ICSU World Data System: Trusted Data Services for Global Science

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ICSU World Data System

ICSU Strategic Plan II, 2012-2017
(including a summary of progress made in
implementing the Strategic Plan I, 2006-2011)

'**ICSU's long-term vision** is of a world where excellence in science is effectively translated into policy making and socio-economic development. In such a world, **universal and equitable access to scientific data and information** is a reality …'

Scientific Committee 2012–2015

- **Bernard Minster** (*Chair, USA*)
- **Michael Diepenbroek** (*Germany*)
- **Françoise Genova** (*France*)
- **Claudia Emerson** (*Canada*)
- **Sandra Harrison** (*UK*)
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- **Ariel Troisi** (*Argentina*)
- **Orhan Altan** (Ex officio, *ICSU*)
- **Yasuhiro Murayama** *(Ex officio, NICT)*

WDS-SC Members and WDS-IPO Staff

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WDS Members

Scientific Data Services: Assist organizations in the **capture**, **storage**, **curation**, **long-term preservation**, **discovery**, **access**, **retrieval**, **aggregation**, **analysis**, and/or **visualization** of scientific data, as well as in the associated **legal frameworks**, to **support disciplinary and multidisciplinary scientific research**.

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WDS Members

- Full and open access data policy

- Broad disciplinary and geographic coverage

- Trustworthiness and adoption of data standards/conventions (certification)

WDS Membership

57 Regular — Organizations that are data stewards and/or data analysis services

10 Networks — umbrella bodies representing groups of data stewardship organizations and/or data analysis services (ESDIS, IODE, IVOA...)
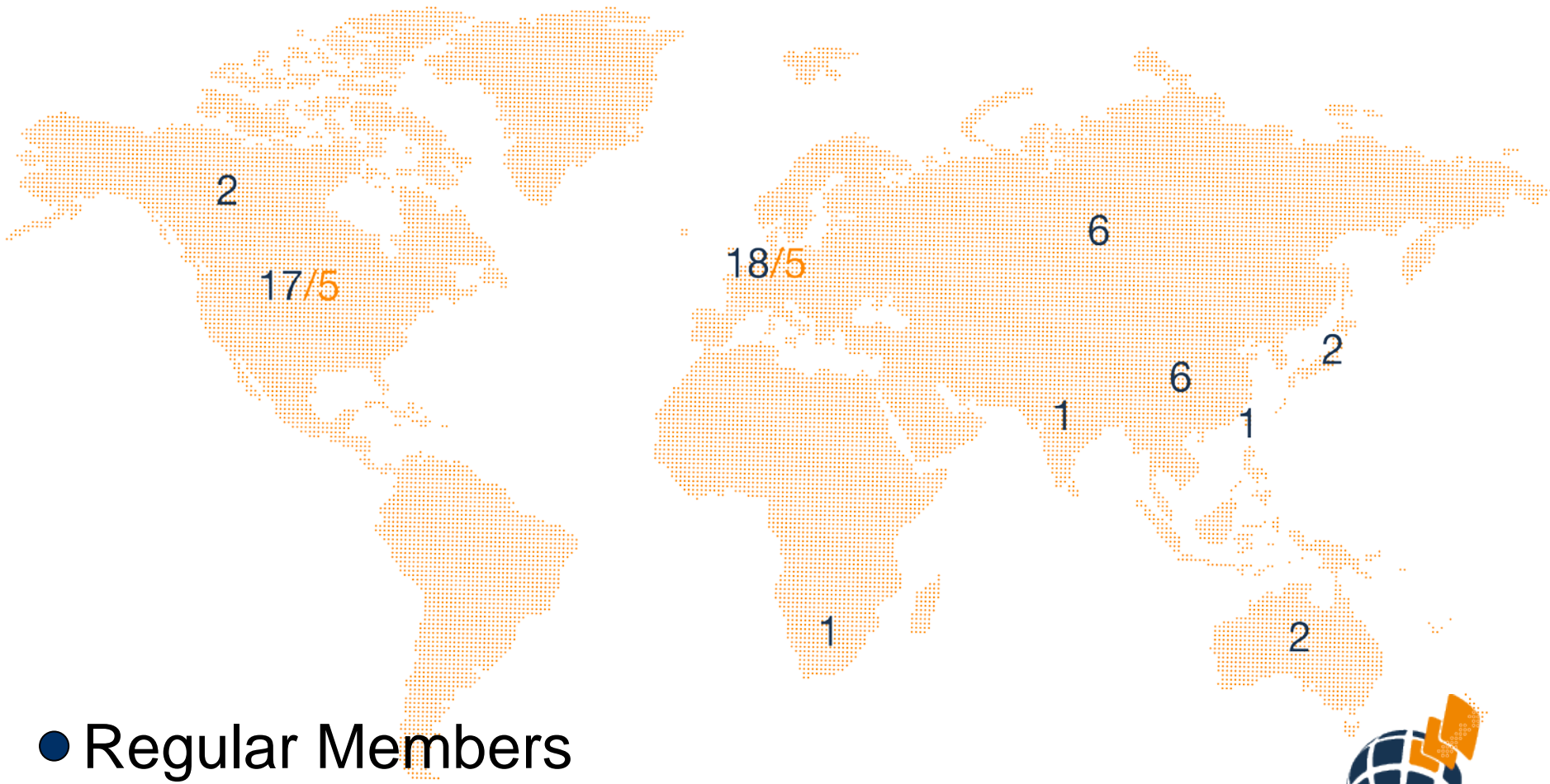
3 Partners — Contribute support to WDS Membership

17 Associates — Interested in the WDS endeavour **(ICSTI)**

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WDS Membership

● Regular Members
● Network Members

Strategic Plan 2014–2018

ICSU World Data System
Strategic Plan 2014–2018
Trusted Data Services for Global Science

https://www.icsu-wds.org/organization/strategic-plan

Strategic Targets

1) Make **trusted** data services an integral part of international collaborative scientific research

2) Nurture active disciplinary and multidisciplinary scientific data services **communities**

3) Improve the **funding** environment for Scientific Data Services

4) Improve trust in and quality of **open** Scientific Data Services

5) Position WDS as the **premium** global multidisciplinary network for quality-assessed scientific research data

Publishing Data

facilitating access to, and use or reuse of datasets through Data Publication

100+ participants at the RDA–WDS Publishing
Data Interest Group breakout session: Dublin, March 2014

Interest Group

- Research facilities

- Data repositories

- Universities

- Libraries

- Industry

The Long Tail

Managed & published data
Large scale monitoring, computed data, and disciplinary data centers

Somewhat managed & open access data

Unmanaged & non-published
Data from individual scientists, labs, or smaller projects

Fitness for use

Total volume of scientific data

Bridging domains

Fitness for use
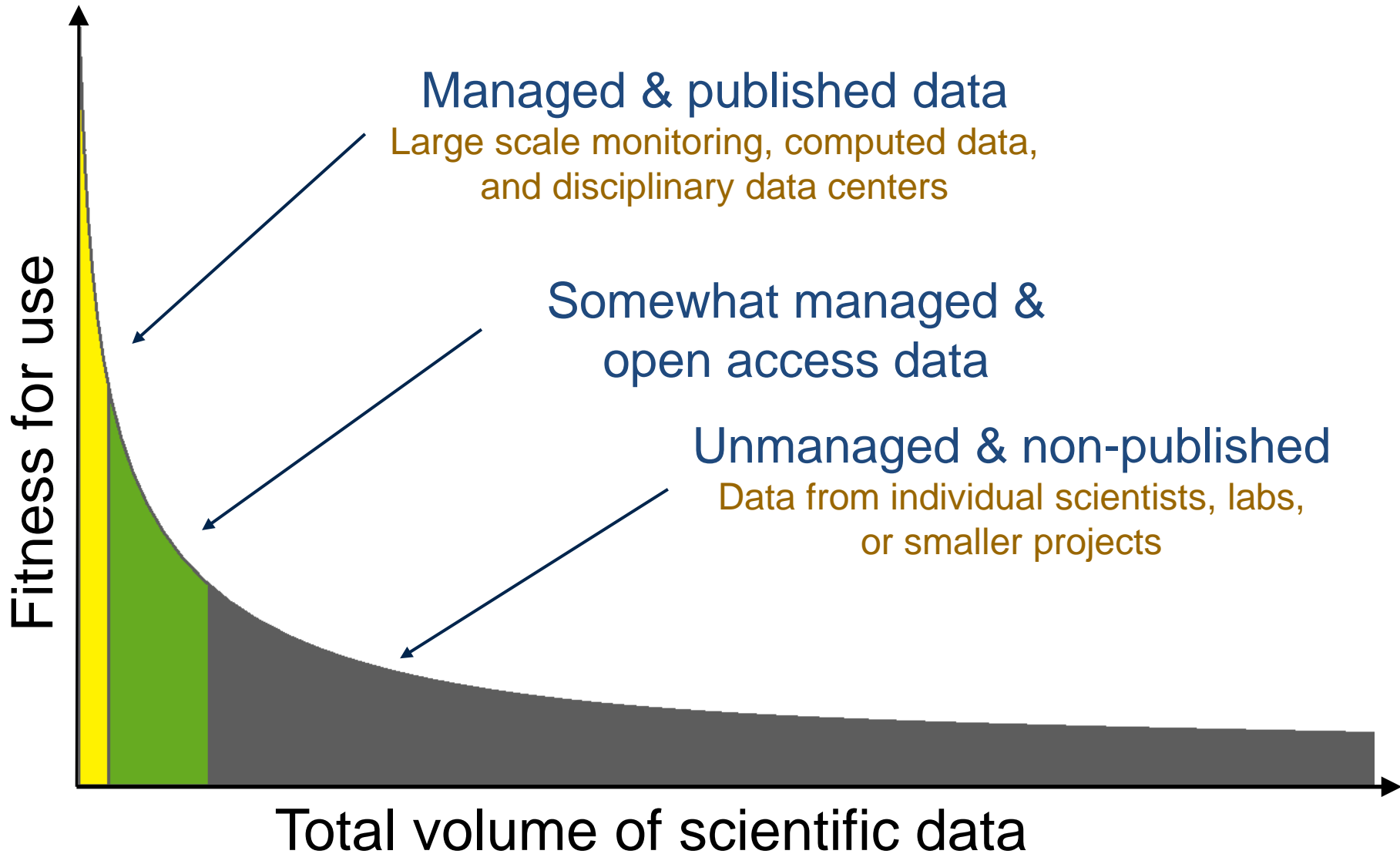
- **Publishing workflows**
- **Publishing Services**
- **Bibliometrics for data**
- **Cost recovery models**
- **Trusted repositories & services**

e-Infrastructures

Scientific research projects

Total volume of scientific data
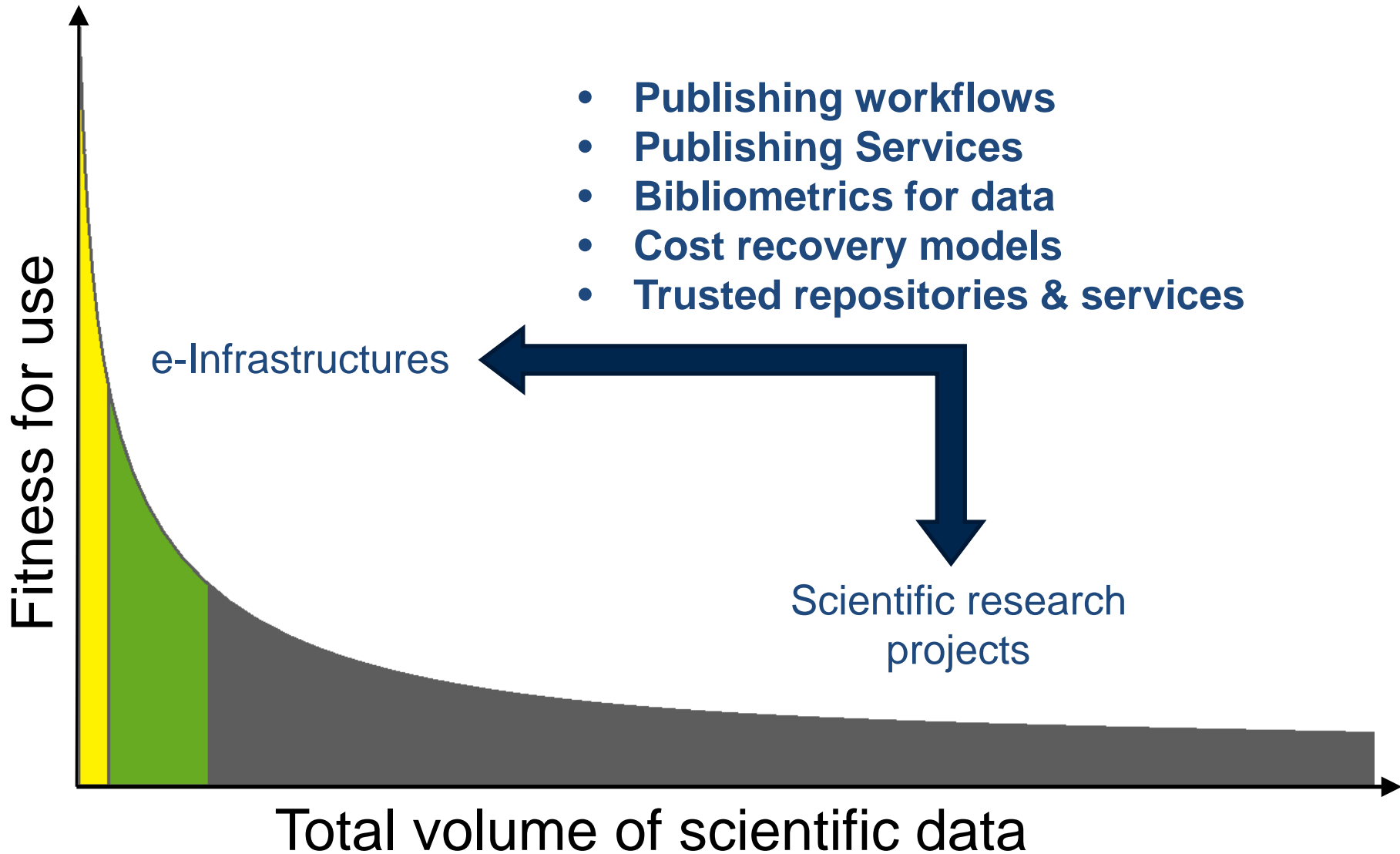
Publishing Data IG

- **Workflows WG: Provide generic workflow models for data publication**

- **Bibliometrics WG: Approaches & solutions that allow analysis of content & proper citations**

- **Cost recovery models WG/IG**

- **Services WG: One-for-all, Article–Data cross-referencing service**

Data Publication Services WG

How to move from a plethora of (mostly) bilateral arrangements to a one-for-all service model infrastructure for the research data publication landscape?
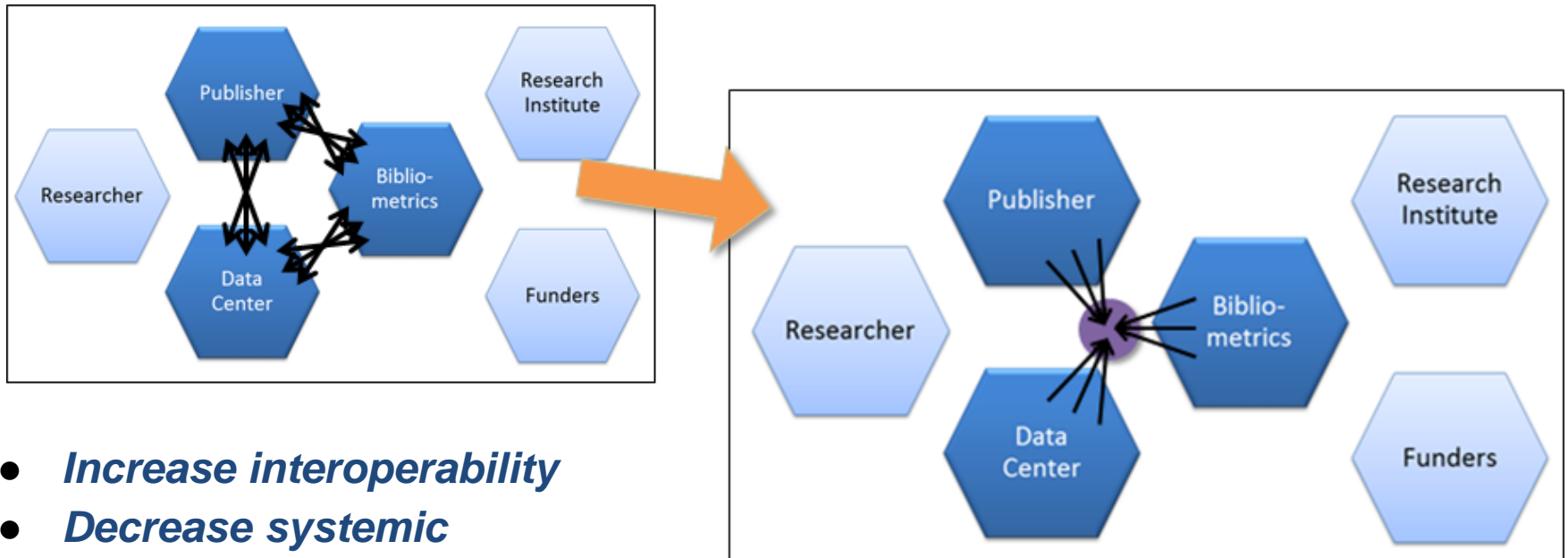
- *Increase interoperability*
- *Decrease systemic inefficiencies*
- *Power new tools and functionalities to the benefit of researchers*

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User Scenarios

Technical Prototype
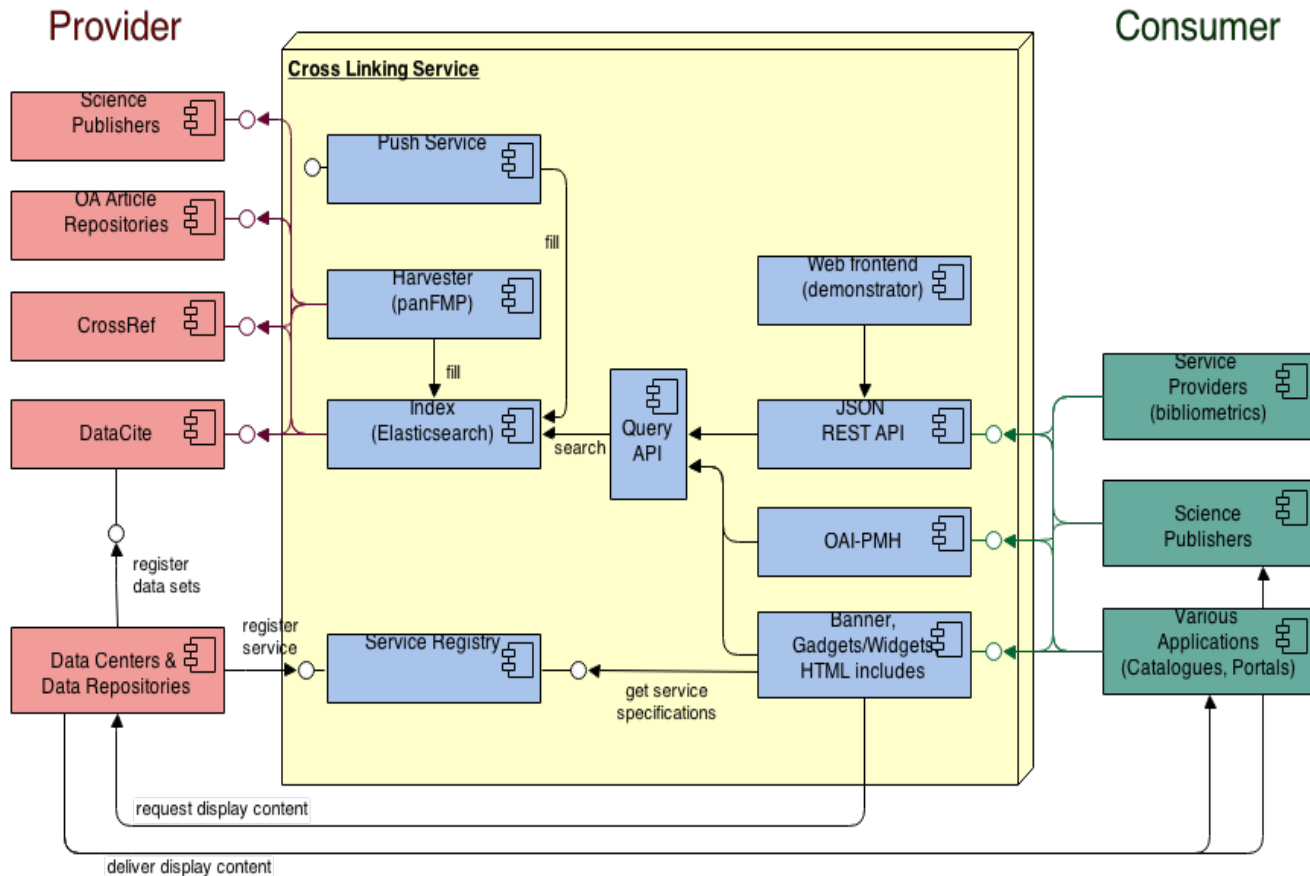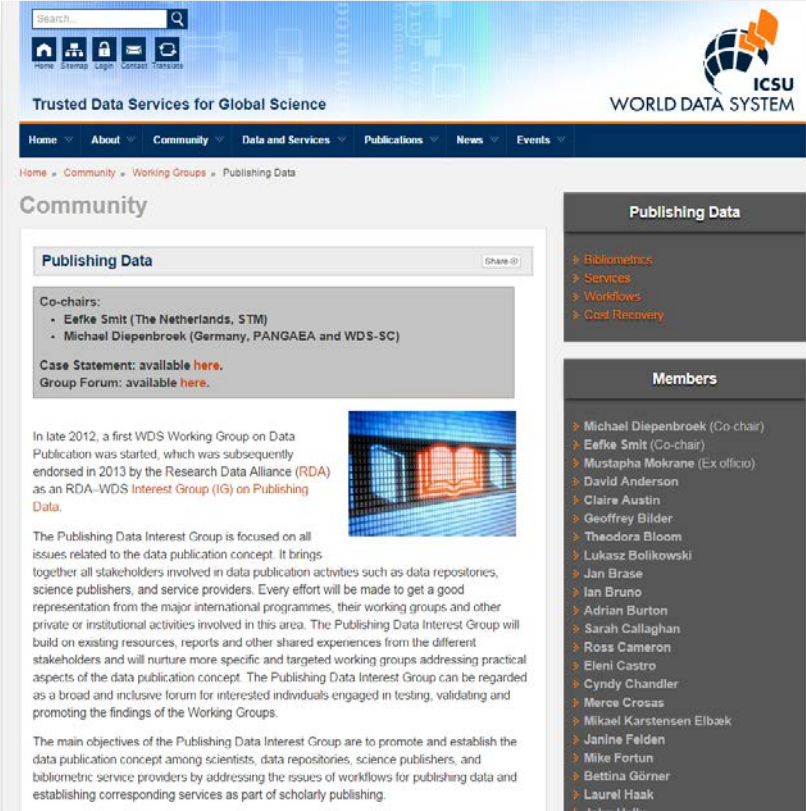
Test Corpus

ANDS	2K data collections with publications across disciplines and publishers; Data URLs with article DOI/URL
CCDC	450K entries from Cambridge Structural Database with CCDC id or DOI linked to CrossRef DOIs from various publishers
CrossRef	CrossRef / DataCite linking service under development. Currently 70k DataCite DOI's referencing CrossRef DOI's.
DataCite	500K linked items (data-data, data-pub, pub-data, pub-pub)
Elsevier	105K article-data links; ScienceDirect article DOIs with URLs to data landing pages
Europe PMC	API access to article-data relations, see http://europepmc.org/advancesearch
PANGAEA	Rich data set description including citation information, content descriptions, references, coverages, identifiers, and lineage
Thomson Reuters	20K data items with article links
OpenAire	Descriptions are collected from publication and dataset repositories, registries, journals and CRIS systems.

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More...

www.ICSU-WDS.org

SciDataCon 2014

**International Conference on
Data Sharing and Integration for Global Sustainability**

Join us at SciDataCon 2014

Date: 2–5 November 2014
Venue: Jawaharlal Nehru University
        Convention Centre, New Delhi, India

SciDataCon will bring together international experts and practitioners in data sciences, technologies and management; researchers from the natural, social, health, and computer sciences; research funders and sponsors; and policy makers and advisors to discuss practical challenges of data sharing and integration in the context of global sustainability research.

www.SciDataCon2014.org