



Open Access Status and Challenges in Korea

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Preface

- ❖ Concept & Benefits of OA
- ❖ History of Journal & OA
- ❖ Current status of OA

Preface

▶ Concept of Open Access



Open access (OA) journals are scholarly journals that are available online to the reader "without financial, legal, or technical barriers...(Wikipedia)

Overcoming Financial Barrier :

- Free access to journal articles
- No subscription charge

Overcoming Legal Barrier :

- Reuse without permission
- Adopt one of CC Licenses

Overcoming Technical Barrier :

- Accessible through Internet
- Interoperable



An open-access repository is a digital platform that holds research output and provides free, immediate and permanent access to research results for anyone to use, download and distribute. OA repositories must be interoperable according to OAI-PMH.

Institutional Repository
Disciplinary Repository
Aggregation Repository
Preprint Repository

Preface

Benefits of Open Access

Public Welfare



Readers who are not able to subscribe, everywhere in the world, can access articles paid by authors.



Increasing Impact



Authors may increase the impact of their articles by publishing through OA journals, which may have more chance to be cited than non-OA ones.



CC-BY Danny Kingsley & Sarah Brown

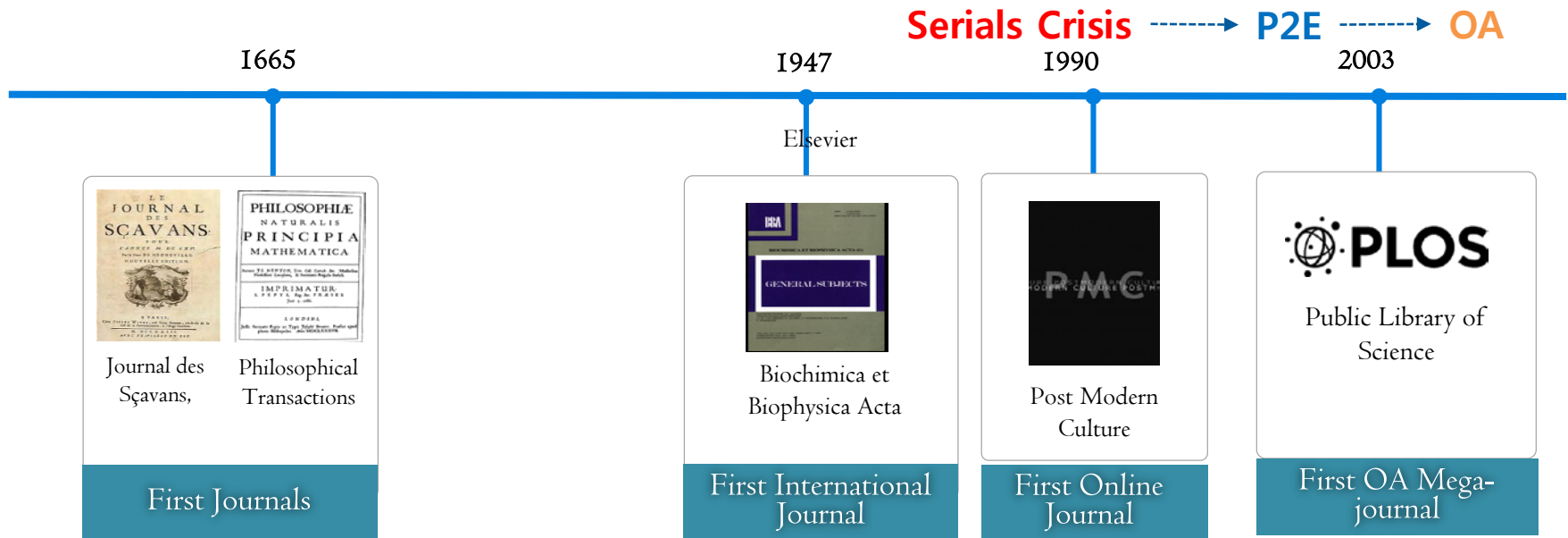
Preface

Brief History of Scholarly Journals

The growth rate of active peer reviewed journals has been almost doubling every 20~22 years.



* source: Michael Mabe, The growth and number of journals, *Serials*, Vol.16, no.2, 191-197, 2003



Preface

Brief History of OA

Unrestricted access to research for all through "self-archiving"

Science Attic (2003)
- KISTI & SNU

KOASAS (2007~), S-Space (2008~)
- KAIST, SNU

OpenDOAR

Launched in 2006 by University of Nottingham and Lund University

KCDC Adopts PA
- NCMIK

NIH Public Access Policy

Omnibus Appropriations Act, 2009

OA Policy & IRsI(2009~)

OAK
OPEN ACCESS KOREA

OA Journals(2009~)

cOAlition S, 2018



Berlin 12 Conference on 8-9 December 2015

OA Transformative Agreement

SCOAP3 Phase I(2014~16)

Korean OA Journals

- Almost 100 journals registered to DOAJ

OA Declaration(2018)

- Korean LIS societies

Green Road



2000 free archive of journal papers (First postprint IR/SR)



2001 open access licenses



SHERPA project (2002)



2001 OA science journal publisher (First non-profit OA publisher)



Launched in 2003 at Lund University

Gold Road



2000 OA bio/med journal publisher (First commercial OA publisher)



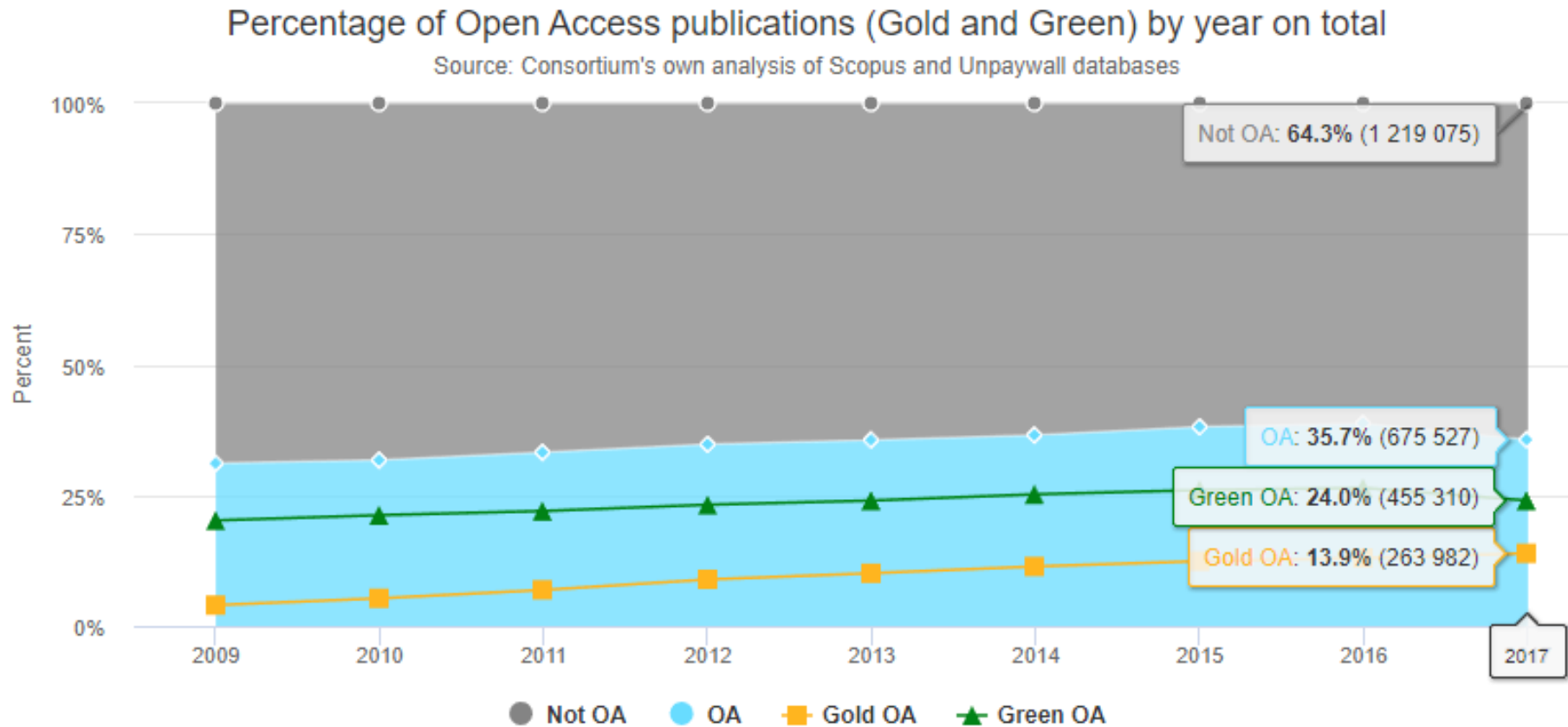
In 2002 Budapest OA Initiative (BOAI)

In 2003 Bethesda Statement on OA, Berlin Declaration on OA

"Flipping" the system from "Back End Paid Access" to "Front End Paid Access"

Preface

Current Status of OA Publication



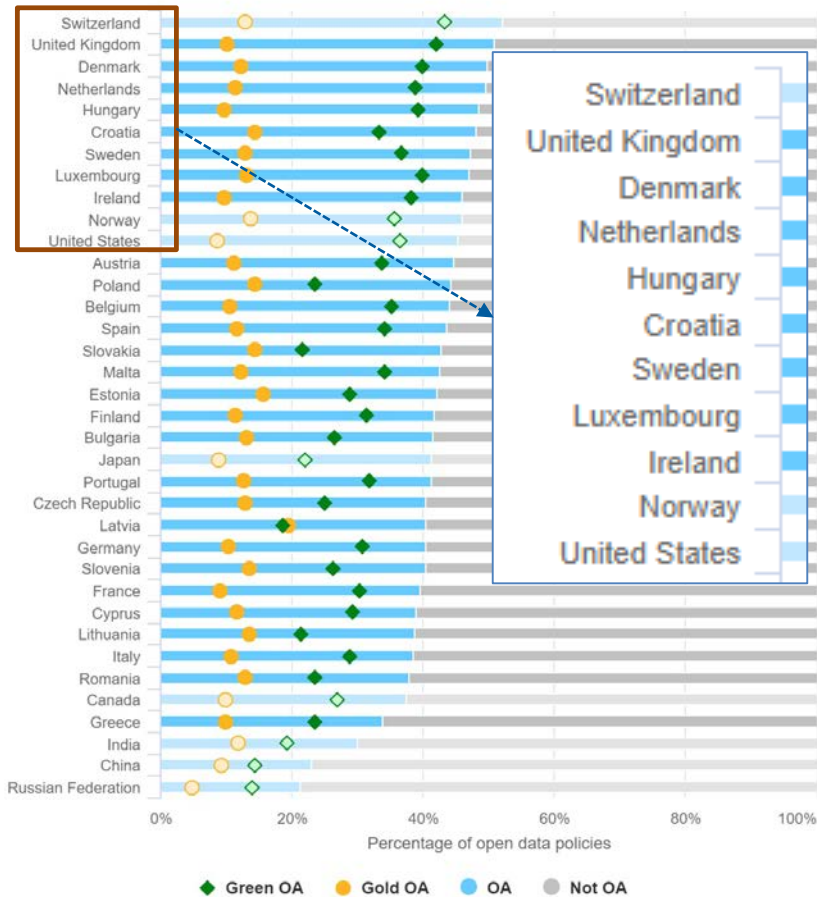
* source: Trends for open access to publication, EU, https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science/open-science-monitor/trends-open-access-publications_en

Preface

Current Status of OA Publication

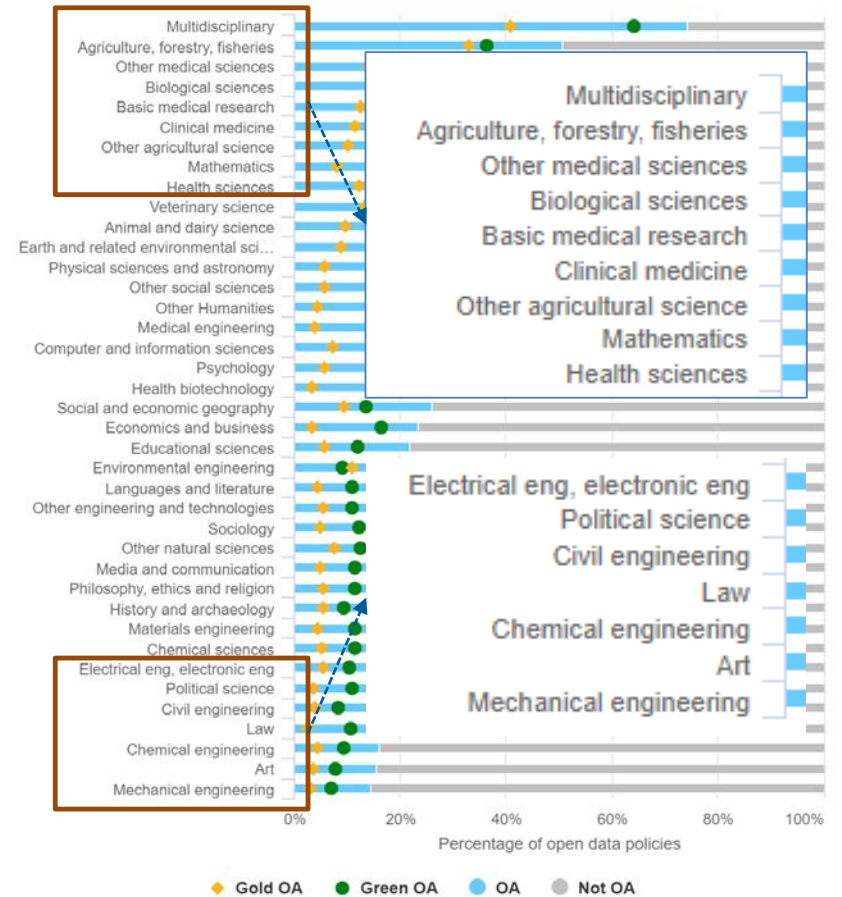
Percentage of Open Access publications (Gold and Green) by country

Source: Consortium's own analysis of Scopus and Unpaywall databases - Reference date: 2009-2017



Percentage of Open Access publications (Gold and Green) by FOS (Fields of Science and Technology)

Source: Consortium's own analysis of Scopus and Unpaywall databases - Reference date: 2009-2017

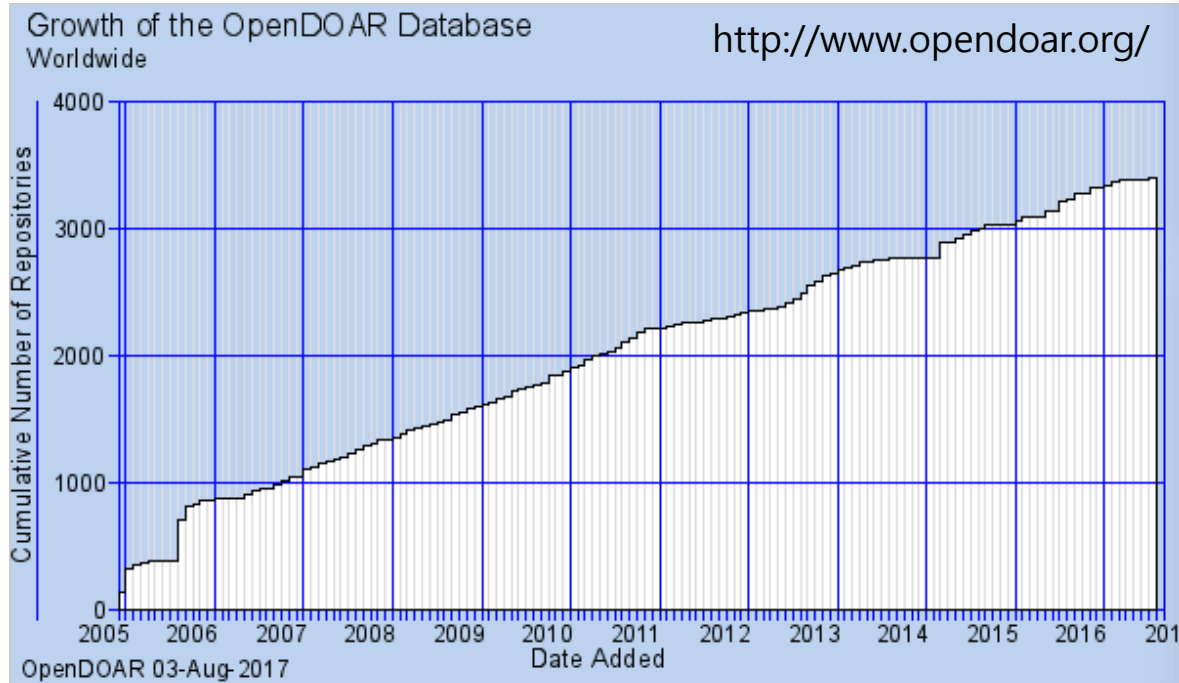


* source: Trends for open access to publication, EU

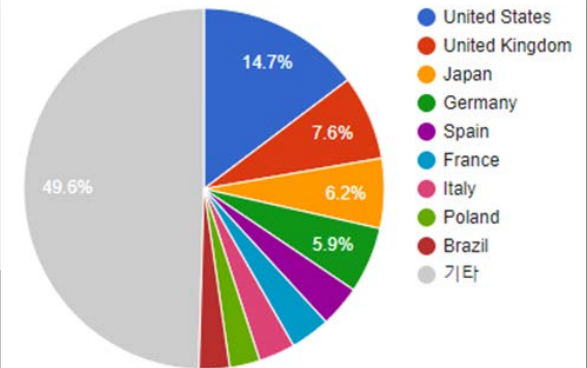
Preface

Current Status of OA Repository

- **3,376** repositories are registered to OpenDOAR as of August 2017
 - By country : **United States** (14.7%) is the most, followed by United Kingdom (7.6%), Japan (6.2%), and Germany (5.9%).
 - By continent : **Europe** (45.4%) is prevailing.



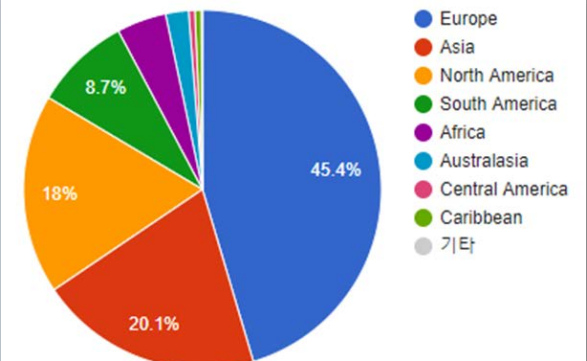
Proportion of Repositories by Country - Worldwide



Total = 3376 repositories

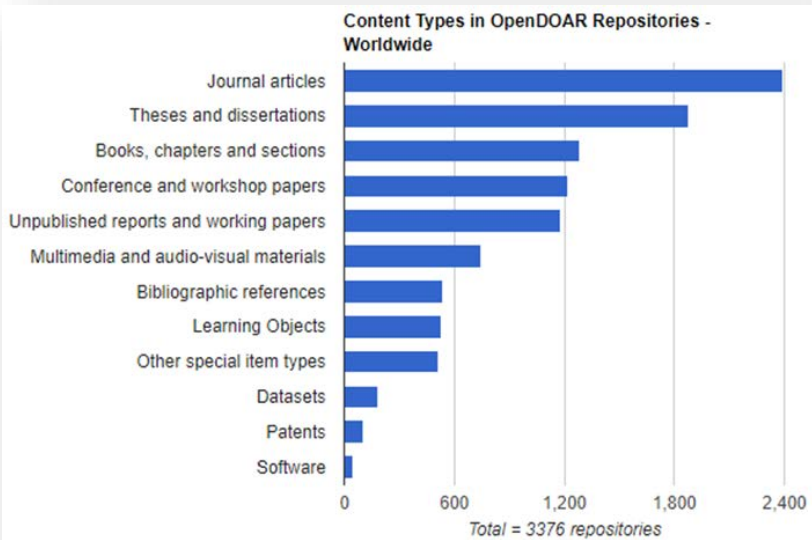
OpenDOAR - 03-Aug-2017

Proportion of Repositories by Continent - Worldwide



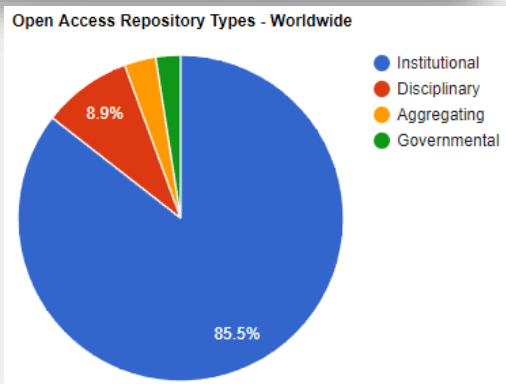
Preface

Current Status of OA Repository

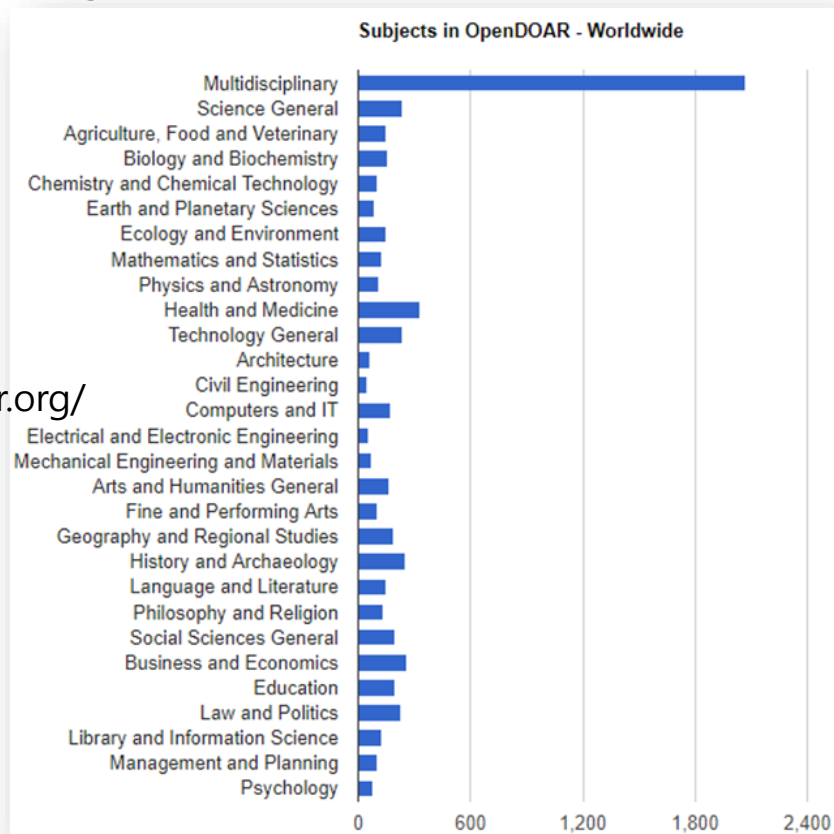


OpenDOAR - 03-Aug-2017

<http://www.andoar.org/>

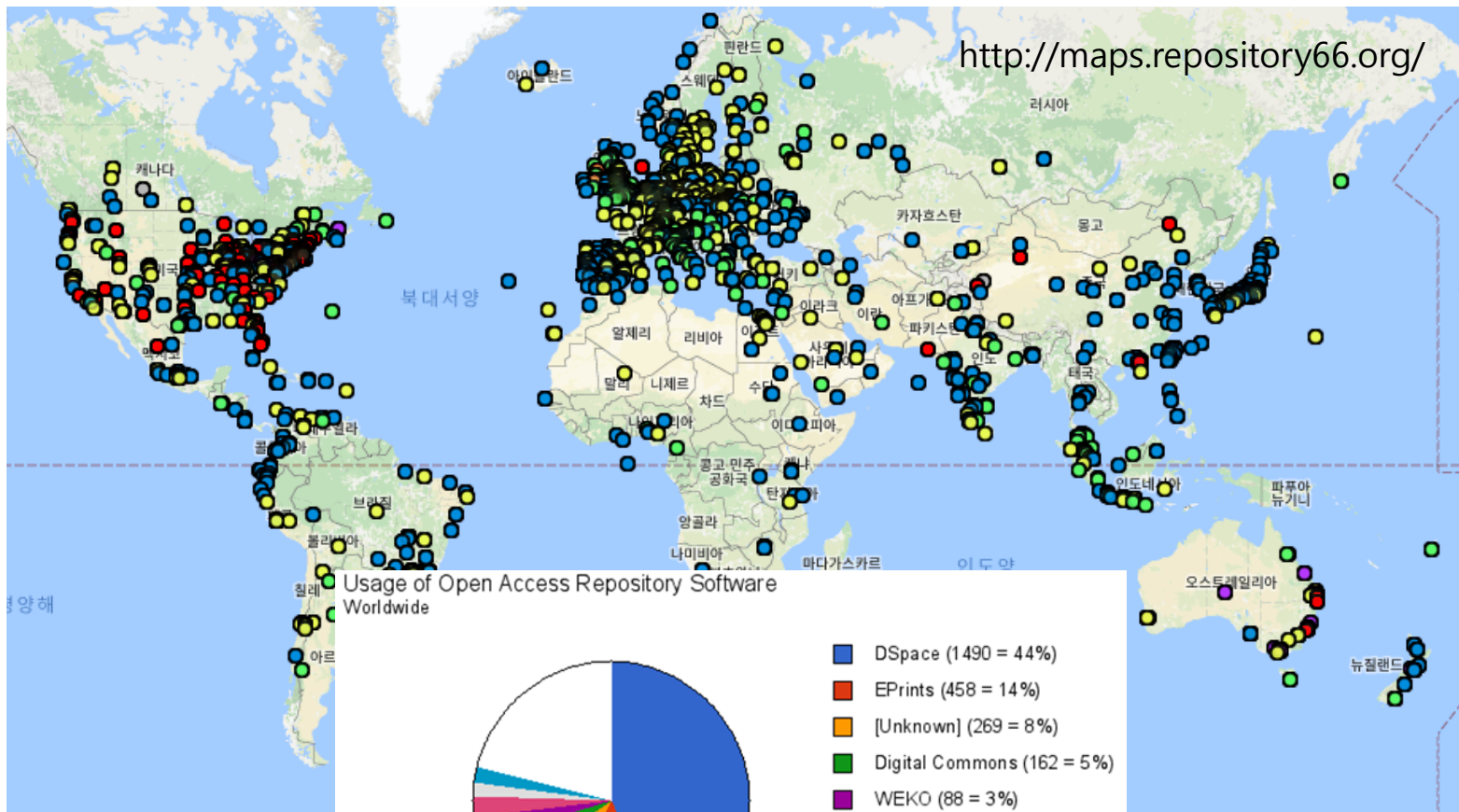


- By content type : **Journal article** is the most.
- By repository type : **IR** is prevailing.
- By subject : **Bio, Basic & Social Sciences** are leading.



Preface

Current Status of OA Repository



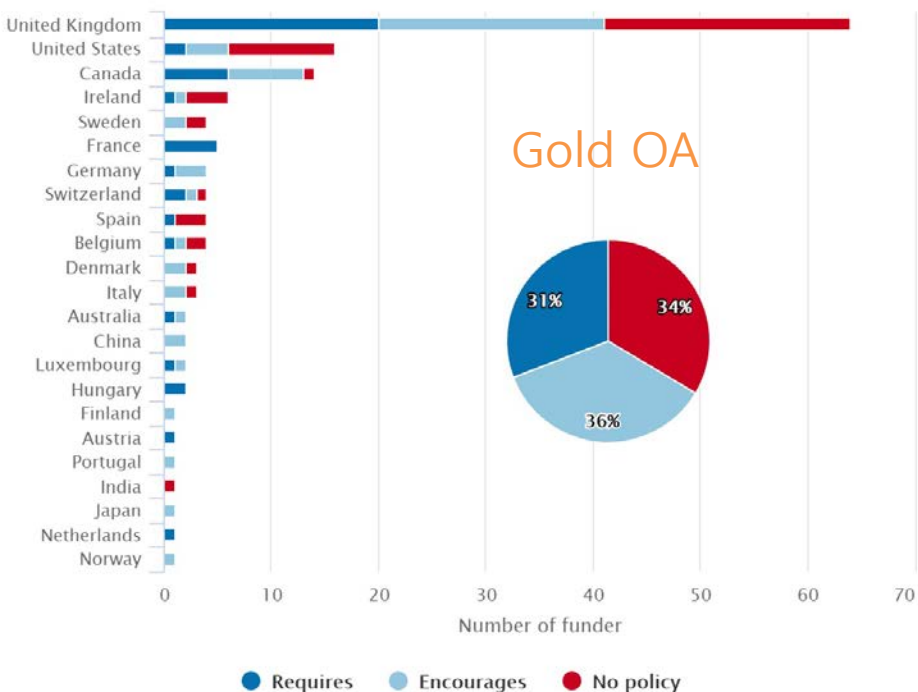
<http://www.openoar.org/>

Preface

Current Status of OA Policy

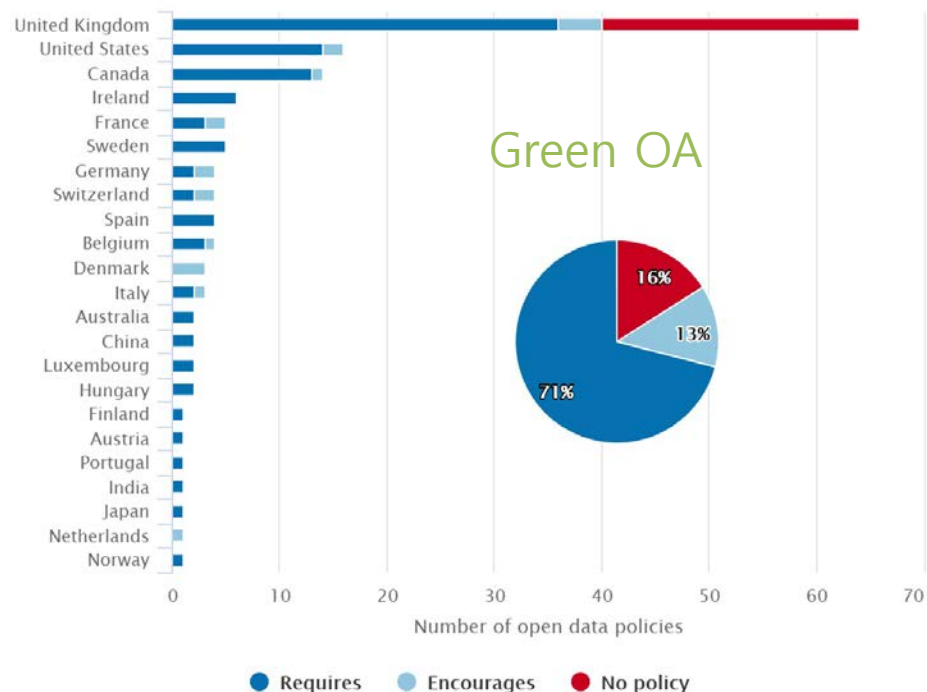
Number of Funder with policies on open access – publishing, by type of mandate and country

Source: Sherpa-Juliet – Reference date: March 26th 2019



Number of Funder with policies on open access – archiving, by type of mandate

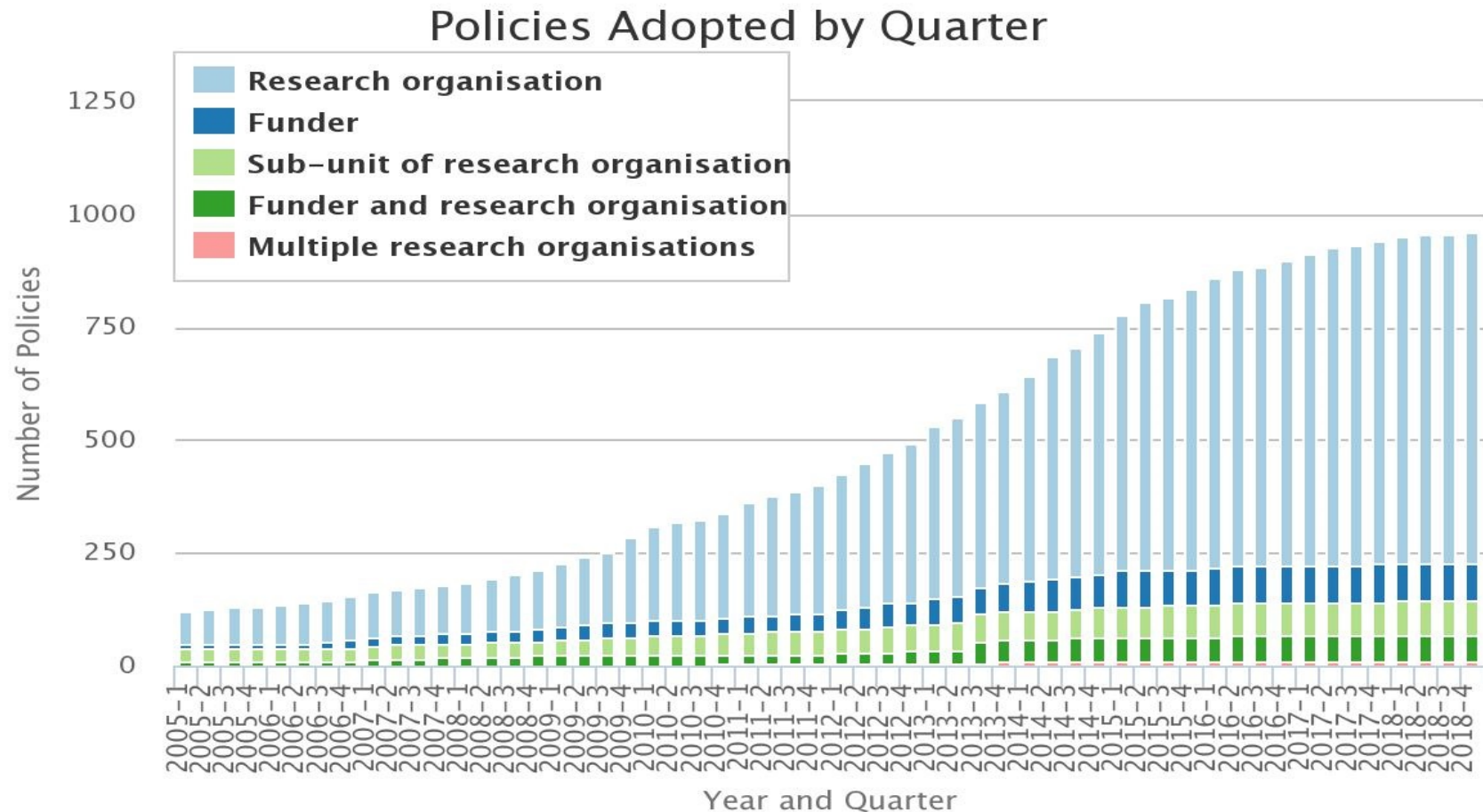
Source: Sherpa-Juliet – Reference date: March 26th 2019



* source: Trends for open access to publication, EU

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Current Status of OA Policy



* Source: ROARMAP, <http://roarmap.eprints.org/view/country/un=5Fgeoscheme.html>

Highcharts.com

Status of OA in Korea

- ❖ OA Policies
- ❖ OA Implementation

Status of OA in Korea

OA policies of Korean Government

- Ministry of Science and ICT don't have PA policy yet.
 - Korean government has successfully operated National Science and Technology Information Service (NTIS), which is a research output management system.
 - Technical Reports and Patents are successfully deposited other than journal articles.
- Korea Center for Disease Control and Prevention (KCDC) has adopted PA policy.
 - Researchers received fund from KCDC must deposit the final manuscript in 12 months after determination of publication.

Status of OA in Korea

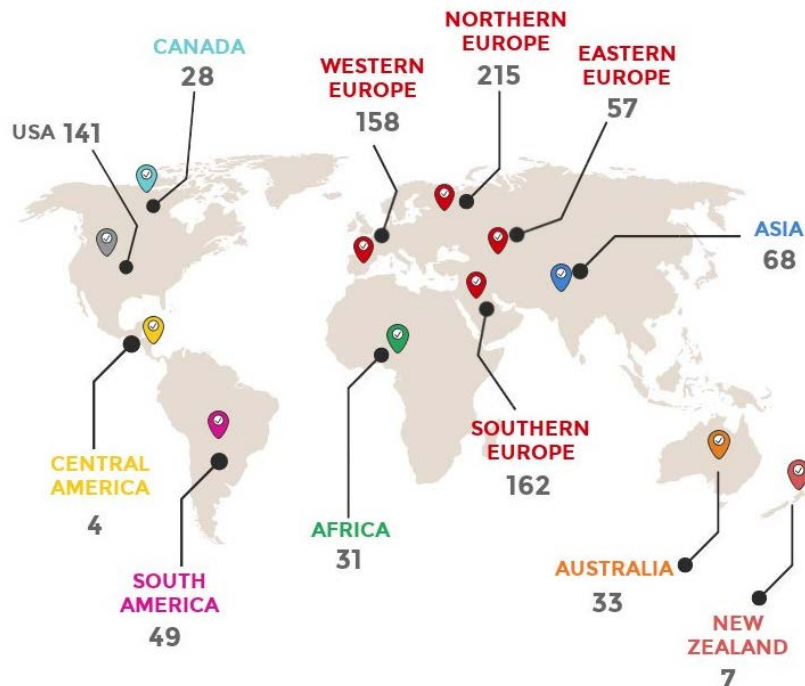
OA policy Study of KISTI

- KISTI studied on 'open access to research outputs funded by government' for two years from 2010.
 - Investigated Korean policy and legislative system for the public access to research outputs
 - Analyzed interest and relationship among stakeholders including researchers, universities, learned societies, and DB companies.
 - Prepared a draft bill for public access in Korea
 - But failed because open access awareness in the field was not matured.
- Korean Government and Funding Agency are Changing.
 - MoS&ICT adopts open research data policy (I-Korea 4.0).
 - Plan S encouraged NRF to study on adopting open access policy.

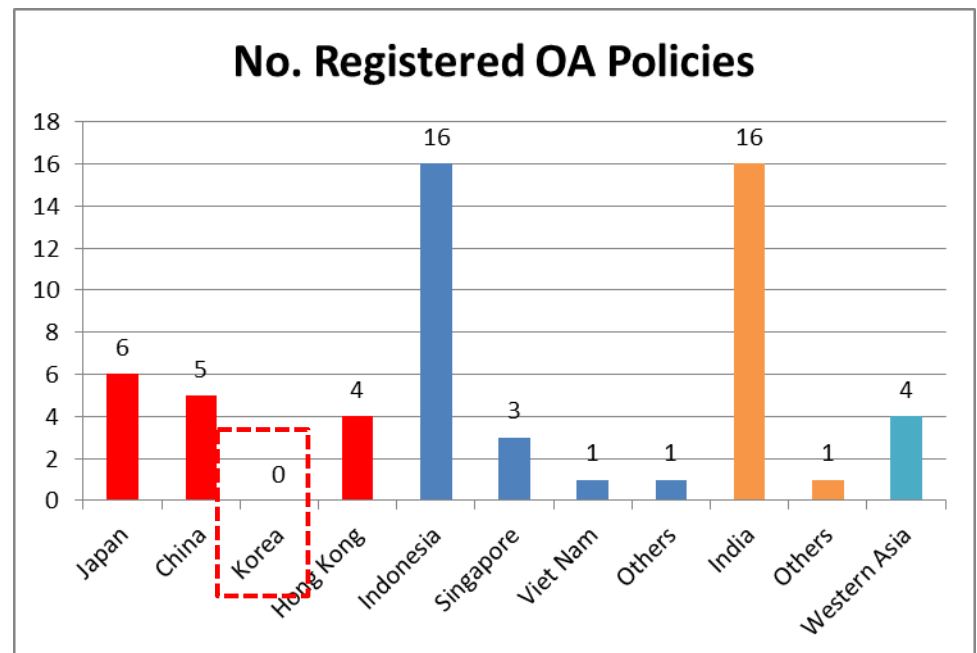
Status of OA in Korea

OA policy status of Korea

- OA policies and mandates across the globe



- ROARMAP is a Registry of Open Access Repository Mandates and Policies showing OA policies by country, continent, and continental region.
- Europe and North American are leading OA policy continent.
- India and Indonesia are dominant among Asian countries.
- Korea has no policy registered to ROAMAP in 2017.**



Status of OA in Korea

OA policy status of Korea

General

Country: [Asia > Eastern Asia > Republic of Korea](#)

Policymaker type: Research organisation (e.g. university or research institution)

Policymaker name: Korea Institute of Science and Technology Information

Policymaker URL: <https://www.kisti.re.kr/eng/>

Policy URL: <http://repository.kisti.re.kr/open-access.jsp>

Repository URL: <http://repository.kisti.re.kr/>

Policy adoption date: 17 October 2018

Policy effective date: 17 October 2018

Source of policy: Administrative/management decision

Countries (UN Geoscheme) (24)

Asia (24)

Eastern Asia (24)

China (4)

China, Hong Kong Special Administrative Region (4)

Japan (14)

Republic of Korea (1)

Taiwan (1)

• KISTI adopted OA policy and registered it to ROAMAP in 2018 for the first time in Korea.

Policy Terms

Deposit of item: Required

Locus of deposit: Institutional Repository

Date of deposit: Not Specified

Content types specified under the mandate: Peer-reviewed manuscripts, Books, Other

Journal article version to be deposited: Published edition (version of record)

Can deposit be waived?: Yes

Making deposited item Open Access: Required

Can making the deposited item Open Access be waived?: Not Specified

Date deposit to be made Open Access: As soon as the deposit is completed

Other Details

Is deposit a precondition for research evaluation (the 'Liège/HEFCE Model')?: No

Rights holding: Author grants key rights to institution

Can rights retention be waived?: Not specified

Can author waive giving permission to make the article Open Access?: Yes

Policy's permitted embargo length for science, technology and medicine: Not Specified

Policy's permitted embargo length for humanities and social sciences: Not Specified

Can maximal allowable embargo length be waived?: Not specified

Open licensing conditions: Requires CC-BY-NC or equivalent

Gold OA publishing option: Not Specified

Funding for APCs where charged by journals: Institution provides funding

OPEN ACCESS

한국과학기술정보연구원 오픈액세스 정책 선언문

연구성과물은 공공의 자산이자 학문과 인류문화 발전을 위한 핵심기반으로 널리 이용될수록 그 가치와 유용성이 증가한다. KISTI와 KISTI 소속 연구원은 KISTI의 연구성과물이 최대한 널리 개방 공유 확산되는 것을 지지하며, 다음과 같은 정책일치를 선언한다.

- KISTI의 연구성과물은 입문상 저각을 및 KISTI 연구원이 저자인 모든 성과를 지어한다.
- KISTI는 오픈액세스 리포지토리를 통해 KISTI의 연구성과물을 국민에게 공개한다 한다.
- 이를 위해, KISTI 연구원은 원천의 연구성과물(학술지 논문 등)이 비독점적 영구적으로 전 세계에 이용될 수 있도록 하는 정책을 KISTI에 채택한다. KISTI의 연구성과물은 저작권 표시와 비영리 사용을 기본사항으로 한다.
- 본 정책이 승인된 후에 출판되는 연구성과물은 본 정책의 적용을 받는다. 다만, 본 정책 승인 이전의 연구성과물(이전 저작권 계약 규정이 해소되는 등 공개가 가능한 경우에는 이를 포함할 수 있다.
- KISTI 연구원은 특정 연구성과물에 대해 본 정책에서 제시하는 방식에 대한 예외를 요청할 수 있다. 이 경우 KISTI는 특정 연구성과물에 대한 공개를 예외로 하거나, 특정 기간 동안 이용을 제한할 수 있다.
- KISTI 연구원은 연구성과물을 공개하기 위해 각 연구성과물의 최종 출판본이나 저자의 최종버전을 명확한 전자서로 형태로 출판한 후 KISTI에 제출해야 한다.
- KISTI는 본 정책의 학적과 관련된 관련 조항 및 수정 보완에 대한 책임을 진다.
- 본 정책의 3년 단위로 검토하여 갱신한다.

KISTI 한국과학기술정보연구원

KISTI Open Access Policy

Adopted October 17, 2018

Research outputs are public assets, and their value and utility increase the more broadly they are available for global academic and cultural advances. KISTI and each KISTI researcher are committed to making available, sharing, and disseminating our research outputs as widely as possible by adopting the following open access policy.

The research outputs of KISTI refer to all publications authored by any KISTI researcher as work made for hire or otherwise.

- KISTI shall make all its research outputs widely and freely available to the public in its open access repository.
- To this end, each KISTI researcher shall permit KISTI to make his or her research outputs(e.g., journal articles) available worldwide in a nonexclusive and permanent manner based on the CC-BY-NC(Creative Commons Attribution-Noncommercial) license.
- All research outputs published after the adoption of this policy shall be subject to this policy. The policy shall also apply to the research outputs published before its adoption when they become available for public access through copyright clearance or the like.
- KISTI researchers shall reserve the right to request exception from the application of the policy to specified research outputs. In such cases, KISTI can waive the application of the policy to those research outputs or delay access to them for a specified period of time.
- Each KISTI researcher shall provide an electronic copy of the published version or the final author's version in an appropriate format to make it available to the public in the KISTI open access repository.
- KISTI will be responsible for interpreting this policy, resolving disputes concerning its interpretation and application, and its modification and supplementation.
- This policy will be reviewed and updated every three years.

Status of OA in Korea

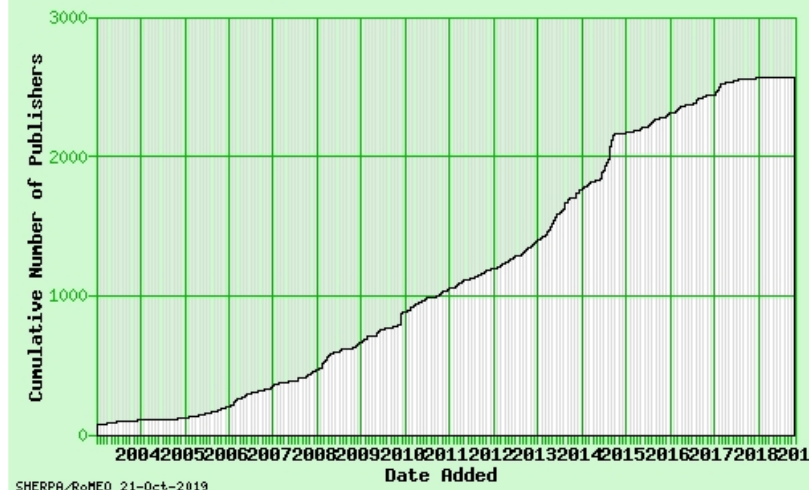
OA policy status of Korea

- SHERPHA/RoMEO is a Registry of Publisher Copyright Policies and self-archiving.
- Korea has 9 organizations registered to SHERPHA/RoMEO as of now.**

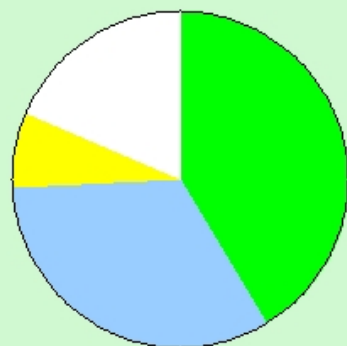
RoMEO colour	Archiving policy	Publishers	%
green	Can archive pre-print and post-print	1064	42
blue	Can archive post-print (ie final draft post-refereeing)	843	33
yellow	Can archive pre-print (ie pre-refereeing)	181	7
white	Archiving not formally supported	474	19

Summary: **81%** of publishers on this list formally **allow** some form of self-archiving.

Growth of the SHERPA/RoMEO Database
excluding provisional policies



SHERPA/RoMEO Colours, excluding provisional policies



■	Green (1064 = 42%)
■	Blue (843 = 33%)
■	Yellow (181 = 7%)
■	White (474 = 19%)

SHERPA/RoMEO 21-Oct-2019

Total = 2562 publishers

Publisher (linked to the full RoMEO details)	RoMEO Colour
Ecological Society of Korea	Blue
Korea Health Personnel Licensing Examination Institute	Blue
Korea Institute for International Economic Policy (KIEP)	Green
Korea Institute of Science and Technology Information (KISTI)	Blue
Korean Academy of Medical Sciences	Blue
Korean Pharmacopuncture Institute	Green
Korean Society of Pathologists	Blue
Sejong University, Sejong Institution, Center for International Economics	Blue

Status of OA in Korea

Korea in International OA Initiatives

- KISTI is leading SCOAP3 activity.
 - KISTI as the NCP in Korea is participating in SCOAP3 on behalf of Korean research libraries.
 - KISTI did the key role in completion of phase 1 (2014-2016) in despite of low participation rate of libraries.
 - In order to derive more participation of libraries during phase 2 (2017-2019), 'Korean SCOAP3 Council' has been organized with libraries and some HEP research organizations.
- KISTI, SNU, NLK, and CODE signed EOI of OA2020.
 - Four organizations cooperate in promoting OA in Korea.
 - No more organization signed.



Preface

OA Journals of Korea

- Number of OA journals is rapidly increasing but still small.
 - 94 journals are being registered to DOAJ.

Country of publisher
100 count ↓ OR
United Kingdom (1523)
Indonesia (1443)
Brazil (1348)
Spain (701)
United States (690)
Poland (581)
Iran, Islamic Republic of (482)
Italy (359)
Turkey (344)
Colombia (341)
Romania (330)
Russian Federation (313)
Switzerland (300)
India (268)
Germany (267)

DOAJ DIRECTORY OF OPEN ACCESS JOURNALS

China (96)

Australia (96)

Portugal (94)

Korea, Republic of (94)

South Africa (92)

Cuba (82)

Malaysia (67)

Youngim holds a PhD from Pusan National University in Computer Science and Engineering.

She is now a Senior Researcher at Korea Institute of Science and Technology Information developing and managing scholarly publishing systems for supporting domestic societies. Previously, she worked for [KESLI](#), the national library consortium in South Korea and contributed herself to establish Korea DOI Center.

She is a committee member of KCSE ([Korean Council of Science Editors](#)) and CASE ([Council of Asian Science Editors](#)). She has authored publications and communications in the field of Scientometrics, Library Systems and Natural Language Processing. [Conflict of Interest document](#).



Preface

OA Journal Platforms in Korea

- **KoreaMed synapse**
 - <https://synapse.koreamed.org/>
 - Bio & Medicine
 - 113 OA journals.
 - DOI & JATS XML
- **ScienceCentral :**
 - <https://www.e-sciencecentral.org/>
 - STM
 - 221 OA/FA journals
 - JATS XML
- **KPubS :**
 - <http://www.kpubs.org/>
 - Science & Technology
 - 117 journals
 - JATS XML or PDF

The image displays three screenshots of Korean Open Access (OA) journal platforms. The top screenshot shows the Synapse website, which is a digital archive and reference linking platform for Korean medical journals. It features a search bar, a list of journals, and a QR code for KAMJE. The middle screenshot shows the ScienceCentral website, a free or open access full-text archive of scientific society journal literature. It includes a search bar and a navigation menu. The bottom screenshot shows the KPubS website, a Korean journal publishing service. It features a search bar, a list of journals, and a table of journal statistics.

Journal	Volume	Issue	Pages
Allergy, Asthma & Immunology Research	2092-7355		
Allergy, Asthma & Respiratory Disease	2268-0402		
Anatomy & Cell Biology	2093-3665		
Annals of Clinical Microbiology	2288-0585		

Journal	Articles
TOTAL	115 55,173
CC BY	3 598
CC BY-NC	72 38,155
CC BY-ND	1 107
Free Access	39 15,820

Preface

OA Repositories of Korea

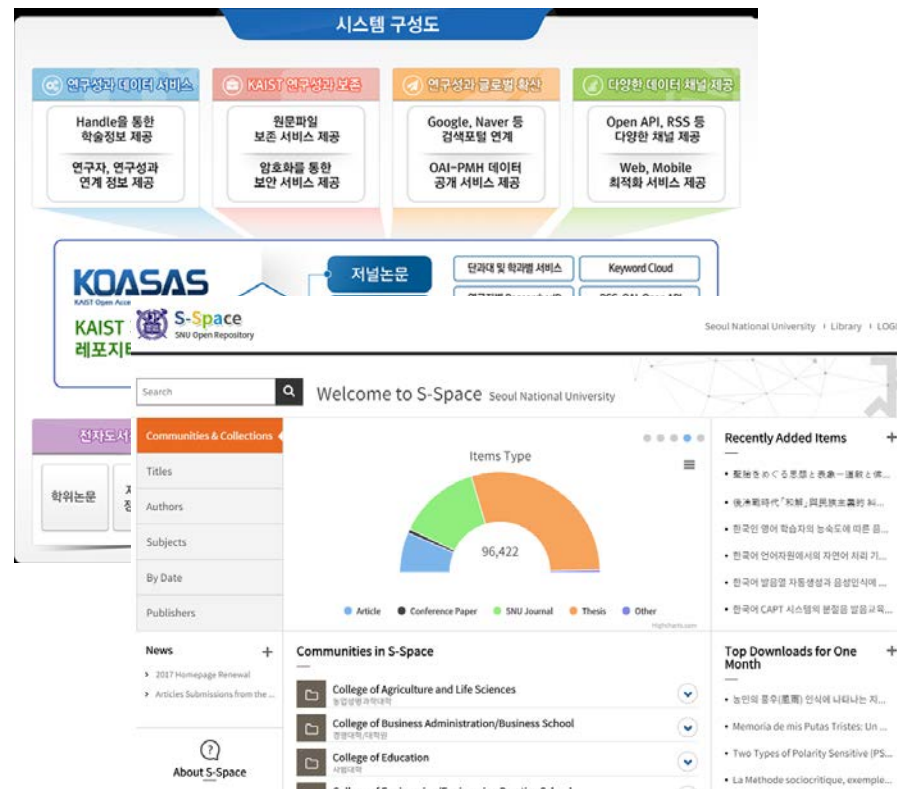
- Number of IRs is relatively small.
 - Korean share in OpenDOAR is only 0.9% while Japanese share over 5.7%.

OpenDOAR

Countries by Region (4124)

Africa (202)
Americas (1127)
Asia (797)
Europe (1892)
Oceania (106)

Japan : 235
Indonesia : 98
India : 86
Turkey : 83
Taiwan : 61
China : 42
Korea : 38
...



Status of OA in Korea

OAK Repositories

- OAK repositories supported by National Library of Korea.
 - Software : DSpace
 - Type of records : Journal paper, Thesis, Technical report, Book, Patent
 - Number of IRs : 35 (but only 15 IRs are being updated.)



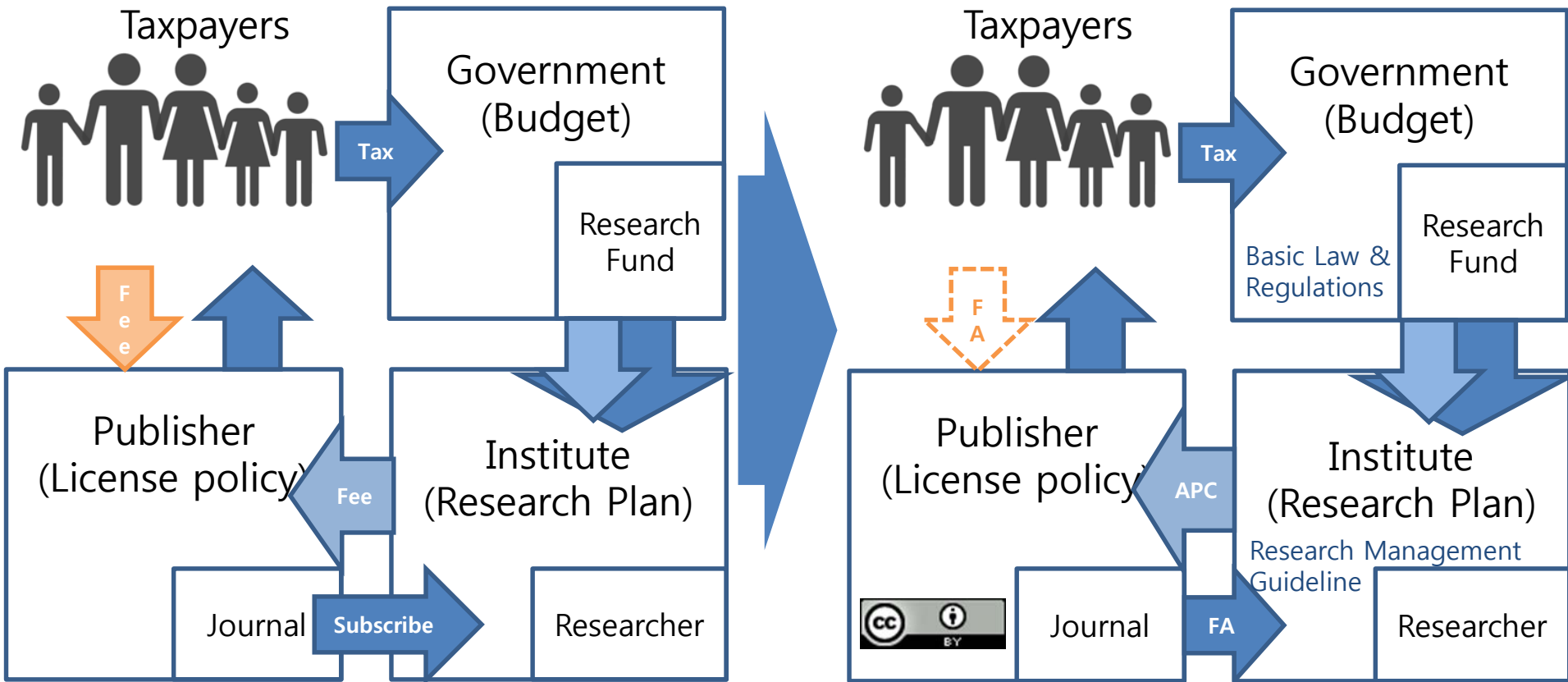
OAK PORTAL

Challenges & Perspectives

- ❖ OA Policy
- ❖ OA Transition
- ❖ OA Infrastructure

Challenges and Perspectives

OA Policy - Revision of Laws and Regulations for Implementing PA



Challenges and Perspectives

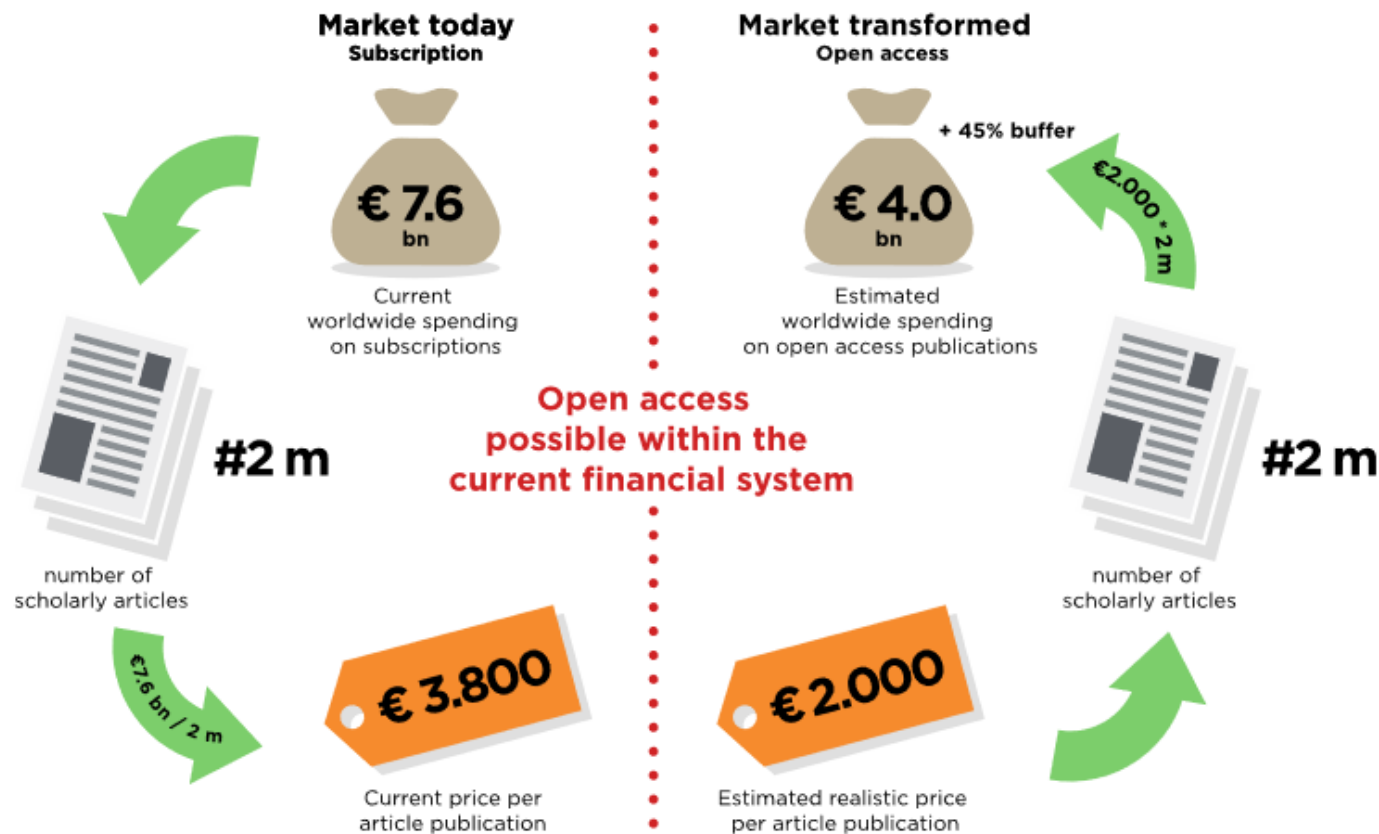
OA Policy - Revision of Laws and Regulations for PA

- Ministry of Science and ICT proposed a Special Law for National R&D Innovation".
 - KISTI has requested to include in the law a mandate of open access of journal articles which are research results out of national research fund.
 - KISTI will cooperate with NRF and MoSICT to accomplish the purpose.
- KISTI performs public access policy study this year.
 - Case study of foreign countries such as EU's Plan S.
 - Draft of laws and regulations including open access mandate.
 - Survey and public hearing to reflect opinions of stakeholders.



Challenges and Perspectives

OA Transition



Based on Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access. doi:10.17617/1.3.

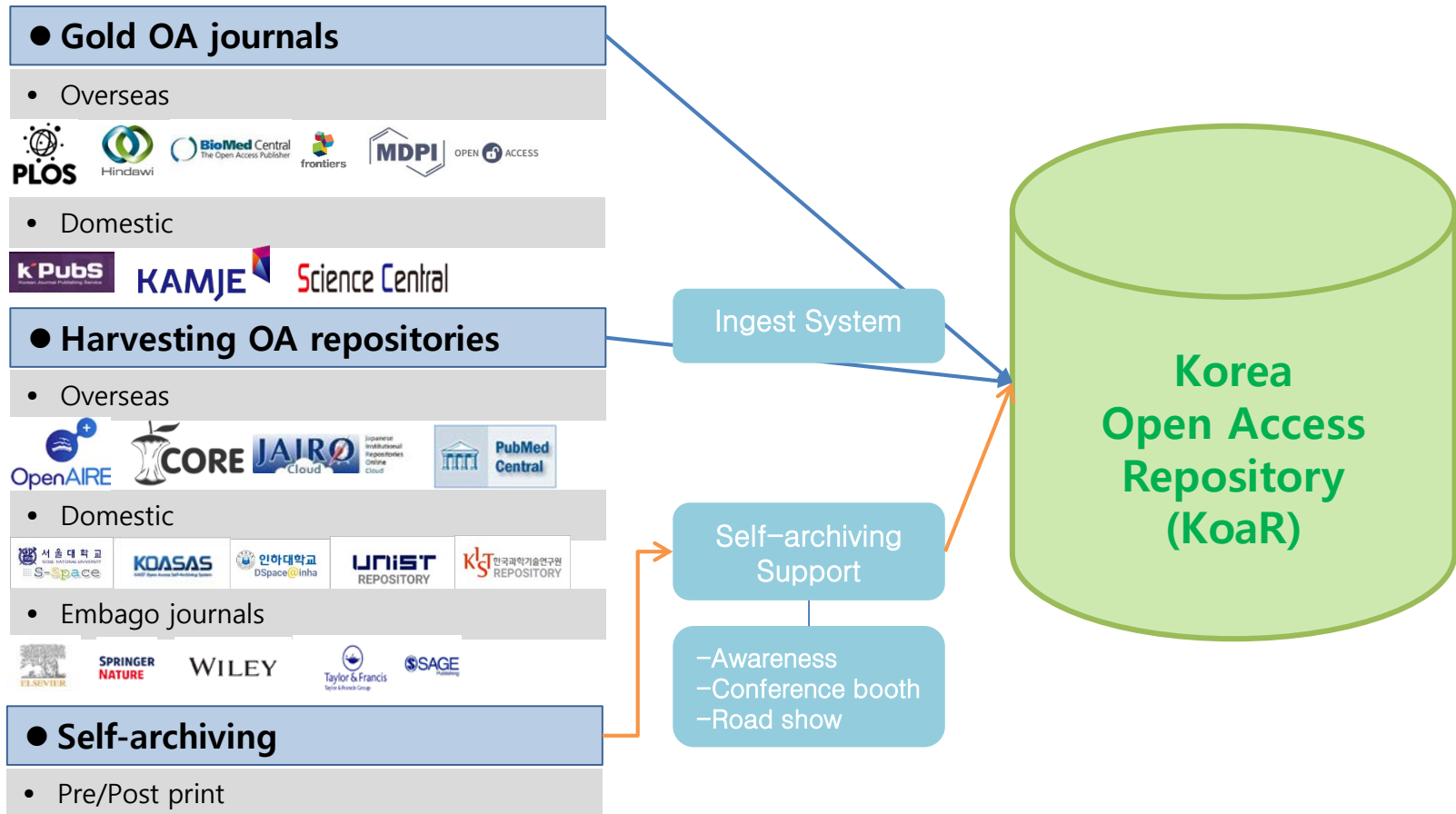
Challenges and Perspectives

OA Transition

- Analysis of OA publishing process and cost of Korean researchers
 - Publication and cost processing workflow analysis by institution.
 - Establish workflow after OA contract.
 - Cost analysis by institute, publisher and sector.
- Proposal for a supporting system for increasing OA publication.
 - OA publishing support and evaluation system
 - Role of OA Consortium and cooperation with stakeholders
- Applying a model combining read and publish.
 - Prerequisites for a Korean consortium contract
 - Select a publisher for read & publish priority negotiation
 - Strategies for successful negotiations

Challenges and Perspectives

OA Repository



Challenges and Perspectives

Next Generation Publishing Platform

Authoring

Submitting

Qualifying

Editing

Publishing/
Archiving

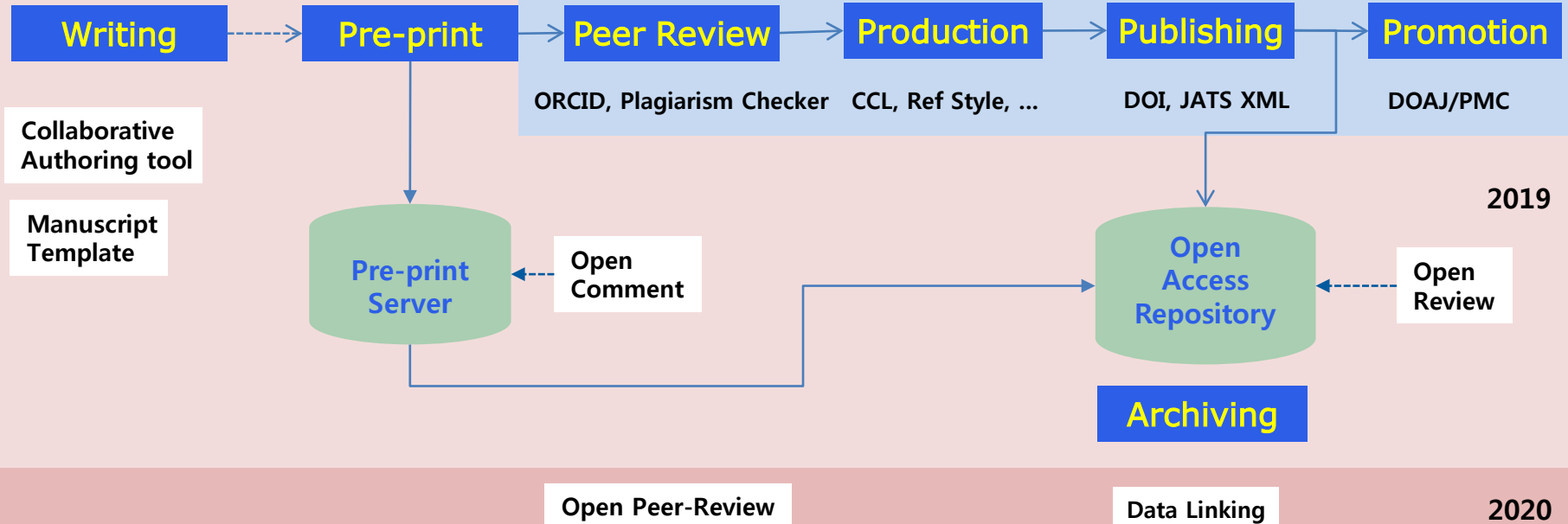
Indexing

Collaborative
Authoring

Preprint

Open Peer-Review

Open Access
Repository



Challenges and Perspectives

Ultimate Objectives



Librarian

- Optimization based on data
- Open access Transition

Optimize
Price for
Journal
Access

SCOPUS
WEB OF SCIENCE™

30,000

TA

SHERPA
RoMEO

Self-
Archiving

2,000 Orgs

OA

DOAJ DIRECTORY OF
OPEN ACCESS
JOURNALS

13,000

Maximize
Scope of
Open
Accessible
Journals

- OA repository
- Flipping to OA journals



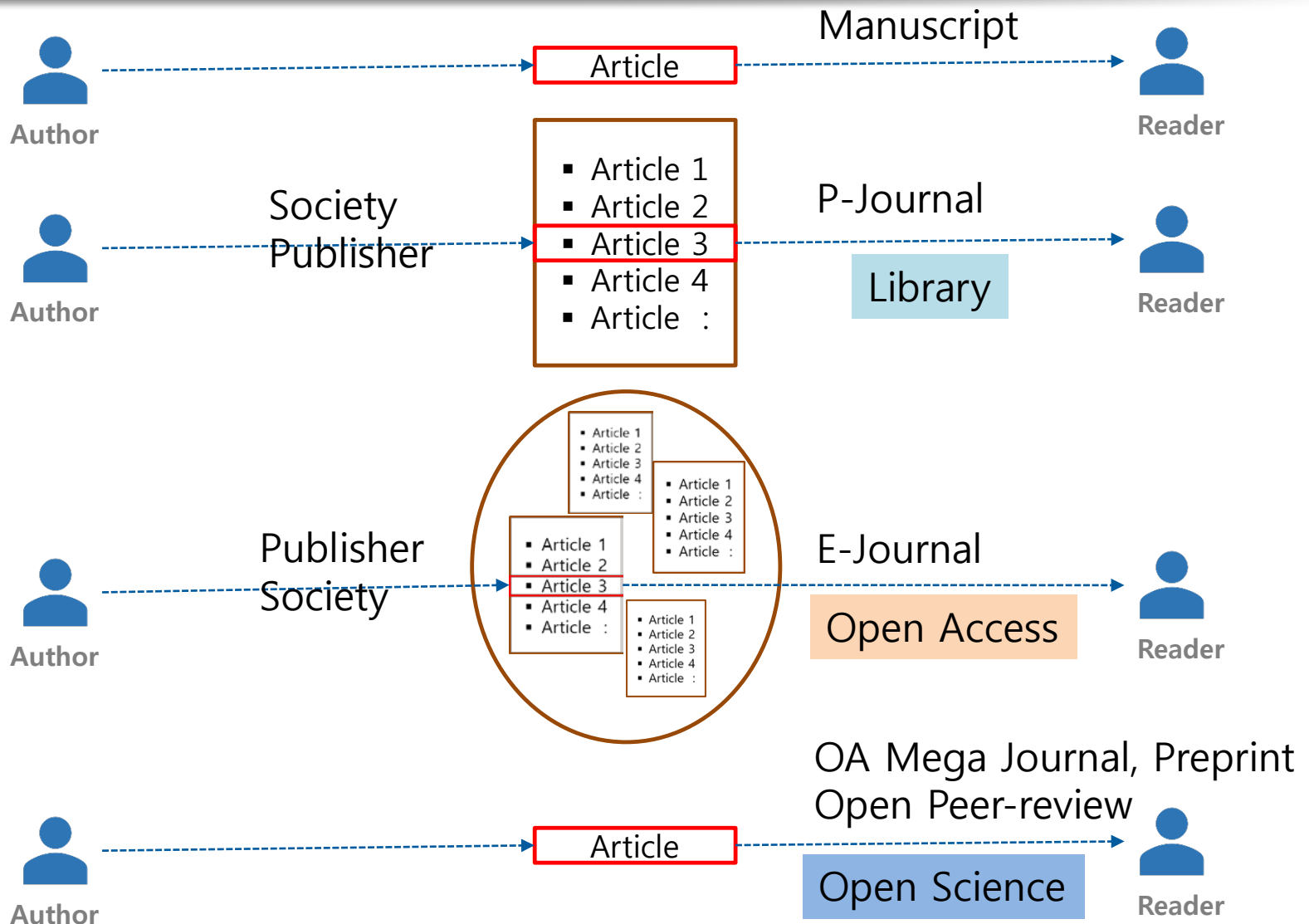
Researcher

Concluding Remark

- ❖ Mega Trend
- ❖ Research Culture
- ❖ Roles of Librarian

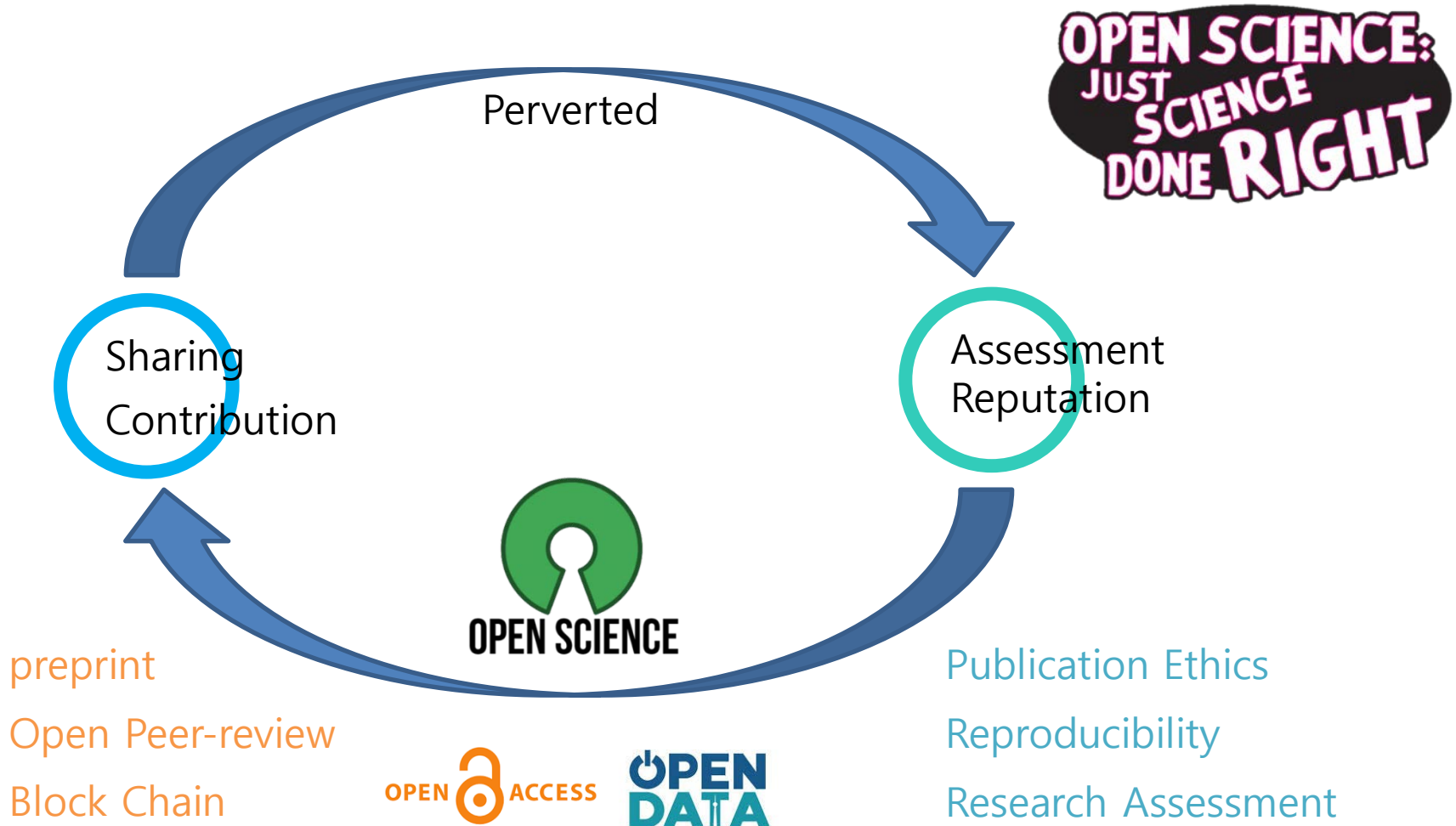
Concluding Remark

Mega Trend of Scholarly Communication



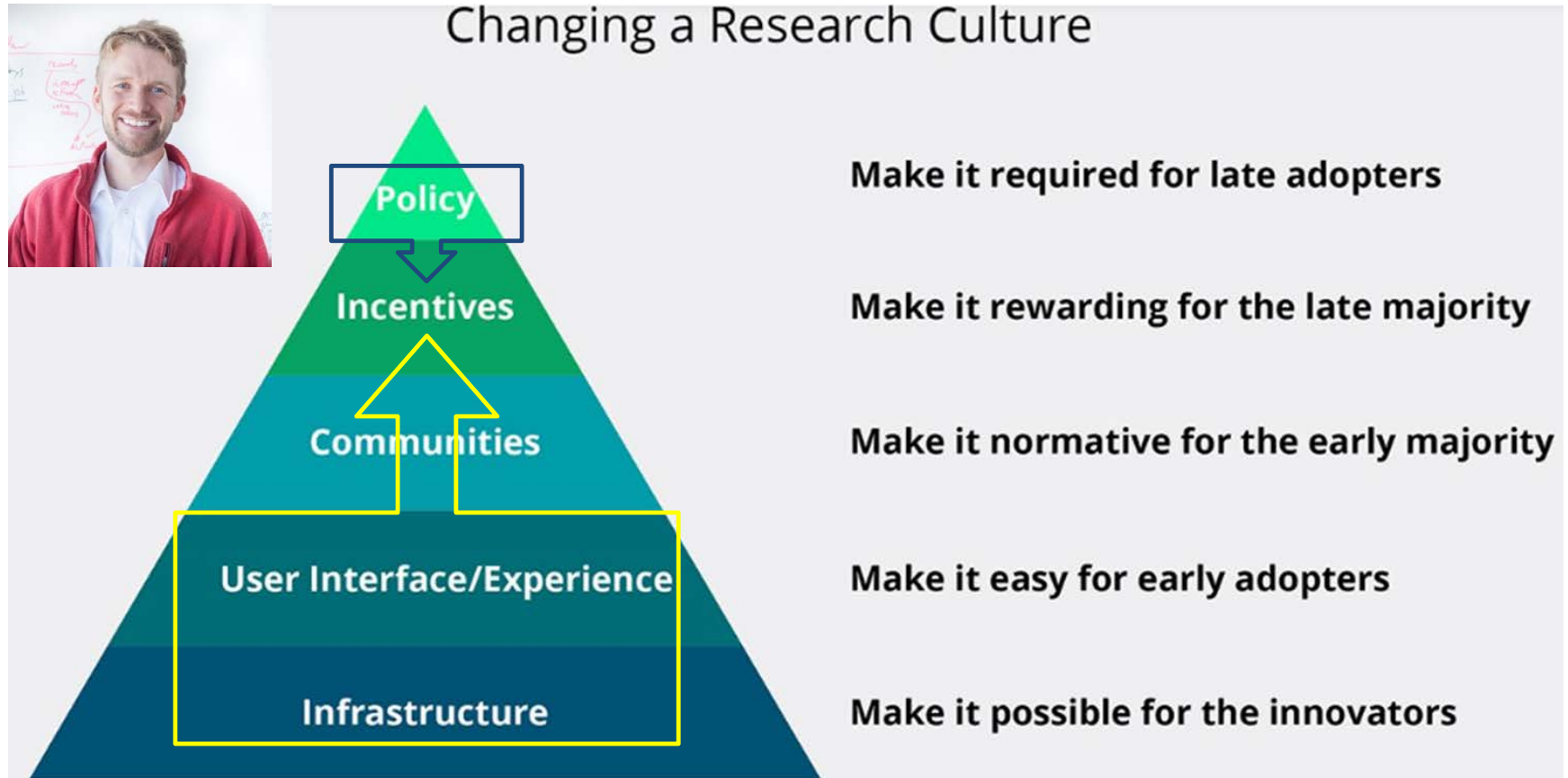
Concluding Remark

Mega Trend of Science



Concluding Remark

Changing Research Culture



David Mellor, the Landscape of Open Science : How Transparent Research Builds Communities,
<https://www.wiley.com/network/journaleditors>

Concluding Remark

Changing Research Culture

- Author(Researcher)
 - Being aware of open access
 - Using open access resources
 - Submitting to open access Journals
 - Securing APC
 - Cooperating in Self-archiving

sharing is caring

Make your research freely available

SKT 8:57 LTE 94%

트윗

Andre@s Ferus @ferli90

My pledge for the rest of my academic life:

1. All publications, data etc. Open Access.
2. Doing editorial work, peer review, etc. only in connection with Open Access publications.
3. All publications on trusted ASNs like e.g. [@humcommons](#).
4. Encourage others to do 1-3.

답글 트윗하기

SKT 8:57 LTE 94%

트윗

Andy Nobes 님이 마음에 들어 함

Jon Tennant @Protohedgehog

If you have ever shared data, code, or made research papers freely available, you are an open scientist. You don't have to 'do open science' all the time. It's about knowing what options are available to you, and using them when possible. Small steps can make a huge difference.

답글 트윗하기

Concluding Remark

Roles of Librarians in Open Science Era

- Librarian
 - Supporting open access
 - Searching open access resources
 - Providing IR service
 - Guiding authors to submit to OA journals
 - Secure APC budget
 - Providing data curation service



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