



# Open Knowledge Maps

## Discovery for an Open Science

**Dr. Peter Kraker**

Co-created with Maxi Schramm

Focus on Open Science  
Kaunas, 29 October 2019



The 2014-2016 **Ebola** epidemic in West Africa claimed more than 11,000 lives

**It could have been prevented using public knowledge**

## Opinion

OP-ED CONTRIBUTORS

# Yes, We Were Warned About Ebola

By Bernice Dahn, Vera Mussah and Cameron Nutt

April 7, 2015

“The results seem to indicate that Liberia has to be included in the Ebola virus endemic zone.”

Knobloch et al. 1982

There is an adage in public health: “**The road to inaction is paved with research papers.**”

**Uncitedness (publications):**  
**12% - 82%** (Larivière & Gingras 2009)

**Uncitedness (data):**  
**85%** (Peters et al. 2016)

**Transfer to practice (medicine):**  
**14%, taking 17 years** (Balas 1998)

# Dark Knowledge

(Jeschke et al.)



**There is a discoverability crisis**  
that negatively impacts effectiveness & efficiency  
of science, and its transfer to practice.

## Scholar

About 2,450,000 results (0.05 sec)

[Articles](#)

[CITATION] Time for Results: Task Force on Leadership and Management  
, ... Task Force on Educational Technology... - 1986 - National Governors' Association ...  
Cited by 385 Related articles Cite

[Legal documents](#)[Any time](#)[Since 2012](#)[Since 2011](#)[Since 2008](#)[Custom range...](#)

[Thinking Technology: Toward a Constructivist Design Model.](#)

DH Jonassen - [Educational technology](#), 1994 - ERIC

Abstract: Discussion of constructivism and instructional design focuses on the development of a design model for constructivist environments that supports the construction of knowledge, a meaningful context for learning, and collaboration among learners and with ...  
Cited by 918 Related articles BL Direct Cite More ▾

[Sort by relevance](#)[Sort by date](#) include patents include citations Create alert

[Conditions That Facilitate the Implementation of Educational Technology Innovations.](#)

DP Ely - [Educational Technology](#), 1999 - ERIC

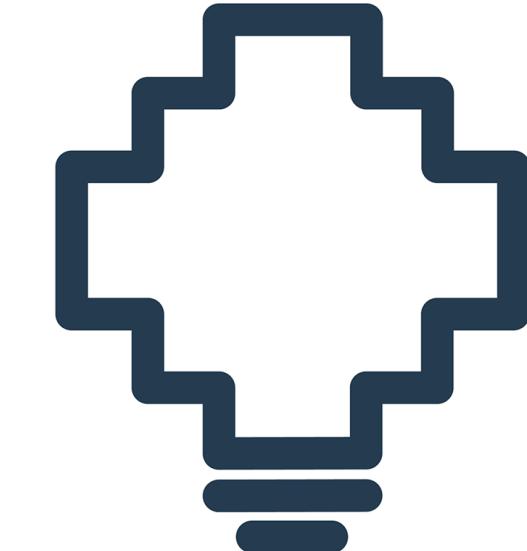
Abstract: Describes eight conditions that facilitate implementation of the **technology**-based change process: dissatisfaction with the status quo, existence of knowledge and skills, availability of resources, availability of time, existence of rewards or incentives, ...  
Cited by 211 Related articles BL Direct Cite More ▾

[BOOK] [Integrating educational technology into teaching](#)

MD Roblyer, J Edwards, MA Havriluk - 2006 - [lavoisier.fr](#)

... Imprimer la notice. Integrating **educational technology** into teaching (4th ed.). Auteur : ROBLYER Margaret. Prix indicatif 89,72 €. Disponible chez l'éditeur (délai d'approvisionnement : 10 jours). ... Paperback. Sommaire d'Integrating **educational technology** into teaching (4th ed.) : ...  
Cited by 1314 Related articles All 14 versions Cite More ▾

Gooooooooogle ►



# OPEN KNOWLEDGE MAPS

@OK\_Maps

Identify  
relevant  
concepts

irrelevant



LWL., KNN,  
K-nearest neighbour



Document Term Matrix,  
Support Vector Machine,  
Feature Extraction



Text Documents,  
Text Mining,  
Affinity Propagation



Text Mining,  
Classification,  
Social Networking Sites



ESI, Distributed  
data mining, Privacy  
preserving data mining



Frequent patterns,  
Meta data conceptual  
mining



K-means,  
J48, Hotspot



Loan Default,  
Time series,  
Tax administration



Web Structural Mining  
(WSM), Data mining,  
Hyperlink



# Who we are



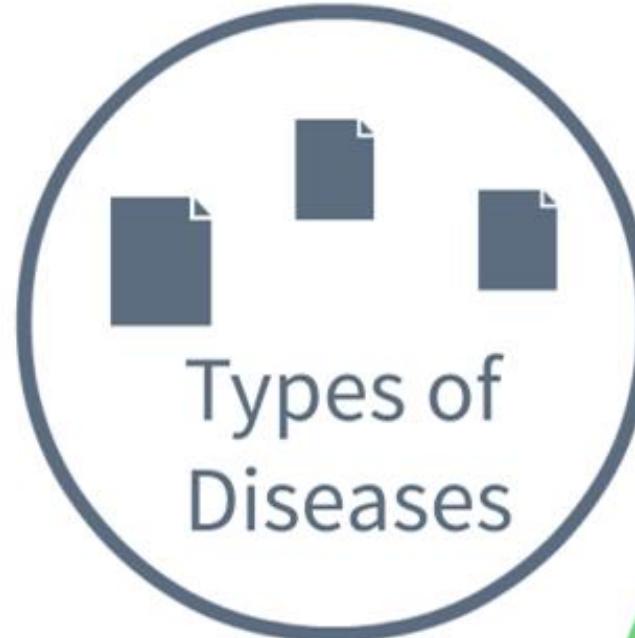
Open Knowledge Maps is  
**a charitable non-profit organization**

dedicated to dramatically **improving**  
**the visibility of scientific knowledge**

for **science and society alike**

# Overview of heart diseases

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beta

# Map a research topic

Get an overview - Find papers - Identify relevant concepts



**PubMed** (life sciences)

**BASE** (all disciplines)

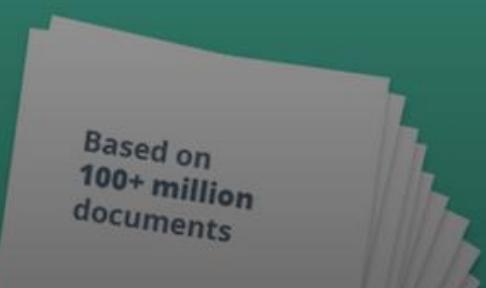
[Refine your search ▾](#)

Enter your search term

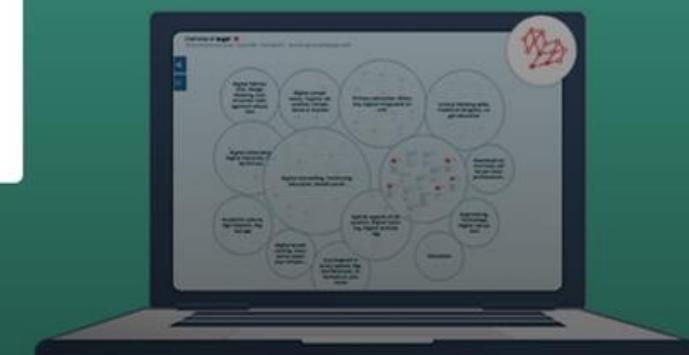
GO

Try out: [sugar](#) [digital education](#)

[What is Open Knowledge Maps?](#)



Based on  
100+ million  
documents



<https://openknowledgemaps.org>

# Advantages



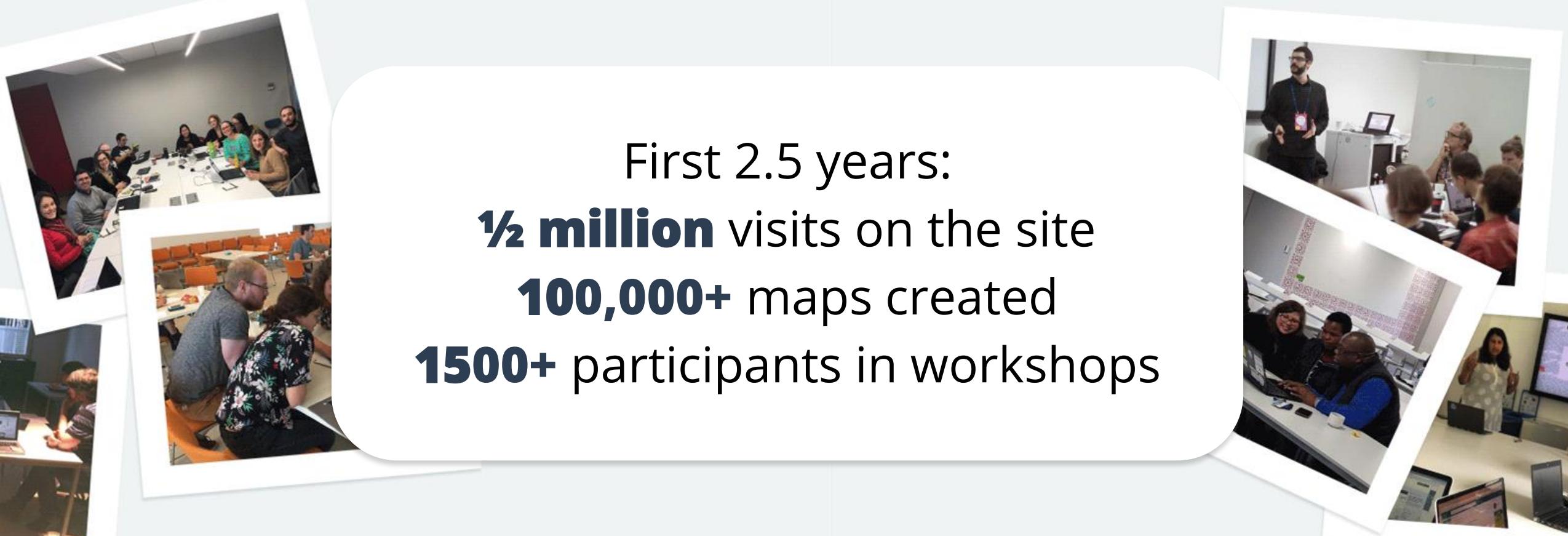
# Largest visual search engine for research

First 2.5 years:

**½ million** visits on the site

**100,000+** maps created

**1500+** participants in workshops



# All of our services are free & open



## Our offering includes:

- ✓ Innovative search and discovery services
- ✓ Integrations for BASE, PubMed, and OpenAIRE
- ✓ A wide range of training activities and materials
- ✓ Our award-winning visualization software
- ✓ Community support & engagement programs



# Core Team



**Peter Kraker**  
Founder & Chairman



**Maxi Schramm**  
UX Designer & Treasurer



**Christopher Kittel**  
Data Scientist & Secretary



**Asura Enkhbayar**  
Software Architect



**Scott Chamberlain**  
Data Sources



**Rainer Bachleitner**  
Frontend Developer



**Fabian Kraut**  
Marketing



**Najmeh Shaghaei**  
Community Coordinator



**Björn Brembs**  
Requirements & Evalu-  
tion



**Thomas Arrow**  
Frontend Developer



**Know Center**  
Organizational member



Ludwig Boltzmann Gesellschaft

**Ludwig Boltzmann Gesellschaft**  
Supporting member

# Advisors



Peter  
Murray-Rust



Stefanie  
Lindstaedt



Natalia  
Manola



Klaus  
Tochtermann



Bertil F.  
Dorch



Katja Mayer



Falk  
Reckling



Claudia  
Garad



Birgit  
Schmidt



Elena Giglia



Daniel  
Mietchen



Isabella  
Peters



Michael E.  
Karpeles



Elisabeth  
Lex



Osman  
Aldirdiri



Lambert  
Heller



Michela  
Vignoli



Christian  
Schlogl



Stefan  
Kasberger



Stefanie  
Haustein



Andreas  
Ferus



Tony Ross-  
Hellauer



Christine  
Zhang



Sebastian  
Dennerlein



Antica  
Culina



Robert  
Gutounig

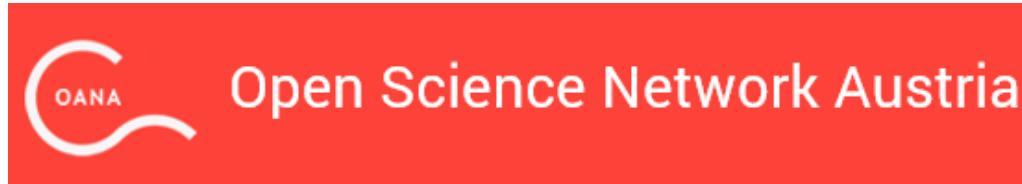


Daniel  
Drler



Christian  
Kaier

# Networks



# **Strong Partnership with Libraries**

Librarians are among **our most important advisors and partners**

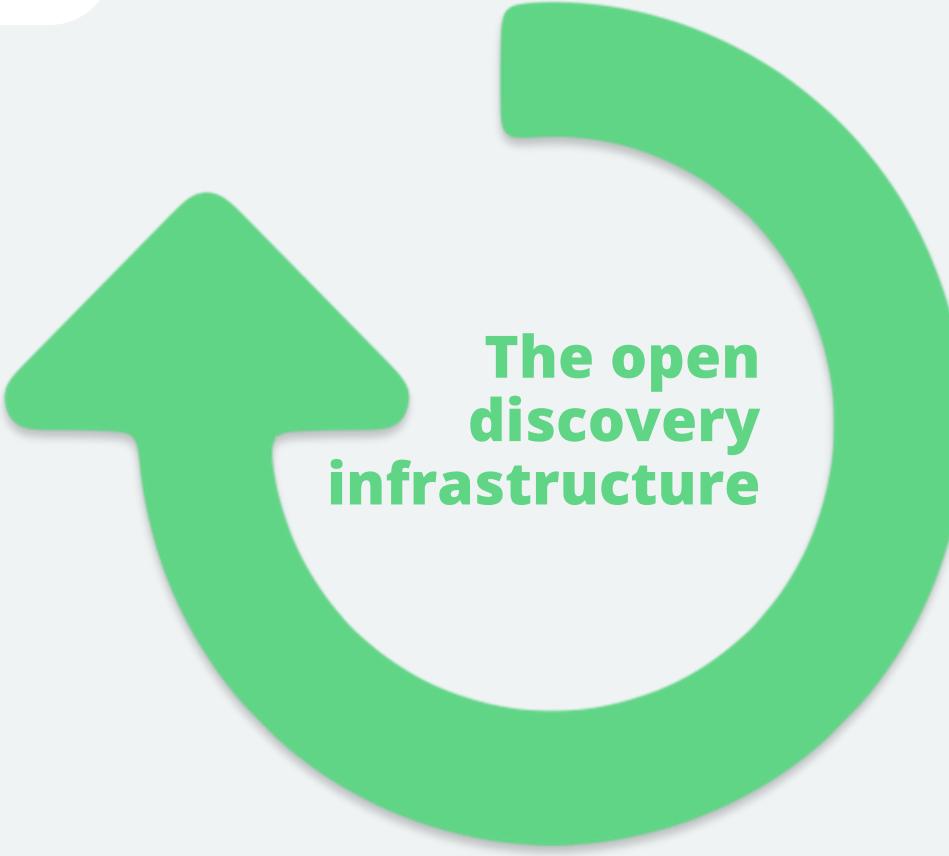
**We increase the visibility of library content** by including sources that many commercial products do not index

**We collaborate with libraries** to develop innovative open source projects

# The cycle of continuous innovation



Institutions, Researchers,  
Publishers



ORCID

unpaywall





# DISCOVERY



gesis

Leibniz Institute  
for the Social Sciences

ALEXANDER VON HUMBOLDT  
INSTITUTE FOR INTERNET  
AND SOCIETY



... net7 ...



OPERAS  
open access in the european research  
area through scholarly communication



ZBW  
Leibniz-Informationszentrum  
Wirtschaft  
Leibniz Information Centre  
for Economics



# Four principles of...



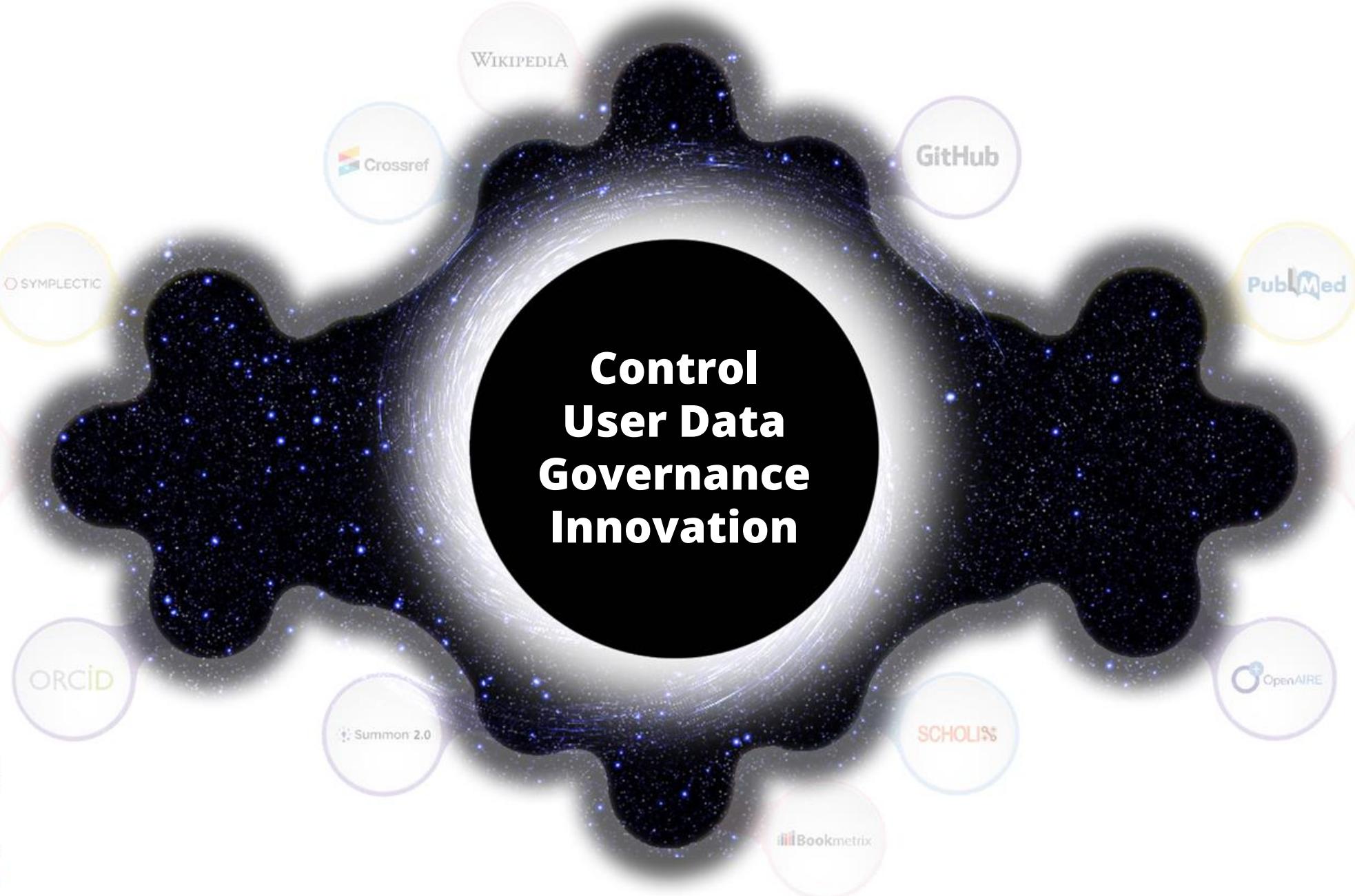
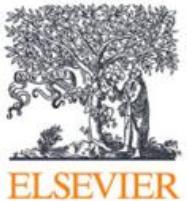


ELSEVIER





# Control User Data Governance Innovation



**A:** 0.5% of RELX's CEO's yearly salary

**B:** Google's revenue from advertising, every 30 seconds

**C:** Est. revenue of Nature Communications every two days

= €95,000?

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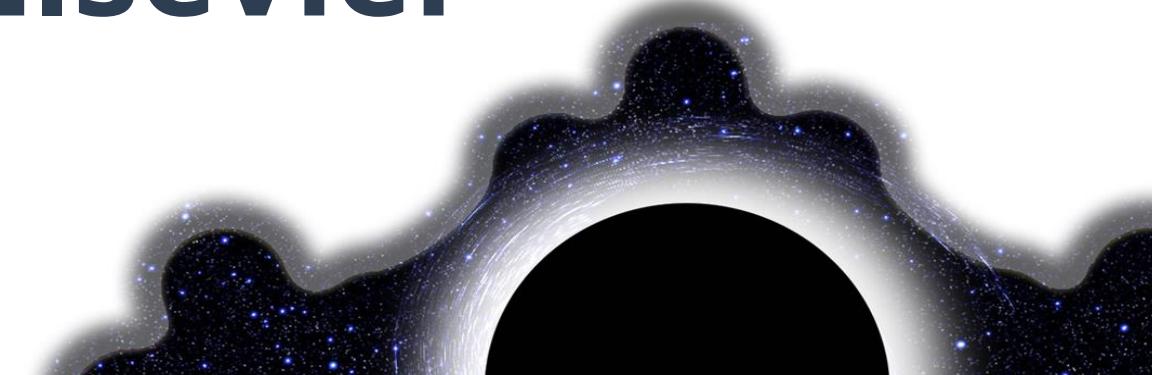
**D:** The total budget of Open Knowledge Maps, including collaboration projects ... in the past 2.5 years

# Let's make the open infrastructure sustainable!

DontLeaveItToGoogle

DontLeaveItToSpringerNature

DontLeaveItToElsevier



# **Membership-based Funding Model**

**We propose to fund Open Knowledge Maps in a collective effort:** organizations become supporting members and provide a yearly contribution.

**In return, we invite our members to co-create the platform with us.** Members become part of the Board of Supporters, which is directly involved in the decision-making process of what features and sources are implemented on Open Knowledge Maps.

# Membership Categories



## Supporting member

**1 seat** on the Board of  
Supporters, listing on website

starting at **EUR 2,800** per year



## Sustaining member

**2 seats** on the Board of  
Supporters, listing on website  
and in select materials with logo

starting at **EUR 4,800** per year

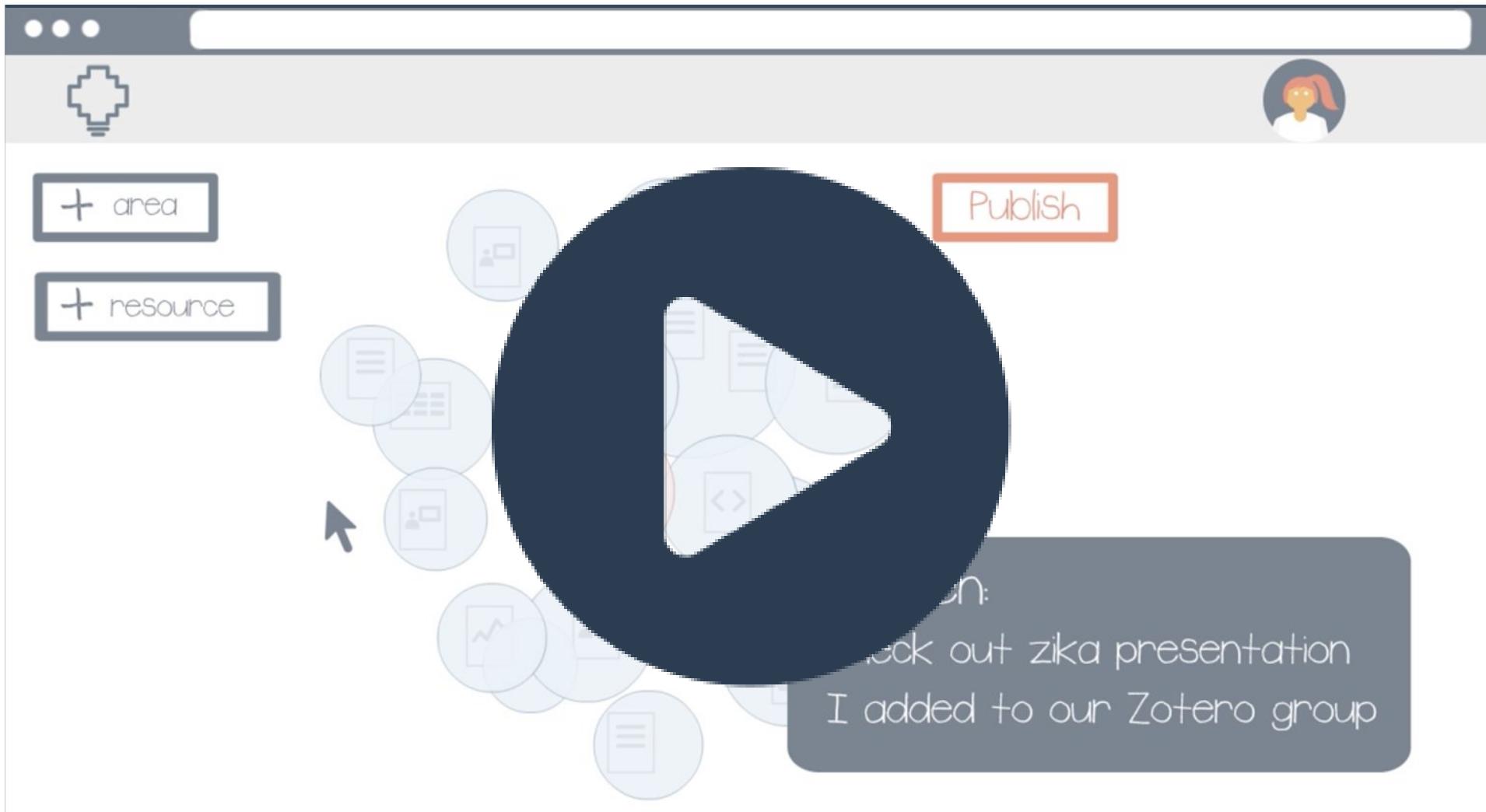


## Sustaining member PLUS

**3 seats** on the Board of  
Supporters, listing on website  
and in select materials with  
logo

starting at **EUR 9,800** per year

# Our vision



<https://vimeo.com/188647919>

# Your support matters ❤



Tell us what you think

Introduce OKMaps to your researchers,  
students and colleagues

Consider becoming a supporting  
member

... and don't forget to **sign-up** for our Newsletter ;-)



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# Thank you for your attention!

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