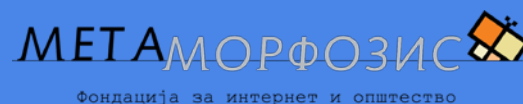


ВОВЕД ВО

# DATA VIS

ИЛИ ВИЗУЕЛИЗАЦИЈА НА ПОДАТОЦИ



This project is funded by the European Union.

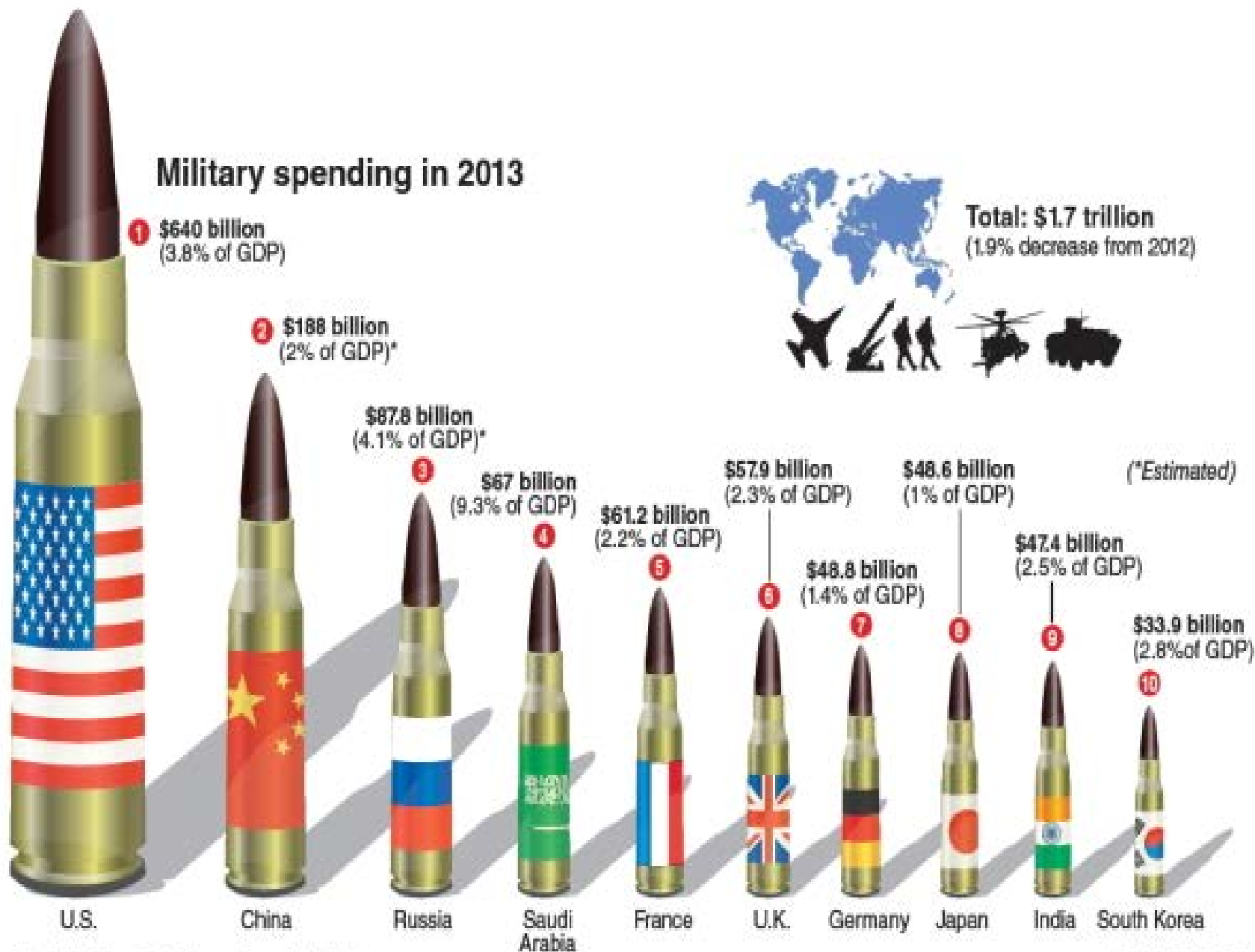


ZaštoNe?



The "Accountability, Technology and Institutional Openness Network in South East Europe - ACTION SEE" project is implemented by Metamorphosis Foundation, Westminster Foundation for Democracy, CRTA – Center for Research, Transparency and Accountability, Citizens Association Why not?, Center for Democratic Transition, Open Data Kosovo (ODK) and Levizja Mjaft!.

## Military spending in 2013



Source: Stockholm International Peace Research Institute

Graphic by Han Chang-duk

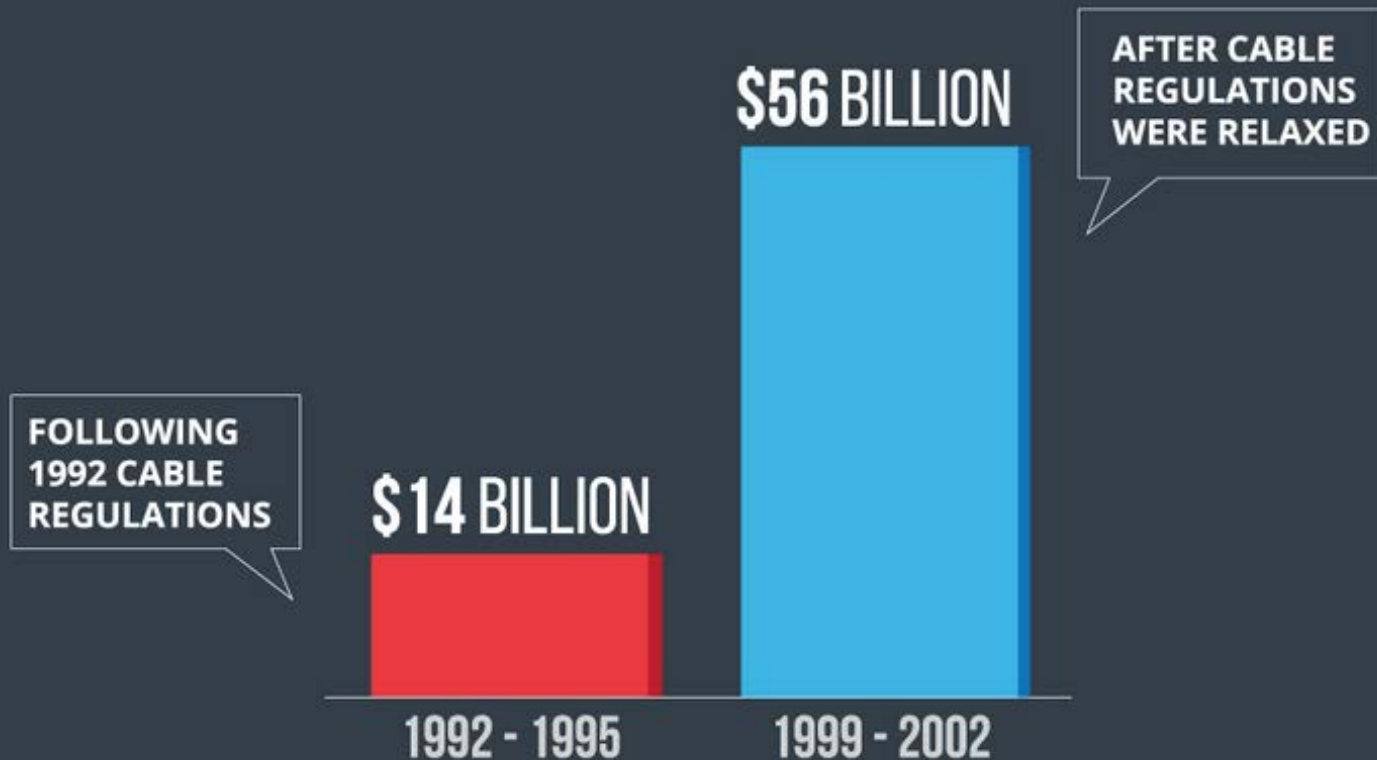
Эстетика или функциональность?

# THE AVERAGE DIVORCE RATES IN AMERICA:



Развод со податоците

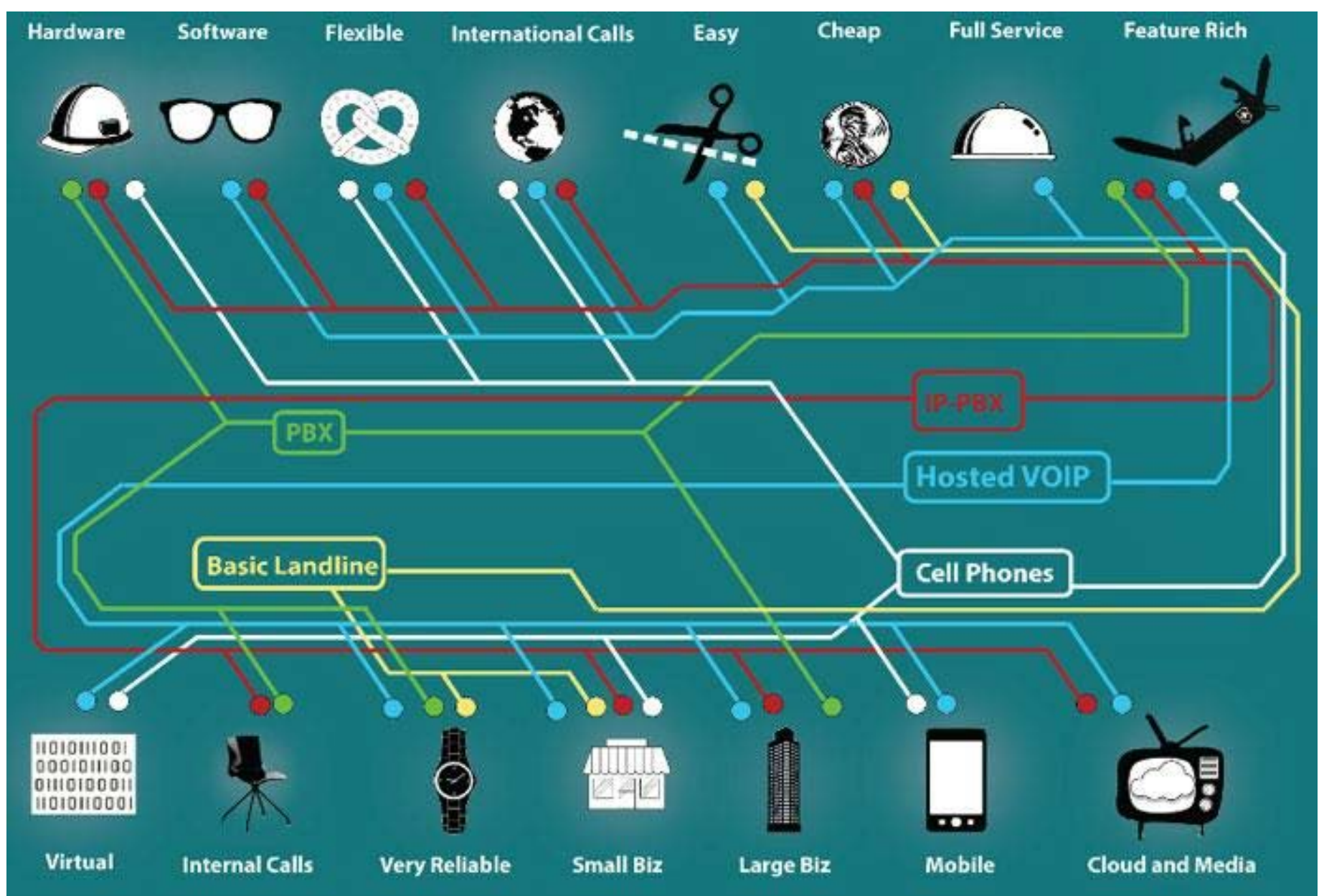
# LESS REGULATION = MORE INDUSTRY INVESTMENT



Note: Investment during the interim 3 year period 1996-1998 was \$18 billion

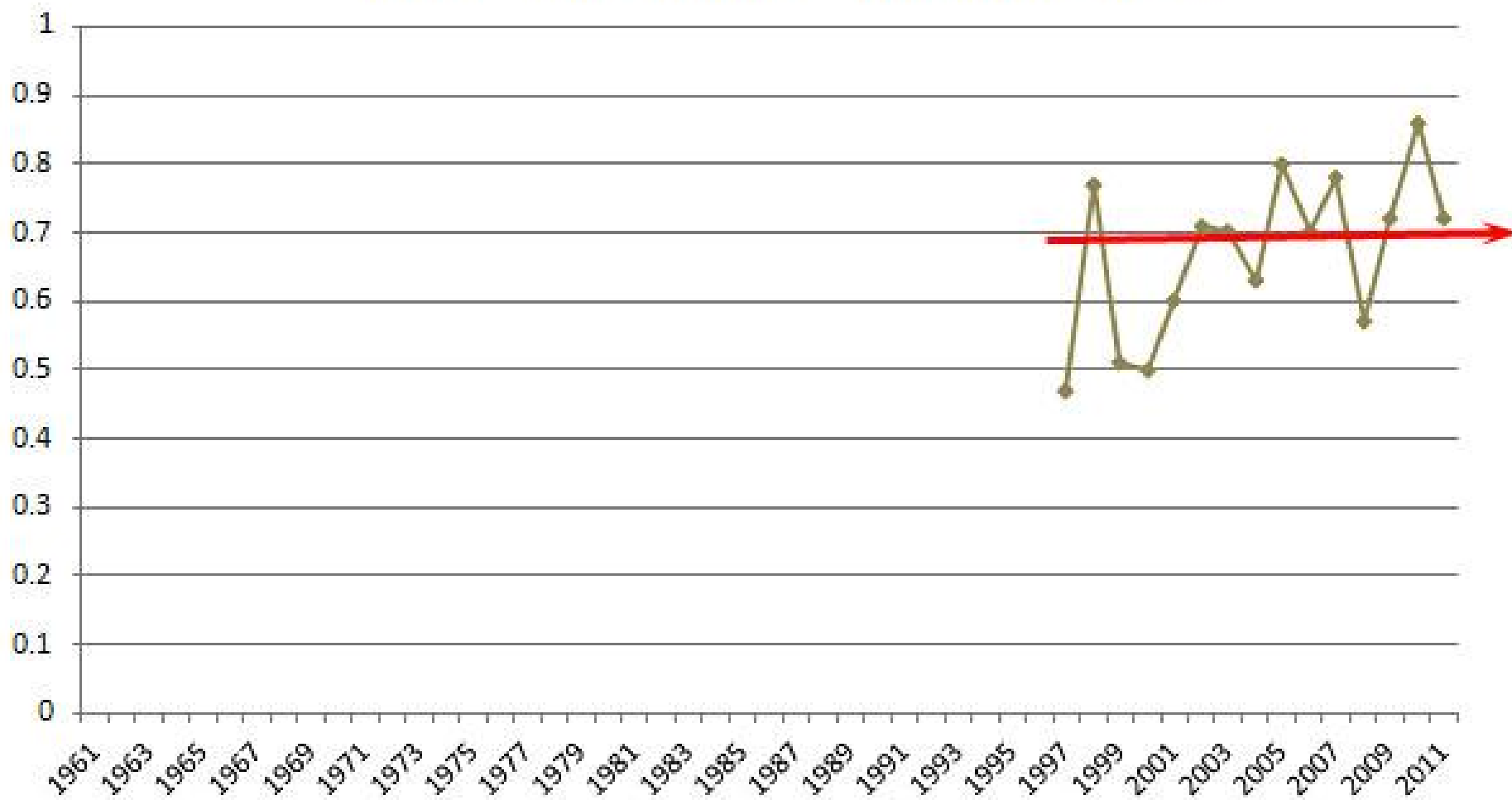
Source: SNL Kagan

Визуелизација со фабрикувани тези



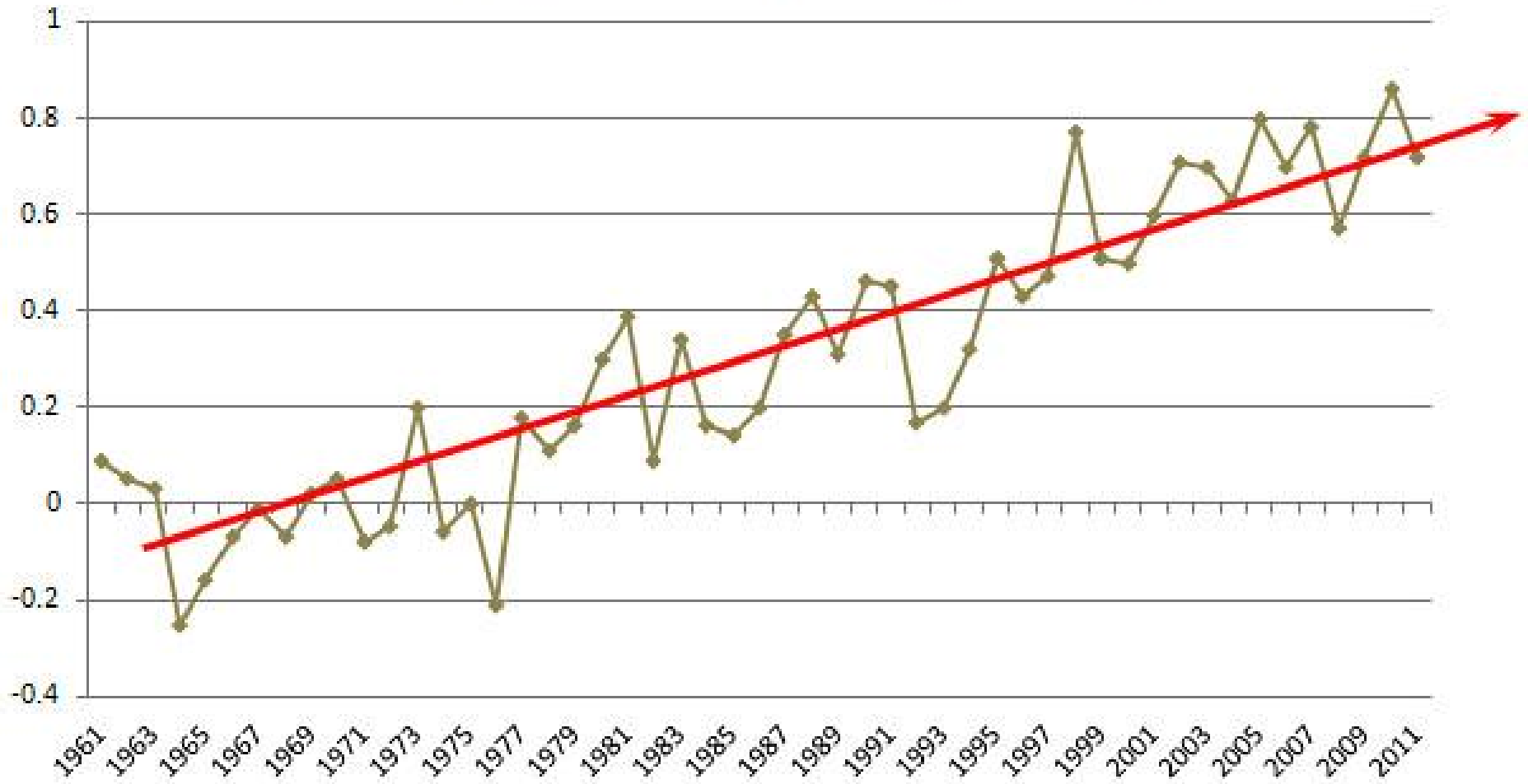
Што точно сакаме да искомунуцираме со публиката?

## Temperature Anomaly -- Annual Mean (°C)

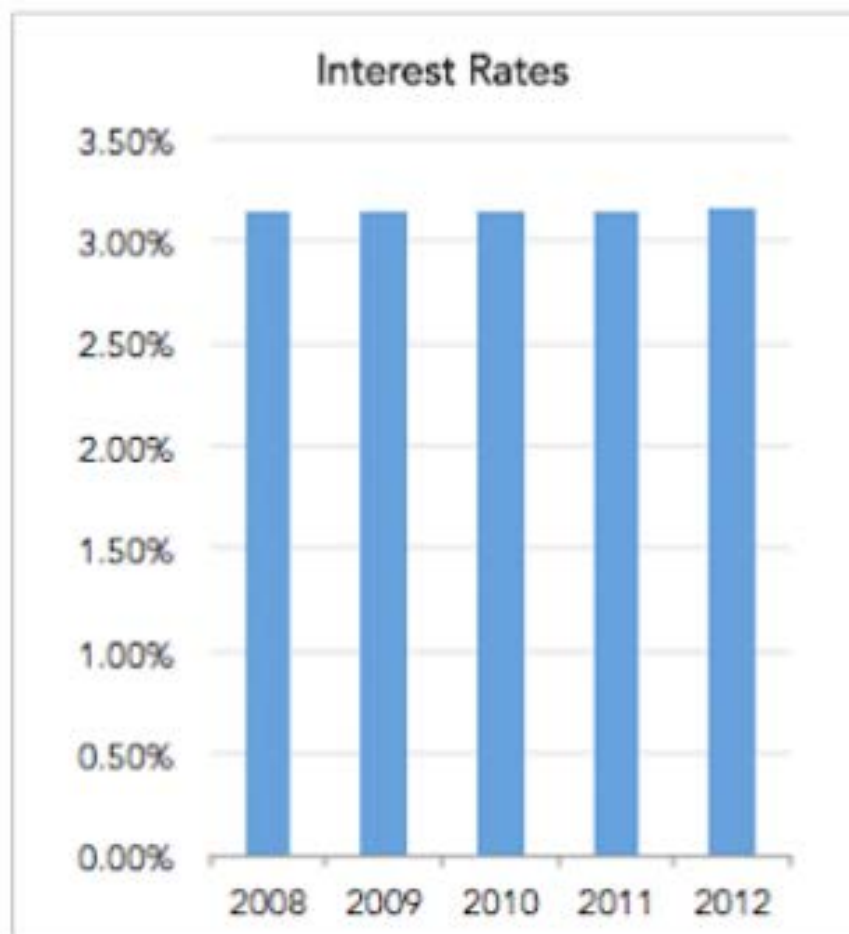
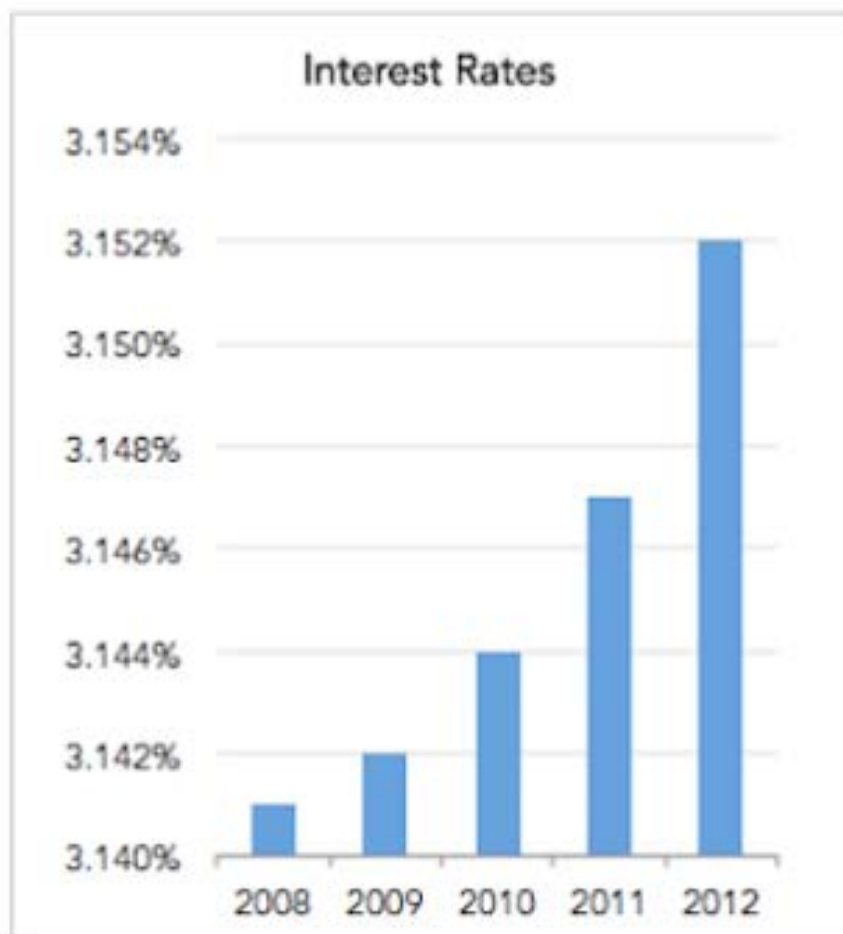


Заборавете на глобалното затоплување

## Temperature Anomaly -- Annual Mean (°C)



Oh, wait.



Каматните стапки растат! ... впрочем не.



ВИЗУЕЛИЗАЦИИТЕ СЕ  
**УБЕДЛИВИ**



Големата моќ носи голема одговорност

# Дизајн на информации

Да се даде смисла на нешто комплексно

Затоа не ја заборавајте комплексноста!

# Визуелизација на податоци

Ги откриваме доказите

- Дозволуваме понатамошна анализа и преземање на податоците, како и вадење на информации и значење.
- Ја откриваме вистината која е сокриена во комплексните податоци.

# Заклучоци

Што видовме од лошите примери

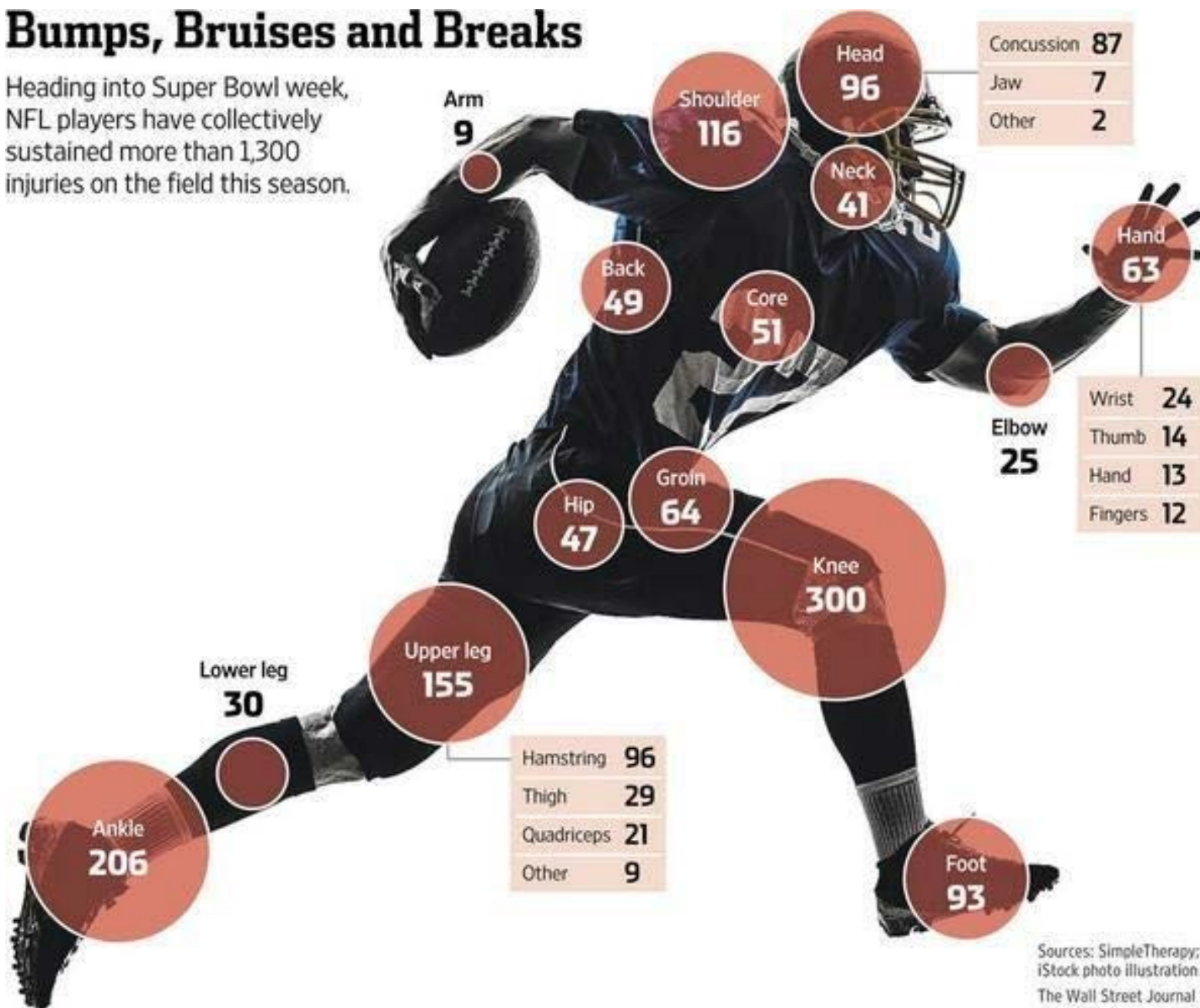
- Непотполни податоци за контекстуализација
- Не земање предвид битен дел од податоците
- Промена на оската во визуелизацијата
- Претерано упростување
- Визуелизација на некомпатибилни системи (скали)
- Користење неадекватни форми за визуелизација

„Добриот инфографик треба да е  
функционален како чекан,  
повеќеслоен како кромид и  
прекрасен како равенка“

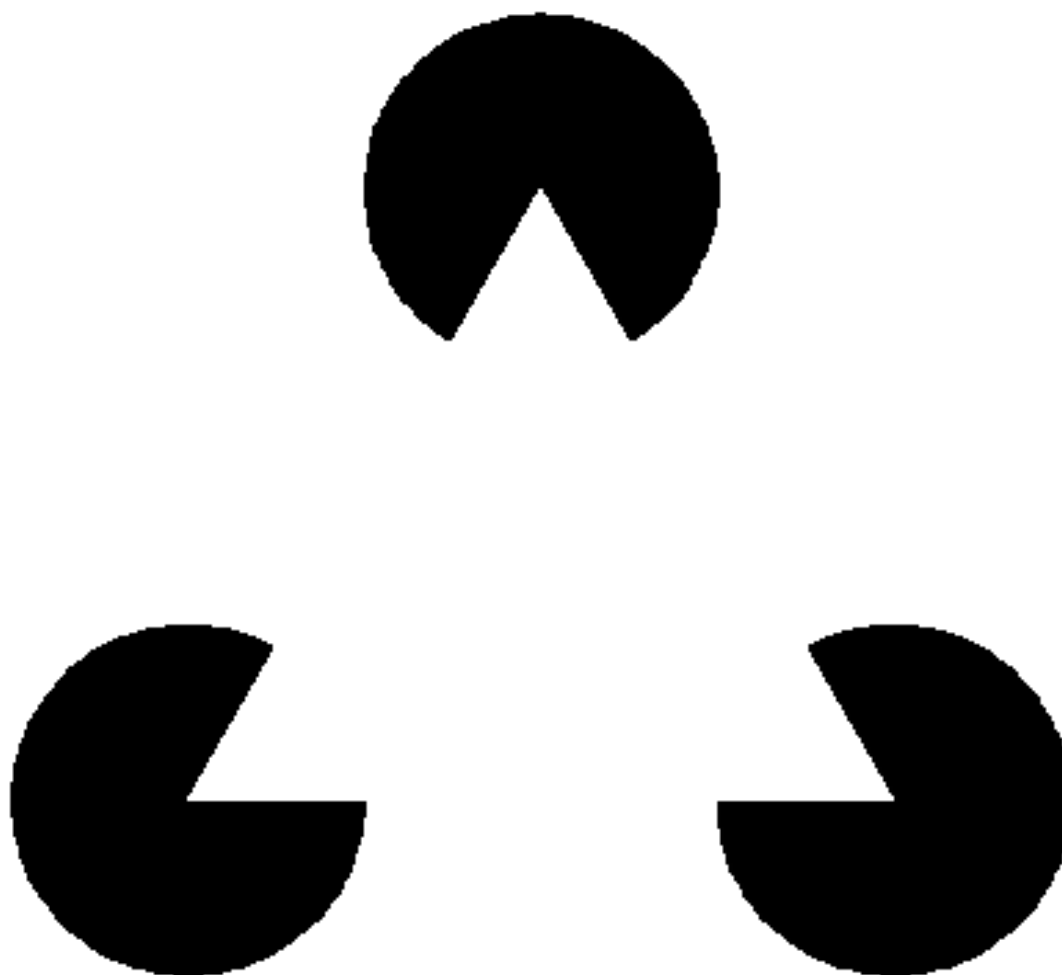
Алберто Каиро

# Bumps, Bruises and Breaks

Heading into Super Bowl week, NFL players have collectively sustained more than 1,300 injuries on the field this season.

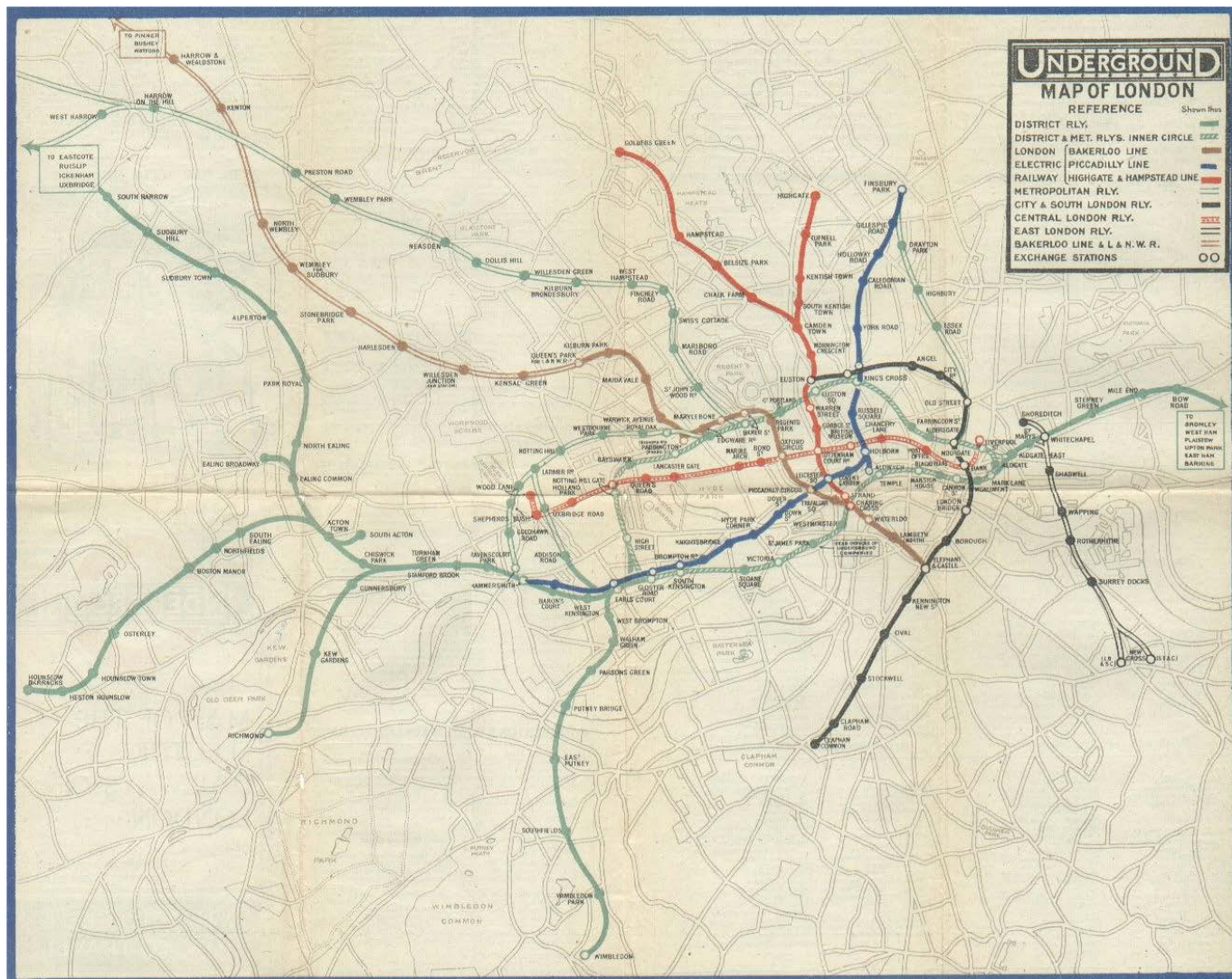


Форма и функција: фотографиите треба да се користат со цел



Шаблоните/патерните ја водат нашата перцепција





Лондонското метро, 1919

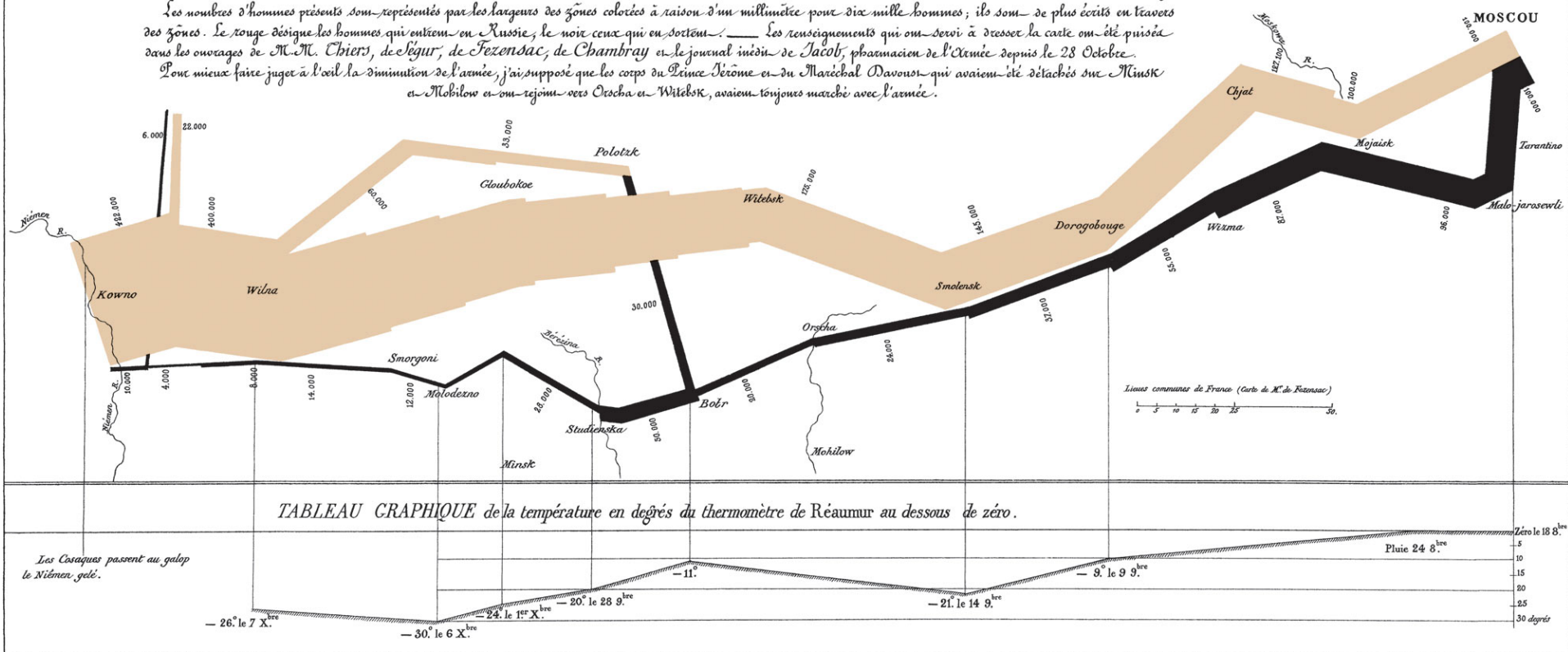




# Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

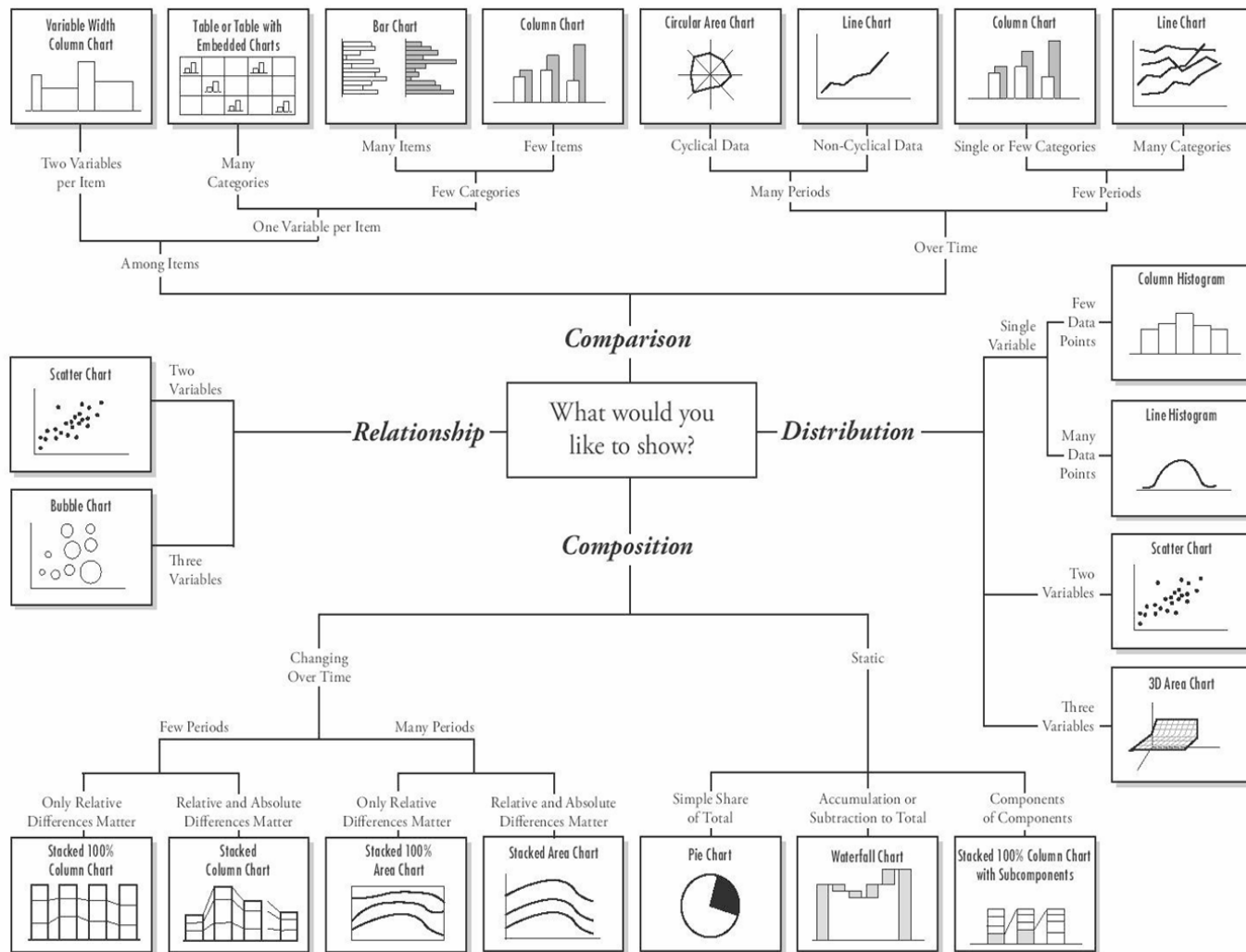
Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les largeurs des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie, le noir ceux qui en sortent. Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Ségur, de Fezensac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre. Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davout qui avaient été détachés sur Minsk et Mohilow et qui rejoignent vers Orscha et Witebsk, avaient toujours marché avec l'armée.



Charles Minard 1869

# Chart Suggestions—A Thought-Starter



© 2006 A. Abela — a.v.abela@gmail.com

Што ја прави добра една визуелизација?



# The Data Visualisation Catalogue

Helping you display your data...

Search by Function

View by List



Arc Diagram



Area Graph



Bar Chart



Box & Whisker Plot



Brainstorm



Bubble Chart



Calendar



Choropleth Map



Donut Chart



Dot Matrix Chart



Flow Map



Histogram



Illustration Diagram



Line Graph



Marimekko Chart



Multi-set Bar Chart



Parallel Sets



Pictogram Chart

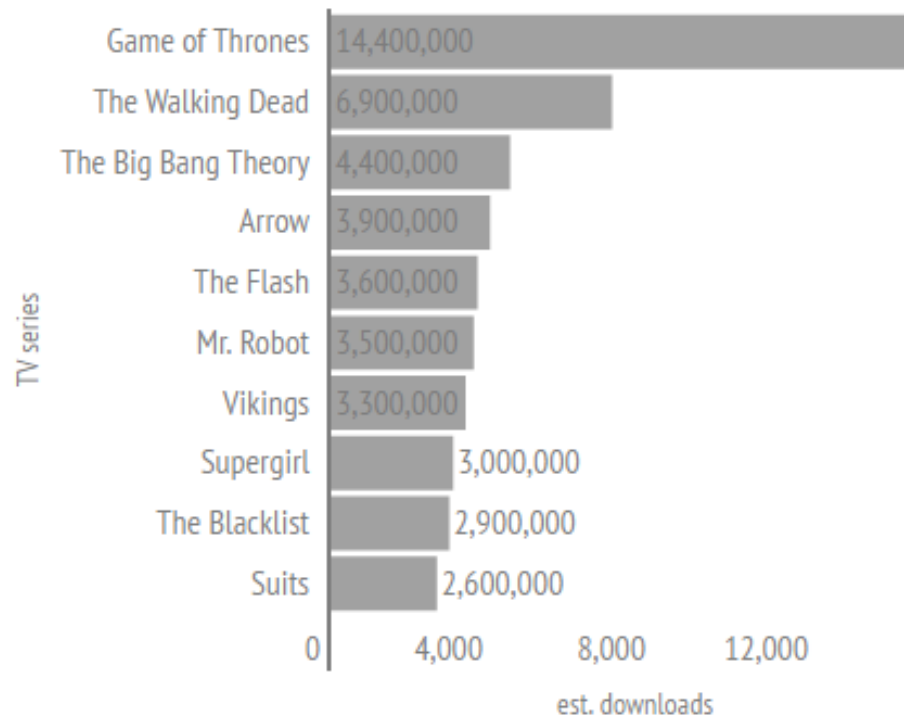
Визуелизации со објаснувања!

БЕСПЛАТНИ

# АЛАТКИ!

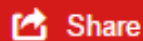
ЗА ВИЗУЕЛИЗАЦИЈА

## Most Pirated TV shows on BitTorrent in 2015



Source: torrentfreak.com

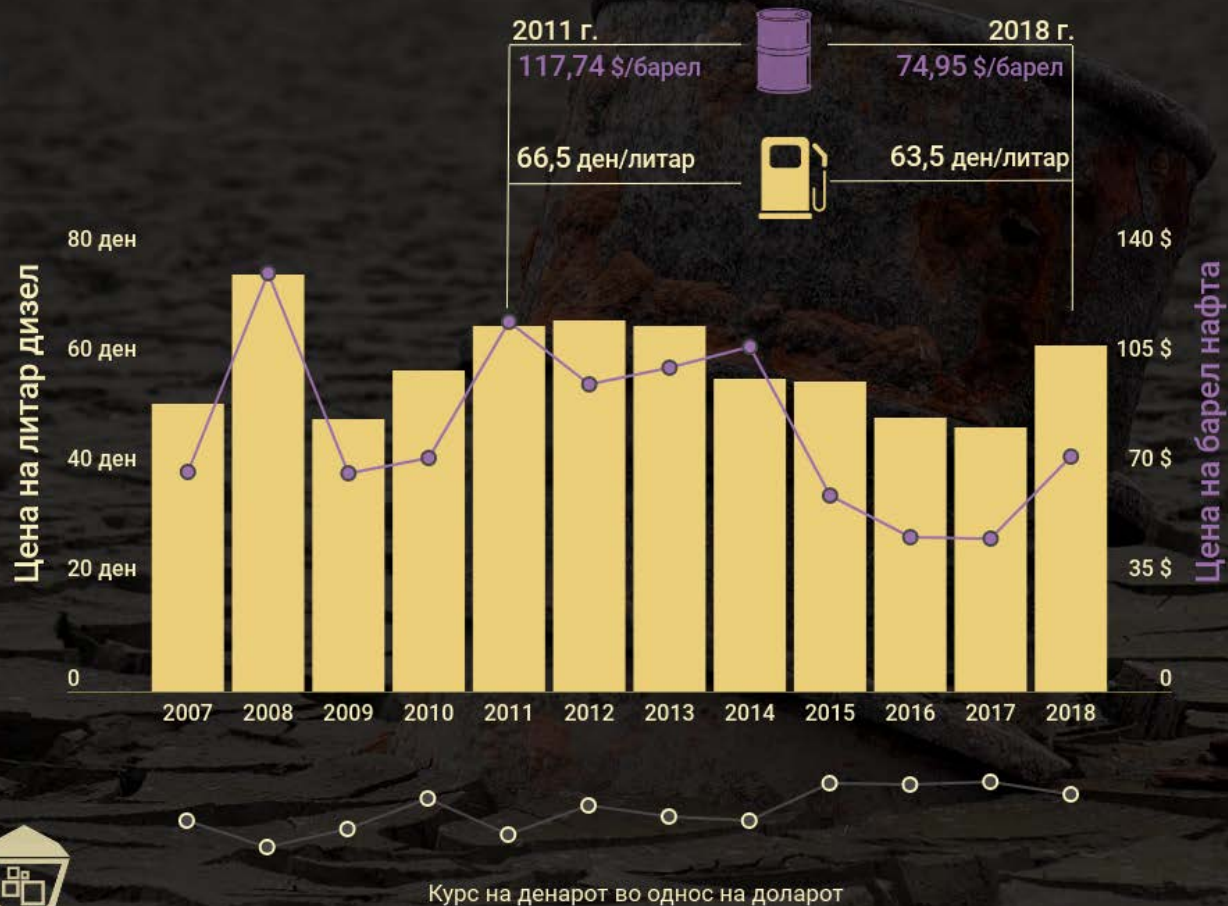
Euronews 2015



Share

According to [TorrentFreak](#), 'Game of Thrones' broke another pirating record in 2015.

# ЦЕНАТА НА ЦРНОТО ЗЛАТО



Анализираните податоци се однесуваат на месец јуни во тековната година



Извори: Регулаторна комисија за енергетика и НБРМ

infogram



# Timeline.js



SOUTH AFRICA

## Nelson Mandela's Extraordinary Life: An Interactive Timeline

By TIME Staff | Dec. 05, 2013 | [Add a Comment](#)[f Share](#)[f Like](#)

2.3k

[t Tweet](#)

333

[g+1](#)

9

[in Share](#)

16

[Pin it](#)[Read Later](#)

David Turnley / Corbis

Mandela in 1990.

### Mandela: A Life of Purpose

Nelson Mandela, the revolutionary-turned-prisoner-turned-president who led South Africa out of apartheid and into an era of political and racial reconciliation, passed away on Dec. 5, 2013. He was 95. As both the father of his nation and its conscience, Mandela's remarkable life changed history and its legacy resonates around the world.



JULY 18,  
1918  
*A Child Is Born*

## Timeline: Egypt in Turmoil



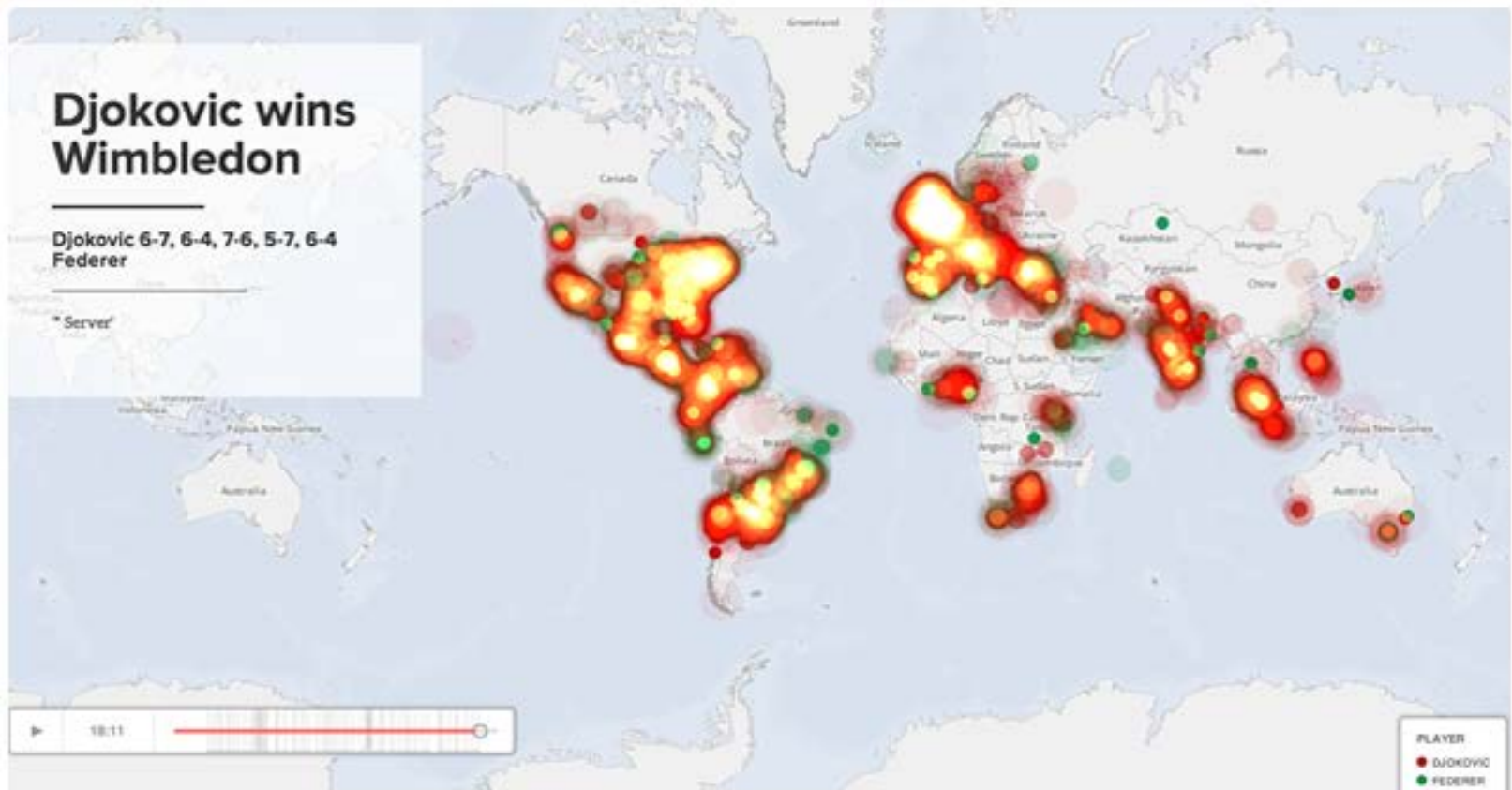
### First anniversary

Huge crowds of Egyptians demonstrate on the first anniversary of President Mohamed Morsi's term of office, demanding that he step down. Eight people are killed in clashes outside the Cairo headquarters of the Muslim Brotherhood, his primary base of support.



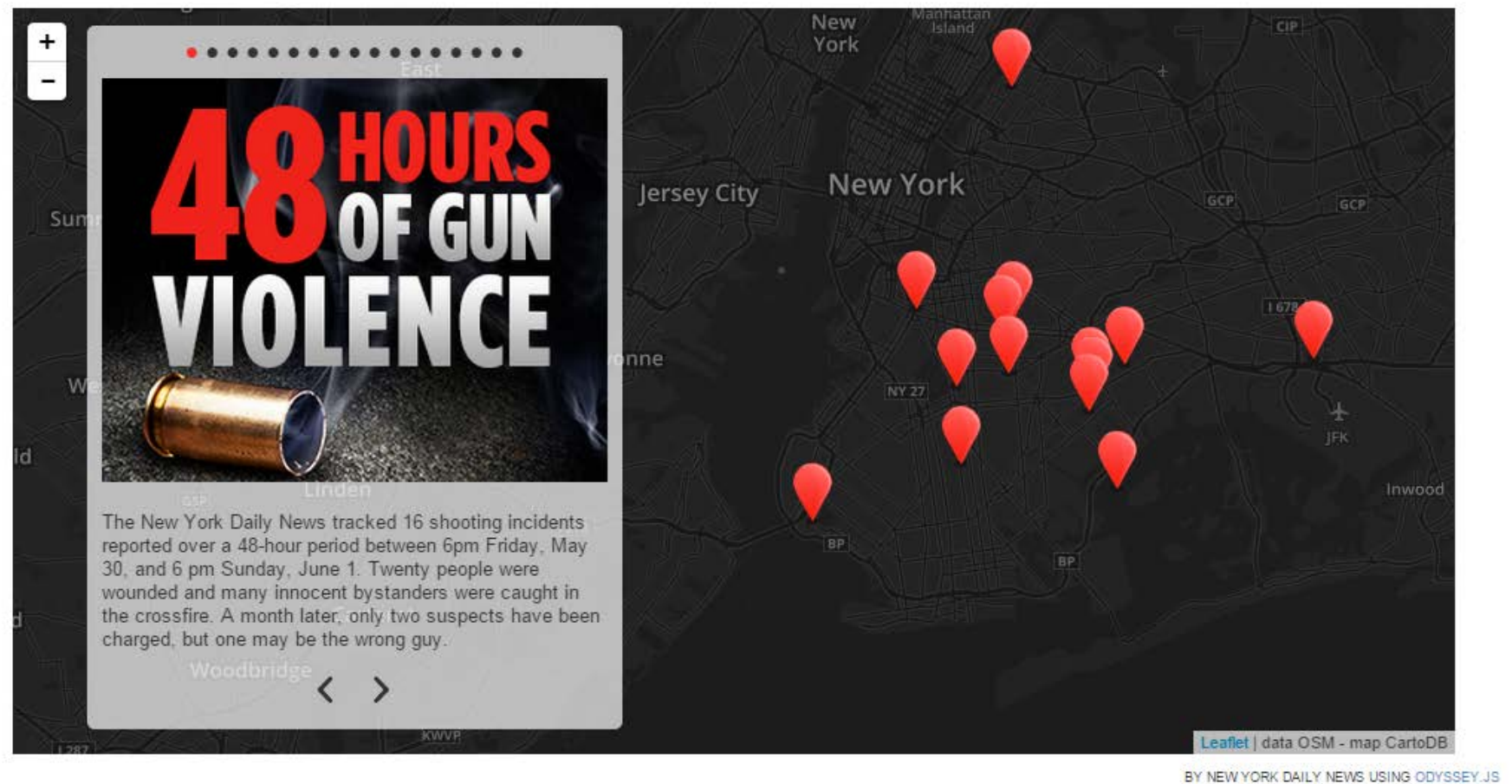
JULY 1, 2013  
Ultimatum

# Odyssey.js



Податоци од Твитер





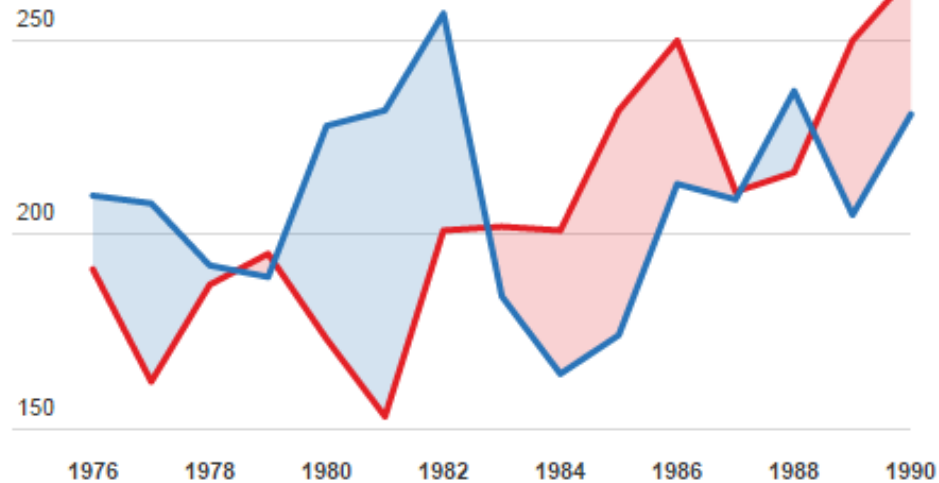
The New York Daily News

# Datawrapper

## Migration: more coming in but more leaving

000s

■ Coming into the UK ■ Leaving the UK



SOURCE: ONS

[GET THE DATA](#)

[EMBED](#)

[FULLSCREEN](#)

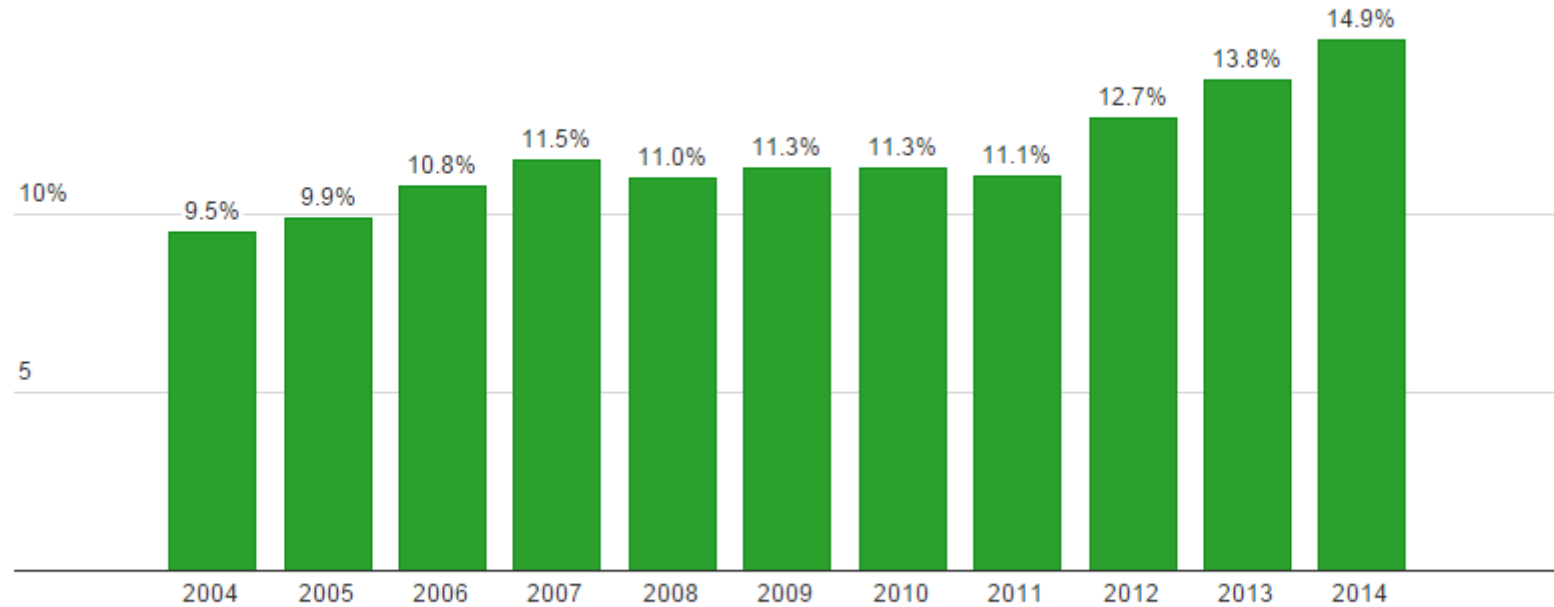
theguardian

The Guardian



## Women in the boardroom

The percentage of corporate board seats at the 100 largest public companies in Massachusetts that are held by women.



Created with [Datawrapper](#)

Source: The Boston Club, [Get the data](#)

Boston Globe

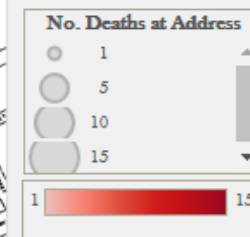
# Tableau Public



Then, Snow mapped these data points onto a map of the Soho neighborhood.

The results were startling.

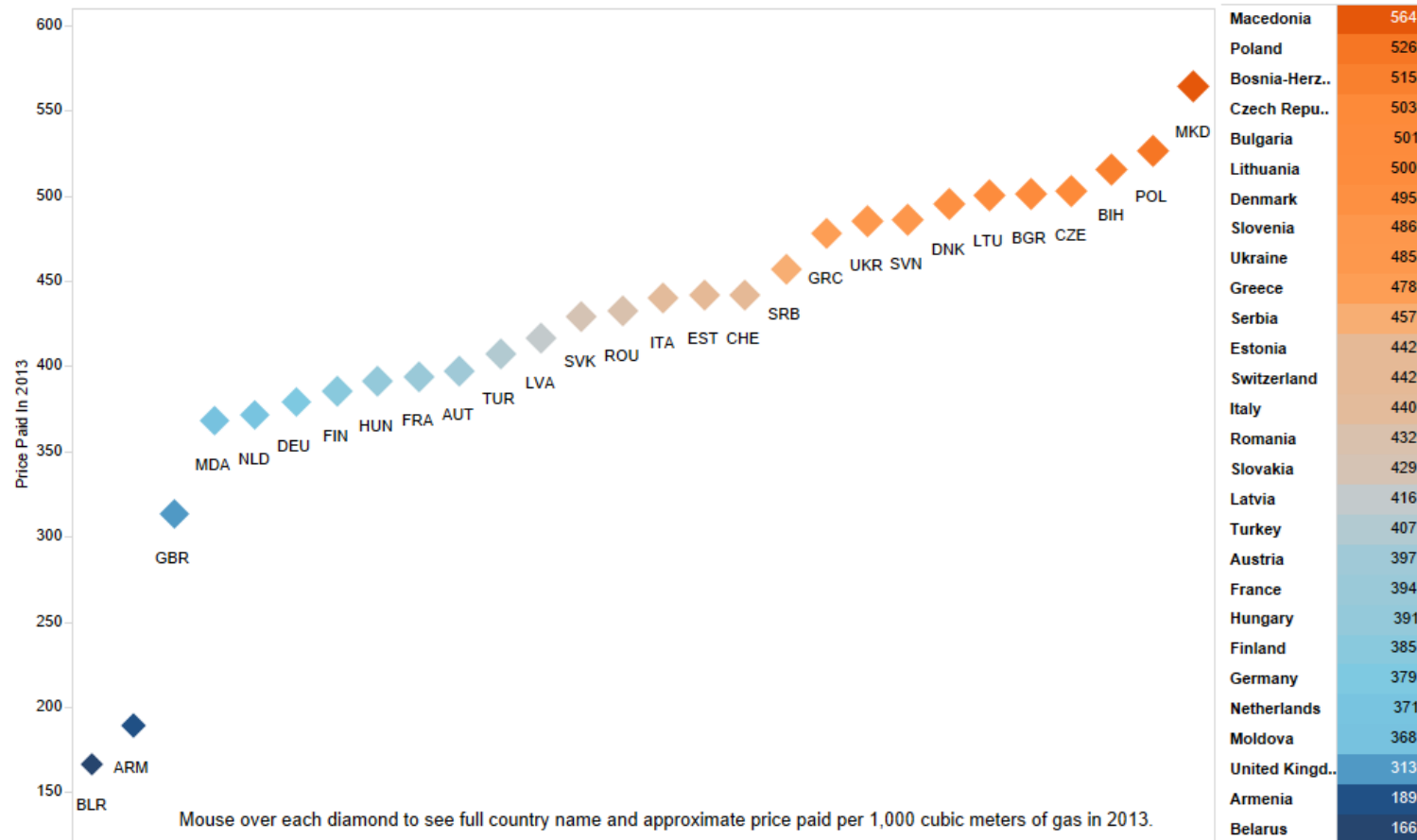
NB: The map reprinted here is Snow's original. I geocoded the addresses, introduced the number of deaths as a dimension in the dataset, and uploaded the map as a background image. Then, I conformed the dimensions of the map to the appropriate lat/long. Thus, the locations appear as they would have on Snow's map.



# Gazprom's Grip: Russia's Leverage Over Europe

1. Mapping Different Prices
2. Gazprom's Price Spectrum
3. Heavy Users: Who Are Russia's Biggest Customers?
4. Which Country is Most Dependent On Russia For Gas?

Gazprom charges its European customers widely different rates. Macedonia pays more than three times as much as Belarus for each thousand cubic meters of natural gas.



## Распределба на мандати на предвремените парламентарни избори во Македонија во 2016 година\*



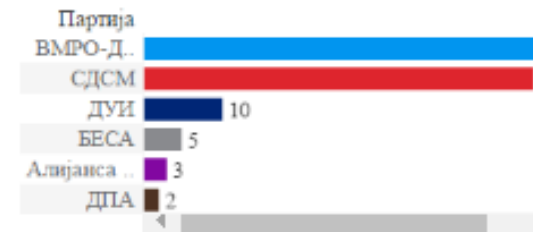
77

гласа му недостигаа на СДСМ во ИЕ 6 за да освои уште едно пратеничко место, со што би биле изедначени по вкупниот бројот на пратеници со ВМРО-ДПМНЕ.

6.533

гласови му беа доволни на ВМРО-ДПМНЕ за да го освои овој пратенички мандат.

Севкупен број на пратеници\*



**META.mk**  
новинска агенција

\*Според привичните неофицијални податоци на ДИК

+tableau

Share Download Full Screen

Meta.mk

# БЛАГОДАРАМ



**DATA**  
Data Analytics for Transparency and Accountability

**МЕТАМОРФОЗИС**   
Фондација за интернет и општество



This project is funded by the European Union.



**ZaštoNe?**



The "Accountability, Technology and Institutional Openness Network in South East Europe - ACTION SEE" project is implemented by Metamorphosis Foundation, Westminster Foundation for Democracy, CRTA – Center for Research, Transparency and Accountability, Citizens Association Why not?, Center for Democratic Transition, Open Data Kosovo (ODK) and Levizja Mjafi!.