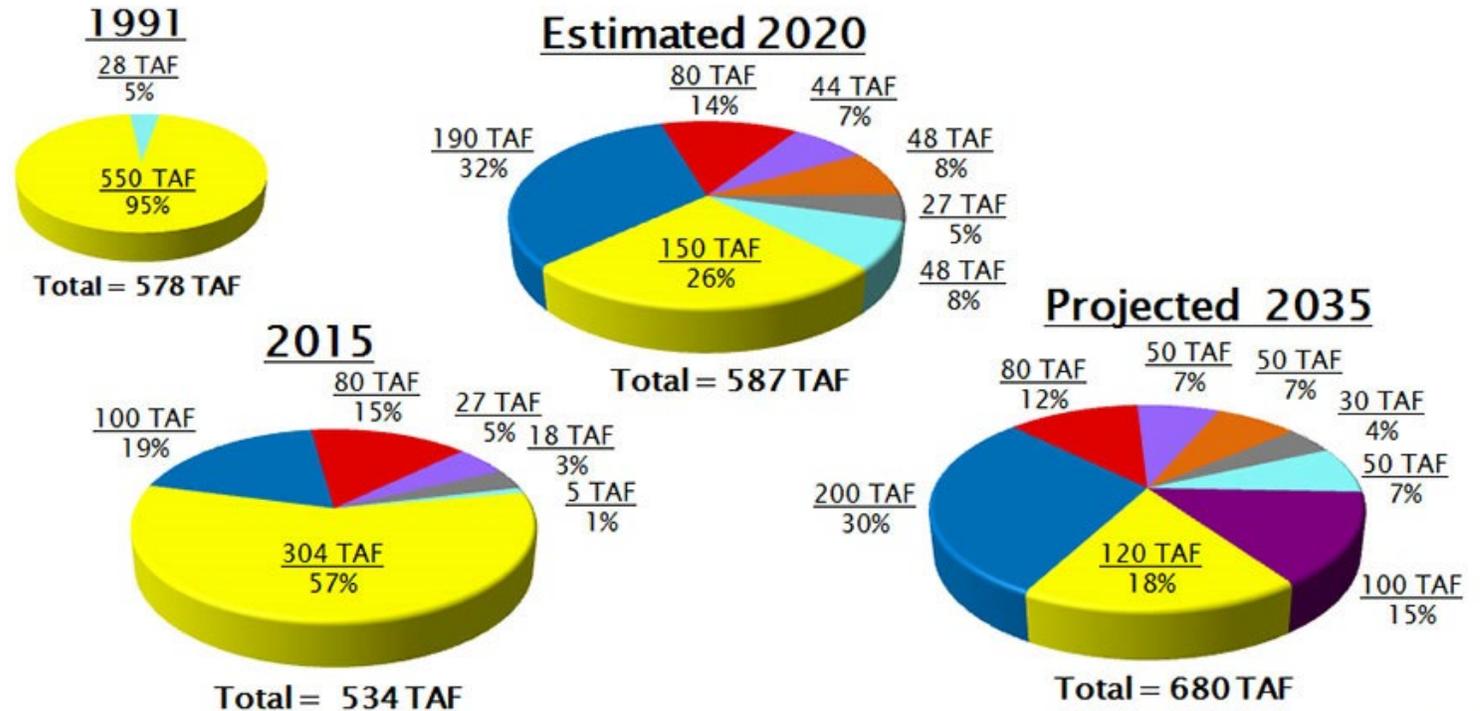


\* Source: Instagram photos reveal predictive markers of depression, Reece and Danforth, arXiv:1608.03282

IMPROVED

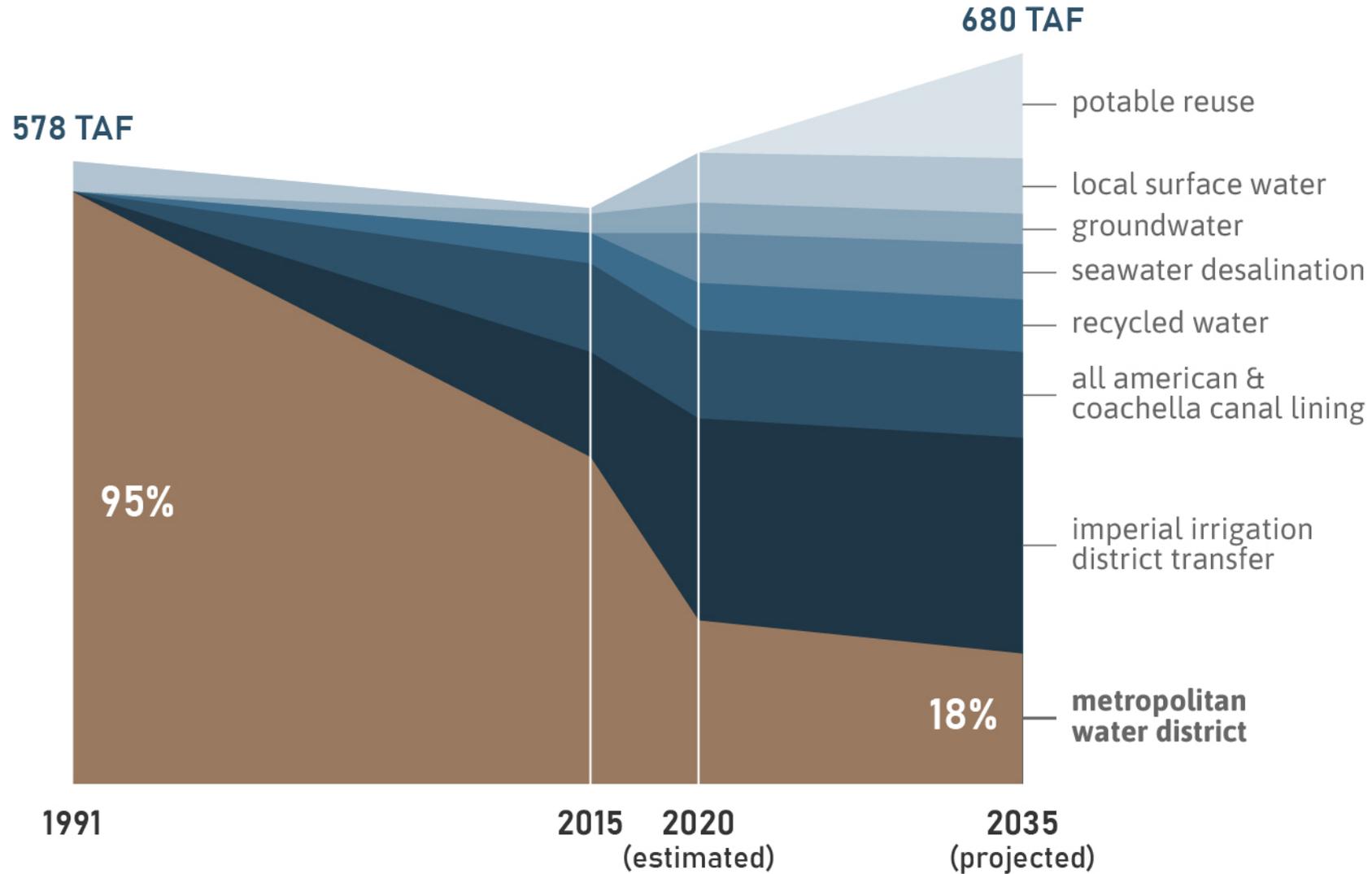
# Wat zou jij veranderen?

## Increasing San Diego County's Water Supply Reliability through Supply Diversification



TAF=Thousand Acre-Feet

# Supply diversification will increase San Diego County's water supply reliability



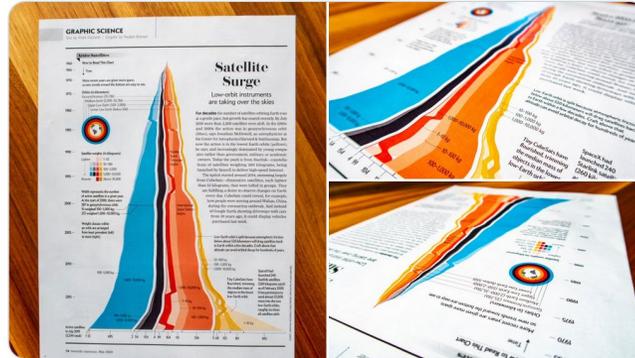


Inspiratie

# Twitter

**Nadieh Bremer** @NadiehBremer · 15 u  
New!! 🎉 I've created a streamgraph-meets-bump-chart #dataviz to show the rise & sudden surge in the no. of satellites orbiting Earth for @sciam 🌍

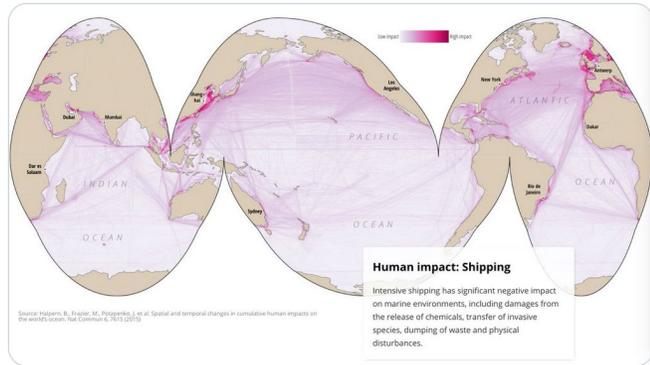
Huge thanks to @ChristiansenJen for the feedback + layout + sending me 2 issues when my store in NL didn't get them due to covid-19



7 40 368

**Maarten Lambrechts** @maartenlam · 23 mei  
Als antwoord op @pickover  
From a work in progress

RECOMMENDED

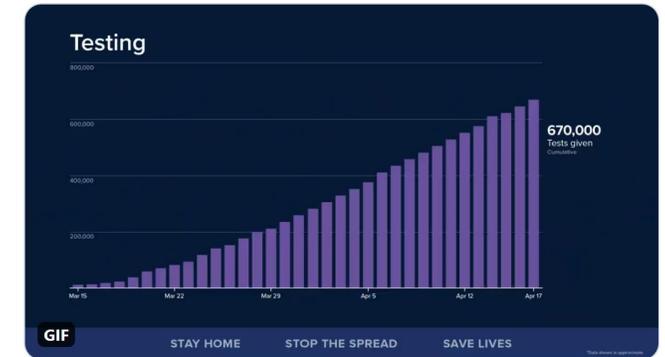


5

Vastgemaakte Tweet  
**Giorgia Lupi** @giorgialupi · 30 apr.  
We ❤️ @NYGovCuomo 's daily briefings. That's why at @pentagram we humbly tried to make his charts even more effective and human.

We talked to @FastCompany about it: [fastcompany.com/90498405/andre...](https://fastcompany.com/90498405/andre...)

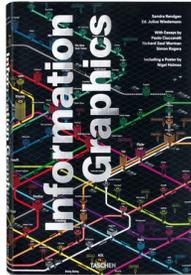
But also check out the full project here: [drive.google.com/file/d/1tS-BDR...](https://drive.google.com/file/d/1tS-BDR...)



13 160 441

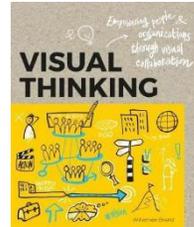
Dataviz World Leaders lijst: [twitter.com/Koen\\_VdE/lists](https://twitter.com/Koen_VdE/lists)

# Boeken



Information graphics

Taschen



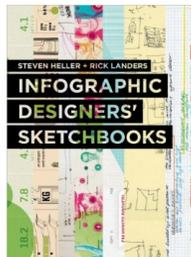
Visual thinking

Willemien Brand



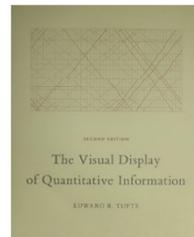
Visual journalism

Gestalten



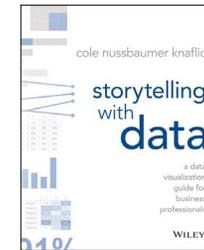
Infographic designers' sketchbooks

Steven Heller, Rick Landers



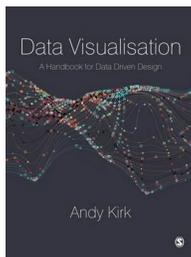
The visual display of quantitative information

Edward R. Tufte



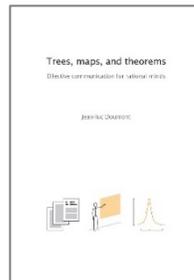
Storytelling with data

Cole Nussbaumer Knaflic



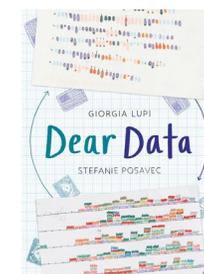
Data visualisation

Andy Kirk



Trees, maps and theorems

Jean-Luc Doumont



Dear data

Stefanie Posavec, Giorgia Lupi

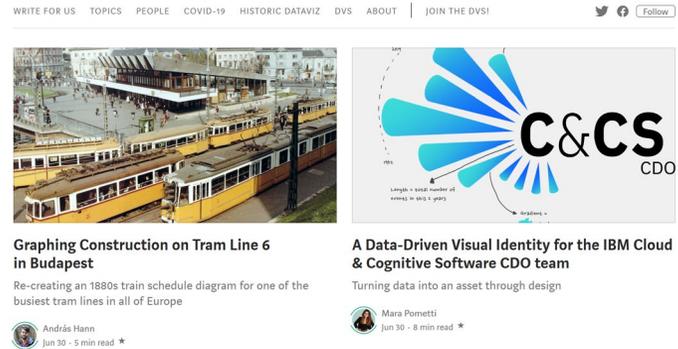
# Blogs



## [Visualising Data](#)

## Nightingale

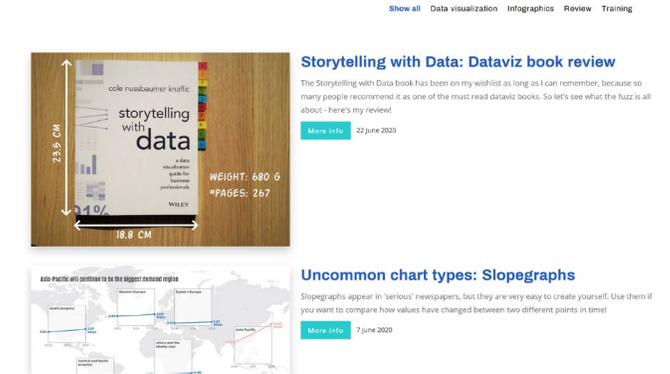
The Journal of the Data Visualization Society



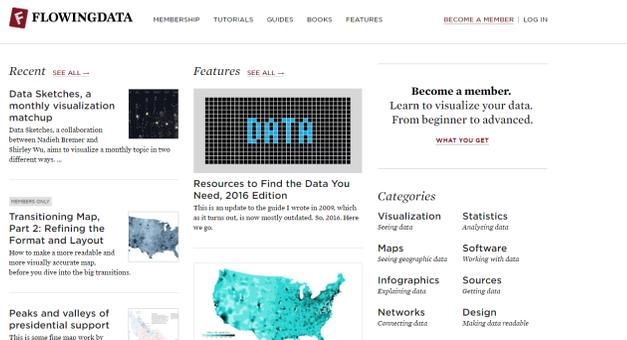
## [Nightingale](#)



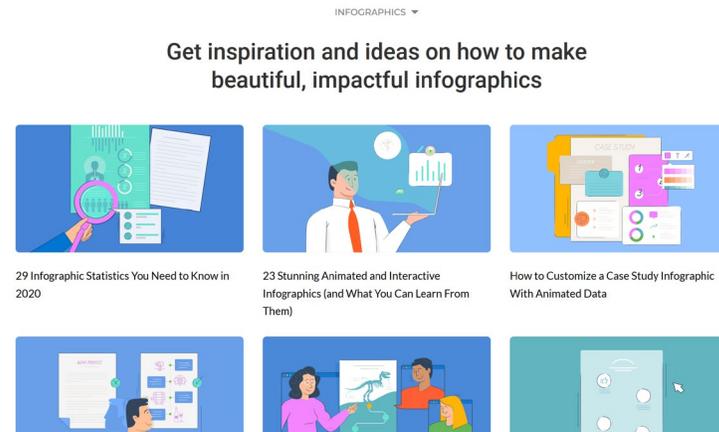
## Blog



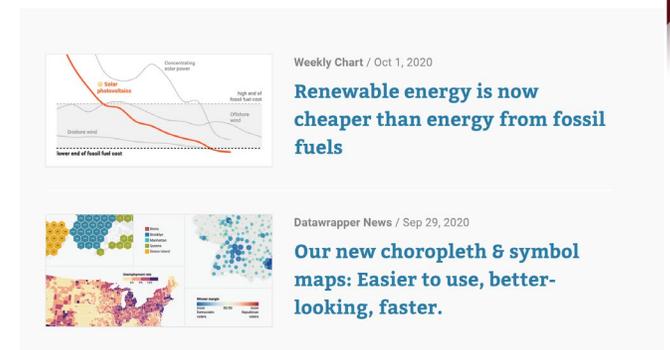
## [Baryon blog](#)



## [Flowing Data](#)



## [Visme blog](#)



## [Chartable](#)

# Video's



The beauty of data visualization  
David McCandless

<https://youtu.be/5Zg-C8AAGg>



Journalism in the age of data  
Geoff McGhee

[datajournalism.stanford.edu](http://datajournalism.stanford.edu)



Datafest online 2020  
23 different talks

[https://www.youtube.com/playlist?list=PLad95\\_ux5CXnpkUTzXNh1b8GCgbi\\_J9L](https://www.youtube.com/playlist?list=PLad95_ux5CXnpkUTzXNh1b8GCgbi_J9L)

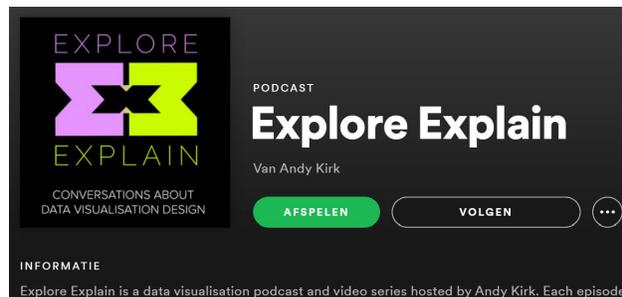
# Podcasts



[Data Stories](#)



[Datasaurus Rex](#)



[Explore Explain](#)

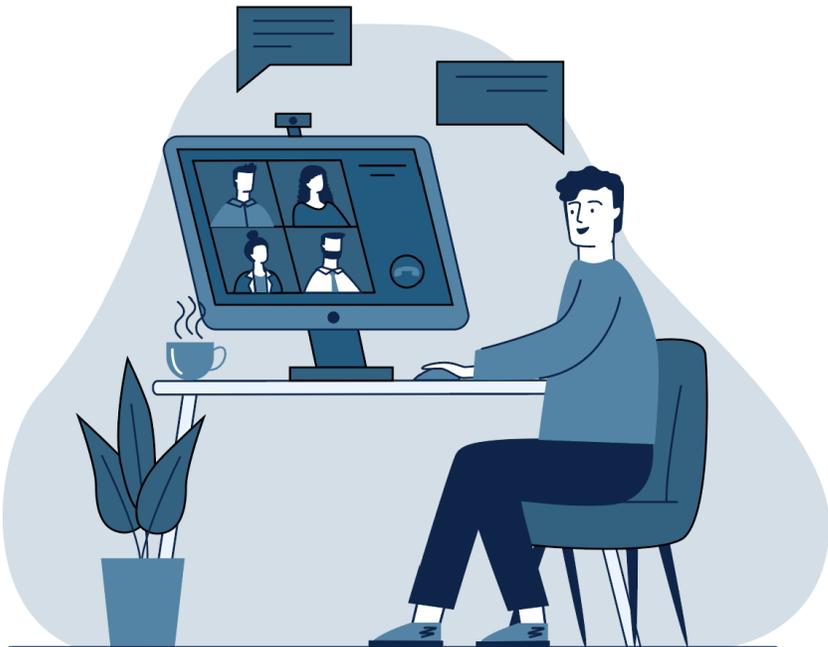


[Storytelling with data](#)

# Q&A

Alle slides en alle links:

<https://baryon.be/dataviz-resources>



*Koen Van den Eeckhout – [koen@baryon.be](mailto:koen@baryon.be) - @koen\_vde*