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NATIONAL DATA SERVICE (NDS) AND
NATIONAL DATA SERVICE CONSORTIUM (NDSC)

CHARTER V2.0 (JULY 2015)

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1. Preamble

This charter is designed to provide guidance for the operations of the National Data Service (NDS) and the National Data Service Consortium (NDSC). The National Data Service is the service providing organization; the National Data Service Consortium is the broader community of stakeholders from which leadership will be drawn to guide NDS.

As an emerging network of networks, which includes individuals, organizations, and consortia, this charter is designed to signal a shared vision of success and define a process where communication, coordination, collaboration, and decision-making are specified, to match the evolving requirements for the work taking place. A key feature of this approach is that elements of the NDS and NDSC have flexibility in structuring their operations—provided they address key functional requirements as specified in this document. In this sense, NDS and NDSC are employing an experimental, continuous learning approach to the social structure, complementary to continuous learning with the technology.

This is a living document that can be adjusted by a majority of the NDS Steering Committee, in consultation with the NDSC general membership.

2. Overarching Vision

A successful National Data Service (NDS) operates as a consortium, advancing the frontiers of discovery and innovation by enabling open sharing of data and increased collaboration within and across fields and disciplines. Success will be achieved through coordinated and concentrated efforts, developing an open environment of *federated, interoperable, and integrated* national-scale services. Researchers, scholars, and policy makers, as well as teams and large collaborations will provide guidance to NDS; in turn, NDS will help these stakeholders to efficiently, conveniently, securely, and sustainably store, curate, share, publish, access, discover, verify, attribute, visualize, and operate on all forms of scholarly research and policy data.

3. Specification of Membership, Communications, Coordination, and Decision Making

The primary components of the NDS and the NDSC are:
* The NDS Consortium
* The NDSC Steering Committee
* The NDS Executive Committee, Executive Director, Project Manager, Program Manager, and Operations Team
* The Architecture and Infrastructure Development Teams
* The Domain Coordinating Committees
* Current Pilot Projects
* NDS Labs and NDS Share

The degree of specification will vary for all components of NDS so that only the minimum critical structure is specified—no more and no less. Also, the specification may vary among the development teams, among the coordinating committees, and among the pilot projects depending on their scope and maturity. As new types of activities are added, additional operating guidelines will be specified. The aim is to experiment and add to the structure in ways that are responsive to the evolving scope of activities.

3.1 Template for Interim Operations

In the sprit of agile development and innovation, the steering committee, operations team, development teams, coordinating committees, and working groups all have flexibility to specify their operations as appropriate for their work. In general, however, such specifications should include the following:
- Vision/mission
- Overall structure and composition
- Frequency and location of meetings (including virtual)
- Decision-making (consensus, voting, etc.)
- Mechanisms and commitments for inclusion, transparency, communications, and documentation
- Intended duration (e.g., ongoing or with target completion date)
- Deliverables

4. NDS Consortium (NDSC)

Membership in the consortium is defined as current and past participants in NDS workshops. Both individual and organizational memberships are possible. All current and past participants have the option to "opt out" at any time. Otherwise, continued membership is assumed. Additional members may "opt in" so long as they are in alignment with NDS Vision. The aim is to be broadly inclusive and diverse, while ensuring constructive engagement and progress.

The roles and responsibilities of members of the NDS Consortium include:
- Constructive engagement in advancing the NDS Vision
- Transparency and inclusiveness in decision making
- Appropriate balance between deliberation and action
- Agile approach to existing and new technologies
- Appropriate balance between general purpose services and discipline/community-specific services
- Appropriate balance between security and openness
- Integrating innovation in social systems with innovation in technical systems
- Overarching commitment to creating value and mitigating harm

The many types of stakeholders relevant to the NDS are spelled out at the end of this document.

4.1 NDSC Steering Committee

The NDSC steering committee guides NDS with respect to:
- Representing the interests of the NDS Consortium members
- Communicating a shared vision
- Coordinating/facilitating pilot projects

- Clarifying relations among consortia and across stakeholders
- Enabling development of grant proposals
- Supporting coordinating committees
- Convening meetings
- Communicating progress

The members of the Steering Committee include the NDS executive director, the NDS project manager, and seven members elected at-large.

Nominations for the steering committee are sought from among NDSC members. Once nominees confirm their willingness to serve, the slate of candidates is presented to NDSC members. All members of the NDSC Steering Committee are elected at large, with the designation of chair, vice-chair, secretary and four at-large members to be determined by the elected members of the NDSC Steering Committee at their first meeting after the election. The election is for staggered two-year terms (with some of the initial terms being three-years to be staggered). The designation of the chair, vice-chair, and secretary is on an annual basis, with recurring designations possible.

4.2 The NDS Executive Committee, Director, Program Manager, Project Manager, and Operations Team

The NDS Executive Committee consists of the NDS Executive Director, NDS Program Manager, the Chair of the NDSC Steering Committee, the Vice-Chair, of the NDSC Steering Committee, and the Secretary of the NDSC Steering Committee – all operating with support by the NDS Project Manager.

The NDS Director, Project Manager, Program Manager and Operations Team are responsible for the daily operations of the National Data Service, operating with direction and priorities from the NDSC Steering Committee. For individuals who represent contributed resources, the scope of their work is defined in consultation with the organization(s) covering their salary and benefits.

4.3 The Architecture and Infrastructure Development Teams

The NDS Architecture Development Team is responsible for the development and evolution of the layered architecture needed for service delivery. The NDSC Steering Committee provides guidance on strategic priorities set by this team.

The NDS Infrastructure Development Team is responsible for the development and operations of the technology infrastructure needed for service delivery. This team is responsible for utilizing existing tools and technologies where available and appropriate, as well as establishing pilot projects to address gaps where there are not adequate tools and technologies. The NDSC Steering Committee provides guidance on strategic priorities set by this team.

Decision-making and communication within each development team is to be structured based on what is functional for that team. Development teams are required to provide a brief statement of their operating guidelines—both as essential information for others and as input into the identification of leading practices for communication and decision-making.

4.4 The Domain Coordinating Committees

The domain coordinating committees are responsible for the specification of user requirements in their domain and the engagement of the broader domain community.

These coordinating committees work with the architecture and infrastructure development teams to specify tools and services that are general purpose and those that are discipline/community-specific. Decision-making and communication within each coordinating committee is to be structured based on what is functional for that committee. Coordinating committees are required to provide a brief statement of their operating guidelines—both as essential information for others and as input into the identification of leading practices for communication and decision-making.

4.5 Pilot Projects

The pilot projects provide focused development of new tools and services, integration of existing tools and services, and wire-frame or more advanced demonstrations of capability.

Decision-making and communication within each pilot project is to be structured based on what is functional for that pilot project. Pilot projects are required to provide a brief statement of their operating guidelines—both as essential information for others and as input into the identification of leading practices for communication and decision-making.

4.6 NDS Labs and NDS Share

NDS Labs has been established as a development and storage "sandbox" in which pilot services can be made available for testing with data. It is intended to also foster a community of developers of potential NDS services. At present, NDS Labs is enabled by the provision of storage by a number of high performance computing centers and the decision making around this storage is coordinated among these centers. As the community of developers grows, formal mechanisms for decision-making will be developed and added to this charter.

NDS Share has been established as the outreach vehicle for services developed in NDS Labs. The aim is to foster pilot use and generate user feedback to enable continuous improvement in services. As the community of users grows, formal mechanisms for decision-making will be developed and added to this charter.

5. Types of Stakeholders

Key stakeholders contemplated by this charter include, but are not limited to:
- Researchers/End users
  - Individual scientists, scientific teams, and large-scale science projects
  - Individuals and networks of humanists and artists
  - K-12 education collaborations
  - Citizen scientists and researchers
- Builders
  - Software developers
- Operators
  - Data centers, including Federally Funded Research and Data Centers (FFRDCs)
  - Advanced computing infrastructure providers
  - Libraries, museums, and archives
- Funders
  - Public agencies (international, national, state, local)
  - Private foundations
- Science/data initiatives
  - Consortia and initiatives centered on open data
  - Standard setting organizations

- Universities/professional societies/ publishers/communities
  - Universities and colleges
  - Professional societies and associations
  - Publishers
  - Cultural and community networks
  - Minority, gender and other identity-focused initiatives and institutional arrangements

6. Conflict Resolution

Conflicts arising under this charter should be resolved in a timely, constructive manner. Towards that end, a three-step process is established.

Step one of the process involves problem-solving dialogue and resolution just between or among the disputing parties. It is recommended that in such a discussion the parties first ensure that they define the issue, discuss the interests or concerns of all involved, and generate multiple options for consideration. It is often the case that resolution is facilitated when there is a well-defined issue, a full listing of interests, and the identification of multiple options before any party advocates for any particular resolution. No written record is needed for issues arising and resolved at step one of this process, but a record if the issue, interests, and options will be needed for appeal to step two.

Step two is an appeal by any involved party not satisfied with the resolution at step one. This involves a formal indication of a dispute to the Secretary of the Steering Committee, who then is charged with documenting the issue, the parties involved, and their report on the interests and options identified in step one. If there is not a clear record of the issue, the interests and the options, the parties may be asked to generate this before advancing further in the process since this becomes the formal record of the issue. In step two, the Secretary of the NDS Steering Committee, in consultation with the Chair of the NDS Steering Committee and the NDS Executive Director where appropriate, will identify a third-party knowledgeable about NDS and appropriate to serve as a facilitator or mediator working with the parties.

If resolution cannot be reached in step two, any involved party can appeal in step three to the relevant body charged with a final and binding decision. In some cases, this will be the Executive Committee. In other cases this will be a funding agency. In some cases it may be the courts or other administrative agencies. The aim, however, is to maximize the capacity to resolve issues at step one—in a timely manner among the parties directly involved—with additional avenues of appeal available.