UNIVERSITY OF AMSTERDAM

UNIVERSITY OF HELSINKI

Towards Digital Democracy

Christoph Becker & Yu-Shan Tseng

Re:public Tokyo & Hiroshima Prefecture
22/10/2021

Agenda & purpose

I. Introduction
II. Quantitative Evaluation of OmaStadi (Helsinki)
III. Discussion

Agenda & purpose

I. Introduction
II. Quantitative Evaluation of OmaStadi (Helsinki)
III. Discussion

Key purpose: Connecting practitioners and researchers

The wider context of digital participation

The rapid globalisation of using digital platforms for facilitating political participation since 2016

Now, more than 200 governmental institutions using open-source software (either Consul or Decidim; not including other similar digital tools)

The danger of this global hype

Are digital platforms really improving our democracy?

If one place's success means the same for other places?

Very few governments conducted evaluation of digital democracy:

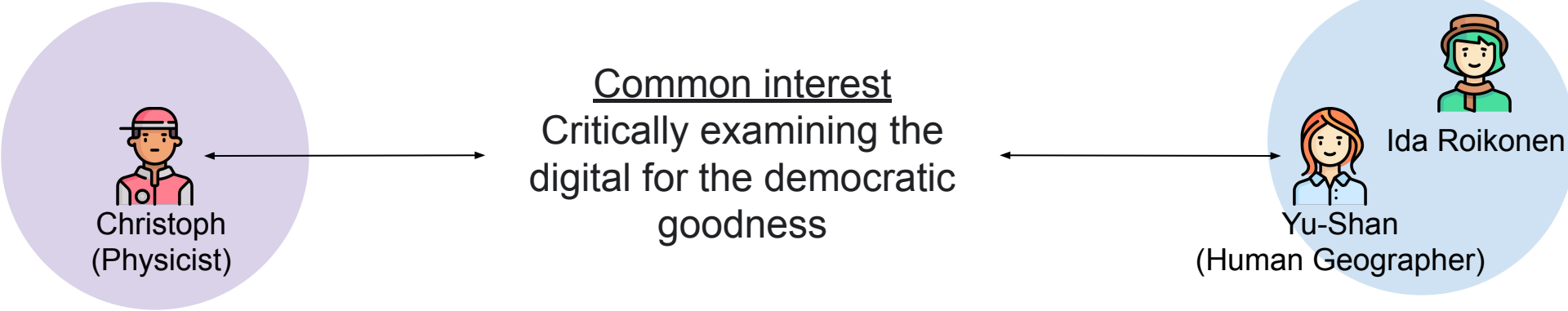
'[A] lack of data and formal evaluations of outcomes and impact' of digital platforms on democracy (NESTA Digital Democracy, 2017):

- 'currently so little attention is being paid to evaluating the outcomes of these digital initiatives themselves. In many of the cases we have looked at we do not even have the data to fully ascertain who is participating'.
- 'there are only a few examples of external evaluations of new tools and programmes. While they sometimes provide more detailed insight into participant profiles and motivations, [...], these represent only snapshots in time and do not provide a longer-term view of how participation is evolving'.

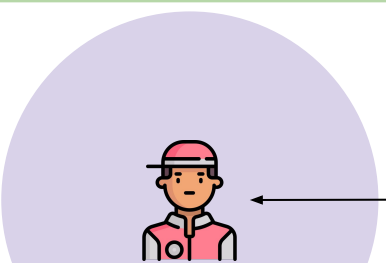
Why evaluating?

- Offer an evidence-based approach to policymaking and governance
- Increasing citizens' motivation and trust in the government
- Fighting against digital inequality
- Creating a sense of belonging and community
- Prove that digital platforms actually improve the quality of democratic participation
- Fulfill the claims that digital democracy is indeed a reality not just a propaganda

A little story behind our collaboration

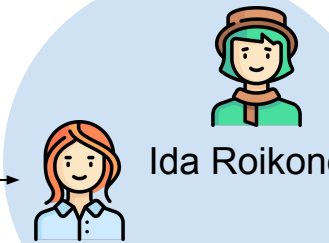


A little story behind our collaboration



Christoph
(Physicist)

<u>Common interest</u>
Critically examining the digital for the democratic goodness



Ida Roikonen

Yu-Shan
(Human Geographer)

How can we do something in practice?

A little story behind our collaboration

Christoph
(Physicist)

<u>Common interest</u>
Critically examining the digital for the democratic goodness

Ida Roikonen

Yu-Shan
(Human Geographer)

Quantitative Methods

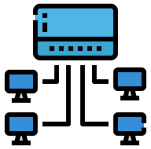
Mixed Methods Approach to evaluate digital impacts for practitioners

Qualitative Methods

How to Evaluate?

Lessons learned from vTaiwan, Decide Madrid, and OmaStadi

Voters

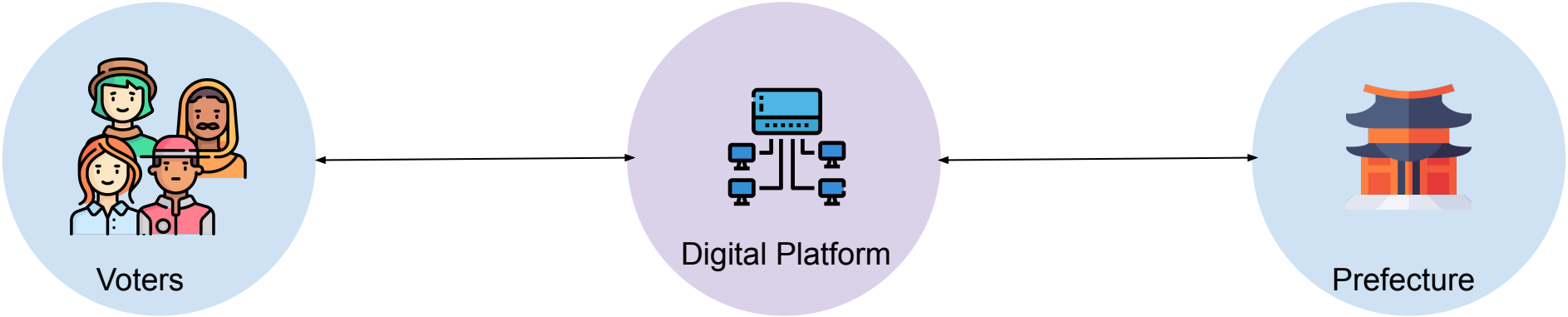


Digital Platform

Prefecture

How to Evaluate?

Lessons learned from vTaiwan, Decide Madrid, and OmaStadi



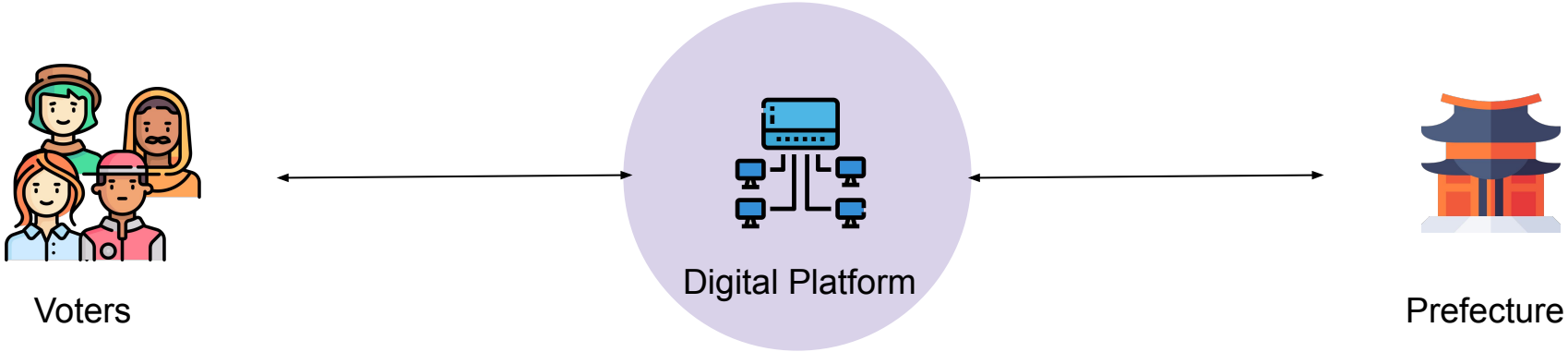
Yu-Shan: Ethnography, Fieldwork, Interviews, Mohawk

Christoph: GraphQL, Web Scraping, Snoopy, Matomo

Christoph

How to Evaluate?

Lessons learned from vTaiwan, Decide Madrid, and OmaStadi



Christoph: GraphQL, Web Scraping, Snoopy/Matomo

Christoph

How to Evaluate using GraphQL?

Lessons learned from OmaStadi

- GraphQL is an in-browser IDE for exploring GraphQL APIs
- Decidim comes by default with customisable GraphQL
- Used to obtain authors of proposals

How to Evaluate using GraphQL?

Lessons learned from OmaStadi

- GraphQL is an in-browser IDE for exploring GraphQL APIs
- Decidim comes by default with customisable GraphQL
- Used to obtain authors of proposals

	nickname	id
0	iunu	10381
1	terhi_2	1040
2	kirsi_2	1050
3	anja	1059
4	juhotik	1080
...	...	...
472	anna_arme	9416
473	ilari_scheinin	9486
474	maritta_hyvarinen	9630
475	jasmine	965
476	KL	995

How to Evaluate using GraphQL?

Lessons learned from OmaStadi

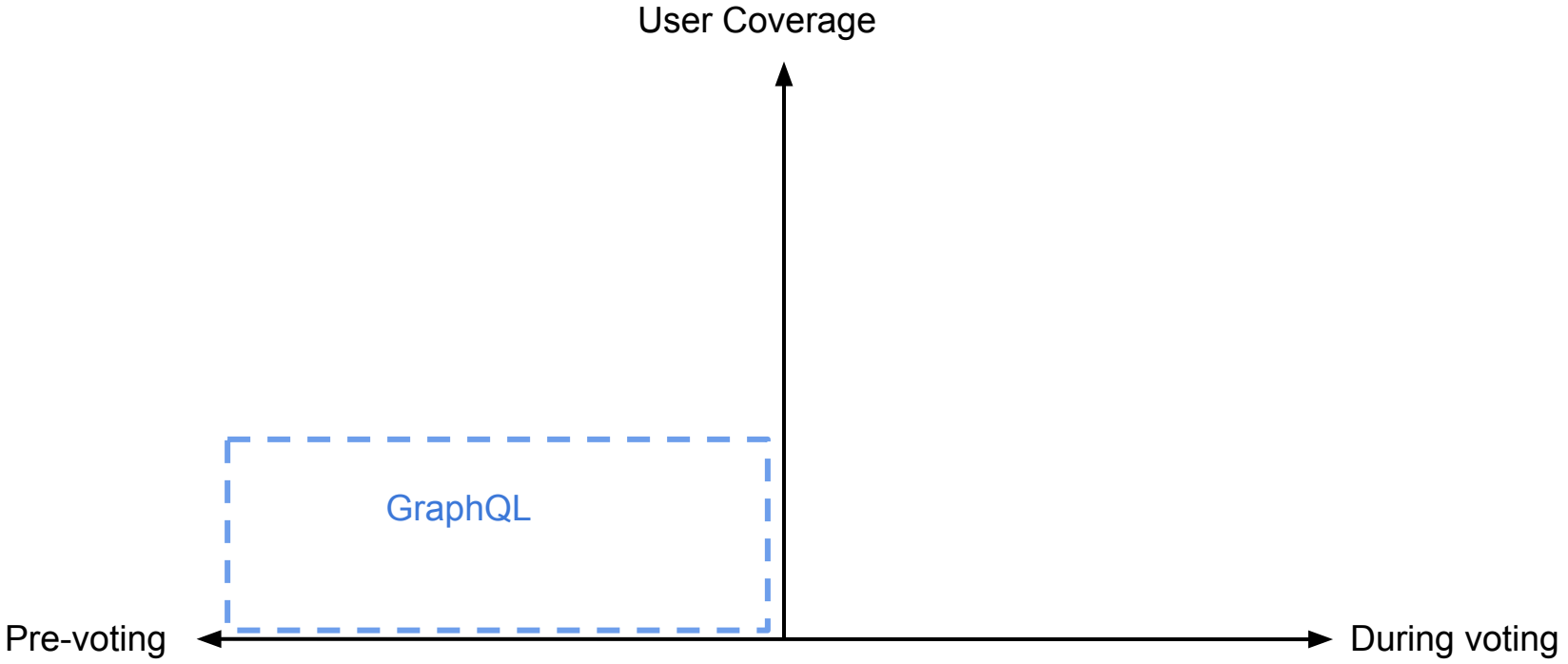
- GraphQL is an in-browser IDE for exploring GraphQL APIs
- Decidim comes by default with customisable GraphQL
- Used to obtain authors of proposals

	nickname	id
0	iunu	10381
1	terhi_2	1040
2	kirsi_2	1050
3	anja	1059
4	juhotik	1080
...	...	...
472	anna_arme	9416
473	ilari_scheinin	9486
474	maritta_hyvarinen	9630
475	jasmine	965
476	KL	995

476 authors in 2020/21, while there were 268 in 2018/19

What is Evaluated?

Lessons learned from OmaStadi



How to Evaluate using Web Scraping?

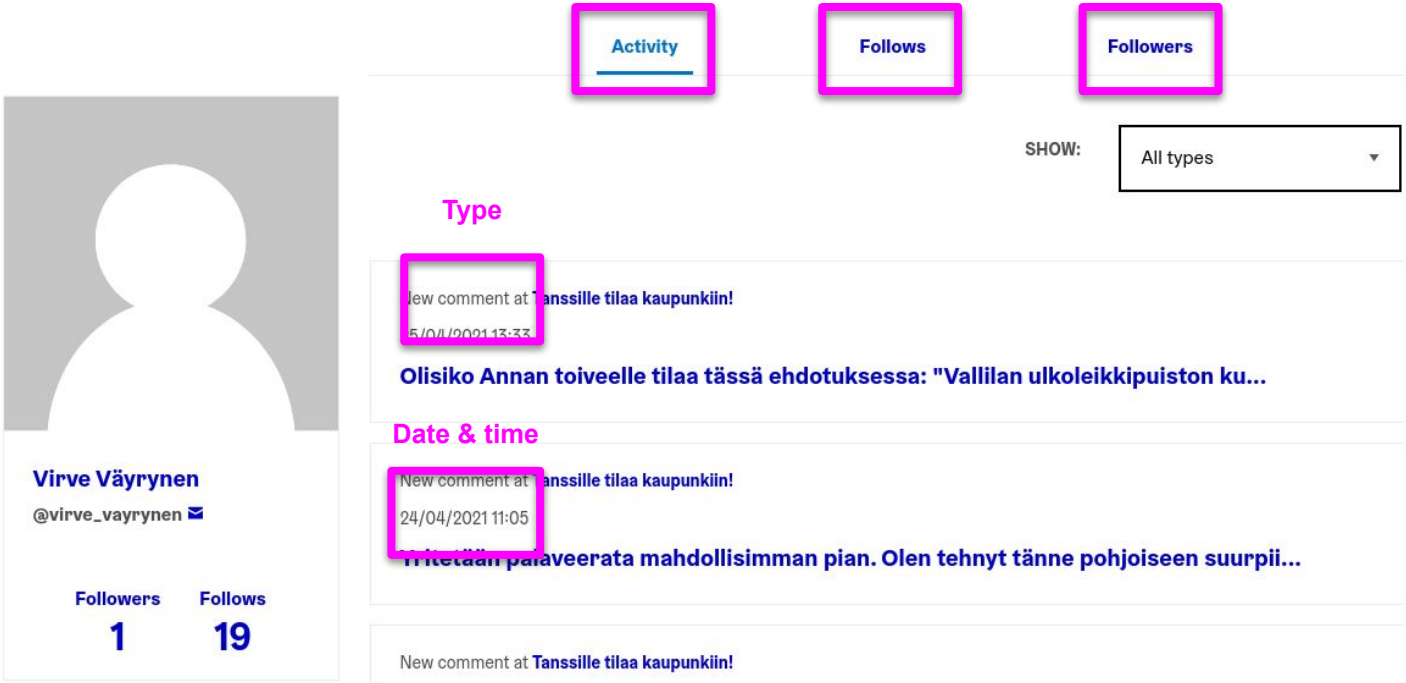
Lessons learned from OmaStadi

- Scrape information from users profiles using their IDs obtained through GraphQL
- Needs to be tailored to HTML code of website
  - Decidim platforms have very similar HTML code, therefore easy to tailor
- Only uses public data, no risk of harming privacy

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi

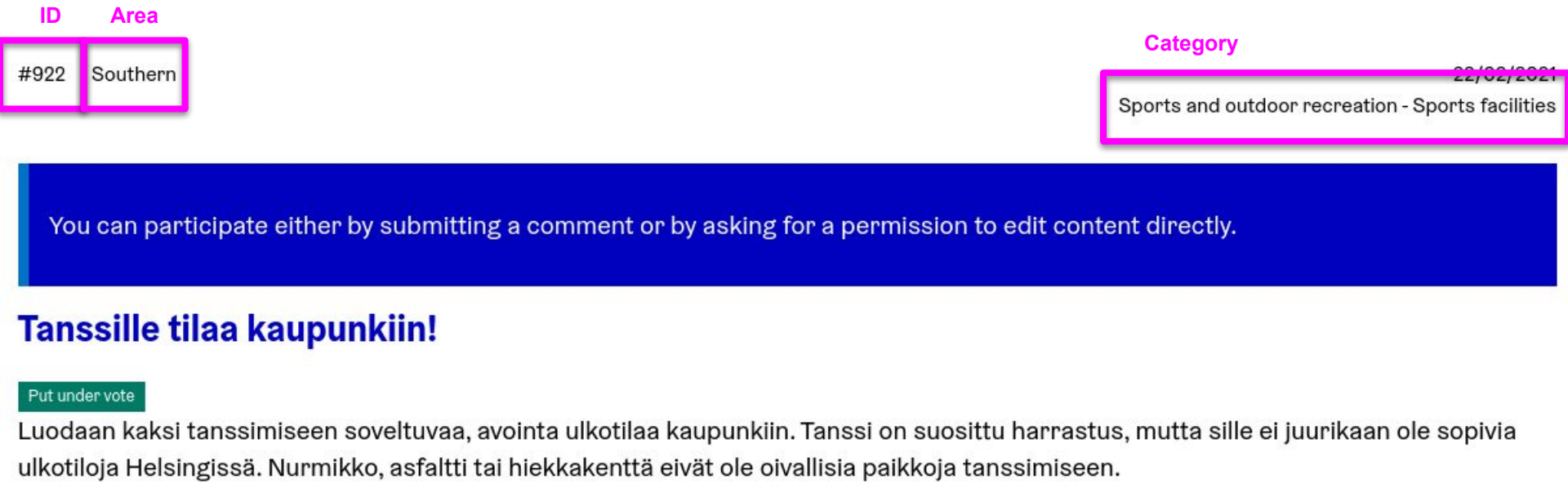
What we scrape from a user profile:



How to Evaluate using Web Scraping?

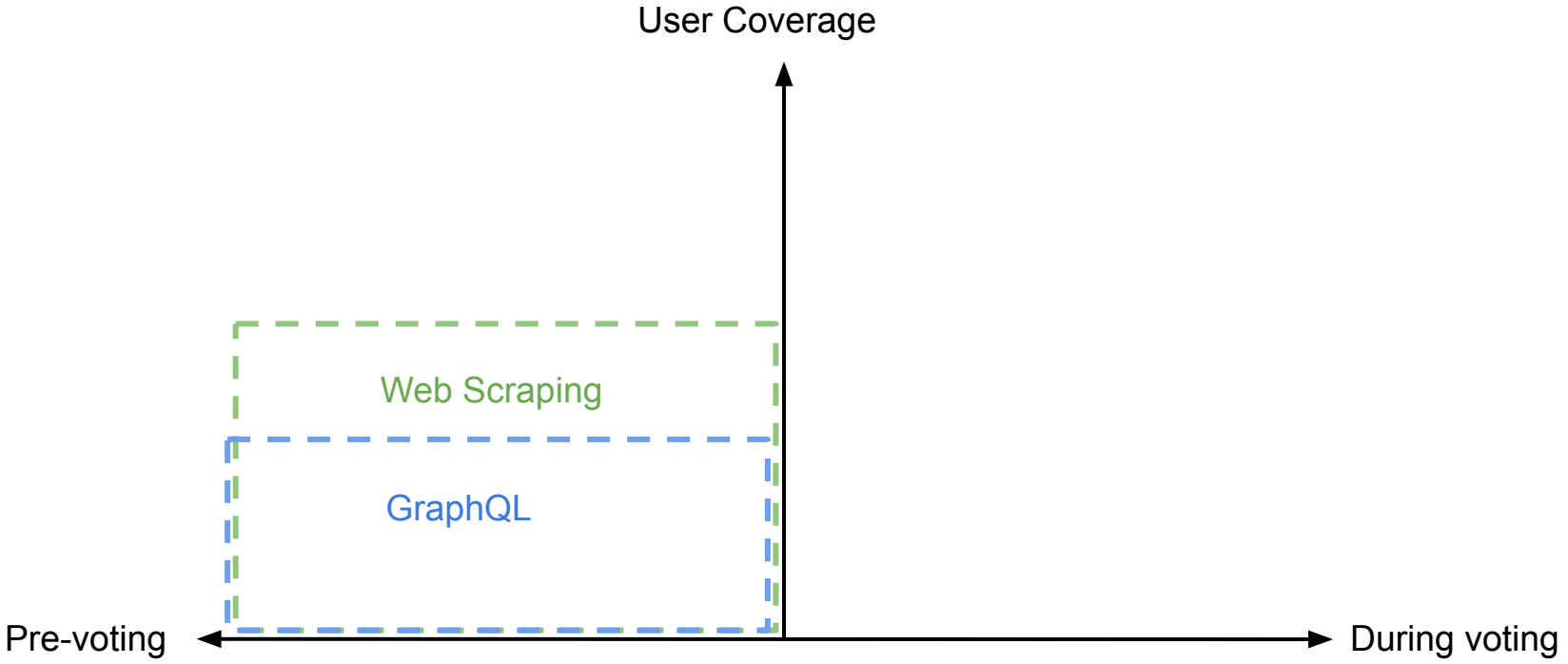
Lessons learned from OmaStadi

What we scrape from a users activity (such as comments, ideas, proposals):



What is Evaluated?

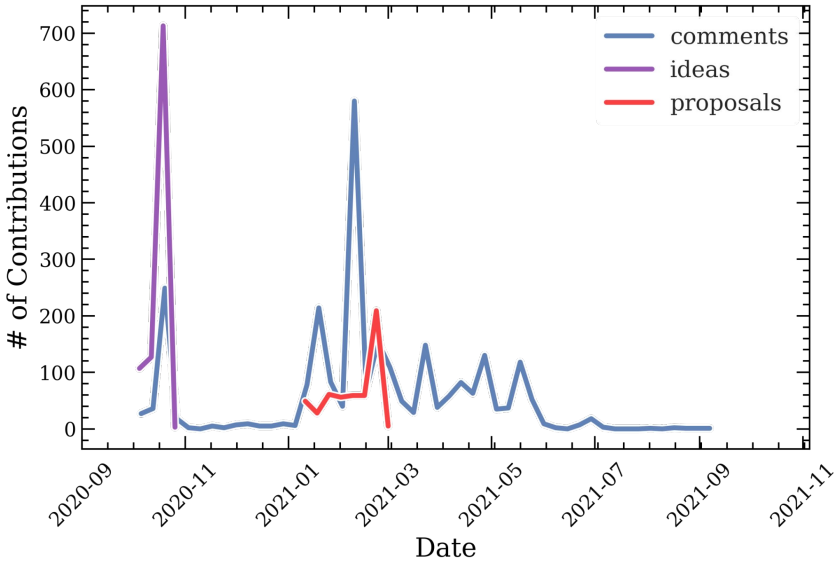
Lessons learned from OmaStadi



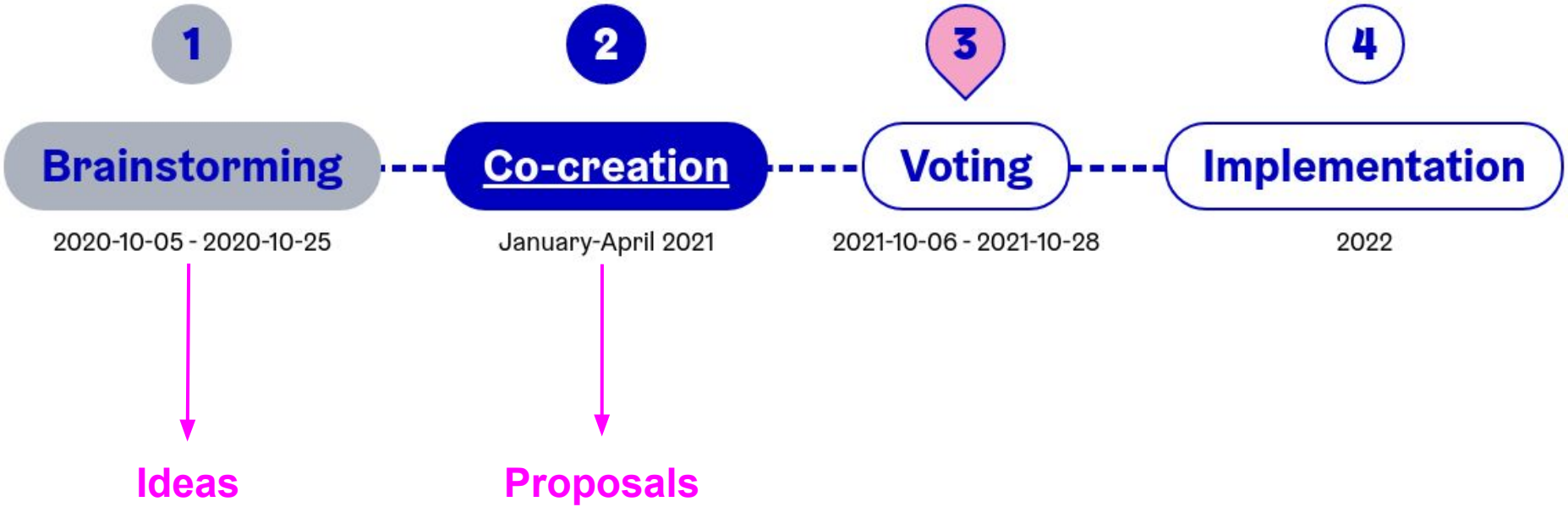
How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Time series analysis of user contributions:



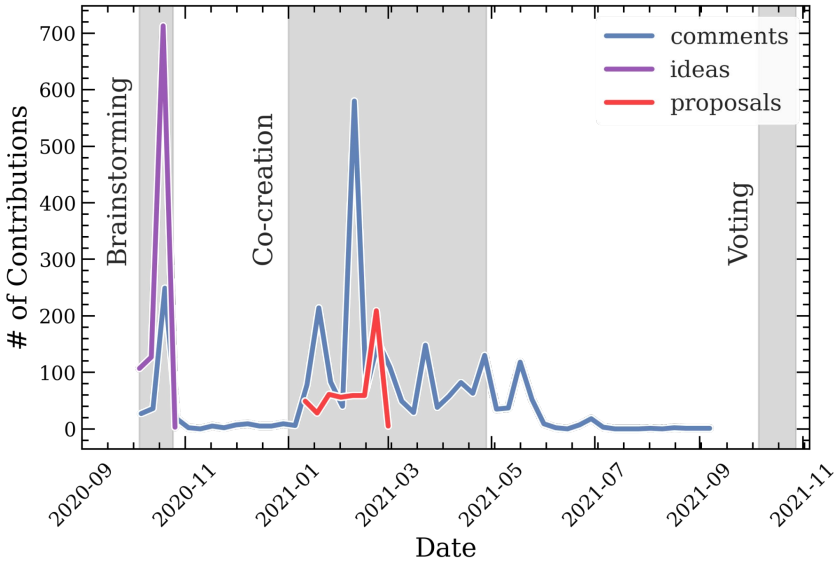
The OmaStadi budgeting process



How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

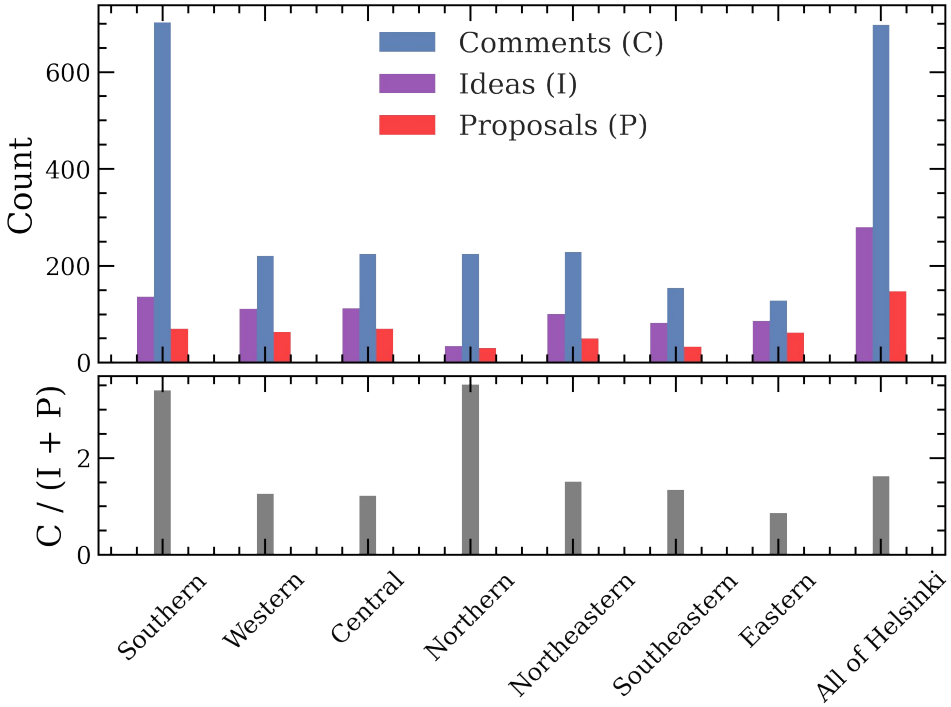
Time series analysis of user contributions



How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

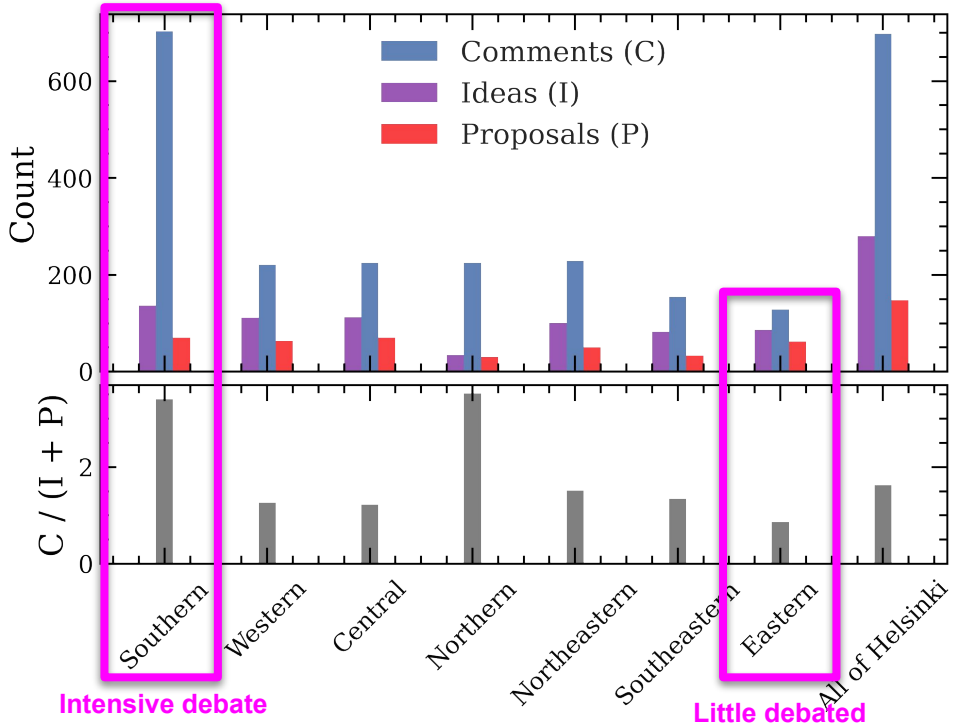
User contribution in each area:



How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

User contribution in each area:

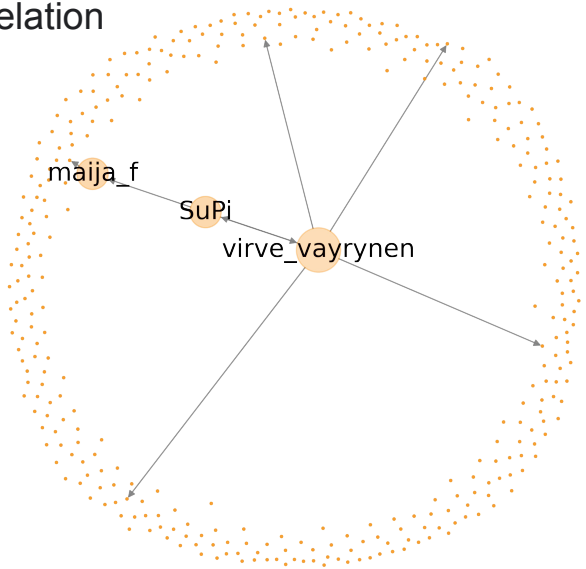


How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whom?

- Each dot represents a proposal author
- Each arrow represents their relation



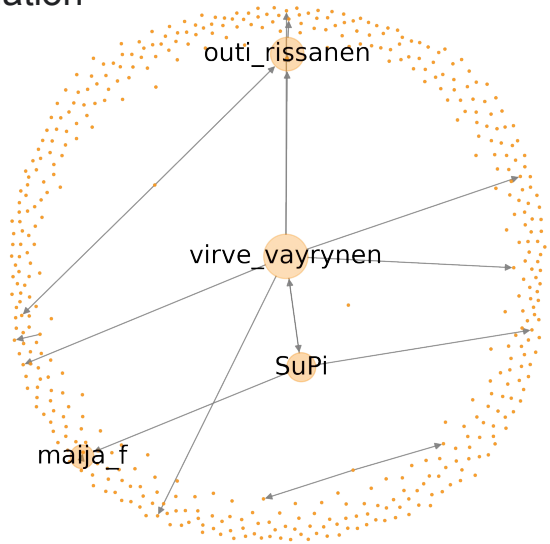
2 May 2021
(after co-creation, before voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whom?

- Each dot represents a proposal author
- Each arrow represents their relation



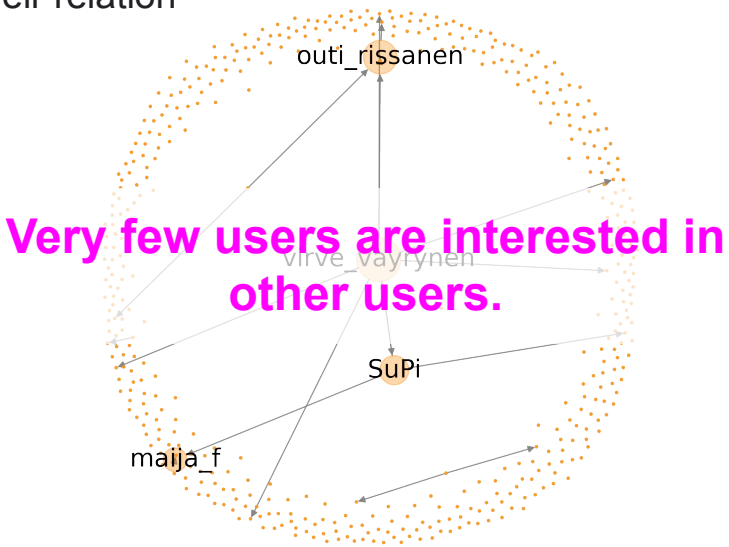
17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whom?

- Each dot represents a proposal author
- Each arrow represents their relation



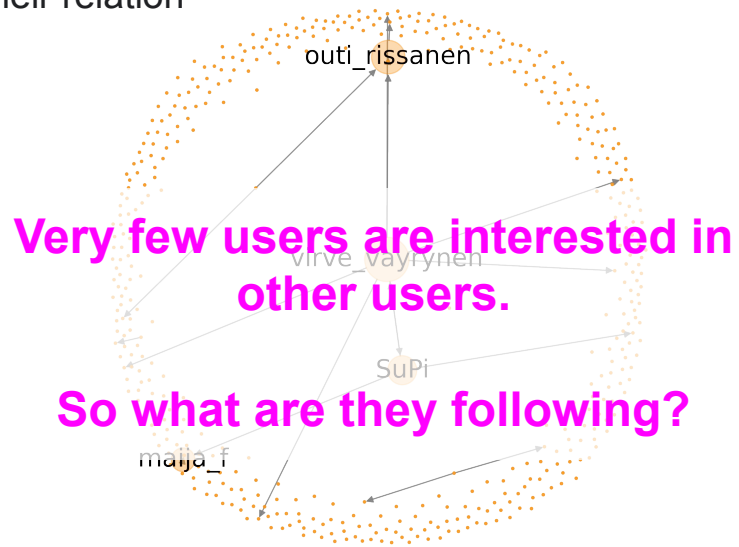
17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whom?

- Each dot represents a proposal author
- Each arrow represents their relation

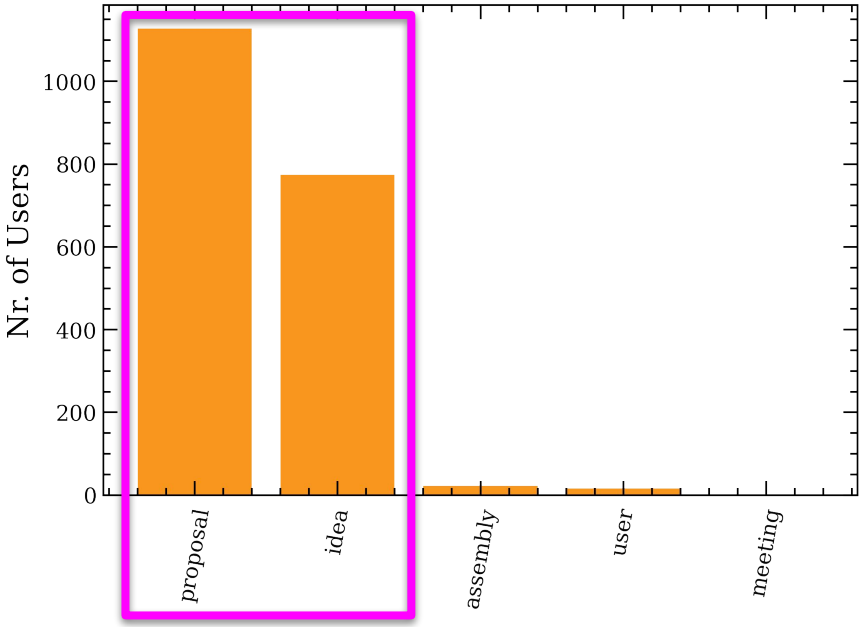


17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

What do users follow on the OmaStadi website?



17 September 2021
(during voting)

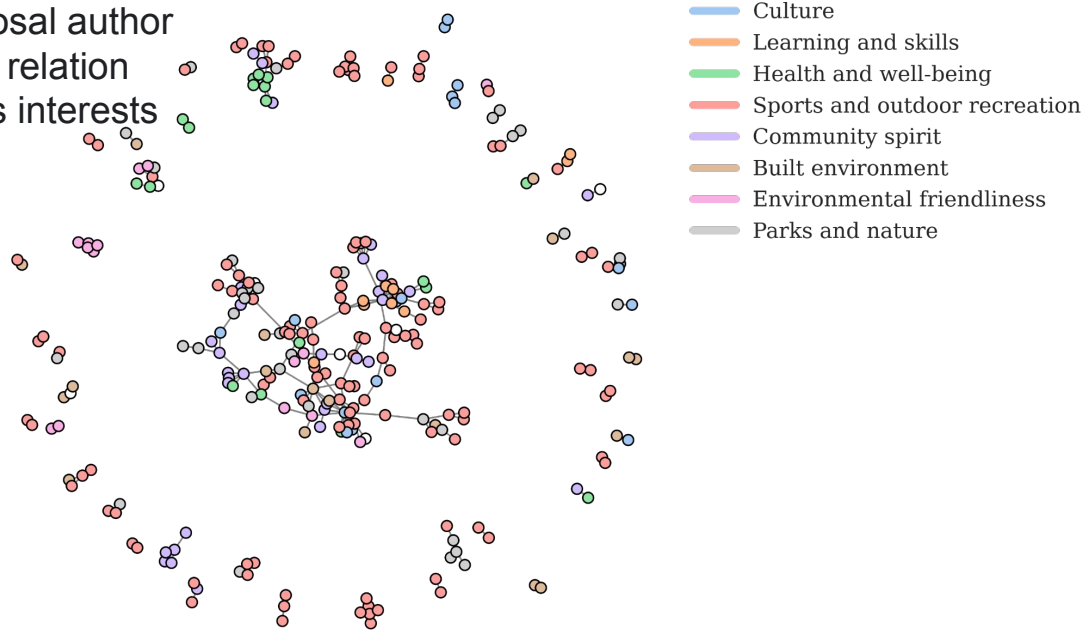
More interest for ideas/proposals than users

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whose idea/proposal?

- Each dot represents a proposal author
- Each arrow represents their relation
- The color shows the authors interests



17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

Social network analysis: Who is following whose idea/proposal?

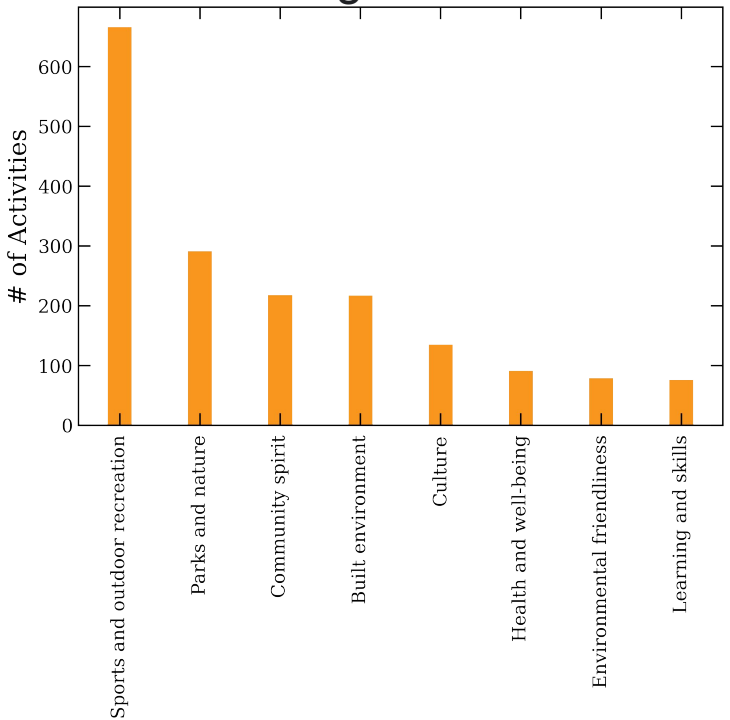
- Each dot represents a proposal author
- Each arrow represents their relation
- The color shows the authors interests

17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

To what categories are users contributing to with comments/ideas/proposals?

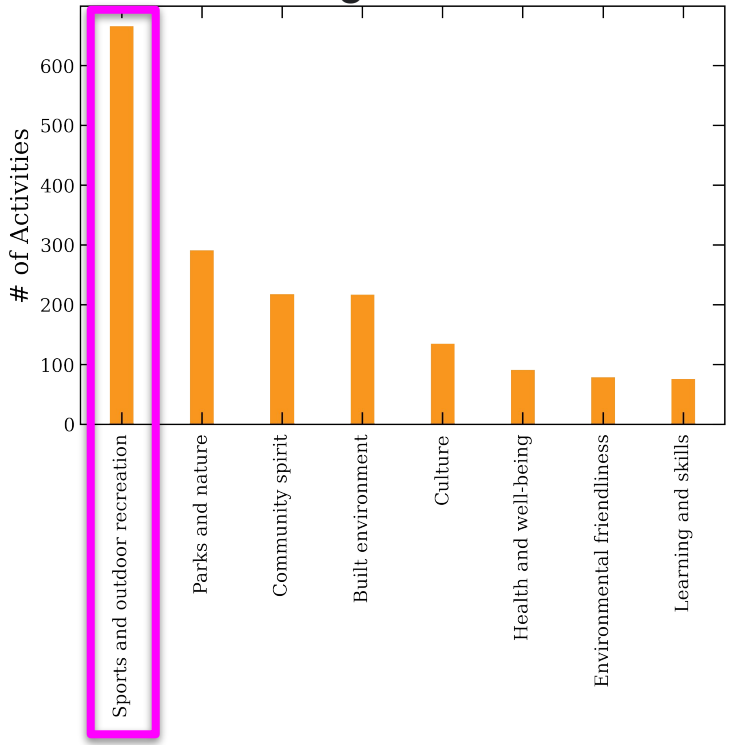


17 September 2021
(during voting)

How to Evaluate using Web Scraping?

Lessons learned from OmaStadi 20/21

To what categories are users contributing to with comments/ideas/proposals?

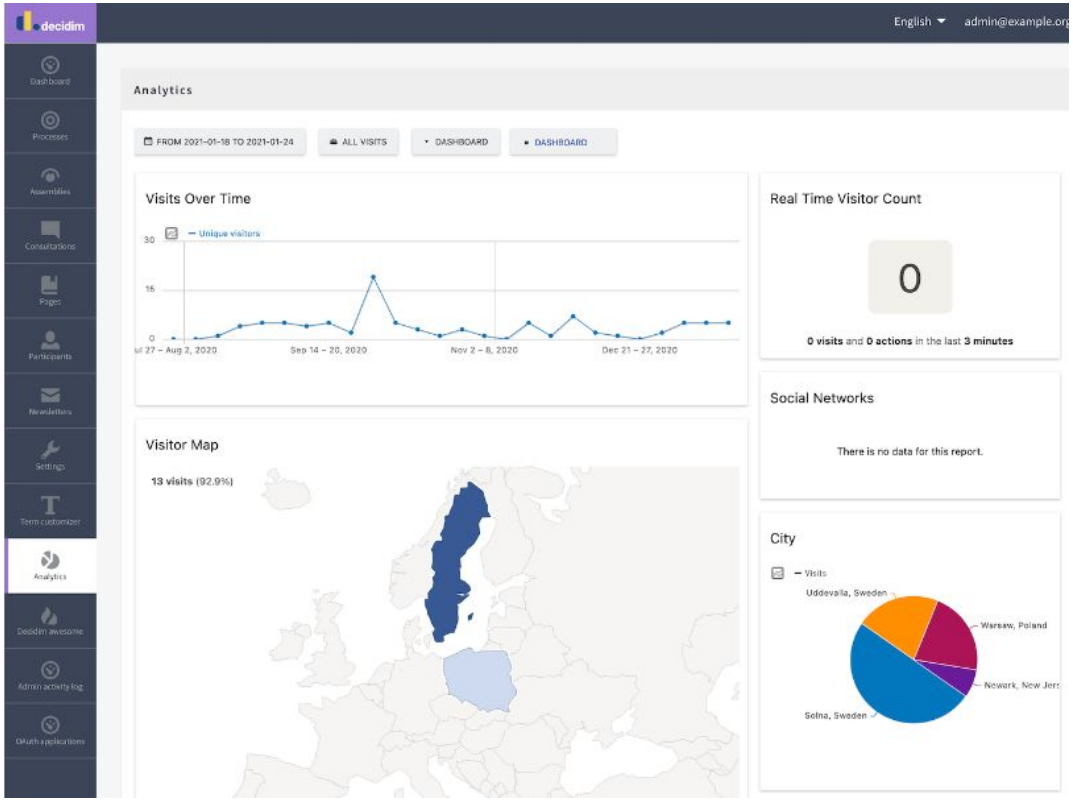


17 September 2021
(during voting)

How to Evaluate using Snoopy/Matomo?

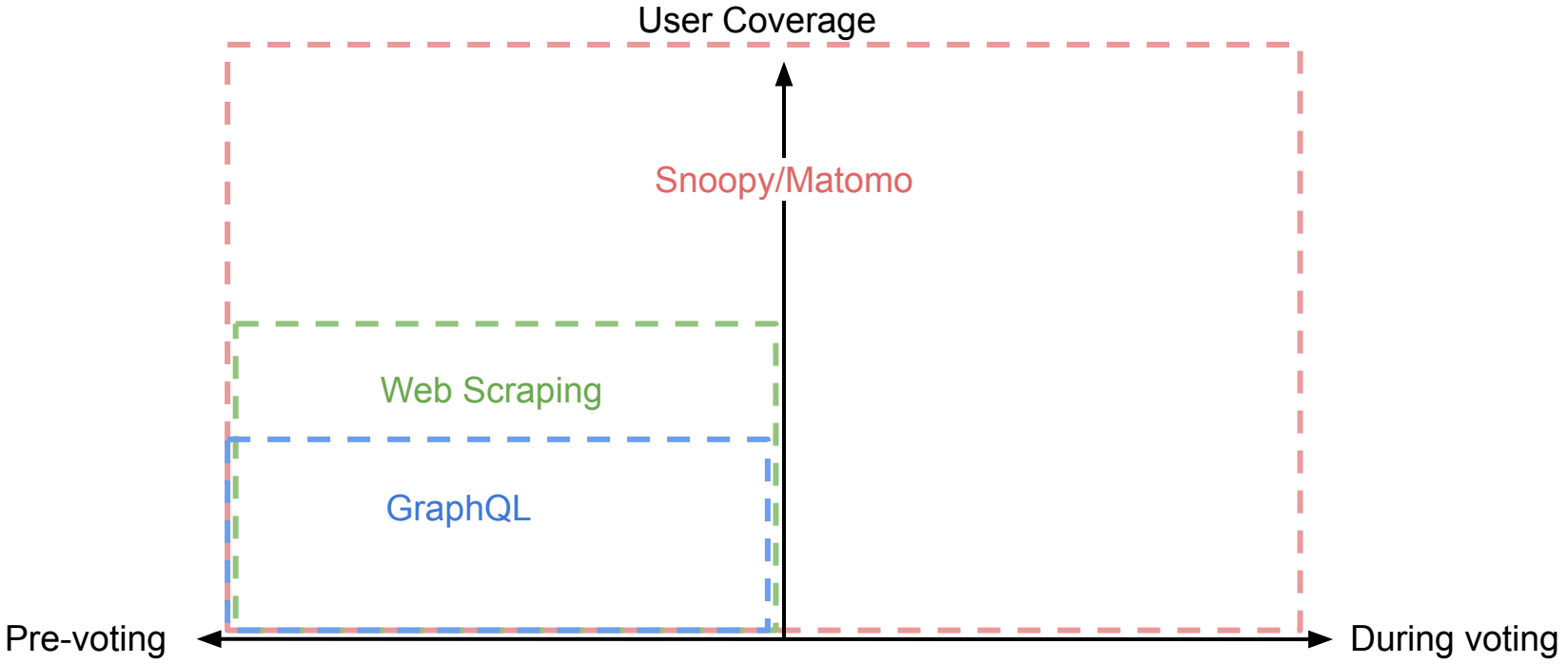
Lessons learned from OmaStadi 18/19

- User behaviour tracking
- Insights into how users engage with the website
- Data can make users identifiable
    - Requires safe handling of data
    - Close collaboration between practitioners and researchers



What is Evaluated?

Lessons learned from OmaStadi 18/19



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

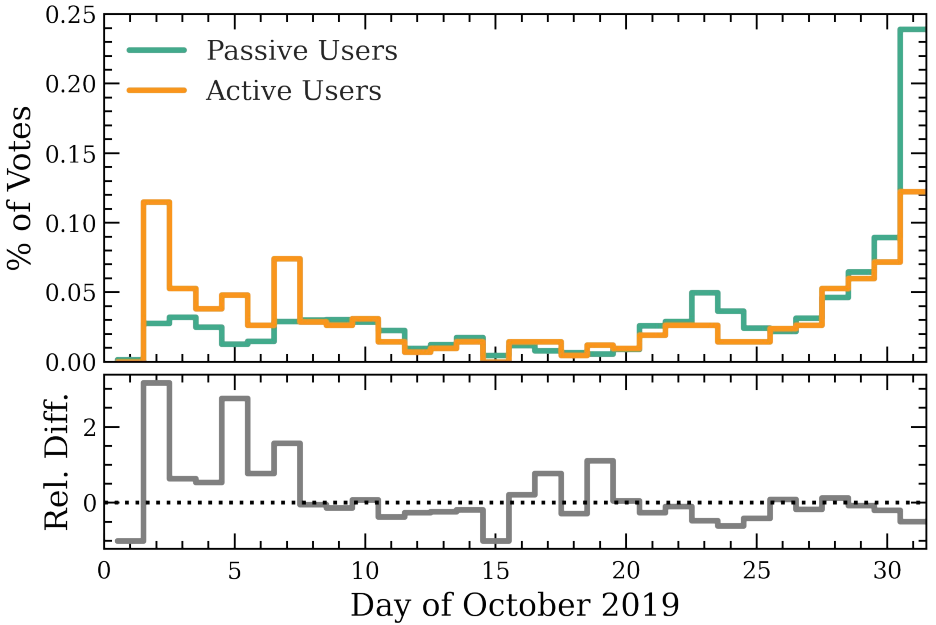
Time series analysis of votes

Passive User:

Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

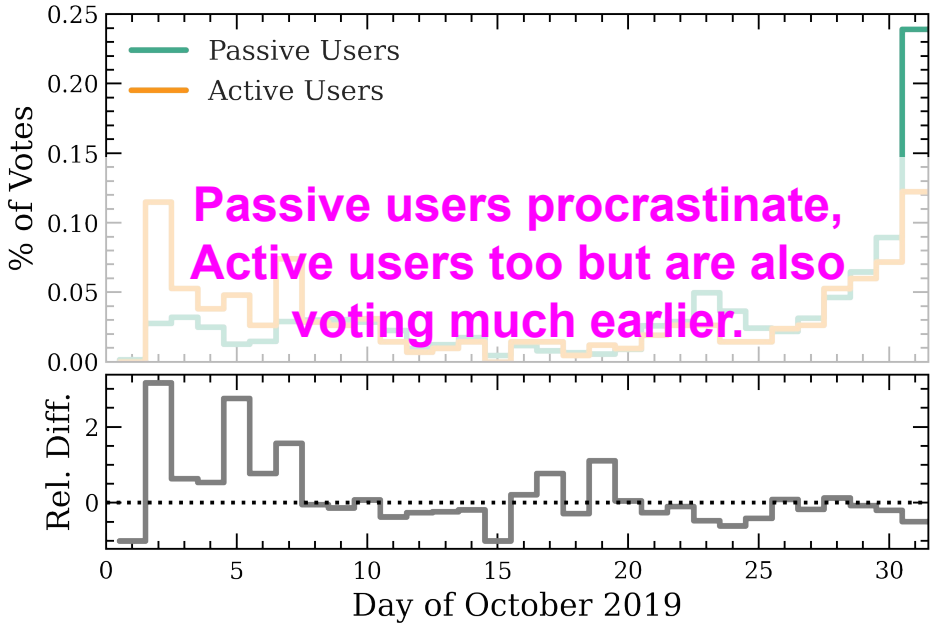
Time series analysis of votes

Passive User:

Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

Spatial analysis of users residence

Passive User:

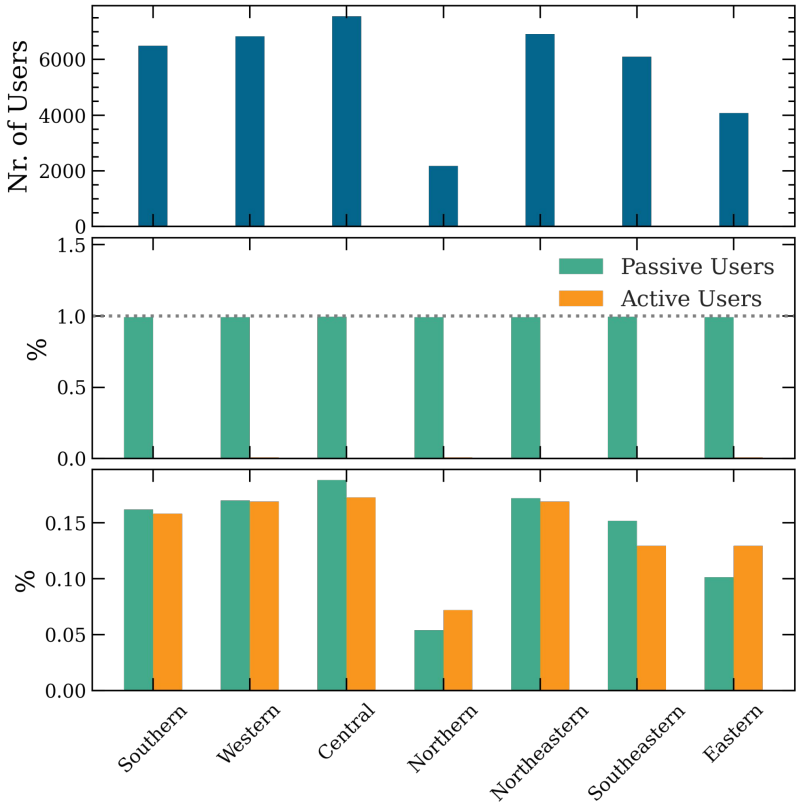
Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals

Of all users, how many belong to type

Of user type, how many live in area



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

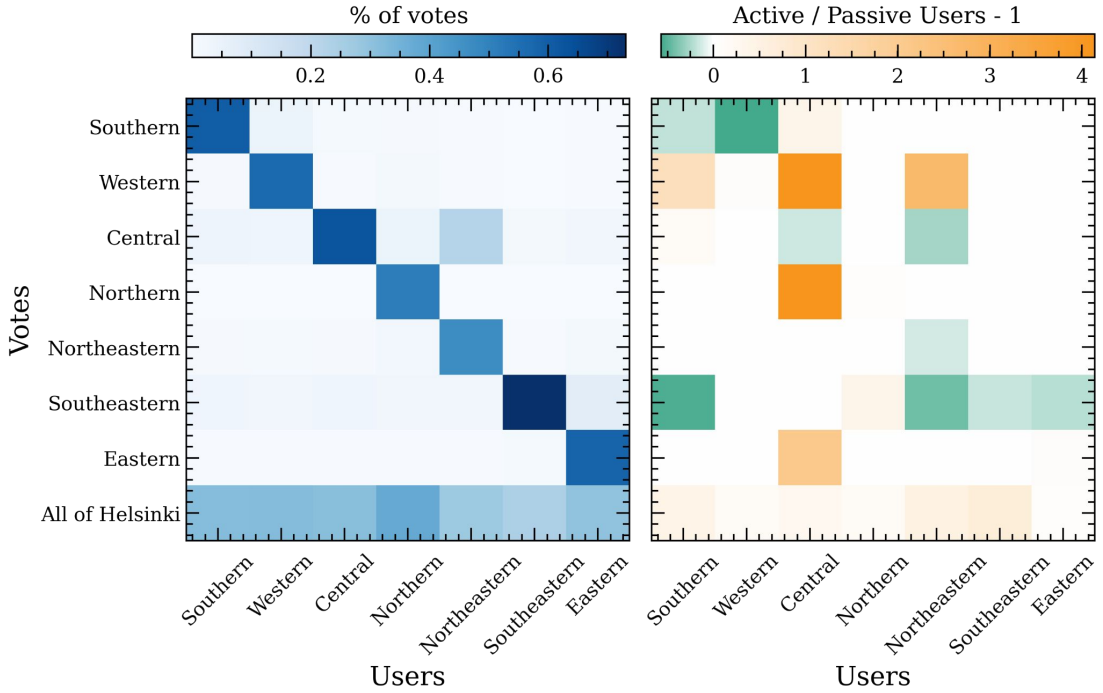
Spatial analysis of users residence and where want change

Passive User:

Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

Spatial analysis of users residence and where want change

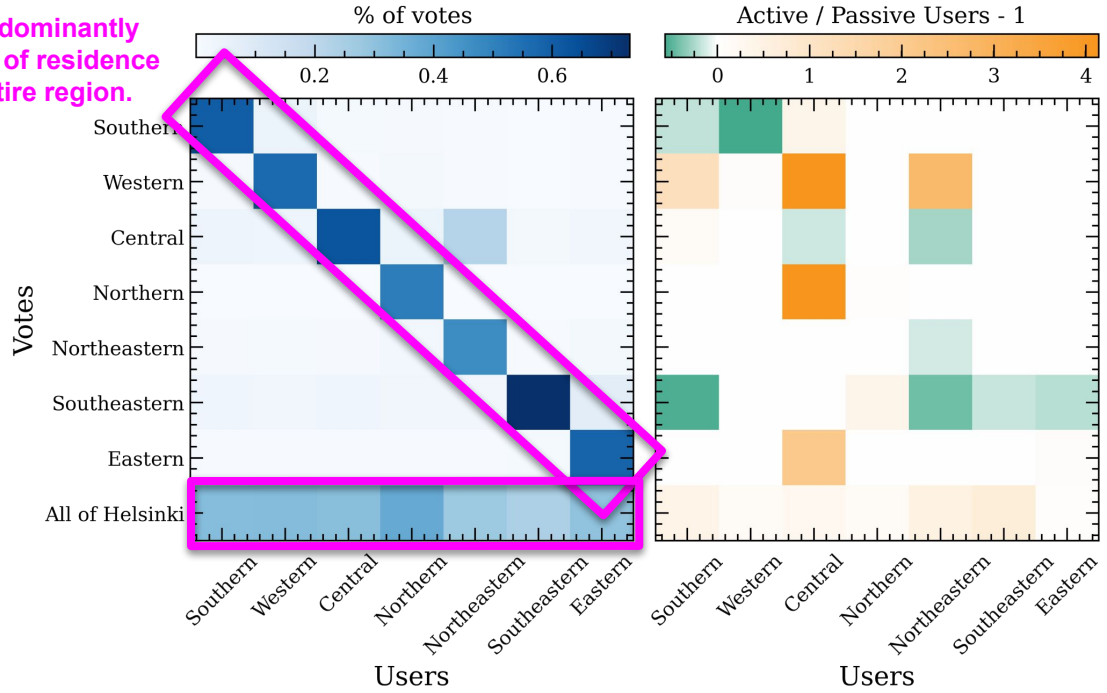
Passive User:

Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals

Users vote predominantly within their area of residence and for the entire region.



How to Evaluate using Snoopy and Matomo?

Lessons learned from OmaStadi 18/19

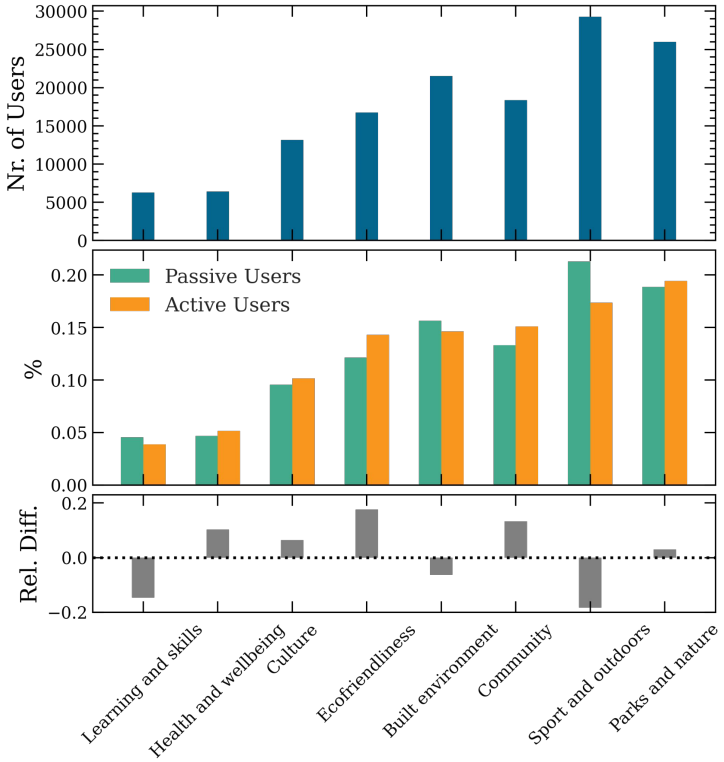
Spatial analysis of users residence

Passive User:

Users that only vote

Active User:

Users that vote and contribute with comments/idea/proposals



Discussion: how to make evaluation better?

Important to work with policymakers and consultants from the governments to decide what matters to them about evaluation

Each locality, with its unique culture, society, history, develops a specific set of possibilities and problems of digital technology

Questions:

What elements would be considered as good digital democracy for the Hiroshima prefecture, start-up and the Japanese public?

Which parts of digital participation are important for you to evaluate?

Christoph

Appendix: Webscraping for Kagogawa

Why Evaluate?

‘We are not *analysing* the world, we are *building* it.’
(Tim Berners-Lee, Message to W3C Technical Architecture Group mailing list, 2003)

‘We need social networks where bad things happen less.’
(Tim Berners-Lee, Interview with John Harris, The Guardian, 2021)

Yu-Shan