

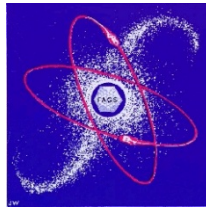
ICSU World Data System

Trusted Data Services for
Global Science



WORLD DATA SYSTEM

Origins of WDS Certification



- ICSU World Data Centres
- Federation of Astronomical and Geophysical data Analysis Services



ICSU

International Council for Science



WORLD DATA SYSTEM

WDS Scientific Committee 2012–2015

- Bernard Minster (*Chair, USA*)
- Michael Diepenbroek (*Germany*)
- Françoise Genova (*France*)
- Claudia Emerson (*Canada*)
- Sandra Harrison (*UK*)
- Wim Hugo (*South Africa*)
- Jane Hunter (*Australia*)
- Vasily Kopylov (*Russian Fed.*)
- Guoqing Li (*China*)
- Ruth Neilan (*USA*)
- Lesley Rickards (*UK*)
- Ryosuke Shibasaki (*Japan*)
- Ariel Troisi (*Argentina*)
- Howard Moore (*Ex officio, ICSU*)
- Yasuhiro Murayama (*Ex officio, NICT*)



*WDS-SC Members
and WDS-IPO Staff*

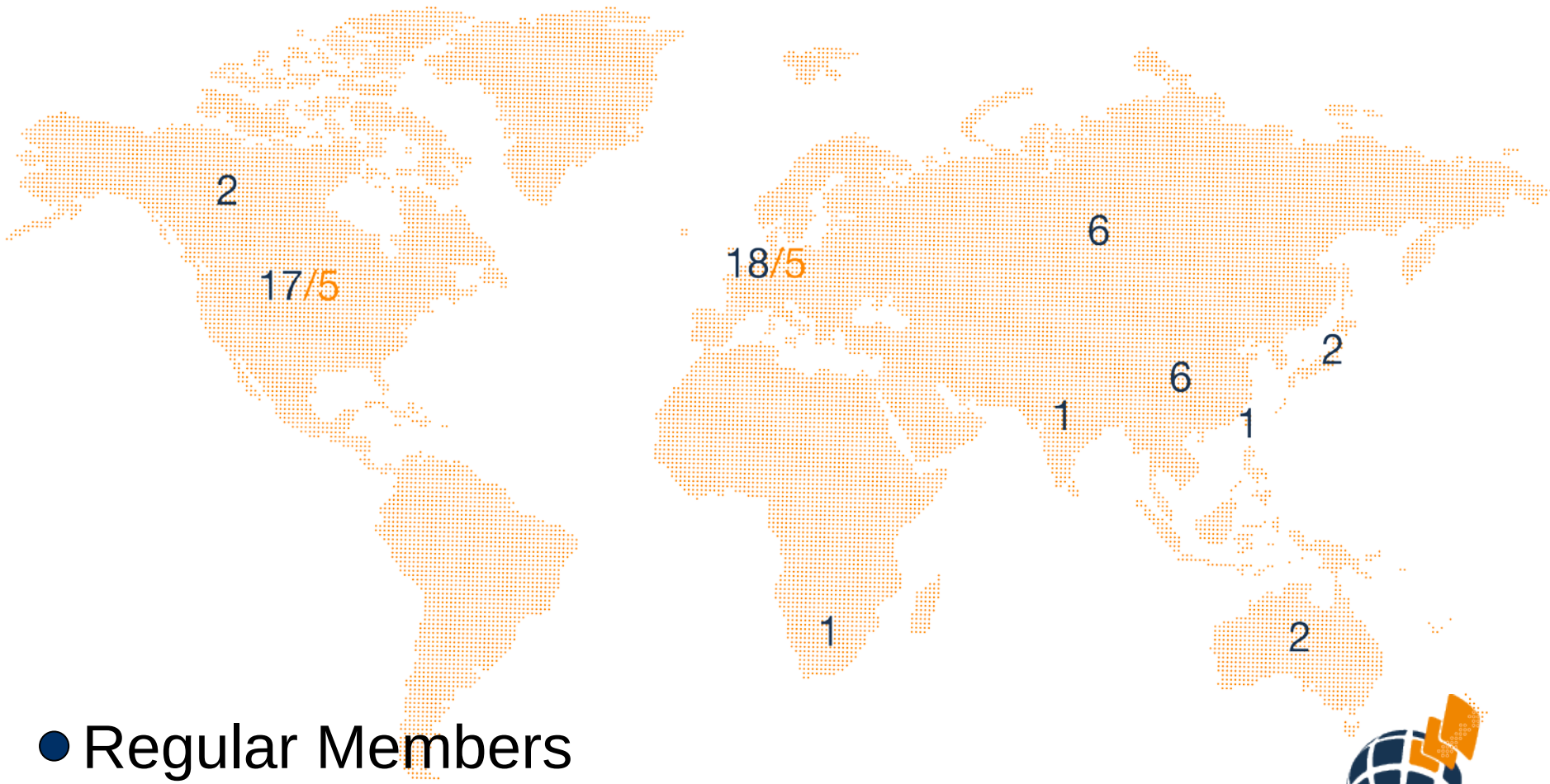


WORLD DATA SYSTEM

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 (EOSDIS, IODE, IVOA...)
3 Partners	Contribute support to WDS Membership
17 Associates	Interested in the WDS endeavour

WDS Membership



● Regular Members

● Network Members



WORLD DATA SYSTEM

How do repositories qualify for certification?

www.icsu-wds.org/community/membership/certification



WORLD DATA SYSTEM

Building Trust

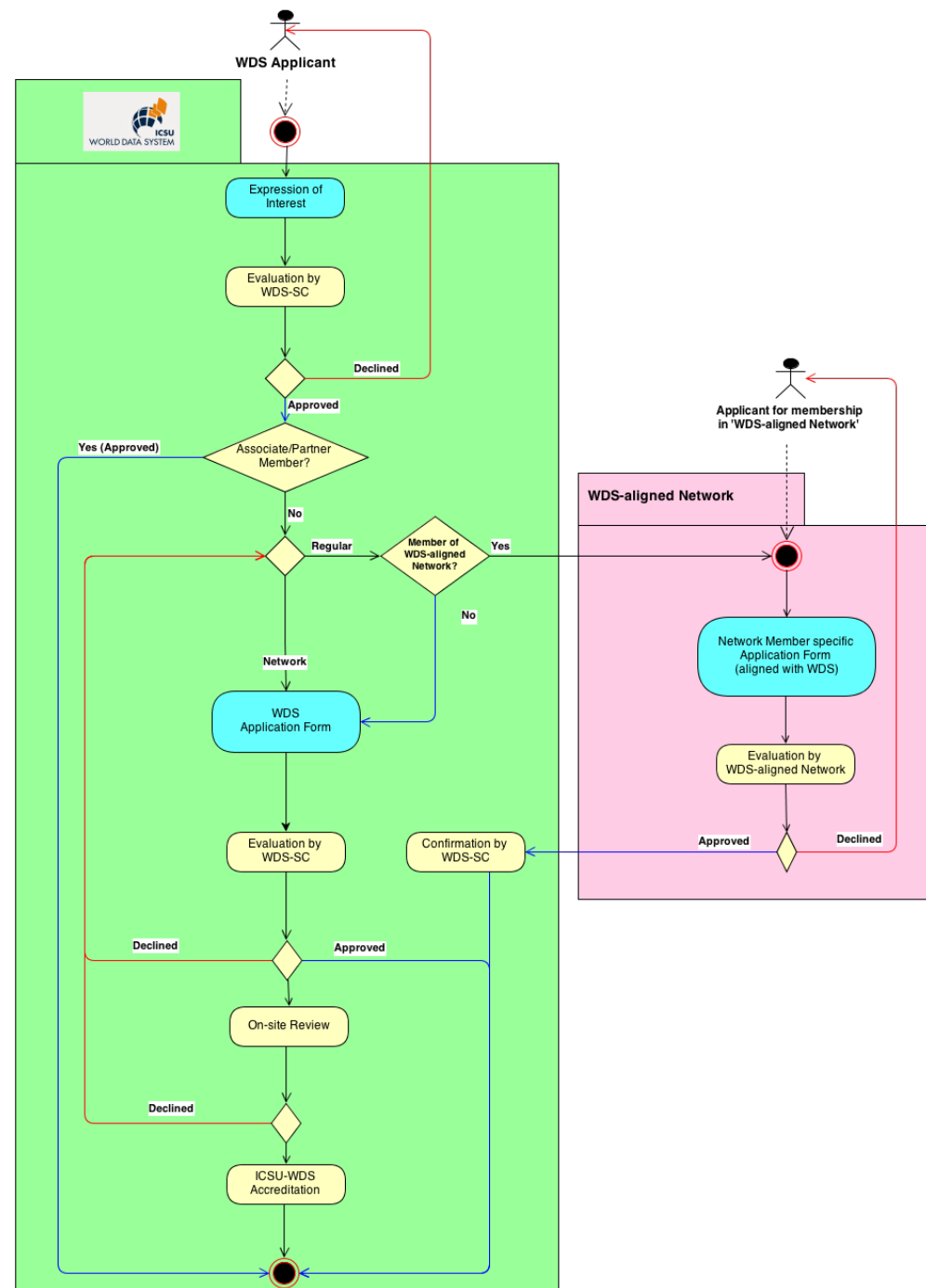
- Criteria incorporate existing standards and best practices (OAIS/ISO, OCLC, NESTOR, WMO-IS, CRL, DSA)
- Pragmatic approach : Functionality / Feasibility



ICSU
WORLD DATA SYSTEM

WDS Certification Workflow

1. Organization completes an Expression of Interest
2. Organization demonstrates its capabilities using the application form to describe its capabilities (and possibly by practical demonstrations)
3. If necessary, an on-site review may take place (to be decided by negotiations with the candidate)
4. Accreditation as a WDS component
5. Review of accreditation should take place every 3-5 years



WDS Certification criteria

1. General requirements and policies (Organization specific requirements)

- Signed Letter of Agreement, Intent to Cooperate or similar with ICSU
- Have relevant external experts to provide advice and guidance to WDS node
- Should attend WDS bi-annual meetings
- Promote active communication with research community and other users
- Provide full, open, timely, non-discriminatory and unrestricted access to metadata, data, products and services, no cost or at the Cost of Fulfilling User Request (COFUR).



WORLD DATA SYSTEM

WDS Certification criteria

2. Organizational framework

- The facility has defined: (a) the scope of the data and/or product (services) it offers; (b) its responsibility for the long-term preservation its data, products and services; (c) its target user communities and their needs; (d) the rights of its users to access and use data; and (e) processes for responding to changing scientific requirements and to evolving technologies
- The organizational form is adequate for the facility in terms of funding, sufficient numbers of qualified staff, organizational structure and long-term planning
- Expertise of the host organisation offers local oversight (scientists, data specialists) of international repute
- Maintenance of a continuity plan in the event of a host institution shift of interests or reaction to substantial changes
- Facility is committed to formal, periodic review and assessment to ensure responsiveness to scientific and technological developments and evolving requirements

WDS Certification criteria

3. Management of data, products and services

- The facility ensures integrity and authenticity of data sets during ingest, archival storage, data quality assessment and analysis, product generation and access and delivery
- The facility accepts data sets from its producers based on defined criteria for collection, selection and evaluation
- Archival storage of the data sets is undertaken to defined specifications
- The facility permits efficient usage of archived data sets, products and services based on defined criteria and preferably open standards (searchable, accessible, and usable objects and services)

WDS Certification criteria

4. Technical infrastructure

- Facility functions on well-supported operating systems and other core infrastructural software
- Facility is using hardware and software technologies appropriate to the services it provides to its designated community(ies)
- Security: Technical infrastructure for protection of the facility and its users, data, products and services

Why should repositories seek certification?

- Promotion and benchmarking
- Inspire confidence (integrity, authenticity, accessibility, re-usable, meaningful and data services can be safely used)



What can be done to help small repositories?

- Iterative process (feedback)
- Guidance for applicants, including examples of successful applications



WORLD DATA SYSTEM

How are standards updated and maintained?

- Criteria for certification revised regularly
- Alignment with similar initiatives (e.g. DSA)



WORLD DATA SYSTEM



**Thank you for your
attention!**

www.ICSU-WDS.org



WORLD DATA SYSTEM