

Technical interoperability for open science

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Chair, Joint Steering Committee for Japan Link Center (JaLC)

Executive Director, SPARC Japan

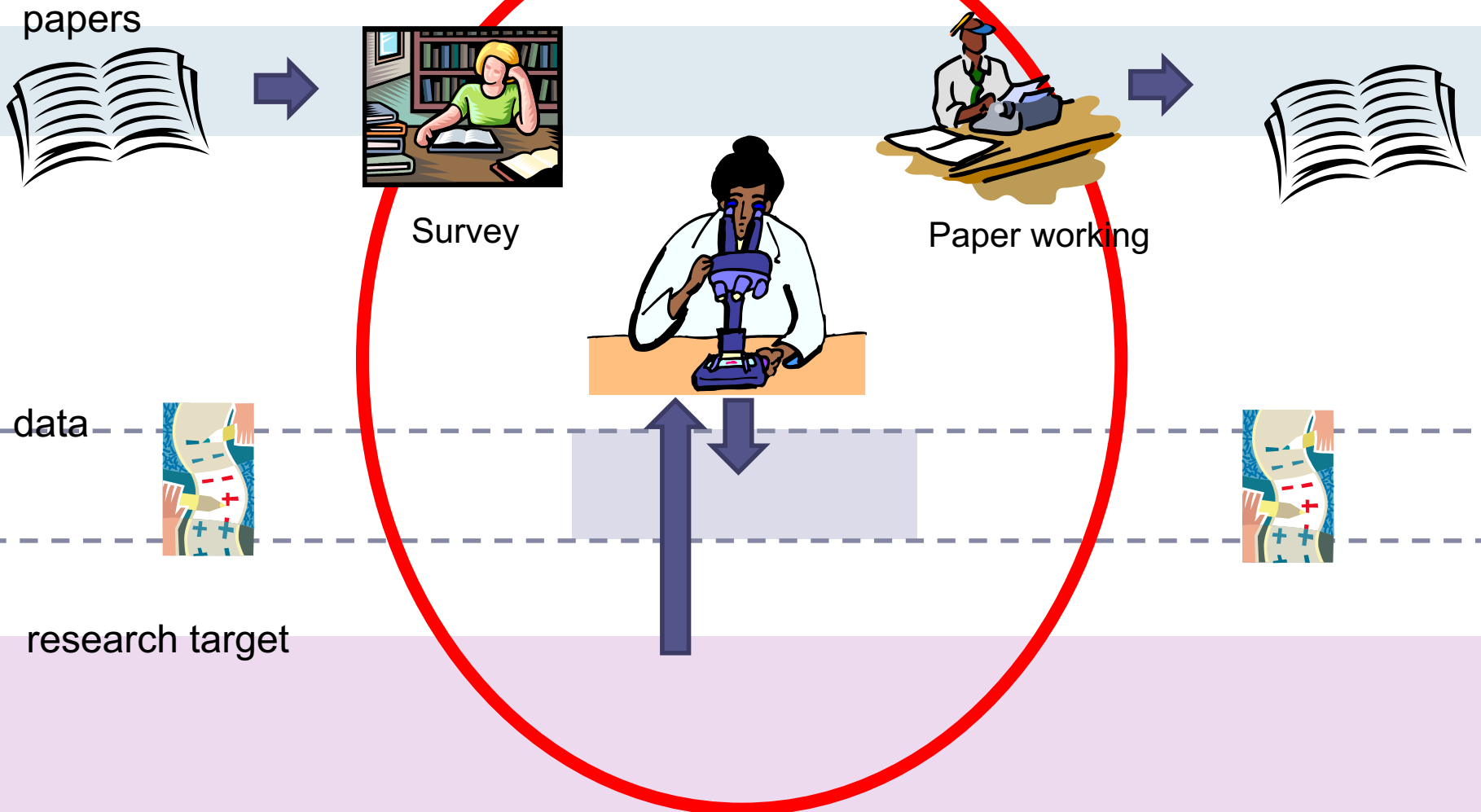
Advisory Board Member, arXiv

Board member, CLOCKSS



Researcher before Digital Age

Research & Writing



Researchers now

Research, Writing & **Data publishing**

papers



Survey



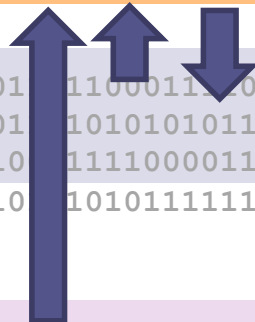
Paper working



data



Data use



Data publishing



research target

Researcher in Future

Integration of papers & data

Data publishing



Data use



Data publishing

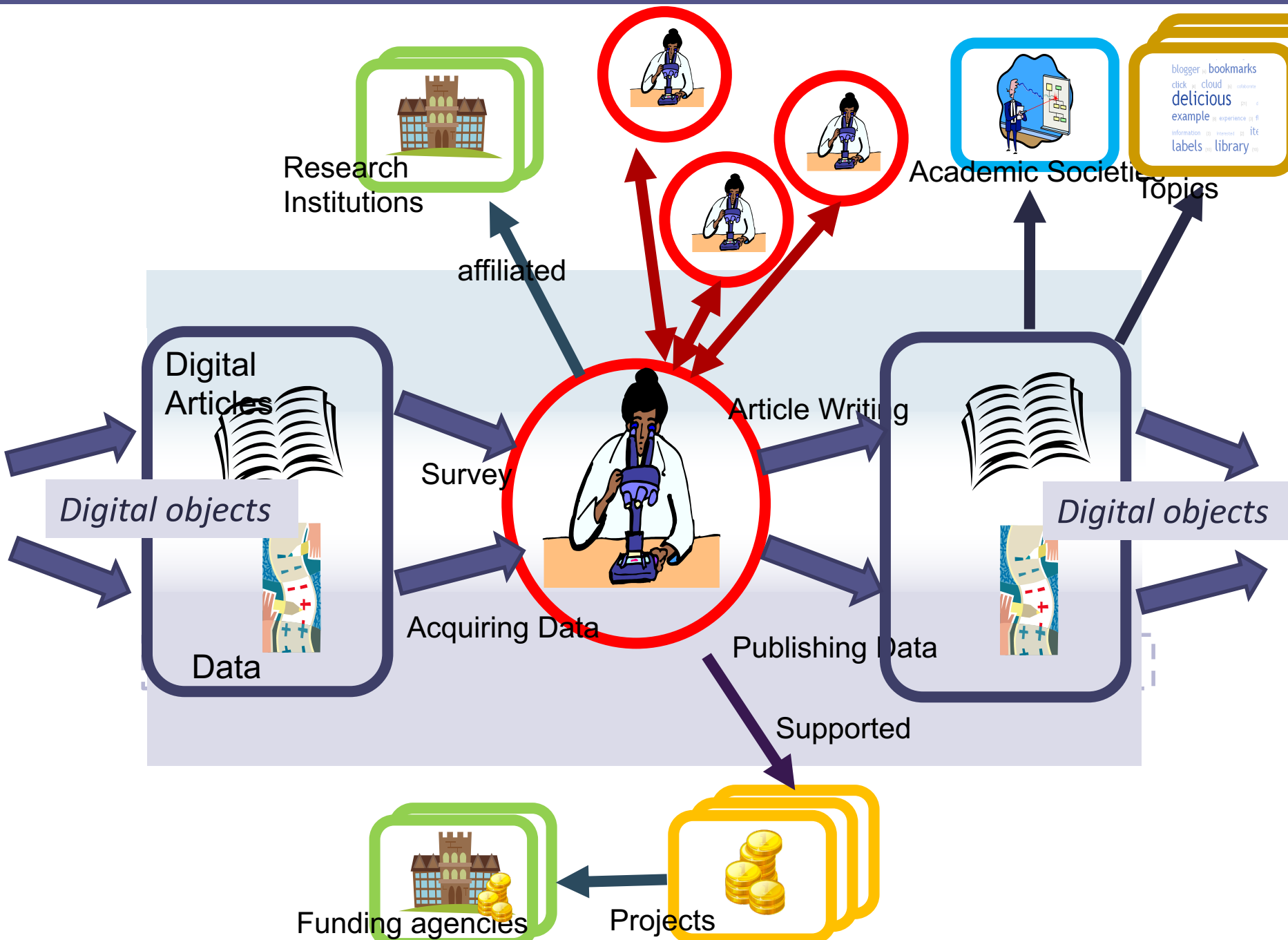


Data

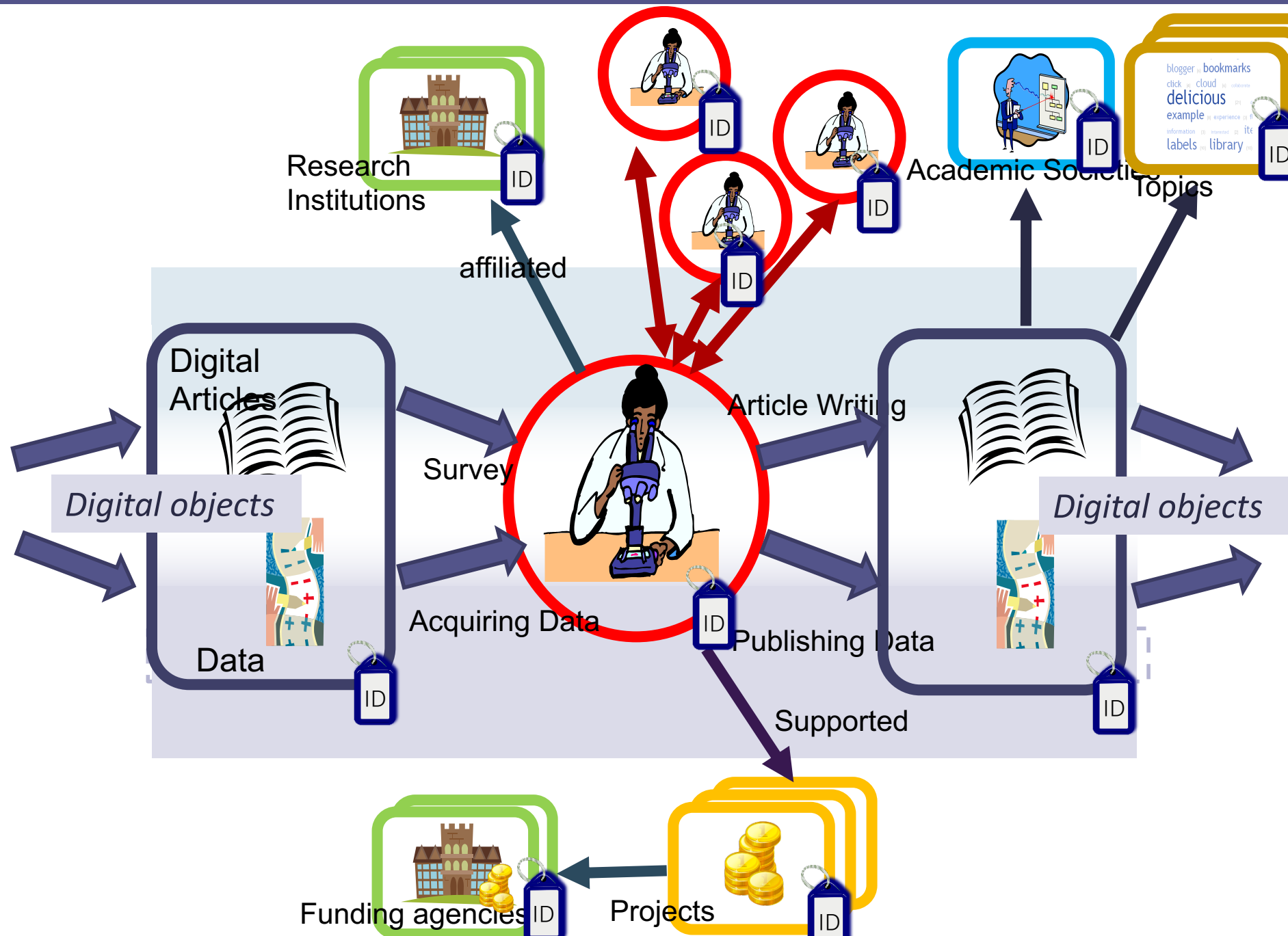


Research = Data Supply-chain

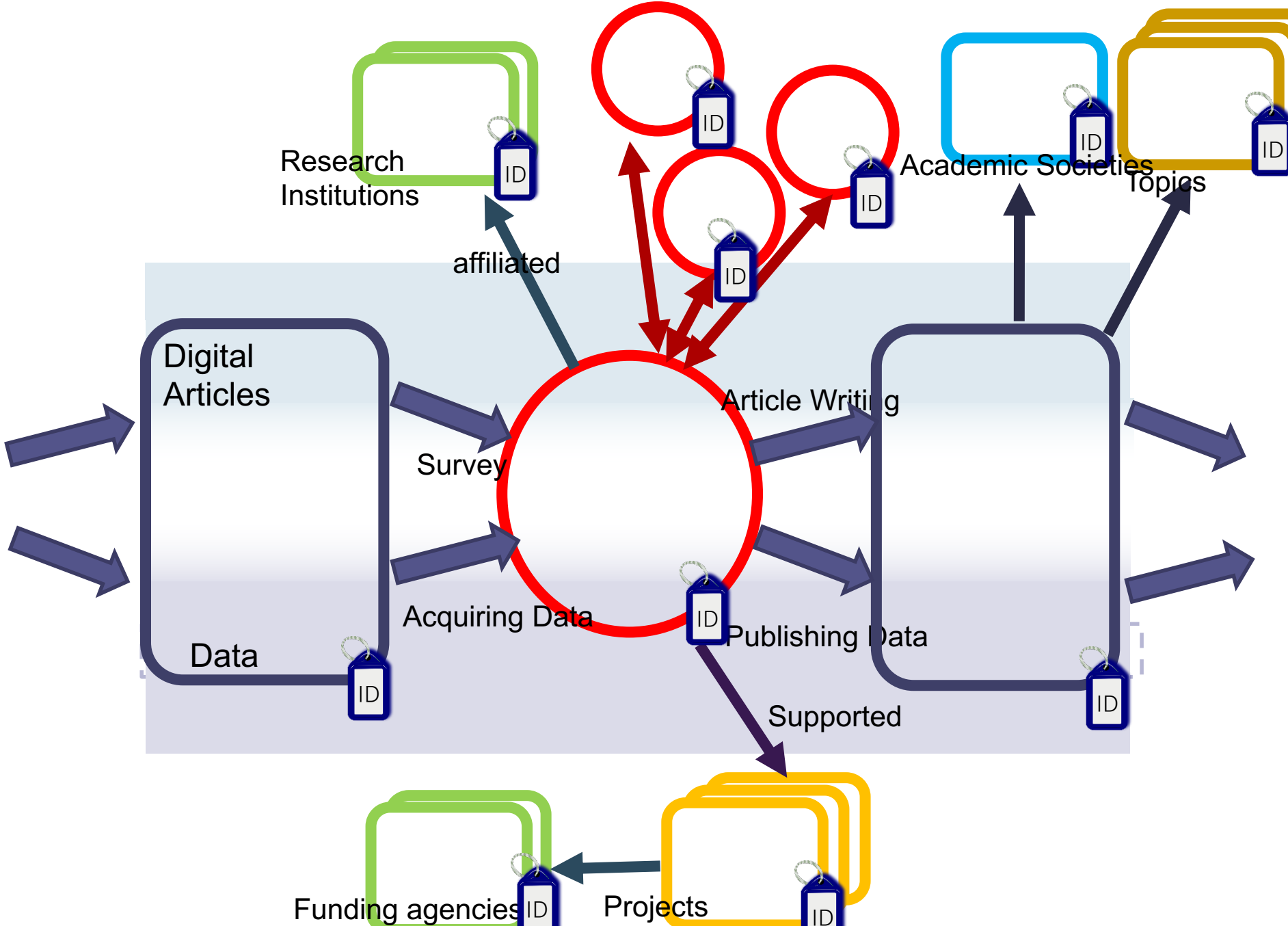
Research Activities and Related Entities



Research Activities and Related Entities



Research Activities and Related Entities



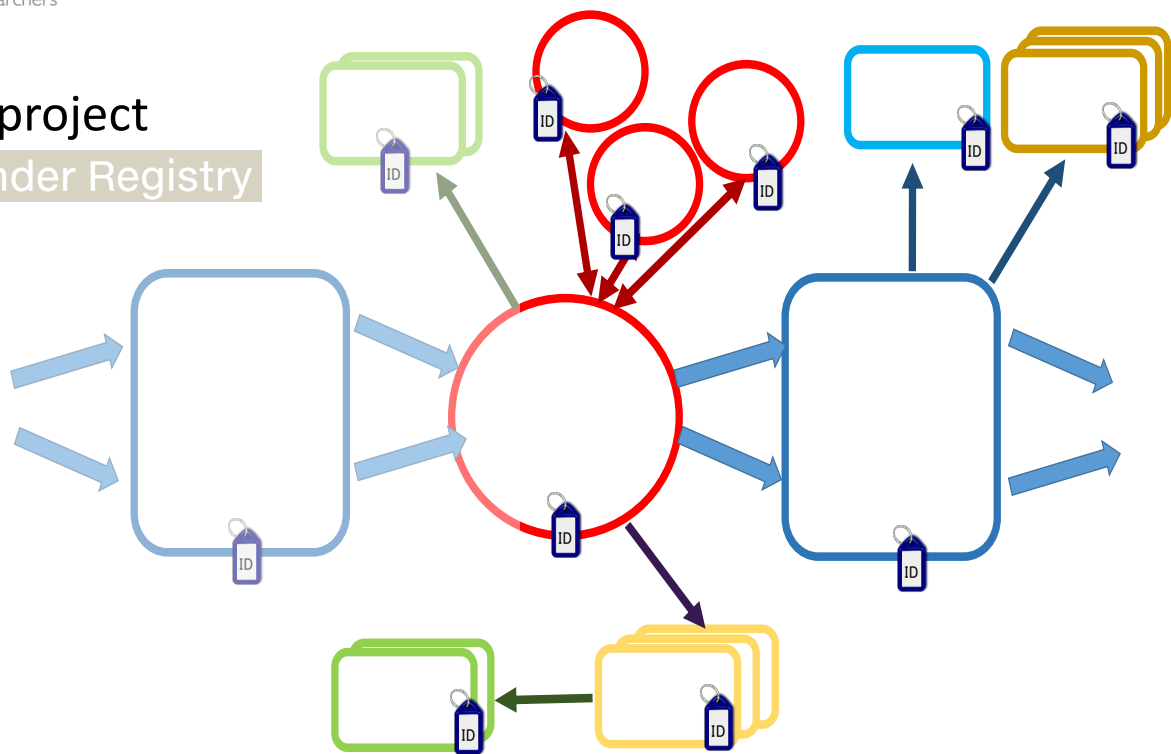
Global Infrastructure for Scholarly Communication

- ID for

- Article
- Data
- Researcher
- Institutions, affiliation
- Funding agency, funded project
- Academic society
- Topic
- ...



Funder Registry



Global Infrastructure for Scholarly Communication

- So the global activity is going on.
 - IDF, CrossRef, DataCite, ORCID ...
- Why is the nation-wide activity needed?
 - Realize **interoperability** over **difference** by nation

Global Infrastructure for Scholarly Communication

- Realize **interoperability** over **difference** by nation
 - Difference from
 - Language
 - Scholarly Systems
 - Scholarly Organization
 - Scholarly Culture
 - Interoperability for
 - ID Systems
 - Metadata
 - Systems
 - Information Flow

CASE STUDY: DOI REGISTRATION SERVICE

Japan Link Center (JaLC):

A Registration Agency for the DOI Foundation

Registration Agencies for DOI



[Airiti, Inc.](#)



[Crossref](#)



[JaLC \(Japan Link Center\)](#)



[Korea Institute of Science and Technology Information \(KISTI\)](#)



[China National Knowledge Infrastructure \(CNKI\)](#)



[DataCite](#)



[mEDRA \(Multilingual European DOI Registration Agency\)](#)



[OP \(Publications Office of the European Union\)](#)



[EIDR \(Entertainment Identifier Registry\)](#)



[ISTIC \(The Institute of Scientific and Technical Information of China\)](#)

Research focused global RAs



[Airiti, Inc.](#)



[Crossref](#)



[JaLC \(Japan Link Center\)](#)



[Korea Institute of Science and Technology Information \(KISTI\)](#)



[China National Knowledge Infrastructure \(CNKI\)](#)



[DataCite](#)



[mEDRA \(Multilingual European DOI Registration Agency\)](#)



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[EIDR \(Entertainment Identifier Registry\)](#)



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Regional RAs



[Airiti, Inc.](#)



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[JaLC \(Japan Link Center\)](#)



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[China National Knowledge Infrastructure \(CNKI\)](#)



[DataCite](#)



[mEDRA \(Multilingual European DOI Registration Agency\)](#)



[OP \(Publications Office of the European Union\)](#)



[EIDR \(Entertainment Identifier Registry\)](#)



[ISFIC \(The Institute of Scientific and Technical Information of China\)](#)

Japan Link Center (JaLC): A Registration Agency for DOI

- Founded in March 2012
- Aimed to register DOIs for academic contents produced in Japan or in Japanese, to circulate information in Japan and overseas.
- Controlled by four national organizations:
 - Japan Science and Technology Agency (JST)
 - National Institute for Materials Science (NIMS)
 - National Institute of Informatics (NII)
 - National Diet Library (NDL)
- Operated by JST
- Membership system
 - 41 Regular members
(Academic societies, Publishers, University libraries, etc)
 - Nearly 2000 Associate members
(academic societies and universities)
- External coordination
 - JaLC is a member of CrossRef and DataCite.

Role of JaLC as a national service

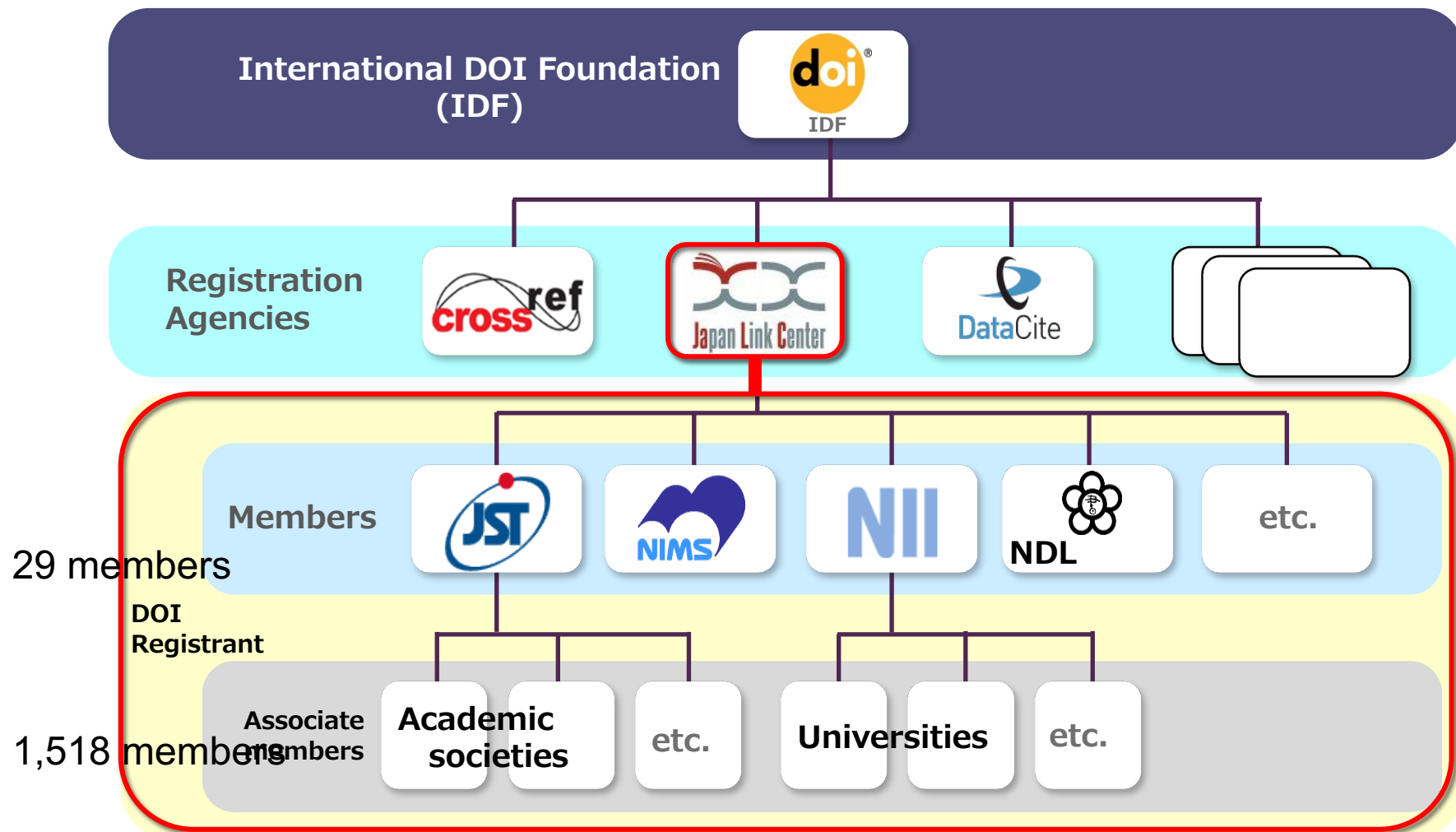
1. Offer various ways for registration procedures
2. Offer the total service for PID Registration
3. Connecting various content holders and users
4. Pick up and implement various requests for DOI
5. Nation-wide outreach of DOI for various sectors
6. Locally suitable business model

Offer various ways for registration procedures

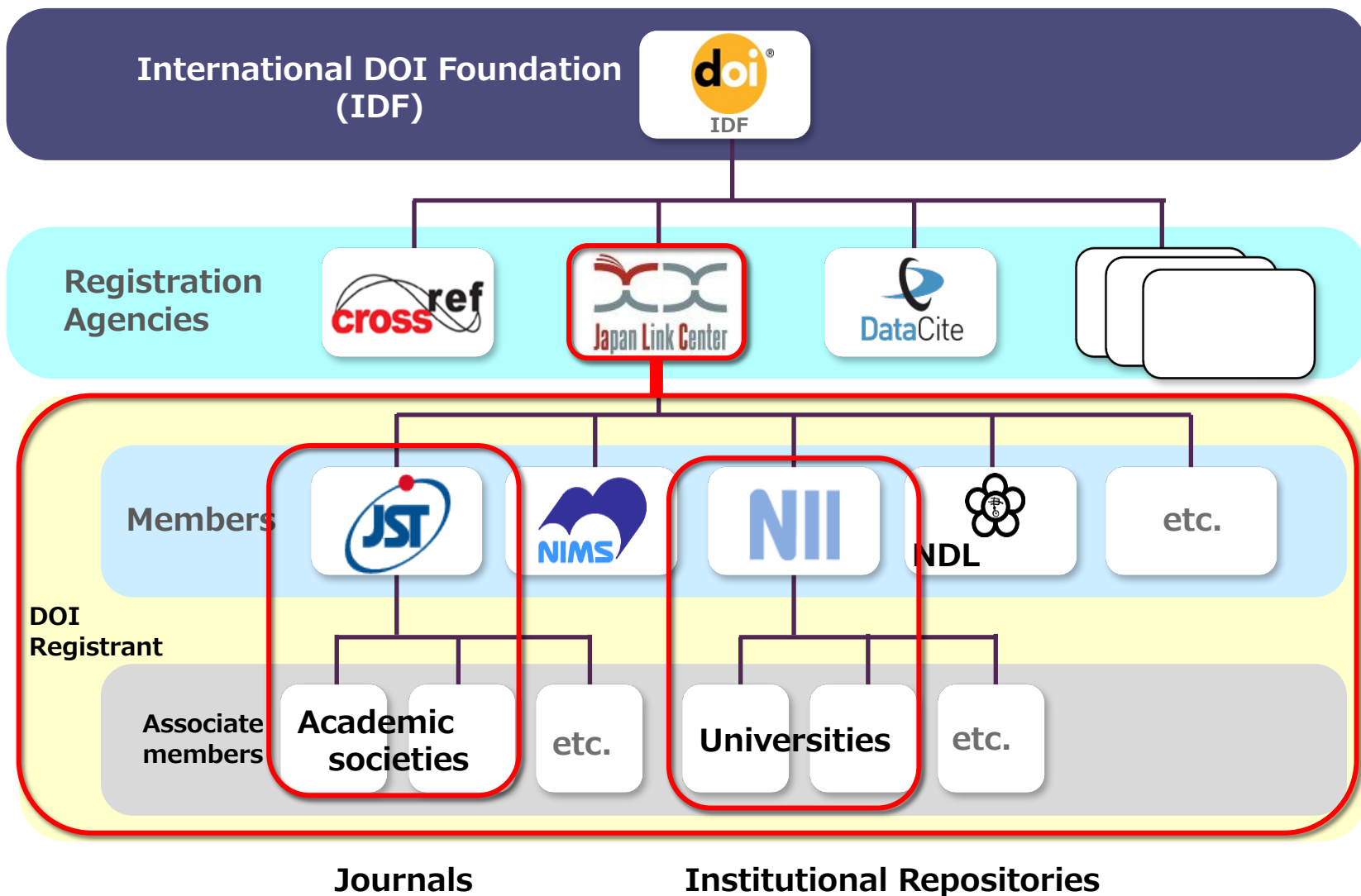
- Support various ways to register DOIs
 - Small institutions are incapable to register DOI by themselves
 - Consolidate the existing information flow
- Current Implementation
 - via J-Stage (JST service for academic E-journals)
 - via IRDB (Institutional Repository Aggregator)
 - Via Japan Medical Abstracts Society



Organizational structure of DOI Registration

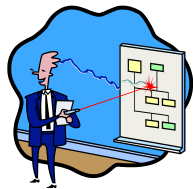


Organizational structure of DOI Registration



Offer various ways for registration procedures

- via J-Stage (JST service for academic E-journals)
 - J-Stage: 1,290 academic societies / 2,191 titles / 3,283,542 articles
 - DOI Registration 1,258 assoc. members / 2,007 titles / 2,880,097 articles
(97.5%) (91.6%) (87.7%)



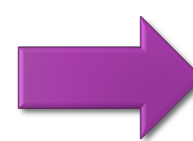
Journal editing

Academic Society
Academic Society
Academic Society
Academic Society
Academic Society



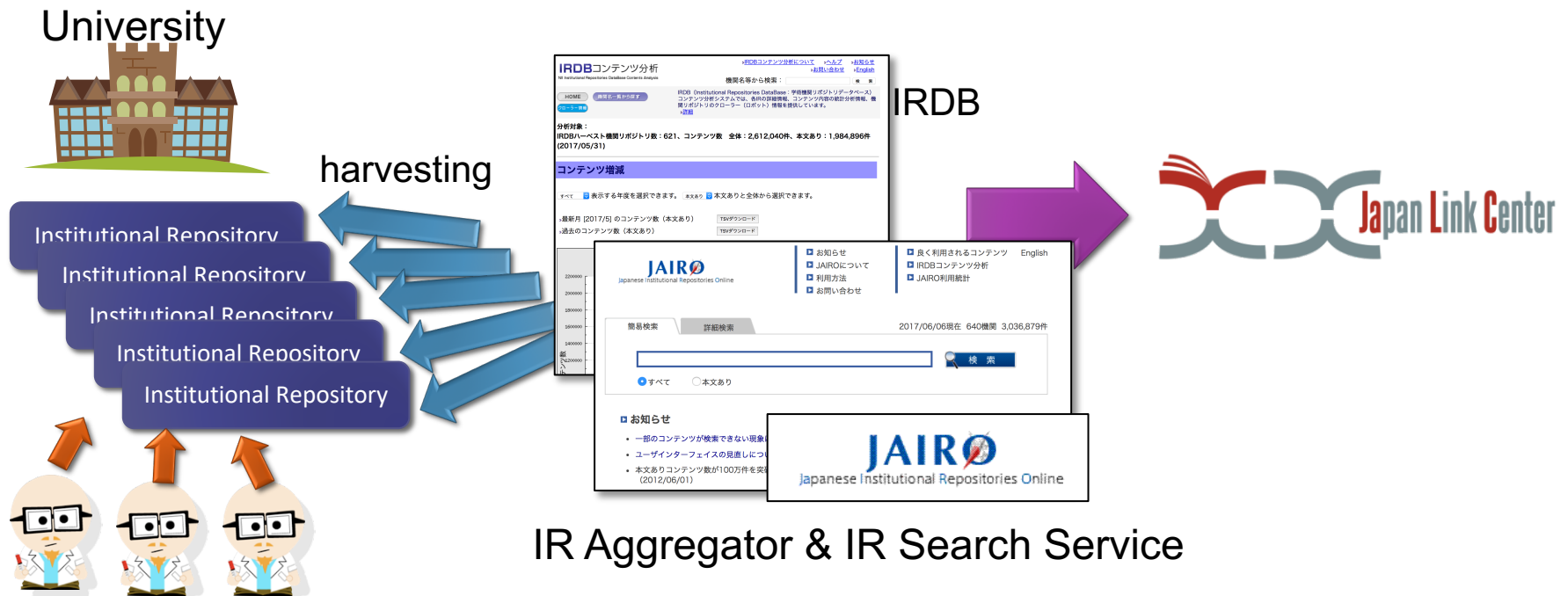
J-STAGE

E-journal Platform

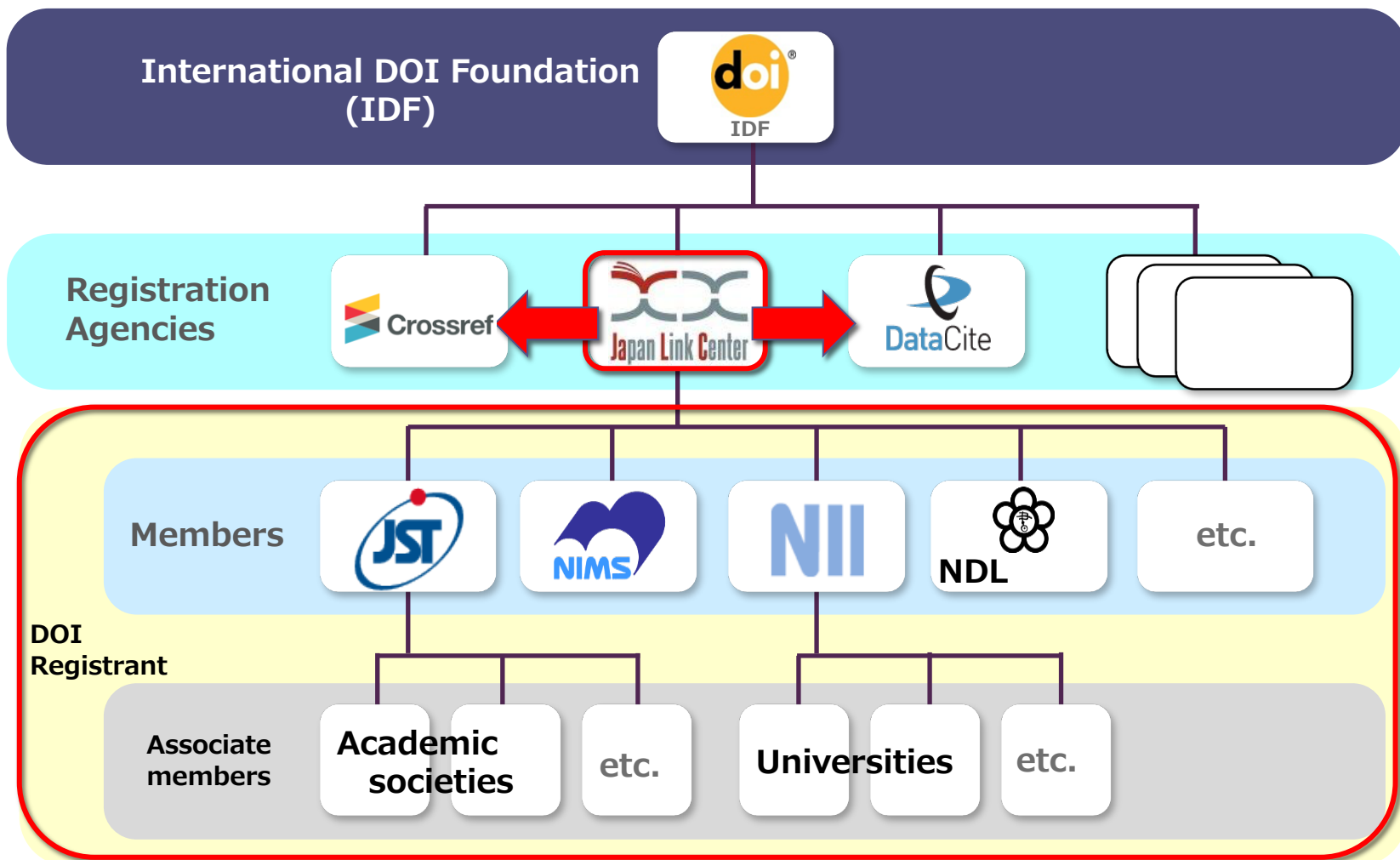


Offer various ways for registration procedures

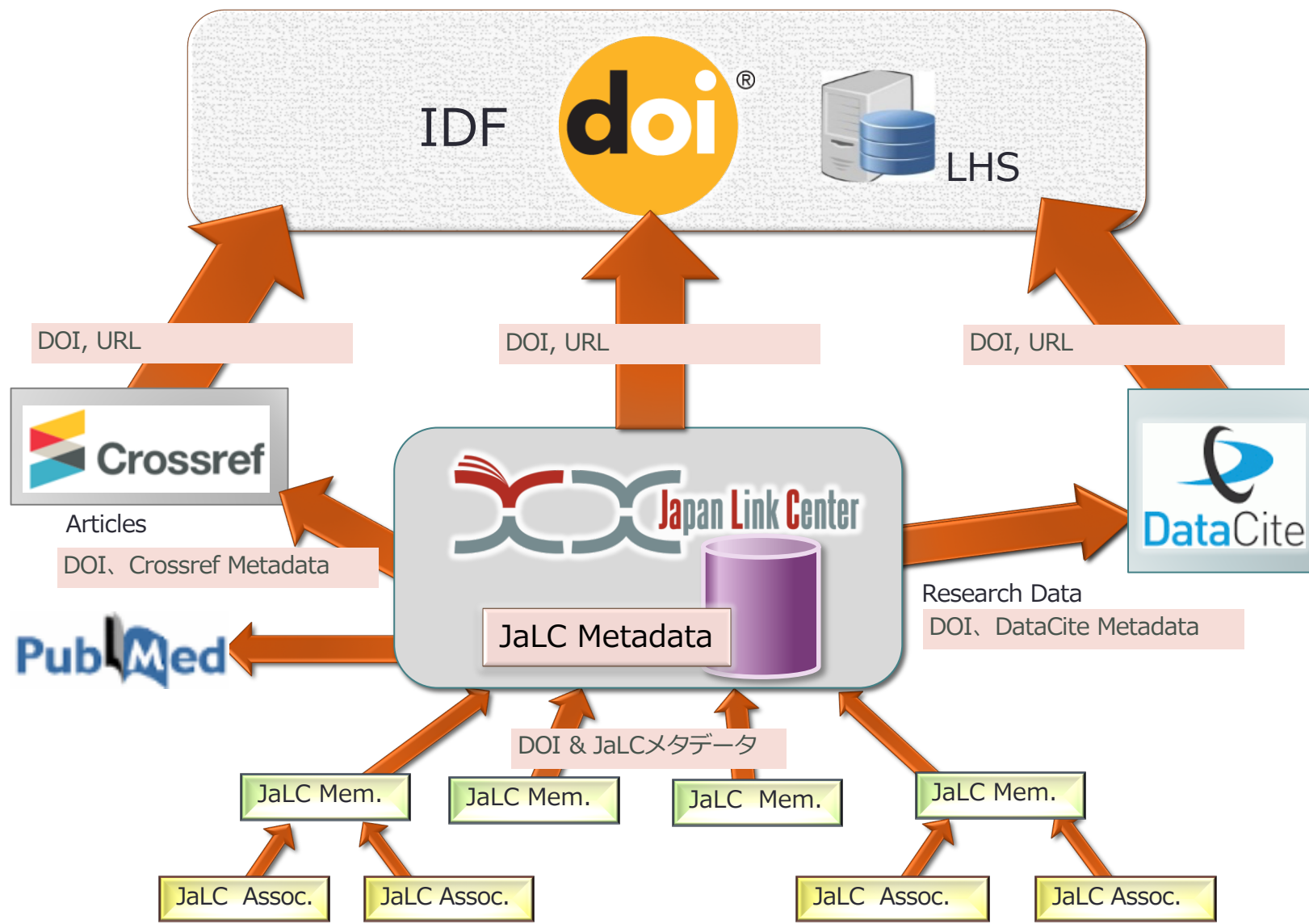
- via IRDB (Institutional Repository Aggregator)
 - IRDB: 621 institutions / 1,984,896 items
 - DOI Registration 254 institutions / 118,619 items
(40.9%) (6.0%)



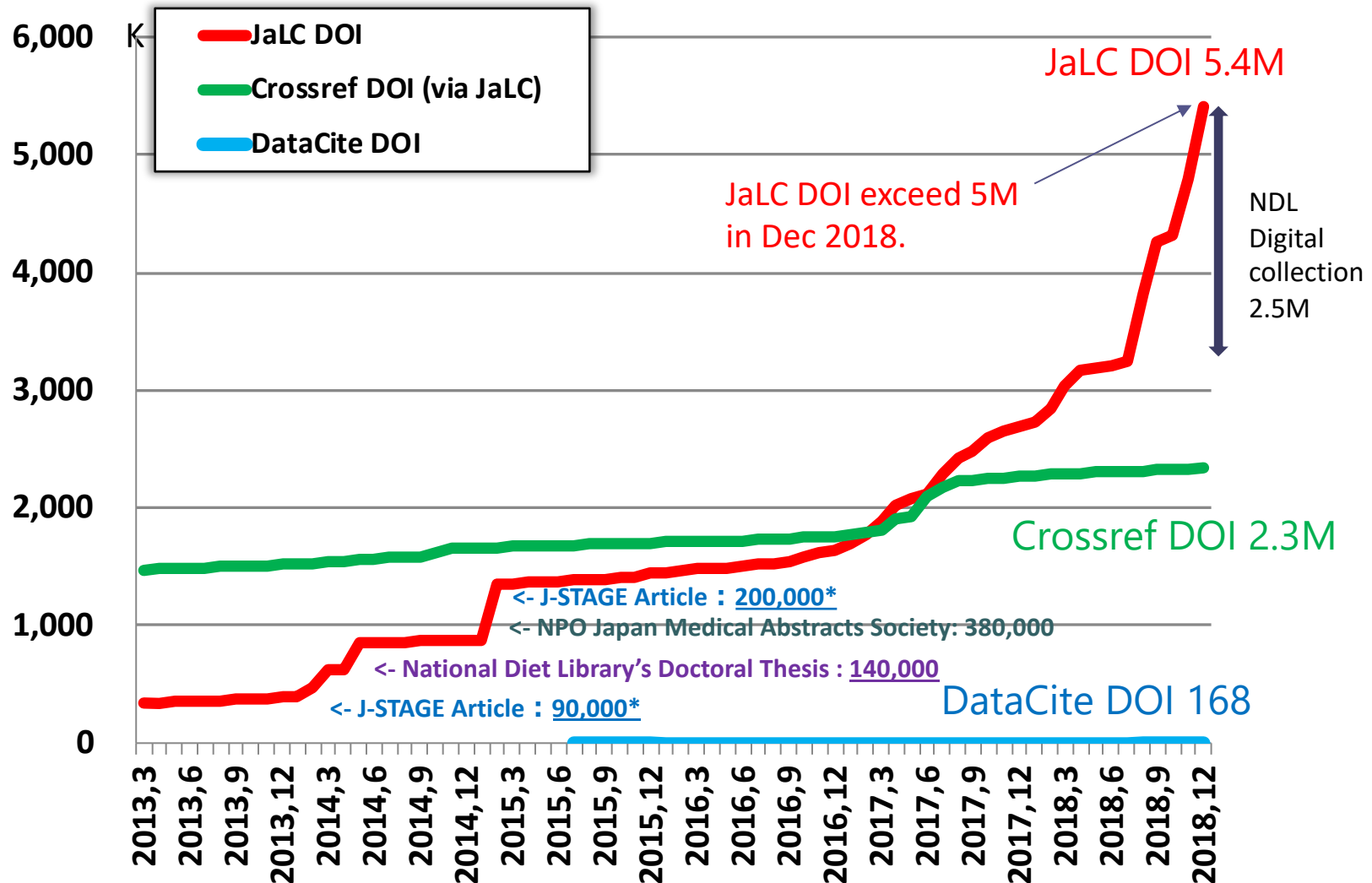
Offer the total service for PID Registration



Offer the total service for PID Registration

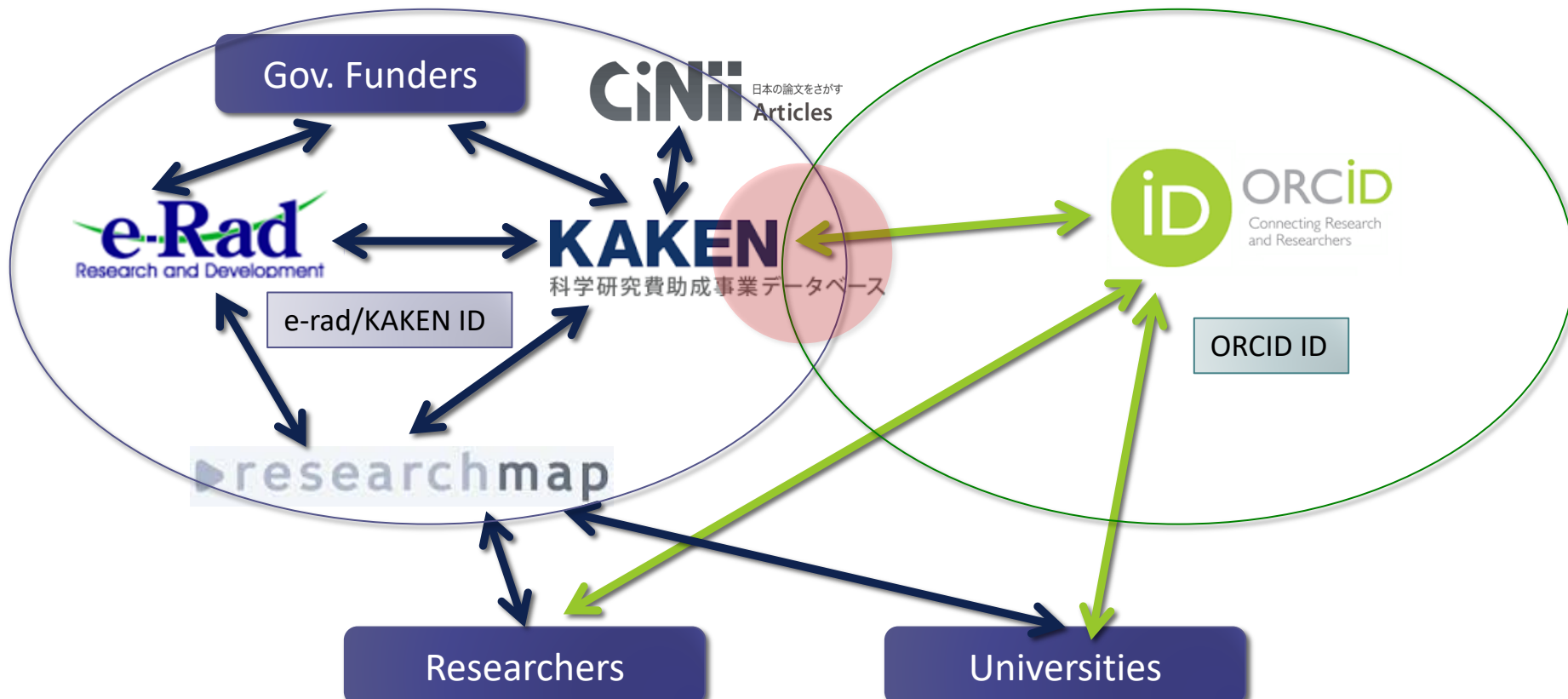




Change in the Number of DOIs (chronological)



ID for Researchers

- ORCID ID
- e-rad/KAKEN ID:
 - Provided for grant application by MEXT (Ministry of Education, ...)
 - Almost all researchers in universities are registered



Search   English

ORCID
Connecting Research and Researchers


EDIT YOUR RECORD ABOUT ORCID CONTACT US HELP

3,503,040 ORCID IDs and counting. [See more...](#)

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Hideaki Takeda

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武田英明

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Japan

Websites

[Personal Web Page](#)

Email

takeda@nii.ac.jp

Other IDs

Researcher Name Resolver ID:
1000080252831

ResearcherID: C-4956-2008

Scopus Author ID: 7403064748





Scopus Author ID: 55437906200

Scopus Author ID: 56369396700

Education (3)

Employment (5)

Funding (19)

- Research on Modeling and support of emergent creative activities through the Internet
Japan Society for the Promotion of Science (Tokyo, Japan)
2012-04 to 2016-03 | Grant
Grant: 24240014
Alternate URL: <https://grants.uberresearch.com/501100001691/24240014/R>
Source: ÜberWizard for ORCID 
- Study on the creative distribution of metadata
Japan Society for the Promotion of Science (Tokyo, Japan)
2009-01 to 2010-12 | Grant
Grant: 21013045
Alternate URL: <https://grants.uberresearch.com/501100001691/21013045/St>
Source: ÜberWizard for ORCID 
- Study on the creative distribution of metadata
Japan Society for the Promotion of Science (Tokyo, Japan)
2007-01 to 2008-12 | Grant
Grant: 19024066
Alternate URL: <https://grants.uberresearch.com/501100001691/19024066/St>
Source: ÜberWizard for ORCID 
- Study on the creative distribution of metadata
Japan Society for the Promotion of Science (Tokyo, Japan)
2006-01 to 2006-12 | Grant
Grant: 18049070
Alternate URL: <https://grants.uberresearch.com/501100001691/18049070/St>
Source: ÜberWizard for ORCID 

KAKEN

Search Research Projects

Search Researchers

English

[Back to previous page](#)

TAKEDA Hideaki 武田 英明

Researcher Number 80252831

Other IDs



External Links

Affiliation ^{help}

2012 – 2015 : 国立情報学研究所, 情報学プリンシプル研究系, 教授
2012 – 2013 : 国立情報学研究所, 大学共同利用機関等の部局等, 教授
2010 : National Institute of Informatics, 教授
2006 – 2010 : 国立情報学研究所, 情報学プリンシプル研究系, 教授
2004 – 2009 : 国立情報学研, 教授 [More](#)

Research Field

Principal Investigator

Intelligent informatics

Except Principal Investigator

Intelligent informatics / Intelligent informatics / Media informatics/Database / Informatics

Keywords

Principal Investigator設計過程 / 機能 / 設計 / オントロジー / 概念体系 / 知識ベース / 知識システム / WWW / 形式化 / セマンティックウェブ [More](#)

Research Projects (20results)

Research Products (121results)

Co-Researchers (47People)

Display in 'KAKEN (Search Research Projects)'

Export in CSV Format

Project Start Year(N)

 **Principal Investigator**

Principal Investigator Takeda Hideaki

Project Period (FY) 2012 – 2015

Research Category Grant-in-Aid for Scientific Research (A)

Research Field Media informatics/Database

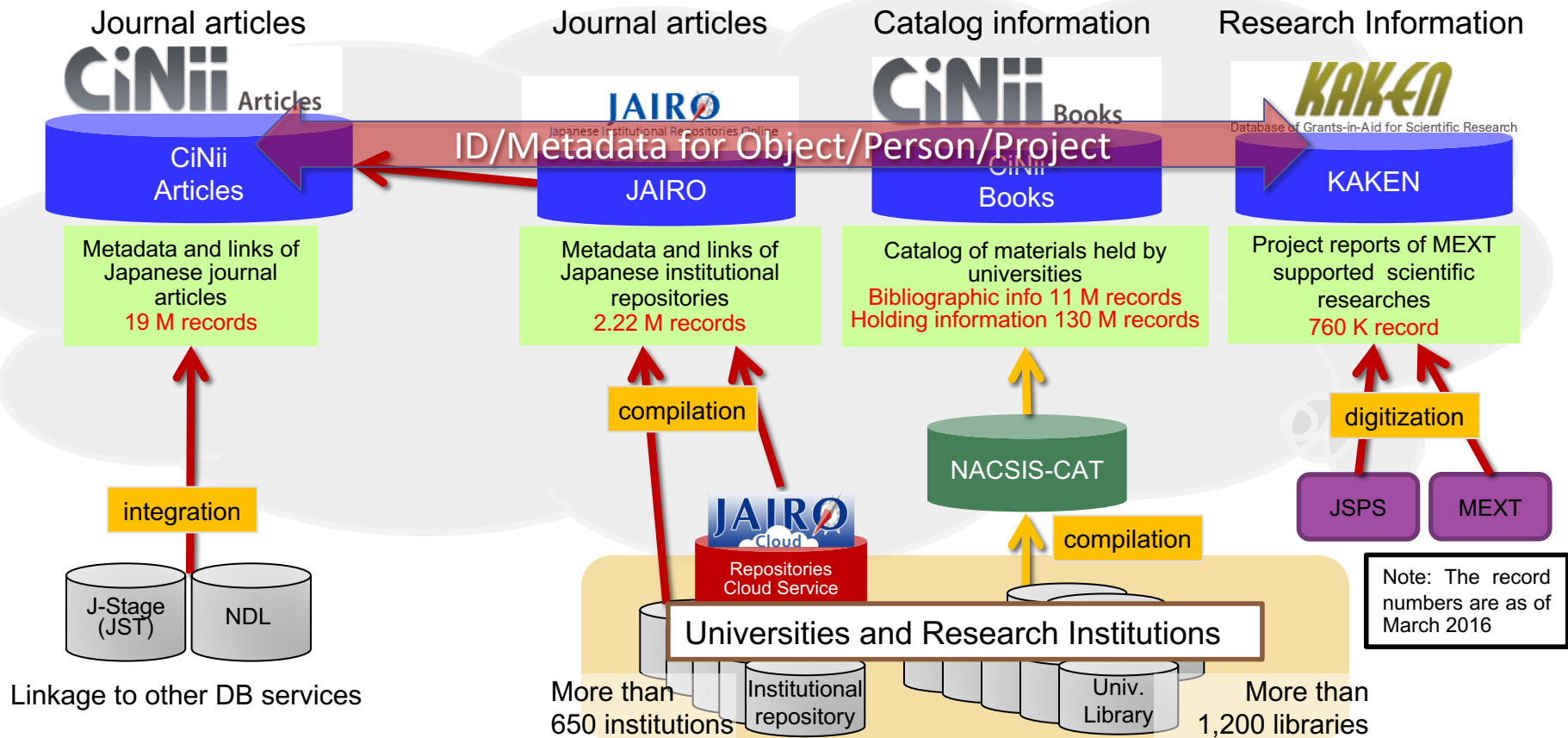
Research National Institute of Informatics

KAKEN Researcher Page

ORCID Page

Scholarly Information Infrastructure in NII

Scholarly information is disseminated through various portals provided by NII, in which the information is compiled with the collaboration with universities.



Summary

- Interoperability is the key for global scholarly communication
- Participate the global activity
- Bridge the gap between the global and local situations
 - ID Level
 - Metadata Level
 - Data Level
 - System Level

