

# Overview of JPCOAR and JPCOAR Schema

JPCOAR Schema: a brand-new metadata schema  
for Open Science in Japan

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# Self introduction

Shuheii Otani

University of the Ryukyus Library  
Management and maintenance of  
Institutional Repository ,  
E-Resource and ILS.



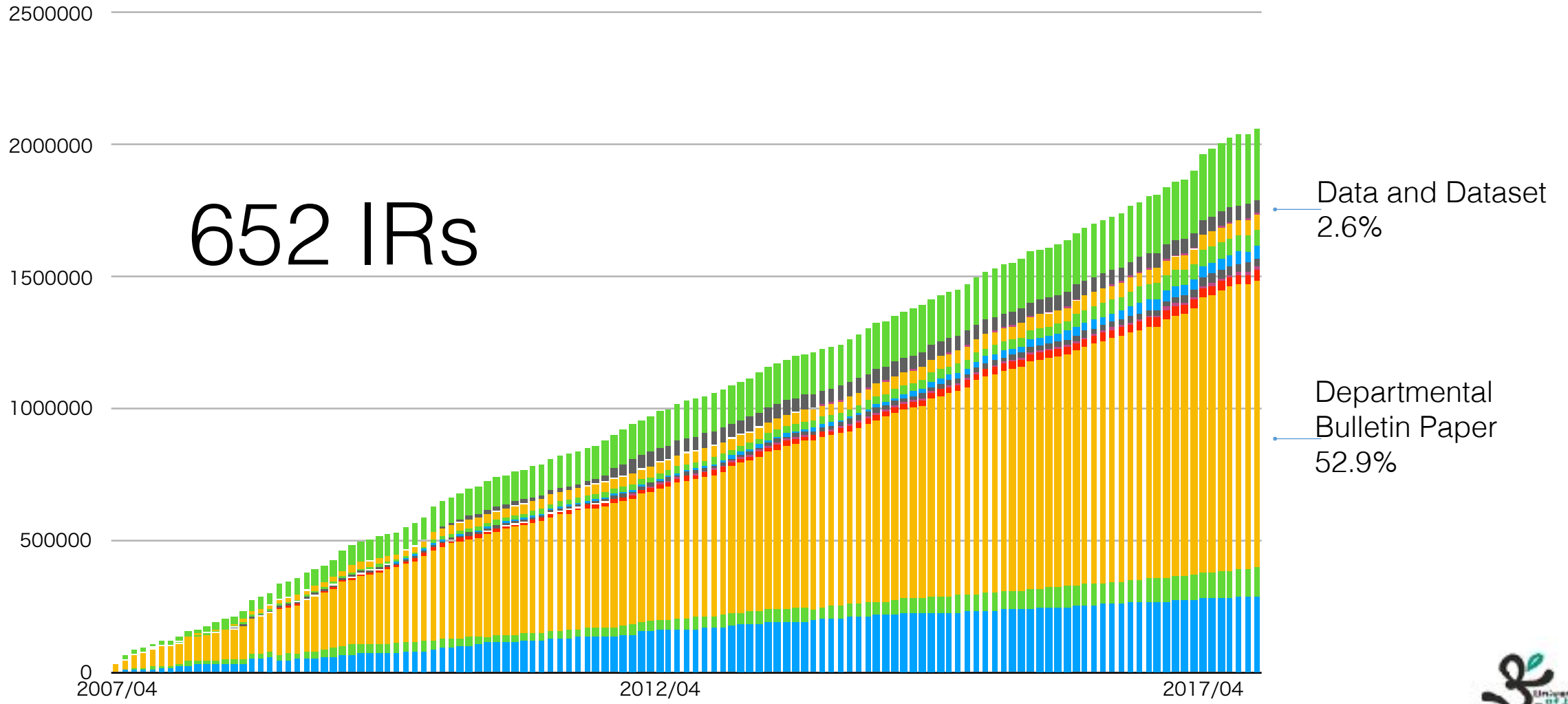
Okinawa

# Outline

1. Current status of Institutional Repositories(IRs) in Japan
2. About JPCOAR
3. Overview of JPCOAR Schema

# 1. Current status of Institutional Repositories(IRs) in Japan

# Fulltext contents in Japan IRS

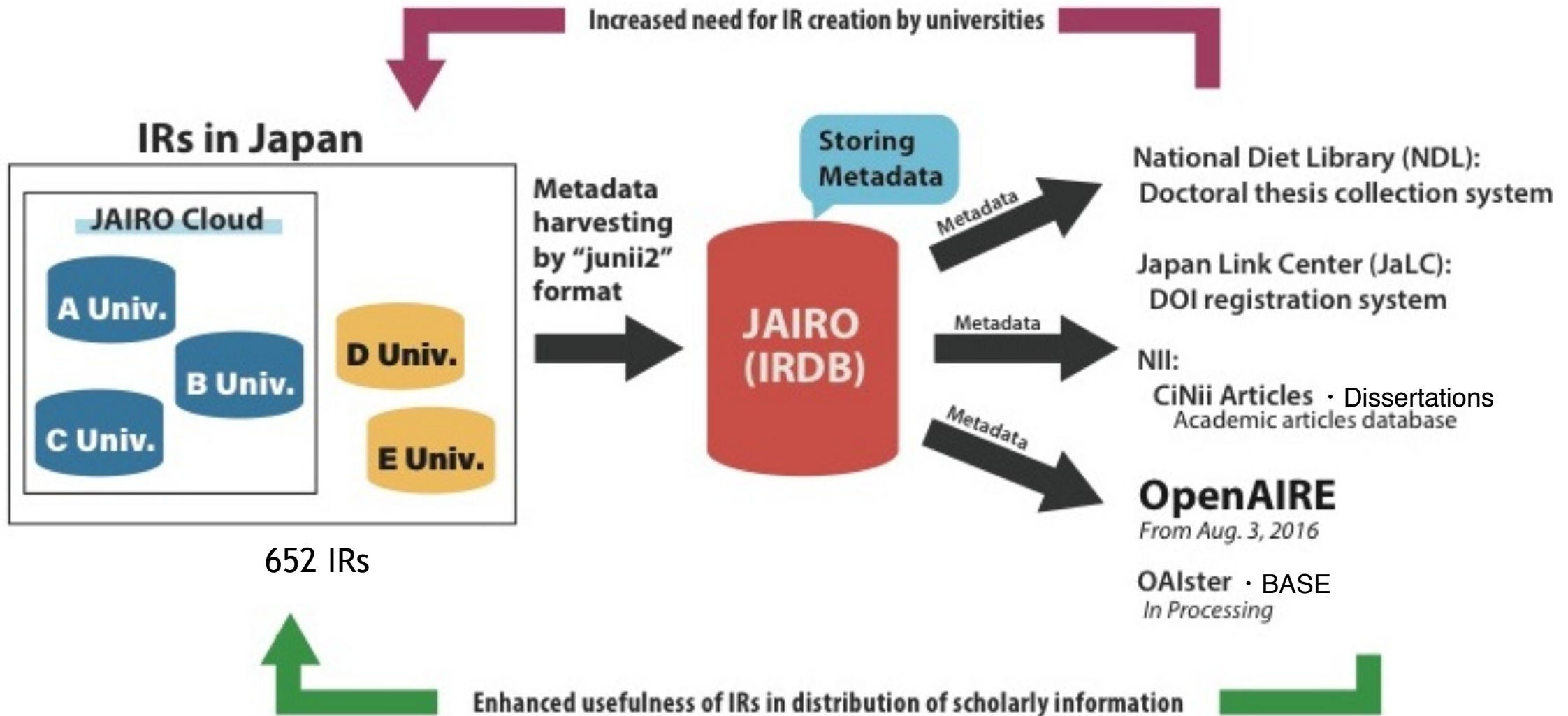


# JAIRO Cloud

Major Japanese Repository System provided on the virtual server hosted by National Institute of Informatics  
 Implemented by 541 Institutions (as of 30 Sep. 2017)



# IRDB : National metadata aggregator

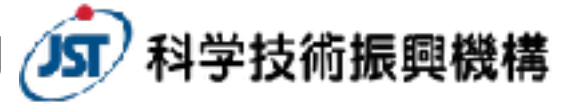


# Major Players / Communities

1. National Institute of Informatics (NII): developer



2. JST (Japan Science and Technology Agency): funder, EJ platformer



3. JSPS (Japan Society for the Promotion of Science): funder



4. Japan Consortium for Open Access Repository (JPCOAR)

A member of Confederation of Open Access Repositories (COAR)



# Open Access Policy

## Cabinet Office

The 5th Science and Technology Basic Plan(2016.1.22)

<http://www8.cao.go.jp/cstp/kihonkeikaku/index5.html>

Report of Promoting Open Science in Japan -Opening up a new era for the advancement of Science(2015.3.30)

<http://www8.cao.go.jp/cstp/sonota/openscience/>

## Ministry of Education, Culture, Sports, Science and Technology

Mandate to doctoral dissertations(2013.4.1)

[http://www.mext.go.jp/a\\_menu/koutou/daigakuin/detail/1331790.htm](http://www.mext.go.jp/a_menu/koutou/daigakuin/detail/1331790.htm)

# Open Access Policy

## Funding Agency

JSPS : Japan Society for the Promotion of Science  
Open Access Policy (2017.3.27)

[https://www.jsps.go.jp/data/Open\\_access.pdf](https://www.jsps.go.jp/data/Open_access.pdf)

JST : Japan Science and Technology Agency  
Open Science Policy (2017.4.1)

<http://www.jst.go.jp/EN/about/openscience/index.html>

## University and Research Institution

15 institutions (2017.10.31)

[https://jpcoar.repo.nii.ac.jp/?page\\_id=53](https://jpcoar.repo.nii.ac.jp/?page_id=53)

## 2. About JPCOAR

# Overview of JPCOAR

Established in June 2016

Succeeding the activities of 3 organizations

- Digital Repository Federation (DRF), since 2006

- JAIRO Cloud Community, since 2012

- Institutional Repository Promotion Committee (IRPC), since 2013

Consist of about 500 institutions

- University libraries (mainly)

- Research institutions

# Missions

1. Accelerate Open Science and Scholarly Communication
2. Co-operate JAIRO Cloud
3. Increase the number of IR contents
4. Plan and Conduct the training
5. International Cooperation

# Organization

Governing Board

4 Task force

Research Data / Metadata / Researcher ID / OA Policy

3 Working group

JAIRO Cloud Operation / Training / Promotion

# Research Data Task force

Development of RDM training tools as online learning materials to be provided as MOOCs.

ga088: オープンサイエンス時代の研究データ管理

ga088を受講登録する (無料)



# Research Data Task force

## Data repository

Clarification of requirements for data repository based on the experience of the publication of data Journal



Making use of JAIRO Cloud as a Data repository



# Metadata Task force

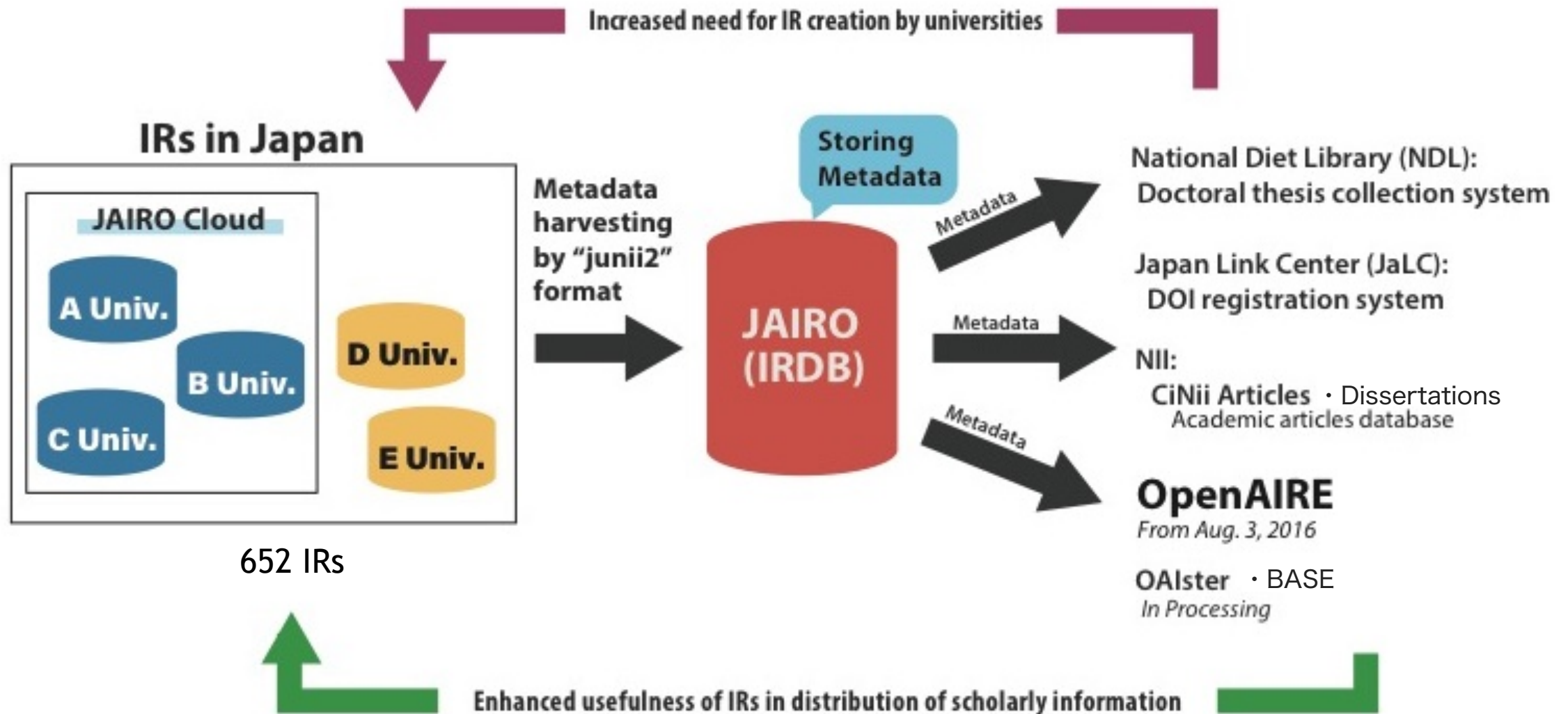
COAR Controlled Vocabularies Editorial Board

Released new metadata schema (JPCOAR Schema ver.1.0.) on 2017.10.30.

<http://id.nii.ac.jp/1458/00000024/>

# 3. Overview of JPCOAR Schema

# Current Japanese metadata schema “junii2”



# About Junii2

Junii2 is used from 2002

Based Dublin Core Metadata Element Set

64 Elements

## Example

```
<xs:sequence>
```

```
<xs:element ref="title" minOccurs="1" maxOccurs="1" />
```

```
<xs:element ref="alternative" minOccurs="0" maxOccurs="unbounded" />
```

```
<xs:element ref="creator" minOccurs="0" maxOccurs="unbounded" />
```

```
<xs:element ref="subject" minOccurs="0" maxOccurs="unbounded" />
```

```
<xs:element ref="NIIsubject" minOccurs="0" maxOccurs="unbounded" />
```

```
<xs:element ref="NDC" minOccurs="0" maxOccurs="unbounded" />
```

# Background of challenge for revising “junii2”

## Japanese regional schema

“junii2”(formerly “junii”) has been used for 15 years as a widespread adopted schema in Japanese community, however, it has not enough interoperability with international scholarly communication

## Unstructured schema architecture

It has issues with appropriate and detailed metadata description such as describing association between creator name, creator ID, affiliation...

## Incapability for scholarly changes

It has not capability to innovative enhancement for change of scholarly environment such as research data management

# Process of Revising Junii2

2016 Project Start

2016.10 Basic Plan for revising Junii2

2017.3 Draft and Public comment

2017.10 Release

# Major Concept

1. Focusing on interoperability with established international standards/schemas
2. Expansion of identifiers and hierarchy of metadata structure
3. New elements for monitoring implementation of Open Access policies and managing research data

# Junii2 / JPCOAR Schema Comparison

	junii2	JPCOAR Schema
<b>Hierarchy</b>	1	3
<b>Number of elements</b>	64	79
<b>migration</b>	21	21
<b>integration</b>	43	7
<b>Addition</b>	-	51
<b>Number of attributions</b>	4	15
<b>language attributions</b>	6	26
<b>other attributions</b>	14	29
<b>Number of identifiers</b>	12	28
<b>Controlled vocabulary</b>	5	22



Focusing on interoperability with established international standards/  
schemas

Namespace	Elements sample
dc	title, rights, publisher, language, type
dcterms	alternative, accessRights, temporal
rioxterms	apc
datacite	description, date, version, geolocation
openaire	versionType
dcndl*	dissertationNumber, degreeName, dateGranted
jpcoar*	creator, contributor, subject, ...

\*Regional elements are still left corresponding to Japanese scholarly environment

# Expansion of identifiers and hierarchy of metadata structure

## Adoption of identifiers

	Researcher	Institution	Funder
Regional	e-Rad NRID	kakenhi	
International	ISNI VIAF ORCID	GRID ISNI Ringgold	Crossref funder

# Expansion of identifiers and hierarchy of metadata structure

## Example

```
<jpcoar:creator>
```

```
  <jpcoar:nameIdentifier nameIdentifierScheme="ORCID"
```

```
    nameIdentifierURI="https://orcid.org/0000-0001-0002-0003">0000-0001-0002-0003</jpcoar:nameIdentifier>
```

```
<jpcoar:creatorName xml:lang="ja">安達, 淳</jpcoar:creatorName>
```

```
<jpcoar:creatorName xml:lang="en">Adachi, Jun</jpcoar:creatorName>
```

```
<jpcoar:creatorName xml:lang="ja-Kana">アダチ, シュン</jpcoar:creatorName>
```

```
<jpcoar:affiliation>
```

```
  <jpcoar:nameIdentifier nameIdentifierScheme="ISNI"
```

```
    nameIdentifierURI="http://www.isni.org/isni/0000000121691048">0000000121691048</jpcoar:nameIdentifier>
```

```
<jpcoar:affiliationName xml:lang="ja">東京大学</jpcoar:affiliationName>
```

```
<jpcoar:affiliationName xml:lang="en">University of Tokyo</jpcoar:affiliationName>
```

```
</jpcoar:affiliation>
```

```
</jpcoar:creator>
```

# New elements for monitoring implementation of Open Access policies

dcterms:accessRights

For Open Access Status

Describe using COAR Controlled Vocabularies

embargoed access / metadata only access / restricted access / open access

rioxterms:apc

For APC Status

Paid / Partially waived / Fully waived / Not charged / Not required / Unknown

jpcoar:fundingReference

For funding information

# New elements for monitoring implementation of Open Access policies

## Example

```
<dcterms:accessRights
  rdf:resource="http://purl.org/coar/access_right/c_abf2">open access</dcterms:accessRights>
<jpcoar:fundingReference>
  <datacite:funderIdentifier
    funderIdentifierType="Crossref Funder">http://doi.org/10.13039/501100001691
  </datacite:funderIdentifier>
  <jpcoar:funderName xml:lang="ja">日本学術振興会</jpcoar:funderName>
  <datacite:awardNumber
    awardURI=" https://kaken.nii.ac.jp/ja/grant/KAKENHI-PLANNED-18049069/">18049069</datacite:awardNumber>
  <jpcoar:awardTitle xml:lang="ja">情報爆発時代の情報検索基盤技術</jpcoar:awardTitle>
</jpcoar:fundingReference>
```

# New elements for managing research data

datacite:version

datacite:geolocation

## Example

```
<datacite:geoLocation>
```

```
  <datacite:geoLocationBox>
```

```
    <datacite:westBoundLongitude>-71.032</datacite:westBoundLongitude>
```

```
    <datacite:eastBoundLongitude>-68.211</datacite:eastBoundLongitude>
```

```
    <datacite:southBoundLatitude>41.090</datacite:southBoundLatitude>
```

```
    <datacite:northBoundLatitude>42.893</datacite:northBoundLatitude>
```

```
  </datacite:geoLocationBox>
```

```
</datacite:geoLocation>
```

# New attribution for managing research data

jpcoar:contributor contributorType

Example

```
<jpcoar:contributor contributorType="ProjectLeader">  
  <jpcoar:nameIdentifier nameIdentifierScheme="ORCID"  
    nameIdentifierURI="https://orcid.org/0000-0001-0002-0003">  
    0000-0001-0002-0003</jpcoar:nameIdentifier>  
  <jpcoar:contributorName xml:lang="ja">夏目, 漱石</jpcoar:contributorName>  
  <jpcoar:contributorName xml:lang="en">Natsume, Soseki</jpcoar:contributorName>  
  <jpcoar:contributorName xml:lang="ja-Kana">  
    ナツメ, ソウセキ</jpcoar:contributorName>
```

# Next Step of JPCOAR Schema

Implementation in IRDB, JAIRO Cloud and other major Japanese repository systems

New IRDB will be released in 2018.

New JAIRO Cloud will be released after 2018.

Expansion of contents

Digital collection management

(e.g. digitalized handwritten classical manuscripts)

Learning materials