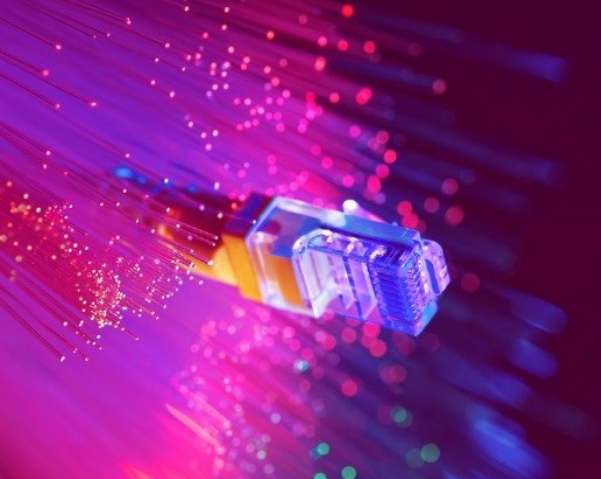




Linking funding to research output and facilities through the Finnish Research Information Hub

Hanna-Mari Puuska and Walter Rydman

CRIS2018, 13-16 June, Umeå, Sweden



CSC – Finnish research, education and public administration ICT knowledge centre

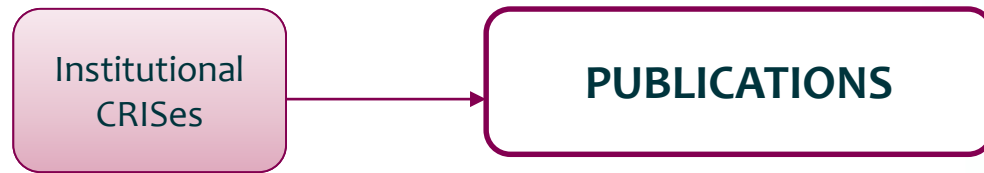


Finnish Research Information Hub 2020:

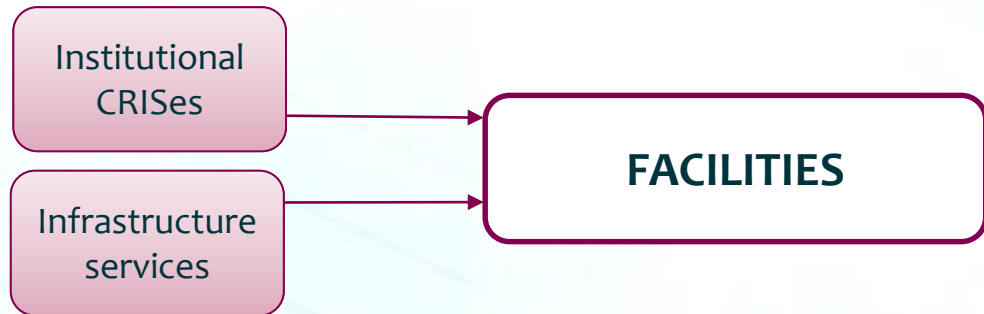
"The Ministry of Education and Culture has set a goal, that in 2020 all information regarding all scientific research made in Finland will be easily accessible for various purposes.

Information filled in one system will be automatically translated to other systems, and the administrative workload will be alleviated. "

Current situation in Finland: national databases as silos



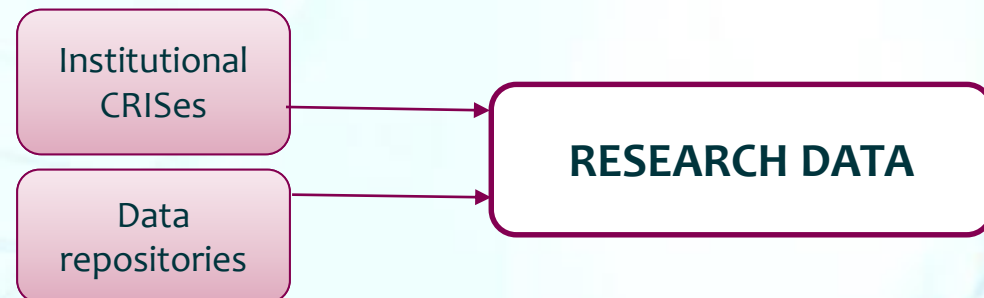
VIRTA Publication Information Service
Publication information from 54 Higher education institutions and state research institutes. Metadata: www.juuli.fi and statistics: www.vipunen.fi



Finnish Research Infrastructures
The infrastructures database compiles metadata on national and institutional research facilities, equipment, materials and services. Currently at piloting stage. <http://infrascience.fi/>



Etsin - Research Data Finder
Etsin contains metadata on research datasets. Integrated part of the Finnish Fairdata Service which include also a preservation service, a metadata warehouse, and a metadata input service. The research data finder can be used at <https://etsin.avointiede.fi>



National Research Funding Database
The database aims to gather all information related to research funding process. The information will be harvested from the funders' registers. In terms of funding decisions, the service will be implemented by the end of 2018. <https://wiki.eduuni.fi/display/CSCTTV/National+Research+Funding+Database>

INTEROPERABILITY OF SERVICES

"Services have up-to-date information available"

INFORMATION PROVIDERS

"Once the information has been input it can be utilized in several systems"

UNIVERSITIES

UNIV. OF APPLIED SCIENCES

RESEARCH INSTITUTIONS

FUNDERS

PUBLISHERS

INFRASTRUCTURES

REPOSITORIES

ORCID

Automated information flows

Connected

Metadata can be used and enriched by national and local systems (e.g. funders). Common vocabularies and data models ensure the consistency of information.

Metadata

RESEARCH INFORMATION HUB 2020

Connected metadata for publications, research data and other research activities, research infrastructures, funding, researchers and organizations

INFORMATION RETRIEVAL

"Overview for research in Finland"

Research.fi portal will provide a comprehensive picture of the research being conducted in Finland.

Search criteria can be specified in, for example, field of science, thematic areas, ongoing projects or experts.

INFORMATION USERS

"Open access to public information"

STATISTICS AND VISUALIZATION

Up-to-date facts and figures about research

NEW APPLICATIONS

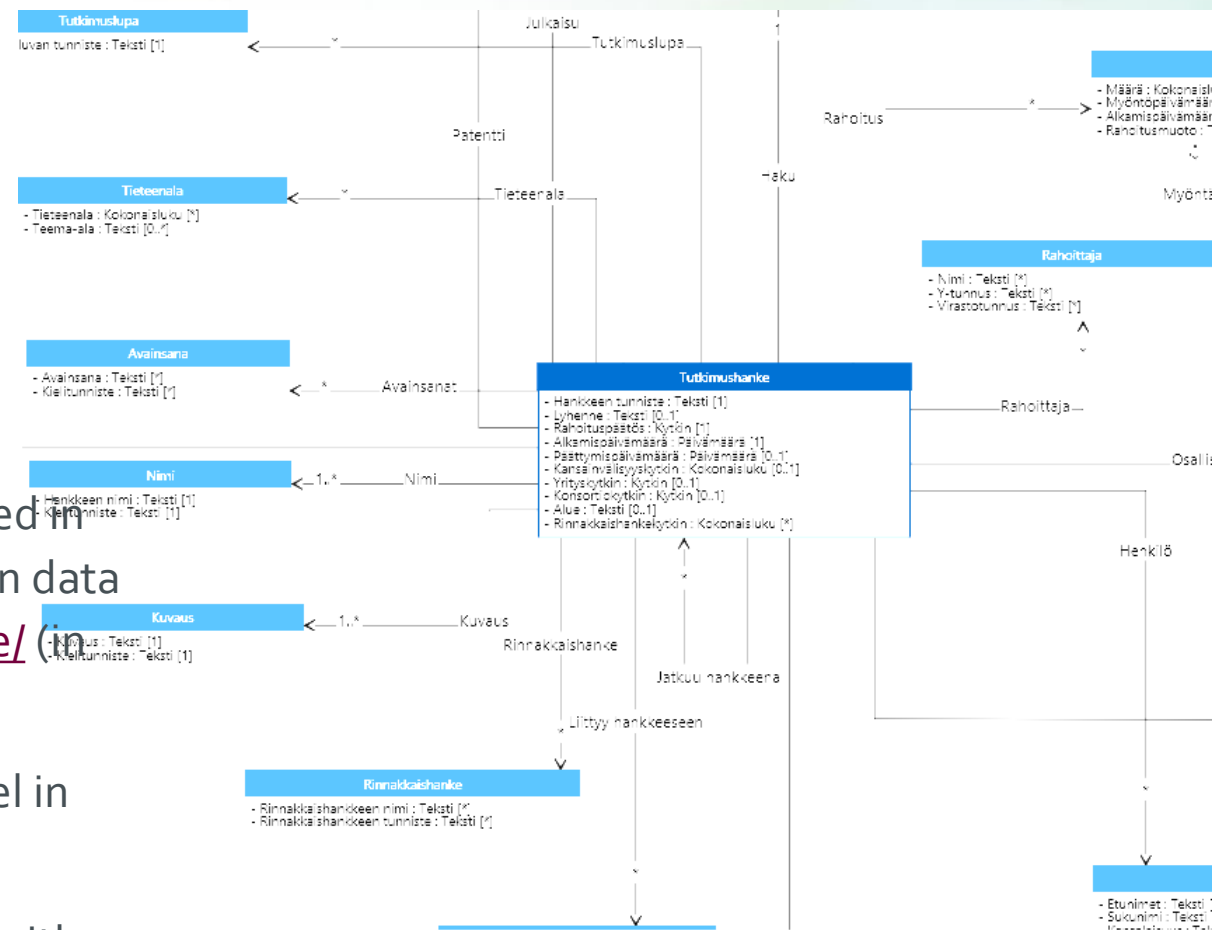
Open information to be utilized in new applications supporting the researchers work. Eg. CV-tools

Funding organizations as information providers

- The National Research Funding Database will be implemented as part of the Research Information Hub together with Finnish research funders.
- The aim is to collect a comprehensive up-to-date registry of Finnish research funding from all major funders, e.g.
 - The Academy of Finland
 - Business Finland (former Tekes)
 - European Regional Development Fund (ERDF)
 - ~180 private foundations granting research
- The long-term goal is to gather all information related to research funding process:
 - Funding decisions
 - Researchers and organizations related to funded projects
 - Output of research funding
 - Funding applications
 - Information on funding organizations and open calls
- In terms of funding decisions, the National Research Funding Database will be implemented by the end of 2018

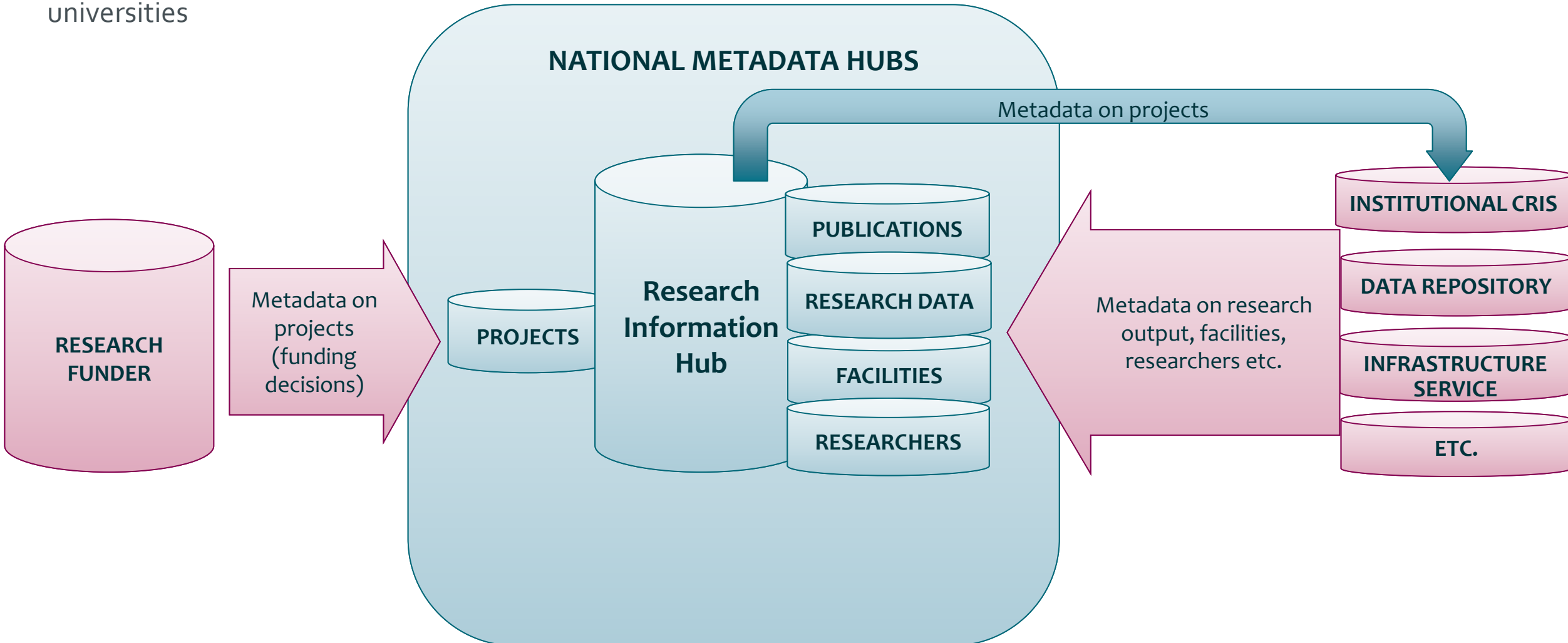
The National Research Funding Database: Data model

- Information of funding decisions will include for example
 - title, description, scientific fields
 - length and amount of funding
 - researchers, research groups and organizations involved
- The common data model for funding decisions has been designed in collaboration with the major funders on the grounds of their own data models <https://tietomallit.suomi.fi/model/hanke/Tutkimushanke/> (in Finnish)
- None of the Finnish funding organizations are using CERIF model in their own systems
- However, the data model of the national database is compliant with CERIF and the Research Information Hub's API will provide CERIF-XML among other formats



Research funders as data providers

- The funders will automatically export metadata on funding decisions from their own registers to the hub after each decision round
- Data are exported from funders via REST API or SFTP file transfer by using a common XML/JSON schema
- Through the Hub's API, information from funding organizations can be used by, for example, in the universities



Funding organizations as information users

- From the Hub, the funders can import research output into their own systems.
- The integration facilitates researchers to pick up their research output from the Hub and connect them to project reports
- Need for manual input will be reduced.
- The funder gets information of the research outputs being funded in a structured format
- This procedure creates a connection between project and its output and research infrastructure, which in turn can be automatically exported to the Hub from the funder's system.
- Similarly, a researcher can harvest a publication lists or other information from the Hub to funding applications or other services
- Example: VIRTATA (publications) integrated into the reporting service of the Academy of Finland



ACADEMY OF FINLAND

Online Services

DesktopOpen callsMy applications**Reports**ReviewsCommitmentsMy accountLog out

Reporting guidelines

Questions and feedback

Preview of report

1. Personal data/CV

2. Basic project data

3. Rahoitus

4. Research personnel

5. Use of research infrastructure

6. Implementation of the research project

7. Research collaboration

8. Visits

9. Realisation of planned mobility plan

10. Interaction

11. Publications

12. Degrees

13. Intellectual property rights

14. Other outputs

15. Data management plan

16. Continuation of research

17. Results

18. Nontechnical description of the project and its results

19. Impact beyond academia

20. Submit report

<< Save and go back

Save

Save and continue >>

Report publications that have been produced from the research within the project.

You can access the VIRT A service of the Finnish Ministry of Education and Culture via the Academy’s online service. From VIRT A, you can import project-related publications to the report. If the publication in question is not available in the VIRT A service, you must enter its details manually. Publication data are also read by machines, so it is important that the data are in the requested format.

- How to select a publication: *Find publication*
- Manual input: *Enter publication*
- Only publications that meet the criteria set by the Ministry of Education and Culture are accepted as publications for the report (Ministry guidelines in Finnish: > Tiedonkeruun käsikirjat > Julkaisutiedonkeruun tutkijaohjeistukset)
- Only report publications that have been published at the time of reporting. Unpublished (e.g. accepted for publication, or in press) articles, works or other publications related to the project’s results can be entered under *Results*.

Publications

☐ No publications

Lisää vähintään yksi julkaisu tai merkitse "Ei julkaisuja"

Year of publication	Type of publication	Authors of publication	Name of publication	Name of journal/series
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Find publication

Add publication

Reporter makes a search from VIRTIA Publication Information Service by Name of author, selects relevant publications from the search result and clicks Move to form button

Preview of report

10. Interaction

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18. Nontechnical description of the project and its results

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20. Submit report

Search for publications in the VIRTIA publication information service

The search covers data on authors, that is, all authors that are listed in the original publication. The search will yield the same result when searching with *First name Surname* and *Surname First name*. You can also search with part of a name, e.g. *First Surn*.

Name of author

Hupa

Search

Year of publication	Authors of publication	Name of publication	Name of journal/series	Name of host publication	Editors of host publication	Publisher	Organisation
☒ 2013	Karlstrom O; Brink A; Biagini E; Hupa M; Tognotti L	Comparing reaction orders of anthracite chars with bituminous coal chars at high temperature oxidation conditions	Proceedings of the Combustion Institute vol:34 nro:2			Elsevier	01903
☒ 2013	Huhtinen R, Sandeman S, Rose S, Fok E, Howell C, Fr\303\266berg L, Moritz N, Hupa L, Lloyd A	Examining porous bio-active glass as a potential osteo-odonto-keratoprosthesis material.	Journal of Materials Science: Materials in Medicine vol:24 nro:5			Journal of Materials Science: Materials in Medicine	Turun yliopisto
☐ 2013	Outi Hupaniittu	Afgrunden aka Kuilu in Finland – Nordiska Biograf Kompaniet, Exclusive Distribution and Newly Established Censorship	null vol:null nro:null	John Libbey Publishing	Martin Loiperdinger, Uli Jung	John Libbey Publishing	Turun yliopisto
☐ 2013	Outi Hupaniittu	Biografiliiketoiminnan valtakausi. Toimijuus ja kilpailu suomalaisella elokuva-alalla 1900-1920-luvuilla	null vol:null nro:null				Turun yliopisto

Cancel

Move to form

Selected publications are shown on the report form

⚠ 10. Interaction

⚠ 11. Publications

⚠ 12. Degrees

⚠ 13. Intellectual property rights

⚠ 14. Other outputs

⚠ 15. Data management plan

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Save

Save and continue »

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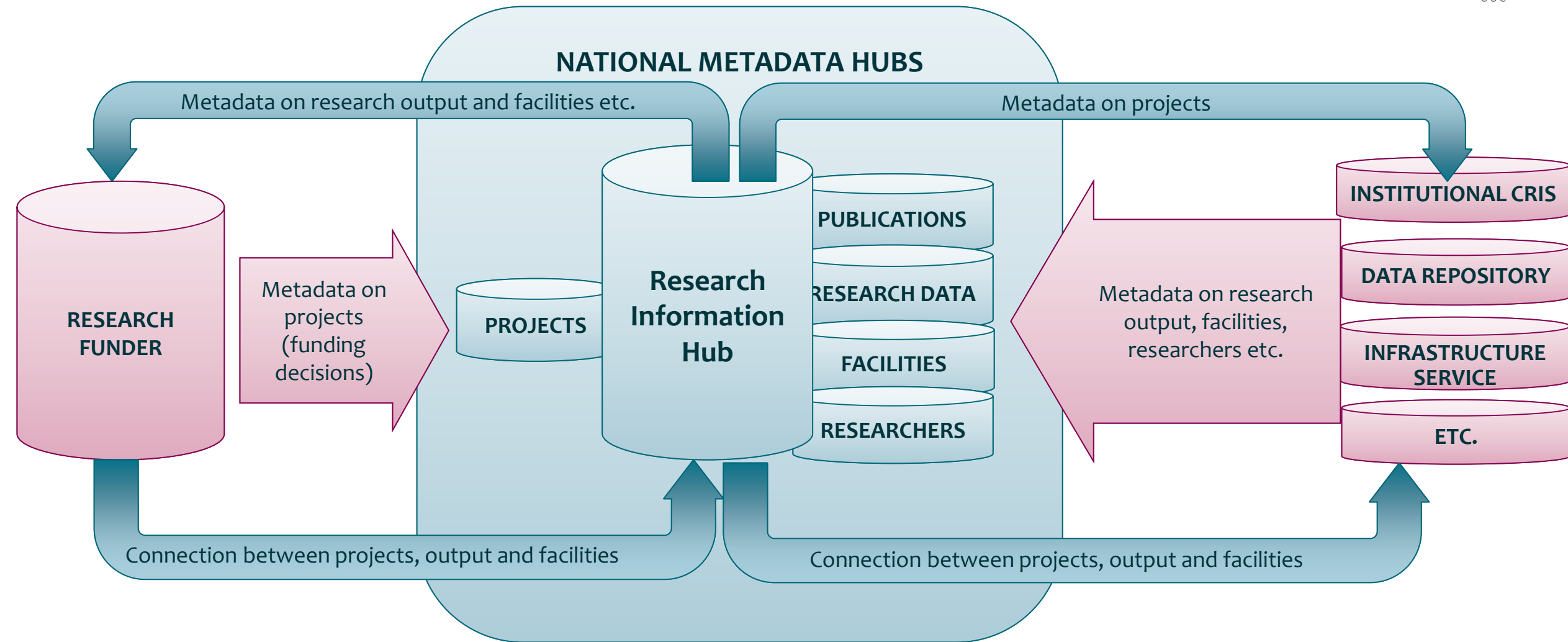
Lisää vähintään yksi julkaisu tai merkitse "Ei julkaisuja"

Year of publication	Type of publication	Authors of publication	Name of publication	Name of journal/series	
2013	A1	Karlstrom O; Brink A; Biagini E; Hupa M; Tognotti L	Comparing reaction orders of anthracite chars with bituminous coal chars at high temperature oxidation conditions	Proceedings of the Combustion Institute	- Delete
2013	A1	Huhtinen R, Sandeman S, Rose S, Fok E, Howell C, Fr\303\266berg L, Moritz N, Hupa L, Lloyd A	Examining porous bio-active glass as a potential osteo-odonto-keratoprosthetic skirt material.	Journal of Materials Science: Materials in Medicine	- Delete

Find publication

Add publication

Linking funding to research output and facilities





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