

Scholarly Communications with Identifiers

- The status and vision of Japan Link Center (JaLC) -

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Chair, Joint Steering Committee

Japan Link Center (JaLC)



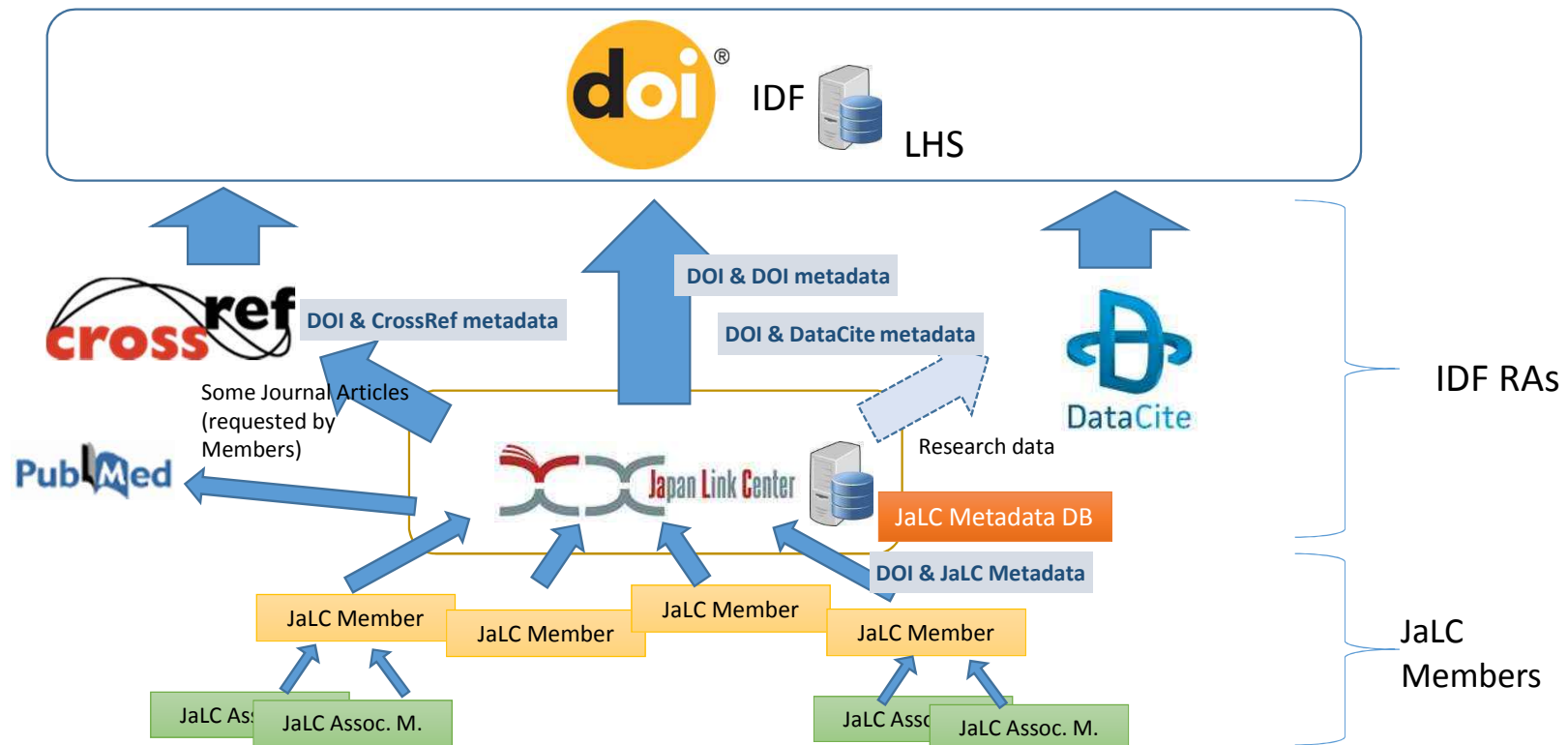
Contributor: Ritsuko Nakajima, Takafumi Kato,
Japan Science and Technology Agency (JST)

<http://japanlinkcenter.org/>

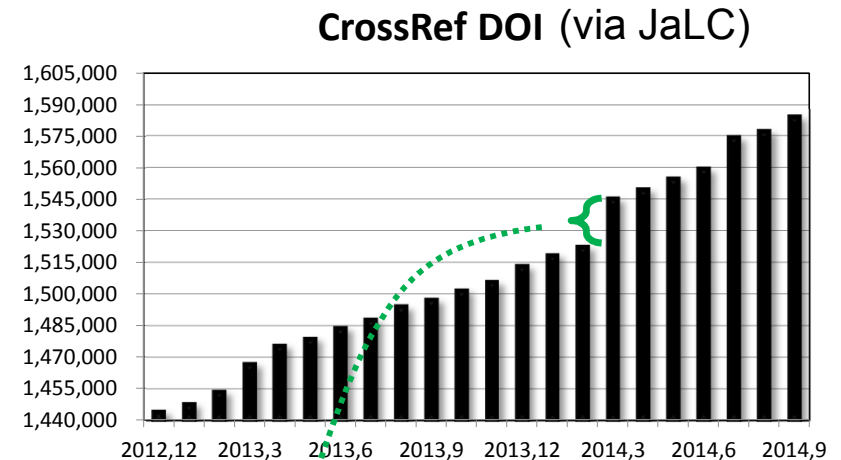
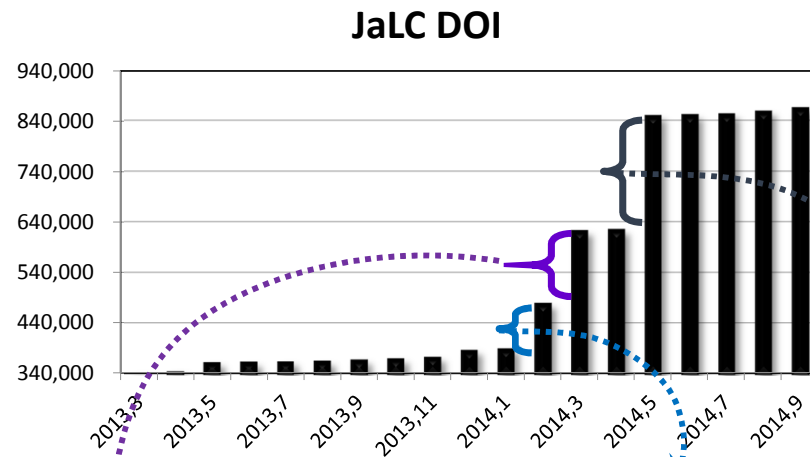
Japan Link Center (JaLC)

- 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)
(has 915 associate members)
 - National Institute for Materials Science (NIMS)
 - National Institute of Informatics (NII)
(will have about 1,000 associate members)
 - National Diet Library (NDL)
- Operated by JST
- Membership system
 - 19 Regular members
(Academic societies, Publishers, University libraries, etc)
- External coordination
 - JaLC is a member of CrossRef and DataCite(Mar. 2014)

Registration of DOI via JaLC



Number of DOIs



※ J-STAGE Article : 90,000+ 200,000 (JaLC DOI)
 + 20,000 (CrossRef DOI)

(Collective registration for the articles which had not been registered DOI)

※ National Diet Library's Doctoral Thesis : 140,000

Total amount of DOIs: 2,449,141 (at the end of September 2014)

Upcoming features

JaLC will release new features in December 2014.

a. More content categories

Expanded to research data and books etc. besides journal articles.

JaLC will collaborate with DataCite in registering DOI for research data.

b. Edition information

Variation: publication version, author's version, ...

Version : 1.0, 2.1, ...

Format: XML, PDF, ...

c. Multiple resolution

Identical contents are resolved into original sites, archive sites and distributors' sites.

d. Researcher identifiers

ORCID, KAKEN ID, NDL authority ID are included in JaLC's deposit schema.

Ex. of application: Send pairs of ORCID and DOI to ORCID system so that corresponding articles will be suggested as research results on ORCID service.

e. Linked data

Metadata are provided as linked data.

Content categories

Category	
Journal articles	
Journal articles	Dec.2012 -
University bulletins	Sep.2014 -
Conference proceedings	Mar.2012 -
Books	
Books	Jan.2015 -
Doctoral theses	Mar.2014 -
Reports	
Technical reports	Jan.2015 -
Governmental reports	Jan.2015 -
Research data	Jan.2015 -
e-learning resources	Jan.2015 -

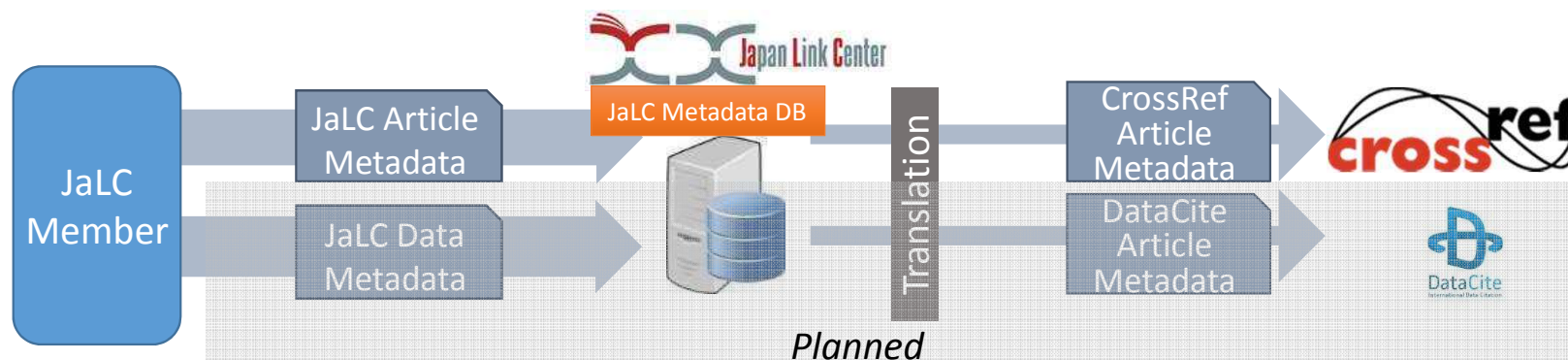
Metadata

These properties are unified among the types

Basic metadata:

DOI, URL, title, author information, affiliation, researcher id, publication date, publisher, edition, related contents, funder

No	Contents type	Additional Metadata	External Deposit
1	Journal Article	journal name, ISSN, volume, number, title, page, etc.	CrossRef
2	Book	series title, chapter , ISBN, etc.	CrossRef
3	Research Data	size, geolocation, rights, signature, etc.	DataCite
4	E-learning	Learning Resource type, rights, etc.	
5	Other	(Basic metadata only)	



Metadata (common)

1	root		○	1
2	head		○	1
3	error_process		○	1
4	result_method		○	1
5	content_classification		○	1
6	request_kind		○	1
7	body		○	1
8	site_id		○	1
9	content			
10	sequence	35		
11	doi	36		
12	url	37		
13	title_list	38		
14	titles	39		
15	lang	40		
16	ISO639準拠	41		
17	title	42		
18	subtitle	43		
19	creator_list	44		
20	creator	45		
21	sequence	46		
22	type	47		
23	person	48		
24	institute	49		
25	names	50		
26	lang	51		
27	ISO639準拠	52		
28	last_name	53		
29	first_name	54		
30	prefix	55		
31	suffix	56		
32	affiliation	57		
33	affiliation_name	58		
34	sequence	59		
35	lang	60		
36	ISO639準拠	61		
37	researcher_id			
38	id_code			
39	type			
40	publication_date		○	1
41	year		○	1
42	month			0-1
43	day			0-1
44	publisher		○	1
45	publisher_name		○	1
46	lang	ISO639準拠		0-1
47	location			0-1
48	edition			0-1
49	variation	△※2		0-1
50	version	△※2		0-1
51	format	△※2		0-1
52	relation_list			0-1
53	related_content		○	1-N
54	type	DOI	○	1
55	relation	URL	○	1
56	alternate_identifier			0-1
57	type		○	1
58	content_language			0-1
59	fund_list			0-1
60	fund		○	1-N
61	funder_name		○	1
62	lang	ISO639準拠	△※1	0-1
63	funder_identifier			0-1
64	type	FundRef		0-1
65	award_number			0-1
66	multiple_resolution_priority			0-1

XML (RDF)

No	Name	mandatory	attribute	
			name	value
1	xml	○		
2	rdf:RDF	○	xmlns:rdf	http://www.w3.org/1999/02/22-rdf-syntax-ns#
3			xmlns:dc	http://purl.org/dc/elements/1.1/
4			xmlns:owl	http://www.w3.org/2002/07/owl#
5			xmlns:foaf	http://xmlns.com/foaf/0.1/
6			xmlns:prism	http://prismstandard.org/namespaces/basic/2.0/
7		○	rdf:about	http://dx.doi.org/" + "D01"
8	rdf:Description	○	prism:doi	
9			dc:title	
10			dc:creator	
11		○	foaf:Person	
12			foaf:name	
13			foaf:familyName	
14			foaf:givenName	
15		○	dc:publisher	
16		○	dc:date	http://www.w3.org/2001/XMLSchema#date
17			prism:volume	
18			prism:startingPage	
19			prism:endingPage	
20			dc:terms:isPartOf	
21		○	owl:Class	Journal
22			prism:issn	
23			owl:sameAs	
24			dc:title	

There's a possibility that this XML will change.

Experiment Project to register DOIs for Research Data

- Goal
 - Establish operation flows to register DOIs for research data and have stable operation
- Objectives
 - Set policies in registering DOIs for research data
 - Establish operation flows to register DOIs for research data with the next version of JaLC system. Ensure that by performing registration tests

Experiment Project to register DOIs for Research Data

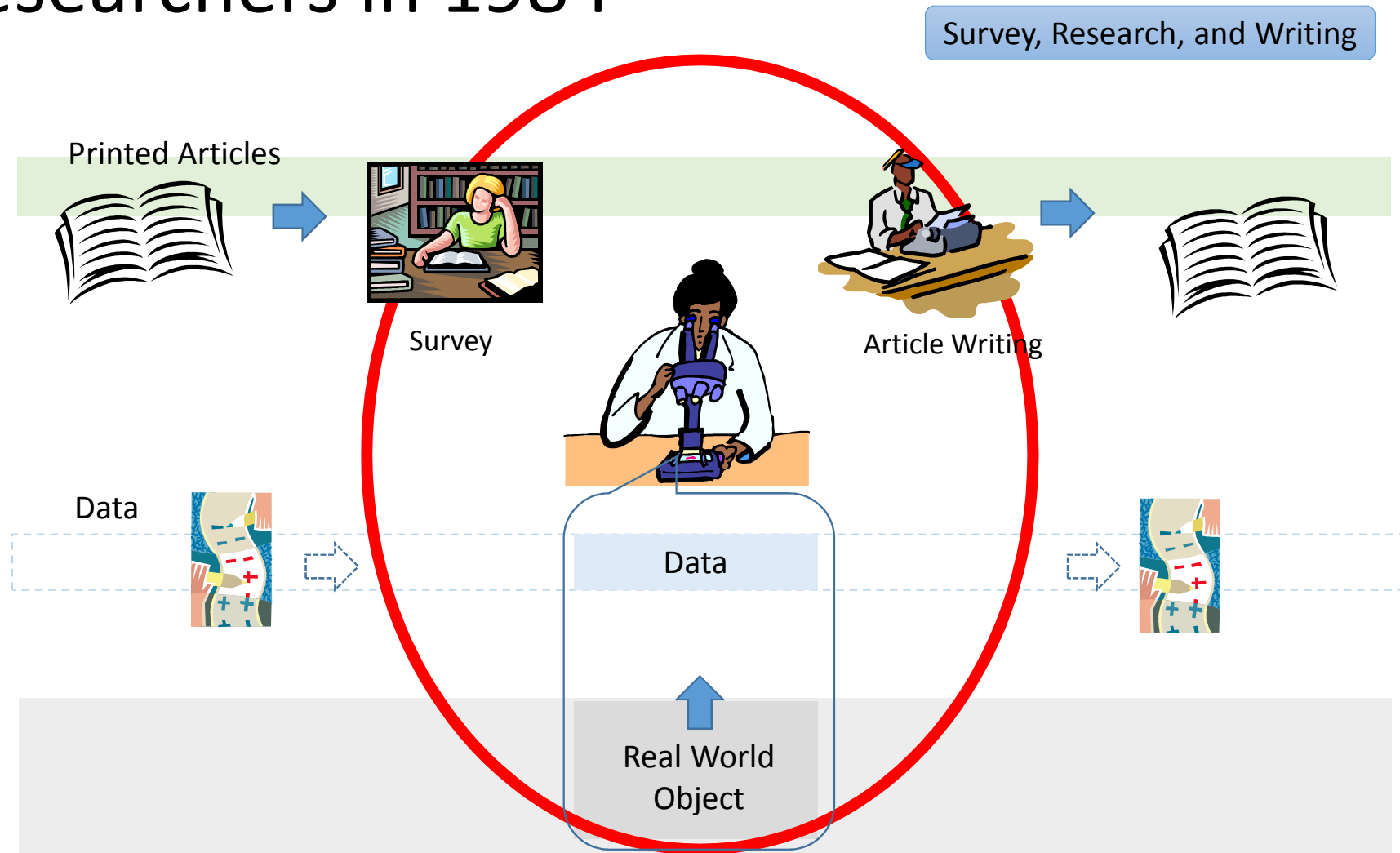
- Current Members
 - National Bioscience Database Center (NBDC), Japan Science and Technology Agency (JST)
 - National Institute of Polar Research (NIPR)
 - National Institute of Informatics (NII)
 - National Institute of Informatics (NII)
 - Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
 - Institute of Industrial Science, The University of Tokyo
 - Center for Spatial Information Science, The University of Tokyo
 - National Institute of Advanced Industrial Science and Technology (AIST)
 - National Institute of Information and Communication Technology (NICT)
 - Data Analysis Center for Geomagnetism and Space Magnetism, Kyoto University
 - Library, Chiba University
 - National Institute for Materials Science (NIMS)
 - Riken Brain Science Institute

Summary

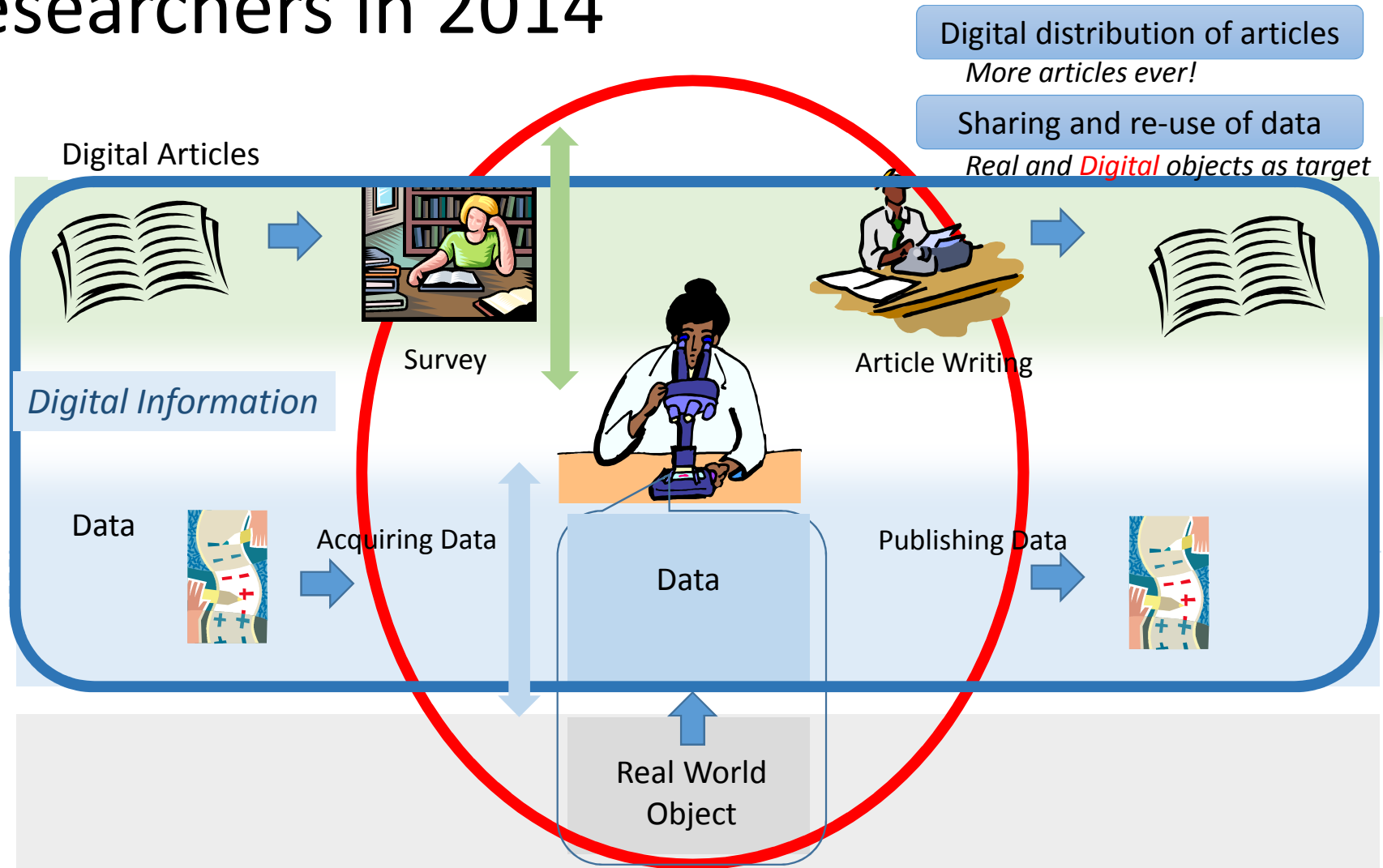
- JaLC is established to enhance scientific communication with DOI
 - Ideally support all activities by researchers
- JaLC started service for journal articles, then will extend it for books, e-learning, and **data**.
- Need of knowledge and experience about data registration
 - Start the experiment in Fall.
 - Need for collaboration and coordination with DataCite

Researchers and Identifiers

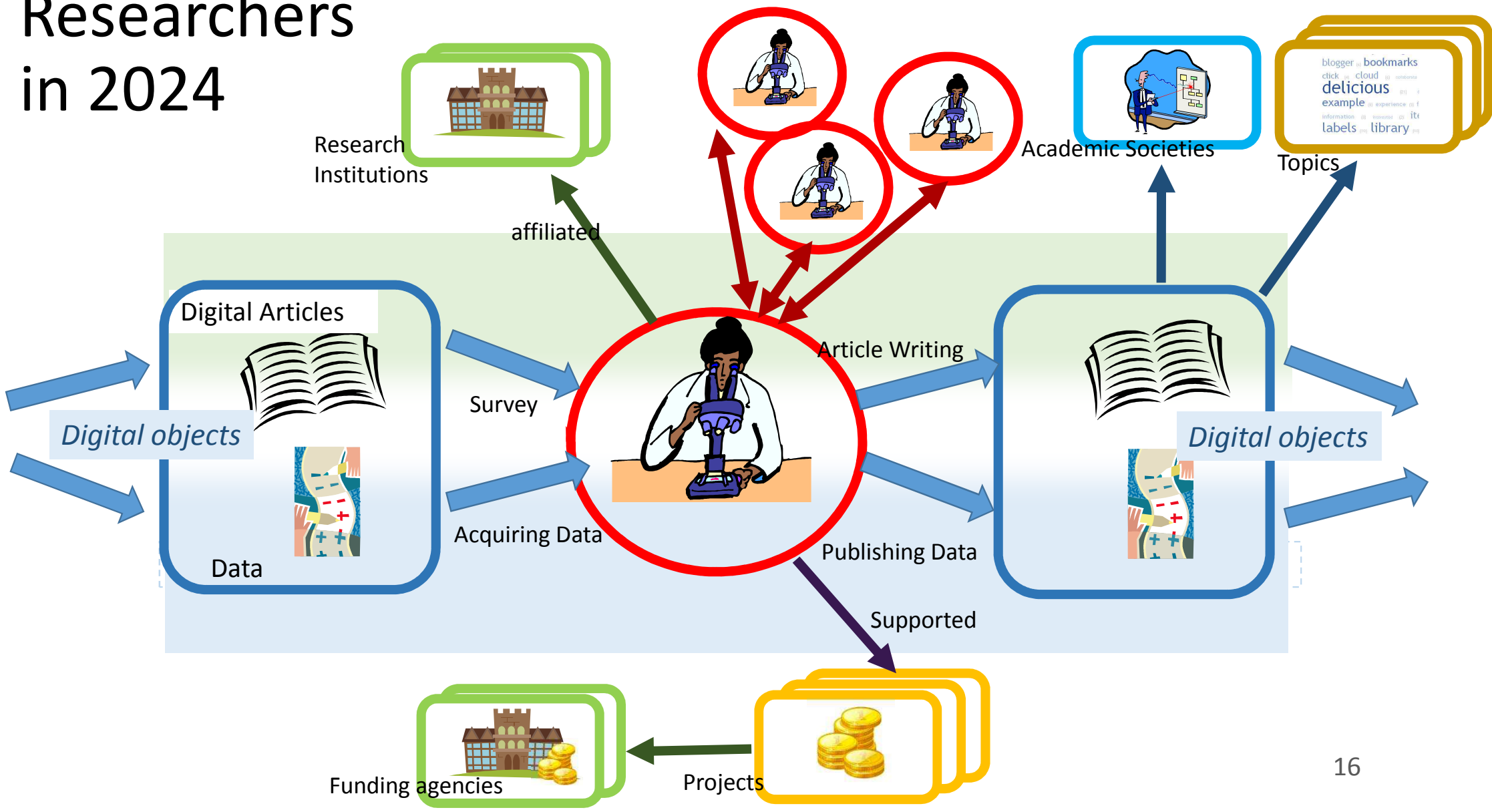
Researchers in 1984



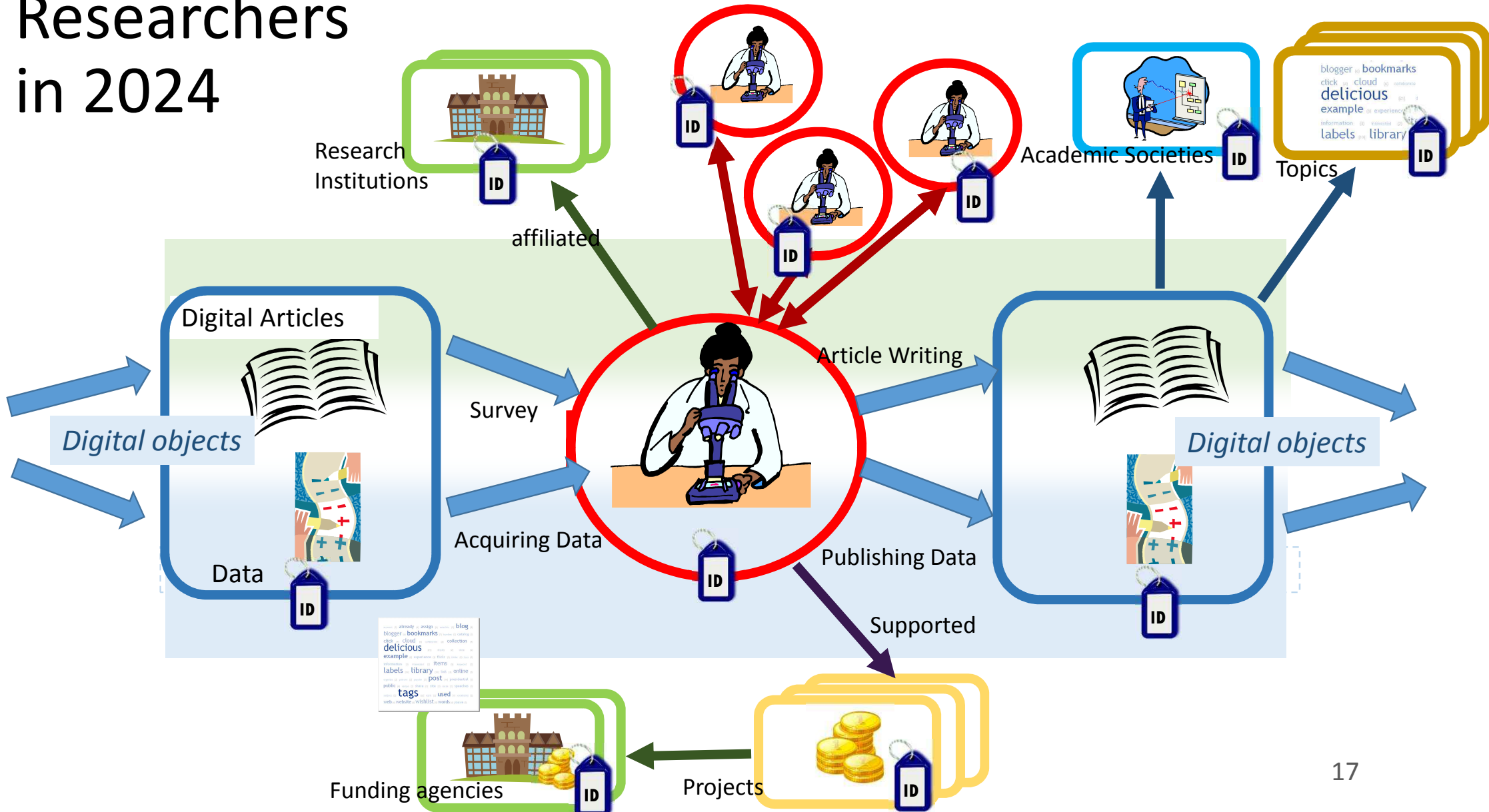
Researchers in 2014



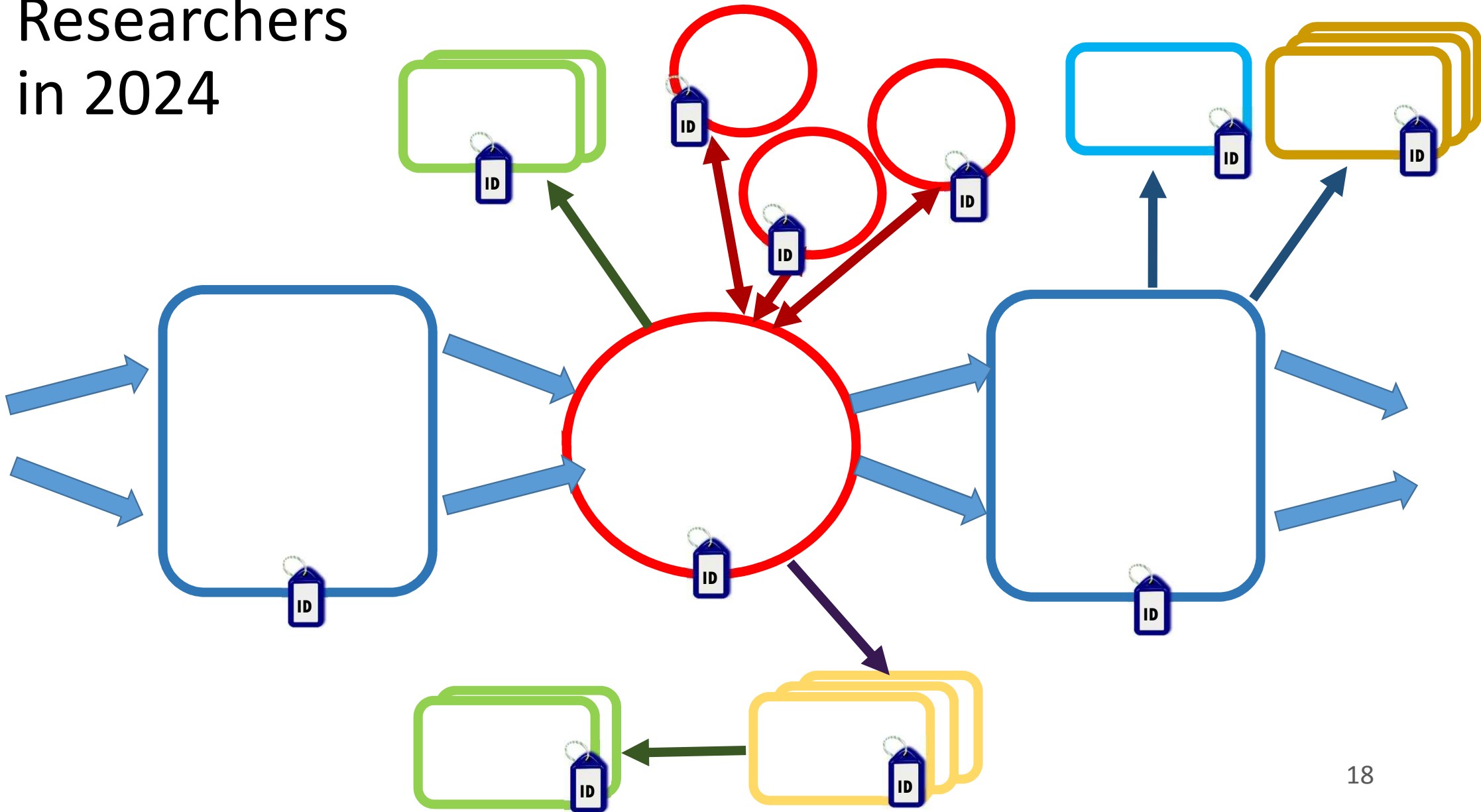
Researchers in 2024



Researchers in 2024

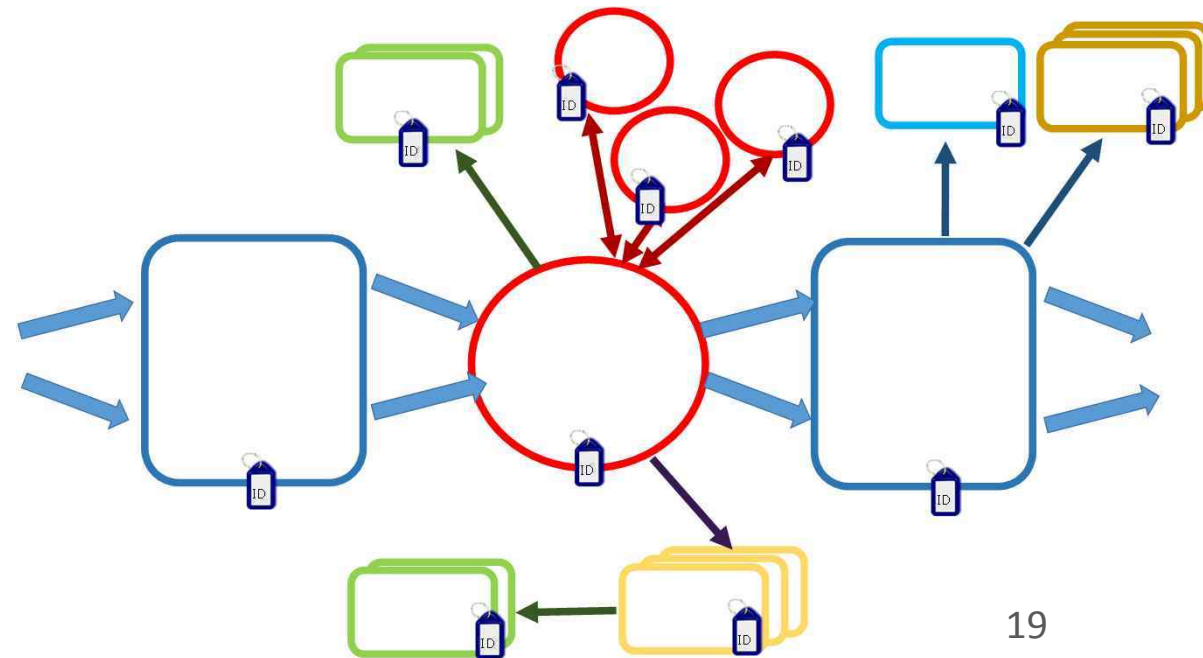


Researchers in 2024



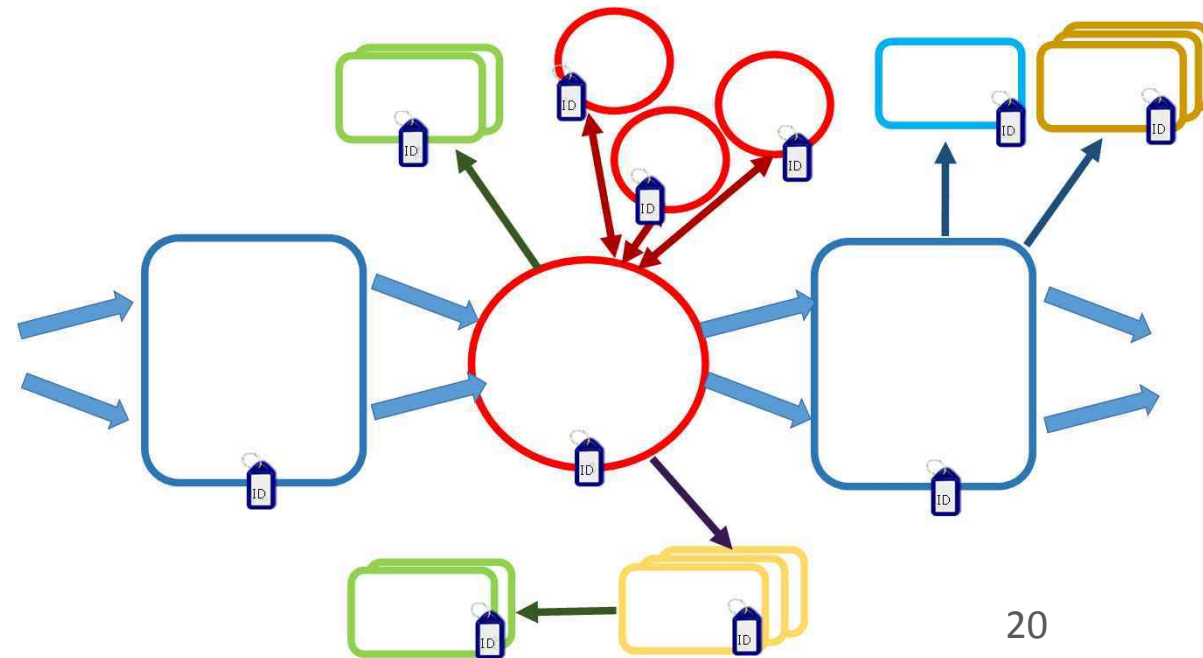
Identifies for research

- A research activity is represented with a structure of identifies
 - Planned and submitted
 - Organized and executed
 - Concluded and evaluated



Identifies for research

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



Some Directions

- ID linkage
- Linked Data

ID linkage

- Linking various identifiers

Researcher Name Resolver (RNS) - Switching Board for Researcher's ID -

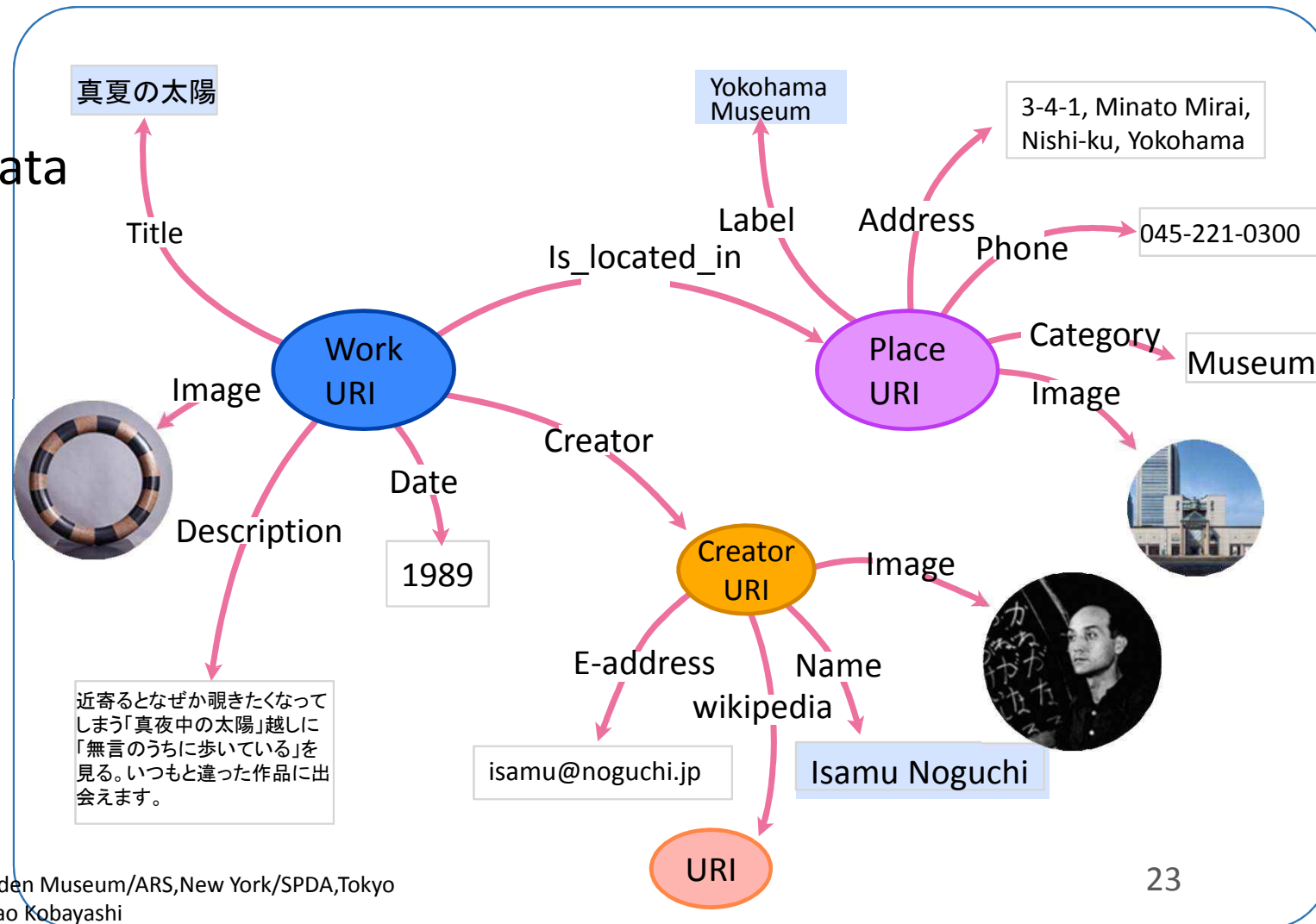


Linked Data

- Network of metadata

- Sharing metadata among RA

- CrossRef
- DataCite
- (JaLC)



Summary

- JaLC is working to extend categories of objects
 - Article, book, data, e-learning
- Possibility to coordinate other IDs and metadata

Thank you!

<http://japanlinkcenter.org/>

