CHORUS

Advancing Public Access to Research

Supporting US Funder Compliance

COGR Meeting, 9 June 2016

Howard Ratner, Executive Director

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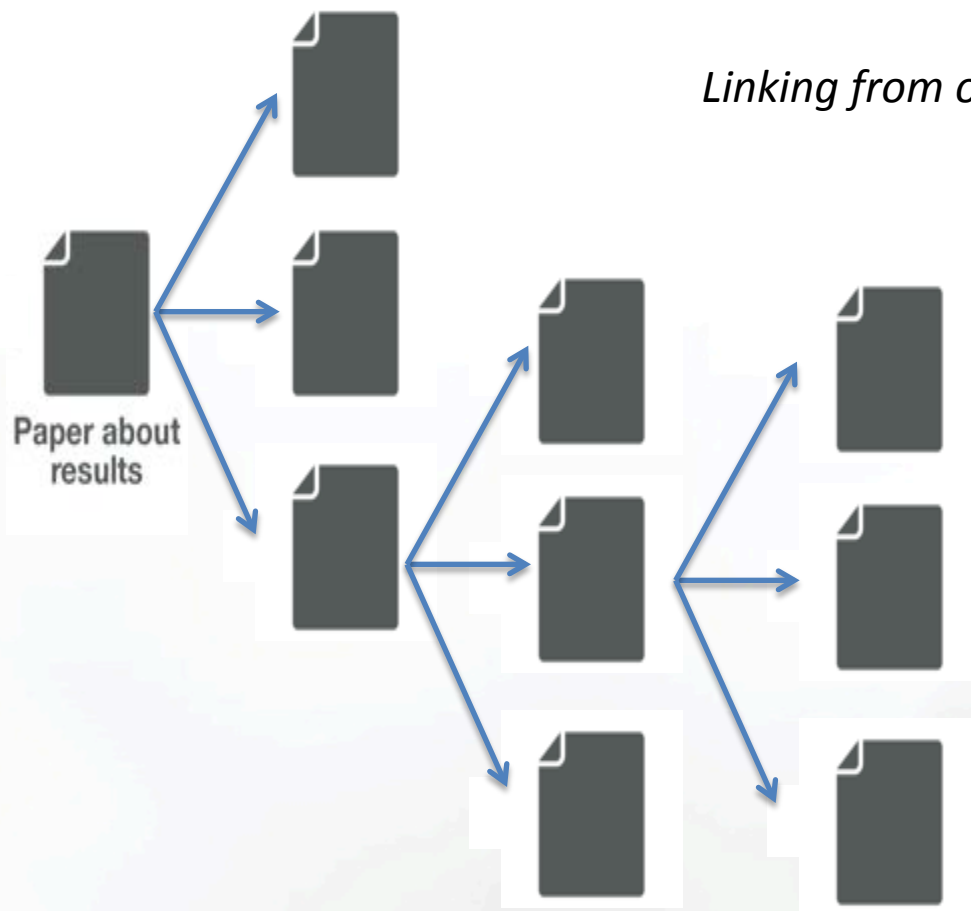**Access • Discovery • Compliance • Identification • Preservation**

A Story about Efficiencies

Crossref
2000

ORCiD
2010

CHORUS
2013

A Story about Efficiencies

Linking from one paper to another at scale

Crossref

Current Mission statement:

"Crossref's goal is to be a trusted collaborative organization with broad community connections; authoritative and innovative in support of a persistent, sustainable infrastructure for scholarly communication"

Where Crossref started

- Not-for profit: founded in 2000
- Set up by publishers to enable reliable reference linking.
- Bringing together publishers and their data for the benefit of the whole community.
- 16-member international board of directors from membership
- Based in Oxford, UK and Boston, USA

What Crossref does

- Network for scholarly community (over 5,000 publisher members)
- Run services publishers cannot do individually
- Facilitator for industry technical innovation
- Extended to include other data and services that address the status and relationships of and between scholarly works of all kinds.
- Engage many types of organizations: Publishers and "non-publisher" publishers; Commercial and non-profits; OA & Subscription; Funders; Researchers; Libraries

The DOI

- Digital Object Identifier
- Solves link rot (broken links)
- Uniquely identifies a piece of content
- Actionable
- Trademark of the International DOI Foundation (IDF)
- ANSI/NISO Standard Z39.84-2005 (R2010)
- ISO Standard 26324:2012

81,000,000 content items

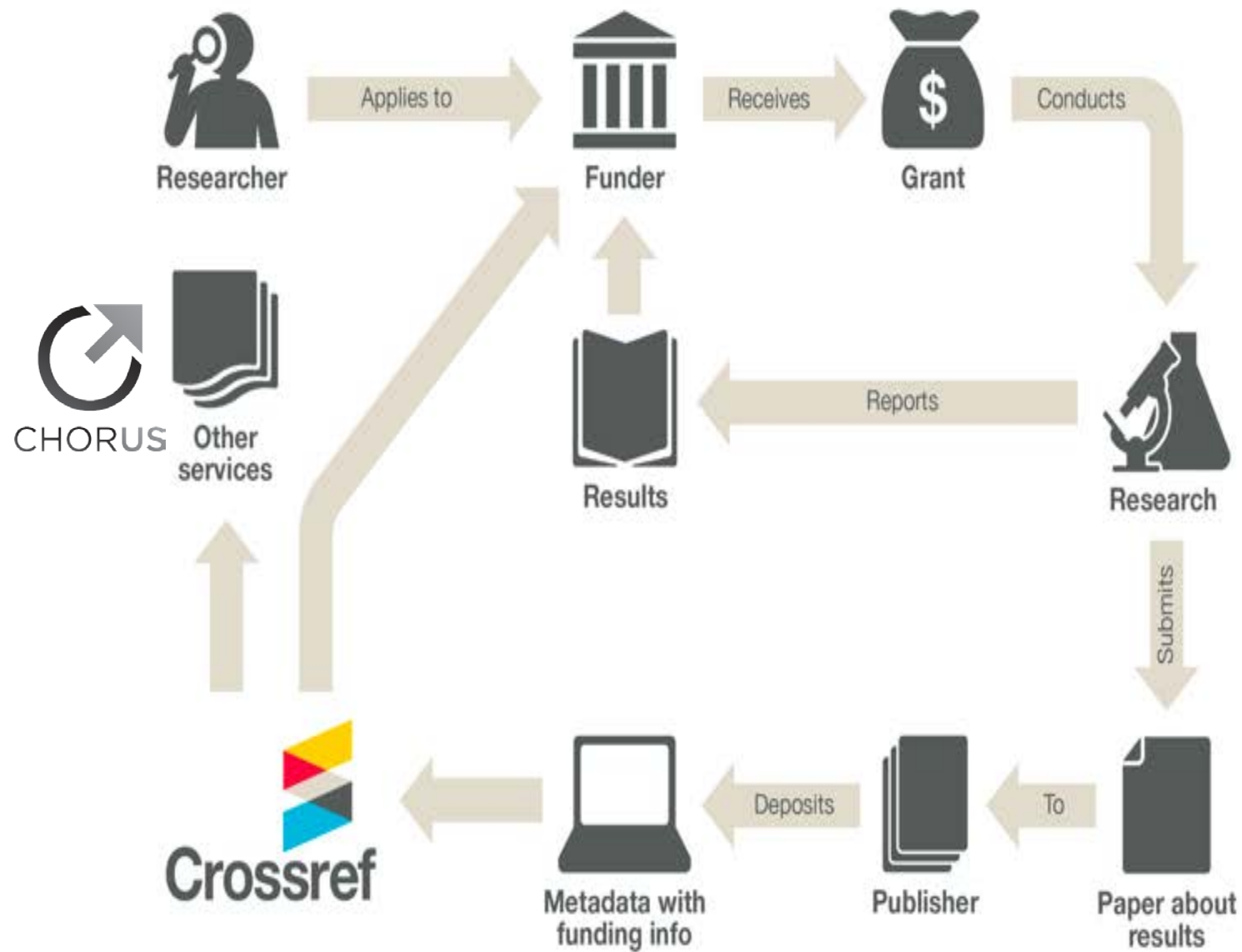# Over 1 billion DOI resolutions per year

DOIs aren't just for articles

- Journals
- Books
- Conference proceedings
- Standards
- Technical reports
- Working Papers
- Theses and dissertations
- Components (figures, tables)
- Datasets (supplementary data)
- Databases

A Story about Efficiencies
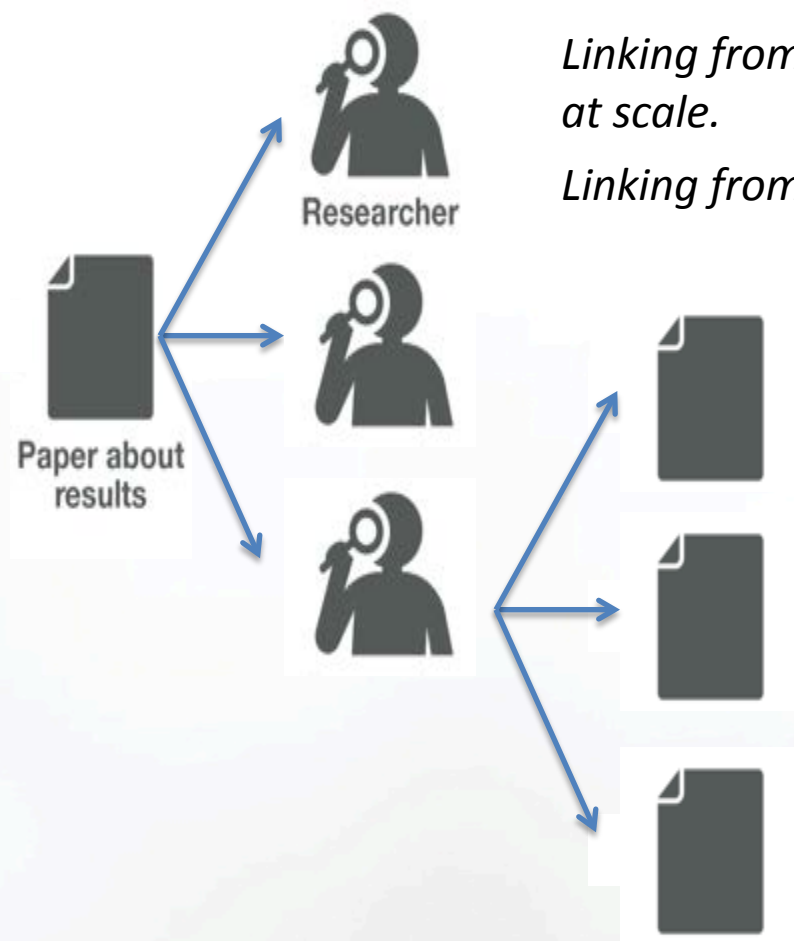
Linking from a paper to its author information at scale.

Linking from a researcher to their papers at scale.

ORCID's vision is a world in which all who participate in research, scholarship, and innovation are uniquely identified and connected to their contributions and affiliations across disciplines, borders, and time.

ORCID
Connecting Research
and Researchers

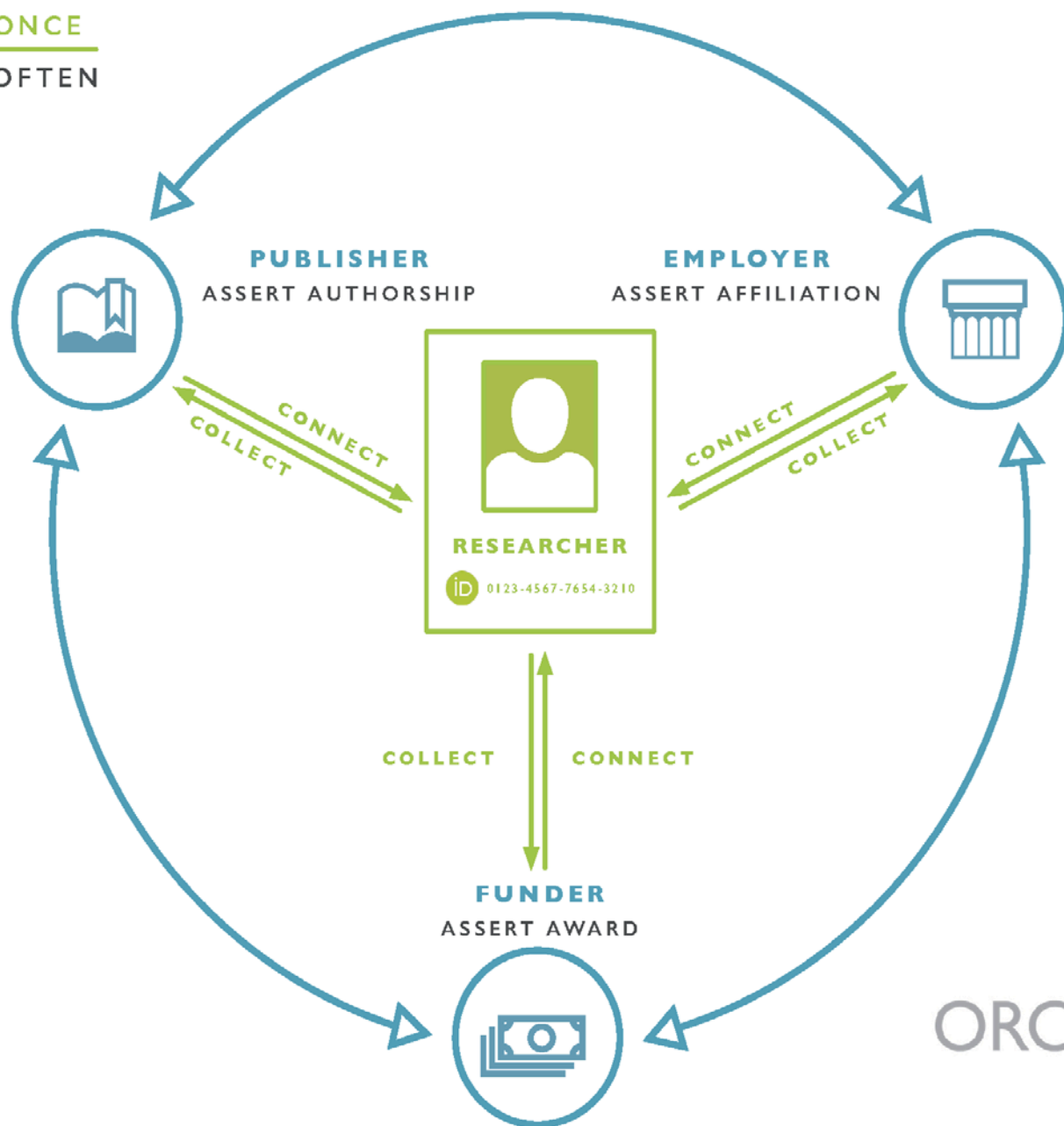- ✓ ORCID is an open, not-for-profit organization that serves the research community by collaborating and innovating with organizations like yours.
- ✓ We provide unique ORCID identifiers free of charge to individuals, allowing them to reliably and clearly connect all participants in the research, scholarship, and innovation process with their contributions across time, disciplines, and borders

orcid.org

Organization/member benefits

1. Reduce/eliminate need for researcher disambiguation within and between systems
2. Enable automatic system-to-system updates for researcher reporting
3. Validate your researchers' affiliation, awards, or works – building trust in the overall research infrastructure
4. Improve speed and accuracy of research reporting
5. Maintain connections with researchers despite name/affiliation changes
6. Ensures your researchers comply with funders and publishers requiring ORCID
7. Learn from other organizations' experiences and share your own
8. Be eligible for public recognition of good ORCID integrations
9. Get involved and help shape ORCID's future priorities and goals
10. Play your part in making the Internet work better

orcid.org

INTEROPERABILITY

ENTER ONCE
REUSE OFTEN

PUBLISHER
ASSERT AUTHORSHIP

EMPLOYER
ASSERT AFFILIATION

CONNECT
COLLECT

CONNECT
COLLECT

RESEARCHER
iD 0123-4567-7654-3210
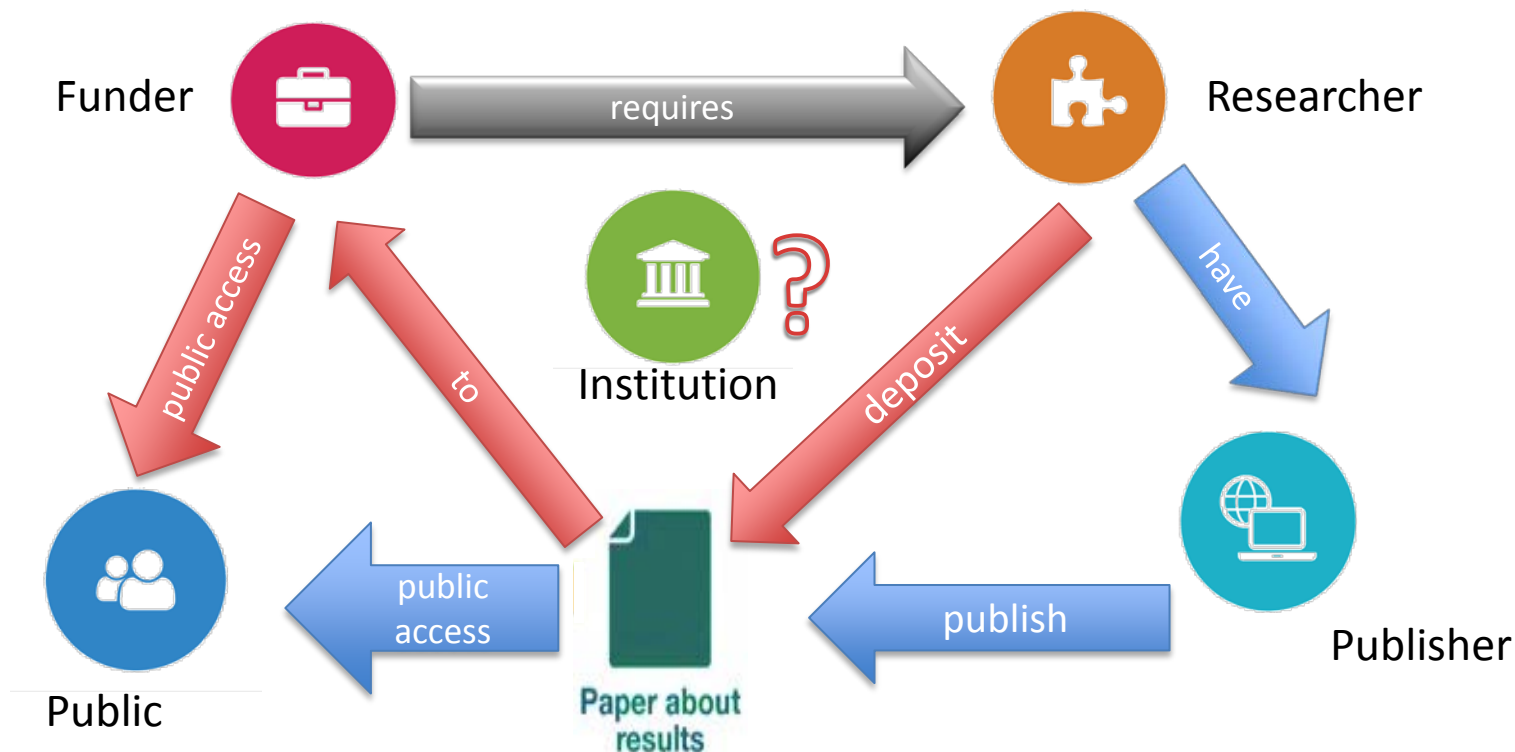
COLLECT   CONNECT

FUNDER
ASSERT AWARD

ORCID
Connecting Research
and Researchers

A Story about Efficiencies

Funders requires grantees to either deposit accepted manuscript or final articles for public access or

have publisher make accepted manuscript or final article publicly accessible

Global approach to open access

Canada
Active in OA discussions and looking at gold and green
- Tri-Agency policy: gold or 12 month deposit mandate
- Gates Foundation: gold open access

United States
Federal funders formulating policies to meet OSTP directive, e.g.
- NIH (gold/green; deposit to PMC in 12 mo)
- DOE (green or gold; public access in 12 mo. via PAGES & CHORUS)
- NSF (gold/green; public access in 12 mo.)
CHORUS working with DOD, DOE, NSF, Smithsonian. NIST, USGS

Europe
- UK funder mandates focused on gold (Research Councils UK & Wellcome Trust)
- VSNU driving expansion in gold open access
- Green open access mandates in Italy & Spain
- All EU members formulating open access policies at either national, funder or institutional level.

Latin America
- Focus on green open access
- Argentina: MINCYT introduced 6 month deposit mandate
- Brazil: Government formulating green open access policy
- Mexico: OA legislation passed to support repository development

Africa
- Developing repositories
- Publishers enabling philanthropic access
- New open access journals to support local research needs
- Some institutions have open access mandates, but no policies from any funders or Governments

Asia Pacific
- China: CAS & NSF; gold or green open access, deposit within 12 months
- ARC & NHMRC in Australia have 12 month self-archive mandate, as does A*Star in Singapore
- Other funders considering policy

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Slide courtesy of Alicia Wise, Elsevier and David Crotty, Oxford University Press, with slight adaptations.

CHORUS

CHORUS advances sustainable, cost-effective public access to articles reporting on funded research in ways that benefit all in the scholarly communications community.

- 501(c)(3) not-for-profit membership organization

- Leverages existing infrastructure

- Promotes collaboration and compliance

- Sparks innovation

- Broadens the dialogue among publishers, societies, funders, service providers, institutions, and other stakeholders

How Does CHORUS Help?

Institution

Funder

PRESERVATION

IDENTIFICATION

COMPLIANCE

Public

Researcher

ACCESS

DISCOVERY

Publisher

Cost-effective Public Access Solution
Builds on Existing Infrastructure

OXFORD UNIVERSITY PRESS
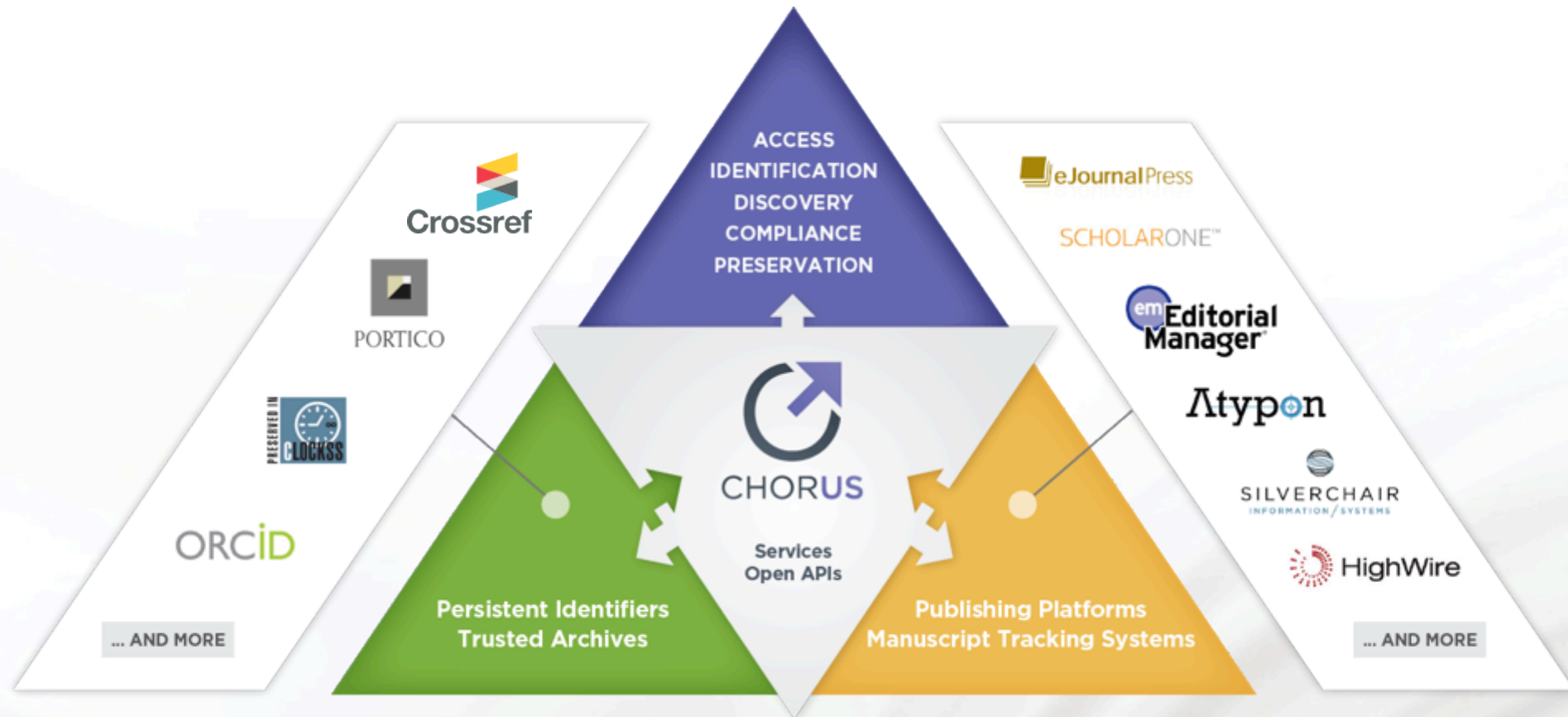
American Chemical Society

Science / AAAS

AAS

OSA The Optical Society

AIP Publishing

THE ROCKEFELLER UNIVERSITY PRESS

acm Association for Computing Machinery

PNAS

American Diabetes Association

APS physics

AMS AMERICAN MATHEMATICAL SOCIETY www.ams.org

Taylor & Francis Group an informa business

ASCO

AAPM

AGU

The Company of Biologists

ACA

AAPT PHYSICS EDUCATION

GSA Genetics Society of America

AMERICAN METEOROLOGICAL SOCIETY

SEG

ASME

THE ROYAL SOCIETY

IOP Publishing

SOCIETY OF EXPLORATION GEOPHYSICISTS

WILEY

AMERICAN SOCIETY OF PLANT BIOLOGISTS

Hindawi

CHORUS MEMBER

AMERICAN PSYCHOLOGICAL ASSOCIATION

PLUS OVER 118 SIGNATORIES

IEEE

ELSEVIER

Atypon

CAMBRIDGE UNIVERSITY PRESS

semantico

siam

AIAA Shaping the Future of Aerospace

AVS

SPRINGER NATURE

Aries systems Publish Faster. Publish Smarter.

STM

AAP PROFESSIONAL AND SCHOLARLY PUBLISHING

The Association of Learned & Professional Society Publishers

SILVERCHAIR INFORMATION/SYSTEMS

HighWire

cenveo publisher services

US Agencies & CHORUS

Department of Defense
Announced Partnership on 3 February 2016
Signed Agreement on 18 December 2015

Smithsonian
Announced Partnership on 18 August 2015
Signed Agreement on 24 June 2015

National Science Foundation
Announced Partnership on 30 November 2015
Signed Agreement on 1 October 2015

NIST
Signed Pilot Agreement on 9 July 2015

US Geological Survey
Announced Partnership on 16 November 2015
Signed Agreement on 23 October 2015

US Department of Energy
Announced Partnership on 4 August 2014
Signed Agreement on 15 April 2015

Active discussions with 5-10 other US federal agencies

Monitored Articles by US Agency

DOIs / Articles	Description
238,026	reported in CHORUS Dashboard
50,532	verified publicly accessible today

Legend:
- NSF
- USDHHS
- USDOD
- USDOE
- NASA
- USDA
- USDOI
- NIST
- BMGF
- USAID
- Smithsonian
- DHS
- DOT
- ED
- EPA
- NOAA
- VA

X-axis dates: 6/15/14, 7/15/14, 8/15/14, 9/15/14, 10/15/14, 11/15/14, 12/15/14, 1/15/15, 2/15/15, 3/15/15, 4/15/15, 5/15/15, 6/15/15, 7/15/15, 8/15/15, 9/15/15, 10/15/15, 11/15/15, 12/15/15, 1/15/16, 2/15/16, 3/15/16

Y-axis: 0 to 90000

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What Funding Agencies are Saying…

When you're a federal agency and there's a data call… it's a huge resource drain. **With CHORUS, because they're collecting this data continuously and in a consistent way, all that's automated for us, and that's a big plus.**

**Keith Kirk
USGS**

Given the extremely limited budget science agencies have because of the flat funding…for over a decade, **we needed to have a cost-effective solution…for all these agencies it's a grand experiment.**

**Jeffrey
Salmon
DOE**

…DOE has been providing public access to research since 1947. This has meant keeping up with and implementing radically changing technology across decades…**Formalizing our collaboration can only propel our acquisition process leading to more compre-hensive coverage of the landscape of articles.**

… **I'd like to combine the usage statistics from PubMed Central with CHORUS's usage statistics to get a good idea of what our total usage is,** so our library staff knows where to put their subscription money.

**Katherine
Sharpless
NIST**

**Jim Kurose
NSF**

…we [NSF] are very much looking forward to working with CHORUS to help further our public access goals.

Reported by Lisa Peet
Library Journal, 1/21/16

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How CHORUS Works:
Access

Embargo Period Expires
or Author/Funder Pays for Public Access

Accepted Author Manuscript
becomes publicly accessible

Version of Record
becomes publicly accessible

Identification

Funding Information

Please enter the funder name, grant number and the grant recipient. Authors listed in the dropdown menu were added during the Add/Edit/Remove Authors submission step. Click the '+' icon to add another funder. When you are finished, click the 'Next' button.

Funder Name	Grant Number	Grant Recipient	Action
Howard Hughes Medical Institute	HH 2055681	Dr. Mary François Smith ▼	🗑
National Science Foundation	KK9898-5476	Robert Jones ▼	🗑
National Institutes of Health (US)	897-42-98	Sarah Wilkes ▼	🗑

Previous Next

Metadata from **Crossref**

Discovery

Compliance

National Science Foundation

Today's Indicators

Key Performance Indicators - History

Key Performance Indicators - Breakdown

Preservation

Government maintained or other 3rd-party dark archive

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US Agency Interactions

Ingest bibliographic and compliance metadata via Open API

Use dashboards for compliance tracking

Use regular email alerts for compliance tracking

Securely harvest full text for indexing from publishers

Present metadata on agency portal

Link to full text on publisher sites via DOI
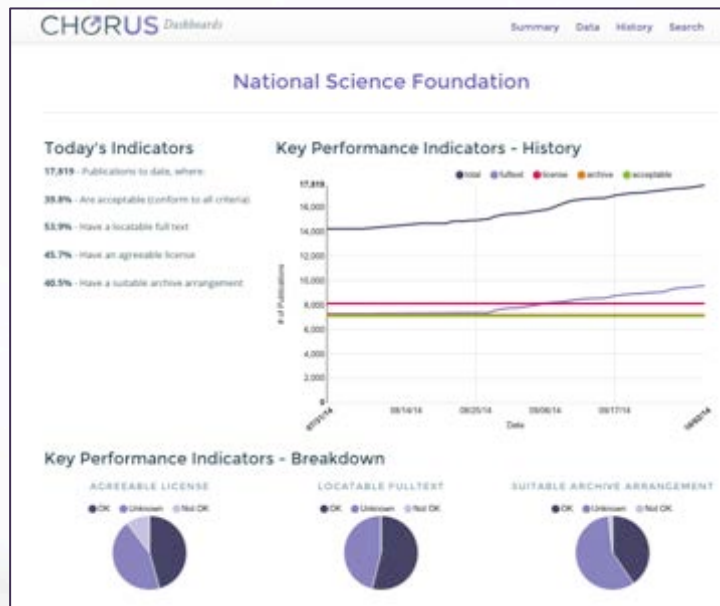
Engage with publisher members on compliance issues
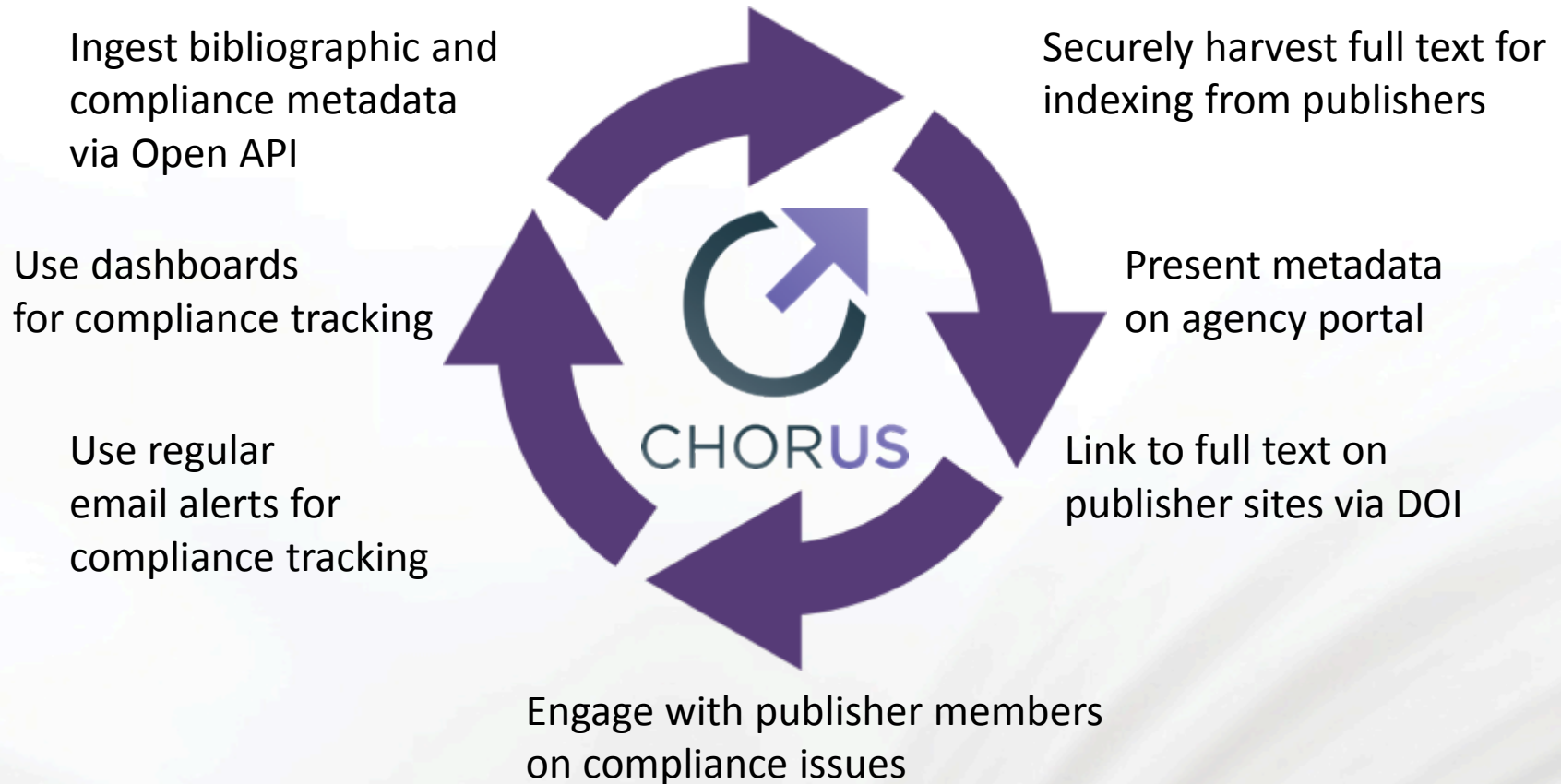
CHORUS + SHARE

- SHARE and CHORUS – work is complementary, not competitive
- CHORUS objective: interoperate with scholarly repositories and other systems providing access to scholarly articles
- Agreed to work jointly on persistent identifiers, metrics, and SHARE Notify system
- Exploring more areas of collaboration
- Active member of SHARE joint working group

CHƟRUS + Data

- Value cross-linking data and articles
- CHORUS infrastructure can link to data repositories
- Unclear if there is one unified mechanism for data and publications
- Simplify procedures for researcher compliance and funding agency monitoring
- Member RDA-WDS Publishing Data Services Working Group
- CHORUS to use standard identifier schemes

CHORUS + Academic Institutions:
Much to Learn, Much to Offer

Active engagement with librarians and the Office of Research through an Academic Advisory Group can:

- Provide key stakeholder perspectives
- Inform the development of new CHORUS capabilities that
  - » help track faculty research output
  - » relieve administrative burden
  - » provide metrics on university research impact
- Do all of the above sustainably and cost-effectively
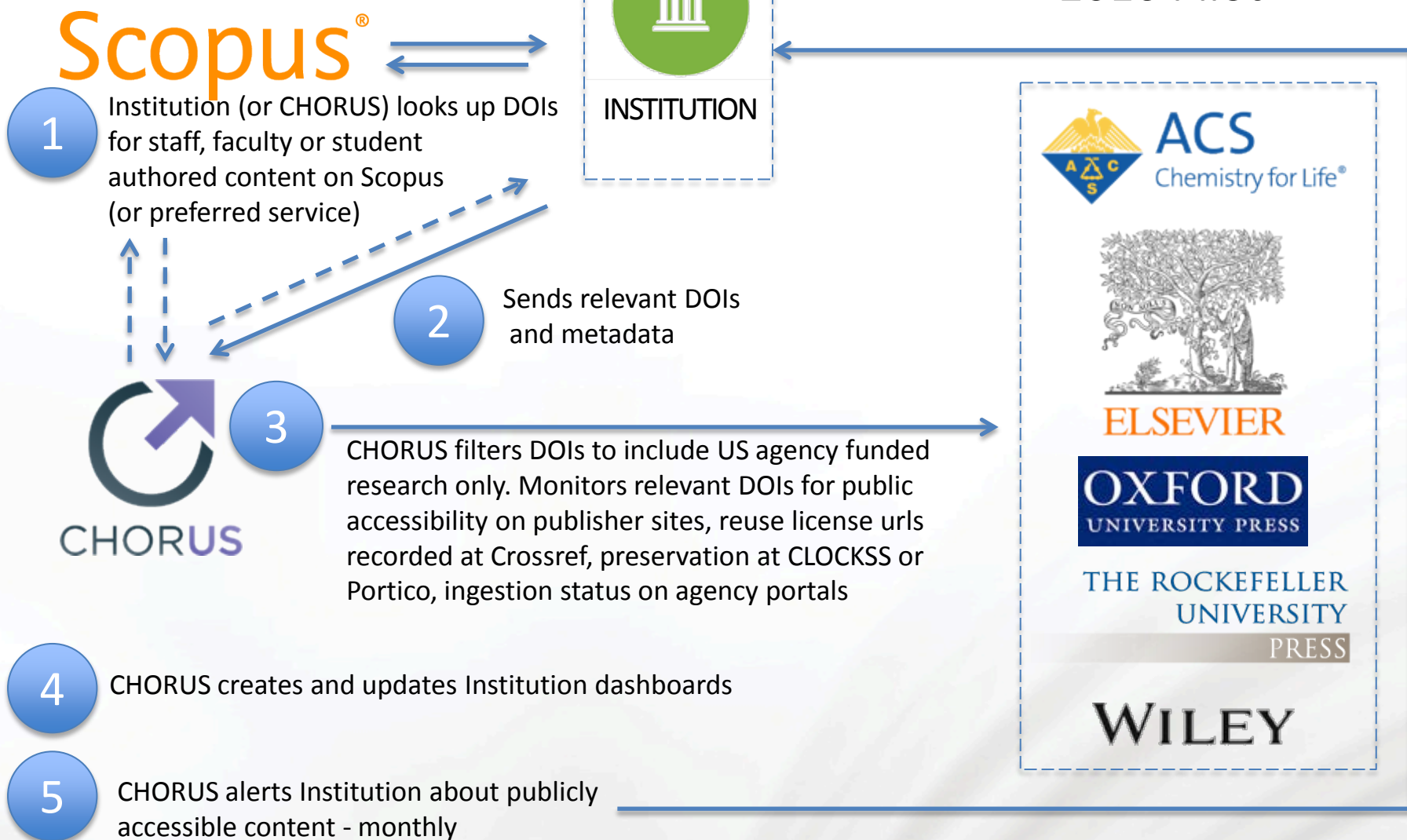
Librarian

Office of Research

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CHORUS Institution Pilot

Identification

Scopus®

CHORUS Institution 2016 Pilot

INSTITUTION

1 Institution (or CHORUS) looks up DOIs for staff, faculty or student authored content on Scopus (or preferred service)

2 Sends relevant DOIs and metadata

CHORUS

3 CHORUS filters DOIs to include US agency funded research only. Monitors relevant DOIs for public accessibility on publisher sites, reuse license urls recorded at Crossref, preservation at CLOCKSS or Portico, ingestion status on agency portals

4 CHORUS creates and updates Institution dashboards

5 CHORUS alerts Institution about publicly accessible content - monthly

ACS Chemistry for Life®

ELSEVIER

OXFORD UNIVERSITY PRESS

THE ROCKEFELLER UNIVERSITY PRESS

WILEY

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Compliance Support

CHORUS Institution 2016 Pilot

INSTITUTION

1 Institution uses metadata, dashboards and reports to populate research information management systems and encourage identified university grantees to comply with their US Funder public access obligations

2 Institution uses metadata, dashboards and reports to help compile reports back to US Funders about public access compliance

Researcher

Librarian   Office of Research

and more . . .

Summary

1. **Meets the OSTP Public Access guidelines**

2. **Established partnerships with funding agencies**
    - Help us grow as an authorized solution for meeting US agency policy requirements for grants and contracts

3. **Free to agencies**
    - Keep agency money for research

4. **Efficient for universities**
    - No added compliance burden for faculty

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Join our institution pilot and Academic Advisory Group

Contact: Howard Ratner
hratner@chorusaccess.org
www.chorusaccess.org | @chorusaccess

Access • Discovery • Compliance • Identification • Preservation