

RISIS



RESEARCH INFRASTRUCTURE FOR SCIENCE
AND INNOVATION POLICY STUDIES

RISIS Core Facility

Building an infrastructure integrating data and
services for the humanities

STIP Compass Linked Data Workshop, 17/06/2022

Lionel Villard - Philippe Breucker

INRAE - Université Gustave Eiffel - CorText Platform



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RISIS Project overview

RISIS



“Research Infrastructure for Science, technology and Innovation policy Studies”

- 4 years infrastructure project (2019–2022), follow-up of a first project (2014–2019)
- EC / H2020 funded
- Linked Datasets from various sources on science, technology and innovation
- Data analysis services from multiple platforms

“Transform the field of STI studies into an advanced research community”

1. An **e-infrastructure** for research
2. Providing a set of **services** tailored to field-specific needs
3. Maintaining and developing new **datasets** on key issues for research and policy

RISIS : 18 Partners



- Université Gustave Eiffel (France)
- Austrian Institute of Technology (Austria)
- Politecnico di Milano (Italy)
- Consiglio Nazionale delle Ricerche (Italy)
- Leiden Universiteit (Netherlands)
- University of Sheffield (England, UK)
- Fraunhofer ISI (Germany)
- Università della Svizzera Italiana (Italy)
- The Samuel Neaman Institute (Israel)
- Athena Research and Innovation Center (Greece)
- Joanneum Research (Austria)
- University of Sussex (England)
- German Centre for Higher Education Research and Science Studies (Germany)
- University of Strathclyde (Scotland, UK)
- Università degli Studi di Roma – La Sapienza (Italy)
- Nordic Institute for Studies in Innovation, Research and Education (Norway)
- Consejo Superior de Investigaciones Científicas (Spain)
- Technology Centre of the Czech Academy of Sciences (Czech Republic)

RISIS : 14 Datasets (and more)

5 critical dimensions: PROs dynamics, firms innovation dynamics, public research, research careers, research and innovation policy evaluations.

CHEETAH

company; fast-growing; medium-sized; firm; growth

CIB / CinnoB

corporation; invention; patent

CWTS Publication Database

academic publishing; journals; articles; web of science

EUPRO

R&D projects; European Framework Programme; networks; collaborative knowledge production

RISIS Patent

patent; invention;

JOREP 2.0

Funding of science; European Research Area; transnational programmes

MORE

researcher mobility; research careers; survey; career stages

NANO

nanoscience; nanotechnology; publications; patent; invention;

PROFILE

researcher mobility; research careers; survey; career stages

RISIS-ETER

higher education; university; register

SIPER

policy evaluations; repository; science policy

VICO

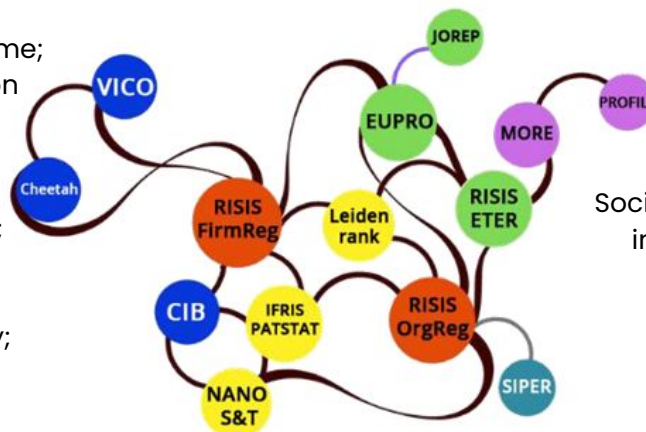
start-ups; venture capital

ESID

Social Innovation, new forms of innovation, social innovation projects, machine learning, Natural Language processing

ISI-Trademark Data Collection (ISI-TM)

Trademarks, IPR, EUIPO, USPTO

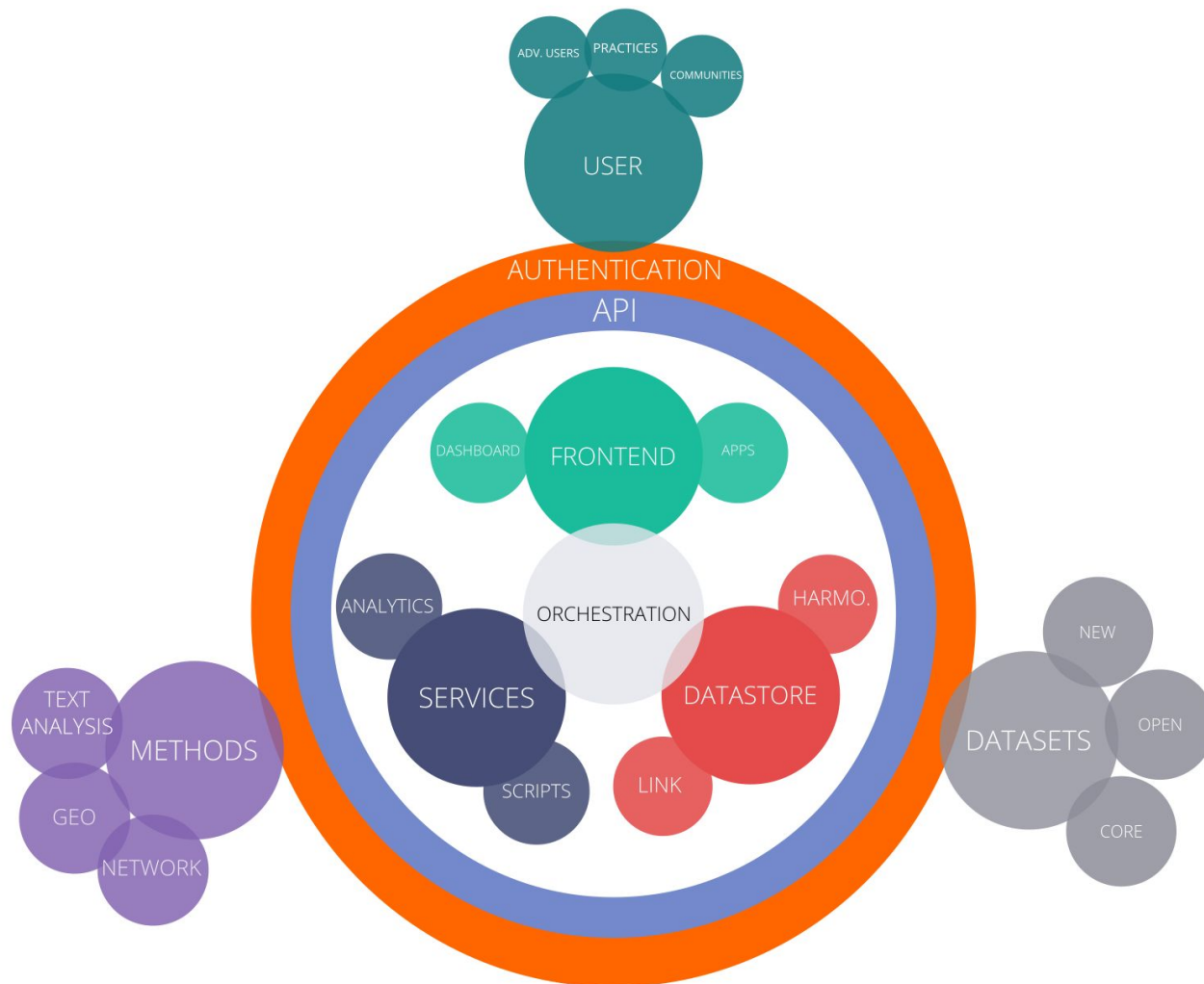


ORGREG: organization central register

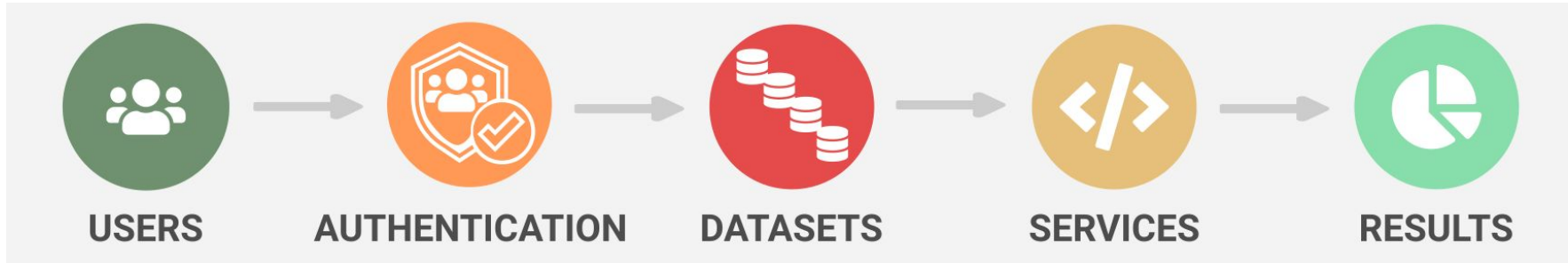
FIRMREG: firm central register

RISIS Core Facility

From resources to research infrastructure
Bringing researchers cutting-edge analysis and computing power



USER WORKFLOW



User registers freely, via **ORCID** number, or conventional username /password

Identity and Access Management (IAM) system authenticates the user

IAM also deals with the various **permissions on the datasets**, all the RISIS and outside services and the user identification throughout RCF modules

3 types of datasets are proposed via RCF **Datastore and data extractions scenarios:**

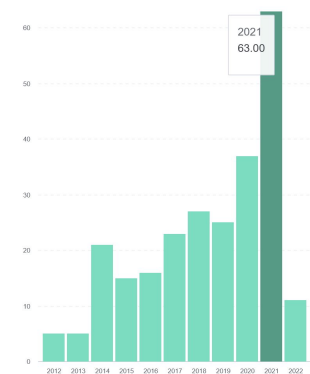
- 1- **Open** and accessible without restriction
- 2- **Private**, that requires a special access request and an authorization
- 3- **User's datasets** that they can upload

Various services (internal or external) are available through **use-case oriented scenarios:**

- Extraction of sub-datasets
- Statistics
- Natural language processing
- Mapping
- Network analysis
- STI analysis
- ...

All the **data, results** and **visualisations** are available directly in the **user's workspace**, or via an external link to the service

Data are reusable via RCF **datastore** and can be published and opened with a public DOI.

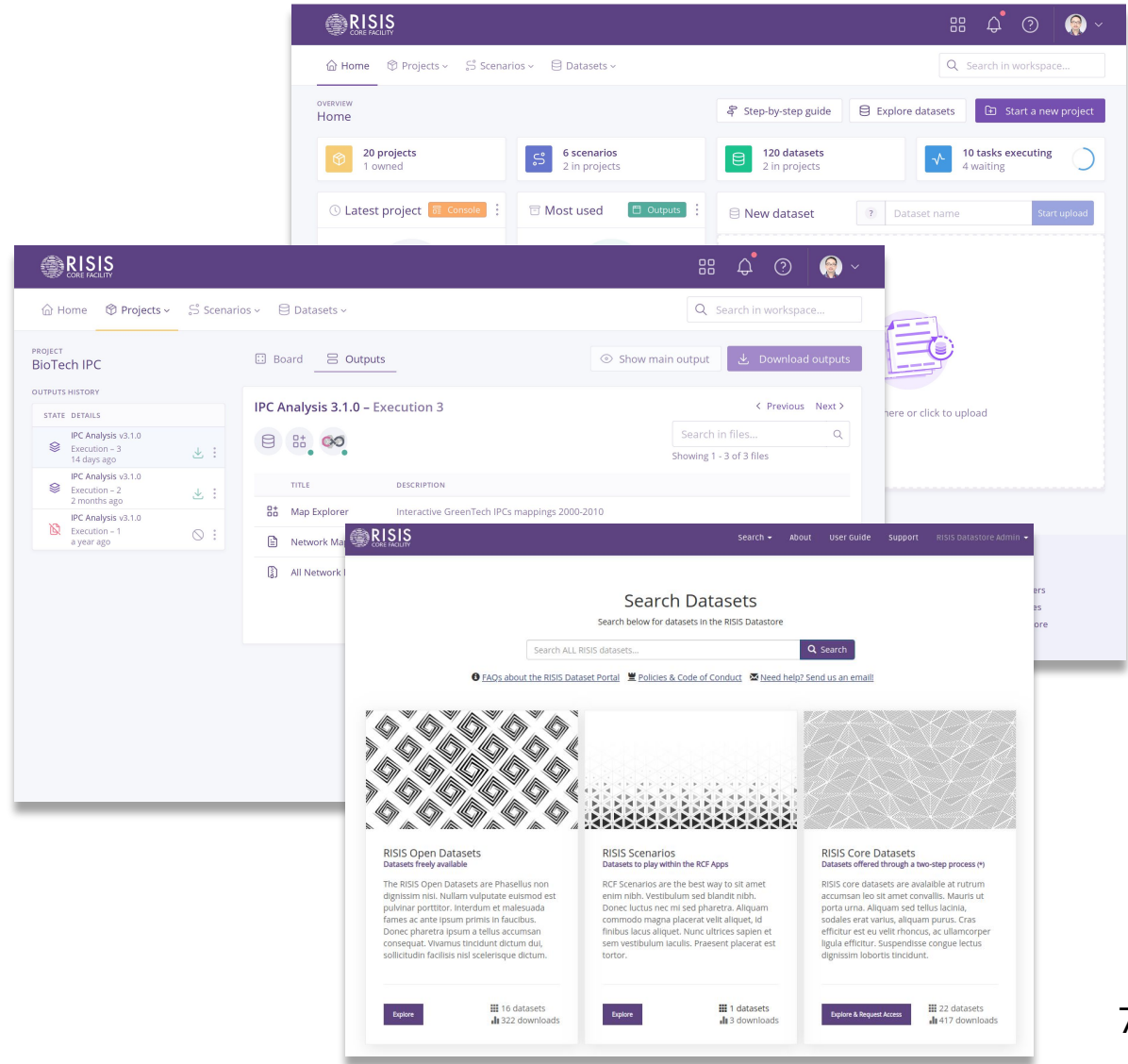


USER INTERFACE

Modeling the researcher's workspace

Researcher's workspace challenges

- Access and usage of Risis resources
- Complex analysis workflow (data normalization and disambiguation, repeating processes,...)
- Shared resources with colleagues in a specific project
- Organizing, documenting and publishing results
- Archiving and retrieving of former work
- Access to large storage capacity
- Leverage cloud-based computing power
- Personal data in datasets (GDPR)

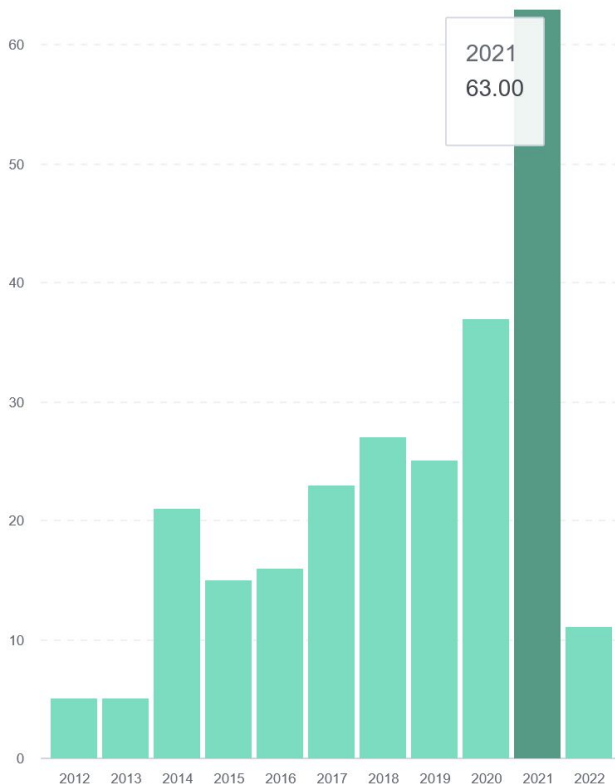


CorTextT as a service

CorText Manager in 2021

- 1,300 active users, generating more than 66,000 calculations;
- From around 552 organisations (universities, firms R&D, policy makers, consultants or advisors, etc.) and cities.

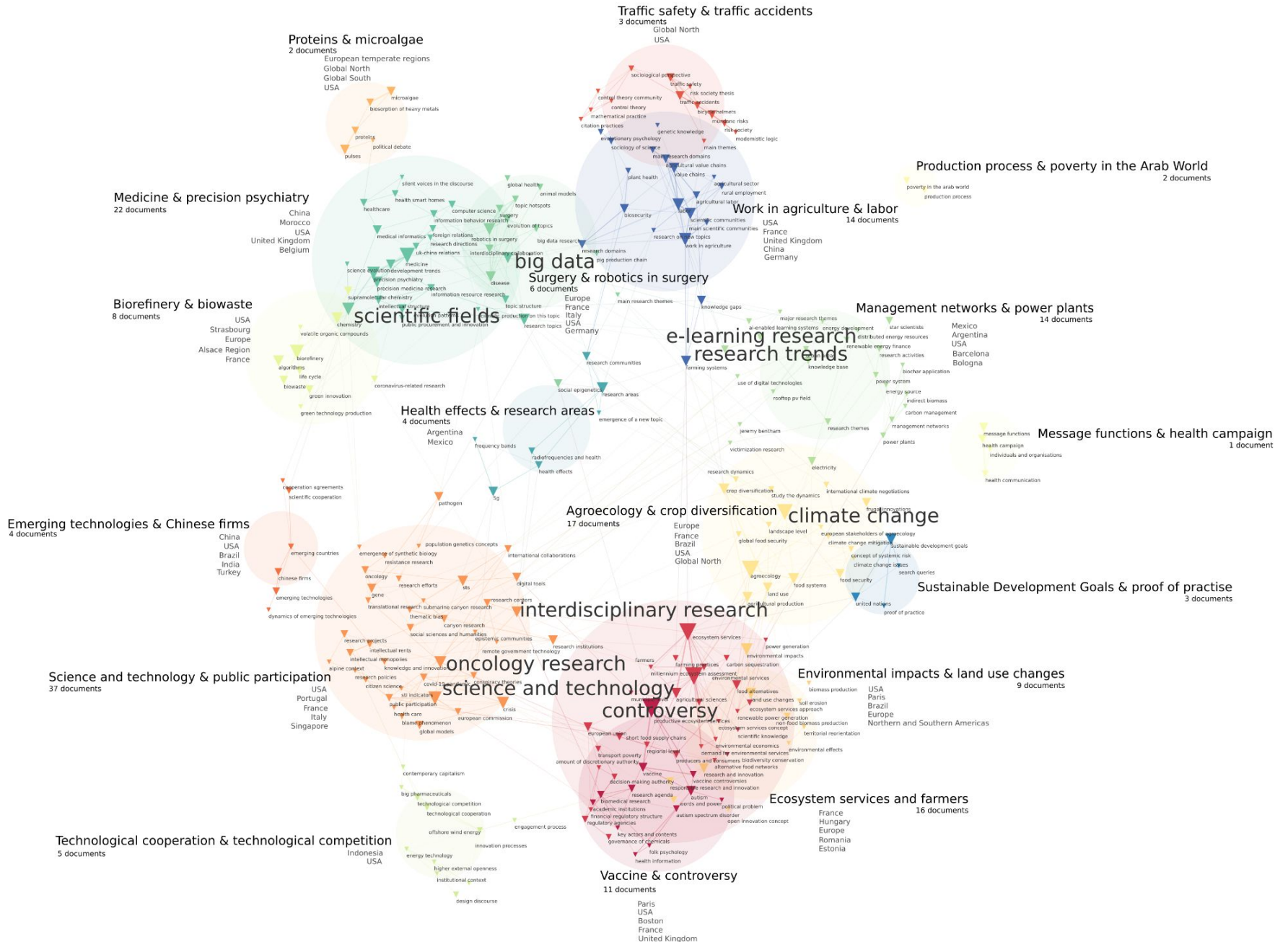
CorText Manager uses for scientific publications: since 2016, more than 580 authors have published using CorText Platform; which represents less than 10% of the community of users.



Documents published between 2012 and 2021 using CoText Manager : co-occurrences of extracted "subjects"

Top 2 central terms and top 5 place names mentioned for each cluster

Node size = frequency ; Proximity measure = raw ; Threshold = top 4 neighbours ; Community detection algorithm = Louvain resolution



So what is the RCF approach added value?

From CorText Manager, it is an extension in two directions, with an expected high level of impact for **STI production** and **public policy**:

- The **topics** covered by the data developed and maintained in RISIS
- The **methods** and analyses that can be mobilised and combined by the various partners

Combine both data and methods supported and developed by the different partners in a unique workspace!

RISIS



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THANK YOU !

www.risis2.eu

CONTACT@RISIS2.EU



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