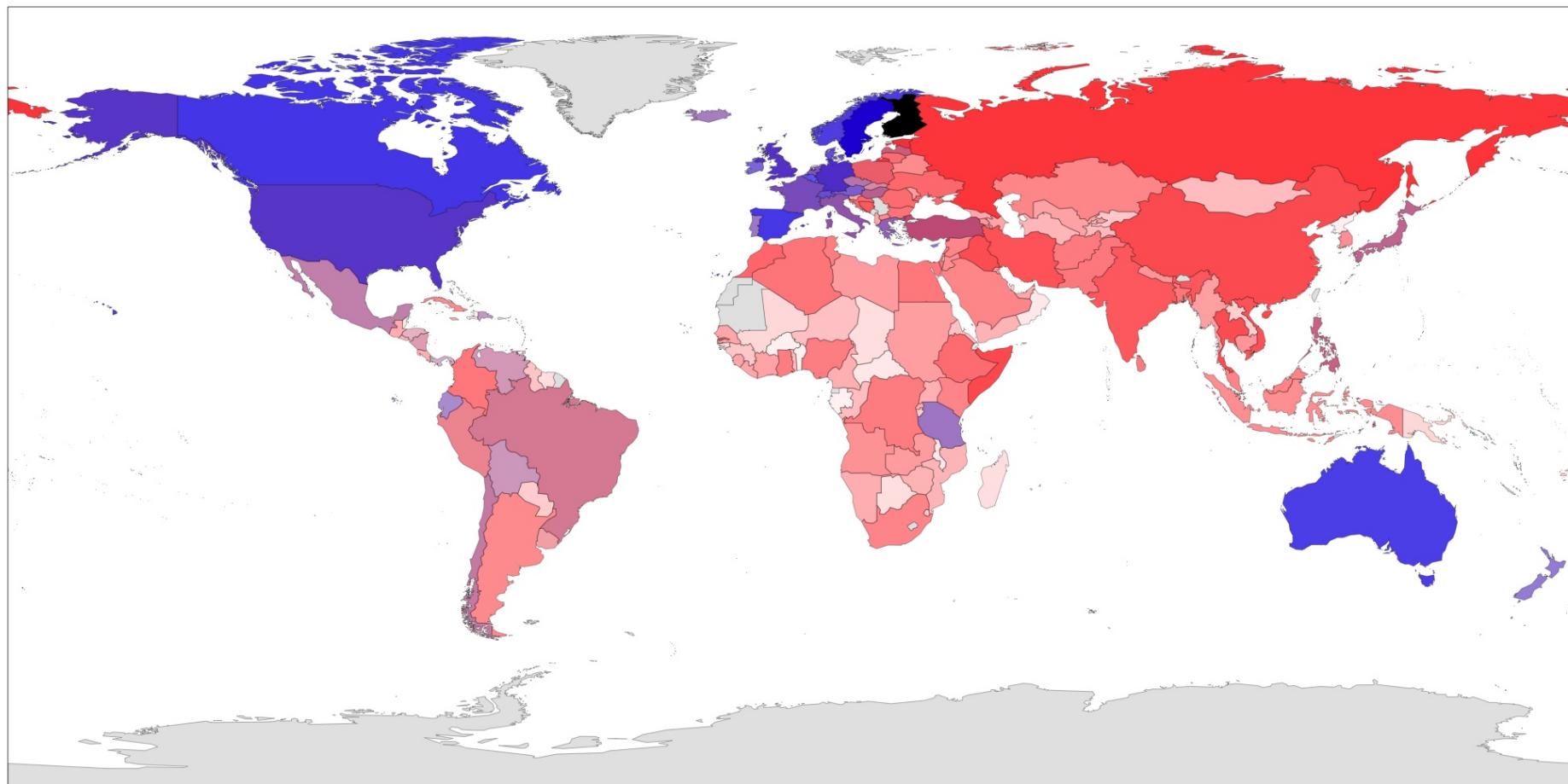


Open Tools for Open Data in Finland

SHARE Conference. Belgrade, Serbia.
April 26, 2012.



Louhos is a community-driven project that aims to:

- 1) Develop and collect source code for open data
- 2) Apply new tools to understand how the society works

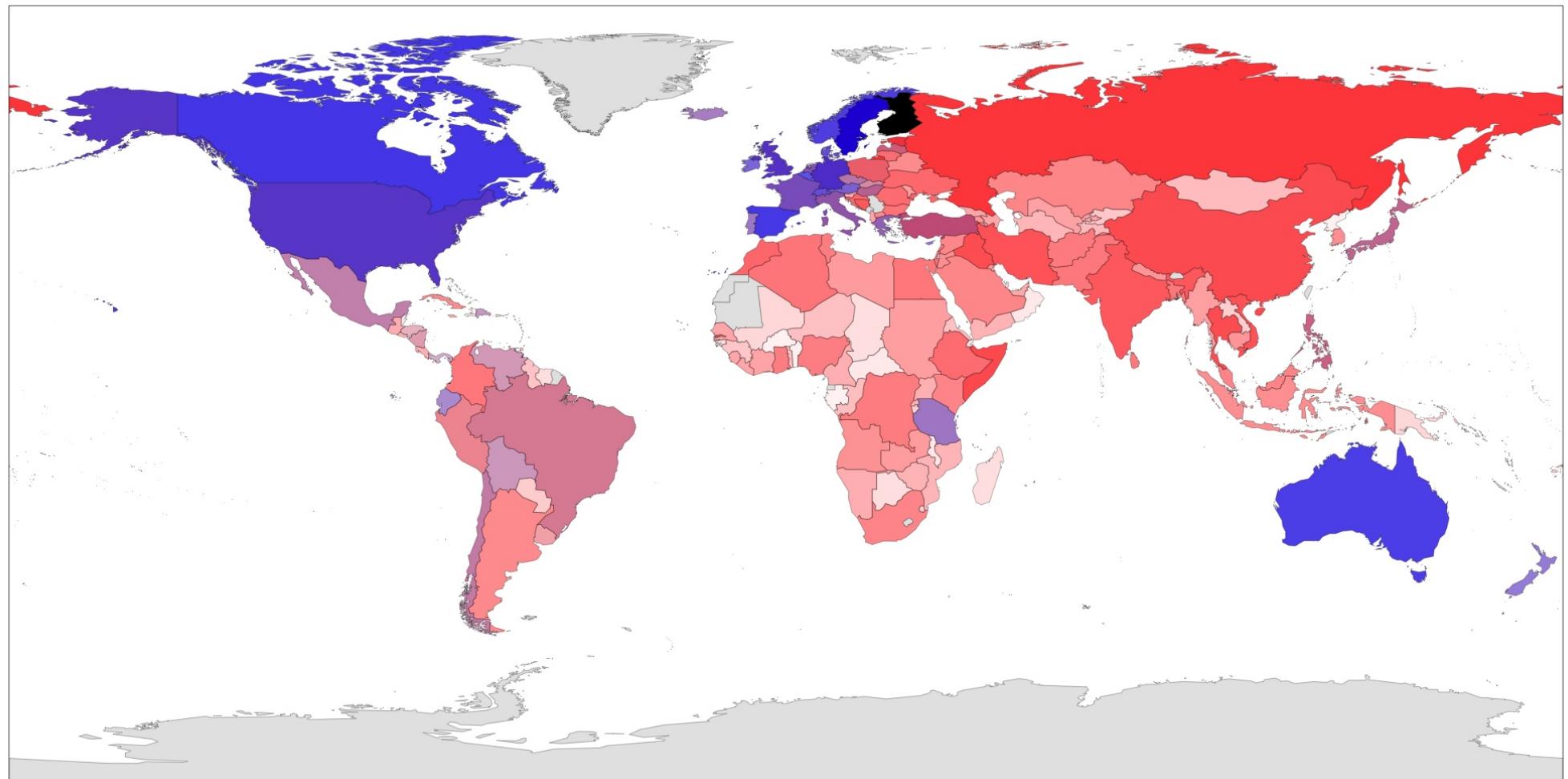
If you asked me what a data scientist was, I would say someone who can bridge the raw data and the analysis - and make it accessible. It's a democratising role; by bringing the data to the people, you make the world just a little bit better.

- Simon Rogers, Guardian

[check louhos.github.com/en](https://louhos.github.com/en)

Example: Finnish migration across the globe

Data: World Bank



Main developers

Leo Lahti

Wageningen University



Joona Lehtomäki

University of Helsinki



Juuso Parkkinen

Aalto University



data analysis, machine learning

open government data, data journalism, biological systems

soRvi - comprehensive R library for Open Data in Finland

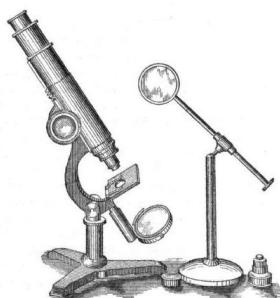
From Data to Knowledge



Wisdom, Action



Knowledge, Understanding

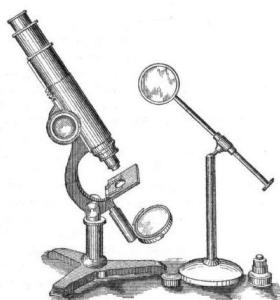


Information, Facts

Observations, Data

From Data to Knowledge

Integrating data across multiple sources can increase its value and enable new applications



Observations, Data

Information, Facts



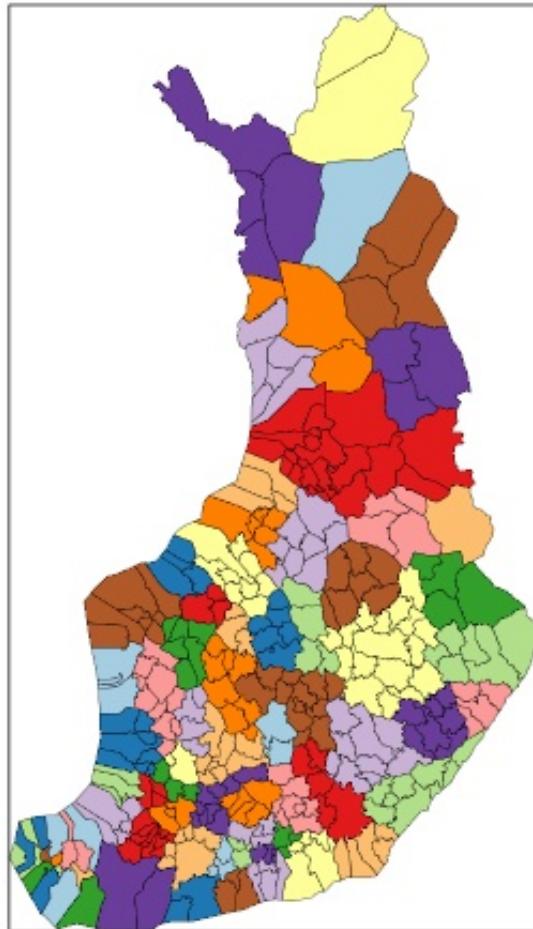
Knowledge, Understanding

Wisdom, Action



Example: municipal restructuring vs. population density

Uusi kuntajako



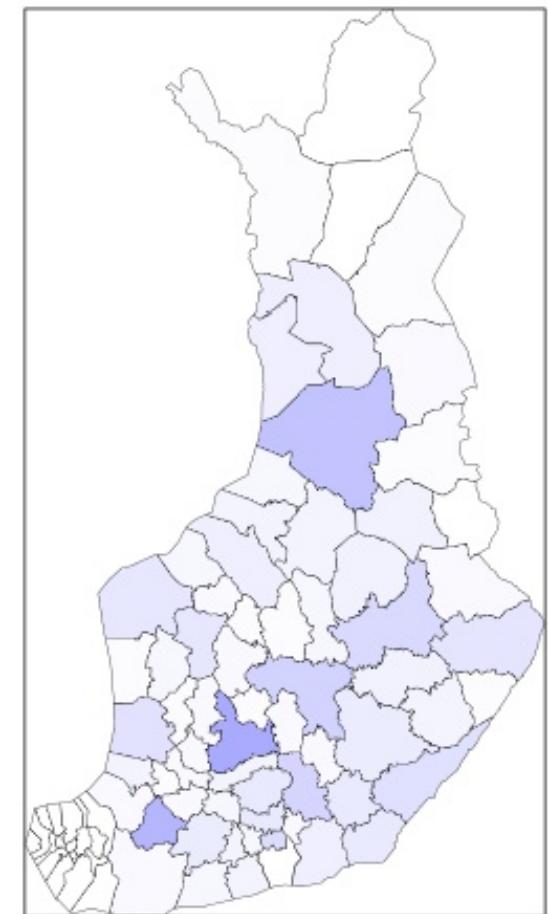
Understanding the changes by integrating data from multiple sources

Municipality info:
YLE

Municipality map:
Land Survey Finland

Population data:
Statistics Finland

Uusien kuntien vakiluku





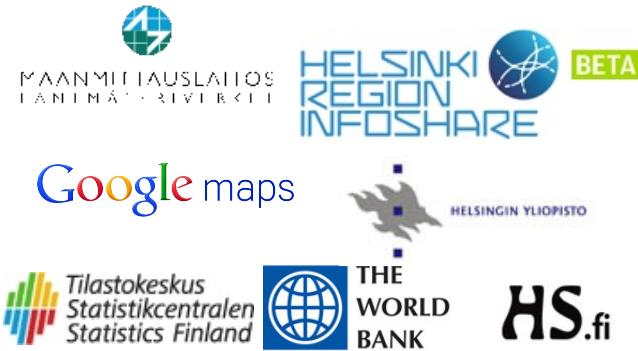
Open Data in Finland



Google maps

What to do with open data?

Open Data



?

Open Tools

louhos.github.com/en

Bits

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January 8, 2009, 1:52 PM

R You Ready for R?

By ASHLEE VANCE



The bottleneck in open data movement is shifting
from data availability
to efficient access and utilization
but the tools are lacking

Open Data



Open Tools

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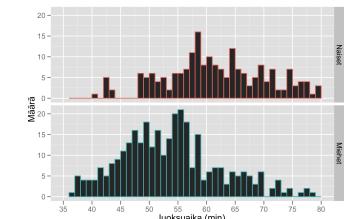
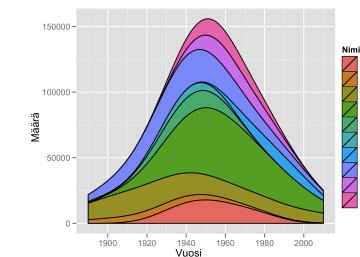
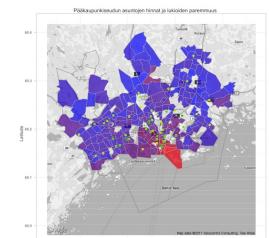
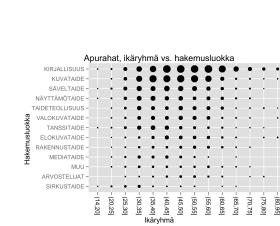
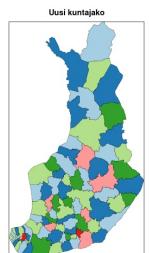
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soRvi - comprehensive R Library for Open Data in Finland

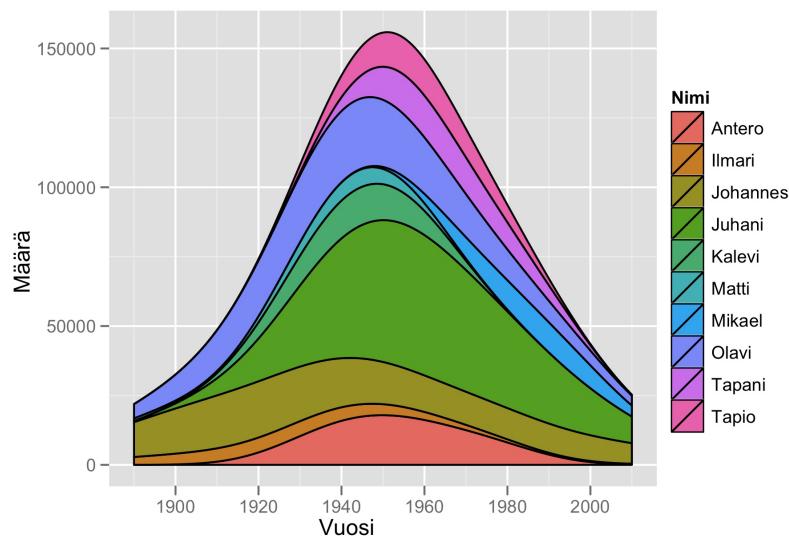
"turning machine":
seamless integration of open data, algorithms and applications



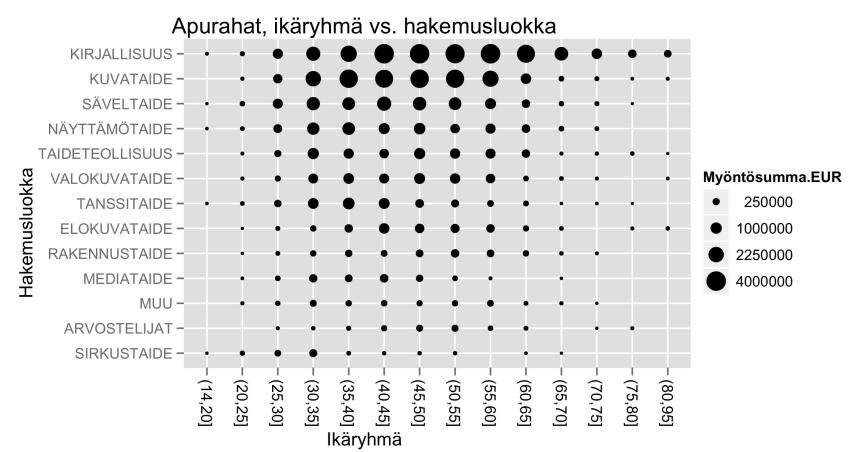
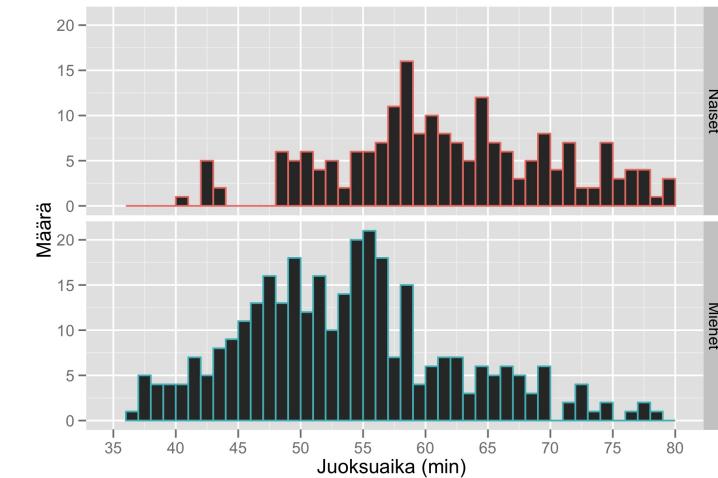
Culture & free time

Sports competition results

Most common Finnish names through 1900's



Grant distribution by arts field and applicant's age



The Need for Algorithmic Tools for Open Data

Efficient access: flexible download and preprocessing routines

Transparent & reproducible: integrated analysis environment

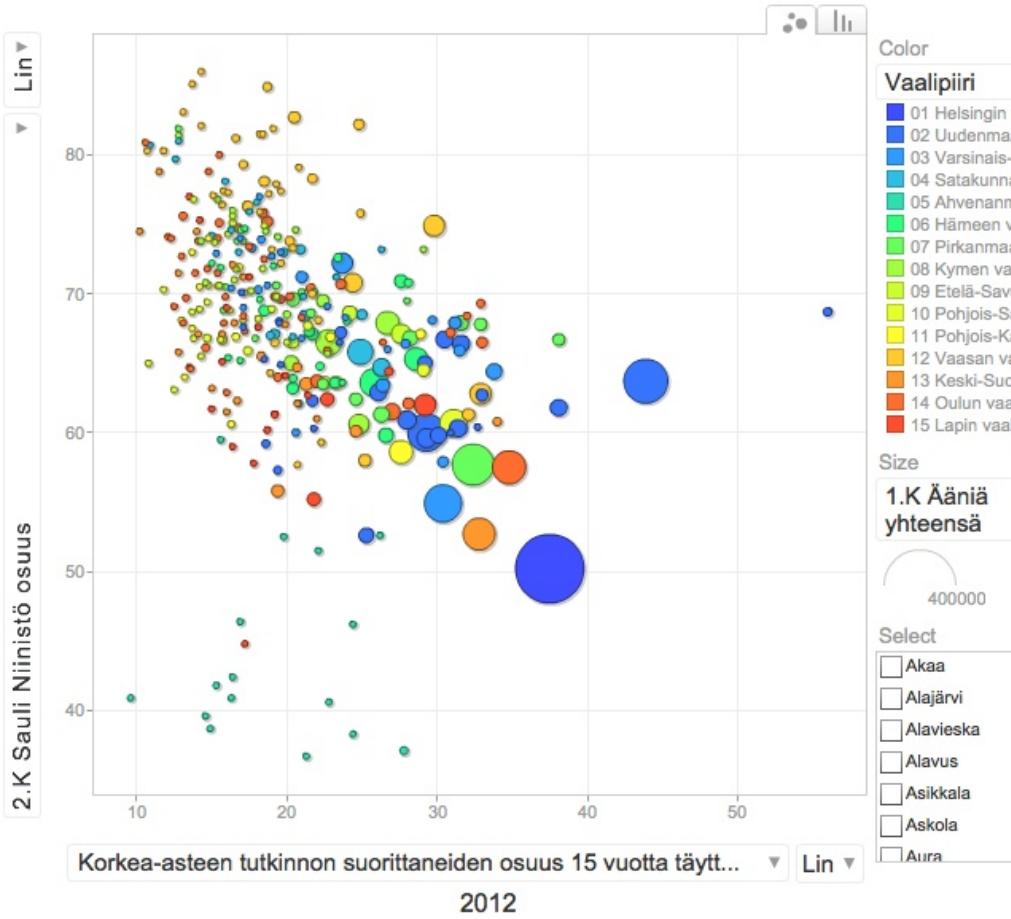
General-purpose: not tied to particular applications

Interactive: rapid data exploration & visualization

Versatile: code base for higher-level applications

Localized: for local needs

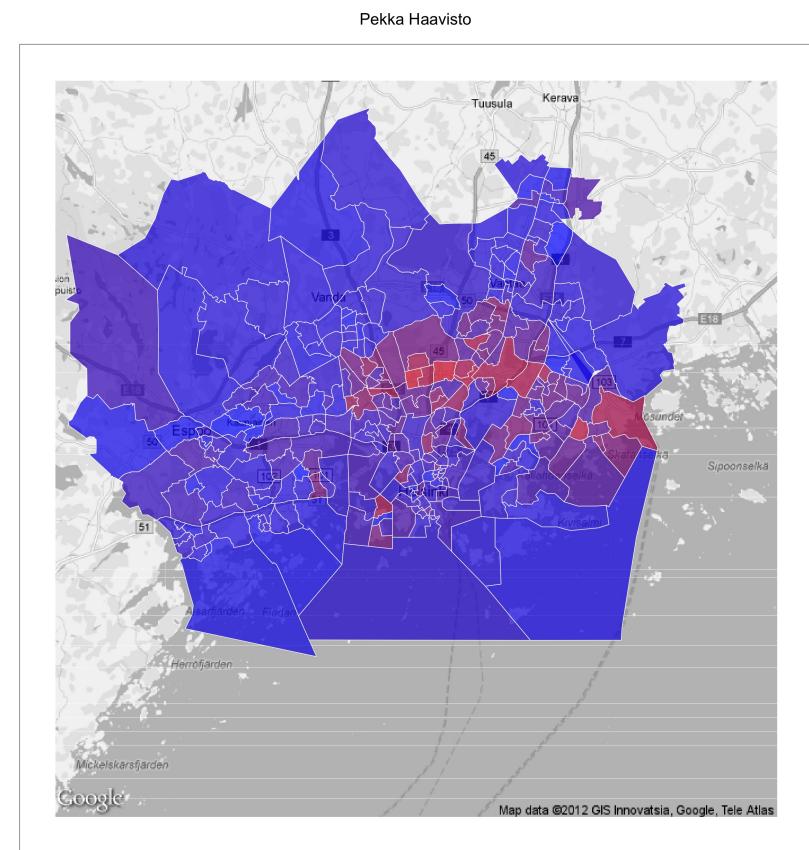




Data: tab • Chart ID: MotionChartID5aad7ceed8ac
R version 2.14.1 (2011-12-22) • googleVis-0.2.13 • Google Terms of Use • Data Policy

Popularity of presidential candidates across socio-economical factors and geographic regions

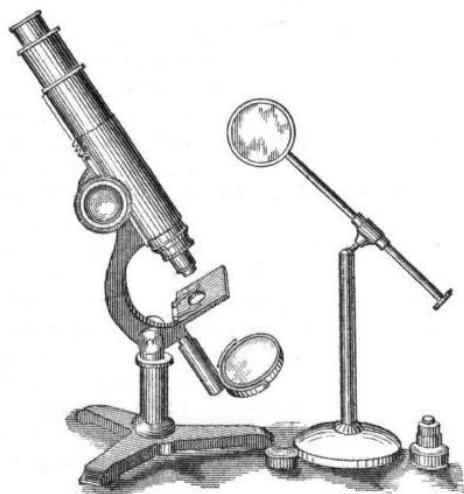
Example: election data



R - Open Statistical Analysis Environment



r-project.org



- Interactive
- Modular (open data, statistics, visualization)
- Thousands of analysis tools
- Graphics Capabilities
- Vast user community and developer base
- Increasingly used in bioinformatics, ecology, economics, data journalism , ...

Open Data



Open Analysis Tools

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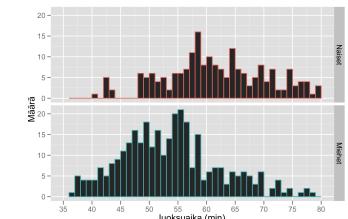
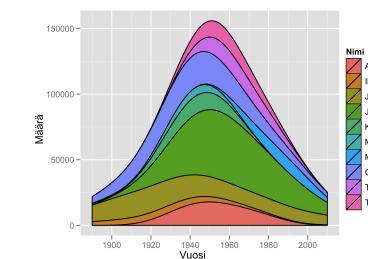
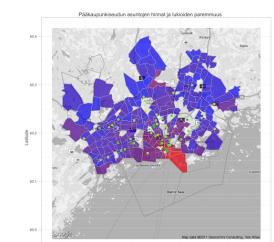
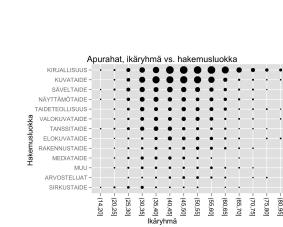
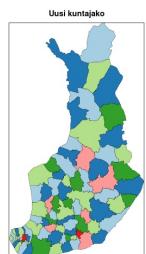
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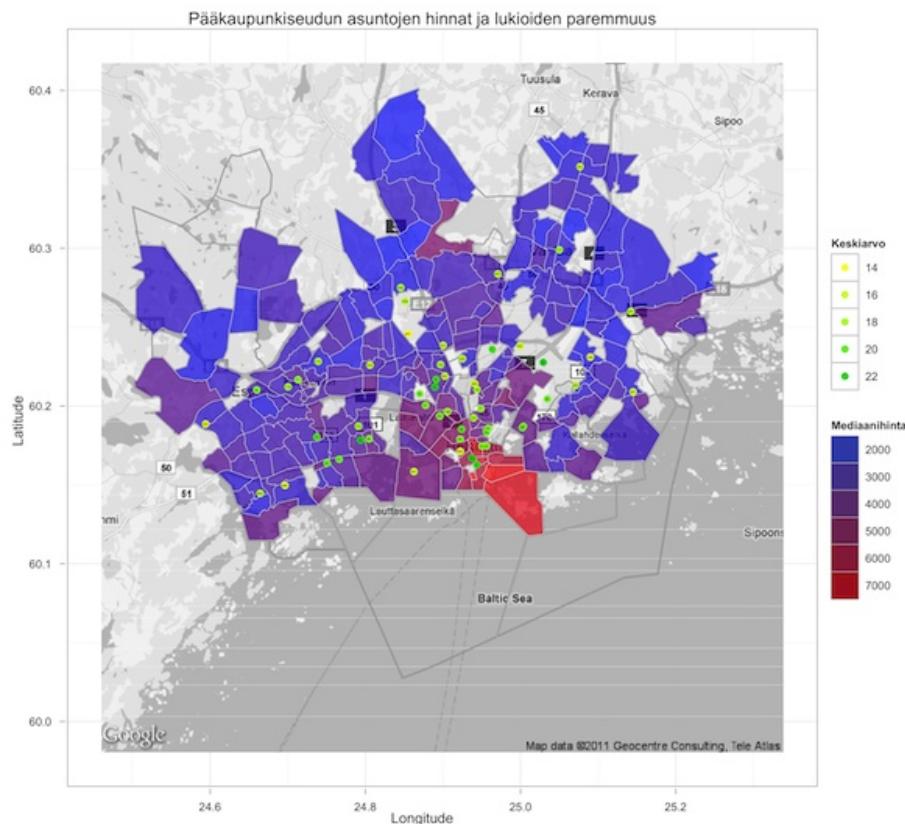
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crossing point for open data, algorithms and applications

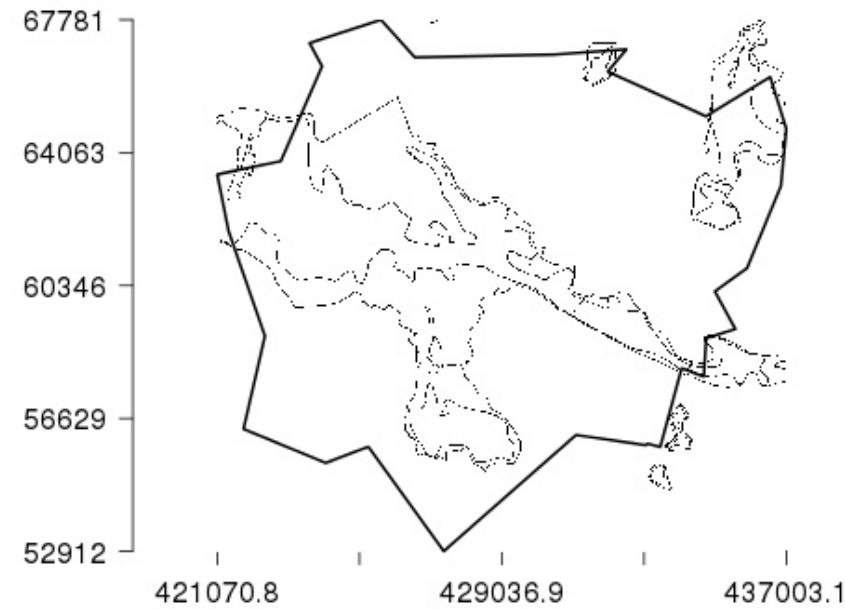


Cities and environment

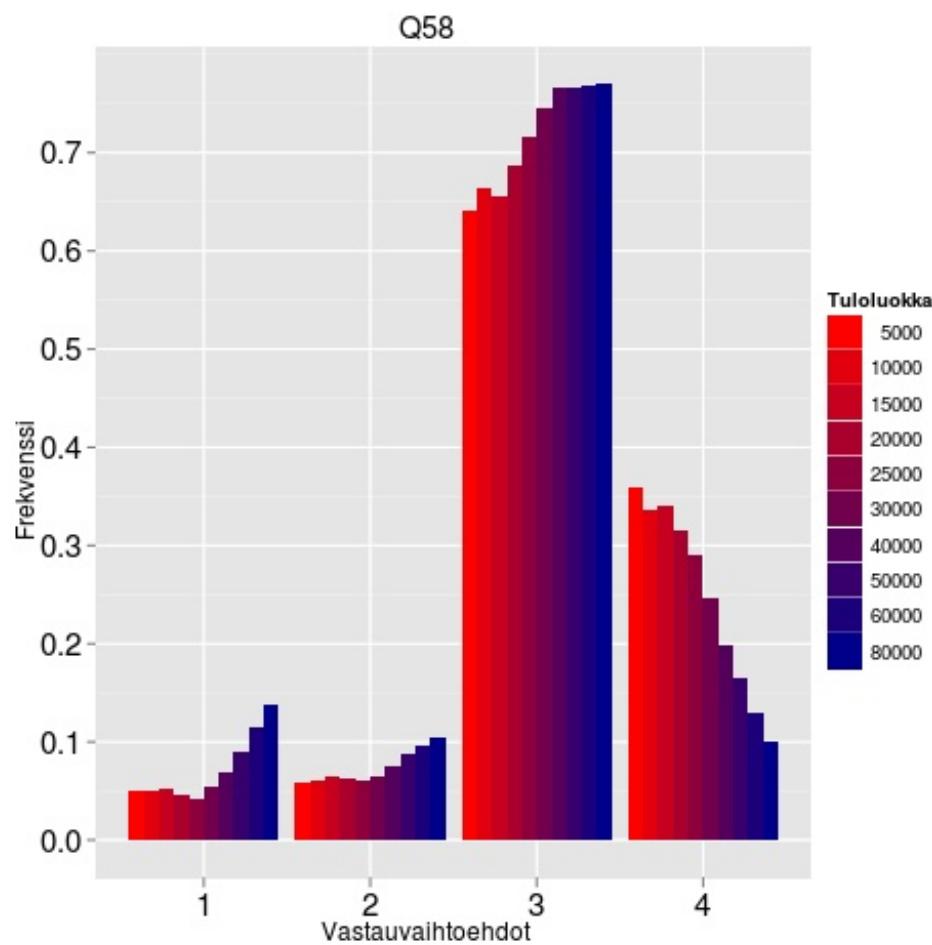
Income level and high-school performance



Ground water resources (Data: Finnish environmenta services)

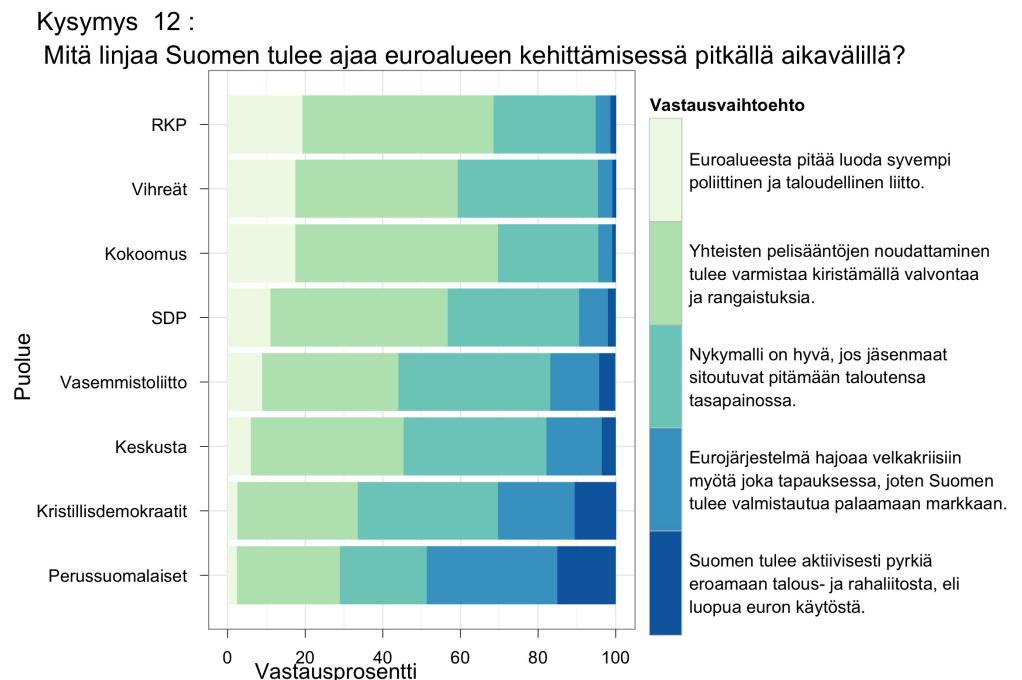


Income versus NATO popularity



Politics

Development plans for Euro-zone



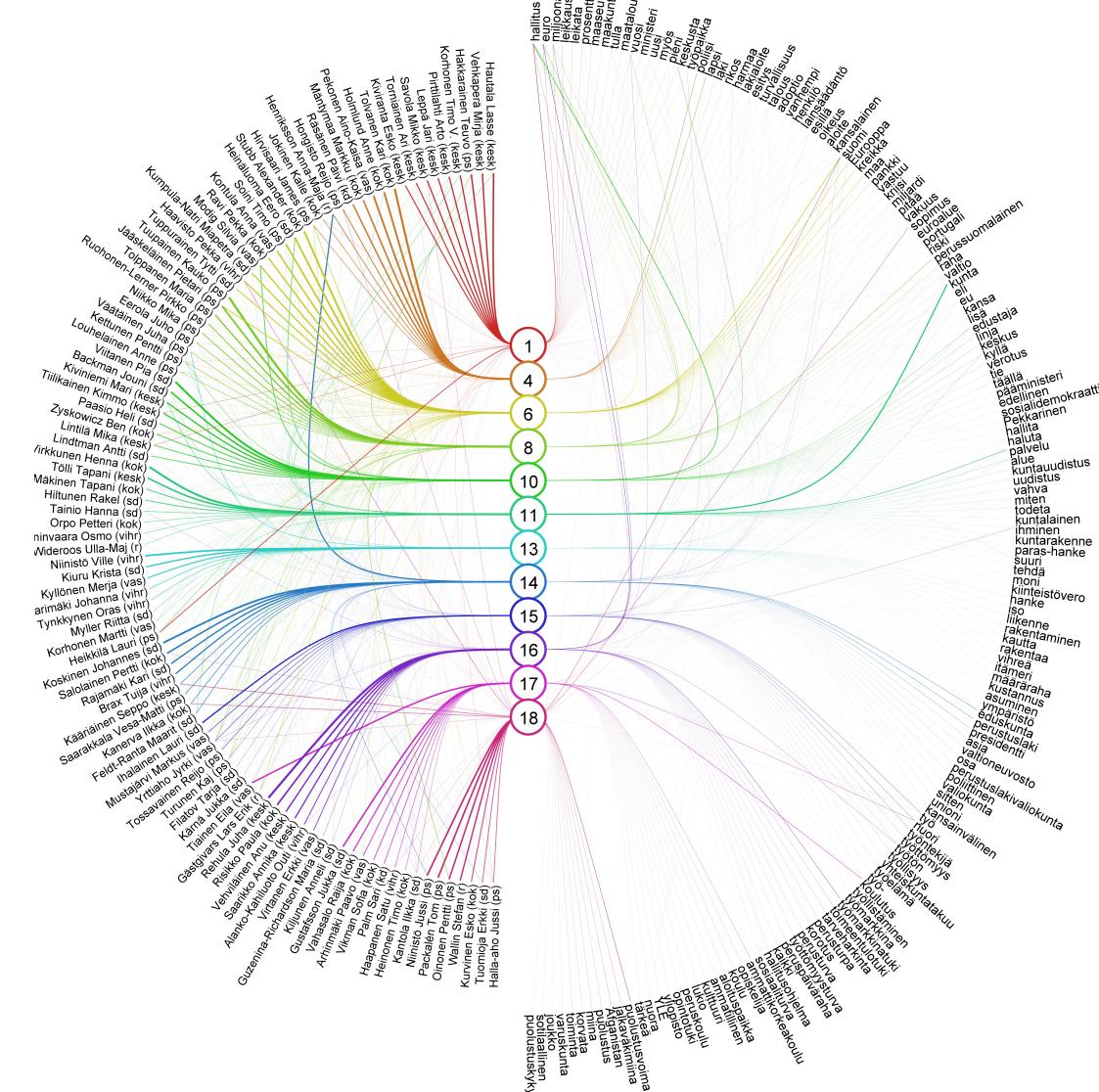
Parliamentary surveillance:

Representatives versus negotiation topics

Left: Representatives

Middle: Interesting topics

Right: Top words for the topics



Data: Helsingin Sanomat

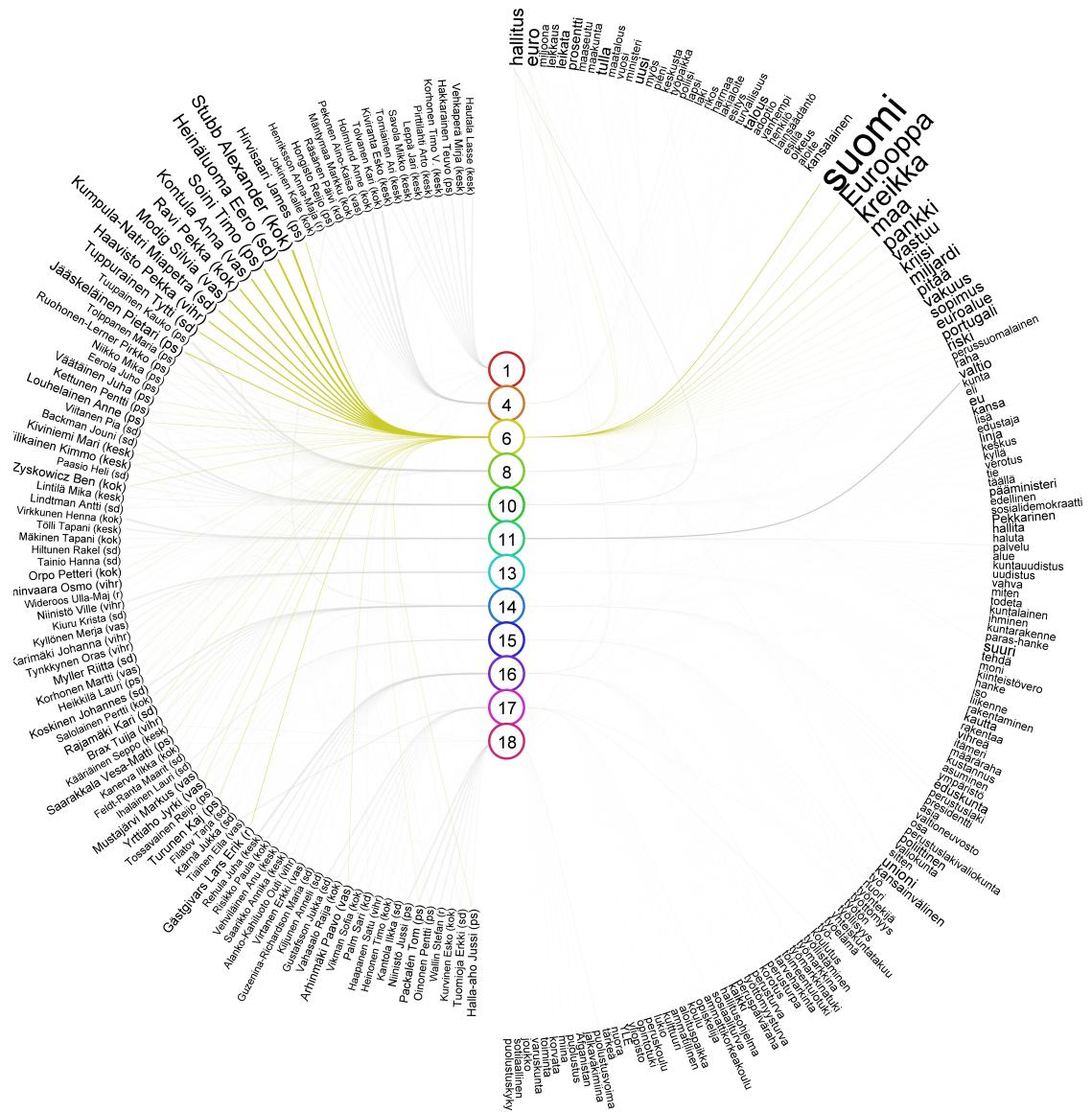
Parliamentary surveillance:

representatives vs.
euro crisis

Left: Representatives

Middle: Interesting topics

Righ: Top words for the topics



Join the World-Wide Data Opening Efforts !

Write analysis routines

Localize the tools

Share the code

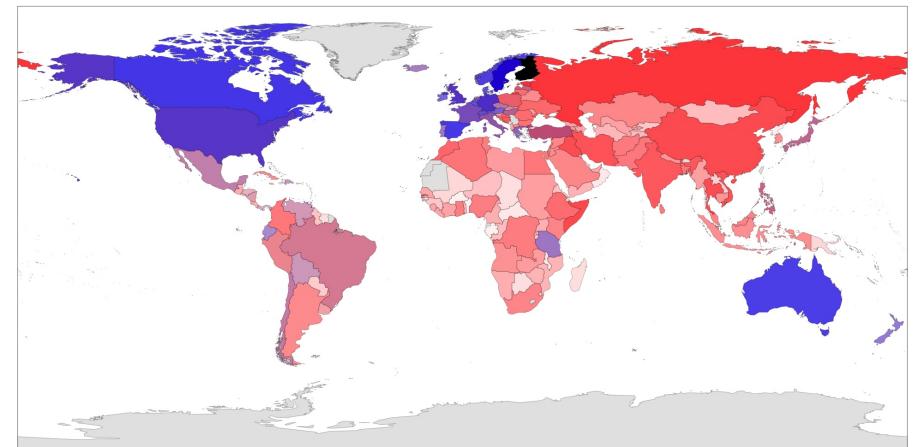
Give feedback

Analyse & visualize

Write a blog post

Make study assignment

Spread the word



*louhos.github.com/en
[!louhos@IRCnet](mailto:louhos@IRCnet)*



Open Street Map, Helsinki

Category

- Jäätelökioski
- Kierrätyspiste
- Yleinen WC

Service data:
- Omakaupunki
- Palvelukartta

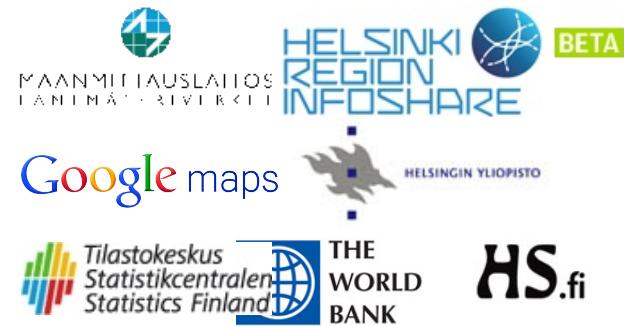
summer park survival guide

view by: theme **park** koffin ▾



Juuso Parkkinen & Miska Knapek @ HS Open

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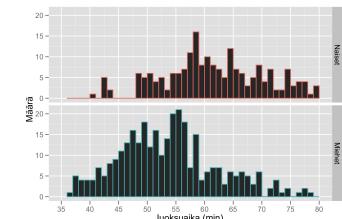
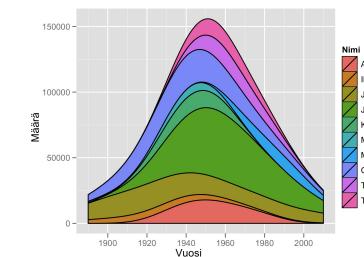
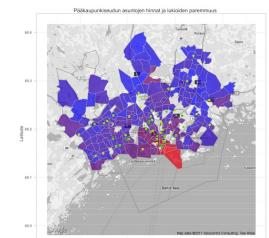
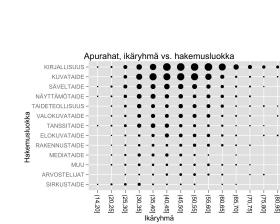
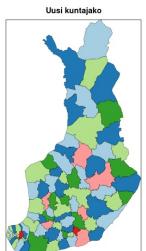
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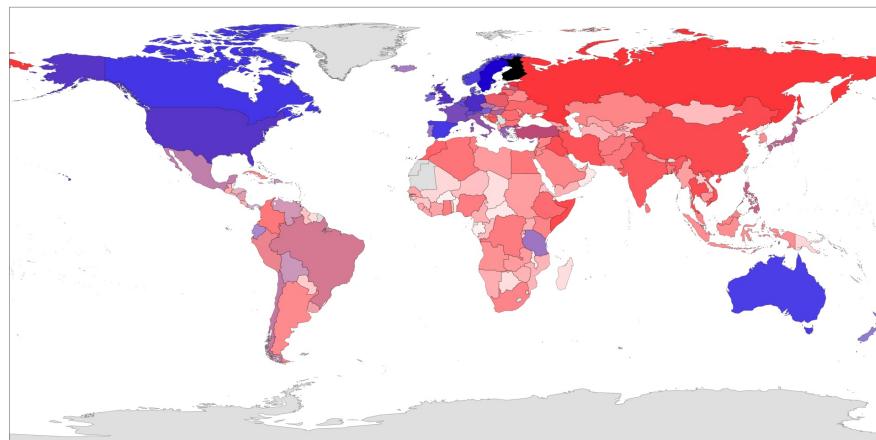
"turning machine":
seamless integration of open data, algorithms and applications



Thank You!

SHARE conference organizers & participants

Apps4Finland
HS Open
Datajournalismi.fi
Helsinki Region Infoshare
Forum Virium Helsinki
Statistics Finland
Geographic Land Survey Finland
R developers
Open Data Community



Contact:
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