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Open Knowledge Maps

Visual Discovery of Scientific Knowledge

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Co-created with Maxi Schramm

Webinar at the Academy of Fine Arts Vienna
19 May 2020



**OPEN
KNOWLEDGE
MAPS**

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):

7% - 63% (Nicolaisen & Frandsen 2019)

Uncitedness (data):

85% (Peters et al. 2016)

Transfer to practice (medicine):

14%, taking 17 years (Balas 1998)



SARA GIRONI CARNEVALE

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

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

Legal documents

Any time

Since 2012

Since 2011

Since 2008

Custom range...

Sort by relevance

Sort by date

- include patents
 include citations

 Create alert

[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

[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 ▾

[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 ▾

1 2 3 4 5 6 7 8 9 10

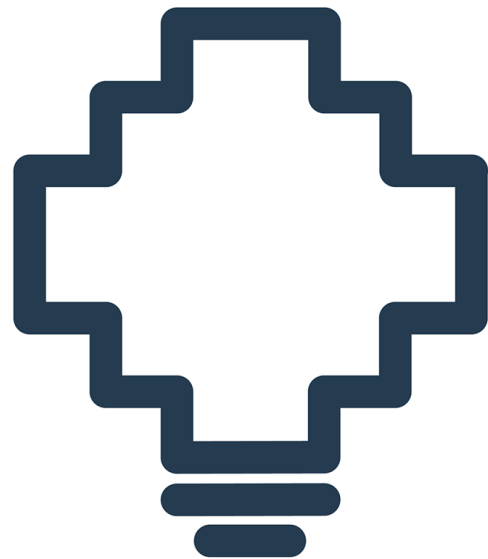
[Weiter](#)

**It's time to change
the way we
discover research**



Identify relevant concepts

irrelevant



OPEN KNOWLEDGE MAPS

LWL, KNN,
K-nearest neighbour

Document Term Matrix,
Support Vector Machine,
Feature Extraction

Text Mining,
Classification,
Social Networking Sites

Text Documents,
Text Mining,
Affinity Propagation

CSI, Distributed
Data mining, Privacy
Preserving data mining

Frequent patterns,
Meta data conceptual
mining

K-means,
J48, Hotspot

Cooperation,
Figure,
Networks

Loan Default,
Time series,
Tax administration

Web Structural Mining
(WSM), Data mining,
Hyperlink

@OK_Maps



Who we are



Charitable **Nonprofit**
Revolutionize **Discovery**
For **Science And Society**

Overview of heart diseases



Our mission



REVOLUTIONIZE DISCOVERY

Open Knowledge Maps is the world's largest visual search engine for scientific knowledge.

We dramatically increase the visibility of research findings for science and society alike.



OPEN AND NONPROFIT

We are a charitable non-profit organization based on the principles of open science.

Our aim is to create an inclusive, sustainable and equitable infrastructure that can be used by anyone.



A SUSTAINABLE PLATFORM

We propose to fund Open Knowledge Maps in a collective effort.

Organizations are invited to become supporting members and co-create the platform with us.



Map a research topic ^{beta}

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
150+ million
documents

<https://openknowledgemaps.org>

Advantages



How it works



An Open Knowledge Maps visualization presents you with a **topical overview** for your search term. It is **based on the 100 most relevant documents** from either **BASE** or **PubMed** for your search term.



We use **text similarity** to create the knowledge maps. The algorithm groups those papers together that have more words in common in the **metadata**.

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



THE VISUAL PROJECT EXPLORER

Step 1: Find a project - Step 2: Create an overview

Search projects within the OpenAIRE database with the following funding agency:

EC - European Commission ▼

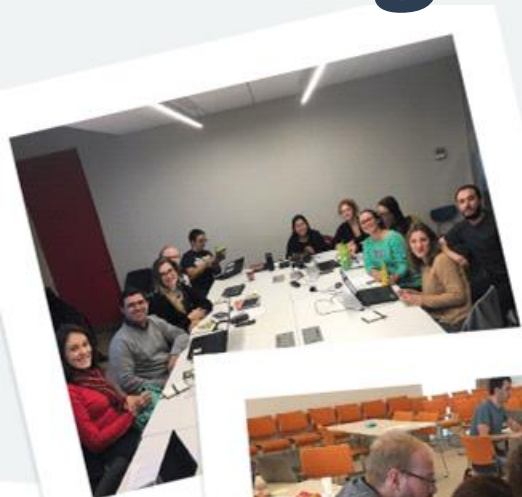
Search by keywords, project name, grant number, institution etc.

GO

[Try it out: Overview of OpenAIRE](#)

Largest visual search engine for research

Since May 2016:
~ **4 million** page views
200,000+ maps created
3000+ participants in workshops



Team



Peter Kraker
Founder & Chairman



Maxi Schramm
UX Designer & Treasurer



Christopher Kittel
Data Scientist & Secretary



Scott Chamberlain
Data Sources



Najmeh Shaghaei
Library Liaison



Thomas Arrow
Frontend Developer



Michela Vignoli
Community Coordinator



Björn Brembs
Resident User



Know Center
Organizational member

Supporting members

u^b

b
UNIVERSITÄT
BERN



universität
wien



LUDWIG
BOLTZMANN
GESELLSCHAFT



Copernicus Publications
The Innovative Open Access Publisher



Leibniz-Informationszentrum
Wirtschaft
Leibniz Information Centre
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Osman Aldirdiri



Lambert Heller



Tony Ross-Hellauer



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Christian Schlögl



Stefan Kasberger



Stefanie Haustein



Andreas Ferus



Christine Zhang



Sebastian Dennerlein



Antica Culina



Robert Gutounig



Daniel Dörler



Christian Kaier

Partners



Enthusiasts



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Daniel Deogratus

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Feedback and question time

1. What are your challenges when it comes to literature search and discovery?
2. Would Open Knowledge Maps help you to overcome these challenges?
3. What else would you need from such a tool?
4. Any other questions or comments?

Coming up

LinkedCat+ - Exploring half a century of knowledge production at the Austrian Academy of Sciences
OeAW Innovation Fund



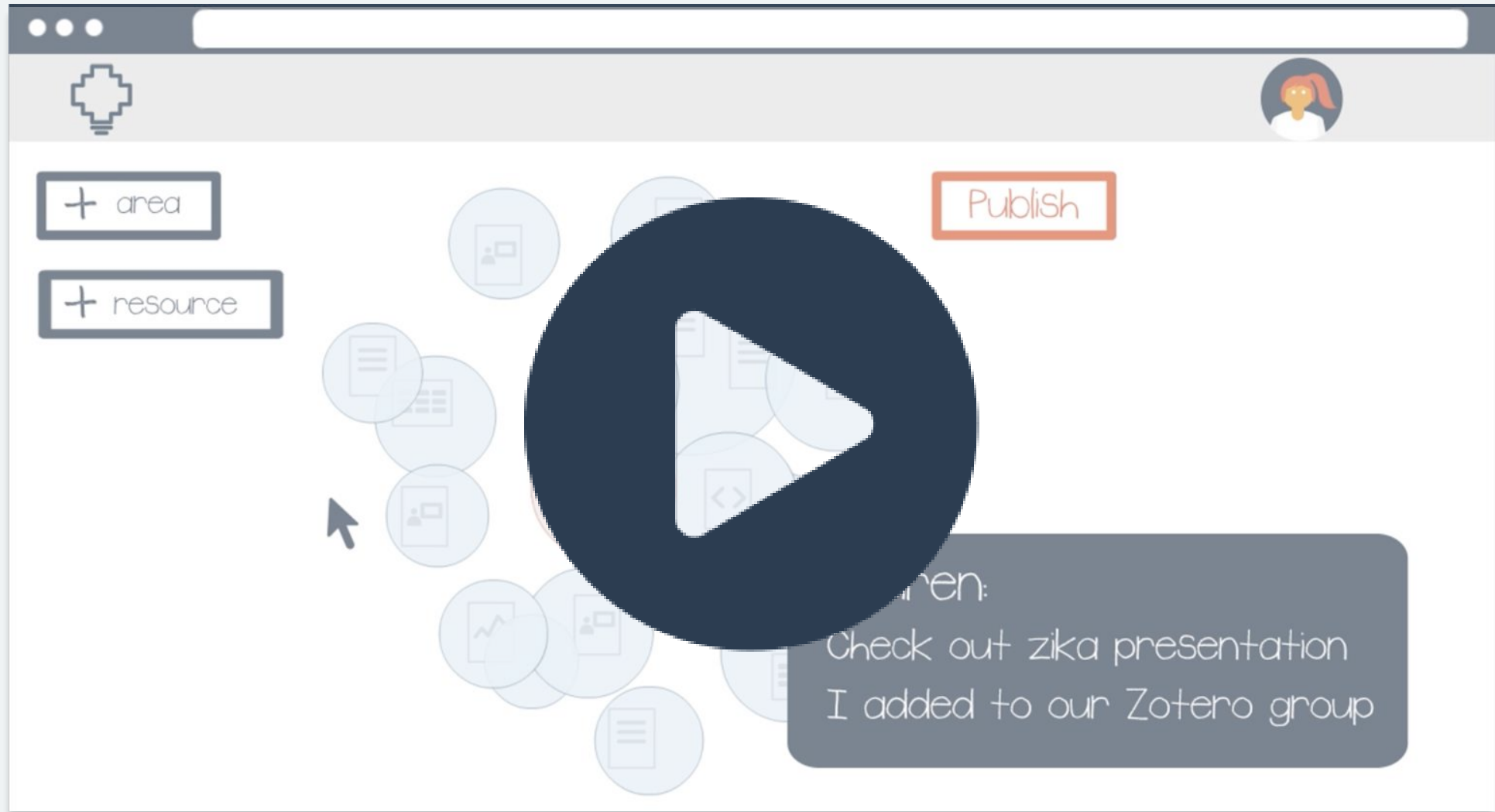
TRIPLE - The multilingual discovery platform for the social sciences and humanities.
EU Horizon 2020



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



Our vision



<https://vimeo.com/188647919>

Your support matters ❤️



Tell your friends and colleagues about us
Let us know what you think
Consider becoming an enthusiast

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



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