Elevate Your Research

The Fascinating World of Open Science Tools

Dr. Peter KrakerCo-created with Maxi Schramm

RUB Open Science Week 23 October 2023



Science



SARA GIRONI CARNEVALE

Scientists are drowning in COVID-19 papers. Can new tools keep them afloat?

Issues with research data discovery

"It involves **making phone calls and looking around in the web** and figuring it out where I can find the information that I need to answer that particular question"

Curty (2016). https://doi.org/10.2218/ijdc.v11i1.401

"I just search for keywords (in Google]) – prostate, MRI, segmentation...but it is not very effective. I can't remember a single instance when I found something useful. [...]"

Gregory et al. (2020). https://doi.org/10.1177/0165551519837182



Articles

About 210.000 results (0,03 sec)

Any time

Since 2020 Since 2019 Since 2016 Custom range...

Sort by relevance

Sort by date

include patents

include citations

Create alert

COVID-19: consider cytokine storm syndromes and immunosuppression

P Mehta, DF McAuley, M Brown, E Sanchez... - The Lancet, 2020 - thelancet.com As of March 12, 2020, coronavirus disease 2019 (COVID-19) has been con firmed in 125 048 people worldwide, carrying a mortality of approximately 3. 7%, 1 compared with a mortality rate of less than 1% from influenza. There is an urgent need for effective treatment ... ☆ 切 Cited by 586 All 6 versions

Presumed asymptomatic carrier transmission of COVID-19

Y Bai, L Yao, T Wei, F Tian, DY Jin, L Chen, M Wang - Jama, 2020 - jamanetwork.com Methods| In January 2020, we enrolled a familial cluster of 5 patients with fever and respiratory symptoms who were admitted to the Fifth People's Hospital of Anyang, Anyang, China, and 1 asymptomatic family member. This study was approved by the local ...

☆ 切り Cited by 693 All 5 versions

COVID-19 and Italy: what next?

A Remuzzi, G Remuzzi - The Lancet, 2020 - Elsevier

The spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has already taken on pandemic proportions, affecting over 100 countries in a matter of weeks. A global response to prepare health systems worldwide is imperative. Although containment ...

☆ 55 Cited by 476 All 35 versions

An interactive web-based dashboard to track COVID-19 in real time

E Dong, H Du, L Gardner - The Lancet infectious diseases, 2020 - thelancet.com In December, 2019, a local outbreak of pneumonia of initially unknown cause was detected in Wuhan (Hubei, China), and was quickly determined to be caused by a novel coronavirus, 1 namely severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The outbreak ...

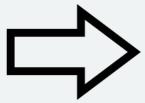
☆ 切 Cited by 572 All 7 versions



Dark Knowledge (Jeschke et al.)











WEB OF SCIENCE[™]



Scopus

The cycle of continuous innovation













Libraries,

Archives,

Repositories,

Aggregators















Value added services



Meta aggregators





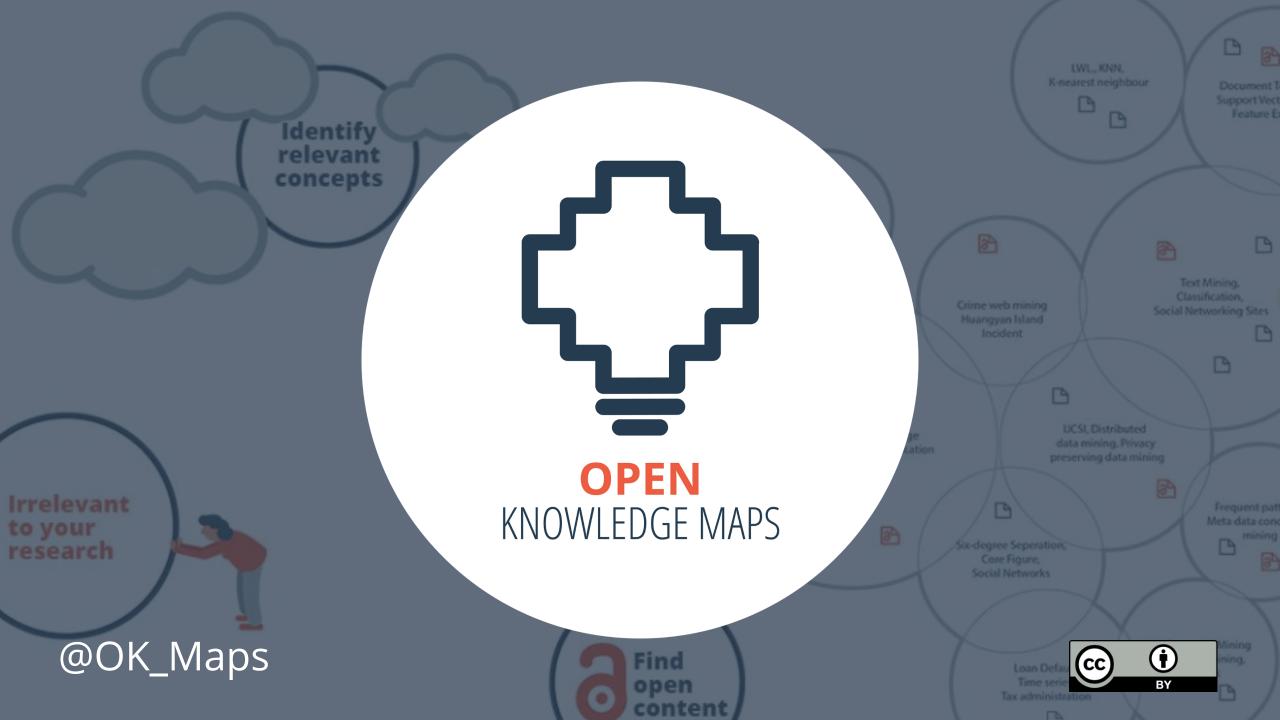












Who we are

Open Knowledge Maps

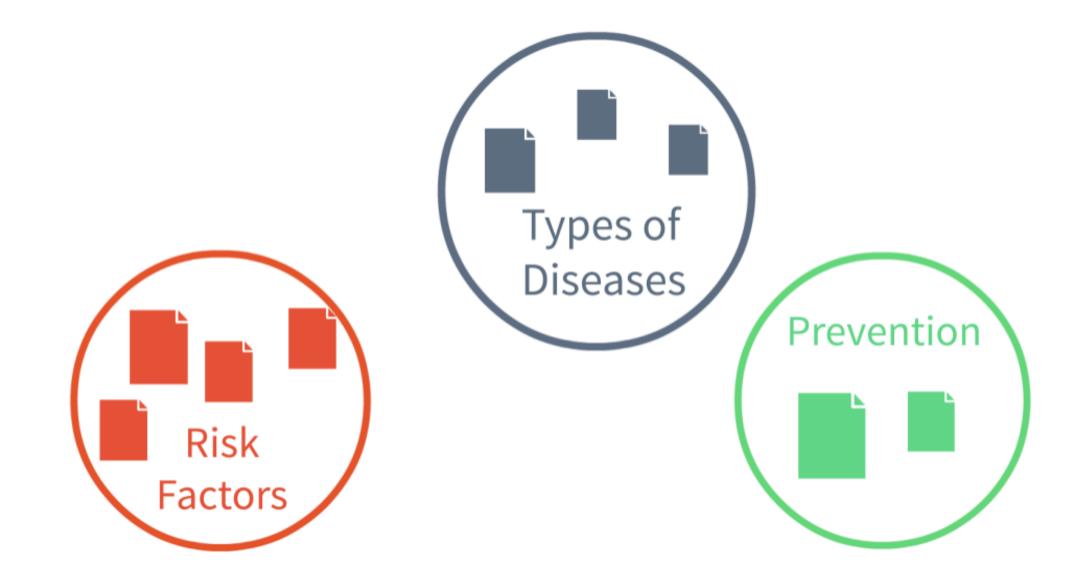
is a charitable non-profit organization

dedicated to dramatically improving the visibility of scientific knowledge

for science and society alike



Overview of heart diseases



240+ million documents n About Team Comi

Community

Projects

FΔC

Get in touch

Become a supporting member



Get an overview - Find papers - Identify relevant concepts



PubMed (life sciences) BASE (all disciplines)	
<u>Refine your search</u> ✓	
digital education	GO
Try out: digital education climate change AND impact	

What is Open Knowledge Maps?

https://openknowledgemaps.org

About

Team

Community Projects News

FAOs

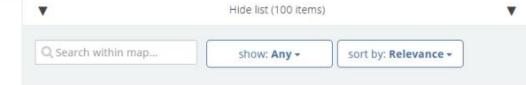
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100 most relevant documents (51 open access) Source: BASE Until 16 Feb 2021 Document types High metadata quality





Conceptualizing digital literacies and digital ethics for sustainability education

LINK %

S Brown in Brown, S 2014, 'Conceptualizing digital literacies and digital ethics for sustainability education 'International Journal of Sustainability in Higher Education, vol 15, no. 3, pp. 280-290. DOI:10.1108/IJSHE-08-2012-0078 (2014-08-14)

[link]: https://www.research.manchester.ac.uk/portal/en/publications/conce...

Purpose - The purpose of this paper is to discuss the need for integrating a focus on digital literacies and digital ethics into sustainability education, proposing a conceptualization of these for sustainability education. Design/methodology/approac...

Area: Rethinking digital literacy, Digital citizenship, Digital literacies

open access and

Digital Education And Learning: The Growing Trend In Academic And Business Spaces—An International Overview



P. K. Paul, P. S. Aithal (2018)

[doi]: https://doi.org/10.5281/zenodo.1292856

Abstract; The world becomes Digital day by day and thus activities, features and sectors and different spaces are highly associated with Digital Tools, Techniques and Technologies. Education domain becomes highly technology enabled in recent past an...

Area: Digital natives, Digital technology, Digital education revolution

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Team

Community

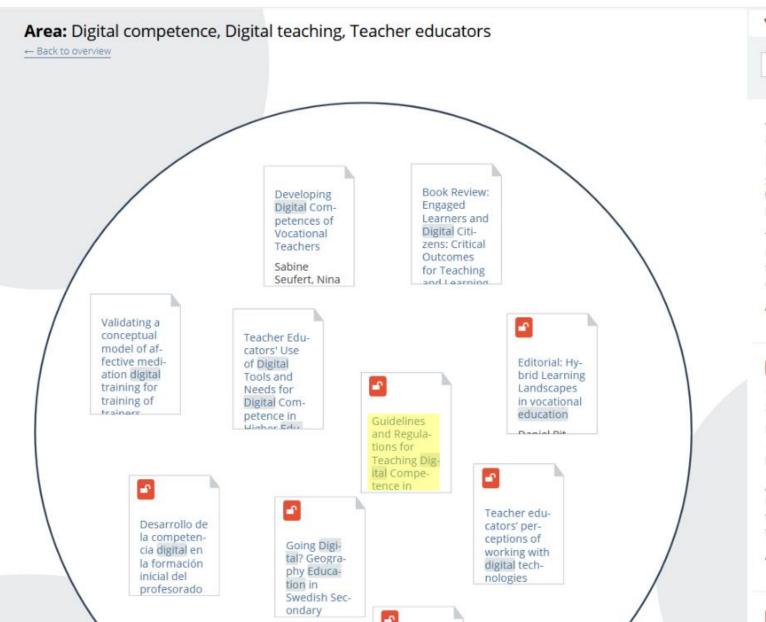
Projects

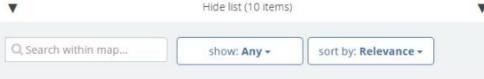
News

FAOs

Get in touch

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Validating a conceptual model of affective mediation digital training for training of trainers (TOT) in education through expert reviews

Siti Nurhazzalilla Omar, Sobihatun Nur Abdul Salam, Fauziah Abdul Rahim (2019)

[link]: http://repo.uum.edu.my/26995/

Training on affective mediation to TOT using digital tool is needed to motivate trainers to learn. However, to develop a digital training tool that will meet the training's objectives has require a model to be based on. Thus, this paper describes the...

Area: Digital competence, Digital teaching, Teacher educators



Guidelines and Regulations for Teaching Digital Competence in Schools and Teacher Education: A Weak Link?

Bård Ketil Engen, Tonje Hilde Giæver, Louise Mifsud in Nordic Journal of Digital Literacy, Vol 10, Pp 69-83 (2015) (2015-01-01T00:00:00Z)

[link]: https://doaj.org/article/141634970a3547bba0b28dd852322600

Abstract Teacher education has recently been criticised for not fulfilling its obligation to adequately prepare teachers to utilise digital tools in the classroom. In this paper, we raise the question of why Norwegian teacher education does not prepa...

Area: Digital competence, Digital teaching, Teacher educators



Teacher educators' percentions of working with digital tech-

LINK %



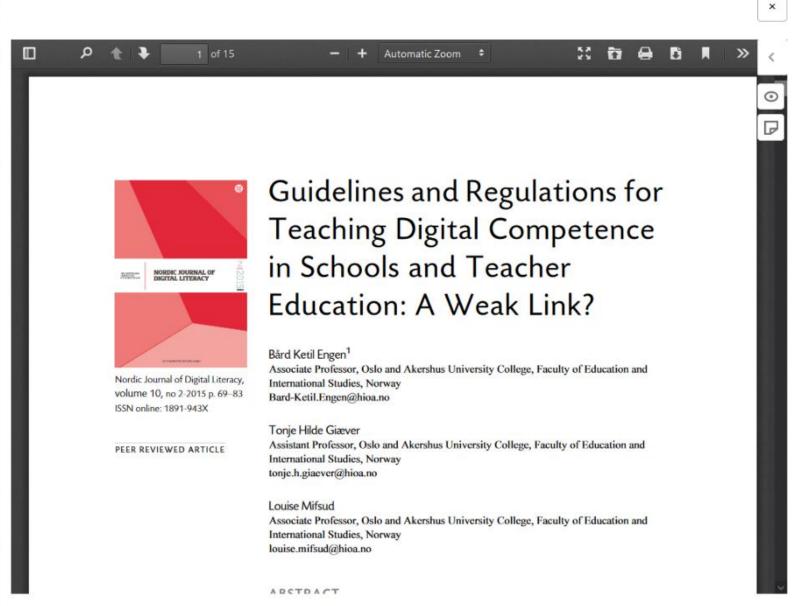
Area: Digital competence

← Back to overview

Validating a conceptual model of affective mediation digital training for training of



Desarrollo de la competencia digital en la formación inicial del



sort by: Relevance -

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in Nordic Journal of Digital

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Advantages

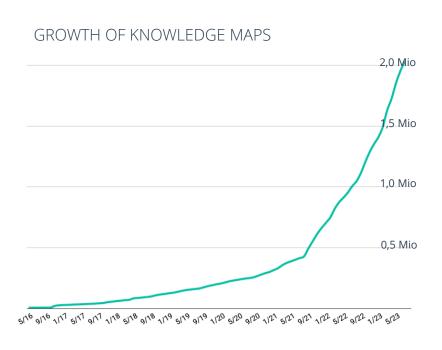


The story so far

We are the largest visual search engine for research







2+ million knowledge maps created

100,000+ monthly visits

200+ countries and territories





FEATURED IN

nature













AWARDS





How it works



An Open Knowledge Maps visualization presents you with a **topical overview** for your search term. It is **based on the most relevant documents** from either **BASE** or **PubMed** for your search term.



We operate an **artificial intelligence (AI) pipeline** to create the knowledge maps. The pipeline combines natural language processing methods to aggregate and display publications according to similarity in topics.

All of our services are free & open



Our offering includes:

- ✓ Al-based search and discovery services
- ✓ Integrations for BASE, PubMed, and OpenAIRE
- **✓ New!** Institutional integration via Custom Services
- ✓ A wide range of training activities and materials
- Our award-winning visualization software
- ✓ Community support & engagement programs









Select projects



TRIPLE - The multilingual discovery platform for the social sciences and humanities

EU Horizon 2020



enKORE - Towards an open, zoomable atlas for invasion science and beyond

VolkswagenStiftung: Offen - für Außergewöhnliches



Frontend Refactoring - A sustainable technological foundation for the Open Knowledge Maps frontend

eLife Innovation Initiative

Supporting members











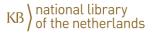






































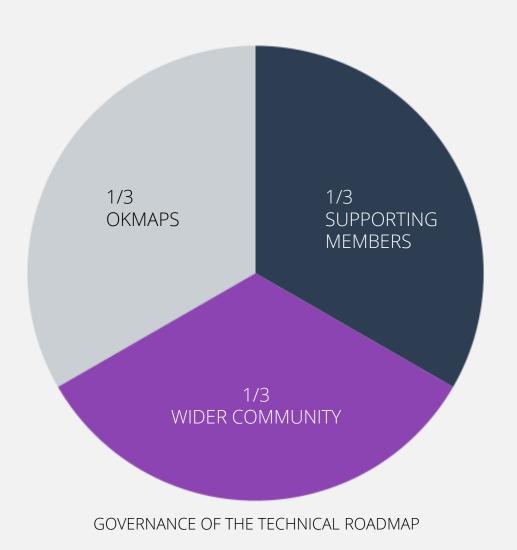








Participatory approach



This means:

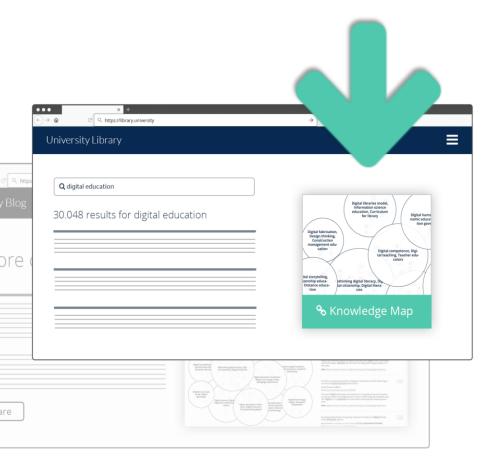
- Open licences for content, data, and source code
- Co-creation of platform with our community
- Community involvement in governance
- Equitable balancing of stakeholder needs
- ✓ Community-based engagement & funding
- Easy integration in community infrastructure



Custom Services



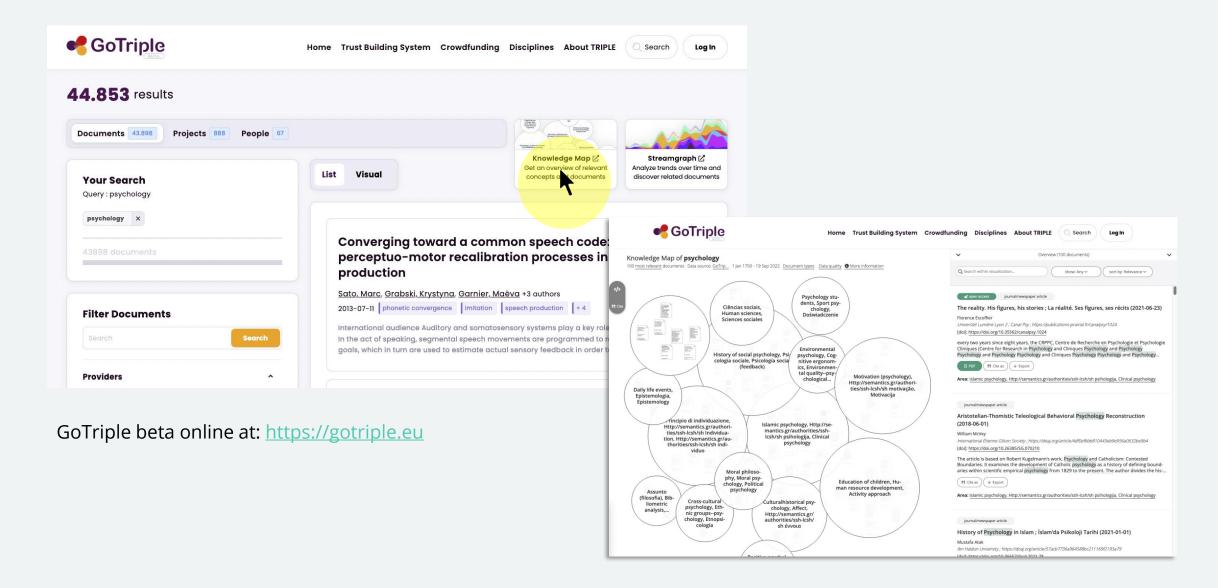
Custom Services in a nutshell



Integrate Al-driven discovery in your own offering

- Embed Open Knowledge Maps services in your own discovery systems based on your own data sources
- Provide attractive, visual entry points to your holdings
- Available as easy-to-install cloud components
- Co-created with our supporting members and community

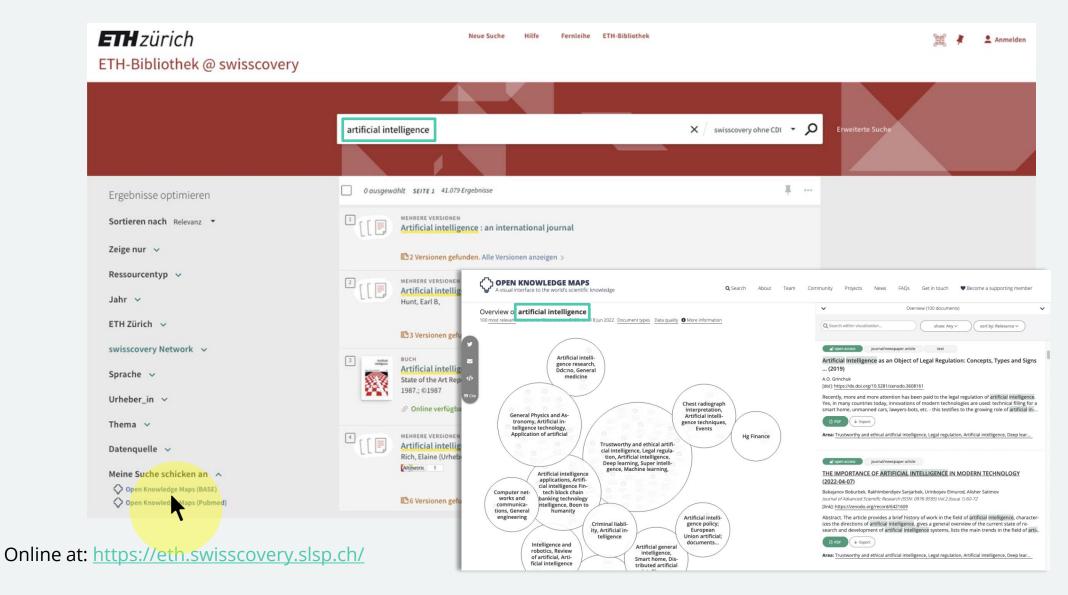
Example: GoTriple integration



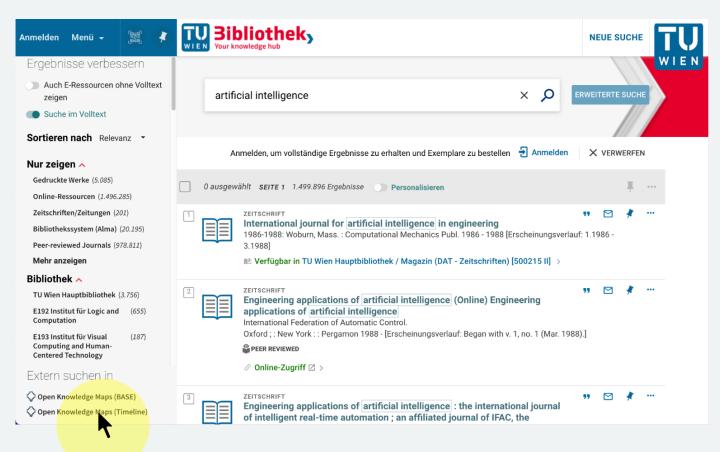
Use cases

Complement existing discovery systems such as a library catalog or a document search

Example: ETH Library integration

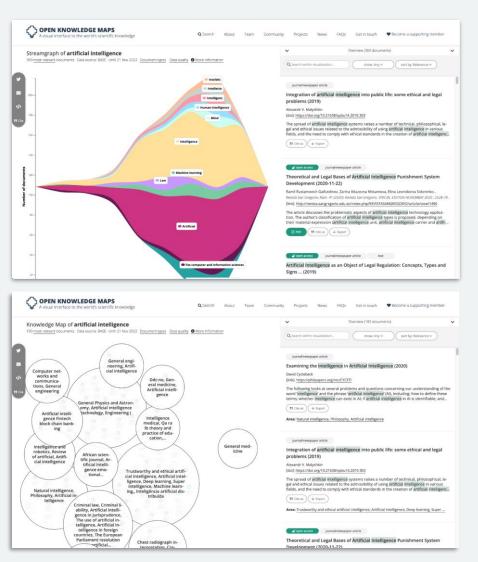


Example: TU Wien integration



Online at:

https://catalogplus.tuwien.at/

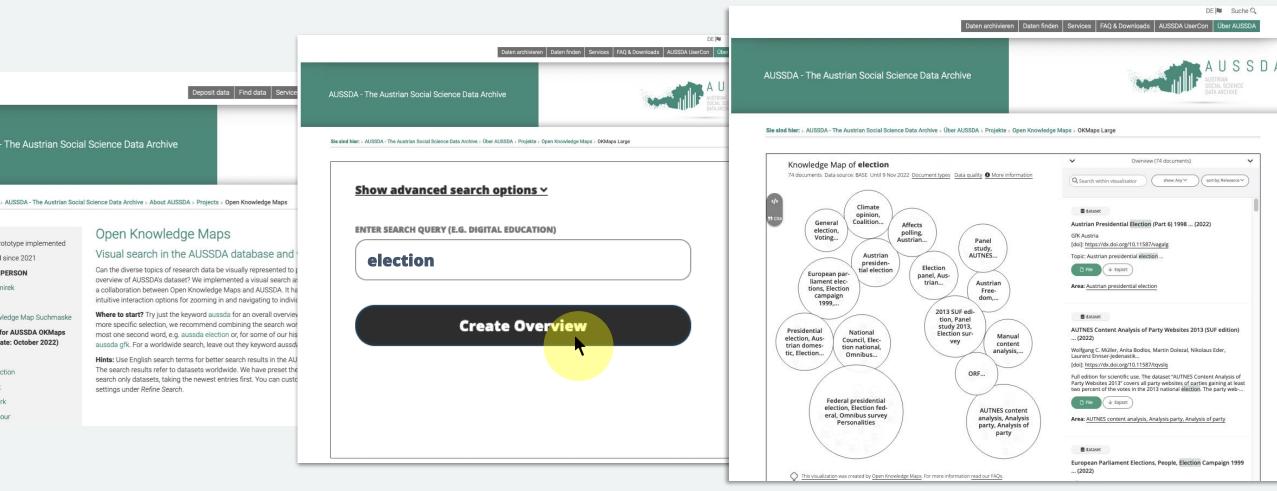


Use cases

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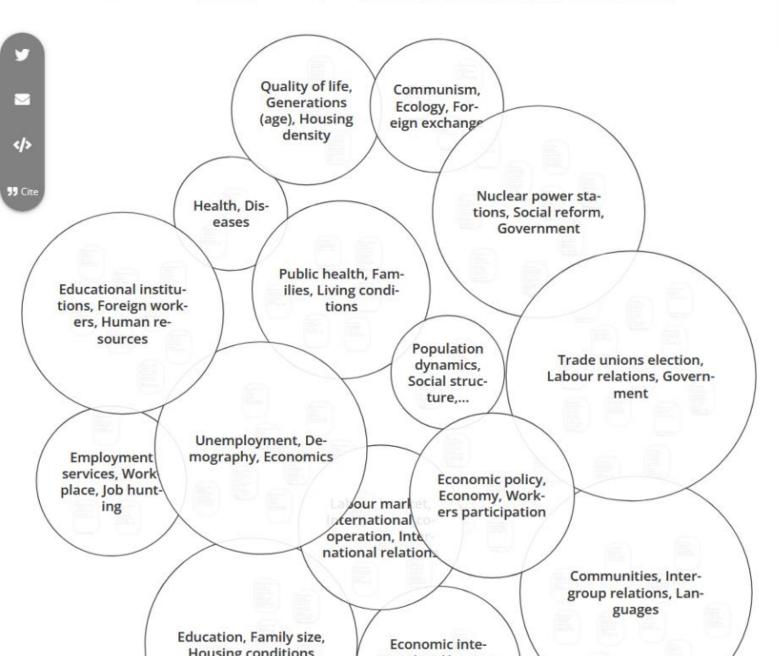
Make resources other than journal articles (e.g. preprints, research data, software) more visible and better discoverable

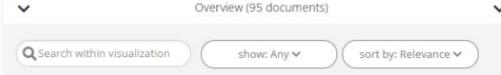
Example: AUSSDA - The Austrian Social Science Data Archive



Knowledge Map of labour

95 documents Data source: AUSSDA... Until 25 Aug 2023 Document types All lang Data quality • More information





Microcensus Ad-Hoc-Module 'Transition from work to retirement' 2012 (SUF edition) (2022-02-17)

Statistics Austria

Population group

[doi]: https://doi.org/10.11587/5ZCVJY

Full edition for scientific use. In addition to the core variables of the Microcensus Labour Force Survey (LFS), the LFS also has so-called ad-hoc-modules (AHM) that can vary from year to year. The EU-LFS ad-hoc-module 2012 on 'Transition from...



Area: Education, Family size, Housing conditions

Microcensus Labour Force Survey / Housing Survey 2022 (SUF edition) (2022-06-30)

Statistics Austria

Population group

[doi]: https://doi.org/10.11587/XSWWSL

Full edition for scientific use. With about 20,000 households surveyed per quarter the Microcensus is the largest regularly conducted sample survey in Austria. It is an important data source for national and international labour market indicators.



Area: Unemployment, Demography, Economics

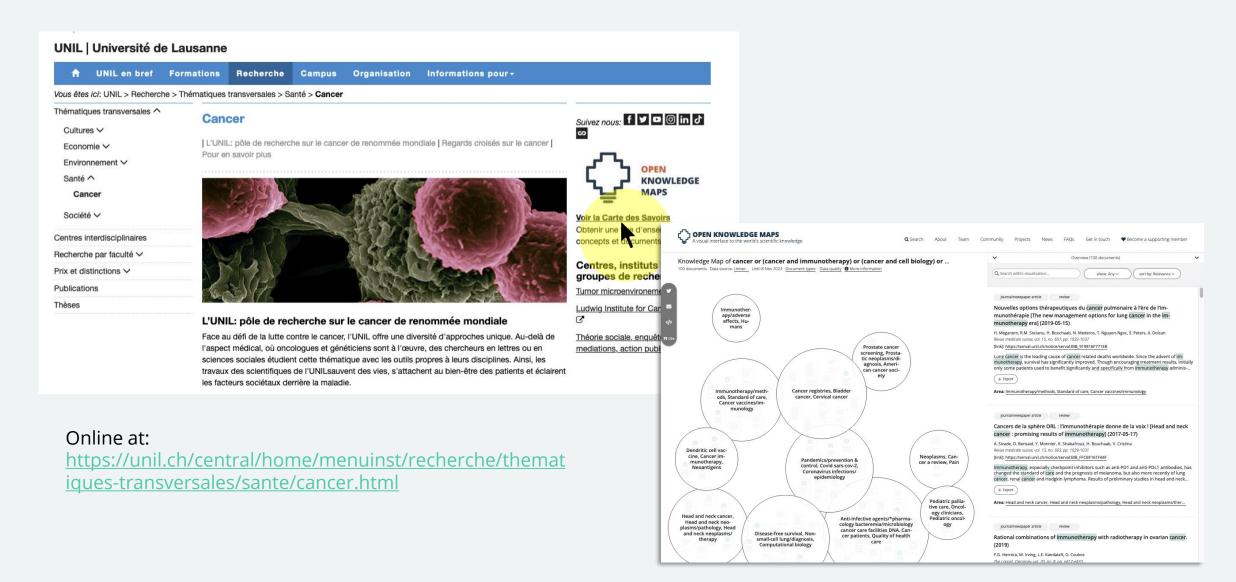
Use cases

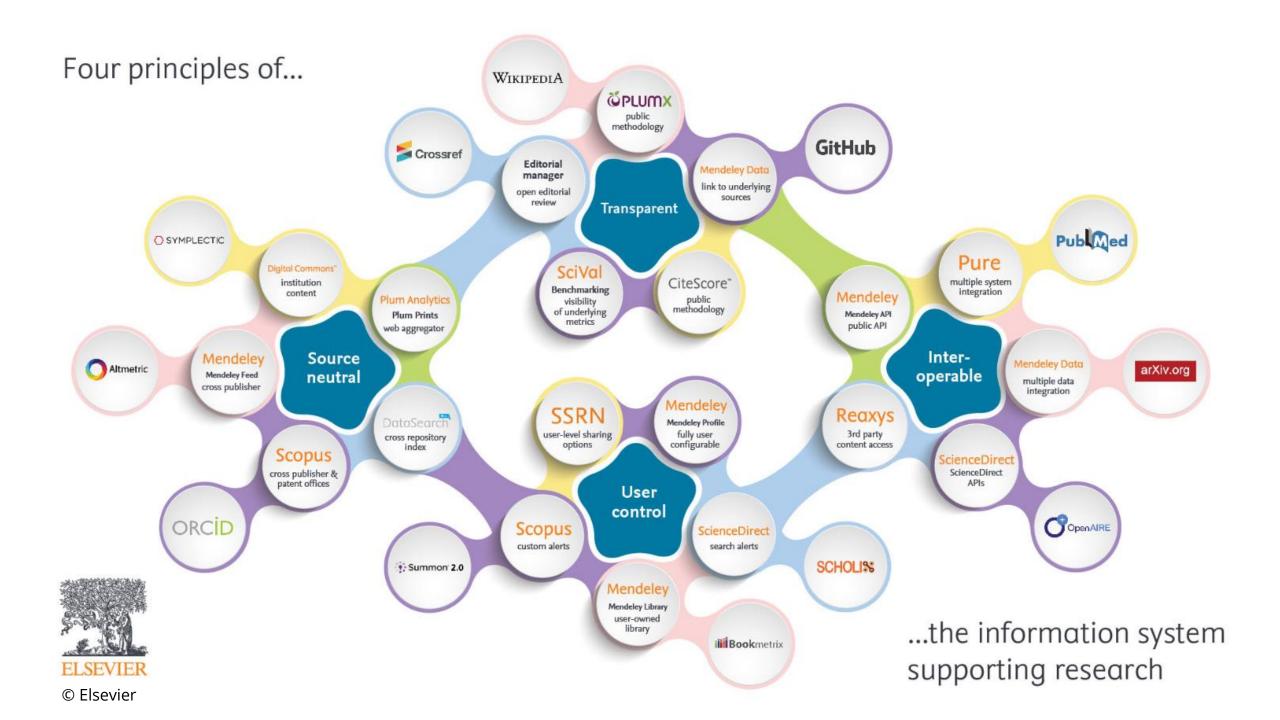
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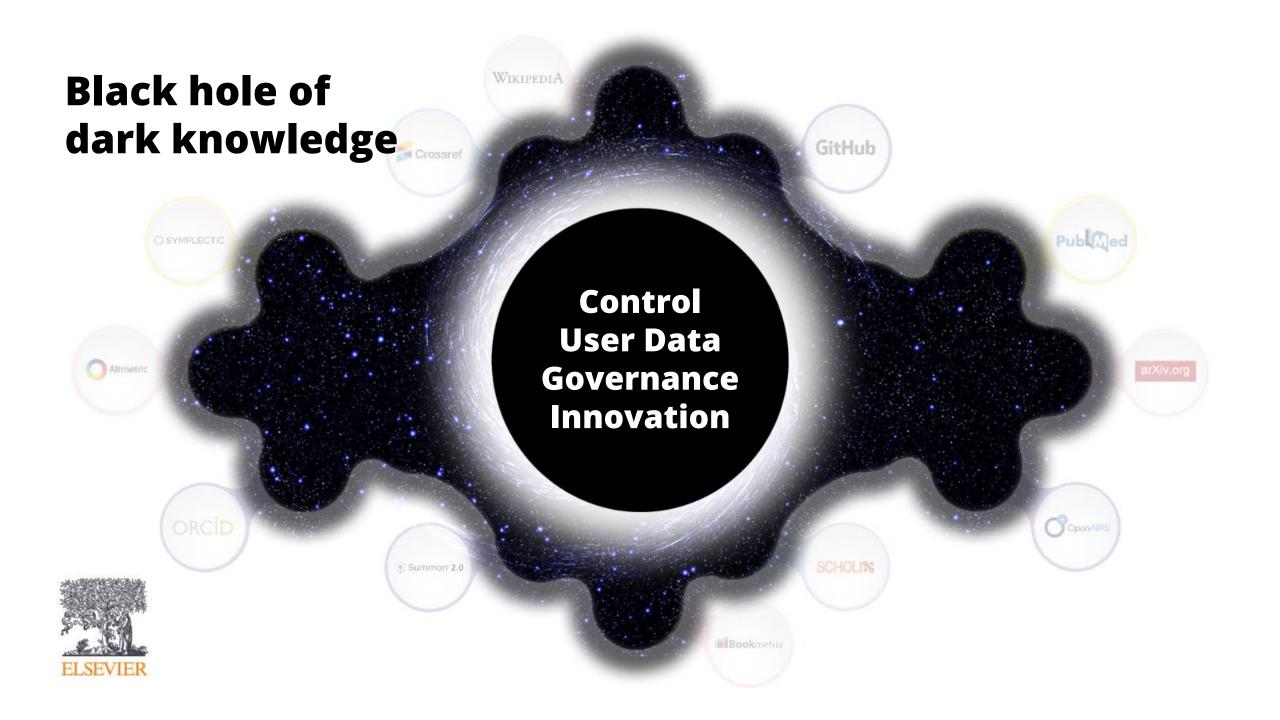
Integrate visual overviews in other areas of your digital services, such as a news page or a research collection

Example: UNIL integration









A: 3.4% of RELX's CEO's yearly salary

B: Google's revenue from advertising, every 150 microseconds

C: Est. revenue of Nature Communications every three days

= €321,000?

A: 3.4% of RELX's CEO's yearly salary

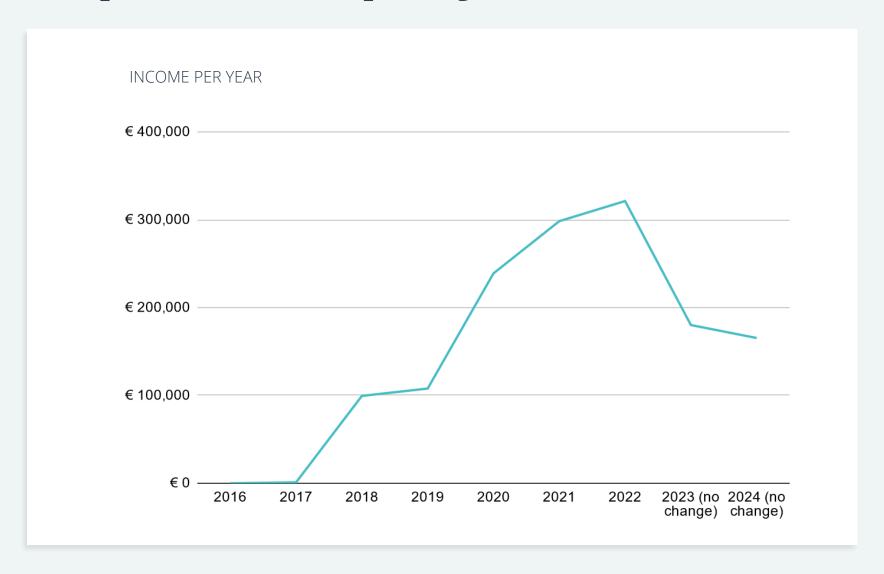
B: Google's revenue from advertising, every 150 microseconds

C: Est. revenue of Nature Communications every three days

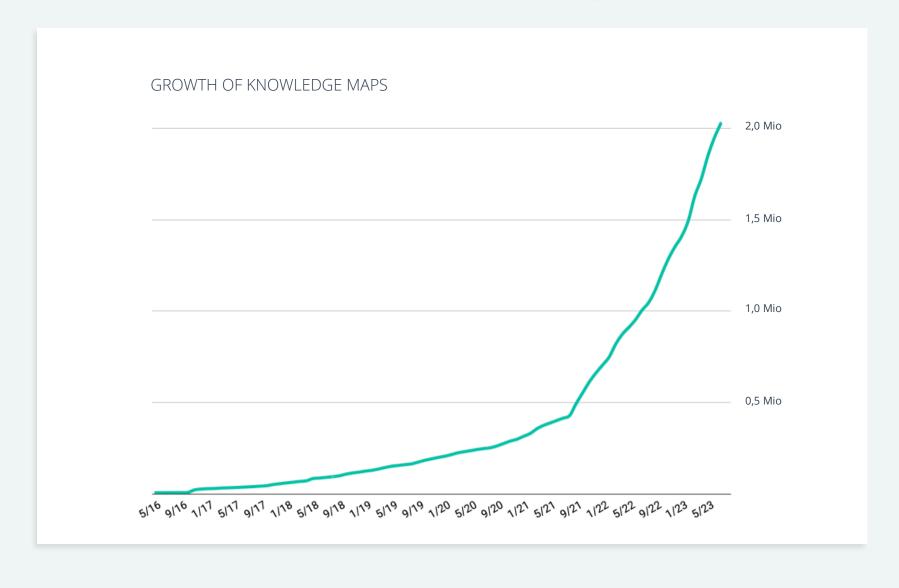
= €321,000!

D: The total income of Open Knowledge Maps in 2022, including collaboration projects

OKMaps income per year



Growth of knowledge maps



Let's make the open infrastructure sustainable!

DontLeaveltToGoogle
DontLeaveltToClarivate
DontLeaveltToElsevier

What can you do to support open infrastructures?

- Suggest to your library that they support open infrastructures that you find useful
- 2. Complain to your library about **problems** and bugs of proprietary software and services

That's it – plain and simple!

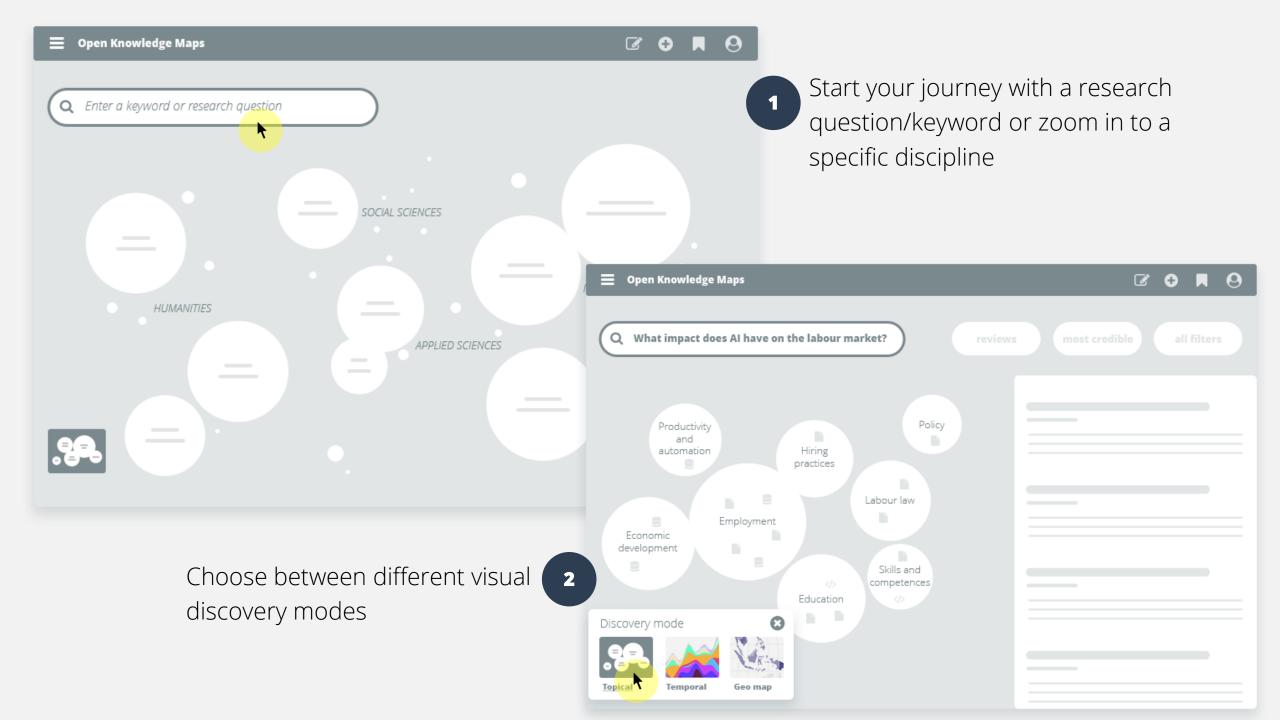
Our future vision

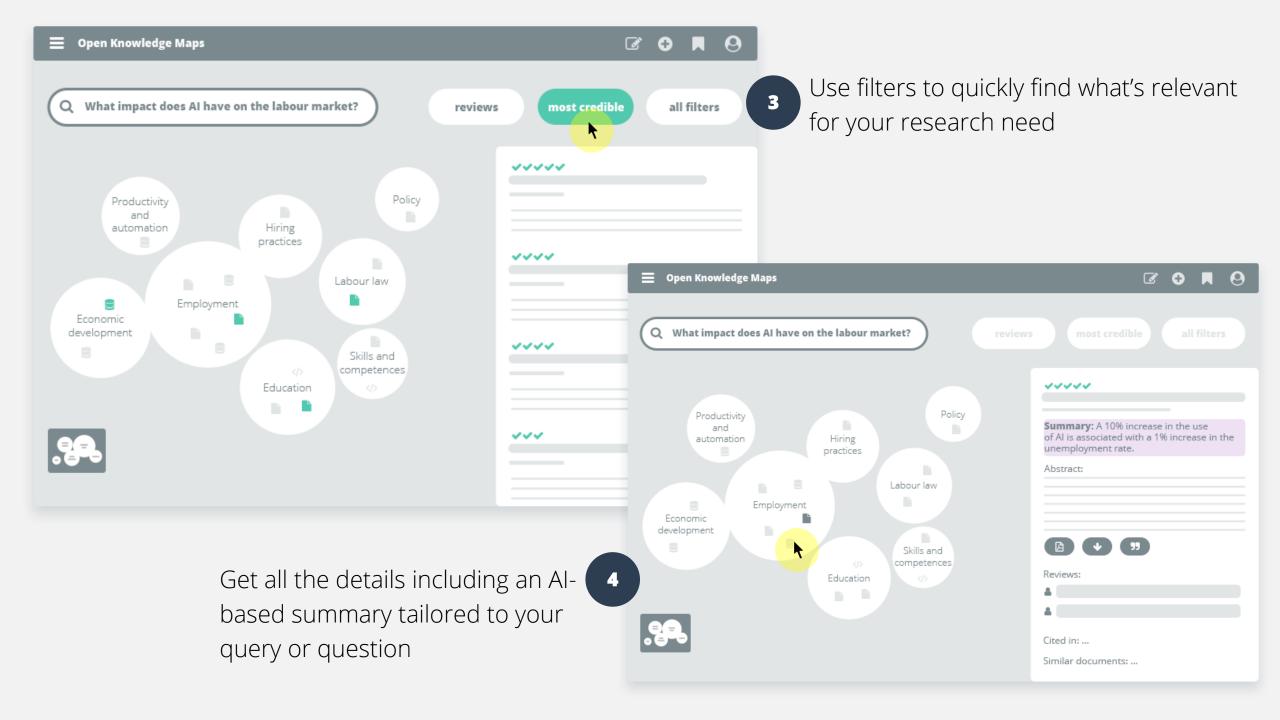


Interactive maps like Google Maps are used for much more than traditional maps and GPS devices. They are often the first choice to find relevant places for a certain need (e.g. a restaurant). They enable users to explore areas, even simulating a stroll down the street. In essence, they are **visual discovery engines for the physical world.**

Now imagine a system where you can discover knowledge in very much the same way.

This is our vision for the future of Open Knowledge Maps.





Thank you for your attention!

Contact

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Dr. Peter Kraker
Founder & Chairman
pkraker@openknowledgemaps.org

