

# Knowledge Network and Open Metadata Catalogue: WDS Working Group Charter

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## Background

- 1) The ICSU-WDS Scientific Committee identified at its 7th meeting (1-2 November 2012), the need to update the concept of the WDS Data Portal and build an online open WDS Metadata Catalogue that can be used to discover and access the quality-assessed scientific data and information holdings of WDS Regular and Network members. The catalogue would also provide a unique aggregated metadata entry point for interested initiatives such as GEOSS.
- 2) The WDS-SC also identified the need to test the feasibility of developing a scalable and agile WDS Knowledge Network, which draws information from the WDS Metadata Catalogue but which is heavily supplemented with additional data and information from a variety of other sources. By richly cataloguing information about accredited centres/service providers (and other known data providing entities) the WDS can become the lead source of information on global capability with respect to scientific data centre/service providers. Information about these entities would be openly discoverable electronically by presenting both human and machine interfaces into the network. This knowledge network would by default differentiate providers on the basis of their accreditation (i.e., accreditation provided by the WDS and any other accreditation schemes which currently exist or emerge to cover specific domains/networks). Such a knowledge network would provide a powerful tool for research projects and science funders to map the multidisciplinary data and information supplier landscape and in so doing help to identify for example datasets or existing gaps in information provision or partners who are available for collaborations. Further, the existence of this network would help reduce global duplication of data management and data sharing efforts and hence result in the improved cost-effectiveness of science funding programmes.

## Terms of Reference

- 1) Establish the requirements and specifications for an open WDS Metadata Catalogue and once agreed, develop the strategy for its implementation.
- 2) Establish the requirements and specifications for a WDS Knowledge Network and once agreed, develop the strategy for its implementation.
- 3) Identify the specifications for an open WDS Catalogue of Data Centres/Data Service Providers.

- 4) Look for obvious content synergies with the re-development of the IPO-hosted member accreditation system (in terms of re-using information supplied by applicants and requesting information that can populate the network).
- 5) Look for obvious content and task synergies with developing the WDS metadata catalogue (in terms of re-using information supplied, controlled vocabularies used, sharing of catalogue interfaces, data stores and code).
- 6) Identify existing sources of Data Centre/Data Service Provider information that can readily be harvested, categorised, organised and used to seed the network.
- 7) Conduct a bounded pilot-project to experiment with different linked data approaches for knowledge representation and discovery in the network.
- 8) Advise on appropriate standards and technology choices.

## Deliverables and Milestones

- 1) **Concept White Paper:** Describes the basis of WDS approach to develop a catalogue integrated with a knowledge network resource. Describes the rationale, advantages, research questions and challenges, and conceptual architecture. This assists WDS membership with understanding the future directions of the WDS from a technology perspective.
- 2) **Standards and Technologies Guidelines:** A detailed review and selection of standards and technologies that will support the conceptual architecture. This output not only guides WDS in the development of its own catalogue and knowledge network, but also serves as a blueprint and a technical roadmap for WDS membership in respect of interoperability.
- 3) **Platform for Catalogue Deployment:** A suitable platform and host institution needs to be identified for the WDS Catalogue implementation. A service level agreement and funding arrangements, if any, needs to be formalised.
- 4) **Platform for Knowledge Network Deployment:** A suitable platform for the knowledge network needs to be identified – bearing in mind that it need not physically be in the same location as the WDS Catalogue, and may even be a federated collection of node repositories. Again, a service level agreement and funding arrangements must be formalised.
- 5) **Pilot Implementation:** Knowledge Network pilot implementation will demonstrate the usefulness of the concept and technology by leveraging (initially) WDS Catalogue information such as is available, and WDS membership information. The scope of the pilot implementation needs to be confirmed by the Working Group, and is dependent on progress with the WDS Catalogue, availability of indirect funding, and contributions in kind from Working Group Members. External funding may be obtained and should be pursued.
- 6) **WDS Catalogue Implementation:** The WDS catalogue needs to be made operational as soon as resources permit, and is an ongoing process. A minimum critical mass is required before launch, and this

decision ultimately lies with the WDS-SC.

## Schedule

- 1) Agree a Terms of Reference and Project Charter for the Workgroup: December 2012
- 2) Canvass external members and obtain commitment to participate: January 2013
- 3) On-going promotion and discussion search for funding opportunities and supporting projects: From January 2013.
- 4) Inaugural Working Group Meeting: February 2013. Subsequent meetings for a period of 1 year on a monthly basis, by agreement between members.
- 5) Start Concept White Paper: End March 2013.
- 6) Invite WDS Members to participate: April 2013.
- 7) Confirmation of technology choices and applicable standards: End April 2013.
- 8) On-going WDS Catalogue Implementation: From Early May 2013.
- 9) Finalise the Concept White Paper and Technology Choices: Identify a suitable international event for a 1-day work session to be conducted around April/May 2013.
- 10) Knowledge Network Pilot Project Implementation: End September 2013.

## Membership

The Chair or co-Chairs and Members of the Working Group are appointed by the ICSU-WDS Scientific committee and the membership will be reviewed every two years during one of the WDS-SC meetings.

## Co-Chairs

- **Wim Hugo** (WDS-SC, SAEON, South Africa)
- **Kim Finney** (WDS-SC, Australian Antarctic Data Centre, Australia)

## Members

### WDS Scientific Committee

- **Michael Diepenbroek** (PANGAEA, University of Bremen, Germany)
- **Yasuhiro Murayama** (National Institute for Communications and Technology, Japan)
- **Jane Hunter** (University of Queensland, Australia)

### External Experts

- **Rob Atkinson** (CSIRO, Australia)
- **Peter Fox** (Rensselaer Polytechnic Institute, USA)

- **Mark Parsons** (Research Data Alliance, USA)

#### WDS Members

- Invitations for participation to be sent in April 2013.

#### Ex officio

- **Mustapha Mokrane** (WDS-IPO)

## Finances

Participation of members of the WDS-WG activity is voluntary. Administrative support is provided by the WDS-IPO. This includes organizing online meetings (GoToMeeting) and providing an online collaborative space.

The WDS-IPO cannot provide financial support for travels or other costs. Face-to-face meetings will be organized as the opportunity arises at international conferences and participants will therefore support their travel and expenses through their own organizations. Additional grants might be secured by the WDS-IPO or its partners in order to support the activities of the Working Group.

## Procedures

The Co-Chairs will be responsible for the WG meeting's agenda and calling the meetings. They will report the WDS-SC Executive Committee regularly and at least twice a year on the occasion of the biannual WDS-SC face-to-face meetings.

## Term and Review

The Working Group activity and continued operation will be reviewed in September 2013.

## Timeline

See [Google spreadsheet](#).