Case Study Template - RDA National PID Strategies Working Group

Title	Case Study: Finland
Creator(s)	Jessica Parland-von Essen Development Manager CSC https://orcid.org/0000-0003-4460-3906
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Features of National PID Approach and/or Strategy

Lead organisation(s)

Representatives from the following PID service providers have participated in the on-going work, among many other PID managers and stakeholders:

CSC – IT Center for Science
- DataCite Finland Consortium lead
- ORCID Consortium Coordinator
- ePIC Consortium member

National Library of Finland
- URN service provider
- Finnish ISBN, ISNI and ISSN Agencies

National Land Survey
- Geodata identifiers

Digital and Population Data Services Agency
- Government interoperability service provider

Natural History Museum/University of Helsinki
- GBIF partner

Scope

The roadmap is focused on researcher's needs, but aims at a vide definition of research data, encompassing as much of government open data as possible.

Drivers

The main driver has been the need of coordination and information sharing among PID service providers, managers and owners. As new types of PIDs and services emerge, there is a need for collaboration to support good management practices and implementation of PIDs. Issues with scientific reproducibility as well as the development of the national research information hub research.fi have spawned interest in describing a shared target state. Finland also has a strong tradition of building national services to support interoperability with services like finto.fi and the national interoperability workbench, https://suomidigi.fi/ohjeet-ja-tuki/yhteentoimivuusalusta.

Strategy development

The URN has been a strong PID system in Finland since its first definition in 1994. The Finnish National Library has offered PID services and promoted the use of PIDs since. As the landscape diversified, an informal network was started some ten years ago. The PID Forum Finland wiki (https://wiki.eduuni.fi/display/CscPidVerkosto/PID-verkosto) was created in 2016 and the network has usually met twice a year to share updates and information. In 2018 the network produced a report on persistent identifiers for the Ministry of Finance, that is responsible for public data management. In 2016 the ORCID consortium was founded. The DataCite Finland Consortium was founded in 2021. Both these consortia are facilitated and supported by CSC. Currently CSC is also developing and maintaining the Research Information Hub mentioned above and looking at implementing RAiD. All this work is funded by the Ministry of Education. CSC is also taking part in the FAIRCORE4EOSC and FAIR-IMPACT Horizon projects, both of which are taking PID development forward within the EOSC.

The work on the PID roadmap began in 2021 and has progressed slowly but steadily. The informal character of the network producing it creates some issues with the mandate. On the other hand there is documented interest from the government in this work and within open science there is a culture of working this way, thanks to the Open Science and Research Coordination work, where much policy work is done. (https://www.avointiede.fi/en)

Key features

The PID roadmap is focused on building a shared understanding of the target state for the PID landscape in Finland and supporting open linked data implementation and interoperability. The target state has been formulated with the following value proposition:

Traceable and unambiguous information (about digital) objects can be found through different channels and can be linked to in a reliable way now and in the future.

Our aim is to ensure data quality and sustainable use of persistent identifiers. The roadmap has the following contents (WiP):

1. Different traits, contexts and requirements and the advantages of managed use of identifiers
2. How to implement and manage national PID policies
    a. Raising awareness and competence
    b. Building trust
    c. Organising the infrastructures

Key infrastructure

Name of infrastructure	Key purpose	List of integrated PIDs
Fairdata.fi	**Research data publication, metadata hub and preservation service**	**DOI, URN, ORCID (upda**
Research.fi	**National research data hub.**	**Current draft: ADSbibcode - Astrophysics Data System - Bibliographic Reference Code (en) ARK - Archival Resource Key (en) arXiv - arXiv identifier scheme (en) BusinessID - Y-tunnus (fi) (en) Crossref_funders - Crossref Funder Registry (en) DOI - Digital Object Identifier (en)**

		EAN13 - The 13-digit International Article Number (en) **GRID - Global Research Identifier Database (en)** **Handle - Handle (en)** **ISBN - International Standard Book Number (en)** **eISBN - electronic International Standard Book Number (en)** **ISNI - International Standard Name Identifier (en)** **ISSN - International Standard Serial Number (en)** **eISSN - electronic International Standard Serial Number (en)** **ISTC - The International Standard Text Code (en)** **LSID - Life Sciences Identifier (en)** **Orcid - Open Researcher and Contributor ID (en)** **PIC - (EC) partner identity code (en)** **PMID - PubMed ID (en)** **PURL - persistent uniform resource locator (en)** **QID - Wikidata identifier (en)** **RAID - Research Activity Identifier (RAiD) (en)** **ROR - Research Organization Registry (en)** **ScopusAuthorID - Scopus Author ID (en)** **UPC - Universal Product Code (en)** **URI - Uniform Resource Identifier (en)** **URL - Uniform Resource Locator (en)** **URN - Uniform Resource Name (en)** **VAT-number - VAT number (en)**

		Virta-id - Virta-id (en) **JuFo-id - Publication Forum publication channel ID (en)** **SF-edu-ID - Tilastokeskuksen oppilaitostunnus**
National Library	**Semantic artefacts, publications**	**URN (ISBN, ISNI, ISSN)**
National interoperability services (?)	**Semantic artefacts**	**URN?**

PIDs

Function	PID type	Comment
Researchers, persons	ORCID; ISNI	ORCID cannot be created posthumously
Organisations	VAT-number (not resolvable yet) RoR ISNI PIC (not resolvable yet) SF-edu-ID (not resolvable yet)	
Funding decisions	URN	Hosted by research.fi
Publications	CrossRef DOI, URN JuFo-id - Publication Forum publication channel ID (en) ISSN ISBN PMID	URN used with ISBN and for instance for file level identification under CrossRef DOI
Datasets	DataCite DOI, URN	DataCite DOI is given strictly to data that can be cited in a precise way
Specimens	doi	underway
Infrastructures	URN	Hosted by research.fi

Concepts, data types	PURL, URN, URI, QID	Hosted by dvv, research.fi, National library, Wikidata
Research Activity	RAiD	underway

Impact and monitoring

This has not yet been defined.

Links

https://wiki.eduuni.fi/display/CscPidVerkosto/PID-verkosto
https://research.fi

Additional information

CSC is also currently working on a PID architecture that describes the landscape including the internal PID Microservice for identifier management.