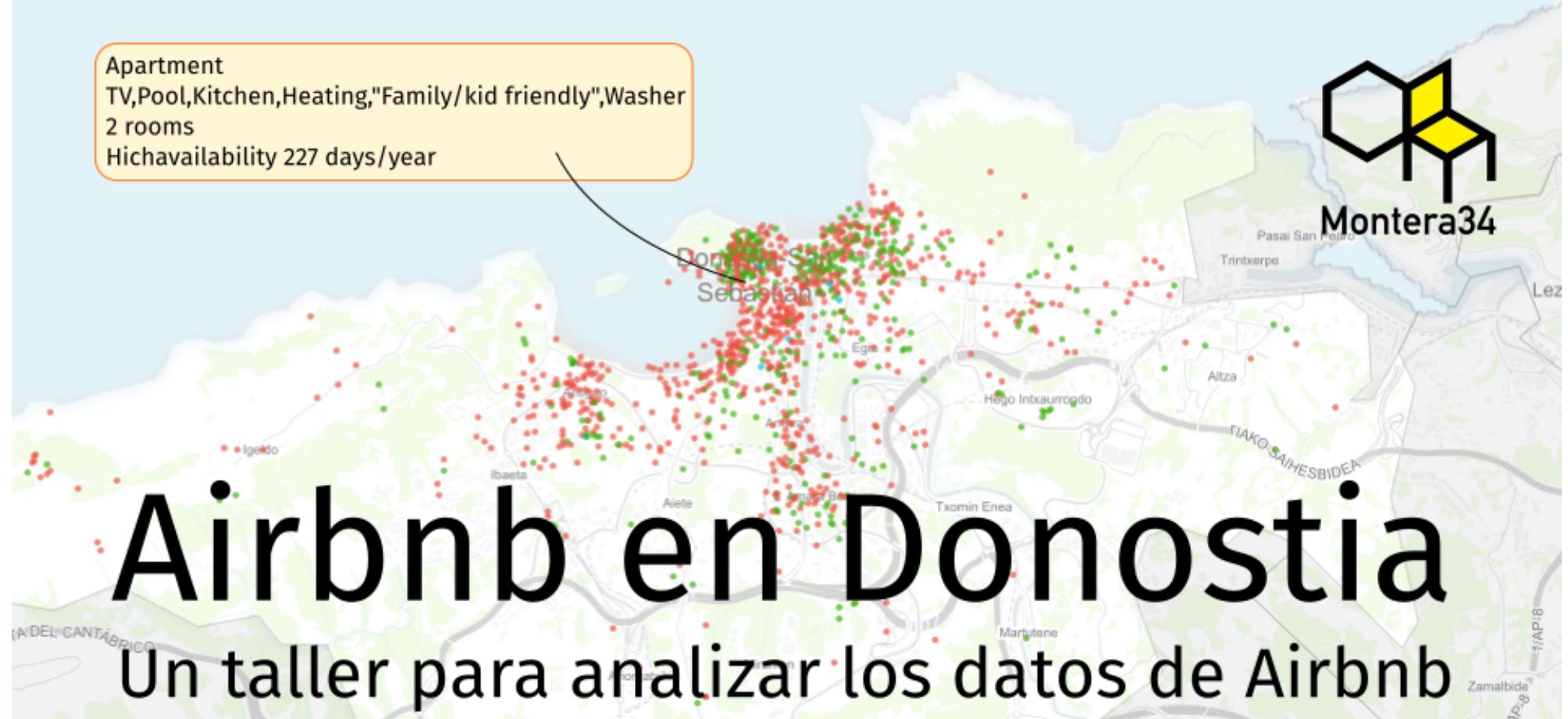


Apartment
TV,Pool,Kitchen,Heating,"Family/kid friendly",Washer
2 rooms
High availability 227 days/year



Montera34



El efecto de Airbnb en Donostia-San Sebastián
Taller para analizar los datos de Airbnb

3-5 abril 2017. Hirikilabs. Tabakalera. Donostia.

Web: <https://montera34.com/project/efecto-airbnb-donostia/>

#airbnbdonosti

montera34.com

Alfonso Sánchez Uzábal y Pablo Rey Mazón

Objetivos taller

Aprender a usar herramientas para producir un informe basado en datos geoespaciales.

Plantear preguntas y responderlas con análisis y visualización.

Aprender técnicas y herramientas.

Estructura del taller

Día 1: lunes 3 de abril

Presentaciones 30min

Del taller. Qué vamos a hacer.

De Montera34. Quiénes somos. Qué hacemos.

De los talleristas. 2 tuits.

Sobre visualización de datos y mapas 1h30

Algo de teoría. Pasos para generar visualización

Algunas herramientas: Openrefine, Pivot tables en Google Drive, Carto.com.

Fairbnb. Por Sito Veracruz. 1h

Día 2-3. Martes 4-5 de abril

Taller de análisis y visualización colectivo de datos.

Encontrar respuesta a las preguntas planteadas.

Quiénes somos

Montera34 somos

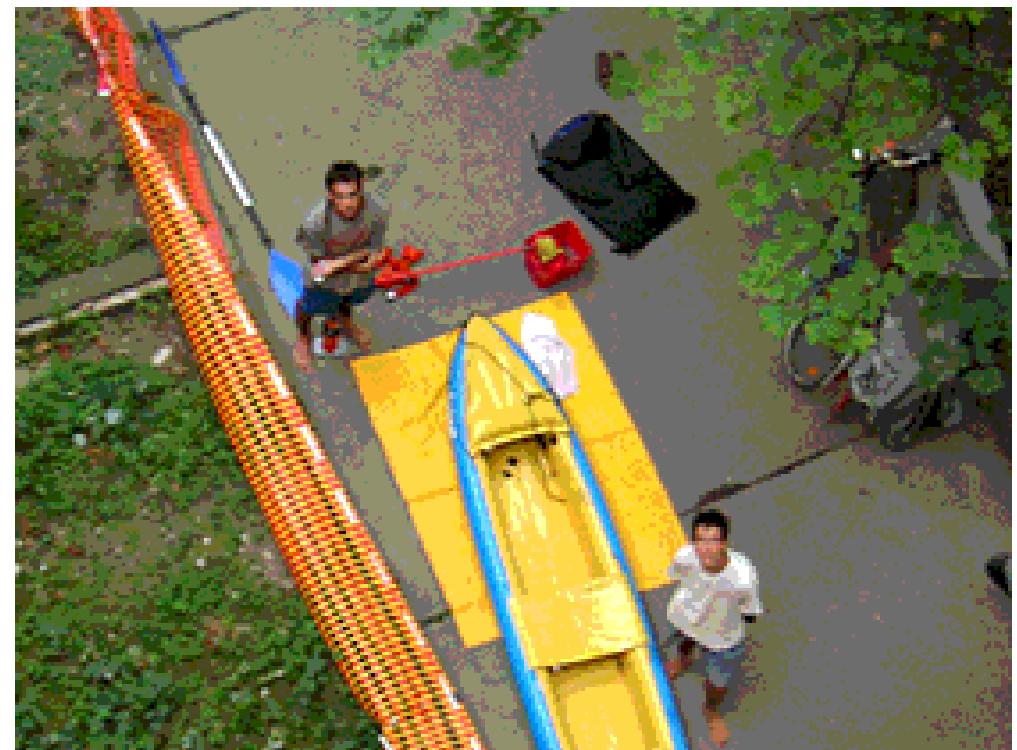
Alfonso S. Uzábal (@skotperez, voragine.net). Arguilla

Pablo Rey Mazón (@numeroteca, numeroteca.org). Bilbao

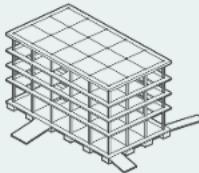
info@montera34.com

@montera34

Montera34.com



Mapa de cadáveres inmobiliarios



Mapa de proyectos arquitectónicos y desarrollos urbanísticos inacabados, infrautilizados o vacíos del periodo post-burbuja inmobiliaria española.



Este mapa es una de las [visualizaciones](#) creadas a partir de la [base de datos de cadáveres inmobiliarios](#).

Sobre el proyecto Cadáveres Inmobiliarios

Ante la inexistencia de un inventario oficial, [Cadáveres Inmobiliarios: Base de datos post-burbuja](#) nace como un proyecto colectivo que persigue la localización y documentación de todos estos desarrollos que murieron antes de tiempo. Esta iniciativa es de marcado carácter interdisciplinar, englobando arquitectos, ingenieros, urbanistas, investigadores, artistas o activistas medioambientales e invita a la participación al mayor número de personas posible.

El objetivo de esta ambiciosa recopilación es la de proporcionar información exhaustiva de manera accesible para que cada cual la utilice acorde con sus intereses. Aunque el mero hecho de informar sobre este fenómeno supone una crítica implícita al modelo de desarrollo basado en el ladrillo, 'Cadáveres Inmobiliarios' pretende ser el punto de partida para futuros proyectos que propongan soluciones a situaciones hoy estancadas, fomentando así una concienciación social con respecto a una realidad que nos define y a la que no podemos dar la espalda.



CADA DÍA VIAJAMOS EN EL TIEMPO
10 AÑOS PARA TRAERTE
LOS GASTOS DE LAS TARJETAS BLACK



BlacktodeFuture
@BlacktodeFuture

Siguiendo

Hace 10 años Antonio Cámara Eguinoa
gastaba 121€ con su tarjeta black en
DRINK-HANDICAP

10:00 - 3 abr. 2017

gastaba 34.73€ con su tarjeta black en
ALIMENTACION ARMANDO



BlacktodeFuture @BlacktodeFuture · 4 h

Hace 10 años Javier de Miguel Sánchez
gastaba 77.88€ con su tarjeta black en
ROBLEGAS, S.A.



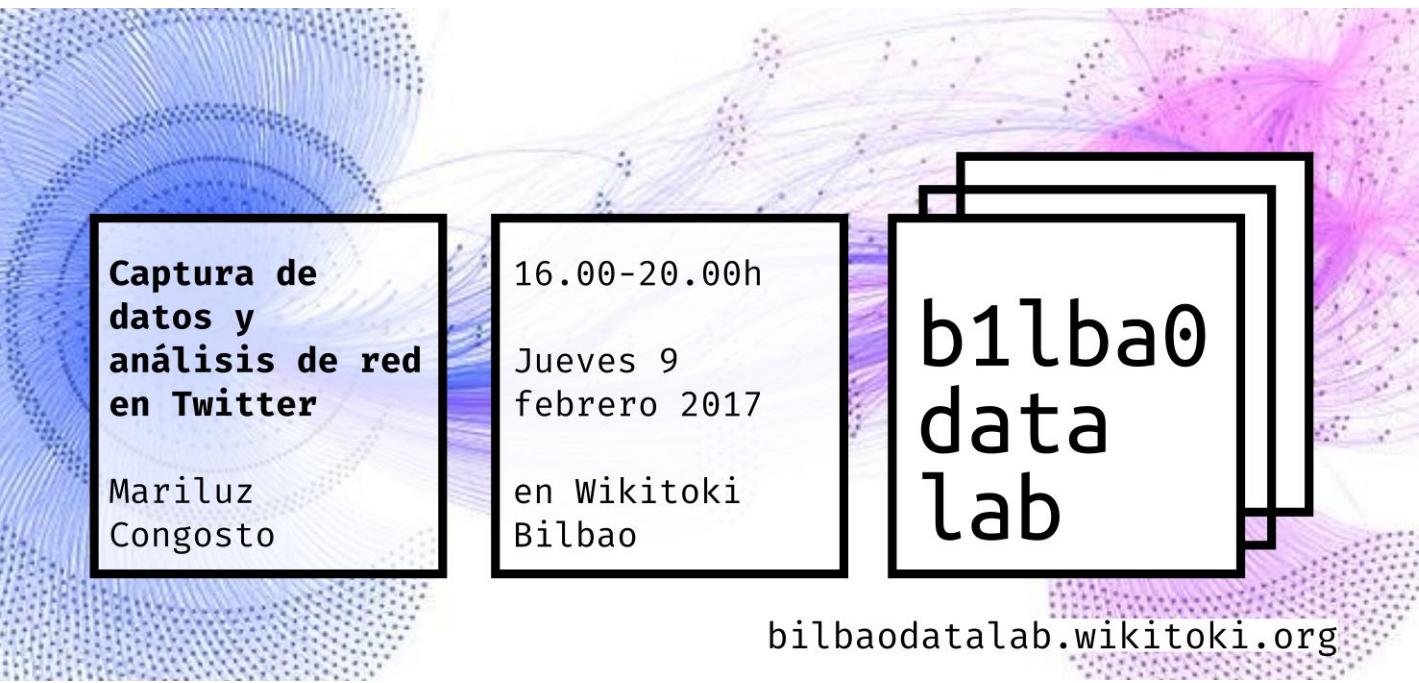
BlacktodeFuture @BlacktodeFuture · 5 h

Hace 10 años Rubén Cruz Uribe
gastaba 74.59€ con su tarjeta black en
FERMIN RUIZ ESCRIBANO

Alojamiento web asociativo

Aloja tu sitio en un espacio que funciona usando software libre, sobre el que tienes capacidad de decisión, y que además podrás aprender cómo funciona si te interesa.

[Hazte socio](#)



**Captura de
datos y
análisis de red
en Twitter**

Mariluz
Congosto

16.00-20.00h

Jueves 9
febrero 2017

en Wikitoki
Bilbao

b1lba0
data
lab

bilbaodatalab.wikitoki.org

Habitantes ↑

200 mil

100 mil

20 mil

10 mil

2.000

1.000

200

100

**Workflow de
un proyecto de
datos**

Martín González

16.00-20.00h

Jueves 19 enero
2017
en Wikitoki
Bilbao

b1lba0
data
lab

bilbaodatalab.wikitoki.org

Presentación talleristas

Preséntate en dos tuits:

¿Quién eres?

¿Qué te ha motivado a apuntarte al taller? ¿Alguna idea o visualización en concreto que te gustaría desarrollar durante el taller?

Visualizar datos

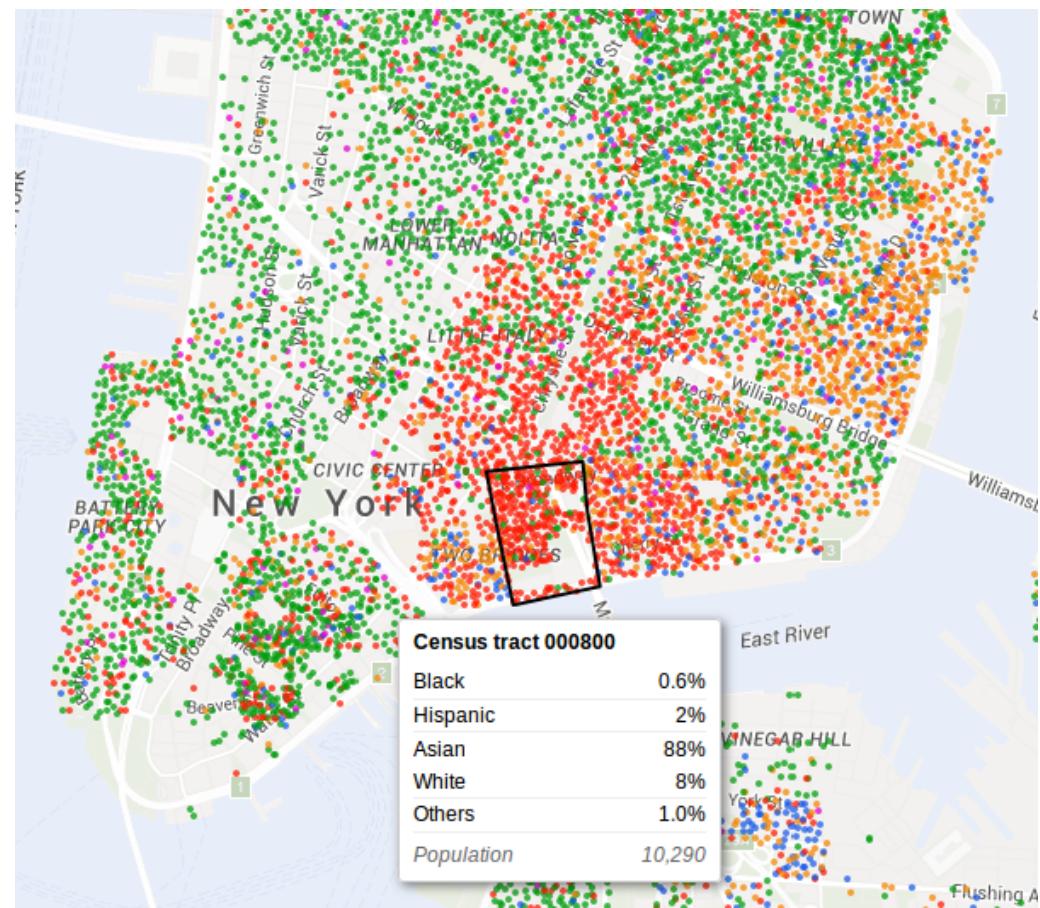
¿Por qué visualizar?

Capacidad de síntesis.

Relacionar varias variables.

¿Por qué no visualizar?

No siempre es necesario:
con una tabla nos vale.



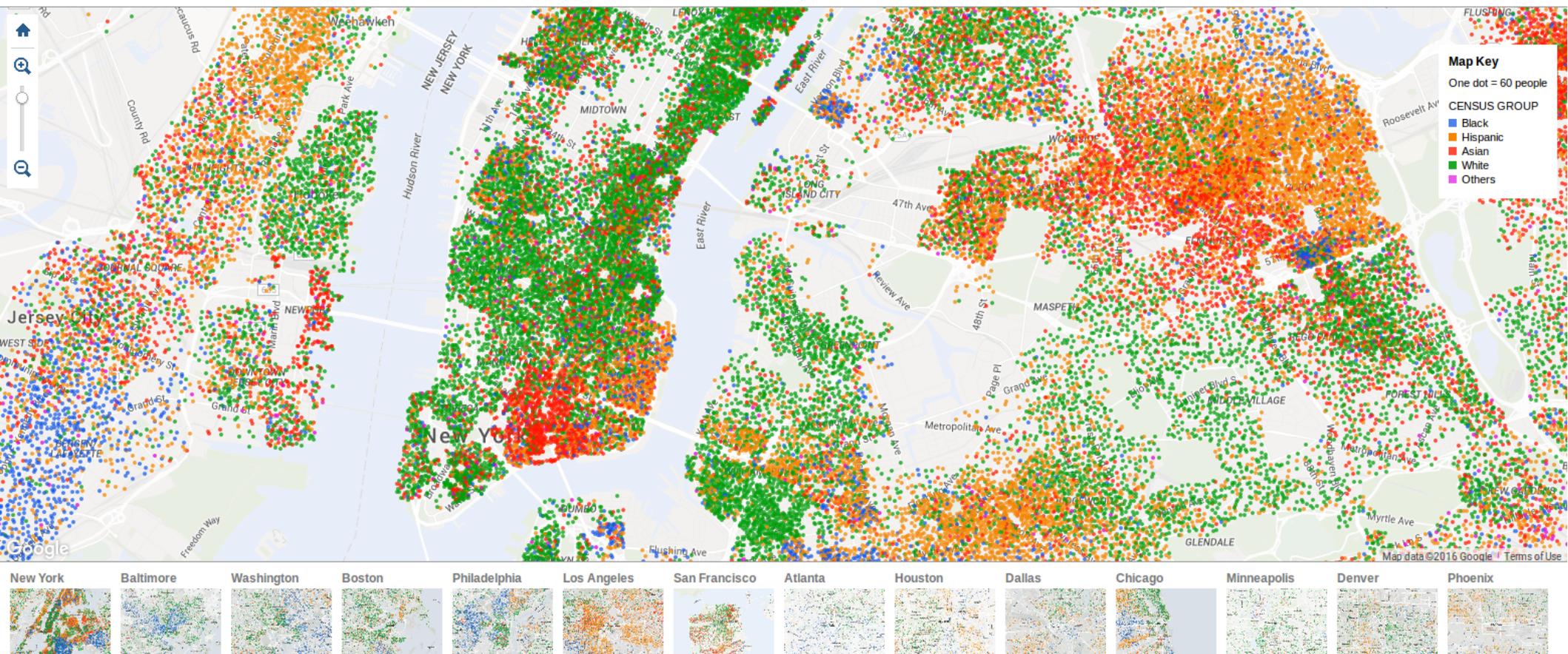
1 dot = 60 people

The New York Times
Published: July 8, 2015



Mapping Segregation

New government rules will require all cities and towns receiving federal housing funds to assess patterns of segregation.



Correction: In an earlier version of this map, the popup table misstated the share of each census group living in a census tract. For example, Manhattan tract 15200 is 56% white, not 54%.

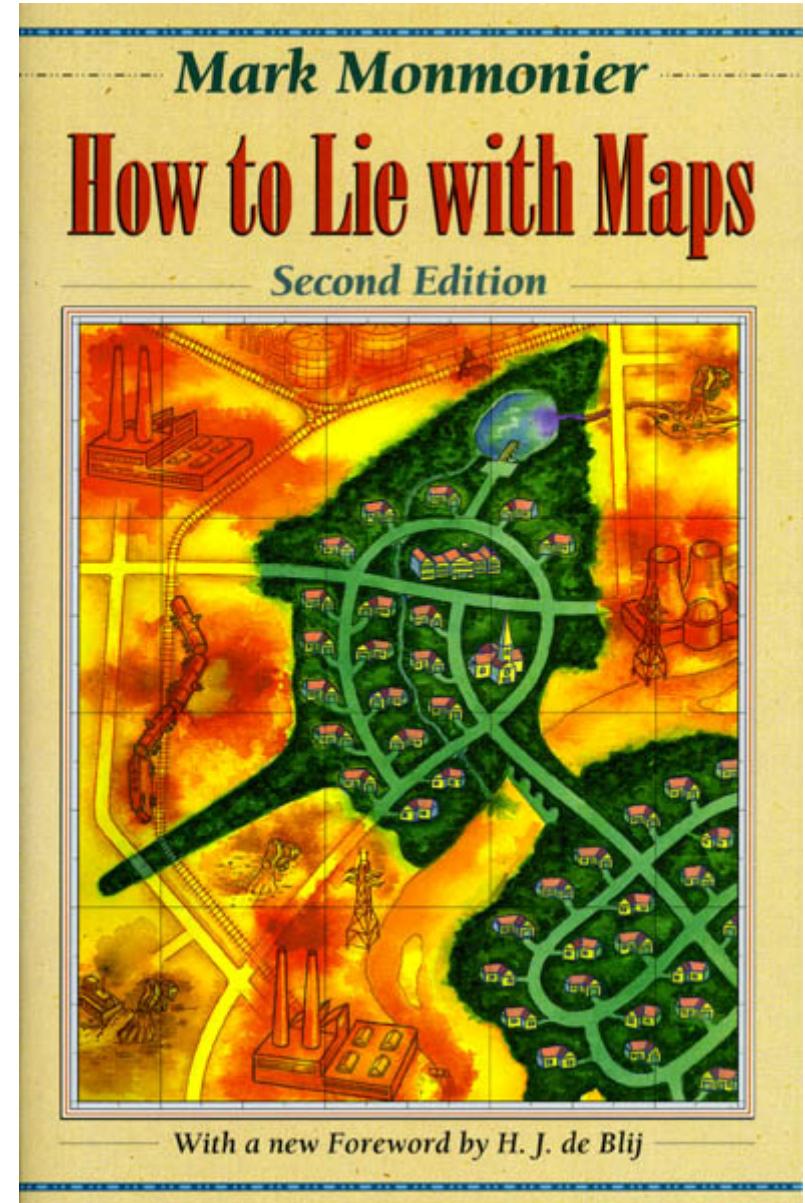
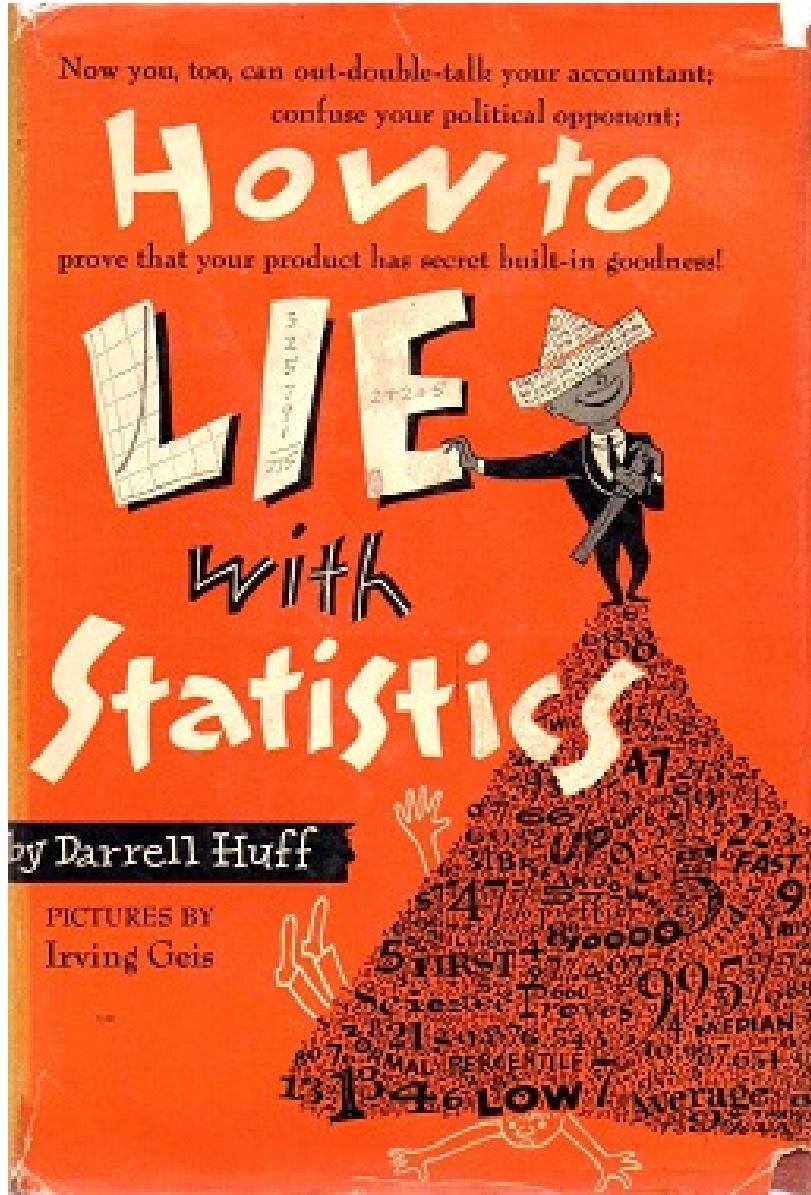
By MATTHEW BLOCH, AMANDA COX and TOM GIRATIKANON
Sources: [2010 U.S. Census](#), [socialexplorer.com](#), Google Maps

Subjetividad de las visualizaciones de datos

Europa 2013

Fuente: FMI, BCE, UE

Los mapas no son neutrales ni objetivos.
La tecnología tampoco



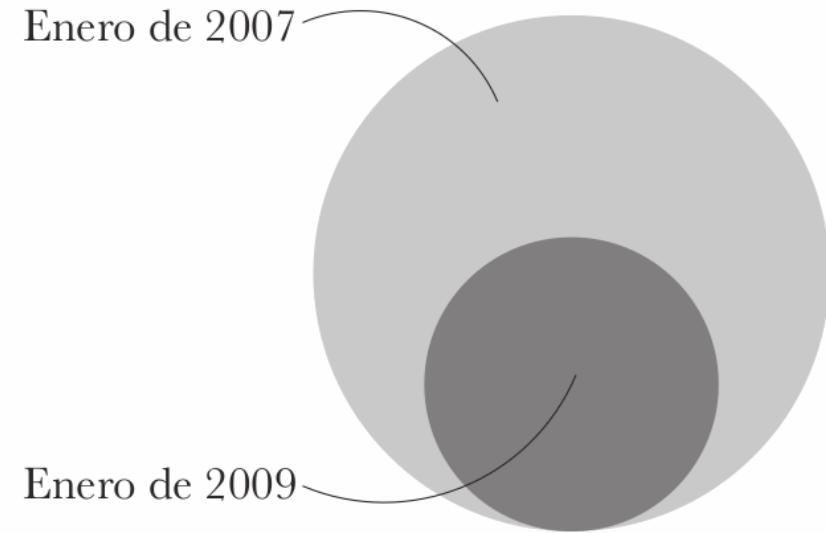
¿Cuánto mentimos?

Si no “mentimos” o dejamos de mostrar información los mapas serían imposibles de comprender.

Société Générale Market value

En miles de millones de dólares

Fuente: Bloomberg



En miles de millones de dólares

Fuente: Bloomberg

Enero
de 2007



Enero
de 2009

Tiempo medio de espera para una operación

A 30 de junio de 2016



* No hay datos disponibles para Cataluña

EL PAÍS / Fuente: Ministerio de Sanidad, Servicios Sociales e Igualdad

Tiempo medio de espera para una operación

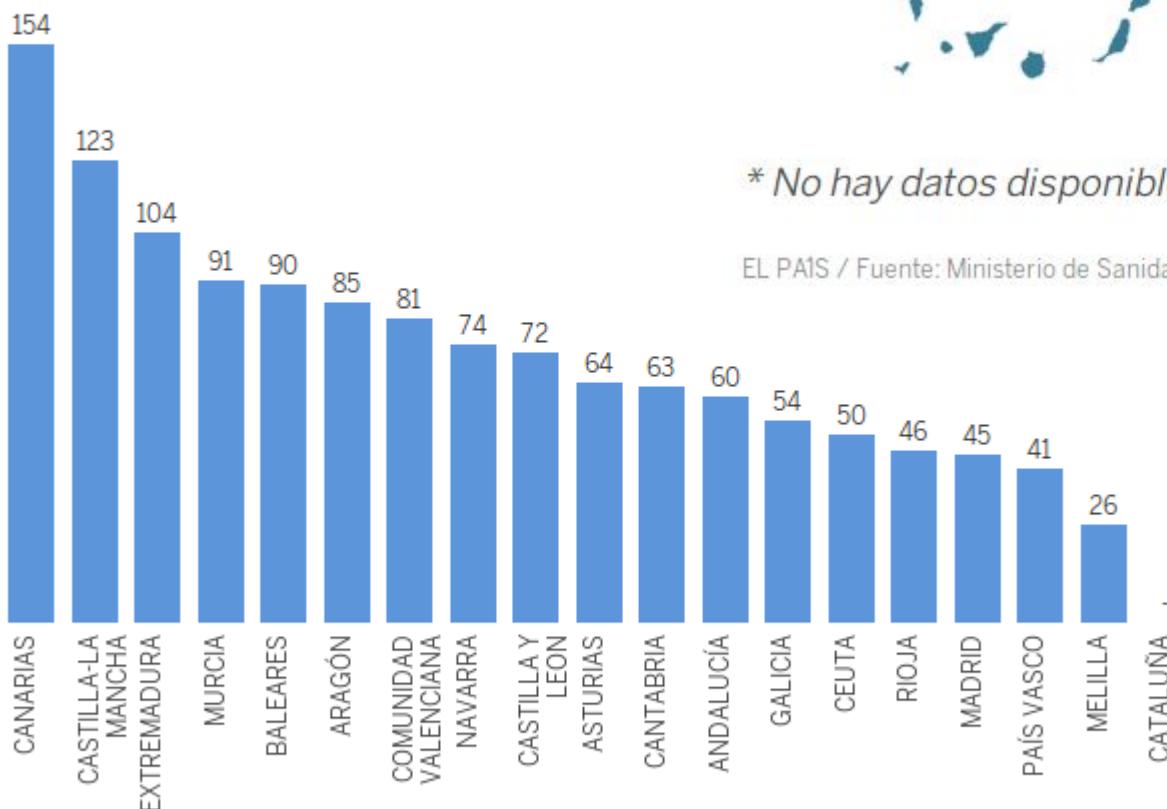
A 30 de junio de 2016



Espera quirúrgica por espec

En días, de media

Cirugía general y de digestivo



* No hay datos disponibles para Cataluña

EL PAÍS / Fuente: Ministerio de Sanidad, Servicios Sociales e Igualdad

Births: United States, 2000

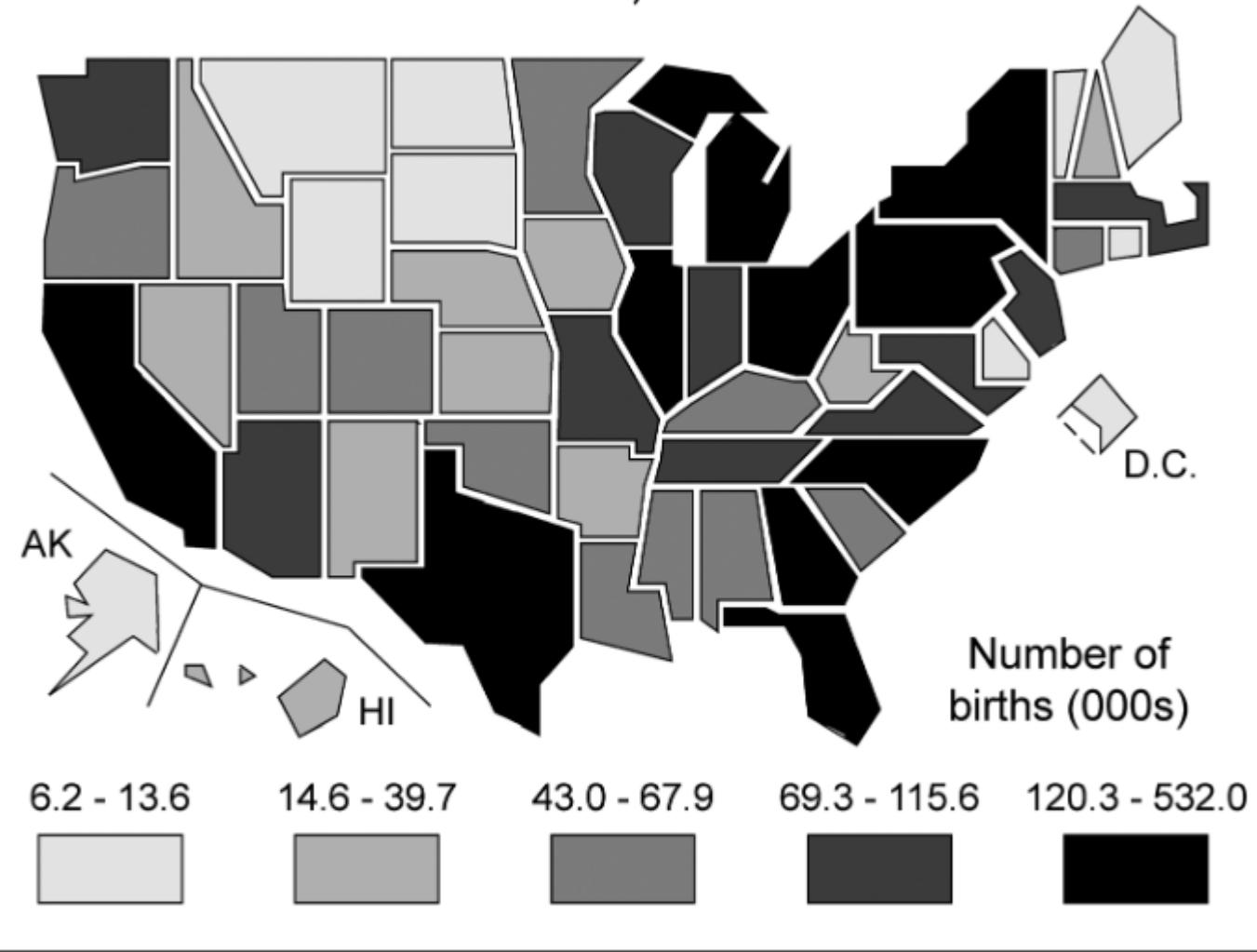


FIG. 7. *The darker-is-more-intense metaphor of choropleth maps offers a potentially misleading view of numbers of births.*

Births: United States, 2000

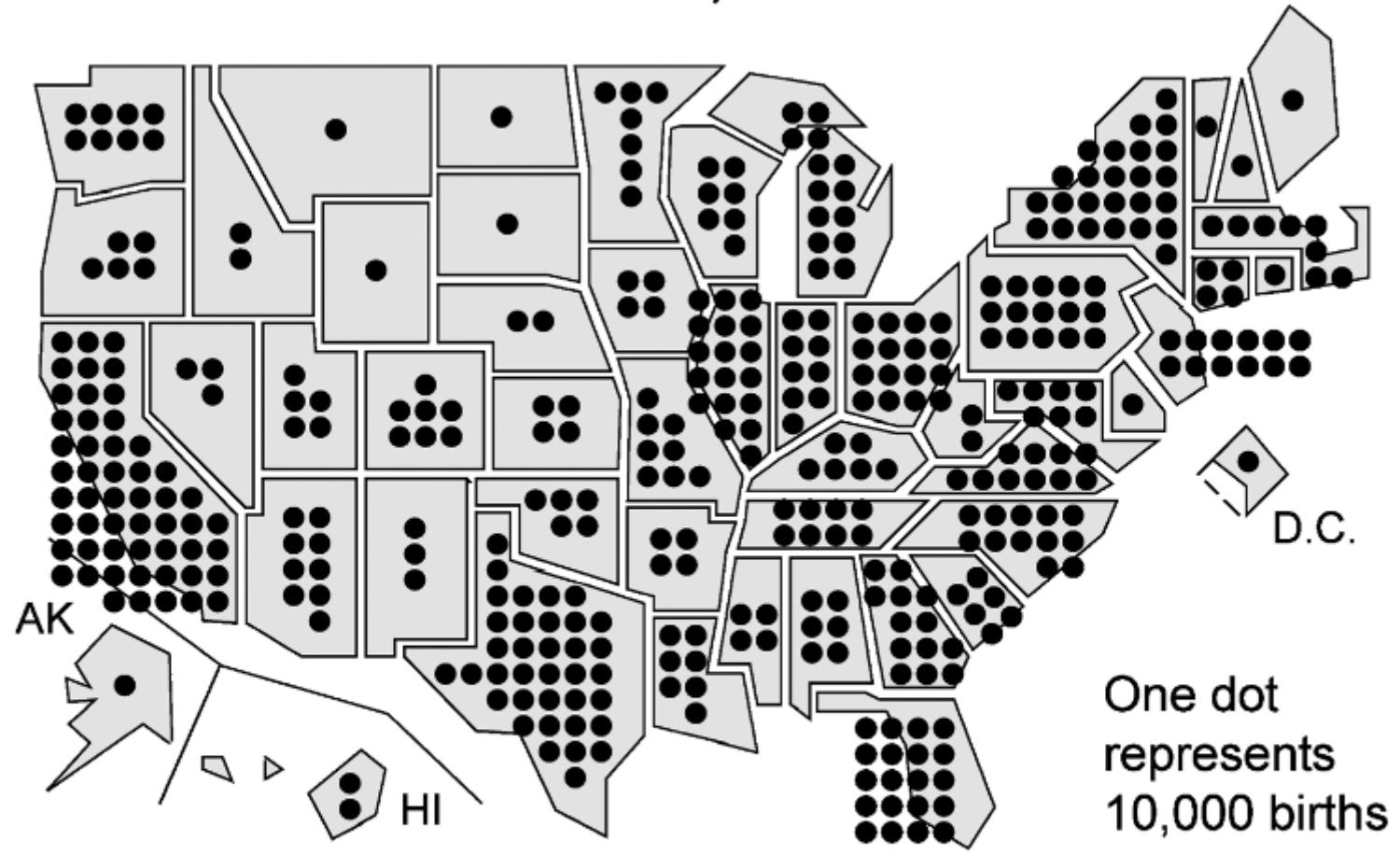


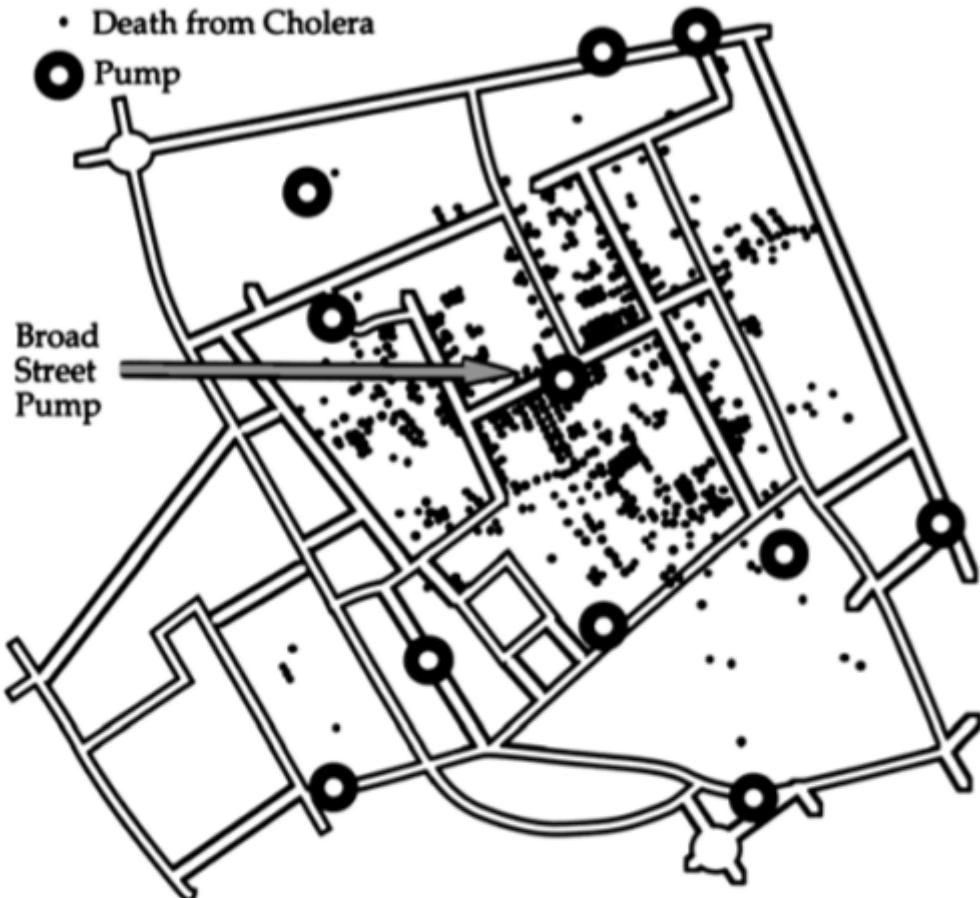
FIG. 8. *The bigger-means-more metaphor of this dot-array map affords a more appropriate treatment of the count data in Figure 7.*



John Snow 1854.

Depende de cómo
dibujes los límites.

Snow's Dot Map



Areal Aggregations and Density Symbols

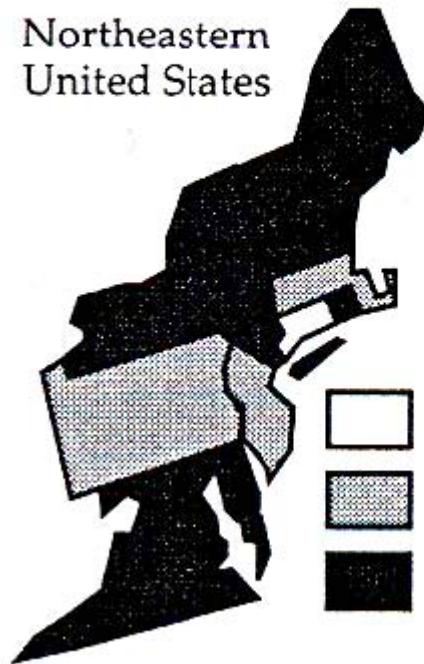


How to lie with maps. Monmonier

FIGURE 10.18. A reconstruction of John Snow's famous dot map of cholera (above) and three choropleth maps (below) produced by different areal aggregations of this part of London.

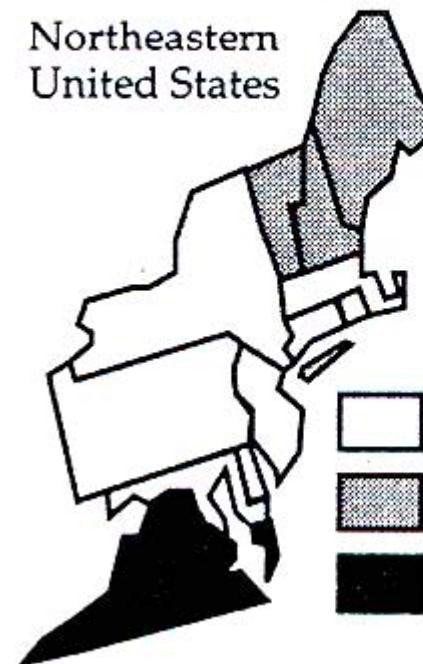
Occupied Housing Units Lacking a Telephone, 1960

Northeastern United States



Occupied Housing Units Lacking a Telephone, 1960

Northeastern United States



Depende de cómo colorees el mapa: colores y rangos.



eurostat

Your key to European statistics

European Commission > Eurostat > Regions and cities > Regional Statistics Illustrated

Legal notice | RSS | Cookies | Links | Contact

English

Regional Statistics Illustrated City Statistics Illustrated Typologies Illustrated

Statistical domains Population

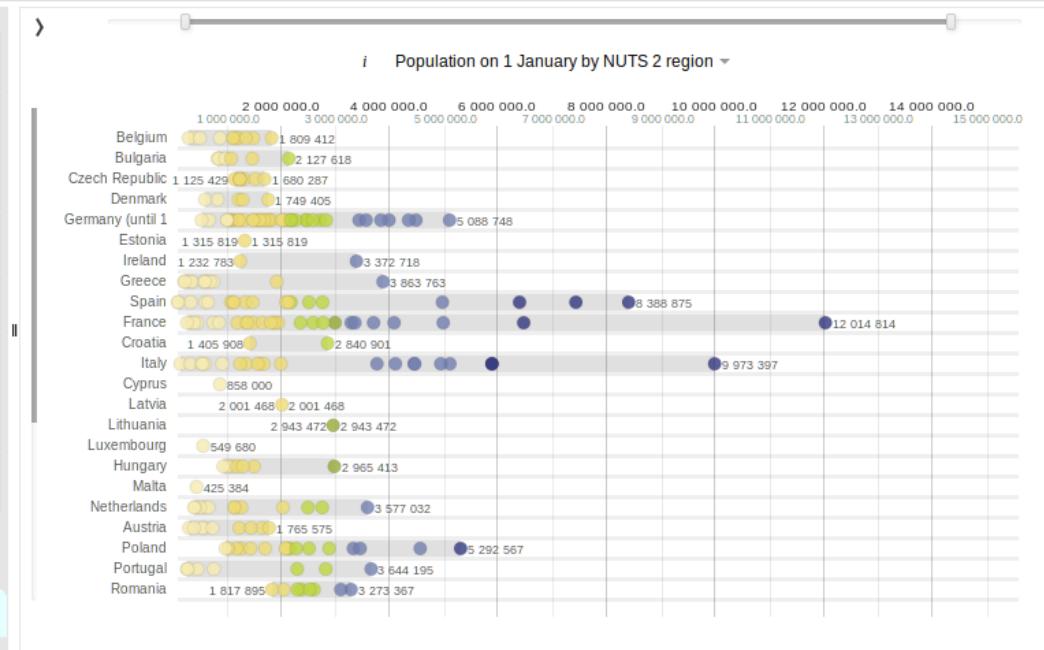
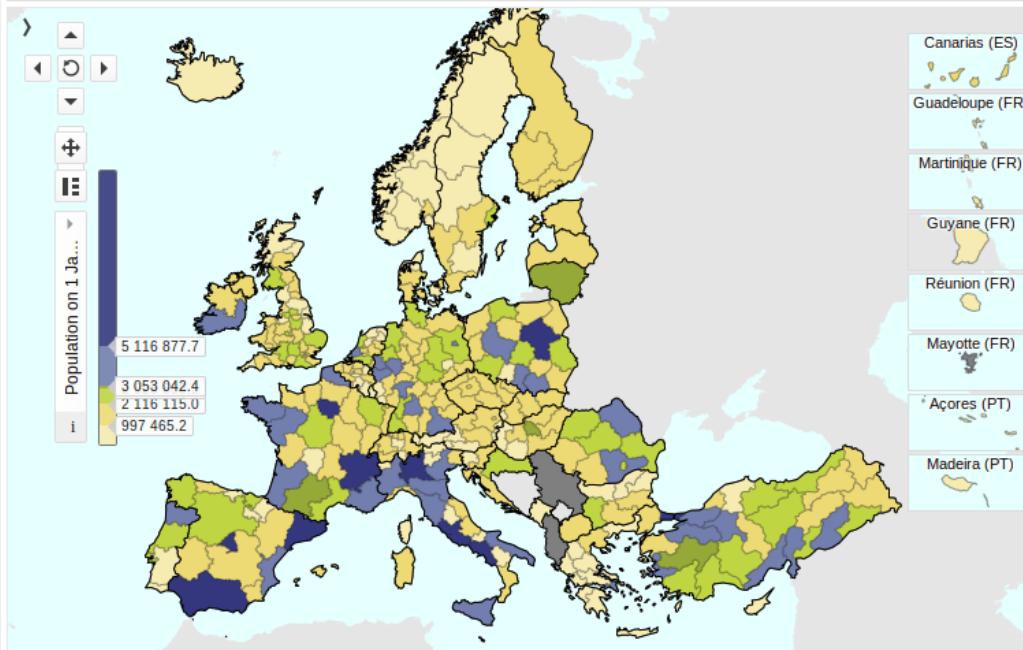
Geographical level

NUTS 1

NUTS 2

NUTS 3

Distribution plot Scatter plot Bar chart Data table



Data sources: Eurostat // Administrative boundaries: ©EuroGeographics ©UN-FAO ©Turkstat // Cartography: Eurostat – GISCO, 07/2013

Eruostat: data and distibution plot. Population.

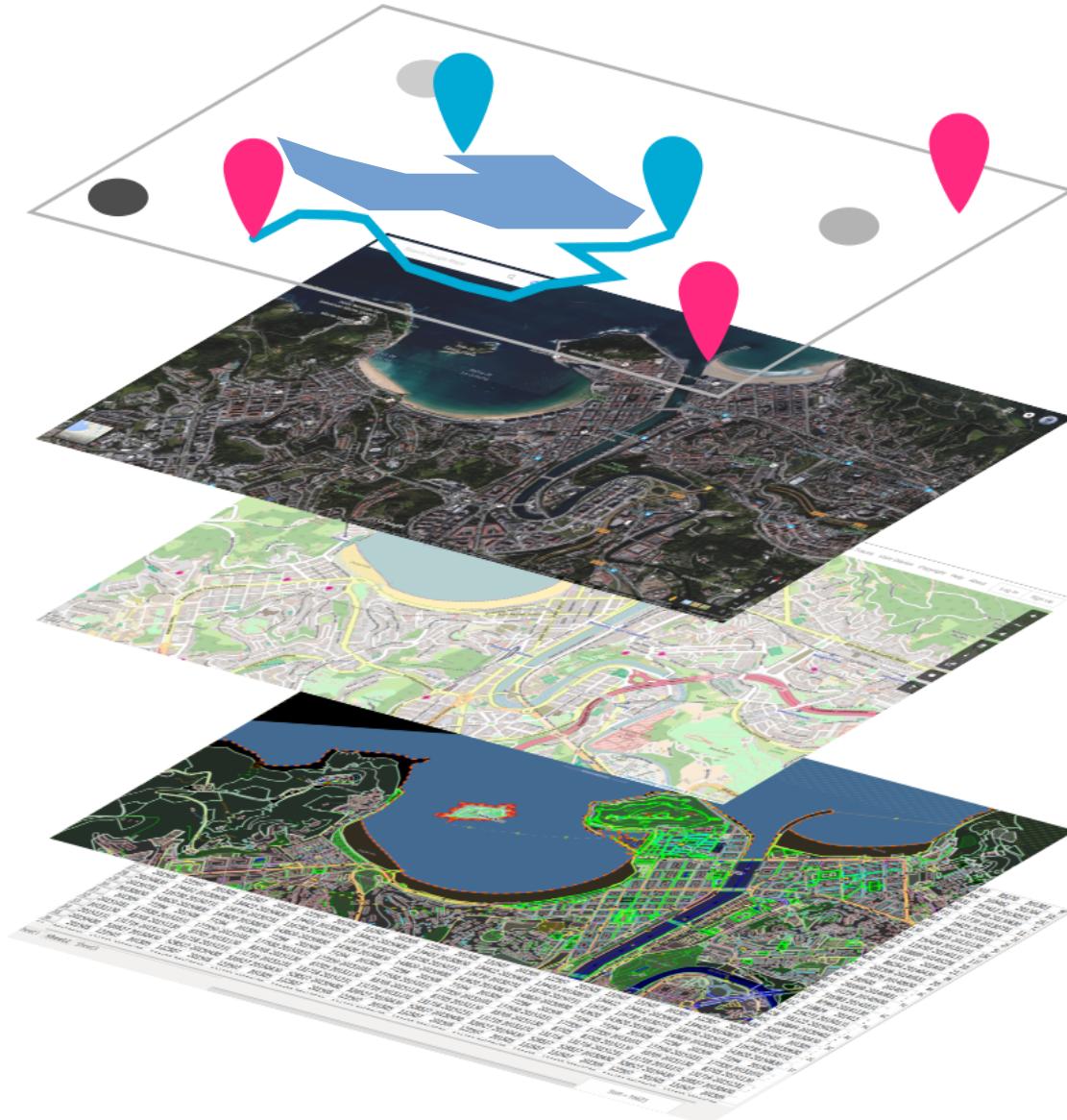
<http://ec.europa.eu/eurostat/cache/RSI/#?vis=nuts2.population&lang=en>

Hace un año...

Google Maps it not The Map

Taller de cartografías digitales ciudadanas

29-31 abril 2016. Hirikilabs. Tabakalera. Donosti.



Info sobre
el mapa

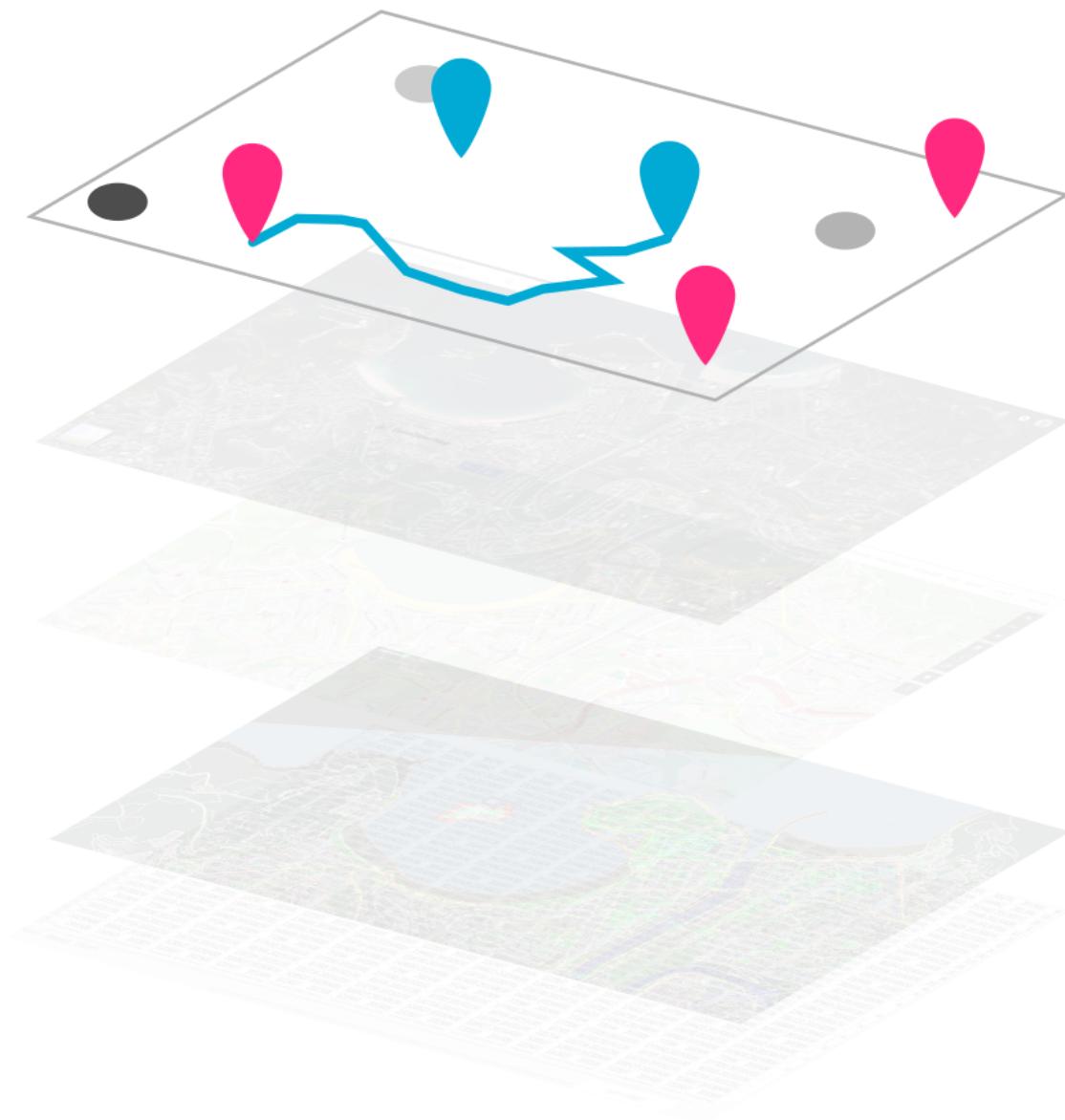
Foto aérea

Mapa

Vectores
Datos

Interfaz
de usuario

genera



Info sobre
el mapa

Foto aérea

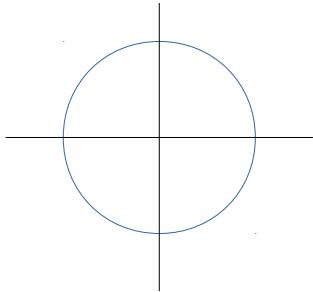
Mapa

Vectores
Datos

Interfaz
de usuario

genera

Punto



Posición:

- Latitud
- Longitud

.csv

.tsv

.geojson

.kml

.gpx

Tiempo

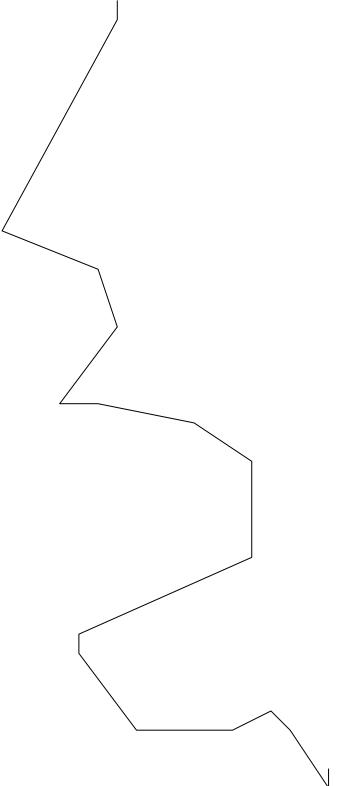
Elevación

Nombre

Precisión GPS

Categoría

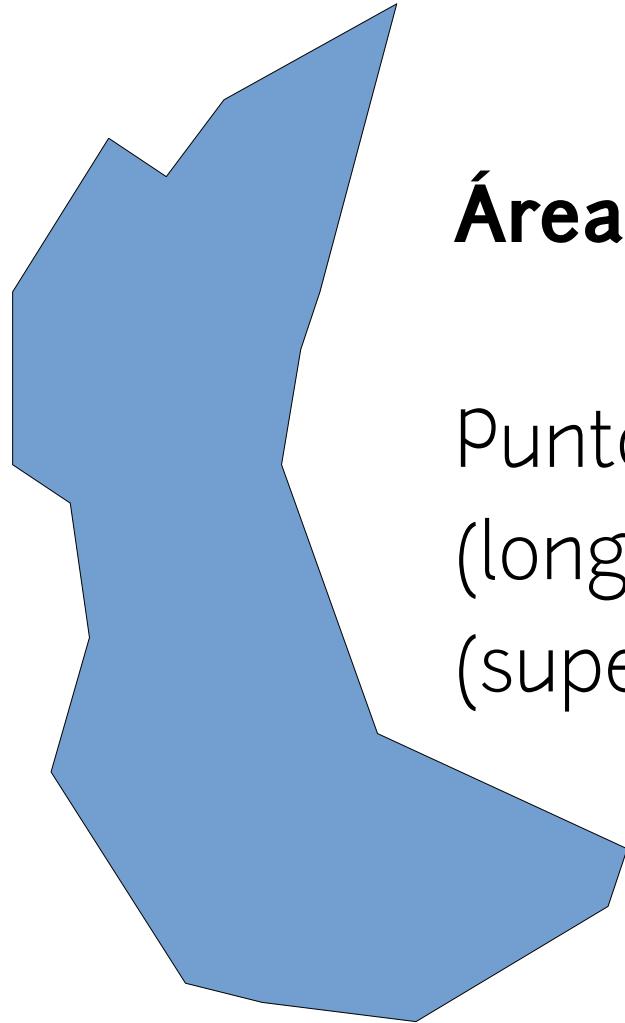
(Velocidad)



Línea

Puntos
(longitud)

.CSV
.tsv
.geojson
.kml
.gpx

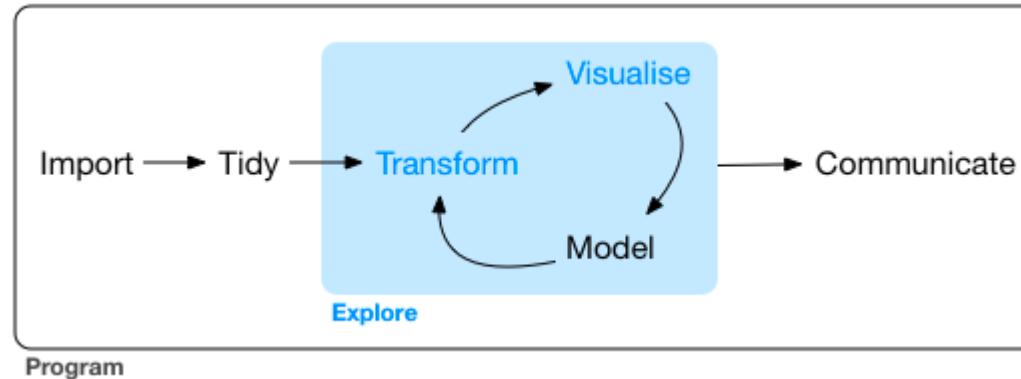


Área

Puntos
(longitud)
(superficie)

.CSV
.tsv
.geojson
.kml
.gpx
shapefile

Proceso de visualización de datos



1. Obtención
2. Limpieza
3. Preparación
4. Exploración y análisis
5. Publicación

¿Cómo vamos a trabajar?

Herramientas abiertas y/o de software libre.

Proceso semidirigido.

Artesanal / semiautomatizado. **Ejemplos**

Manos a la obra

Documentos compartido

<http://piratepad.net/airbnbeuskadi>

¿Cómo vamos a trabajar?

Herramientas abiertas y/o de software libre.

Proceso semidirigido.

Artesanal / semiautomatizado.

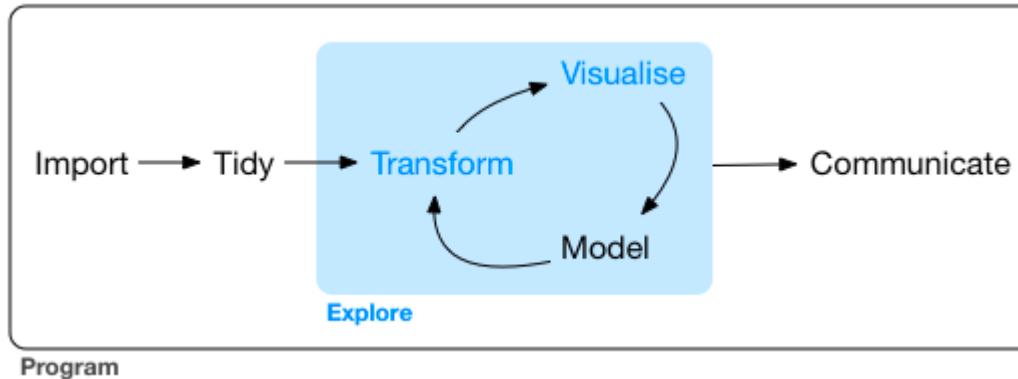
—

Un paseo por:

Github.com

Piratepad.net

Proceso de visualización de datos



- o. Atención: pregunta
1. Obtención (Inside Airbnb, Open DataEuskadi, GeoEuskadi, Euskalgeo)
2. Limpieza (Open Refine)
3. Preparación y transformación (R, QGIS)
4. Exploración (carto, R, LibreOffice, google spreadsheet)
5. Publicación (html)

1. Obtención de datos

1. Fuentes oficiales
2. Fuentes semioficiales
3. Estudios / papers
- ...o scraping

Inside Airbnb: fuente principal de datos. Web scraping por Murray Cox.

Open DataEuskadi: número de viviendas por barrio, alojamientos turísticos.

GeoEuskadi: Contornos de barrios.

Euskalgeo: ayuntamientos.

2. Limpieza

Si tus datos están sucios puedes limpiarlos:

Open Refine (<http://openrefine.org/>)

/ Redo / Undo 2874 rows

Cluster & Edit column "city"

This feature helps you find groups of different cell values that might be alternative representations of the same thing. For example, the two strings "New York" and "new york" are very likely to refer to the same concept and just have capitalization differences, and "Gödel" and "Godel" probably refer to the same person. [Find out more ...](#)

Method: key collision Keying Function: Fingerprint 19 clusters found

Cluster Size	Row Count	Values in Cluster	Merge?	New Cell Value
8	8	<ul style="list-style-type: none">• Donostia - San Sebastian (1 rows)• Donostia - San Sebastián (1 rows)• Donostia /San Sebastian (1 rows)• Donostia San Sebastian (1 rows)• Donostia san sebastian (1 rows)• Donostia- San Sebastian. (1 rows)• San Sebastian Donostia (1 rows)• San Sebastián - Donostia (1 rows)	<input type="checkbox"/>	Donostia - San Sebastian
8	396	<ul style="list-style-type: none">• San Sebastián (243 rows)• San Sebastian (142 rows)• San Sebastián (6 rows)• SAN SEBASTIAN (1 rows)• San Sebastian (1 rows)• San sebastian (1 rows)• San sebastián (1 rows)• san sebastian (1 rows)	<input type="checkbox"/>	San Sebastián
4	9	<ul style="list-style-type: none">• Donostia-San Sebastian (3 rows)• Donostia-San Sebastián (3 rows)• Donostia-San Sebastián (2 rows)• Donostia/San Sebastian (1 rows)	<input type="checkbox"/>	Donostia-San Sebastian
3	3	<ul style="list-style-type: none">• Ispaster (1 rows)• Ispáster (1 rows)• isnaster (1 rows)	<input type="checkbox"/>	Ispaster

Choices in Cluster
2 — 8

Rows in Cluster
0 — 810

Average Length of Choices
5 — 24

Length Variance of Choices
-1 — 1

Select All Unselect All Merge Selected & Re-Cluster Merge Selected & Close Close



Limpando con Open Refine

1. Descarga repositorio <https://github.com/montera34/airbnbeuskadi/>
2. Descomprime archivo **/data/original/listings_euskadi.csv.gz**
3. Descarga Open Refine <http://openrefine.org/download.html>
4. Instala Open Refine
5. Limpia, fija y da esplendor.

city

change

323 choices Sort by: name count

Cluster

- Donostia 799
- Bilbao 317
- San Sebastián 243
- San Sebastian 142
- Bilbo 138
- Vitoria-Gasteiz 103
- Zarautz 80
- Hondarribia 55
- Getxo 34
- Orio 34
- Zumaia 30
- Irun 28
- Lekeitio 27
- Bizkaia 24
- Bermeo 22
- Deba 21
- Mundaka 21
- Barakaldo 20



A power tool for working with messy data.

Create Project

Open Project

Import Project

Language Settings

Create a project by importing data. What kinds of data files can I import?

TSV, CSV, *SV, Excel (.xls and .xlsx), JSON, XML, RDF as XML, and Google Data documents are all supported. Support for other formats can be added with OpenRefine extensions.

Get data from Locate one or more files on your computer to upload:

This Computer

listings.csv

Web Addresses (URLs)

Clipboard

Google Data



Version 2.6-rc.2 [TRUNK]

Help

About



A power tool for working with messy data.

Create Project

[« Start Over](#)

Configure Parsing Options

Project name **listings csv**

[Create Project »](#)

Open Project

Import Project

Language Settings

	id	listing_url	scrape_id	last_scraped	name	summary	space	description	e
1.	679760	https://www.airbnb.com/rooms/679760	20170323205238	2017-03-24	Utopia between Bilbao and Vitoria	A suite (bedroom + living room + private bathroom) for 6 places in a peaceful setting, just 30 min. the center of Bilbao and Vitoria 35. Ideal for families or groups of friends. We live in the house and rent two double rooms more. So please ask us if you need space for more people :)	Utopia is a Basque country-style mansion with garden, beautifully restored on 2002 and located in Amurrio, just half an hour from downtown Bilbao (Guggenheim Museum) and Vitoria (with a beautiful medieval town). The Suite is located in the first floor, and it has capacity 6-8 persons, as it has a connecting living room, a private bathroom and a separate entrance from the garden. If you are less than 4 people, we have other smaller rooms in our house that could be cheaper or more convenient, please ask us about it. The room is very spacious and bright, is 20 square meters and has two large windows facing south and east, with pleasant garden views. It is equipped with two double beds of 1.35 m. wide, wardrobe, chest of drawers, a chair and an extendable table. Under the beds there are two mattresses that can be enabled as beds for two	A suite (bedroom + living room + private bathroom) for 6 places in a peaceful setting, just 30 min. the center of Bilbao and Vitoria 35. Ideal for families or groups of friends. We live in the house and rent two double rooms more. So please ask us if you need space for more people :)	n

Parse data as

Character encoding

[Update Preview](#)

CSV / TSV / separator-based files

[Line-based text files](#)

[Fixed-width field text files](#)

[PC-Axis text files](#)

[JSON files](#)

[MARC files](#)

[RDF/N3 files](#)

[XML files](#)

[Open Document Format spreadsheets \(.ods\)](#)

Columns are separated by

commas (CSV)

tabs (TSV)

custom ,

Escape special characters with \

Ignore first 0 line(s) at beginning of file

Parse next 1 line(s) as column headers

Discard initial 0 row(s) of data

Load at most 0 row(s) of data

Parse cell text into numbers, dates, ...

Quotation marks are used to enclose cells containing column separators

Store blank rows

Store blank cells as nulls

Store file source (file names, URLs) in each row

Version 2.6-rc.2 [TRUNK]

[Help](#)
[About](#)



listings csv Permalink

Open... Export... Help

Facet / Filter

Undo / Redo

2874 rows

Extensions:

Show as: rows records Show: 5 10 25 50 rows

« first < previous 1 - 10 next > last »

post_identity_ve	street	neighbourhood	neighbourhood_	neighbourhood_	city	state	zipcode	market	smart_location	country_code	country
------------------	--------	---------------	----------------	----------------	------	-------	---------	--------	----------------	--------------	---------

	Amurrio, Basque Country 01470, Spain		Amurrio	Álava							
--	--	--	---------	-------	--	--	--	--	--	--	--

- Facet ►
 - Text facet
 - Text filter
- Edit cells ►
 - Timeline facet
 - Scatterplot facet
- Transpose ►
 - Custom text facet...
 - Custom Numeric Facet...
- Sort...
- View ►
 - Customized facets
- Reconcile ►

javascript:{}

Refine
[listings csv](#)
[Permalink](#)
Open... Export... Help

Facet / Filter

city
323 choices Sort by: name count

- Vitoria-Gasteiz 1
- Abadiño 3
- Acebedo 1
- Ahedo 9
- Aia 4
- Aizarnazabal 11
- Álava 2
- Alegria-Dulantzi 1
- Alkiza 1
- Alonsotegi 1
- Altzaga 1
- Altzibar-Karrika 1

2874 rows

Cluster & Edit column "city"

This feature helps you find groups of different cell values that might be alternative representations of the same thing. For example, the two strings "New York" and "new york" are very likely to refer to the same concept and just have capitalization differences, and "Gödel" and "Godel" probably refer to the same person. [Find out more ...](#)

Method **key collision** **Keying Function** **fingerprint** **19 clusters found**

Cluster Size	Row Count	Values in Cluster	Merge?	New Cell Value
8	8	<ul style="list-style-type: none"> • Donostia - San Sebastian (1 rows) • Donostia - San Sebastián (1 rows) • Donostia /San Sebastian (1 rows) • Donostia San Sebastian (1 rows) • Donostia san sebastian (1 rows) • Donostia- San Sebastian. (1 rows) • San Sebastian Donostia (1 rows) • San Sebastián - Donostia (1 rows) 	<input type="checkbox"/>	Donostia - San Sebastian
8	396	<ul style="list-style-type: none"> • San Sebastián (243 rows) • San Sebastian (142 rows) • San Sebastián (6 rows) • SAN SEBASTIAN (1 rows) • San Sebastian (1 rows) • San sebastian (1 rows) • San sebastián (1 rows) • san sebastian (1 rows) 	<input type="checkbox"/>	San Sebastián
4	9	<ul style="list-style-type: none"> • Donostia-San Sebastian (3 rows) • Donostia-San Sebastián (3 rows) • Donostia-San Sebastián (2 rows) • Donostia/San Sebastian (1 rows) 	<input type="checkbox"/>	Donostia-San Sebastian
3	3	<ul style="list-style-type: none"> • Ispaster (1 rows) • Ispáster (1 rows) • isnaster (1 rows) 	<input type="checkbox"/>	Ispaster

Select All **Unselect All** **Merge Selected & Re-Cluster** **Merge Selected & Close** **Close**

Extensions:

previous 1 - 10 next last »

country_code	country
ES	Spain

Choices in Cluster



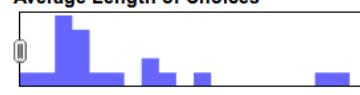
2 — 8

Rows in Cluster



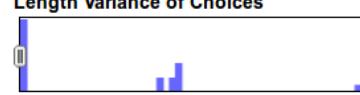
0 — 810

Average Length of Choices



5 — 24

Length Variance of Choices



0 — 1.09

Refine OPEN

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city change

323 choices Sort by: name count Cluster

- [Vitoria-Gasteiz 1](#)
- [Abadiño 3](#)
- [Acebedo 1](#)
- [Ahedo 9](#)
- [Aia 4](#)
- [Aizarnazabal 11](#)
- [Álava 2](#)
- [Alegria-Dulantzi 1](#)
- [Alkiza 1](#)
- [Alonsotegi 1](#)
- [Altzaga 1](#)
- [Altzibar-Karrika 1](#)

2874 rows

Show as: [rows](#) [records](#)

Show: [5](#) [10](#) [25](#) [50](#) rows

post_identity_value	street	neighbourhood	neighbourhood_1	neighbourhood_2	city	state	zipcode	mark
	Amurrio, Basque Country 01470, Spain		Amurrio	Álava	Amurrio	Basque Country	1470	Bilbao

- [Export project](#)
- [Tab-separated value](#)
- [Comma-separated value](#)
- [HTML table](#)
- [Excel \(.xls\)](#)
- [Excel 2007+ \(.xlsx\)](#)
- [ODF spreadsheet](#)
- [Triple loader](#)
- [MQLWrite](#)
- [Custom tabular exporter...](#)
- [Templating...](#)

javascript:{}

3. Preparación y transformación

- Cambiar sistema de proyección en mapas (QGIS)
- Limpiar dobles comillas (a mano)
- Quitar símbolos de dolar (\$) de los precios (busca y reemplaza)
- Añadir nuevas variables (R)
- Simplificar: bases de datos con menos campos (R)
- Simplificar: bases de datos de cada ciudad (R)

**Un TV 42" puede
estropearte la tarde.**

Simplificando con R

The screenshot shows the RStudio interface with the following details:

- File Bar:** File, Edit, Code, View, Plots, Session, Build, Debug, Tools, Help.
- Toolbar:** Go to file/function, Addins.
- Project Explorer:** airbnb-donostia-euskadi.Rmd, donostia, donostia_simple.csv, bilbao, listings.
- Code Editor:** Displays an R Markdown script with the following content:

```
1 ---  
2 title: "Airbnb en Donostia y Euskadi"  
3 author: "montera34"  
4 date: "April 1, 2017"  
5 output: html_document  
6 ---  
7  
8 ```{r setup, include=FALSE, cache = TRUE}  
9  
10 # require("tidyverse")  
11 # library(tidyverse)  
12 #carga libreria para reagrupar tablas de datos y hacer "melt"  
13 library("reshape2") #no sé la diferencia con "reshape"  
14  
15 #importa datos  
16 listings <- read.csv("data/listings_euskadi.csv")  
17  
18 #otras ciudades  
19 # listings_madrid = read.csv("data/listings_madrid.csv")  
20 # listings_barcelona = read.csv("data/listings_barcelona.csv")  
21 # listings_mallorca = read.csv("data/listings_mallorca.csv")  
22  
23 #view data basics  
24 #str(listings)  
25 #head(listings)  
26 #añade variables para acceso fácil  
27 #summary(listings)  
28  
29 #creates variable True/false for with/without license  
30 listings$withlicense <- listings$license!=""  
31  
32 attach(listings)  
33  
34 #exporta data  
35 write.table(listings, "data/listing_euskadi.tsv", sep="\t", row.names=FALSE)  
36  
37 #Exporta a csv y elimina las columnas que dan problemas por comillas no escapadas  
38 listings_simple <- listings[,c(-6,-7,-8,-10,-11,-12,-13,-14,-15,-25,-35,-59)]  
39 write.table(listings_simple, "data/listings_euskadi_simple.csv", sep=",", row.names=FALSE)
```

At the bottom, there are tabs for "Console" and "R Markdown".

Simplificando con R

Generar los archivos por ciudad y simplificados:

- listings_bilbao.csv
- listings_bilbao_simple.csv
- listings_donostia.csv
- listings_donostia_simple.csv
- listings_euskadi.csv
- listings_euskadi_simple.csv
- listings_vitoria.csv
- listings_vitoria_simple.csv

Simplificando con R

Generar los archivos por ciudad y simplificados (Rmarkdown):

Airbnb en Euskadi

La base de datos de Euskadi de InsideAirbnb contiene 2874 alojamientos en 267 municipios, de ellos 395 tienen licencia de alojamiento turístico (13.7%).

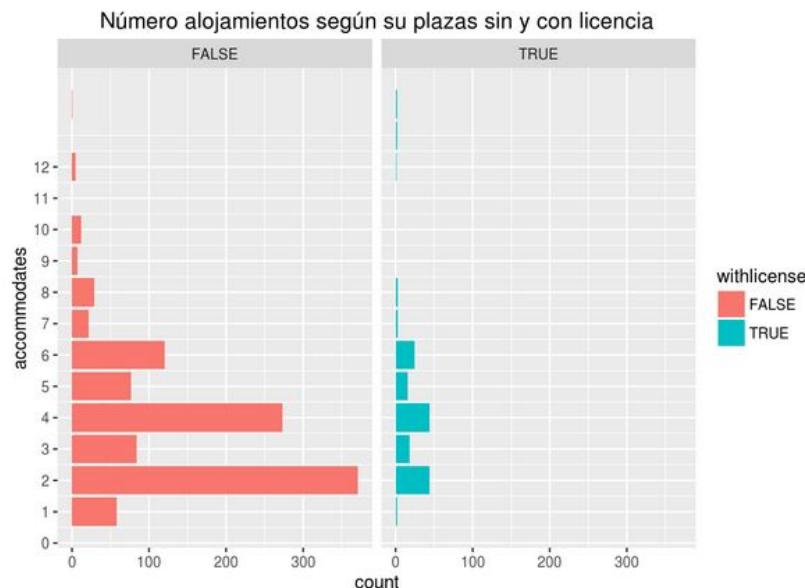
En las capitales tenemos:

- **Donostia - San Sebastián** 1219 (42.4 % del total), de esos alojamientos tienen licencia 160 (13.1 % del municipio). Dispone de 4553 plazas. Usuarios con alojamiento listado 696
- **Bilbao** 459 (16.0% del total), de esos alojamientos tienen licencia 74 (16.1 % del municipio). Dispone de 1484 plazas. Usuarios con alojamiento listado 367
- **Vitoria - Gasteiz** 107 (3.7% del total), de esos alojamientos tienen licencia 27 (25.2 % del municipio). Dispone de 361 plazas. Usuarios con alojamiento listado 79

Por comparar con otras ciudades, el porcentaje de alojamientos con licencia turística en Barcelona es 18.0% de un total de 17369 alojamientos según datos de insideairbnb. Madrid (7446 alojamientos) y Mallorca (11271 alojamientos) no tienen indicado si tienen licencia.

Donostia - San Sebastián

En Donostia existen 696 usuarios con alojamientos disponibles en Airbnb.



4. Exploración: visualizar, transformar, probar y vuelta a empezar

La exploración de los datos es el arte de mirar a tus datos y rápidamente generar hipótesis, probarlas inmediatamente y repetir una y otra vez una y otra vez. El objetivo de la exploración de datos es generar ideas prometedoras que luego podrás explorar más tarde en profundidad.

R for data Science. <http://r4ds.had.co.nz/explore-intro.html>

4. Exploración: Pivot tables (tablas dinámicas)

Archivo: data/listings_donostia_simple.csv

Herramientas: Google spreadsheet o LibreOffice.

Objetivo: Creación de pivot tables para entender los datos. Obtener números gordos.

Documento: https://docs.google.com/spreadsheets/d/1KtfJ5B-AEQrSEG3AtYQt_H3wgi8ZL1caufNtmp_ae4

Ejercicio. Número y % de alojamientos:

- Por usuario
- Por tipo de alojamiento
- Con/sin licencia turística
- Número de plazas
- ...



Selecciona tu variable en el doc compartido.

Crea pivot table: Data > Pivot table

Screenshot of a Google Sheets document titled "listings_donostia_simple.csv". The document contains a single sheet with data from a CSV file. The data includes columns such as id, listing_url, experiences_offered, thumbnail_url, medium_url, picture_url, xl_picture_url, host_id, and host_url. A cursor arrow points to the "Pivot table..." option in the "Data" menu.

id	listing_url	experiences_offered	thumbnail_url	medium_url	picture_url	xl_picture_url	host_id	host_url				
192	17439831	https://www.airbnb.com/rooms/17439831	2017	https://a0.musical-u.com/rooms/17439831/thumbnail.jpg	https://a0.musical-u.com/rooms/17439831/medium.jpg	https://a0.musical-u.com/rooms/17439831/picture.jpg	https://a0.musical-u.com/rooms/17439831/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/17439831			
193	6487451	https://www.airbnb.com/rooms/6487451	2017	https://a0.musical-u.com/rooms/6487451/thumbnail.jpg	https://a0.musical-u.com/rooms/6487451/medium.jpg	https://a0.musical-u.com/rooms/6487451/picture.jpg	https://a0.musical-u.com/rooms/6487451/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/6487451			
194	5701507	https://www.airbnb.com/rooms/5701507	2017	https://a0.musical-u.com/rooms/5701507/thumbnail.jpg	https://a0.musical-u.com/rooms/5701507/medium.jpg	https://a0.musical-u.com/rooms/5701507/picture.jpg	https://a0.musical-u.com/rooms/5701507/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/5701507			
195	7625399	https://www.airbnb.com/rooms/7625399	2017	https://a0.musical-u.com/rooms/7625399/thumbnail.jpg	https://a0.musical-u.com/rooms/7625399/medium.jpg	https://a0.musical-u.com/rooms/7625399/picture.jpg	https://a0.musical-u.com/rooms/7625399/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/7625399			
196	5682884	https://www.airbnb.com/rooms/5682884	2017	https://a0.musical-u.com/rooms/5682884/thumbnail.jpg	https://a0.musical-u.com/rooms/5682884/medium.jpg	https://a0.musical-u.com/rooms/5682884/picture.jpg	https://a0.musical-u.com/rooms/5682884/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/5682884			
197	11152897	https://www.airbnb.com/rooms/11152897	2017	https://a0.musical-u.com/rooms/11152897/thumbnail.jpg	https://a0.musical-u.com/rooms/11152897/medium.jpg	https://a0.musical-u.com/rooms/11152897/picture.jpg	https://a0.musical-u.com/rooms/11152897/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/11152897			
198	14308576	https://www.airbnb.com/rooms/14308576	2017	https://a0.musical-u.com/rooms/14308576/thumbnail.jpg	https://a0.musical-u.com/rooms/14308576/medium.jpg	https://a0.musical-u.com/rooms/14308576/picture.jpg	https://a0.musical-u.com/rooms/14308576/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/14308576			
199	11857207	https://www.airbnb.com/rooms/11857207	2017	https://a0.musical-u.com/rooms/11857207/thumbnail.jpg	https://a0.musical-u.com/rooms/11857207/medium.jpg	https://a0.musical-u.com/rooms/11857207/picture.jpg	https://a0.musical-u.com/rooms/11857207/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/11857207			
200	2798383	https://www.airbnb.com/rooms/2798383	2017	https://a0.musical-u.com/rooms/2798383/thumbnail.jpg	https://a0.musical-u.com/rooms/2798383/medium.jpg	https://a0.musical-u.com/rooms/2798383/picture.jpg	https://a0.musical-u.com/rooms/2798383/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/2798383			
201	13241851	https://www.airbnb.com/rooms/13241851	2017	https://a0.musical-u.com/rooms/13241851/thumbnail.jpg	https://a0.musical-u.com/rooms/13241851/medium.jpg	https://a0.musical-u.com/rooms/13241851/picture.jpg	https://a0.musical-u.com/rooms/13241851/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/13241851			
202	13626859	https://www.airbnb.com/rooms/13626859	2017-03-23	205238	24/03/2017 SAN FRANCISC	APA none	https://a0.musical-u.com/rooms/13626859/thumbnail.jpg	https://a0.musical-u.com/rooms/13626859/medium.jpg	https://a0.musical-u.com/rooms/13626859/picture.jpg	https://a0.musical-u.com/rooms/13626859/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/13626859
203	14068970	https://www.airbnb.com/rooms/14068970	2017-03-23	205238	24/03/2017 GIPUZKOA	APA none	https://a0.musical-u.com/rooms/14068970/thumbnail.jpg	https://a0.musical-u.com/rooms/14068970/medium.jpg	https://a0.musical-u.com/rooms/14068970/picture.jpg	https://a0.musical-u.com/rooms/14068970/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/14068970
204	5196884	https://www.airbnb.com/rooms/5196884	2017-03-23	205238	24/03/2017 SAN MARCIAL	APA none	https://a0.musical-u.com/rooms/5196884/thumbnail.jpg	https://a0.musical-u.com/rooms/5196884/medium.jpg	https://a0.musical-u.com/rooms/5196884/picture.jpg	https://a0.musical-u.com/rooms/5196884/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/5196884
205	13119805	https://www.airbnb.com/rooms/13119805	2017-03-23	205238	24/03/2017 LA PERLA	APA none	https://a0.musical-u.com/rooms/13119805/thumbnail.jpg	https://a0.musical-u.com/rooms/13119805/medium.jpg	https://a0.musical-u.com/rooms/13119805/picture.jpg	https://a0.musical-u.com/rooms/13119805/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/13119805
206	4835329	https://www.airbnb.com/rooms/4835329	2017-03-23	205238	24/03/2017 MIRACONCHA	APA none	https://a0.musical-u.com/rooms/4835329/thumbnail.jpg	https://a0.musical-u.com/rooms/4835329/medium.jpg	https://a0.musical-u.com/rooms/4835329/picture.jpg	https://a0.musical-u.com/rooms/4835329/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/4835329
207	11855805	https://www.airbnb.com/rooms/11855805	2017-03-23	205238	24/03/2017 SUITE BOULEV	APA none	https://a0.musical-u.com/rooms/11855805/thumbnail.jpg	https://a0.musical-u.com/rooms/11855805/medium.jpg	https://a0.musical-u.com/rooms/11855805/picture.jpg	https://a0.musical-u.com/rooms/11855805/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/11855805
208	13070653	https://www.airbnb.com/rooms/13070653	2017-03-23	205238	24/03/2017 VIA FORA	APA none	https://a0.musical-u.com/rooms/13070653/thumbnail.jpg	https://a0.musical-u.com/rooms/13070653/medium.jpg	https://a0.musical-u.com/rooms/13070653/picture.jpg	https://a0.musical-u.com/rooms/13070653/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/13070653
209	5342320	https://www.airbnb.com/rooms/5342320	2017-03-23	205238	24/03/2017 ETXAIDE	APAR none	https://a0.musical-u.com/rooms/5342320/thumbnail.jpg	https://a0.musical-u.com/rooms/5342320/medium.jpg	https://a0.musical-u.com/rooms/5342320/picture.jpg	https://a0.musical-u.com/rooms/5342320/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/5342320
210	3085721	https://www.airbnb.com/rooms/3085721	2017-03-23	205238	24/03/2017 COZY STUDIO	F none	https://a0.musical-u.com/rooms/3085721/thumbnail.jpg	https://a0.musical-u.com/rooms/3085721/medium.jpg	https://a0.musical-u.com/rooms/3085721/picture.jpg	https://a0.musical-u.com/rooms/3085721/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/3085721
211	8544793	https://www.airbnb.com/rooms/8544793	2017-03-23	205238	24/03/2017 BERGARA	APA none	https://a0.musical-u.com/rooms/8544793/thumbnail.jpg	https://a0.musical-u.com/rooms/8544793/medium.jpg	https://a0.musical-u.com/rooms/8544793/picture.jpg	https://a0.musical-u.com/rooms/8544793/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/8544793
212	5198559	https://www.airbnb.com/rooms/5198559	2017-03-23	205238	24/03/2017 PIO BAROJA	AF none	https://a0.musical-u.com/rooms/5198559/thumbnail.jpg	https://a0.musical-u.com/rooms/5198559/medium.jpg	https://a0.musical-u.com/rooms/5198559/picture.jpg	https://a0.musical-u.com/rooms/5198559/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/5198559
213	17473578	https://www.airbnb.com/rooms/17473578	2017-03-23	205238	24/03/2017 LA CONCHA	AP none	https://a0.musical-u.com/rooms/17473578/thumbnail.jpg	https://a0.musical-u.com/rooms/17473578/medium.jpg	https://a0.musical-u.com/rooms/17473578/picture.jpg	https://a0.musical-u.com/rooms/17473578/xl_picture.jpg	5254782	https://www.airbnb.com/rooms/17473578
214	6222184	https://www.airbnb.com/rooms/6222184	2017-03-23	205238	24/03/2017 San Sebastian's	none	https://a0.musical-u.com/rooms/6222184/thumbnail.jpg	https://a0.musical-u.com/rooms/6222184/medium.jpg	https://a0.musical-u.com/rooms/6222184/picture.jpg	https://a0.musical-u.com/rooms/6222184/xl_picture.jpg	5280731	https://www.airbnb.com/rooms/6222184
215	17073272	https://www.airbnb.com/rooms/17073272	2017-03-23	205238	24/03/2017 Donostia Green	none	https://a0.musical-u.com/rooms/17073272/thumbnail.jpg	https://a0.musical-u.com/rooms/17073272/medium.jpg	https://a0.musical-u.com/rooms/17073272/picture.jpg	https://a0.musical-u.com/rooms/17073272/xl_picture.jpg	5361990	https://www.airbnb.com/rooms/17073272
216	991935	https://www.airbnb.com/rooms/991935	2017-03-23	205238	24/03/2017 San Sebastián	C none	https://a0.musical-u.com/rooms/991935/thumbnail.jpg	https://a0.musical-u.com/rooms/991935/medium.jpg	https://a0.musical-u.com/rooms/991935/picture.jpg	https://a0.musical-u.com/rooms/991935/xl_picture.jpg	5361990	https://www.airbnb.com/rooms/991935
217	1031210	https://www.airbnb.com/rooms/1031210	2017-03-23	205238	24/03/2017 rent room by night	none	https://a0.musical-u.com/rooms/1031210/thumbnail.jpg	https://a0.musical-u.com/rooms/1031210/medium.jpg	https://a0.musical-u.com/rooms/1031210/picture.jpg	https://a0.musical-u.com/rooms/1031210/xl_picture.jpg	5634854	https://www.airbnb.com/rooms/1031210
218	1031158	https://www.airbnb.com/rooms/1031158	2017-03-23	205238	24/03/2017 rent room by night	none	https://a0.musical-u.com/rooms/1031158/thumbnail.jpg	https://a0.musical-u.com/rooms/1031158/medium.jpg	https://a0.musical-u.com/rooms/1031158/picture.jpg	https://a0.musical-u.com/rooms/1031158/xl_picture.jpg	5634854	https://www.airbnb.com/rooms/1031158
219	1023630	https://www.airbnb.com/rooms/1023630	2017-03-23	205238	24/03/2017 Rent rooms for night	none	https://a0.musical-u.com/rooms/1023630/thumbnail.jpg	https://a0.musical-u.com/rooms/1023630/medium.jpg	https://a0.musical-u.com/rooms/1023630/picture.jpg	https://a0.musical-u.com/rooms/1023630/xl_picture.jpg	5634854	https://www.airbnb.com/rooms/1023630
220	1039110	https://www.airbnb.com/rooms/1039110	2017-03-23	205238	24/03/2017 Alquilo Habitació	none	https://a0.musical-u.com/rooms/1039110/thumbnail.jpg	https://a0.musical-u.com/rooms/1039110/medium.jpg	https://a0.musical-u.com/rooms/1039110/picture.jpg	https://a0.musical-u.com/rooms/1039110/xl_picture.jpg	5719679	https://www.airbnb.com/rooms/1039110

https://docs.google.com/spreadsheets/d/1KtfJ5B-AEQrSEG3AtYQt_H3w9i8ZL1causfNtmp_ae4/

Edita pivto table

File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

Report Editor

listings_donostia_simple.csv!A1:CH122
Edit range...

Rows - Add field

Group by: host_id

Order: Descending ▾

Sort by: COUNT of id ▾

Show totals

Columns - Add field

Values - Add field as: Columns ▾

Display: id

Summarise by: COUNT ▾

Display: accommodates

Summarise by: SUM ▾

Filter - Add field

	COUNT of id	SUM of accommodates
15707672	55	215
98419892	51	254
3952766	26	93
5254782	23	95
4614604	18	104
12954077	16	86
790667	16	40
13367653	15	67
6598471	14	73
25039584	13	72
102583389	11	60
98189424	11	57
18192487	11	41
149691	10	29
50920106	9	43
2470030	8	44
73815563	7	17
48013502	6	12
29992891	6	12
13725999	6	38
12747666	6	12
5173315	6	22
2625306	6	14
2035832	6	25
49473712	5	20
37985139	5	21
33064793	5	11

host_id

id (o cualquier variable)
Summarise by COUNT

Report Editor

listings_donostia_simple.csv|A1:CH122

Edit range...

Rows - Add field

Group by: host_id

Order: Descending ▼

Sort by: COUNT of id ▼

Show totals

Columns - Add field

Values - Add field as: Columns ▼

Display: id

Summarise by: COUNT ▼

Display: accommodates

Summarise by: SUM ▼

Filter - Add field

Filter: withlicense

Show: 1 items

	A	B	C	D	E	F
1		COUNT of id	SUM of accommodates			
2	98189424	11	57			
3	18192487	11	41			
4	3952766	8	18			
5	13725999	6	38			
6	76289581	4	9			
7	50920106	3	14			
8	39152861	3	6			
9	22467824	3	8			
10	6598471	3	26			
11	115372864	2	8			
12	106481544	2	4			
13	92414536	2	4			
14	36268260	2	4			
15	35700062	2	4			
16	8462790	2	5			
17	6520043	2	7			
18	4614604	2	10			
19	2676178	2	4			
20	120231094	1	6			
21	115134693	1	3			
22	115129584	1	6			
23	109780975	1	4			
24	109347536	1	3			
25	106914989	1	5			
26	106884120	1	12			
27	105917109	1	5			
28	105237788	1	4			

Filtra por con y sin
licencia (true/false)

File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

Comments Share Report Editor

listings_donostia_simple.csv!A1:CH122

Edit range...

Rows - Add field

Group by: host_id

Order: Descending ▾

Sort by: COUNT of id ▾

Show totals

Columns - Add field

Values - Add field as: Columns ▾

Display: id

Summarise by: COUNT ▾

Display: accommodates

Summarise by: SUM ▾

Filter - Add field

A B C D E F

	COUNT of id	SUM of accommodates
15707672	55	215
98419892	51	254
3952766	26	93
5254782	23	95
4614604	18	104
12954077	16	86
790667	16	40
13367653	15	67
6598471	14	73
25039584	13	72
102583389	11	60
98189424	11	57
18192487	11	41
149691	10	29
50920106	9	43
2470030	8	44
73815563	7	17
48013502	6	12
29992891	6	12
13725999	6	38
12747666	6	12
5173315	6	22
2625306	6	14
2035832	6	25
49473712	5	20
37985139	5	21
33064793	5	11

host_id

id (o cualquier variable)