



OpenAIRE & euroCRIS regional / national research information portals

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Agenda

- Introduction
- Guidelines / DRIS
- On-going projects and lessons learned
- Discussion (Q&A)
- Closing



welcome

- Together is Better -

presenters today



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euroCRIS secretariat
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FRIS analyst and scrum
master



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Bielefeld University
Library and OpenAIRE
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euroCRIS

- welcome -

community of Research Information System Managers

Mission

Promote **cooperation** within and **share knowledge** among the research information community and interoperability of research information through **CERIF**, the Common European Research Information Format

CERIF

Projects

DRIS

Publication
Repository

Conferences

Membership
meetings

Webinars

National/Regional Portals WG (w/ RIS Synergy project)



Plus a few additional national CRIS outside Europe:

- BrCRIS (Brazil)
- PerúCRIS (Peru)
- NZRIS (New Zealand)

<https://eurocris.org/blog/introducing-nationalregional-research-portals-working-group>

National/Regional Portals WG (w/ RIS Synergy project)



RIS
SYNERGY

KICK-OFF MEETING: WORKING GROUP ON NATIONAL/REGIONAL RESEARCH PORTALS

COORDINATED BY EUROCRIS AND RIS SYNERGY

01/02/2023



National/Regional Portals WG (w/ RIS Synergy project)

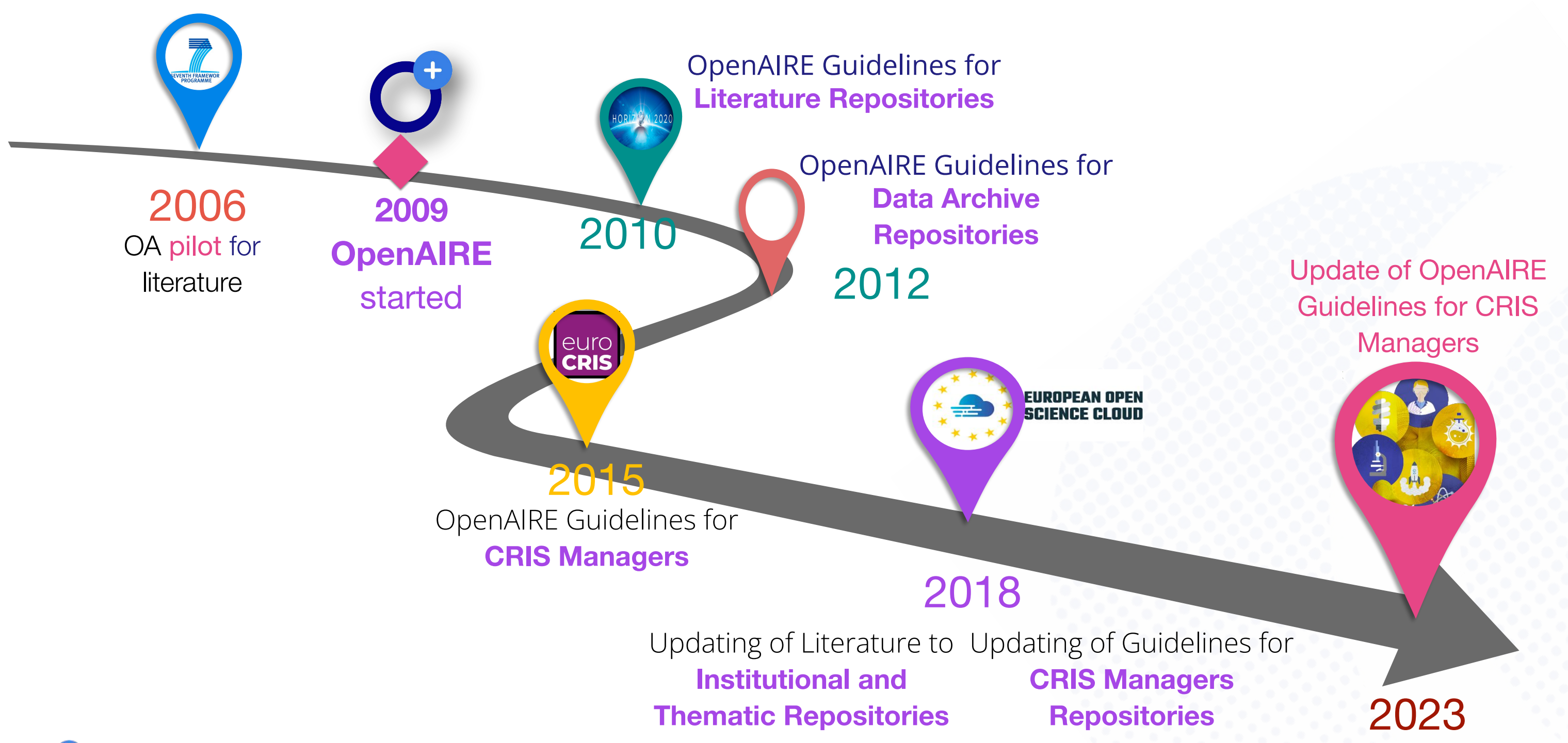


TOPICS ON THE TABLE 1/2

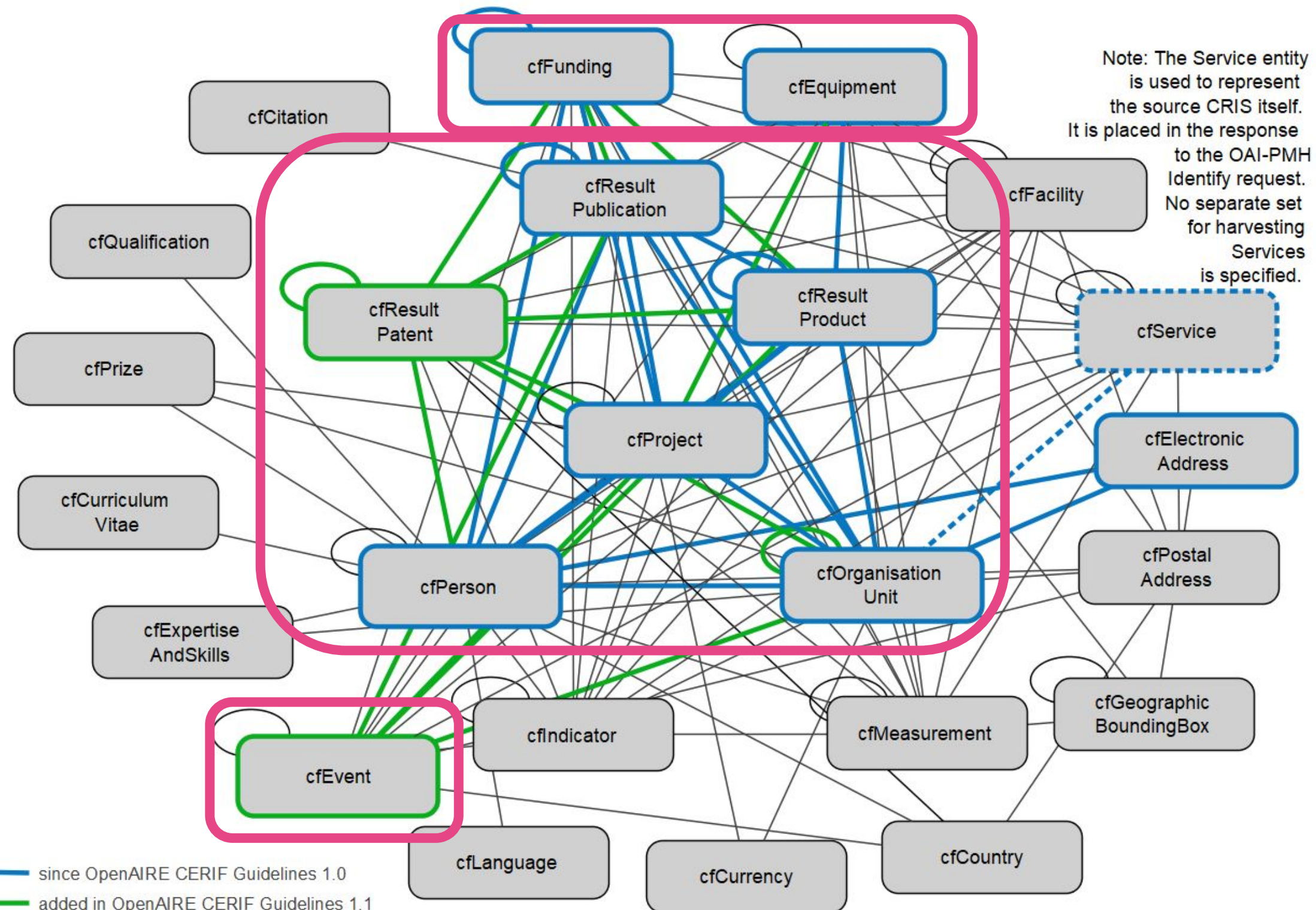
- Lessons learned
- Persistent identifiers (PIDs)
- CERIF-based interoperability: top-down & bottom-up
- **Implementation of OpenAIRE Guidelines for CRIS managers**
- Promotion of a national/regional portal to different stakeholders/target groups

Guidelines for CRIS Managers

- overview -



Common European Research Information System - Model



Guidelines for CRIS Managers v1.1.2rc - an update

- using the latest COAR resource type vocabulary v3.1 ([#99](#)), compatible with the previous version.
- report on the ‘Compliance of the OpenAIRE Guidelines for CRIS Managers v1.1.1 with the FAIR Principles’ ([10.5281/zenodo.6627246](https://zenodo.org/record/6627246) , [#98](#))
- adding more description and examples
- Update of the CRIS-Validator at <https://github.com/EuroCRIS/openaire-cris-validator>
 - OAI Identifier uses outdated validation for domain name (#126)

<https://github.com/openaire/guidelines-cris-managers>

CRIS solutions are out-of-the-box OpenAIRE-compliant

out-of-the-box compliant:

- DSpace-CRIS since v5.10, v6.3, v7.x
- PURE since v5.14
- Omega-PSIR since v1.2
- ...

Overview of repository platforms and supported guidelines:

https://docs.google.com/spreadsheets/d/1_TQzbMf1jz-YEgatt76IMe-MBbt28g-1_N7j_GZyoPc/edit#gid=1470707378

Future development of the Guidelines

Based on the [CERIF Refactoring project](#) by euroCRIS, the following will be possible in a new major release of the Guidelines for CRIS Managers:

- Improved handling of publishing channels
- More type-specific metadata for research outputs
- More rich inter-document relationships
- Harvesting through an API, not just (only) OAI-PMH 2.0

DRIS

Directory of Research Information Systems

- overview -

euroCRIS DRIS simplifies CRIS registration



Discover

Country

India	630
Norway	132
United Kingdom	82
Italy	76
Spain	49
United States	47
Poland	43
Germany	39
Turkey	37
Netherlands	19
next >	

Software

IRINS	629
Pure	178
CRISin	131
In-house-built	79
IRIS	70
Symplectic Elements	45
Omega-PSIR	41
DSpace-CRIS	35
Avesis	32
Dialnet CRIS	21
next >	

Status


Operational	1317
Under Construction ...	25
Closed ...	2
In Preparation ...	1

euroCRIS DRIS - the map




Some DRIS entries already show OpenAIRE registration

DRIS record METIS Research Information System

 View Statistics

 Email Alert

 RSS Feed

 Information

DRIS Details

Name of the CRIS METIS Research Information System **Acronym** METIS Radboud

Description METIS is the CRIS of Radboud University It was implemented already in 1994 and as such is one of the oldest fully fledged CRIS's in Europe.

Status Operational

Scope Institutional

Date of establishment 01-04-1993

URI <https://www.ru.nl/research-information-services/manuals/ris-explained/> **Number of users** 750

Institution/organization Radboud University Nijmegen

Department Central Management

Contact person Simons, Eduard

CRIS data supply Faculties

CRIS data validation Central Administration

CRIS data output Central Management

Country Netherlands

Coverage Dataset

Software Metis

OpenAIRE

join euroCRIS :: DRIS



- Register via <https://www.eurocris.org/dris/dris-form>
OR
- Drop us a line at eurocris@eurocris.org

There's a number of *minimally sufficient metadata elements* needed to create a DRIS entry:

- CRIS type (institutional, regional, national, funder, aggregation, etc)
- Organisation hosting the CRIS
- CRIS name
- Software solution
- Status (operational, under construction)
- URL for publicly available portal

CRIS endpoint URL *is not shown* on DRIS entries in order not to compromise safety, but this is necessary for OpenAIRE harvesting

<https://dSPACECRIS.eurocris.org/cris/explore/dris>

on-going and lessons learned

- *VIRTA & FRIS* -



VIRTA

- *Joonas Nikkanen* -

VIRTA Publication Information Service

- Ministry of Education and Culture collects bibliographic information on scientific publications annually from
 - 14 universities and 5 university hospital districts (since 2011)
 - 23 universities of applied sciences (since 2012)
 - 12 state research institutes (gradually since 2014)
- Used as criteria in performance-based funding model of higher education institutions
- Organizations provide a copy of their publication information to VIRTA making it a national data warehouse (or *data hub*) for other services to use the publication metadata
- In total some 60 000 publications per year
 - = books, journal articles, conference papers, non-scholarly publications, dissertations, artistic publications
 - ✓ All scientific fields are covered
- The data can be...
 - ...examined on bibliographic level: <https://research.fi/>
 - ...pivoted on statistical/reporting needs: www.vipunen.fi/en-gb/
 - ...queried via authenticated REST API (XML, JSON) and OAI-PMH API (Dublin Core, XML)

Check
it out!



Research.fi

Why OpenAIRE integration?

- To expose more of the Finnish research publications to OpenAIRE
 - Organizational repositories only include a fraction of publications
 - Some institutional repositories are missing OpenAIRE integration
- Centralized solution - to save time and resources
 - Implementation and possible updates to OpenAIRE specifications has to be done to one system only
 - Does not limit possible individual implementations in Finnish CRIS systems
- Better quality and more complete metadata for OpenAIRE
 - Future additions to VIRTATA data model can be harvested to OpenAire as well

How the integration was done?

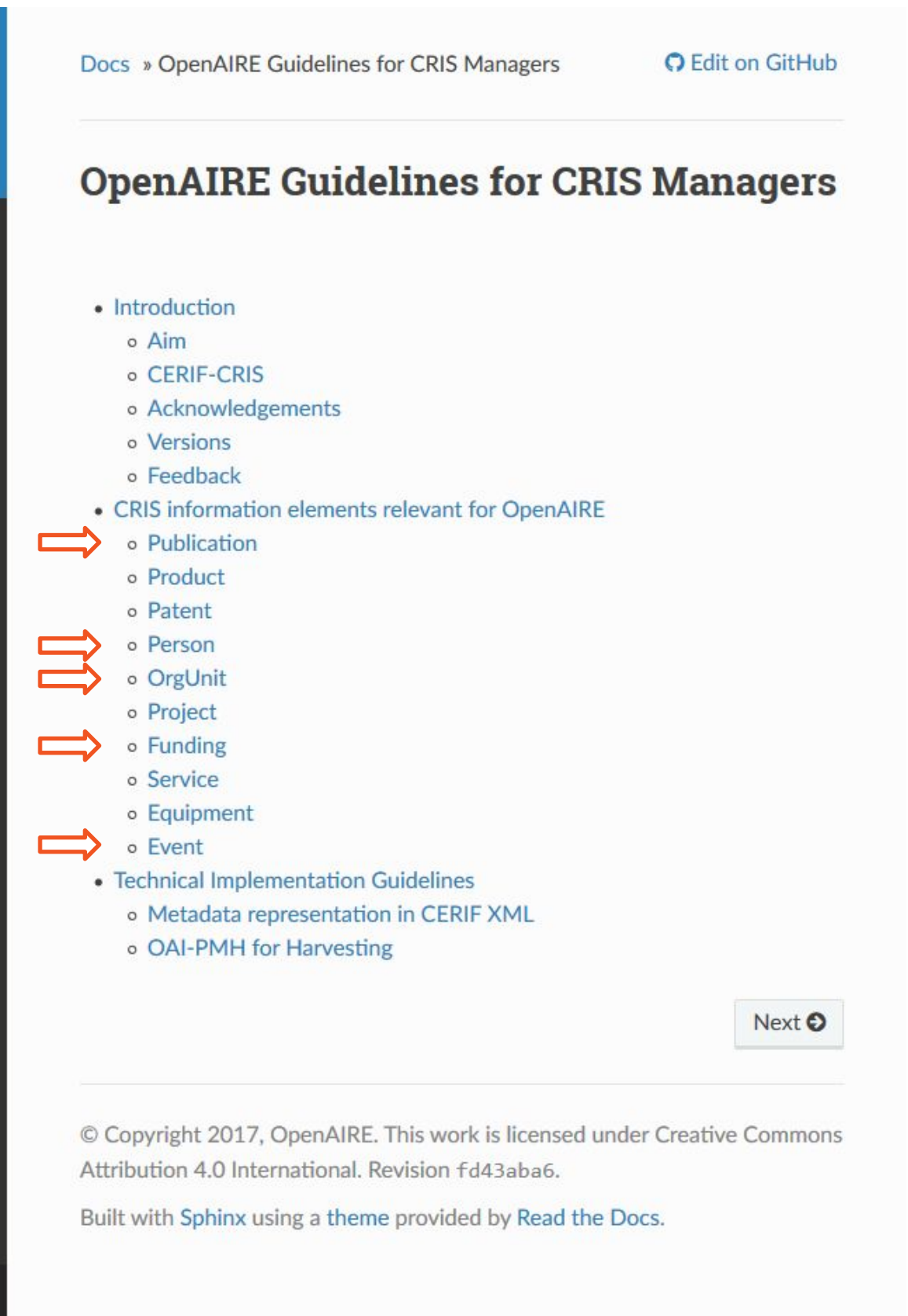
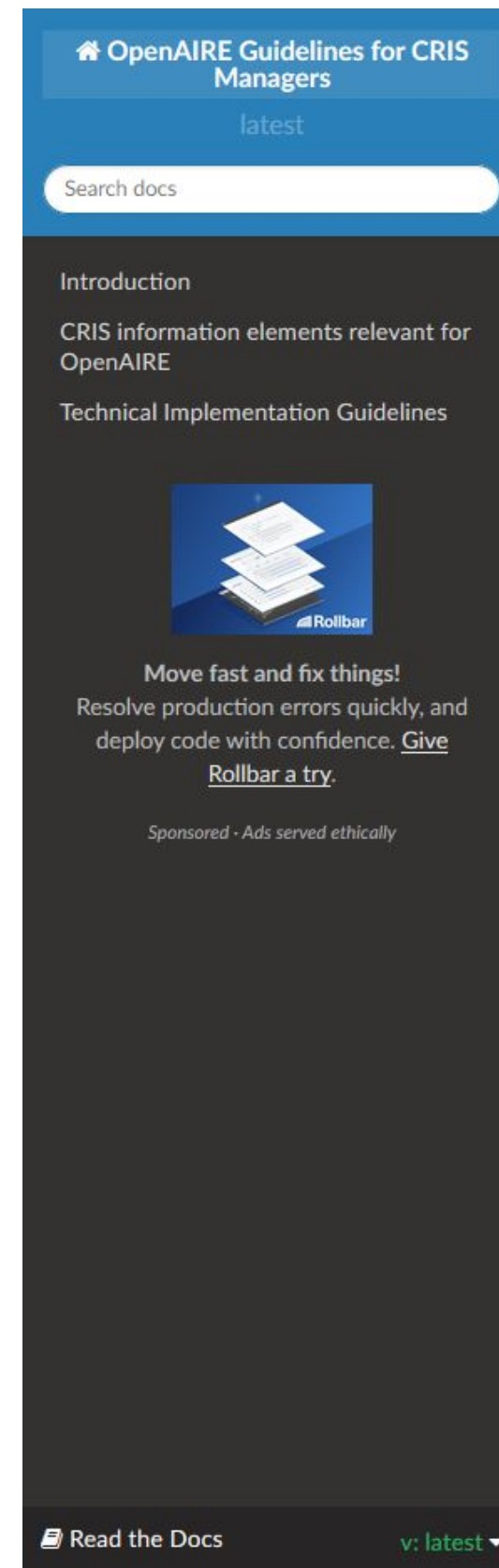
- A rough schedule as presented was planned
 - Actual integration work (i.e. technical work) could have been achieved in much less time
 - Organizational work and agreeing on permissions took most of the time
- Following phases were done:
 - Planning work / coordination with organizations
 - Actual mapping of data models / schemas
 - Exchanging data in CERIF compliant form via OAI-PMH
 - Testing via beta environment - any corrections
 - Production starts

Q1	Q2	Q3	Q4	Q1	Q2
Planning	Presenting to organizations	Mapping data models	OAI-PMH endpoint validating	OpenAIRE beta	First harvests to OpenAIRE?
		Procedures for CERIF-XML		Permissions from organizations	
		OAI-PMH work			

Guidelines for CRIS Managers

"The Guidelines provide orientation for CRIS managers to expose their metadata in a way that is compatible with the OpenAIRE infrastructure. By implementing the Guidelines, CRIS managers support the inclusion and therefore the reuse of metadata in their systems within the OpenAIRE infrastructure."

OpenAIRE Guidelines for CRIS Managers



Data models – VIRTAs / CERIF

- Many similarities between VIRTAs and CERIF data models on publications and what elements are included
 - Some key differences on e.g. classifications
- VIRTAs - CERIF mapping table available: <https://wiki.eduuni.fi/pages/viewpage.action?pageId=80941717>
- VIRTAs data model for reference: <https://tietomallit.suomi.fi/model/julkaisu/>

VIRTAs Julkaisu element	CERIF Publication element	VIRTAs Example	CERIF Example
JulkaisunTunnus	Attribute id of Publication element + Subelement URL which content has value of concatenation("http://juuli.fi/Record/", JulkaisunTunnus)	<JulkaisunTunnus>0283592417 </JulkaisunTunnus>	<Publication xmlns="https://www.openaire.eu/cerif-profile/1.1/" id="0283592417"> <URL>http://juuli.fi/Record/0283592417 </URL> </Publication>
JulkaisutyypinKoodi (type)	Subelement Type with attribute xmlns="https://www.openaire.eu/cerif-profile/vocab/COAR_Publication_Types"; and content: switch(JulkaisutyypinKoodi) case 'A1': http://purl.org/coar/resource_type/c_2df8fbb1 case 'A2': http://purl.org/coar/resource_type/c_dcae04bc case 'A3': http://purl.org/coar/resource_type/c_3248 case 'A4': http://purl.org/coar/resource_type/c_5794 case 'B1': http://purl.org/coar/resource_type/c_6501 case 'B2': http://purl.org/coar/resource_type/c_3248 case 'B3': http://purl.org/coar/resource_type/c_5794 case 'C1': http://purl.org/coar/resource_type/c_2f33 case 'C2': http://purl.org/coar/resource_type/c_2f33 case 'D1': http://purl.org/coar/resource_type/c_6501 case 'D2': http://purl.org/coar/resource_type/c_3248	<JulkaisutyypinKoodi>E1 </JulkaisutyypinKoodi>	<Type xmlns="https://www.openaire.eu/cerif-profile/vocab/COAR_Publication_Types">http://purl.org/coar/resource_type/c_2f33 </Type> <!-- <Type xmlns="VIRTAs types vocabulary URL">https://wiki.eduuni.fi/display/cscvirtajtp/CERIF+Type#E1 </Type> -->

Lessons learned

1. Implementation process **highly dependant on** source system **architecture / technologies**
2. Following **documentation is straightforward**, but further support and best practices would be useful for implementers (like this webinar 😊)
3. Aiming for **high quality metadata equals more work** and more complex mapping (+ upkeep in the future)
4. Next step: Integrating national CRIS Research.fi to OpenAIRE (RDGraph) and **widening the research entities** to include e.g. funding information, projects etc.
-> Progressing in FAIRCORE4EOSC projects case study: <https://faircore4eosc.eu/case-studies/european-integration-national-level-services>

CRIS Aggregator
VIRTA

OPENAIRE CRIS V1.1 FINLAND

Web page: <https://www.csc.fi> →

Summary Publications (192,489) Other research products (1,651) R > **Statistics**

Results with funding information
6,297

Countries
Finland

OAI-PMH
<https://virta-jtp.csc.fi/api/cerif>



FRIS

- *Tom Wuyts* -

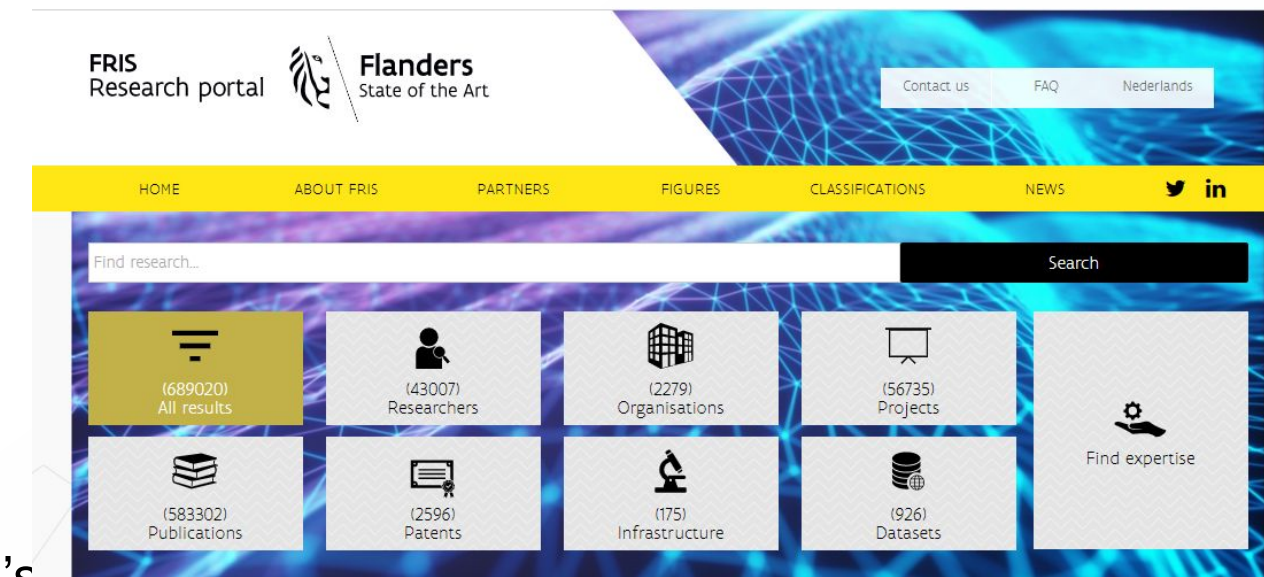


FRIS delivery to OpenAIRE

- What is FRIS
 - short introduction
 - FRIS scheme
- OpenAIRE Compliance
- Lessons learned
 - guidelines, delivery and mapping
 - technical impact
- Next steps

What is FRIS

- Flemish Research Information Space
- CRIS: publicly funded research performed in Flanders - data since 2008
- Connected with institutional CRIS systems (automated flow) | If not: manual input also possible
- Exchange format: CERIF 1.5 + fris-extensions
- Some numbers:
 - >40.000 active researchers
 - >56.000 research projects
 - >580.000 publications
- Since very recently also information on:
 - Patents
 - Research infrastructure
 - Datasets
- Information available through portal ([Researchportal.be](https://researchportal.be)) and open API's
- used for reporting on research and Open Science in Flanders

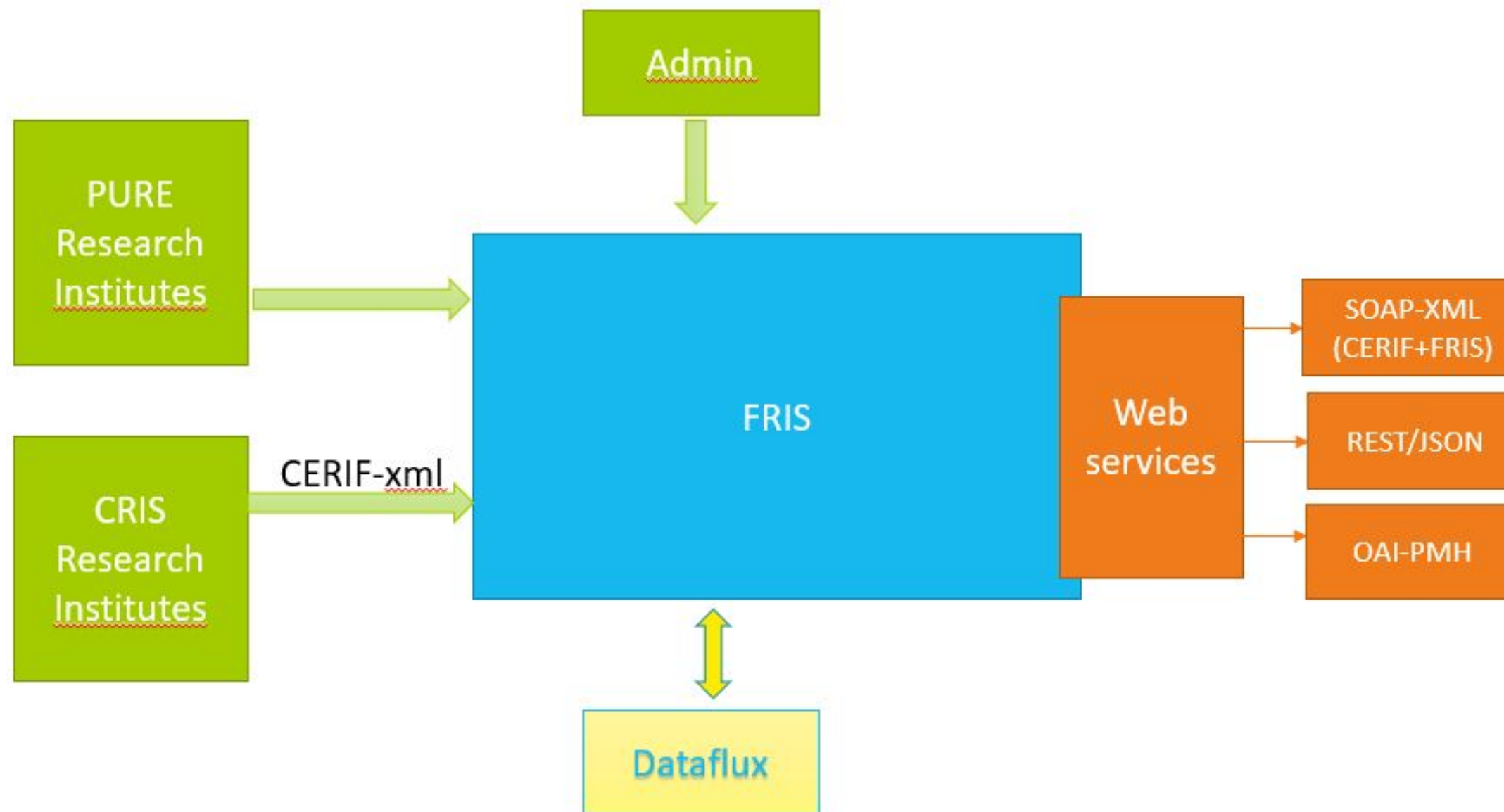


Most important principle:

- Institutions are responsible for the quality of the data (ownership) - data currently not merged

FRIS in scheme

Basic view of FRIS for OpenAIRE purposes



OpenAire Compliance

FRIS believes and supports Open Science - connecting to EOSC

- Transparency
- Collaboration
- Innovation
- FAIR:
 - Findability
 - Accessibility
 - Interoperability
 - Reusable

Efficiency

- FRIS has +- 100 research institutions delivering data
 - 1 integration with FRIS will deliver data of 100 institutions
 - Note: other integrations are still possible



Lessons learned (I)

Which guidelines to follow?

- [OpenAIRE Guidelines for Literature, institutional, and thematic Repositories](#)

Since FRIS knows which data has been delivered from whom:

→ Provenance element doesn't allow this

- or : [OpenAIRE Guidelines for CRIS Managers](#)

→ Since FRIS is a CRIS-system

```
<about>
  <provenance
xmlns="http://www.openarchives.org/OAI/2.0/provenance"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/provenance
e
  http://www.openarchives.org/OAI/2.0/provenance.xsd" >
  <originDescription altered="true"
harvestDate="2012-09-17T14:58:36Z" >

<baseURL>http://dspace.library.uu.nl:8080/dspace-oai/request </bas
eURL>

<identifier>oai:dspace.library.uu.nl:1874/218065 </identifier>
  <timestamp>2012-01-19T12:38:56Z </timestamp>
  <metadataNamespace>
    http://www.openarchives.org/OAI/2.0/oai_dc/
  </metadataNamespace>
  </originDescription>
</provenance>
</about>
```



Lessons learned (II)

Not yet delivered entities:

- started with datasets
- links to other not yet delivered entities:
 - dataset/project,
 - dataset/publication,
 - publication/project

```
<OriginatesFrom>
  <Project id="Projects/112347">
    <Acronym>EUFAR</Acronym>
  </Project>
</OriginatesFrom>
```



Corresponding mapping issues:

- 3 FRIS values for 2 OpenAIRE values

Link between entities	Openaire element	FRIS term
Dataset and dataset	PartOf (https://w3id.org/cerif/vocab/Inter-ProductRelations#Part)	Is new version of, Part, Referenced By
Publication and dataset	References (https://w3id.org/cerif/vocab/Inter-OutputRelations#Reference)	Referenced By
Dataset and dataset	References (https://w3id.org/cerif/vocab/Inter-OutputRelations#Reference)	Is new version of, Part, Referenced By
Dataset and patent	References (https://w3id.org/cerif/vocab/Inter-OutputRelations#Reference)	Referenced By

Lessons learned (III)

Technical issues

- Generating of the creator element of the provided xsd
ticket on github : <https://github.com/openaire/guidelines-cris-managers/issues/142>



Next steps

WHAT'S
NEXT?

Short future:

- Adding the creator(s) to datasets
- Delivery of datasets in production
- looking into the other entities and links (especially links with datasets)

Longer term options, still under discussion:

- Possible delivery in the future of other entities
- Possible enrichment from OpenAIRE to FRIS

Questions?

Tom Wuyts: tom.wuyts@vlaanderen.be

General contact:

>> www.researchportal.be

>> fris.support@vlaanderen.be (technical questions)

>> fris@vlaanderen.be (general questions)



open discussion

- every one -

up-coming events

- euroCRIS Spring 2023 membership meeting on May 31 and June 1, 2023 in Brussels
<https://eurocris.org/news/spring-2023-membership-meeting-brussels>
- WG national/regional Research Portals, End of April
<https://eurocris.org/blog/introducing-nationalregional-research-portals-working-group>
- PROVIDE community calls, May 3rd
<https://www.openaire.eu/provide-community-calls>

THANKS

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