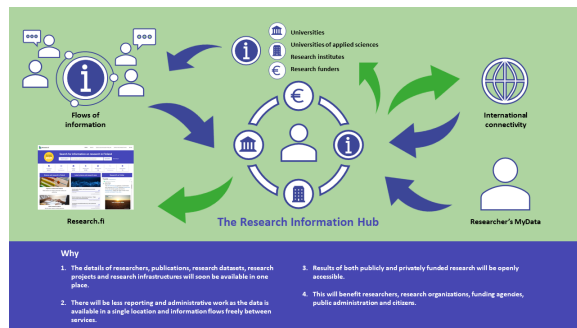# Research Information Hub

Introduction

CSC - IT Center for Science Ltd. is establishing the **National Research Information Hub** at the behest of the Ministry of Education and Culture. The planned service will serve as a warehouse for metadata on, for example, publications, research data, research infrastructures, researchers, projects/projects and research groups.

The amount of different research being produced is increasing rapidly along with the advent of research digitalisation and open science. The number of the systems where the produced research outputs and other information are stored is alike increasing, resulting in wide range of separate and disintegrated information systems. The National Research Information Hub targets to integrate and connect the currently disintegrated systems and registers to complement each other.

The sensible and easy management of research outputs requires a uniform specification for research metadata and its seamless processing. Metadata is used in research work and administrative processes related to research, such as information retrieval, funding applications and reporting, publishing, the compilation of statistics and other dissemination of research data.

The rationalisation of information flows lightens the administrative workload and makes the information more accessible and easier to find. This will benefit researchers, research organisations, funders and parties making decisions based on data. In addition, research outcomes will be more accessible to citizens using it.

Background

Authorities, research funders, higher education institutions, research facilities and other parties conducting research are constantly collecting enormous amounts of metadata on research being conducted in Finland. This metadata is collected in several different locations, such as:

- Universities and other research organisations
- Ministry of Education and Culture's data collection campaigns
- Research data archives
- Research funder registers
- Project registers
- Scientific publisher services

For the time being, information has been difficult to locate and use, and databases and information systems containing metadata are not linked with one another. Anyone needing data has to search in several different places, because there is no one cohesive access point for research being conducted in Finland where the information is organised in easily accessible and understandable entities.

Considerable resources are used in the collection of information. At the national level, the use of information has thus far primarily put an emphasis on its use as a criterion for the distribution of funds as well as in the evaluation, steering and statistics compilation of research.

Researchers use numerous online services, which also collect information on research. However, at the moment, researchers are still forced to enter the same information, for example, on their publications, in several different places, such as research data systems, publication archives, CV services, researcher funder systems and various impact services. In addition to this, when changing organisations, they may also have to re-enter their data in the systems of several different organisations.

Targets

The National Research Information Hub can be used to link the currently separate data warehouses and databases with one another. Consolidating the metadata of these discrete data warehouses into a single research information hub will provide a single, uniform, open and comprehensive access point for all the research being conducted in Finland, and the information will be available for everyone*. The goal is *not to* increase the amount of reporting and administrative work, but rather to compile and share existing information.

The research information hub is not a single website - it is a service entity, in which research metadata is collected and interlinked in a form that allows it to be easily used in any other service.

Using standardised terms and definitions, the research information hub compiles and shares commensurate, open and linked data with other services. The machine-readable interfaces of the service allow for the seamless transfer and use of information in different services and processes, thus enhancing the commensurability of information and reducing the manual entering of information in several different places.

In the research information hub, research metadata can be examined from a variety of perspectives, thus making it easy to gain access to data sources.

* some limitations may be placed, e.g. personal research information details

✅ Benefits for researchers

- The same information does not have to be entered several times
- The workload for funding applications and reporting is reduced
- One's own research output can be linked
- Information keeps up with changes in the organisation
- Information is transferred seamlessly between systems
- Information on research conducted in Finland is easily accessible
- Greater national exposure of one´s own research

✅ Benefits for downstream users of data (new applications, services)

- Opportunities to build different visualisations, portals, applications and services for describing research activities and supporting researcher work.

✅ Benefits for research funders

- Comprehensive picture of the research outputs being funded
- Commensurate information easily accessible for applications and project reports
- Enhanced exposure for funders and the research they are funding
- Lightened administrative workload

✅ Benefits for parties searching for research data (general public, media)

- Research output produced in Finland available from a single source
- Support for finding experts

✅ Benefits for scientific publishers

- Greater exposure for publications
- Support for selecting evaluators

✅ Benefits for research organisations

- Information on funded projects from research funders
- Transfer of information between organisations
- Seamless reporting to authorities
- Up-to-date and commensurate benchmarking information on organisation research activities
- Information on research co-operation between organisations
- More extensive use of research infrastructures
- Increased national exposure for research

✅ Benefits for authorities

- Extensive, high-quality database for the needs of science policy
- Up-to-date, commensurate data on research activities