Visualizing (not so) Big Data

Wouter Meys
Citizen Data Lab
Amsterdam University of
Applied Sciences
We address local issues through data practices: methods, approaches and tools for co-creation to learn about and through data.
Today

1. Mapping the city (Data Collection)
2. Making it visible (Visualizing Data and using Visualisations)
3. Putting visualisations to work
1. Mapping the City

- Through open data sets
- Social Media
- Sensors (IoT)
- Participatory Data
Open Data sets

Analyzing the urban area through data

Open data is data that can be freely used, shared and built-on by anyone, anywhere, for any purpose.

Some sources we often use:

- Local (Utrecht, Amsterdam, etc)
- National (CBS, Chamber of commerce)
- Topic related (NASA, Figshare, Scientific)
Social Media

Analyzing the urban area through data
Some examples

#MH17
Some examples

Lifehoods

Source: http://livehoods.org
Some examples

Sefiecity

Each city has a different style when it comes to selfies. Compare yourself:

BANGKOK
BERLIN
MOSCOW
NEW YORK
SAO PAULO

In these grids, we have arranged the photos horizontally by head tilt; the vertical axis shows you if people look up or down. In addition, we can crop and rotate the photos to center on the faces:

NORMAL

Source: http://selfiecity.net
Sensors

Analyzing the urban area through data
Some examples

Air Quality Egg & Smart Citizen Kit
Participatory Mapping

Analyzing the urban area through data
2. Making it Visible

- Tools
- Computer generated visuals (static and dynamic)
- Human Design (designed by designer)
- Participatory (Collaborative visualising)
Tools

- Raw (Density Design) [http://rawgraphs.io/](http://rawgraphs.io/)
- Gephi
- Tableau Public
- R
- Python
- JS/d3js

- Geo data
  - CartoDB
  - Google Fusion tables
Computer (static)
The Complexity Of The Climate Change Finance Flow

This chart shows the flow of public climate change finance. There are two main parties: Bilateral funds and Multilateral funds. We choose 7 major contributors, 35 major recipient countries, and 10 major institutions; the others are classified as OTHERS. We use different colors to distinguish the main contributors. In the case of bilateral funds, we use the different size of the circle to indicate the amount of recipient country’s investment in each sector.

Source: UNFCCC National Communication Module NC6

Source: http://jonathangray.org
Computer (Dynamic)
All routes with emotions

201 areas - 88,099 data points

Average emotion per area

23 points of interest - 24,539 data points

Points of interest

HOW TO READ THE MAP

COLOR: How do students perceive the area they are passing through?

- Very Bad
- Normal
- Very Good
Human Design
Infographic

17 WOMEN
4 ELDERLY PEOPLE
9 BALL GAMES
9 RUNNING
8 PLAYGROUND
4 SWEET SNACKS
4 SODA
5 SAVORY SNACK
7 SMOKING INDIVIDUALS
3 SMOKING GROUPS
Participatory
3. Making people literate through visualisations
The Tracker Guide to the Cloud

This field guide offers an introduction to recognizing the traces and patterns of online trackers, and content served through the Content Delivery Networks of the cloud. The term "the cloud" already suggest that it could be difficult to grasp, let alone recognize its particles. And indeed it is.

This field guide will provide you with a glossary of 236 trackers and Content Delivery Networks, as well as point you at the available equipment that can be used for your inquiry. It will help you to better understand what happens when you open a website in your browser. Which content is being "pulled in" from the cloud, and which user data is being collected by the present trackers.

A PROJECT OF THE DIGITAL METHODS INITIATIVE, UNIVERSITY OF AMSTERDAM AND DISSEYDESIGN, POLITECNICO DI MILANO
Some considerations for Collaborative data practises

1. Mix methods and disciplines: quali-quanti
2. Create many visualisations, not one that “sums it all up”
3. Online, offline, hybrid approaches to data and visualisations
4. Follow the actors, find out what are their matters of concern
5. Allow people talk back to the data, create rich narratives
6. Share the outcomes, the tools and the process and formats