University of Applied Sciences and Arts Northwestern Switzerland
School of Architecture, Civil Engineering and Geomatics

Exploring Personalization of Infographics and Stories in the Atlas of the Ageing Society

www.altersatlas.ch

Susanne Bleisch and GeoVis & VA Team @ FHNW Institute of Geomatics

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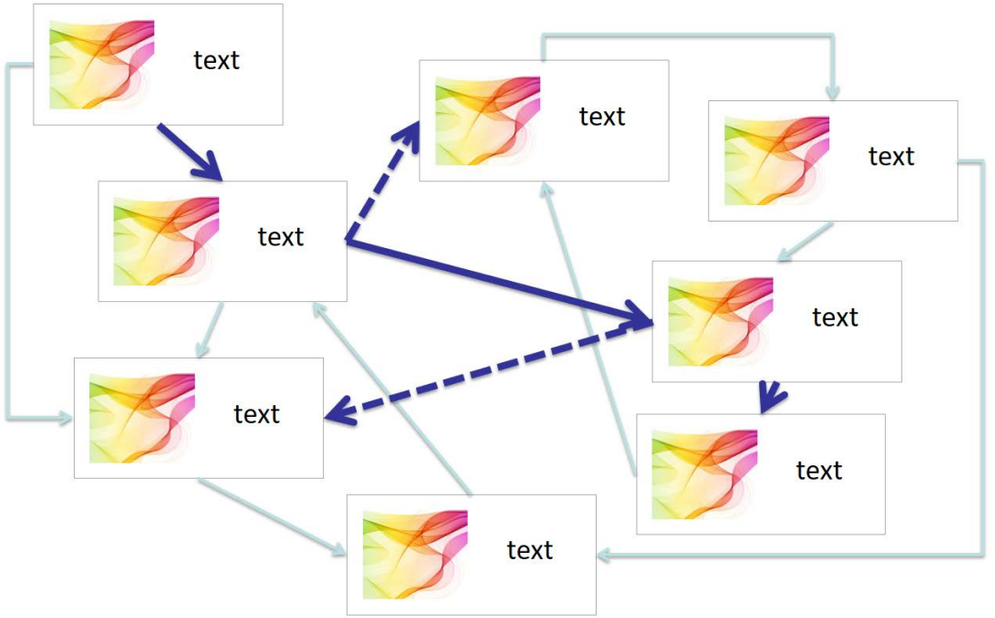
an infographic (for fun) from 2013

http://xkcd.com/1273/

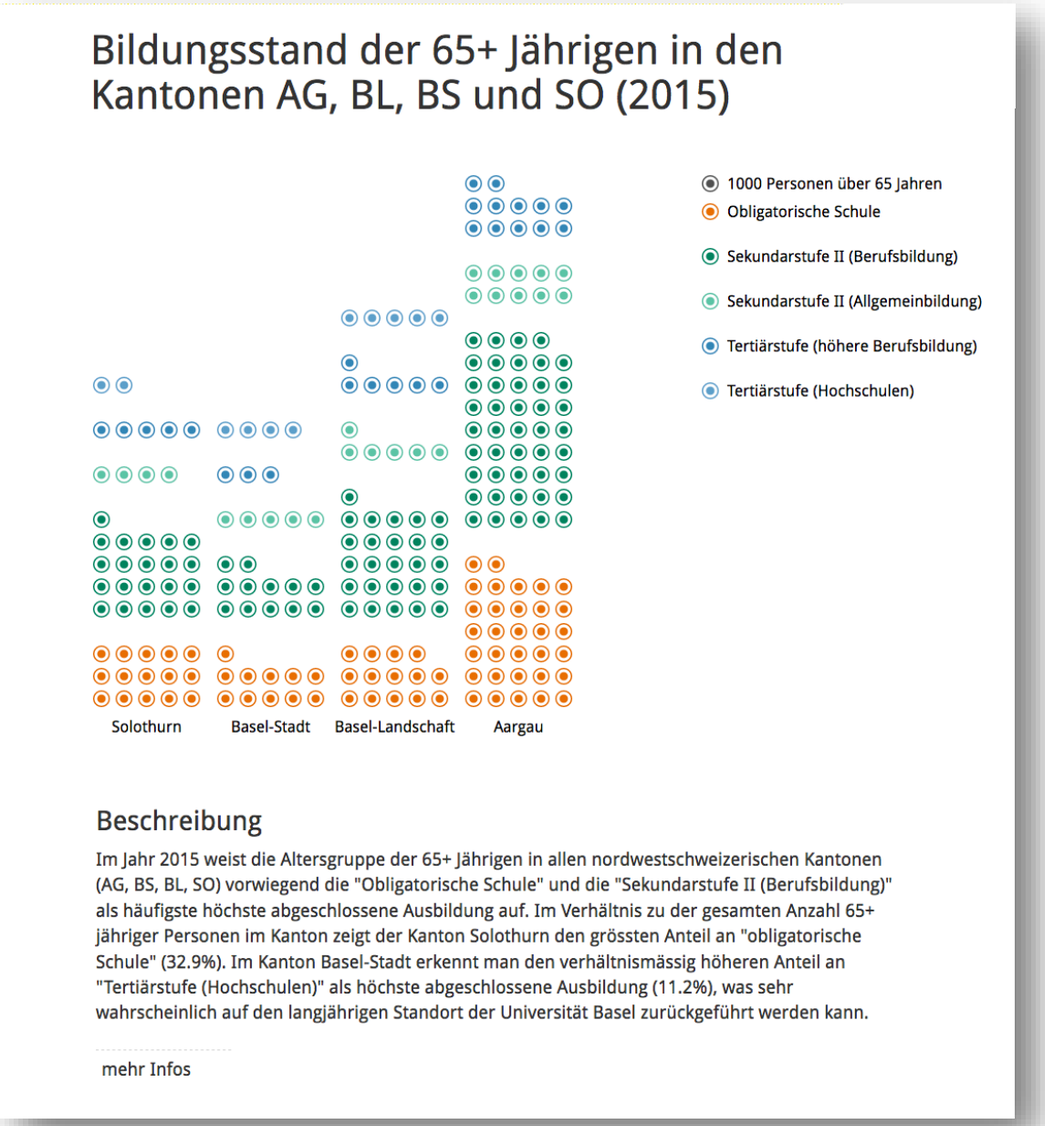
The Atlas of the Ageing Society (AA)



Network of „Index Cards“

Selected content on cards with:

title
visualization
short description
meta information on the back side of the card



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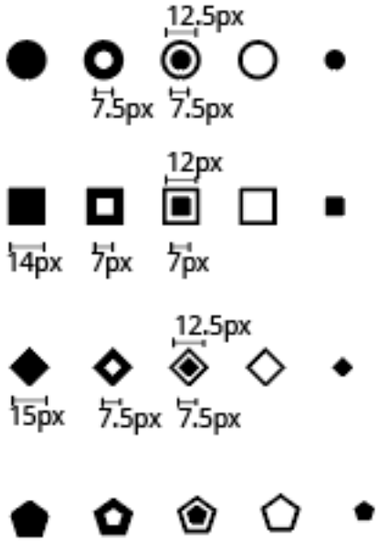
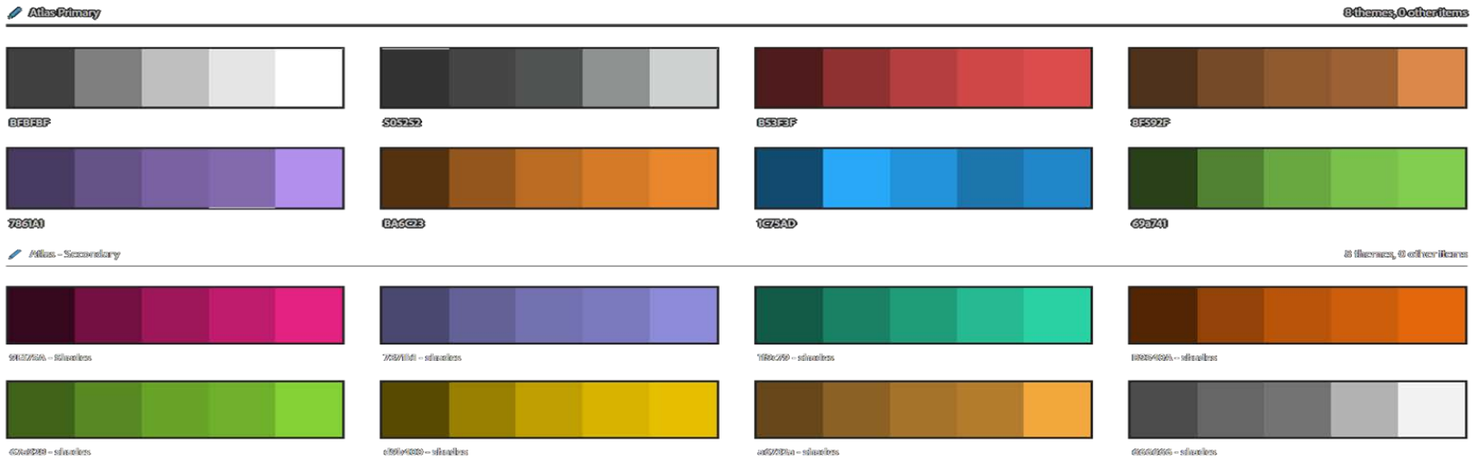
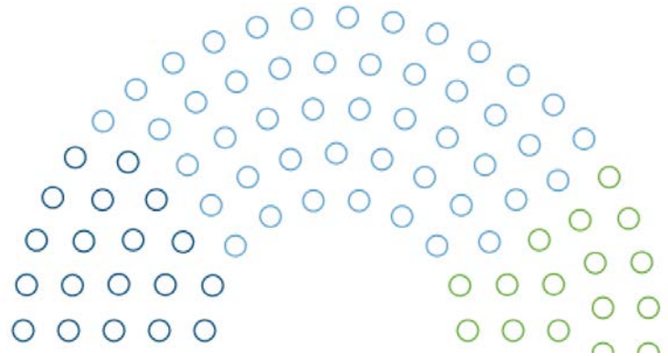
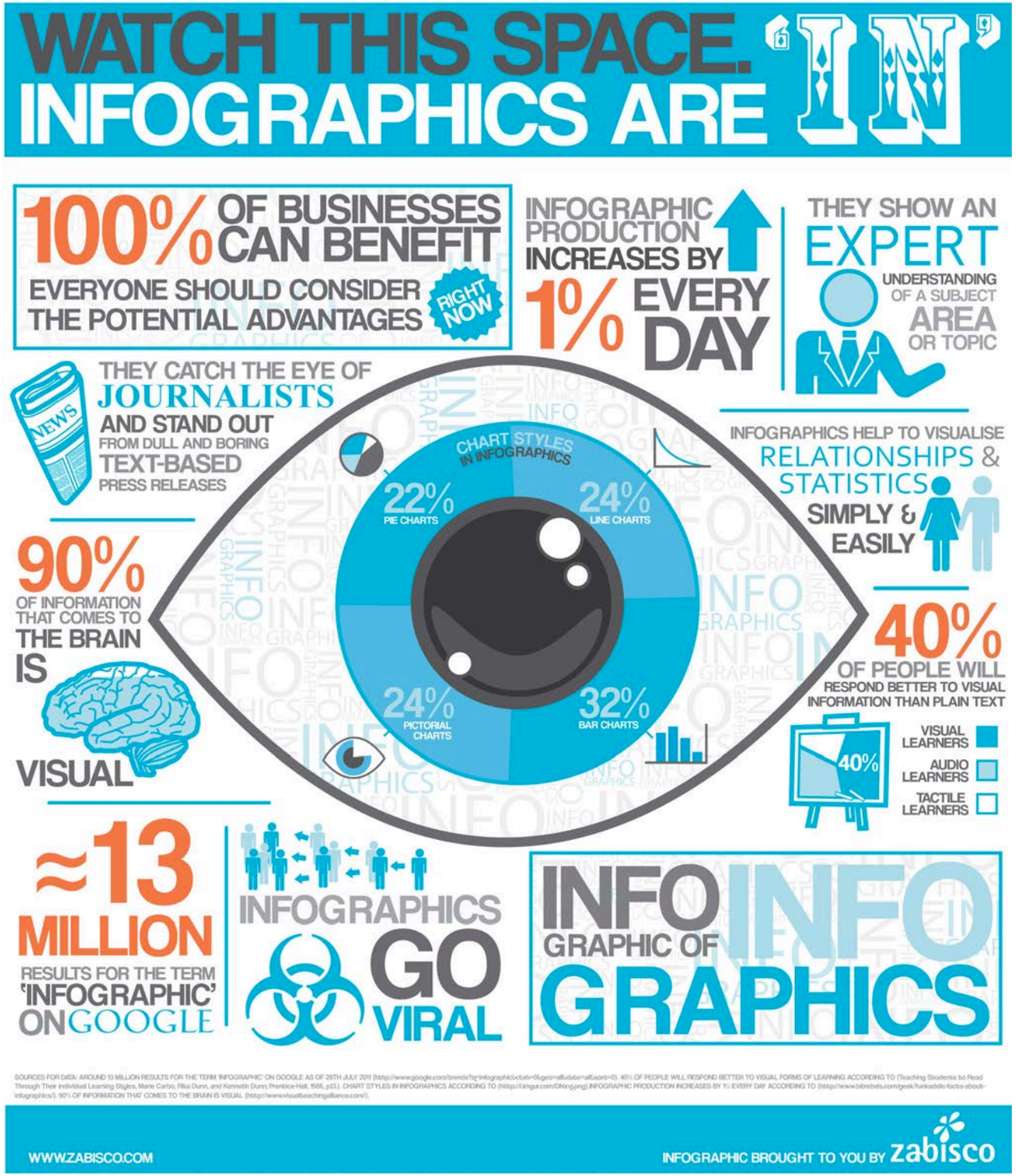






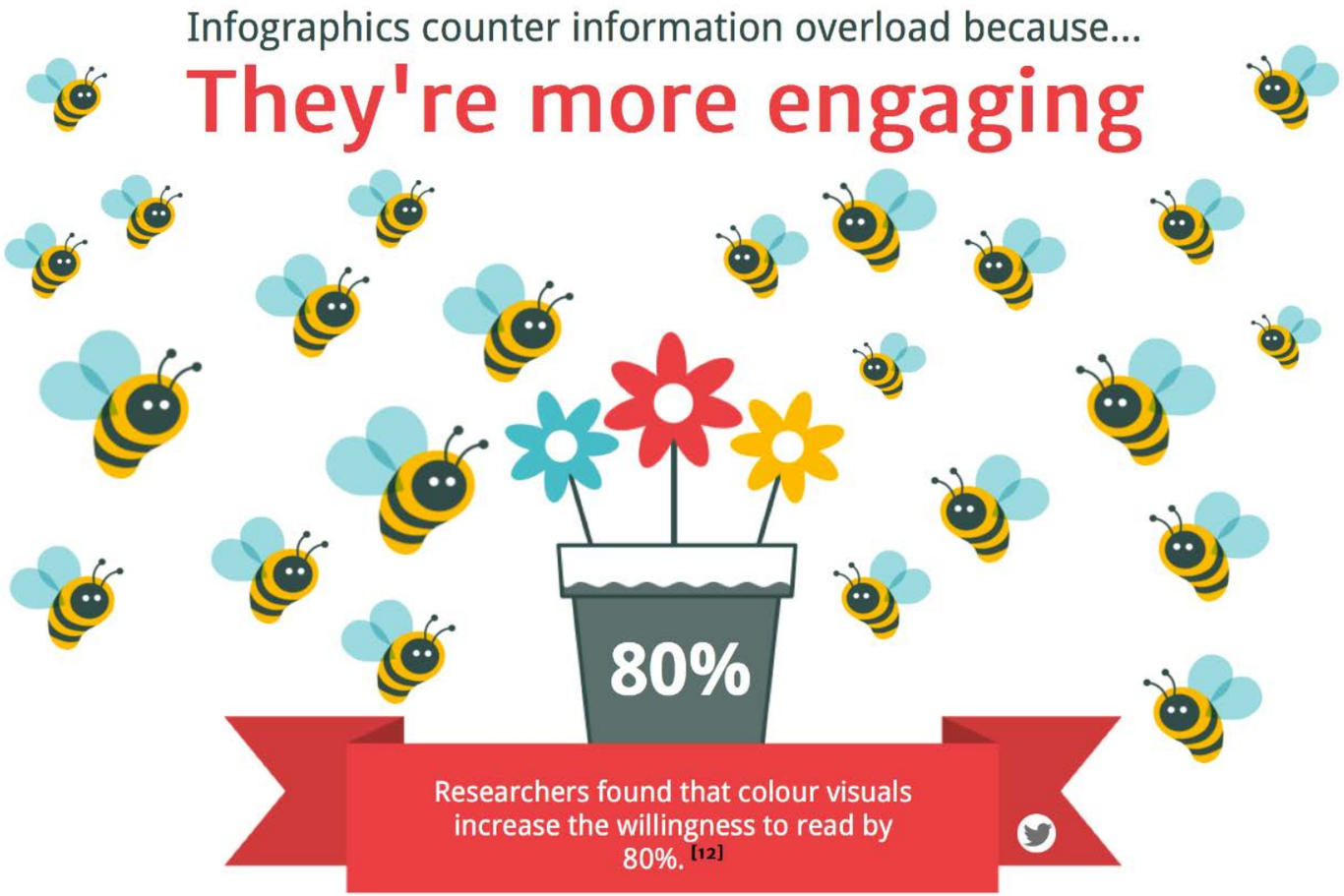
Types of Infographics



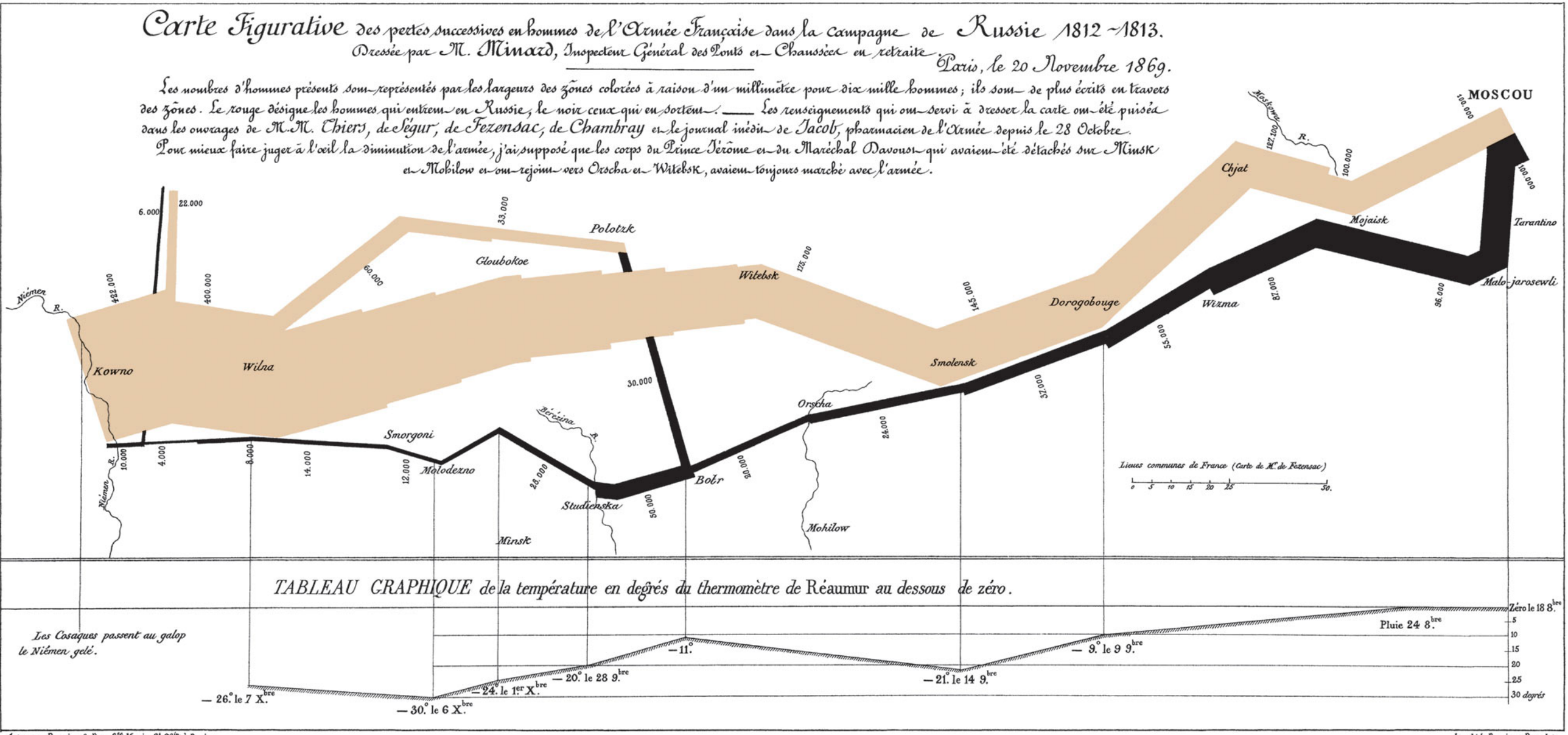
http://blog.crazyegg.com/2013/05/10/infographics-ultimate-guide/

Types of Infographics

https://neomam.com/interactive/13reasons/



Types of Infographics



https://upload.wikimedia.org/wikipedia/commons/2/29/Minard.png

Story telling

"**Infographics is about modern storytelling**" (Alberto Cairo, the functional art)

Define the story

Clarify the key message(s)

Represent it clearly

by **guiding** the user

emphasizing the message

reducing clutter

After http://www.thefunctionalart.com/

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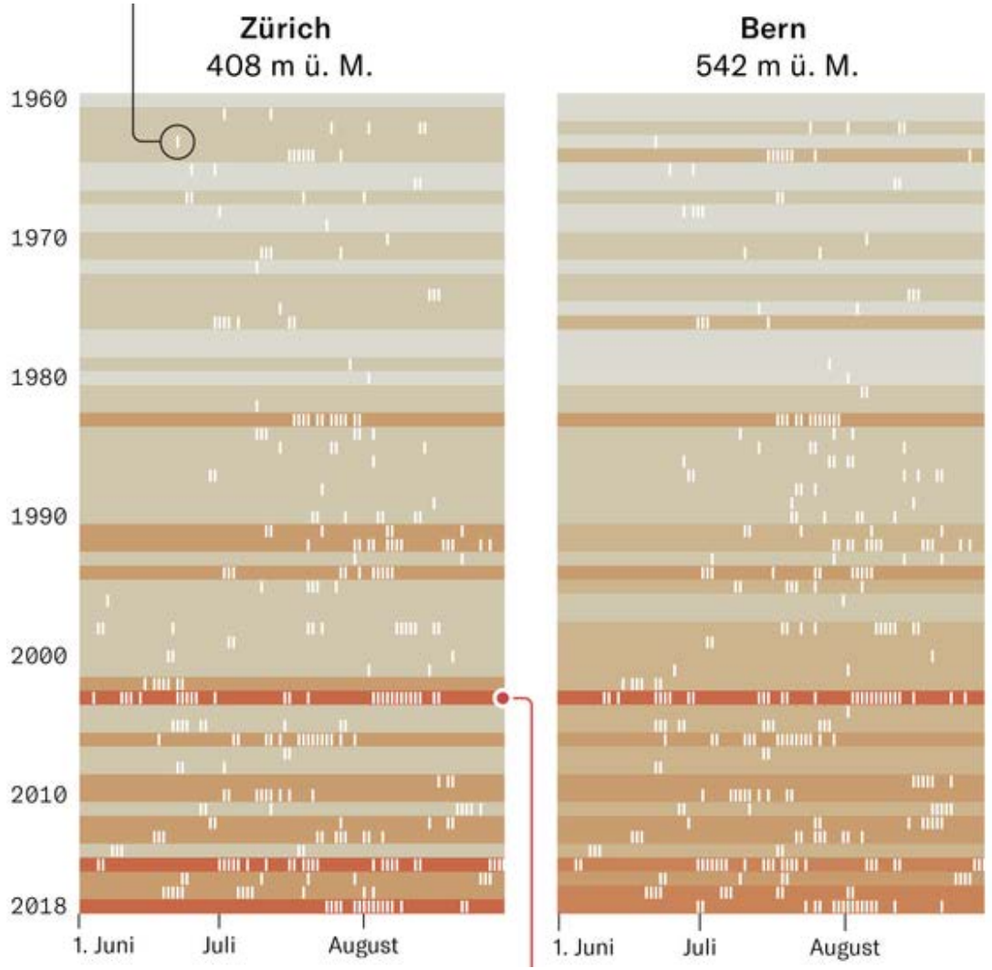
Are summer temperatures rising since 1960?

Average temperature of the summer

13,9 Grad 15,6 16,7 17,8 18,8 19,9 21,3 24,2

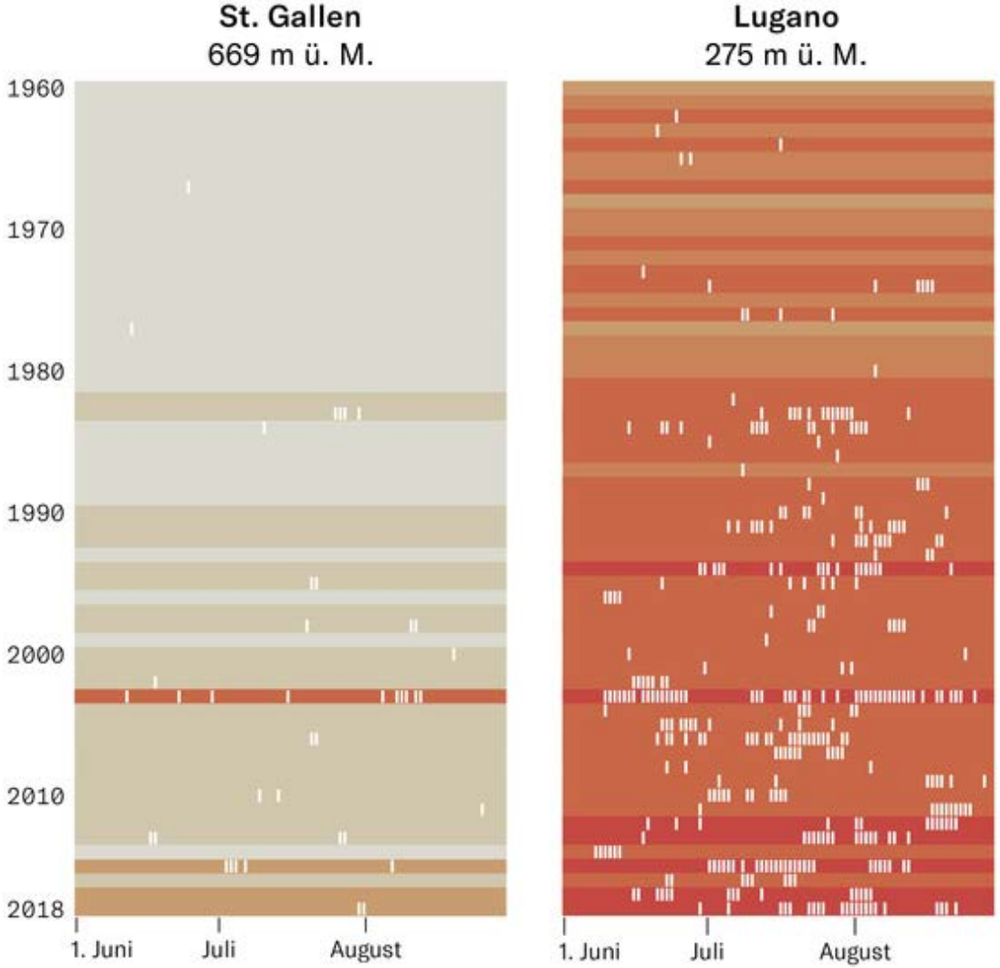
Each dash stands for a day with temperatures >30°C



2003 was an extremly hot summer everywhere

Average temperature of the summer

13,9 Grad 15,6 16,7 17,8 18,8 19,9 21,3 24,2



https://www.nzz.ch/panorama/hitzewelle-schweizer-staedte-werden-immer-heisser-ld.1491209

eEducation - five story telling strategies

Keep It Real With Real-Life Stories

Make Learning Fun With Illustrated Stories

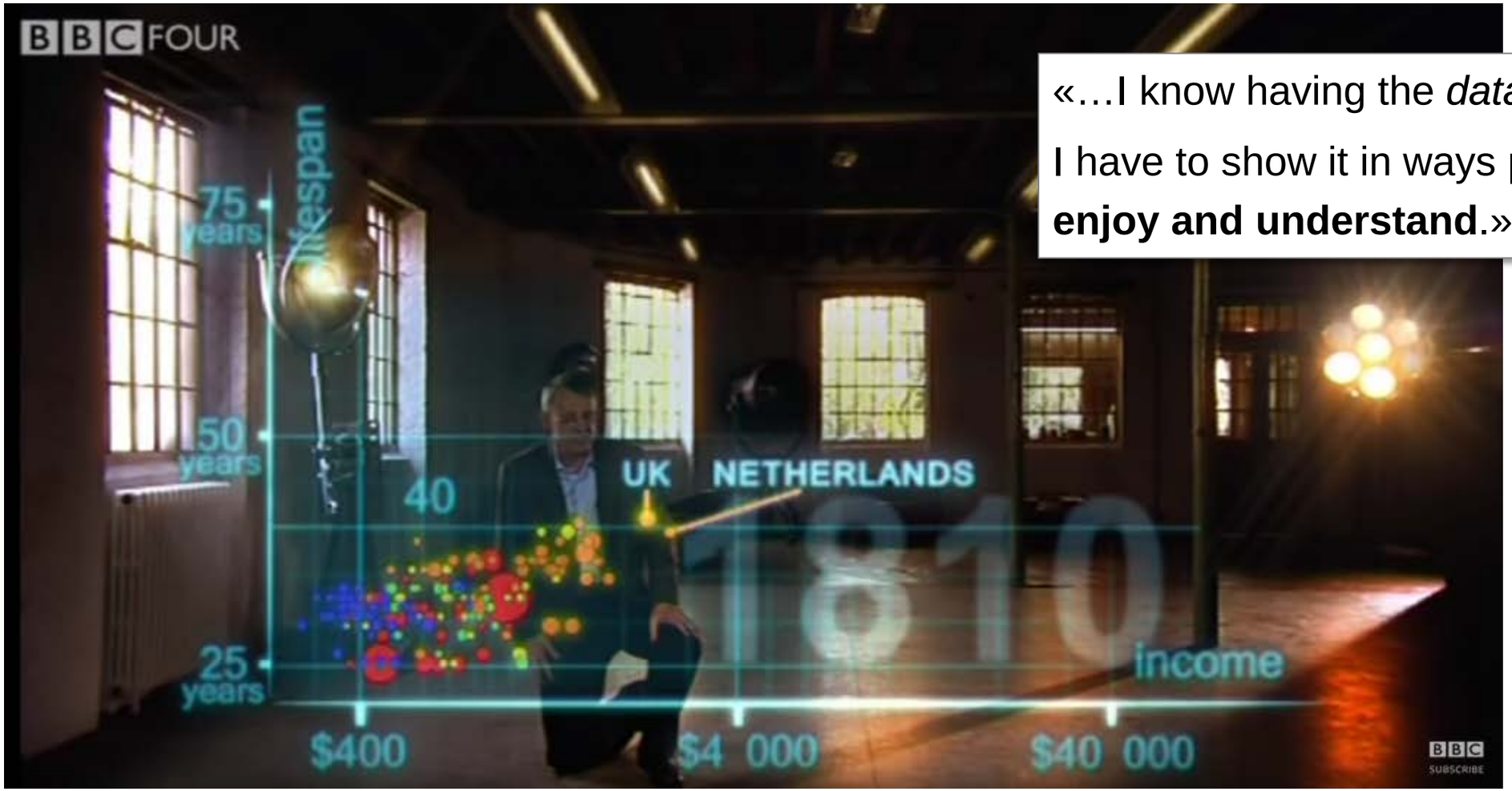
Boost Interactivity With Game-Based Stories

Engage Learners With Animated Stories

Deliver Inspirational Training With Open-Ended Stories

https://elearningindustry.com/storytelling-strategy-choose-story-based-learning

Animated story telling for education
Hans Rosling's 'The Joy of Stats'



«…I know having the *data* is not enough.

I have to show it in ways people both **enjoy and understand**.»

https://www.youtube.com/watch?v=jbkSRLYSojo

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Illustrated story telling for self-guided learning

Story I - MAUP | Story II - Standardisation

Story I - MAUP

The modifiable area unit problem (MAUP) describes how the aggregation of point-based data in areal units is influenced by the shape and size of the chosen areal units. To illustrate the problem try the following using the drop-down boxes in the interface below.

1. Data: Select „Uniform data grid 1“. It shows you an evenly distributed grid of data points.
2. Standardisation: Select „None“
3. Classification: Select „Equal Intervals“
4. Areal units: Select „50km Grid“

Alternatively, do all above steps together by clicking here.

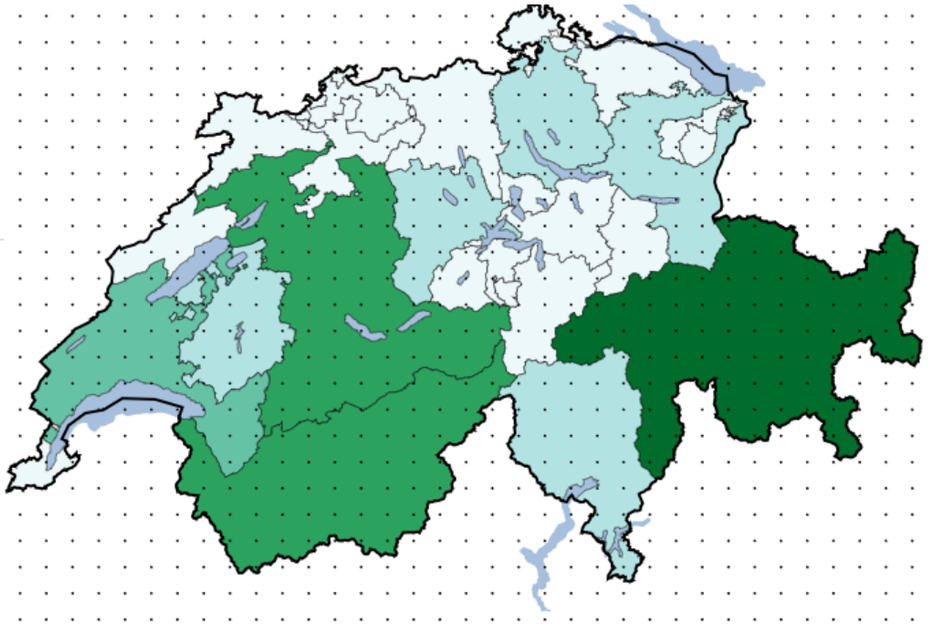
The result is a homogeneously coloured array of 50km grid cells. Each of the grid cells contains 25 data points. Thus the regular arrangement of data points, where the same number of data points falls in each grid cell, is reflected in the homogeneous colouring of the grid cells.

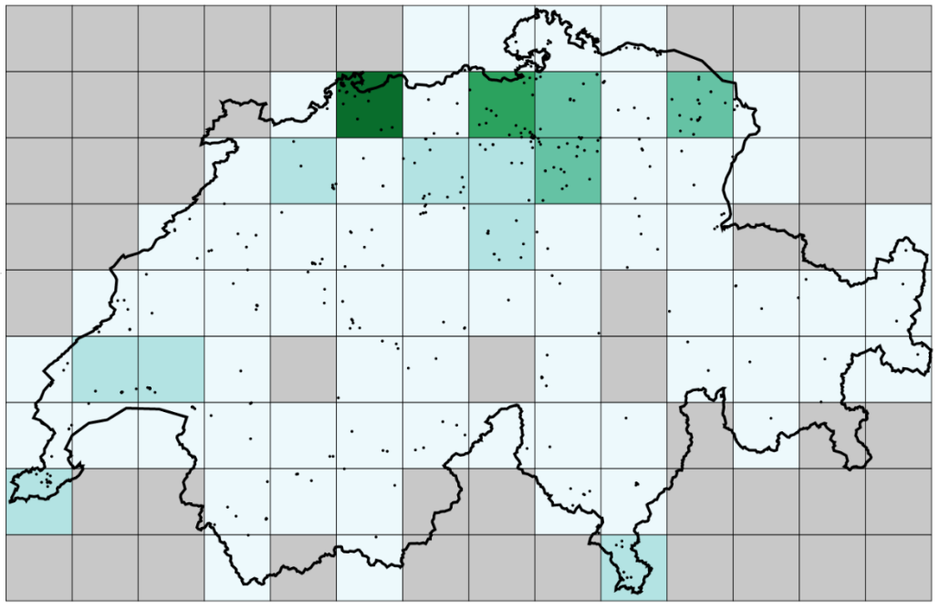
Let's play with different areal units to illustrate the MAUP (modifiable area unit problem).

What happens when you change the areal units to „25km Grid“ (without changing any of the other options)? [change] [show answer]

What happens when you change the areal units to „Cantons“ and class number to 5? (Note: Cantons are administrative units of different sizes in Switzerland.) [change] [show answer]

Data is often provided in administrative units and it is not possible to access the underlying data points to experiment with different aggregations. Which type of administrative unit (in terms of size and shape) would be most useful in displaying those data? [change] [show answer]





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Story telling strategies for the Atlas of the Ageing Society

Keep It Real With Real-Life Stories

Make Learning Fun With Illustrated Stories

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https://elearningindustry.com/storytelling-strategy-choose-story-based-learning

Illustrated stories – AA card principle

Das Gesundheitswesen in der Schweiz (2017)

\+ 42% mehr **PERSONAL**

\+ 33% mehr **HOSPITALISIERUNGEN**

\+ 17% mehr **EINWOHNER**

\- 14% weniger **BETTEN**

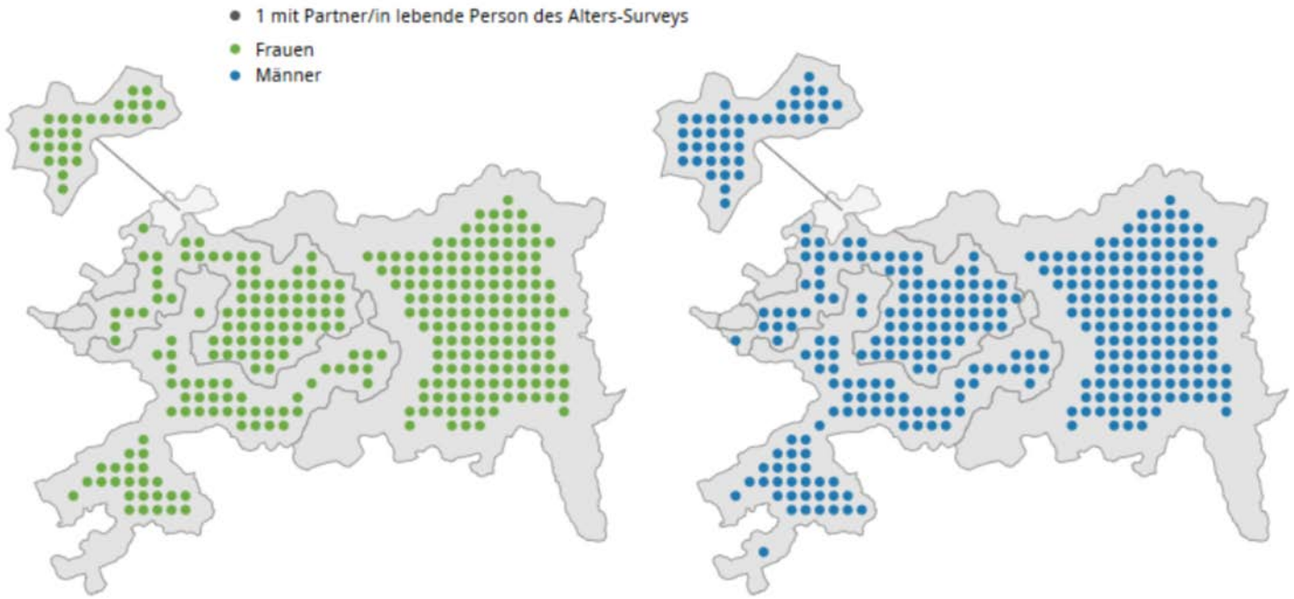
\- 25% weniger **PFLEGETAGE**

\- 36% kürzere **AUFENTHALTSDAUER**

Beschreibung

Entwicklungen in der Gesundheitsbranche zwischen den Jahren 2001 und 2017 zeigen, dass parallel zum Wachstum der ständigen Wohnbevölkerung in der Schweiz, auch die Hospitalisationen und das Personal in den Spitälern zugenommen haben, abgenommen haben hingegen die Zahl der Betten, die Anzahl der Pflegetage und die Aufenthaltsdauer.
Spitäler werden in der Schweiz gemäss einer vom Bundesamt für Statistik entwickelten Krankenhaustypologie eingeteilt. Das BFS unterscheidet dabei grundsätzlich zwei Hauptkategorien:

Karte der mit Partner/in lebenden Alters-Survey Befragten



Beschreibung

Die Karte zeigt die Verteilung der Männer und Frauen des Alters-Survey, die mit einem Partner bzw. einer Partnerin zusammenleben. Das Zusammenleben mit dem Partner oder der Partnerin ist auch in höherem und hohem Alter die häufigste Lebensform. Es zeigt sich, dass Männer etwas häufiger als Frauen (vor allem in BS und SO) mit einer Partnerin/einem Partner zusammen leben.

http://www.altersatlas.ch/AA?story=150
http://www.altersatlas.ch/AA?story=515

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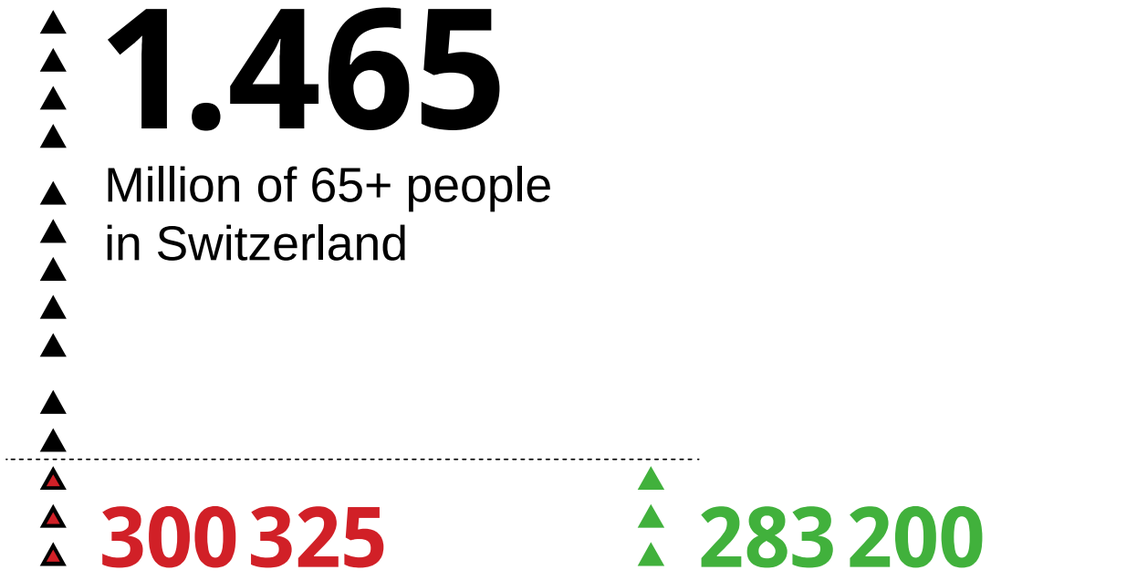
Relation to real life – highlighting personal references or preferences



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Relation to real life – highlighting personal references or preferences

1.465

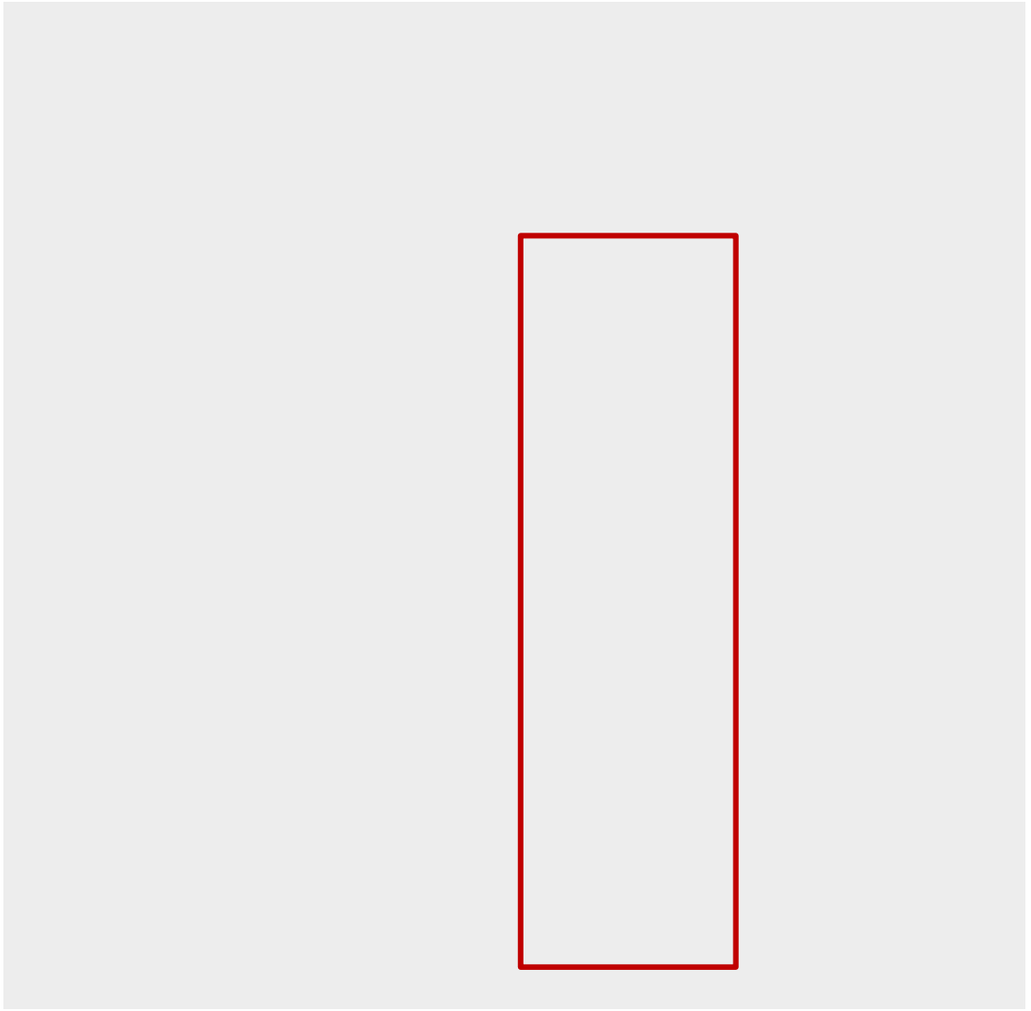
Million of 65+ people in Switzerland

300 325

Number of 65+ people owning < 10’000 CHF in Switzerland

283 200

Population of canton Basel-Landschaft



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Defining reference/preference information

Users input reference information –
i.e. interested in area x or age group y

< Employing sketches or images -
user select depicted scenes they relate to

Tracking usage and suggesting information

Defining your own stories by selecting cards or suppressing cards

https://www.stadt-zuerich.ch/content/dam/stzh/ssd/Deutsch/Volksschule/dokumente/publikationen_broschueren/daz-schluesselbund/wimmelbild.jpg

some remarks

+ huge potential

for more relevance through personalization, providing emotional connection to the information

for employing different types of infographics

challenges:

defining (personal) relevance to know when the definition of input data is useful

finding useful and/or ‘natural’ ways of defining input information

- pay attention to

the danger of creating information or filter ‘bubbles’

issues of collecting (and storing) data

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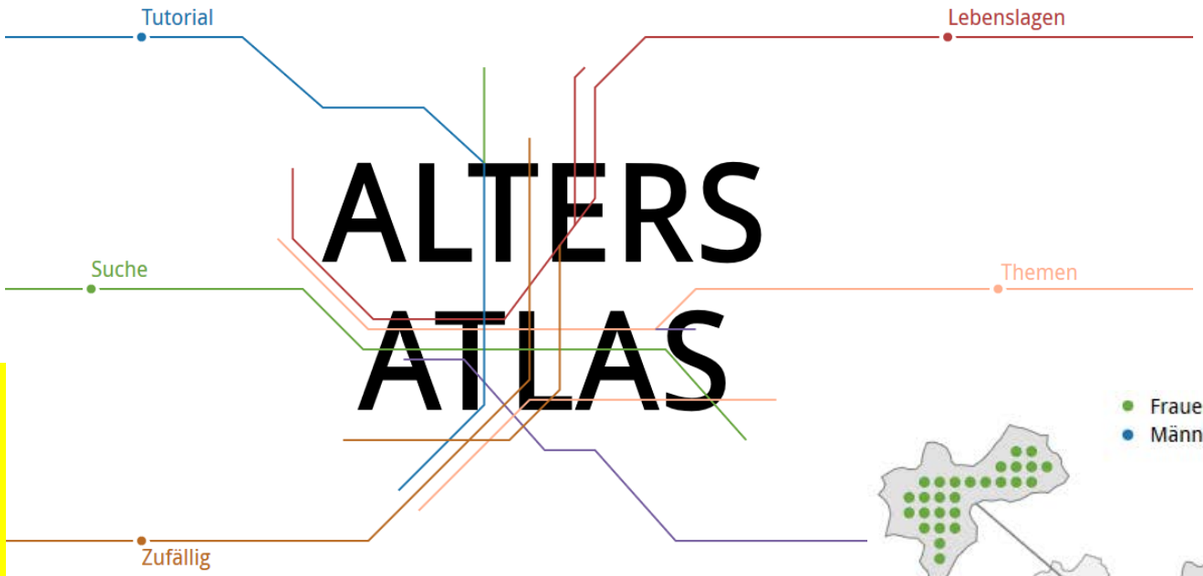
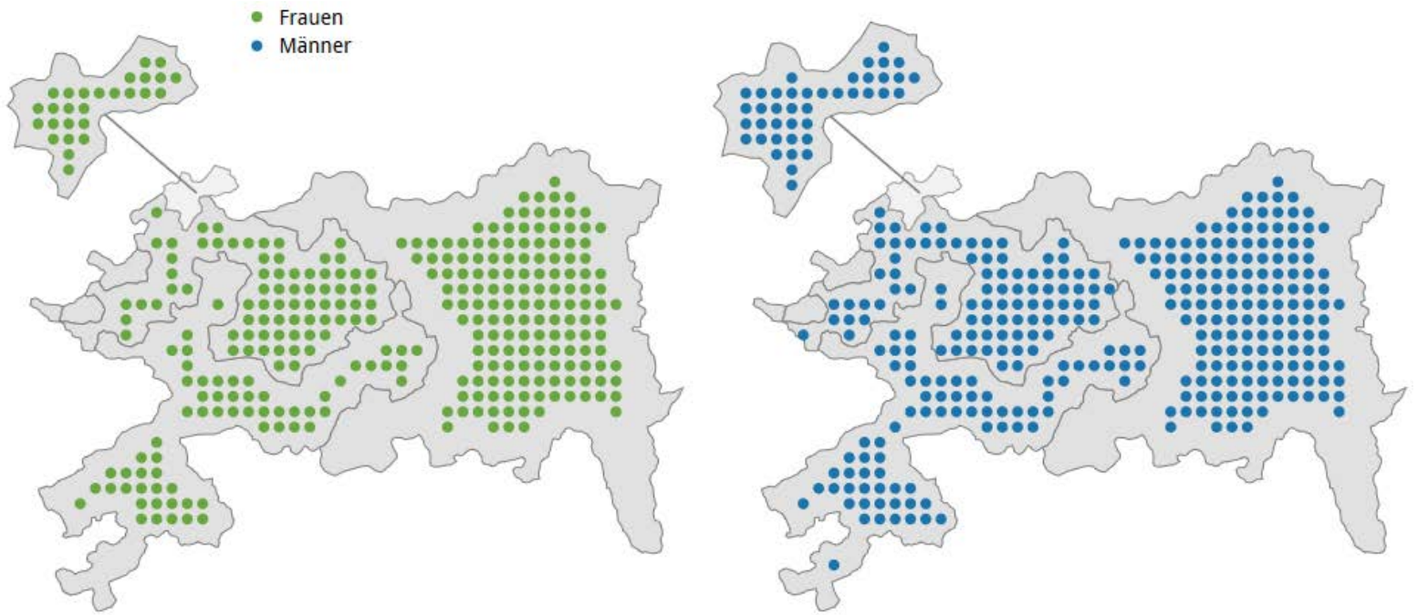
Thank you!



Discussion, questions and inputs welcome!



Thanks to the GeoVis & VA team!
Lina Dönni
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Daria Hollenstein

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