



Telling your story through data visualisation

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Unit EU Open Data and CORDIS

Sector EU Open Data



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1. INTRODUCTION TO STORYTELLING




Storytelling Once upon a time...



Vlaamse Volksvertegenwoordig

https://www.vlaamsparlement.be/vlaamse-volksvertegenwoordigers

 Vlaams Parlement

zoeken

Plenaire vergadering | Commissies | **Volksvertegenwoordigers** | Parlementaire documenten | Over het Vlaams Parlement


Home > Vlaamse Volksvertegenwoordigers


Vlaamse Volksvertegenwoordigers

Alfabetisch | [Deelstaatsenatoren](#) | [Per fractie](#) | [Per kieskring](#) | [\(Uitgebreid\) Bureau](#) | [Alle contactgegevens downloaden](#)


A B C D E F G H I J K L M N O P Q R S T U V W X Y Z


A


 [Imade Annouri](#)
Groen

 [Björn Anseeuw](#)
N-VA

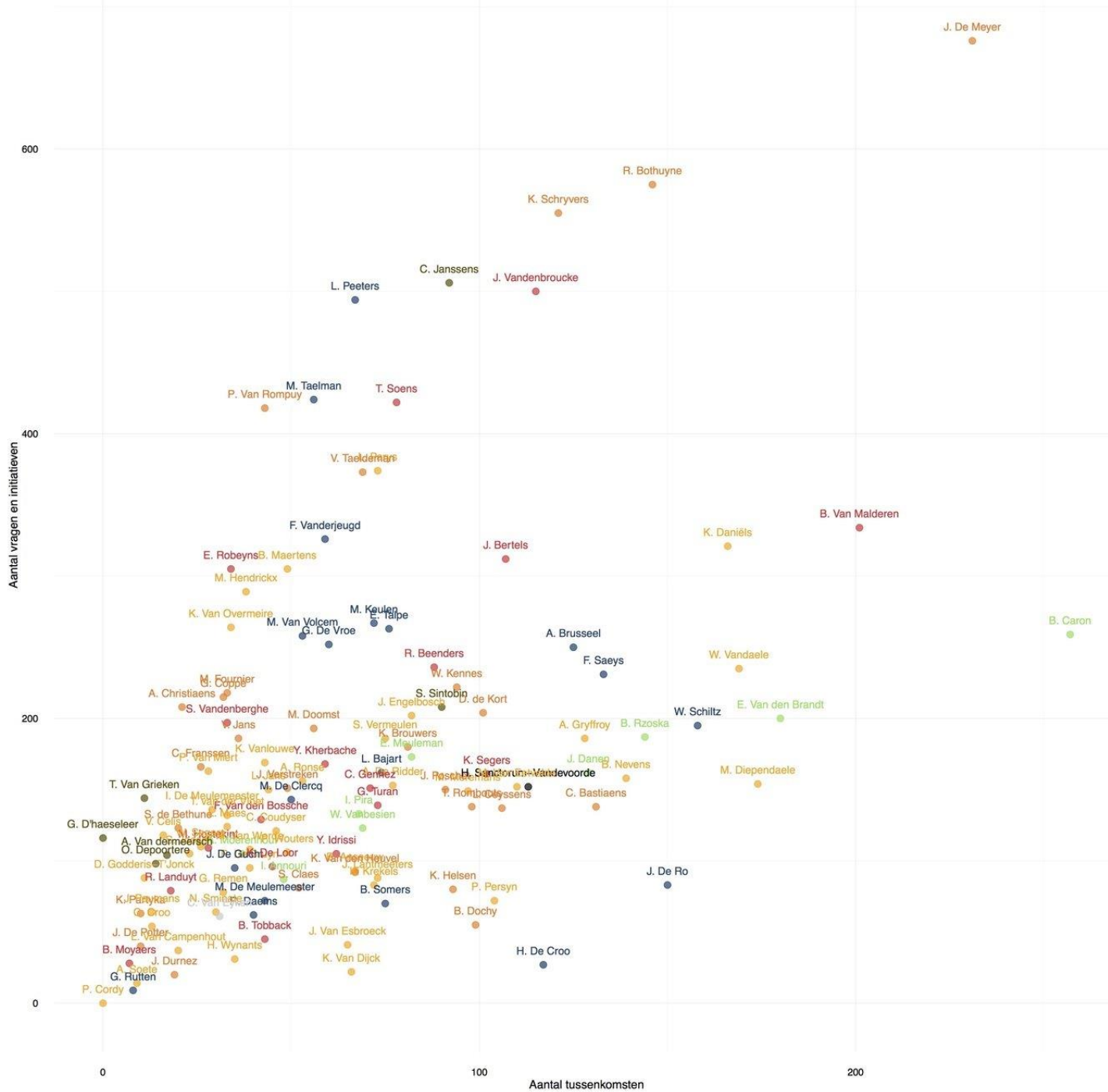
B

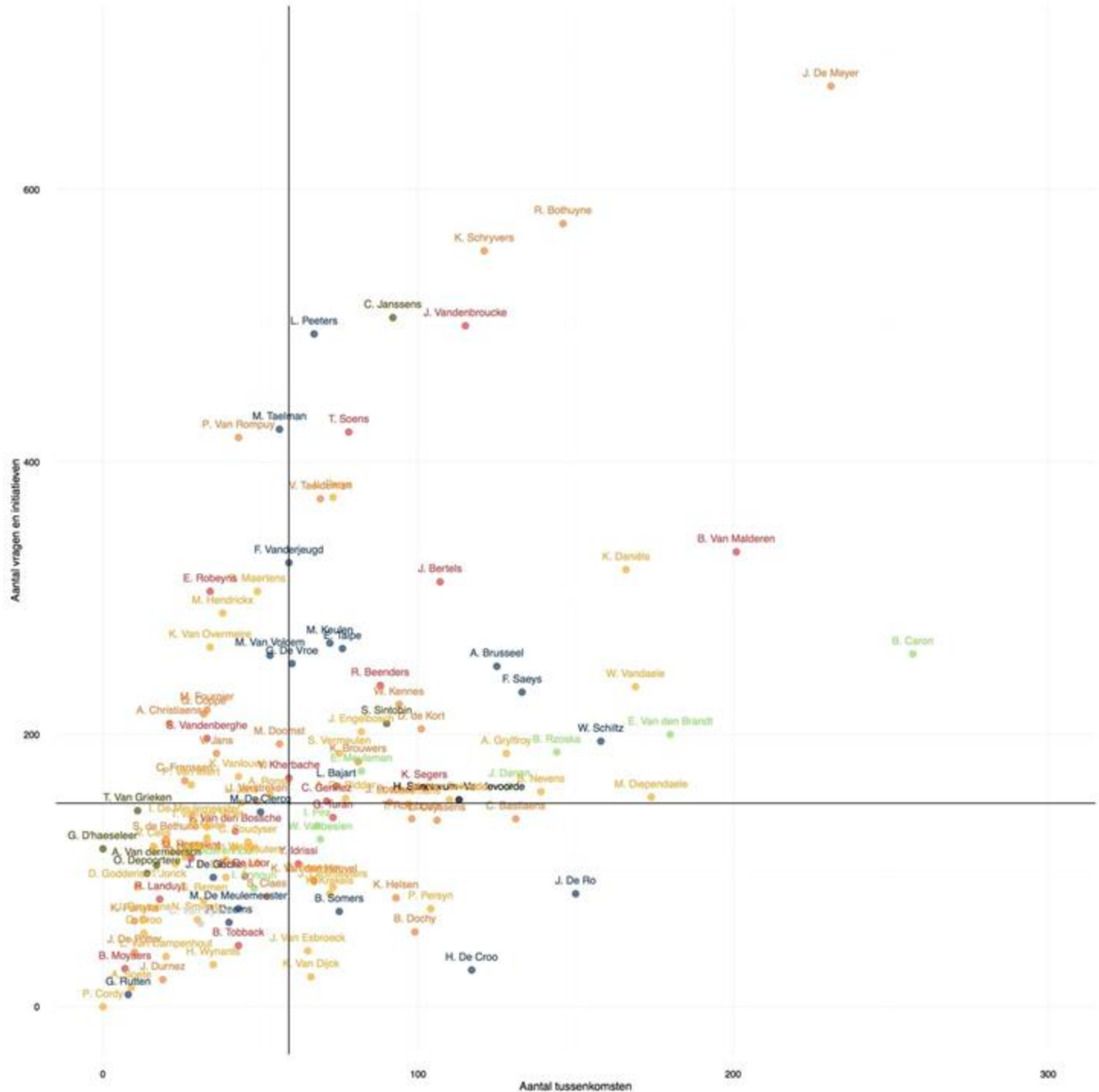
 [Lionel Bajart](#)
Open Vld

 [Rob Beenders](#)
SP.a

 [Jan Bertels](#)
SP.a



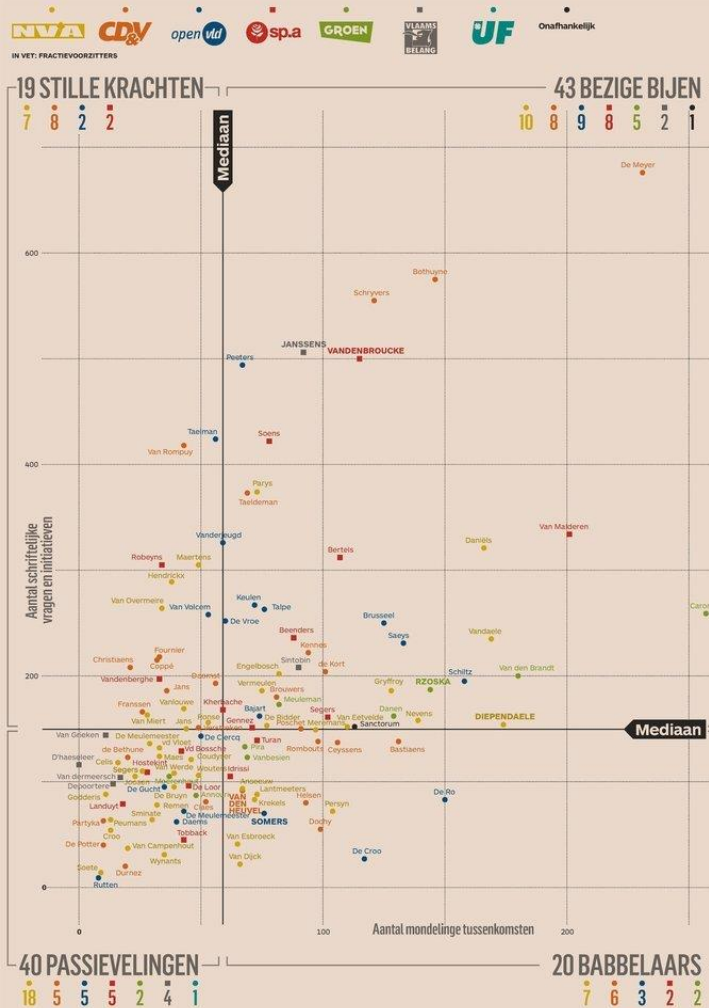




Storytelling Once upon a time...

N-VA minst actief in Vlaams Parlement

'In het Vlaams Parlement heb je mensen die hard werken en mensen die niets doen', zei voorzitter Jan Peumans (N-VA) aan het begin van het parlementaire jaar. De Tijd nam de proef op de som en ging na wie de ijverigste parlementsleden zijn. MAARTEN LAMBRECHTS, PIETER GORDTS EN BARBARA MOENS



De Tijd analyseerde een waaijer aan parlementair werk: zowel mondelinge als schriftelijke initiatieven. Een van de opvallendste conclusies is dat uitgerekend de N-VA, de fractie van Peumans, niet goed uit de veer komt. De partij heeft het grootste aandeel passieve parlementsleden (43 %). Een verklaring kan zijn dat de N-VA mede door haar snelle groei veel mensen met weinig politieke ervaring in haar fractie heeft. Sommigen van hen vinden moeilijk de weg in het politieke labirynth van de Vlaamse politiek.

De N-VA vindt dat niet zo erg. Als ze allemaal zo actief waren als Annick De Ridder of Lorin Parys, hadden we een probleem, klinkt het. Bovendien wil de partij het federale scenario van een overactieve fractie, met alle gevolgen van dien, absoluut vermijden. Daar slaagt fractieleider Matthias Diependaele tot nu toe goed in.

Diependaele vindt het logisch dat de N-VA-fractie het moeilijker heeft. 'We zijn met 43; dat is een derde van het Parlement. We hebben zes leden per commissie. Het is voor de N-VA moeilijker om het aantal onderwerpen en bevoegdheden over haar leden te verdelen.'

Oppositie
Uit onze oefening blijkt voorts dat de parlementsleden met een sterke reputatie zoals Robrecht Bothynne (CD&V), Joris Vandembroucke (sp.a), Annelies Gyffroy (N-VA), Jan Bertels (sp.a), Björn Roska (Groen) maar voren komen als ijverige parlementsleden. Het locht niet te verbazen dat daar twee fractievoorzitters van de oppositie tussen zitten: Vandembroucke en Roska. De rol van de oppositie blijft uit het hogere aantal initiatieven en tussenkomsten. Dat is ook logisch gezien hun functie als luis in de pelz van de regering.

Ten slotte komen parlementsleden die hun job met andere mandaten combineren sneller in de categorie 'passieve' terecht. De groep telt twee partijvoorzitters, acht burgemeesters en zes schepenen.

De grafiek vertelt maar een deel van het verhaal. Deze kwantitatieve oefening zegt niets over de inhoud of de impact van de vragen en de initiatieven of over het werk dat erin loept. Sommige parlementsleden nemen enkel het woord om zich voor de camera te profileren. Ook weten we verdomd goed dat schriftelijke vragen een graadmeter zijn in rapporten van parlementsleden.

Overschis is het niet om dat je veel vragen moet stellen om impact te hebben. Een parlementslid kan dankzij goede contacten met de regering of de kabinetten wegen op het gevorderde gebied, of dankzij goede relaties met de pers het publieke debat sturen. Die zaken vertellen zich niet in cijfers.

En Peumans? Als we dezelfde spegels hanteren als voor de andere parlementsleden, belandt hij bij de 'passieve' lingen, maar dat doet hem onrecht aan, gezien zijn specifieke opdracht als parlementsvoorzitter.

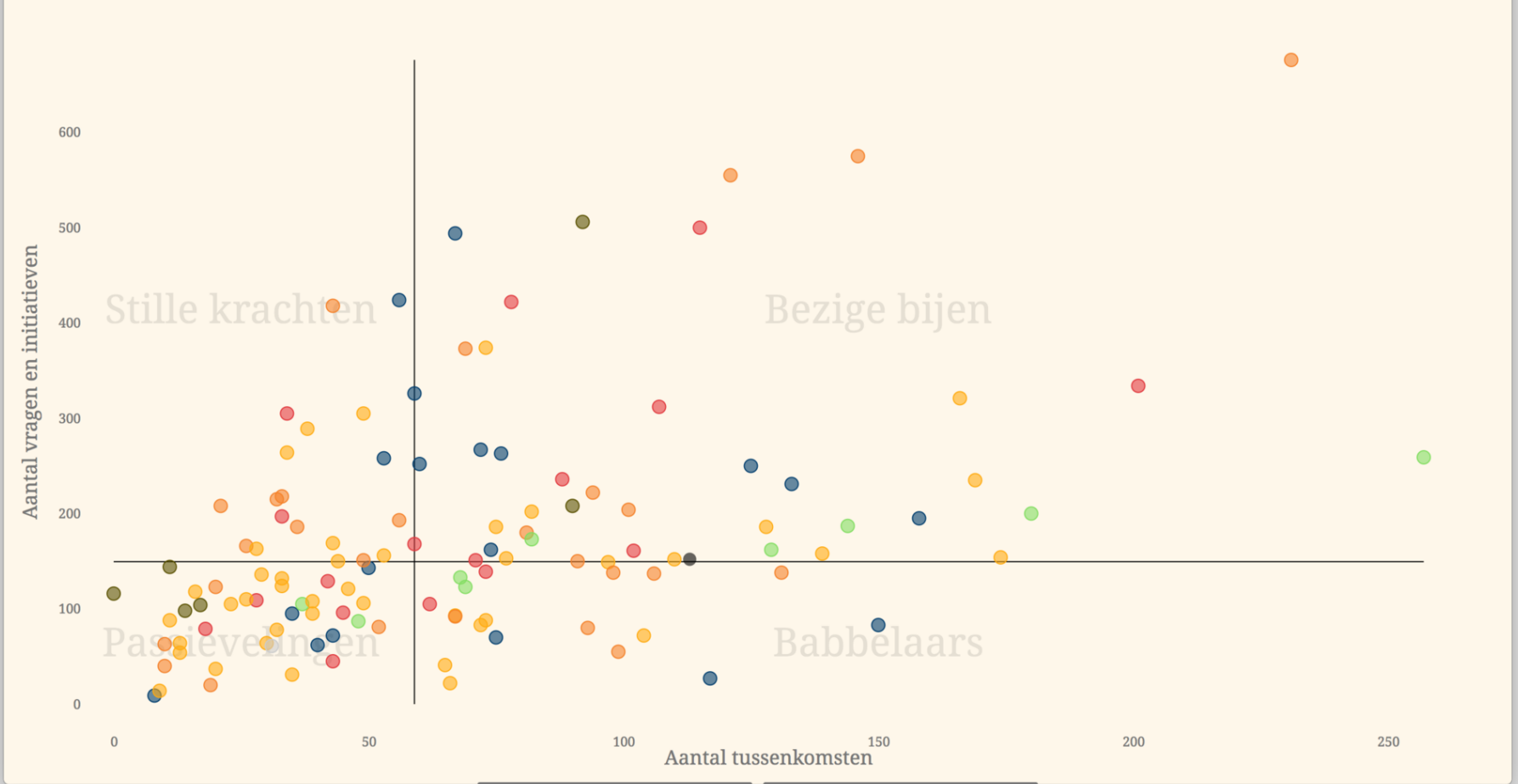
WERKWIJZE

Voor alle Vlaamse parlementsleden keken we hoe vaak ze amendementen, schriftelijke vragen en moties indienden, en hoe vaak ze het woord namen in de plenaire vergadering en de vakcommissies (tussenkomsten). De oefening werd enkel voor de huidige legislatuur (sinds 2014) gemaakt. Paul Cordy (N-VA) en Bert Moyaers (sp.a) zitten niet in de oefening aangezien ze nog maar sinds dit jaar in het Parlement zitten.

U vindt een interactieve versie van de grafiek op onze site: www.tijd.be



- CD&V
- N-VA
- Open VLD
- Groen
- s.pa
- VB
- Alle



Storytelling

Elements of a story

Once upon a time,
somewhere

Context

there was someone or
something

Character

who did something or
something happened
to him/her/it

Cause

which resulted in
him/her/it/someone
doing or being
something else

Effect



Storytelling Goal

Connect to your
audience

Engage with people, by means
of emotions + curiosity

Let people learn, understand,
remember



Storytelling

Examples of stories

Stories are everywhere

Literary stories, movies

Sports games

Religion

Politics

Brands

...

News stories





2.

JOURNALISTIC TECHNIQUES FOR DATA STORYTELLING



Journalistic
techniques
News stories

Differences with
literary stories

Inform rather than entertain

Curiosity driven rather than
emotion driven



Journalistic techniques

5W

(+ 1H)

Where

When

Who

What

Why

(How)

Context

Context

Character

Cause + effect



Journalistic
techniques
Inverse pyramid

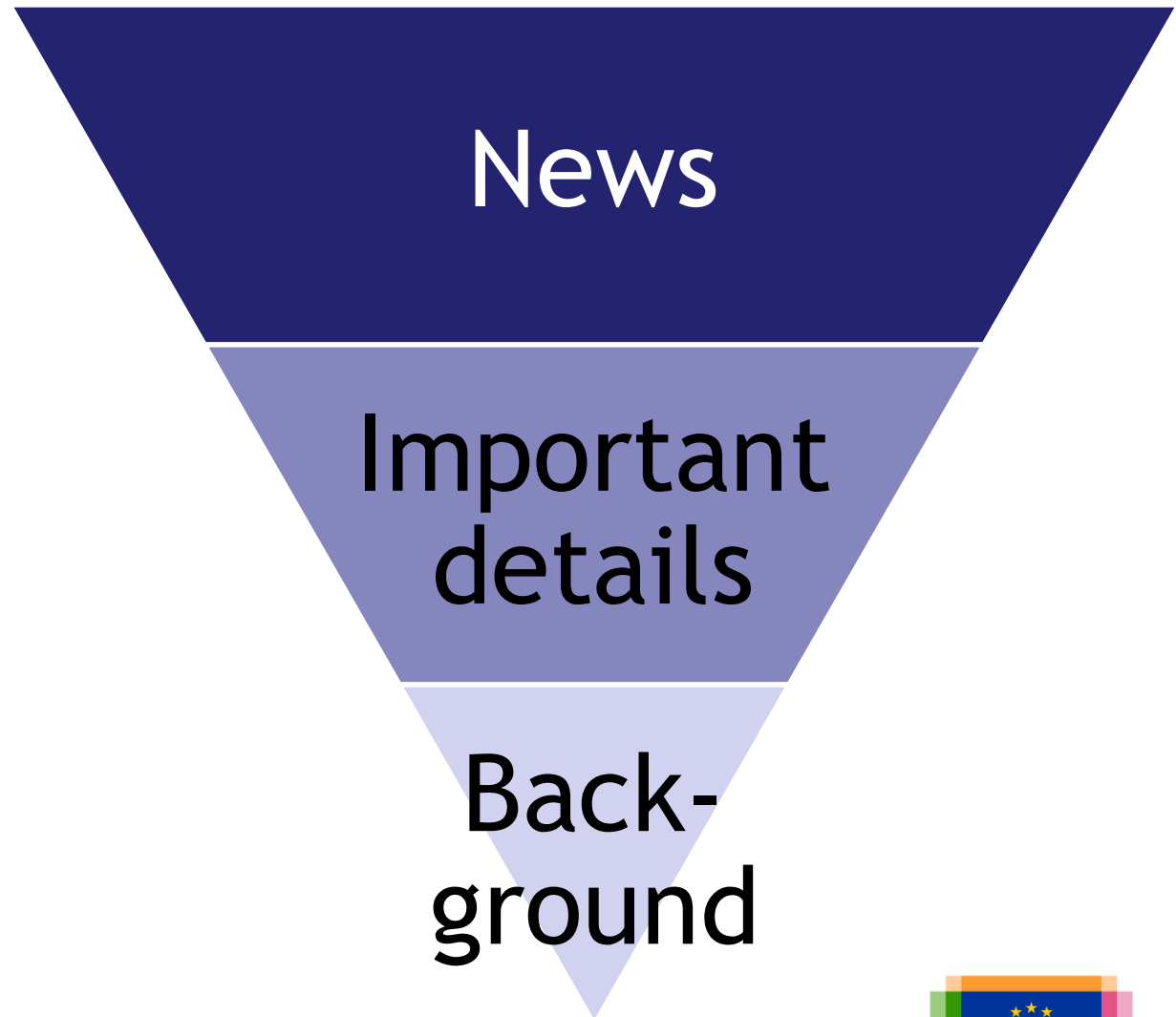
Journalistic reality:

Fixed length

Breaking news

"When in doubt, leave
things out"

"Cut from the bottom"





Journalistic
techniques
Inverse pyramid

Examples

Boris Johnson under fire over row with partner as top Tories raise fears

Scamp the Tramp is champ at World's Ugliest Dog Contest





Journalistic
techniques
Make it personal

"What's in it for me?"

Put the "you" in the
headline

[How Much Hotter Is Your Hometown Than
When You Were Born?](#)

[See How Your Salary Compares](#)

[The best and worst places to grow up: how
your area compares](#)

[Wann war zuletzt weiße Weihnacht in...](#)



Journalistic techniques **Put in people**

We are empathic
beings

It is much easier to
relate to a person than
to a number, a dot or
an average

Homan Square

What the Tax Bill Would Look Like for
25,000 Middle-Class Families





3.

DATA STORY PATTERNS





Data story patterns

Evolution over time

Line charts

Usually line charts,
but other forms are
possible

[The Greenland ice sheet is melting unusually fast](#)

[Battling Infectious Diseases in the 20th Century: The Impact of Vaccines](#)

[The chart that defines our warming world](#)



Data story patterns

Zoom in

Start with the overview, than zoom to interesting details

[Lazy Members of Parliament](#)

[Cancer prevalence and survival rates](#)



Data story patterns

Zoom out

Start with a single data point, then zoom out to general overview

[The story of a house: how private equity swooped in after the subprime crisis](#)

[Living in China's Expanding Deserts](#)

[Guns](#)



Data story patterns

Contrast

Juxtapose 2 (or more) things against each other

[The Gender Pay Gap](#)

[The Myth of the Criminal Immigrant](#)

[How terrorism in the West compares to terrorism everywhere else](#)

[Population pyramid Qatar](#)



Data story patterns

Intersections

Something overtakes
something else

[Chance of Winning Presidency](#)

[How to make a bump chart](#)

[Bar chart race](#)



Data story patterns

Components

A whole composed of components

[A world of languages - and how many speak them](#)

[Drugs, gold, cash and alcohol](#)

[All 5.5 million Belgian cars in one graphic](#)

[Four Ways to Slice Obama's 2013 Budget Proposal](#)



Data story patterns

Outliers

Very high or very low values

What Lies in Irma's Path

The Greenland ice sheet is melting unusually fast

Where the Labour Market is Tightening

Ergebnisse der Grünen bei Europa



Data story patterns

Repetition

Fairy tales (Red Riding Hood, 3 little pigs, ...) also use this technique

What's really warming the world

How work has evolved for Switzerland's women and men



Data story patterns

Gradual visual reveal

Start simple, add complexity and data step by step

[How Trump's Trade War Went From 18 Products to 10,000](#)

[Reading the Brexit tea leaves](#)

[Rock 'n poll](#)



Data story patterns

Make a guess

Test own assumptions,
curiosity

Gamification

You draw the charts: 60 years of change

You draw it

Wissen Sie noch, wo Deutschland geteilt war?

How well can you identify news trends?



Data story patterns

Surprising, unusual

Breaking conventions
attracts attention

The glass ceiling persists



Data story patterns

Concretise

Make numbers less abstract

Household Income Distribution in the U.S.
Visualized as 100 Homes

Isotype

Wee people





4.

DATA STORY GENRES



Data story genres

Magazine style



[Migration since the Brexit vote: what's changed in six charts](#)

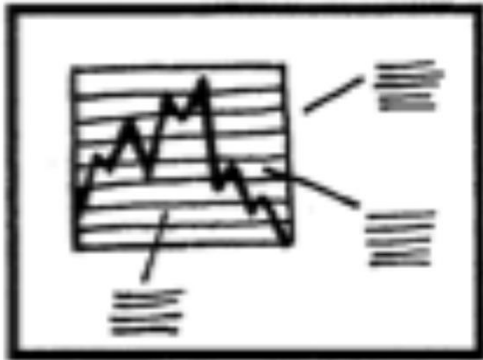
[The UK contribution to the EU budget](#)

[6 Reasons That Pay Has Lagged Behind U.S. Job Growth](#)



Data story genres

Annotated chart



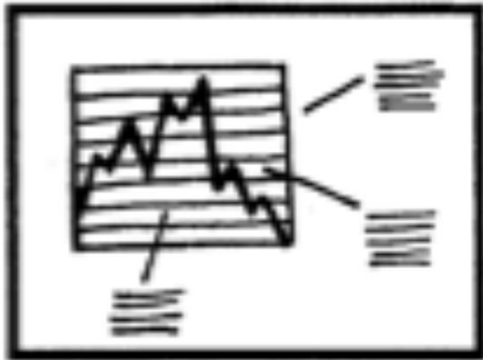
“The annotation layer is the most important thing we do. Otherwise it's a case of here it is, you go figure it out.”

- Amanda Cox, New York Times



Data story genres

Annotated chart



Clearing the air

Arctic Ice Reaches a Low Winter Maximum

Is now the right time to buy property in London?

Bailout cost will be a burden for years



Data story genres

Partitioned poster



Mostly for print

Also known as infographic

[La Catedral, al detalle](#)

[EU Youth Report Infographics](#)

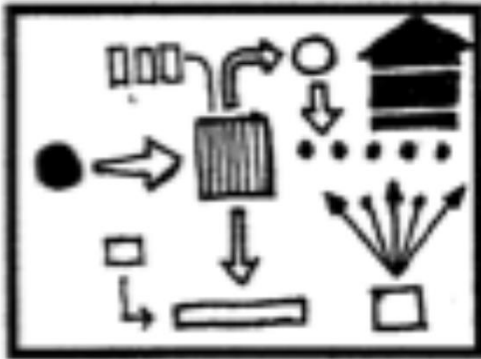
[En Europe, le grand écart des populations](#)



Data story genres

Other genres

Flowchart



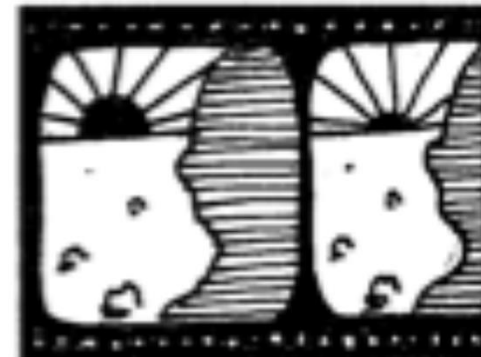
Slideshow



Data comic



Video/animation





5.

STORYTELLING WITH CHART DESIGN



Chart design Chart type

Visual Vocabulary

Deviation	Correlation	Ranking	Distribution	Change over Time	Magnitude	Part-to-whole	Spatial	Flow	
<p>Explains how values of 1 item relate to other items. Typically the reference point is an average but can also be a target or a single data average. Can also be used to show variance (distance from average).</p> <p>Example FT uses Times in a football's double charge</p>	<p>Show the relationship between two or more variables. An excellent tool, as you can tell immediately how variables will behave. The standard is to show the average in the middle and what the spread is.</p> <p>Example FT uses FT's view of unemployment, income and the economy</p>	<p>Use when an item's position is ordered or its measurement is in a scale or relative value. Good for a quick visual comparison of the relative position of items.</p> <p>Example FT uses Results of the 2014 FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Show where a value is and how often. The chart is a histogram or a distribution chart. It is used to show the frequency of values. It is also used to show the distribution of data.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Use to compare how things change. The chart is a line chart or a bar chart. It is used to show the change in a value over time.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Show the comparison. These charts are used to show the relationship between two or more variables. The chart is a bar chart or a line chart. It is used to show the change in a value over time.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Show how a part relates to the whole. The chart is a pie chart or a stacked bar chart. It is used to show the relative contribution of each part to the whole.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Shows the relationship between two or more variables. The chart is a scatter plot or a line chart. It is used to show the change in a value over time.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	<p>Show the relationship between two or more variables. The chart is a scatter plot or a line chart. It is used to show the change in a value over time.</p> <p>Example FT uses Income FT 100. Good for a quick visual comparison of the relative position of items.</p>	
<p>Grouped bar A simple and direct bar chart that can be used to compare different categories. It is used to show the relative contribution of each part to the whole.</p>	<p>Scatter plot The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Ordered bar The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Histogram The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Line The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Column The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Stacked column/bar The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Dot plot The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Bar The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>	<p>Waterfall The standard way to show the relationship between two or more variables. It is used to show the change in a value over time.</p>

Visual vocabulary

Designing with data

There are so many ways to visualise data - how do you know which one to pick? Use the categories across the top to decide which data relationship is most important in your story, then look at the different types of chart within the category to form some initial ideas about what might work best. This list is not meant to be exhaustive, nor a wizard, but is a useful starting point for making informative and meaningful data visualisations.

[ft.com/vocabulary](https://www.ft.com/vocabulary)



Chart design

Highlighting

Labels and annotations

[Arctic Ice Reaches a Low Winter Maximum](#)

Color

[Purchasing power in Belgium](#)

Size and bolding

[The Departed: Britain's Government Is Breaking Records for Upheaval](#)

Enclosing (box, region)

Pointers

[You draw the charts: 60 years of change](#)

Motion



Chart design

Annotating

Average mark

Lowest/highest values

Target

Data labels

Explanations

Visual annotations

Across the globe, personality is rated as more important than looks

Once upon a time, this was a Very Important Thing

Economically and Physically, Blackpool is Unwell

LeBron James Scores 5,995th Playoff Point, Taking the Record From Michael Jordan



Chart design Fonts

Hierarchy

Top-left to bottom-
right

And you will read this last

You will read this first

And then you will read this

Then this one



Chart design

Titles

Usually first thing
people look at first

Let the title tell the story

Same message as chart



Chart design

Data labels

Put the key numbers (most recent value, etc.) on the chart

Don't label every data point

Stress with a data mark



Chart design

Text on charts

Titles (or at least units)
are needed to interpret a
visualisation

Datalabels provide
hierarchy: not all data
points are equally
important

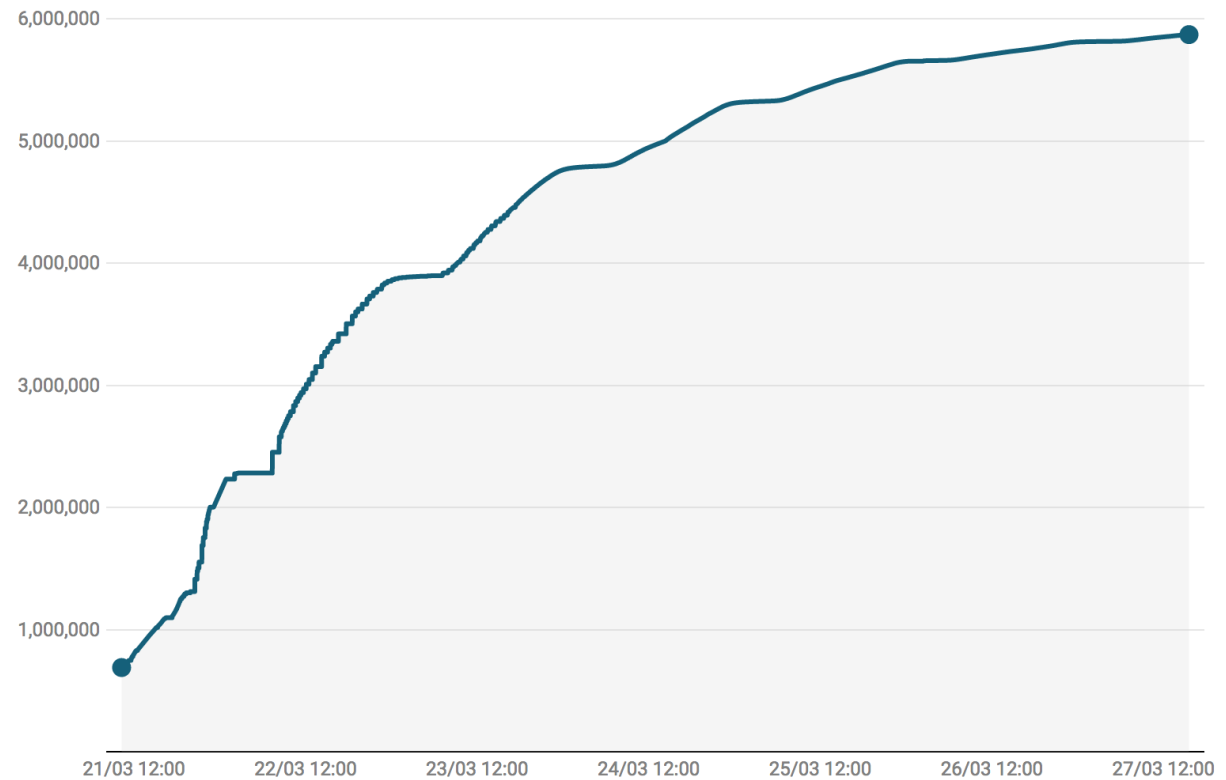


Chart design

Text on charts

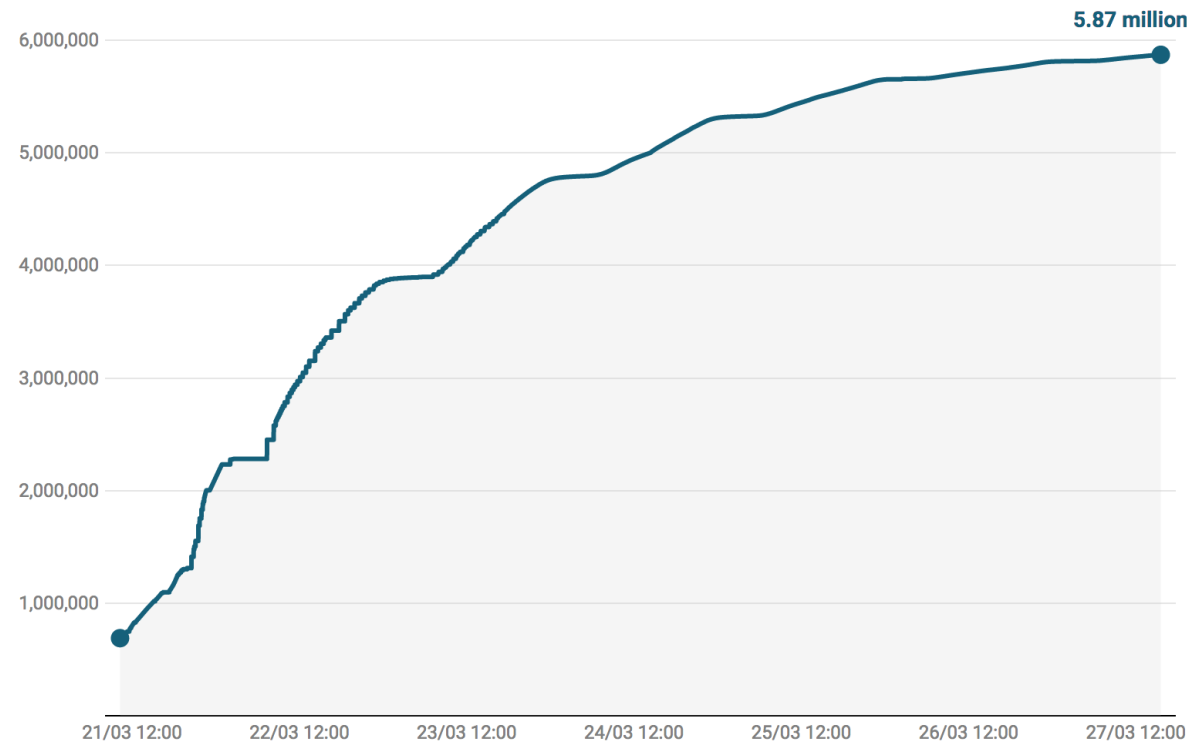
A descriptive title tells the story

Optional subtitle can give details and metadata

Source and credits make the chart self-contained

Almost 6 million Brits signed up to stop Brexit

Petition to Revoke Article 50 and remain in the EU - Sign Up Count



Based on Ben Howard • Source: petition.parliament.uk • Get the data • Created with Datawrapper



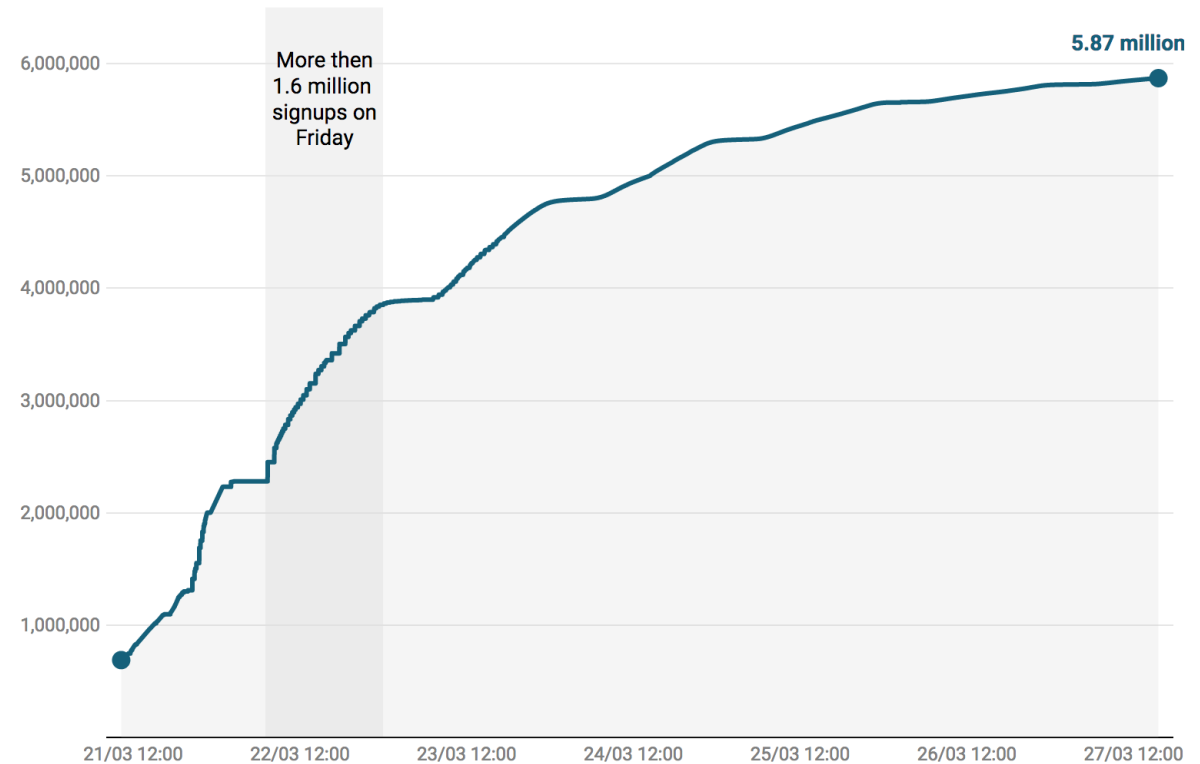
Chart design

Text on charts

Annotations make the reader focus and tell the story even more

Almost 6 million Brits signed up to stop Brexit

Petition to Revoke Article 50 and remain in the EU - Sign Up Count



Based on Ben Howard • Source: petition.parliament.uk • [Get the data](#) • Created with [Datawrapper](#)



What's next in Data Viz events in 2019



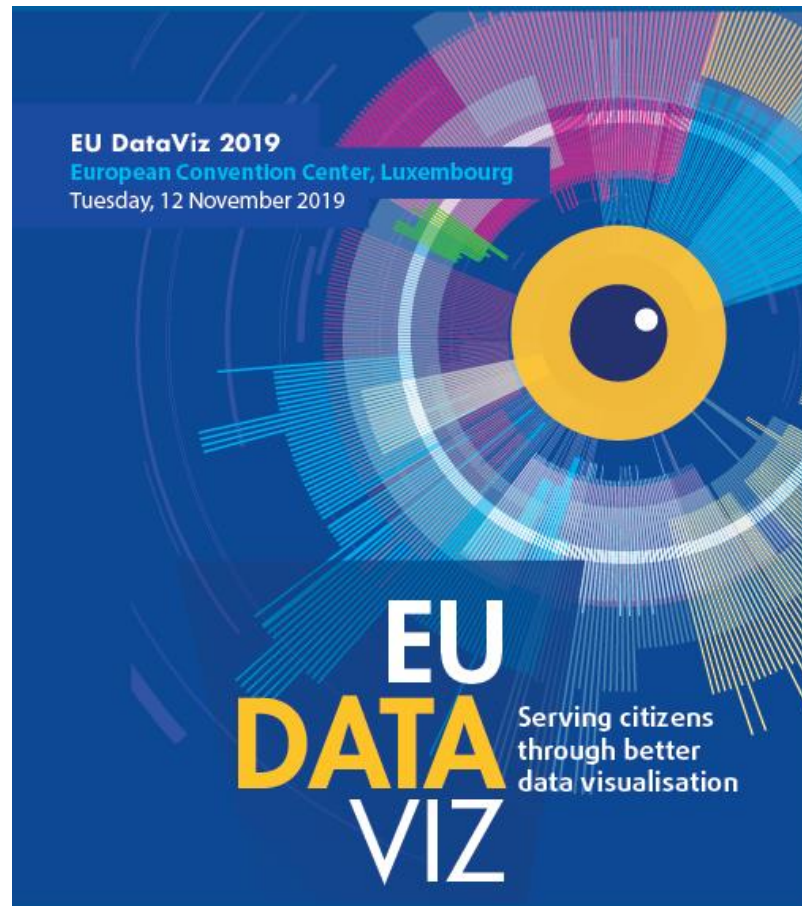
Learn more details on webinar and registration on Joinup:

<https://joinup.ec.europa.eu/collection/joinup/event/register-now-practising-non-standard-data-visualisation>

e-mail: op-odp-contact@publications.europa.eu



Conference EU DataViz, 12 November 2019



e-mail: op-eu-dataviz@publications.europa.eu



Resources

Data story patterns

[Narrative patterns for data-driven storytelling](#)

[7 Data Story Types](#)

Data story genres and structures

[Narrative Visualization: Telling Stories with Data](#)

Choosing a chart type

[Visual Vocabulary](#)

Data visualisation tools

[Chartmaker directory](#)

Books

[Storytelling with data](#)

[Data-driven storytelling](#)



Q&A

