

The Northwest Knowledge Network (NKN):

A Regional Approach for Research Data Lifecycle Management

Mission:

Make cross disciplinary research data more accessible, comprehensible, usable, and secure for data providers and users by promoting commonly accepted policies, standards, and protocols and supplying services (e.g. secure data storage, seamless discovery, exploration, transfer of data between and within user groups, etc.) that are adaptive to changing data management and storage needs.

About the NKN Service Center:

The NKN Service Center will provide research data storage, data retrieval, and protection services across the data life cycle. NKN currently supports six metadata standards including the International Standards Organization (ISO) 19115-2, Federal Geographic Data Committee (FGDC) standard, Ecological Metadata Standard (EML), Hydrologic Information System (HIS) Observations Data Model (ODM) / WaterML (WaterOneFlow), Darwin Core, and Dublin Core.

Current Project Goals:

- ◇ Establish data centers at the University of Idaho (UI) and the Idaho National Laboratory (INL) with failover capabilities between the two.
- ◇ Provide standards-based data management support for individual and collaborative scientific research in and among Idaho institutions and their collaborators.
- ◇ Develop and deploy three phases of the NKN portal architecture including searching across six metadata types and with data upload and metadata editing.

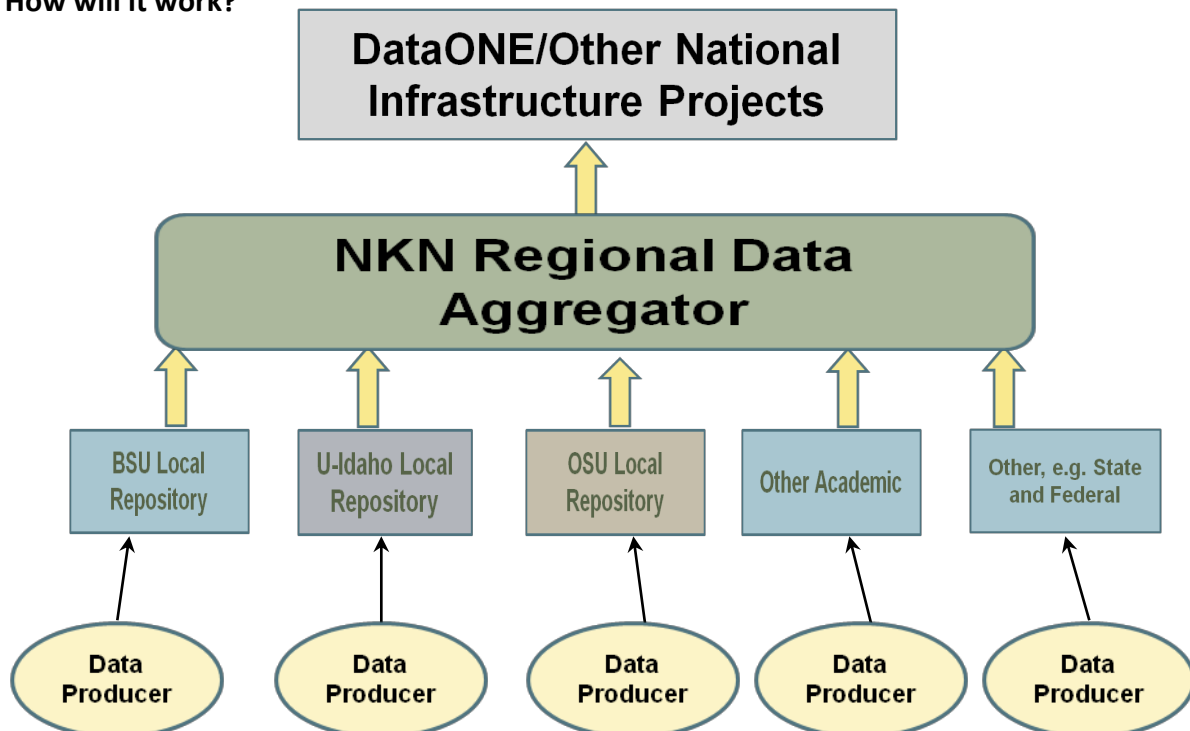
Current Focus on Environmental Data Types:

- ◇ Geospatial data
- ◇ Hydrological data
- ◇ Ecological data
- ◇ Climate / Meteorological data

Anticipated Data:

- ◇ Social sciences including survey data
- ◇ Soil microbial data
- ◇ Genetic / genomic data
- ◇ Transportation data
- ◇ Digital collections (e.g. herbaria, anthropology, history, etc.)

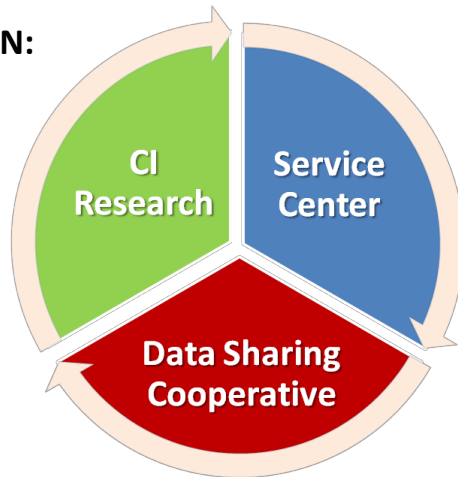
How will it work?



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The Pillars of NKN:



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Service Center

Purpose:

To provide tools and services that enable interdisciplinary research between geographically distributed researchers.

Goals:

- ◇ Provide backup for data created by currently funded projects.
- ◇ Provide archival storage of project data.
- ◇ Assist researchers in cataloging their data using nationally accepted metadata standards.
- ◇ Provide a secure system where researchers can share data in a collaborative environment.
- ◇ Develop and support tools that enhance data interoperability
- ◇ Provide 24/7 access to data.
- ◇ Provide researchers with access to high performance computing (HPC).

Cyberinfrastructure Research

Purpose:

To incorporate advancements in cyberinfrastructure research into the NKN architecture and services.

Goals:

- ◇ Enable growth and ensure innovative tools, techniques, and technologies are incorporated
- ◇ Develop new capacity for cyberinfrastructure research at the University of Idaho focusing on data interoperability, data visualization, and data intensive modeling.

Data Sharing Cooperative

Purpose:

To develop policies and procedures to facilitate data sharing and preservation between academic institutions and interested state and federal agencies.

Goal:

- ◇ Establish intra-state and then regional governance models.

Who's Involved

University of Idaho: Experimental Program to Stimulate Competitive Research (EPSCoR), UI Library, Office of Research and Economic Development, Information Technology Services, College of Engineering, College of Natural Resources

Partners: Idaho National Laboratory, Boise State University, Idaho State University, Oregon State University, University of New Mexico, University of Nevada, University of Washington, Washington State University, USGS, USDA, US Fish and Wildlife Service, National Park Service, Idaho Department of Water Resources, and Idaho Geospatial Office.