Research Data Alliance from an international and European angle

IVOA Interoperability meeting 12 – 17 May 2013

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Why discussing the Research Data Alliance at an International Virtual Observatory Alliance meeting?

- The Research Data Alliance (RDA) is a new community organization forming to facilitate **specific, short-term efforts that accelerate the sharing and exchange of research data**

- **Working groups will serve as accelerants** to data sharing practice and infrastructure. Work products / deliverables to include
  - Adopted standards
  - Deployed infrastructure
  - Adopted policy
  - Implemented best practice, etc.

- RDA aims are thus relevant to us
- iCORDI co-sponsors this meeting and is the European project in support to RDA – will change to RDA Europe
- This talk
  - A short history to the RDA and iCORDI
  - iCORDI as a EC funded project
  - Current status of the Research Data Alliance

THE HISTORY TO RDA AND ICORDI
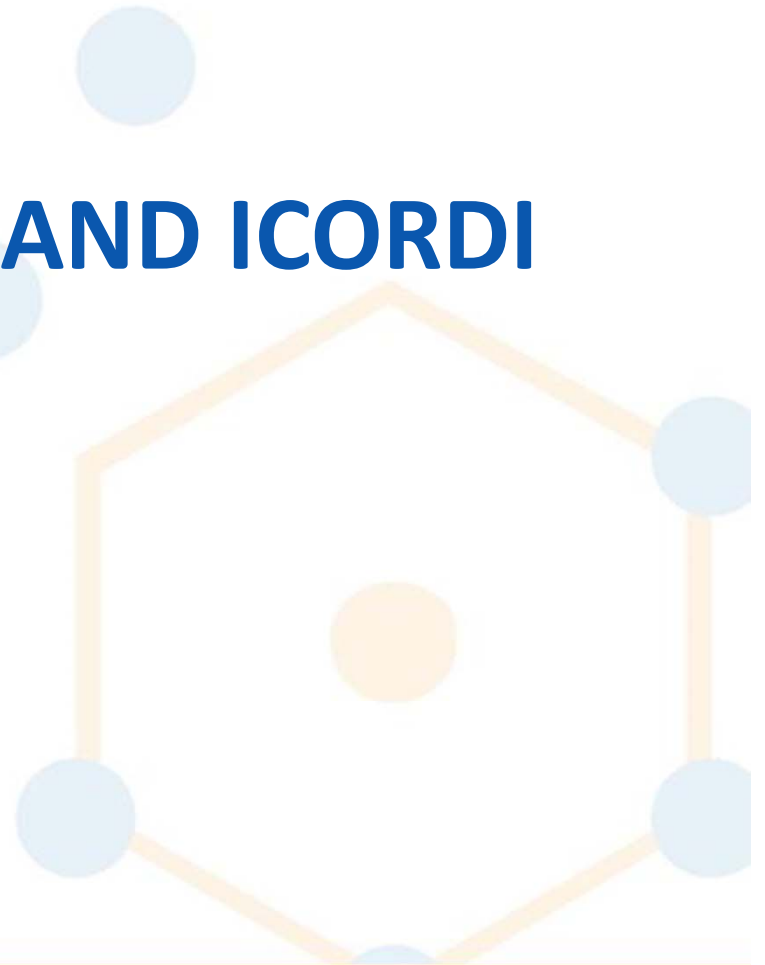
From DAITF/DWF to RDA

- Efforts have started as bottom-up activities in US and Europe and supported by NSF, NIST, Presidential Office and European Commission
  - Europe: Data Access and Interoperability Task Force (DAITF) 2011-2012
    - iCORDI project proposal refining the concept of the DAITF (EU) 2011
  - USA: Concept Paper – Data Web Forum (US) presented in 2012
- RDA emerged and built up very rapidly since August 2012 (high level push by NSF + EC + AU)
  - RDA Steering Group established in August 2012, lots of work done since then
  - "Research Data Alliance Planning Meeting: Global Data" 1 – 3 October 2012 in Washington DC
  - The first RDA Council members announced in Barcelona 2012 during the EUDAT conference: Fran Berman (US), John Wood (EU), Ross Wilkinson (AU)
- RDA launched in Gothenburg on the 18th March 2013

Some iCORDI history

- We are now entering the third, possible fourth phase of the iCORDI development
    1. The original iCORDI proposal submitted to the Commission Call INFRA-2012-3.2
    2. The iCORDI project that grew out of the combination of the iCORDI and DataGRAIL proposals
    3. The iCORDI project that grew out of the changing landscape (DAITF & DWF ➜ RDA)
    4. Suggestion to change iCORDI into RDA Europe and the decision HLSF ➜ RDA Europe Strategic Forum

ICORDI AS A PROJECT
(WILL CHANGE TO RDA EUROPE)

iCORDI key facts

Project Name	iCORDI – Global Data Interoperability
Start date	1st September 2012
Duration	24 months
Budget	3,3 M€ (including 2,3 M€ from the EC) and 244 PMs (CSA)
EC call	Call 10 (INFRA-2012-3.2): International cooperation with the USA on common e-Infrastructure for scientific data (11.2011)
Participants	14 partners from 8 countries (national data centres, technology providers and research communities)
Objectives	"iCORDI's prime objective is to establish a **coordination platform** between Europe and the USA to discuss and improve the interoperability of today's and tomorrow's scientific data infrastructures of both continents and to extend this to the global levels."

iCORDI goals

- Facilitate and support the creation of an IETF – like (Internet Engineering Task Force) organisation for the global data interoperability and data exchange – **Research Data Alliance** (RDA)

- **Support** the work of **European research communities** in their effort to **collaborate** with their US counterparts through **a coordinated platform** and to extend this to **the global levels**

A coordinated platform

- The platform that iCORDI will set up will be supported by three key programmes:
  - An *analysis programme* devoted to analyzing data organizations and solutions as they emerge from the various scientific communities.
  - A *prototype programme* to coordinate a series of cross-infrastructure experiments on EU-US interoperability with a selected group of important projects and communities.
  - A *workshop programme* covering the investigation of data infrastructure requirement convergence and reaching out to new research communities.

Prototypes and Workshops

- Prototypes
  - Astronomy
    - Prototypes: Linking EUDAT and IVOA, Evolution of the IVOA
  - Earth Sciences
  - Data & Publications linking
  - Chemical Safety, incl. Toxicogenomics
- Workshops
 - This meeting is a iCORDI Workshop
    - "Interoperability hands-on"

RDA Europe Strategic Forum (HLSF)

- ICORDI/RDA Europe complements and supports the work of the RDA Europe Strategic Forum (HLSF) in Europe

- RDA Europe Strategic Forum will organize annual meetings resulting in recommendations and strategy notes both to the RDA and the European Commission.

- The *RDA Europe Strategic Forum defines policy and strategies* in the realm of data management, curation, sharing and access by continuing the work of initiatives such as the High Level Expert Group on Scientific Data and the G8+O5 group on data.

RDA Europe Strategic Forum as of March 2013

- John Wood (Chair)
- Paul Ayris (LIBER)
- Paul Boyle (Science Europe)
- Donatella Castelli (ERF)
- Sandra Collins (ALLEA)
- Peter Linton (European Internet Foundation)
- Norbert Lossau (LERU)
- Marja Makarow (Academy of Finland)
- Jens Vigen (Eiroforum)
- Martin Vingron (Max Plank Society)
- Norman Wiseman (Knowledge Exchange)

- The group will be expanded to reflect needed expertise before the next meeting, autumn 2013

THE RESEARCH DATA ALLIANCE
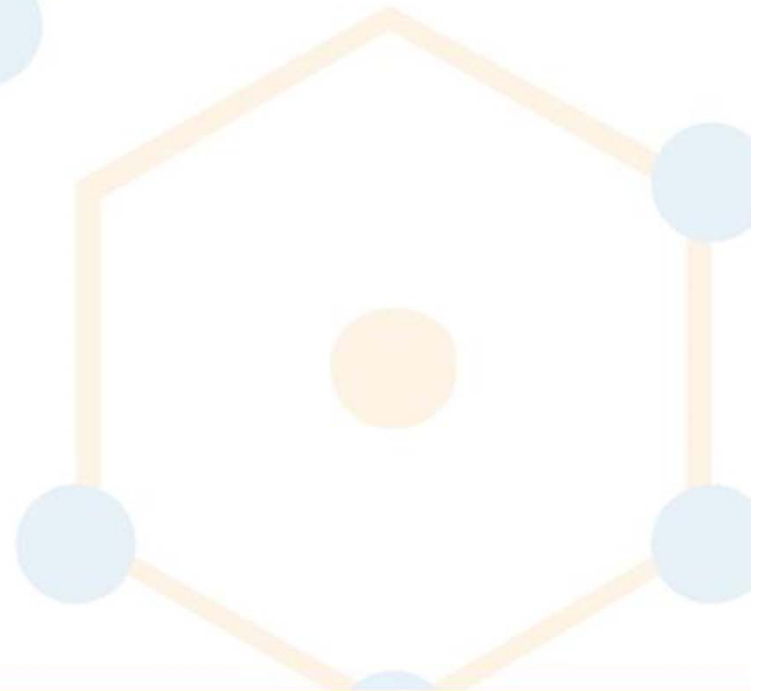
RDA Vision and Purpose

Vision

- *Researchers around the world **sharing** and **using** research data without barriers.*

Purpose

- *The purpose of the Research Data Alliance (RDA) is to accelerate international **data-driven innovation and discovery** by facilitating research data **sharing** and **exchange**, **use** and **re-use**, **standards harmonization**, and **discoverability**. This will be achieved through the development and adoption of **infrastructure**, **policy**, **practice**, **standards**, and other deliverables.*

RDA Working Groups

- ***Form the Foundation for RDA Community Impact!***

- ***An Interest Group can be established prior to a Working Group for community discussion of issues and areas that facilitate data-driven research. Many groups are forming at forum.rd-alliance.org***

- ***Working Groups envisioned as accelerants to data sharing practice and infrastructure in the short-term*** with the overarching goal of advancing global data-driven discovery and innovation

- RDA Working Group profile:

  - *Short-term: 12-18 months*

  - *Focused efforts with specific actions adopted by specific communities*

  - *International participation*

  - *Open, voluntary, consensus-driven*

 - *Complementary to effective efforts elsewhere*

Potential outcomes / deliverables:

- Adopted standards

- Deployed infrastructure

- Adopted policy

- Implemented best practice, etc.

Making Data Work: Assessing Case Statement Impact

Key questions for Candidate Working Groups:

1. **What are the practical outcomes of the work?**

2. **Who will benefit from the work and what research issues will be facilitated?**

3. **How do the deliverables make it easier for researchers to do their work? How do they change how research will be undertaken?**

4. **Who will implement / adopt the deliverables? Are adopters and beneficiaries included in the Working Group?**

5. **What is the schedule for implementation / adoption?**

6. **What are the advantages of this approach over existing approaches?**

Adopted harmonized standards

Adopted Policy and Practice

Implemented and adopted tools and infrastructure
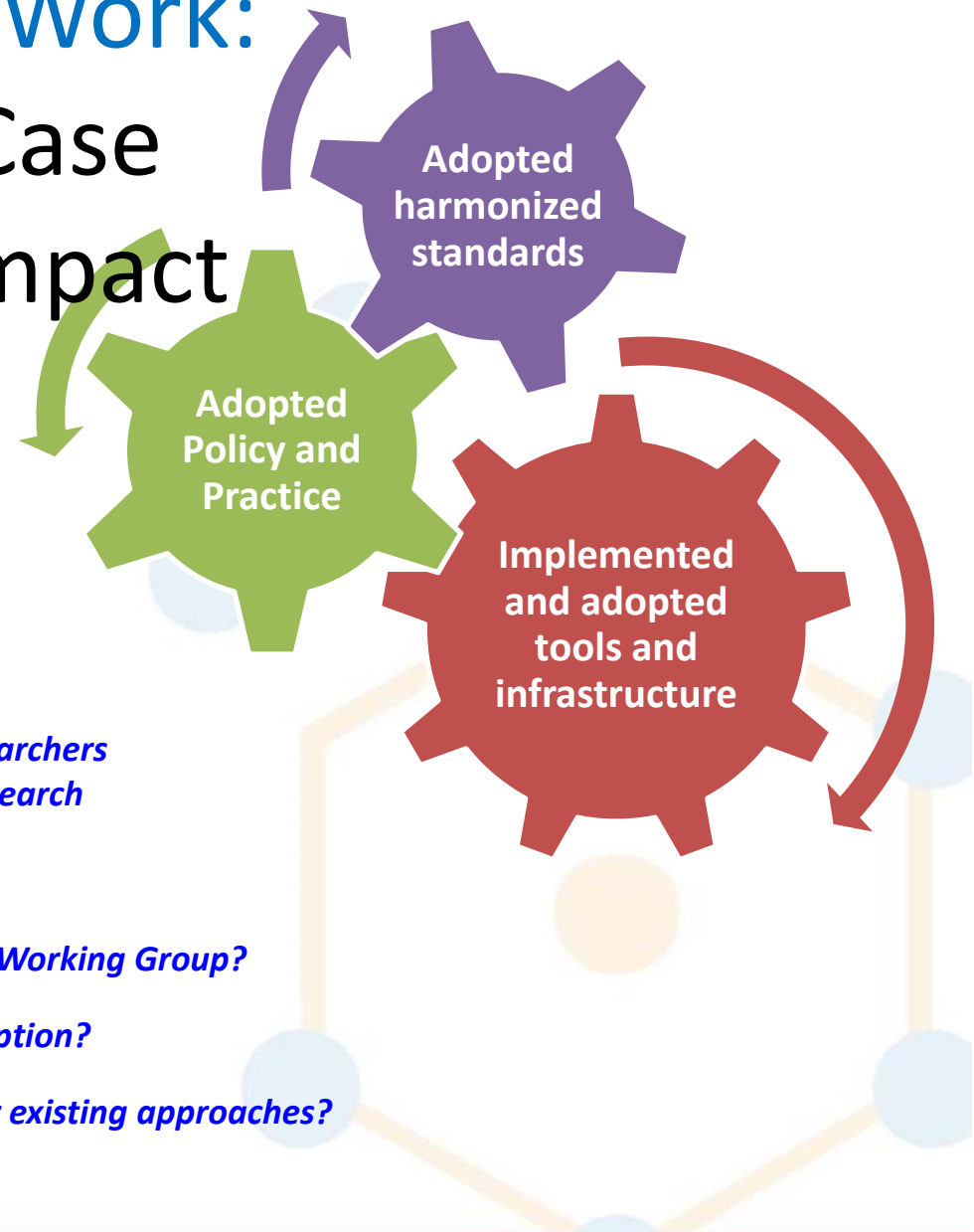
Individual Member Participation

- **Discussion Forums** where ideas are discussed on ways to enhance the aims of RDA.

- **Interest Groups** where ideas for action are turned into one or more case statements that propose a particular building block or data bridge. Interest Groups may refine their ideas into implementable actions by creating focused Case Statements to create one or more Working Groups.

- **Working Groups** carry out the technical work of the RDA. Their purpose is to achieve consensus on a technical matter. They are open to participation from anyone who wishes to become involved. Working Groups operate to a defined objective and on a finite timeline which are set when they are established. Upon completion of their original task, a working group will be disbanded or re-chartered with a new task. Working group members are volunteers who may be supported by their sponsors or self motivated. The outputs of a working group may include documents, web resources, code and applications, tools, data sets, etc.

- The **Plenary** is responsible for discussing all aspects of research data exchange, approving and establishing working groups, analysing needs, identifying gaps, and discussing, strengthening and endorsing Working Group proposals.

Individual Members - ways to contribute

Discussion Forums → Generate → IDEA

Interest Groups → Generate → Case Statements

Working Groups → Produce → Blocks & Bridges

Plenary → Results in → Strengthened Blocks & Bridges
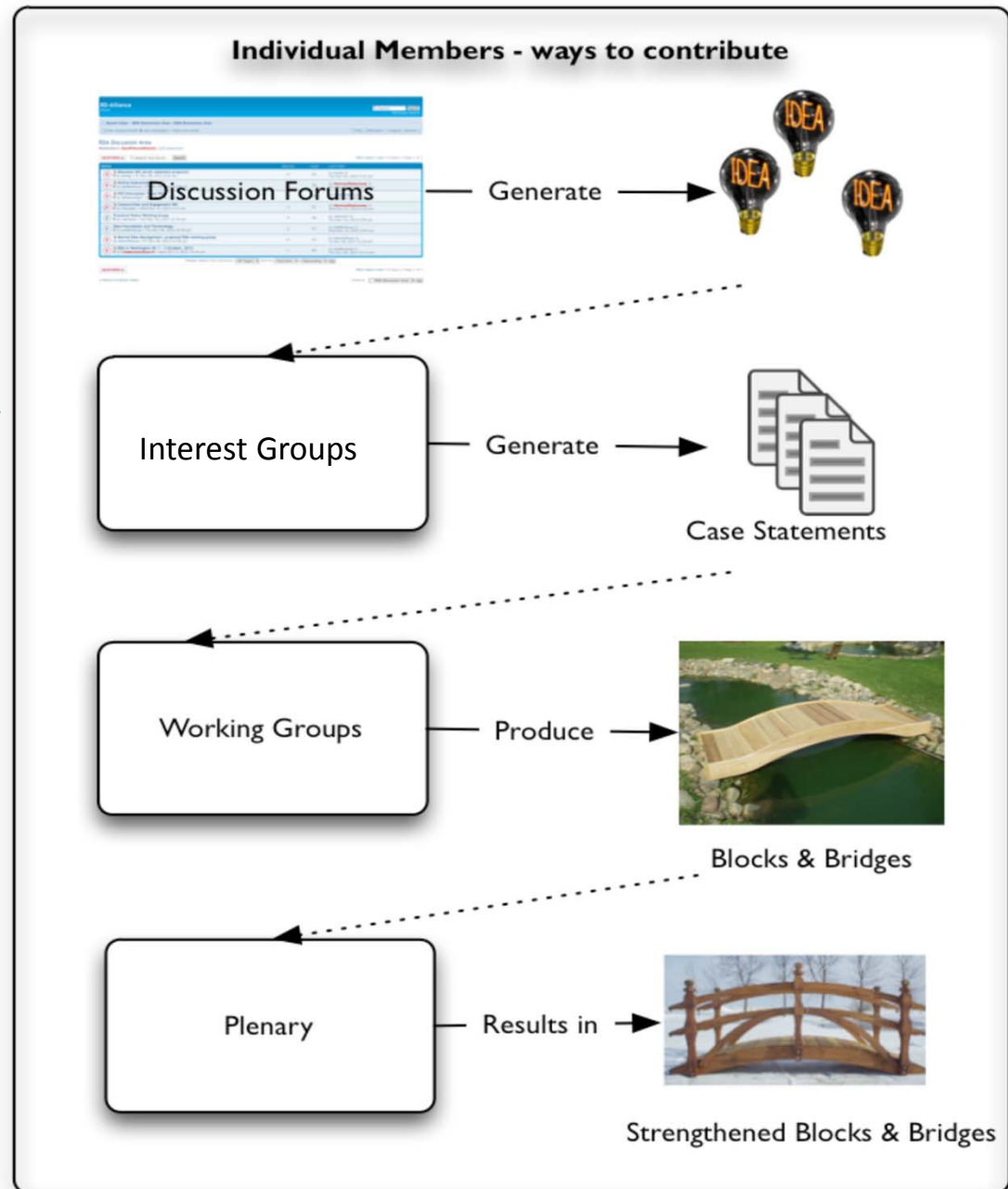
Initializing RDA: Organizational Framework

RDA Membership

RDA Strategy and Leadership: **Council**
Responsible for overarching mission, vision, sustainability of RDA

Technical Leadership:
Technical Advisory Group (TAG)

Responsible for Technical Roadmap

Administrative Leadership:
Secretariat

Responsible for Administration and Operations

Organizational Partners:
Organisational Advisory Group (OAG)

Responsible for Process and Strategy Reference Document

Community Impact: **Working Groups**
Responsible for impactful, outcome-oriented efforts

Government Group

Appropriate International R&D Agency Support

Initializing RDA: Organizers and Sponsors

⬡ **Steering Group**

- ⬡ Fran Berman, US
- ⬡ Juan Bicarregui, EU
- ⬡ Leif Laaksonen, EU
- ⬡ Beth Plale, US
- ⬡ Andrew Treloar, AU
- ⬡ Ross Wilkinson, AU
- ⬡ Peter Wittenburg, EU
- ⬡ John Wood, EU

⬡ **Secretariat:**

- ⬡ Herman Stehouwers, EU
- ⬡ Stefanie Kethers, AU
- ⬡ Mark Parsons, US

- **Sponsors**
  - **US:** Research Data Alliance / U.S. – funded by NSF, in-kind support from NIST
  - **AU:** Australian National Data Service – funded by the Australian Government
  - **EU:** iCORDI – funded by the European Commission

- **Council**
  - John Wood, EU
  - Fran Berman, US
  - Ross Wilkinson, AU

- ***Expansion of sponsoring countries is key to moving RDA forward as a global organization***

Current WGs and IGs

- It is the beginning and only a few have been fully set up but many topics are being discussed
- http://rd-alliance.org/working-groups/current-candidate-groups/
- General and more thematic topics

RDA and IVOA

- RDA has lots of momentum and the support of funding agencies (probably more will join)
- We have lots of relevant expertise
- Not sure we need an 'astronomy IG' since we have the IVOA
- Participation in RDA activities would give us a broader view on interoperability
- Individuals are welcome to join the activities
- RDA policies wrt other organisations being worked out
- Funding of the participation in RDA activities is an issue

2013: High-profile, high impact second RDA Plenary

- **September 16 - 18, 2013**
  - **at the National Academy of Sciences in Washington, DC, USA**

- **Agenda includes**
  - Leading scientists and high-level international speakers
  - Birds of a Feather Sessions for RDA Interest Groups
  - All-hands sessions for technical, organizational issues, governance
  - Data Organization and International Data Panels, etc.

  - *RDA Plenary 3 being scheduled in Europe for spring 2014.*

- **Information:**
  rd-alliance.org

- **Questions, comments:**
  enquiries@rd-alliance.org

- **Registration and Forum:**
  forum.rd-alliance.org

Thank you!

IT Center for Science

C S C

The Association of Commonwealth Universities

Athena Research Center
Research and Innovation Center in Information, Communication and Knowledge Technologies

Barcelona Supercomputing Center
BSC
Centro Nacional de Supercomputación

CINECA

cnrs Centre National de la Recherche Scientifique

Consiglio Nazionale delle Ricerche

epcc Edinburgh Parallel Computing Centre

Maastricht University

MAX-PLANCK-GESELLSCHAFT

Science & Technology Facilities Council

Trust-IT Services Ltd
Communicating ICT to markets

icordi-info@postit.csc.fi | www.icordi.eu

Working Groups and Interest Groups (07.05.2013) 1/3

- PID Information Types
  - Recognized as a Working Group, March 2013
- UPC Code for Data
  - Final case statement not yet submitted
- Data Type Registries
  - Recognized as a Working Group, March 2013
- Metadata Standards Directory
  - Recognized as an Interest Group, 23 April 2013
- Publishing Data
  - Final case statement not yet submitted
- Data Foundation and Terminology
  - Pending independent technical review
- Practical Policy
  - Pending independent technical review
- Legal Interoperability
  - Recognized as a joint CODATA/RDA Interest Group, March 2013, leading to future Working Group(s)

Working Groups and Interest Groups (07.05.2013) 2/3

- Defining Urban Data Exchange for Science
  - Final case statement not yet submitted
- The Engagement Group
- Marine Data Harmonization
  - Final case statement not yet submitted
- Repository Audit and Certification
  - Final case statement not yet submitted
- Preservation e-Infrastructure
  - Final case statement not yet submitted
- Data in Context
  - Final case statement not yet submitted

Working Groups and Interest Groups (07.05.2013) 3/3

- Community Capability Model
  - Final case statement submitted, 30 April 2013
- Big Data Analytics
  - Final case statement not yet submitted
- Agricultural Data Interoperability
  - Final case statement not yet submitted

List with all information available at:
http://rd-alliance.org/working-groups/current-candidate-groups/