The Northwest Knowledge Network (NKN)

The Northwest Knowledge Network is a data management and data science program based at the University of Idaho. NKN's mission is to advance the use of data in society and steward research data for data producers and consumers by:

- Adopting and promoting current and emerging data policies, protocols and standards

- Providing stable and enduring access to data and tools to apply the data

- Anticipating and delivering data services

- Conducting research to respond to challenges in large-data management

The University of Idaho is positioning the Northwest Knowledge Network as the go-to data management cyberinfrastructure for large, regional, cross-disciplinary research and outreach programs in the Northwest.

NKN Network will provide basic data services, data-sharing policies and processes, and coordinated faculty hiring to increase the overall efficiency of data management and sharing across higher-education institutions and federal and state agencies in the region *(see chart)*. This will reduce duplication within agencies and result in consistent, defensible data management policies and procedures, as well as increases in overall data quality and accessibility.

Through advancements in data science, NKN can advance ground- and surface-water modeling by state and local agencies; help the Idaho National Laboratory implement Environmental Impact Assessments and catalog and analyze nuclear reactor test data; apply new clean motor and transportation management technology developed by University Transportation Centers; enable agriculture and natural resource managers to adapt to climate-driven change through federally funded research projects; facilitate the digital collections of Idaho's research libraries and increase accessibility to INSIDE Idaho GIS data.

NKN is a collaborative effort of the University of Idaho, U.S. Department of Energy Idaho National Laboratory and the U.S. Department of Interior U.S. Geological Survey.

Accomplishments

- NKN is the core data management service provider for grant-funded regional projects involving multiple research universities and federal and state agencies. NKN facilitates connections between institutions by cooperating in network planning with the Idaho Regional Optical Network (IRON) and larger networks like Internet2 and the National Science Foundation's DATANet.
- The Northwest Knowledge Network has been identified as data management coordinator for multiple new grant-funded projects, including the U.S. Department of Transportation University Transportation Center and the National Science Foundation Research Coordination Network
- NKN was awarded a $275,000 grant from the U.S. Geological Survey to apply data management best practices to Northwest and Southwest Climate Science Center research projects.
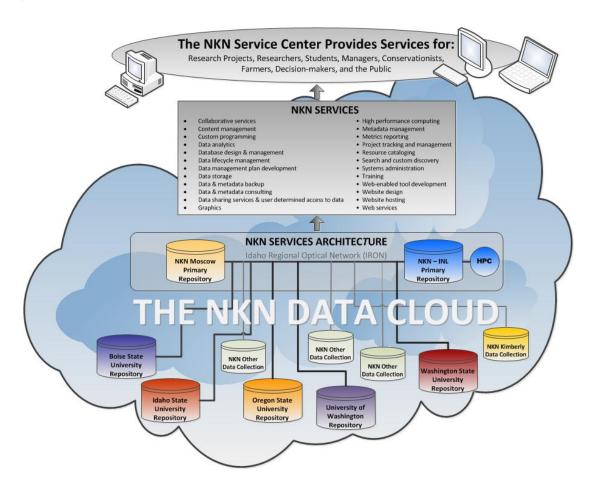
- The network is responding to present growth and preparing for the future by establishing a new leadership team, developing a new strategic plan and staffing plan, and hiring new staff members. NKN also began building out a Data Services Center and Cyberinfrastructure Research Program.

Next Steps

Infrastructure establishment costs for a fully functional Northwest Knowledge Network program are $6 million, including core hardware and software, IT and programming personnel and virtualization/simulation/visualization capabilities.

A sustained NKN will require $2 million in annual revenue. The University of Idaho and Idaho National Laboratory have made investments of nearly $1 million in core infrastructure and start up, and NKN has leveraged approximately $2 million through grant writing.

An additional one-time infusion of $4 million and an annual infusion of $1 million would augment a realistic fee-for-services model and allow NKN to operate on a sustainable business model for the next five years.

For more information, please contact:

John K. "Jack" McIver, Vice President for Research and Economic Development
vpresearch@uidaho.edu | 208.885.6689 | www.uidaho.edu/research/federal-relations