

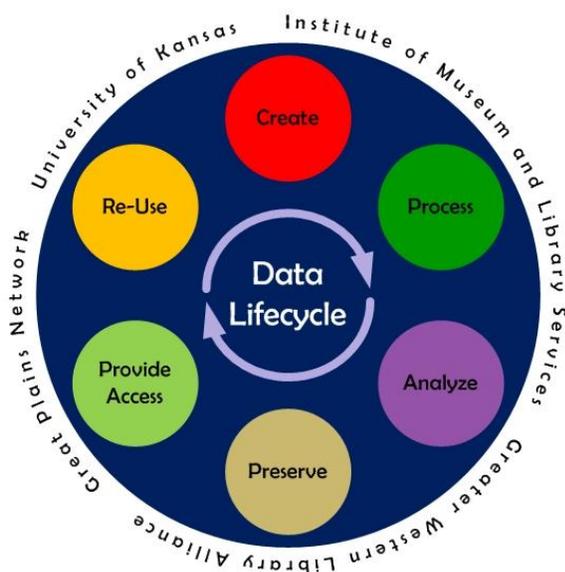
MULTI-INSTITUTIONAL DATA MANAGEMENT: A PLAN

PLANNING FOR THE LIFECYCLE MANAGEMENT AND LONG-TERM PRESERVATION OF RESEARCH DATA: A FEDERATED APPROACH

Roadmap for Collaboration

Updated April 14, 2014

IMLS 51-12-0695



UNIVERSITY OF KANSAS LIBRARIES &
INFORMATION TECHNOLOGY

GREAT PLAINS NETWORK

GREATER WESTERN LIBRARY
ALLIANCE

INSTITUTE OF MUSEUM AND LIBRARY
SERVICES

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Planning for the Lifecycle Management and Long-Term Preservation of Research Data: A Federated Approach

“Create and disseminate a plan for a scalable multi-institutional approach to research data management to support the university members of GPN and GWLA...”

VISION:

We envision a community of research universities engaged together in discovering and mutually supporting best practices, training, education, and tools for the effective management of research data across their intended lifecycle. The cross-institutional solutions and services we create as part of this community will be rooted in the larger ecosystem of existing and emerging national and international data initiatives and aligned with the research sharing efforts of research funders and the federal government, domain-based initiatives, and other collaborative data and publication hosts. Our efforts at federation are aimed at innovation, efficiency, and community to leverage the best ideas for research data management at scale.

EXECUTIVE UPDATE:

Beginning in October of 2012, the Greater Western Library Alliance (GWLA) and the Great Plains Network (GPN) undertook a formal collaboration, facilitated through the University of Kansas (KU) and a grant from the Institute for Museum and Library Services (IMLS), to identify collaborative approaches to the management of research data across member universities. The formal phase of this project, known as the *Data Federation Of University Research (DataFOUR or D4)*, resulted from informal discussion between representatives of GPN’s cyberinfrastructure initiative and the Greater Western Library Alliance beginning in 2010.

This document is the result of work by many people: a steering committee made up of members from five institutions; an environmental scan conducted by two research teams in 2012 and 2013; meetings of the grant’s advisory council in May of 2013; and further effort by two strategic working groups beginning in the fall of 2013 to look more deeply into collaborative opportunities in education, outreach, training, and infrastructure.

We hope this plan will encourage discussion and feedback, generate additional ideas for collaboration to improve management and sharing of research data, and endorse an ongoing cross-institutional partnership between GWLA and GPN member institutions.

GRANT ACCOMPLISHMENTS, OCTOBER 2012 – March 2014

During the formal collaboration period marked by the grant, a number of key accomplishments can be noted, including a sustained and productive series of conversations reaching across disciplinary and geographic distances. Under the leadership of the IMLS grant steering committee, we have scanned the environment and examined the needs of GWLA and GPN member institutions to identify potential opportunities to help institutions and their researchers with data management, with compliance planning to meet external funder mandates and, ultimately, with creation of potential for researchers to share research data as scholarship.

To date our efforts have touched more than 200 people representing GWLA & GPN member institutions, including members of various working groups focusing on collaboration, members of the advisory council, and professionals from higher education who attended events at the IMLS-sponsored *Big Data Summit* in 2013. We have created a robust social media presence for *D4*; we have assessed GPN and GWLA member needs and interests; we have established a formal connection to the Association of Research Libraries' *SHARE* project through GWLA; and we have pursued discussion with other possible partners, including the Association for College and Research Libraries (ACRL).

In some cases, collaborative initiatives are already moving into action. In February of 2014, with leadership from the University of Colorado, GWLA and GPN became partners in an IMLS grant submission for an initiative called *DataQ* as a result of discussions within the strategic working group for training, education, and outreach. We have established that, within GWLA and GPN member institutions, a dynamic community of professionals exists ready to partner to develop innovative initiatives that advance research data management practices.

The IMLS planning grant will conclude at the end of June 2014, but it is our hope that the GWLA and GPN collaboration will move beyond a planning effort to become a full-fledged incubator for innovative partnerships and specific initiatives to support institutional management of research data management. We recognize that some projects envisioned in this plan, along with new ideas generated by this partnership, will be a good match for grant funding. Other projects may require both leadership and local investment from GPN and GWLA members in which case leadership, governance, and business models would need to be addressed for specific initiatives.

Key questions remain open for discussion by GWLA and GPN leaders members:

1. Where do leaders see the greatest institutional value in collaboration centered on research data management efforts?
2. What specific opportunities are GWLA/GPN leaders most interested in for collaboration? Are there new ideas not yet explored or new directions?
3. How are institutions most interested and able to support collaboration?
4. Where are institutions most able to invest the time and talents of their staff?

5. Which institutions might be interested in leading specific initiatives and in what timeframe?
6. How might we formalize and sustain partnership between GWLA and GPN to incubate and support future collaboration?

STRATEGIC PLAN WITH UPDATES THROUGH MARCH 2014

This plan has been updated and we have added some opportunities initiatives identified as having potential by the working groups charged to delve more deeply into the strategies between October 2013 and April 2014. We look forward to additional feedback endorsement of the strategies as a final step in the IMLS grant.

Strategy #1 – Outreach, Education, Training

GWLA & GPN will offer a collaborative program of outreach, education, and training for member universities, addressing common institutional needs related to data management, data policy development, and best practices for data lifecycle curation.

Strategy #1 Initiatives:

1. **Review existing models of education and training for data professionals and identify potential partners such as professional organizations, library schools, or related disciplines.**

The working group completed a review and curriculum resources are linked on the D4 web site under the section PLAN & RESOURCES.

2. **Adopt a model curriculum and develop an active training program for providers of data management services at member institutions.**

The curriculum review by the working group leads us to believe that good existing curriculum exists. We don't need to develop unique curriculum. Joni Blake & Deborah Ludwig have touched based with the executive director of ACRL to see if there is potential for partnership in a data management roadshow or other educational efforts. The outcome of that discussion remains to be determined. Amanda Whitmore and Deborah Ludwig participated virtually in an ACRL focus group during the ALA Midwinter meeting.

Action Needed: *Establish which GWLA / GPN member institutions would be interested in developing and leading training sessions.*

3. **Apply for new IMLS NLG funding for initiative by January 31, 2014 to develop and offer a program to provide basic level training for staff in GWLA and GPN institutions in data management issues and best practices.**

*The University of Colorado Boulder Libraries, with partners GWLA and GPN, have proposed a virtual resource, **DataQ**. The project was submitted as grant proposal to IMLS in January 2014. **DataQ** will function as a collaborative knowledge base of research data questions and answers*

curated for and by the library community. Library staff from any institution may submit questions on research data topics, with or without answers, to the **DataQ** website where questions will then be both crowd-sourced and reviewed by an editorial board comprised of research data experts. Answers to these questions, from both the community and the editorial team, will be posted on the website and will include links to resources and tools, best practices, and practical approaches to working with researchers to address specific data issues. An advisory board will be formed to provide strategic direction, coordinate outreach, and develop policies.

4. **Create a checklist of best practices for data management that universities can use in planning programs and services for data management or as a measure of progress.**

Action Needed: *Identify partners who wish to work on this project.*

5. **Collect and evaluate institutional policies for research data and related intellectual property to analyze concepts and language to develop model policy language for consideration by member institutions.**

Librarians from the University of Arkansas reviewed the web sites of GWLA and GPN member institutions and created a list of current university policies relevant for research data. We have identified sources of model policy language.¹ Librarians from the University of Arizona and the University of Kansas have expressed interested in working with the University of Arkansas to do some addition analysis and development of tools for evaluating policy.

Action Needed: *Create a scope for this project and assemble interested parties to work on the project, building on the work of ASERL, ARL, SPARC and others.*

Strategy #1: Outcomes:

- a. Education, training, and support for questions about data management are provided to members with coordination through GWLA and GPN leadership.
- b. A checklist tool for auditing campus research data management readiness or progress is provided for use by member institutions.
- c. Sources and key considerations for research data policy are available for institutions wishing to develop new policies or to review and evaluate existing policies.

¹ ASERL/ SURA model policy - http://www.aserl.org/wp-content/uploads/2013/01/ASERL-SURA_Model_Language_RDM_Policy_Language_FINAL.pdf; ARL Spec Kit 334 <http://publications.arl.org/Research-Data-Management-Services-SPEC-Kit-334/>; SPARC Open Data Resource <http://www.sparc.arl.org/resources/papers-guides/open-data-guide>

Strategy #2 – Strengthen Infrastructure

Strengthen networked repository and storage infrastructure for data derived from research conducted by member institutions. Improve interoperability and opportunity between institutions, disciplinary organizations, and other research data hosts for working collaboratively with data and for access, archiving, and long-term preservation.

Strategy 2: Initiatives

1. **Identify infrastructure “gaps” and needs for new or shared platforms to meet needs for data management that are not universally addressed at member institutions.**
 - a. Review results of the 2013 institutional survey and follow up with GWLA and GPN member institutions to better understand and prioritize institutional infrastructure gaps and needs.
 - b. Identify models of multi-institutional collaborative initiatives for data management and assess potential of federated infrastructure found in model programs to meet identified needs.

Institutions completing the grant survey in 2013 addressed institutional infrastructure for data management. Infrastructure was also an element of discussion by the grant’s advisory council in its meeting of May 29, 2013. Following adoption of a strategy to strengthen infrastructure in August of 2013, a working group lead by Greg Monaco met virtually to further discuss infrastructure needs. Joni Blake, Deborah Ludwig, Greg Monaco, and Nikki Potter followed up with interviews of staff involved in research data management at eight institutions.

What we can report is that needs and interests vary widely from institution to institution. We have identified some possible high-level opportunities for discussion by leadership, which might be pursued collaboratively. These opportunities are elaborated below the strategies for further consideration and prioritization by institutional leadership.

In terms of models of multi-institutional collaboration, we note, of course, the SHARE project under development by the Association of Research Libraries in partnership with the Association of American Universities and the Association of Public and Land Grant Universities.² “SHARE compatibility” with current institutional repositories is a recurring interest of GWLA and GPN members. Members also noted interest in shared discovery systems for metadata with the Mercury catalog of DataONE mentioned as one model and Dataverse, an initiative in the social sciences with a distributed repository nodes mentioned as another. Others noted potential in models of shared storage and active data infrastructure developed for high performance computing, such as the Texas Advanced Computing Center, TACC.

² ARL SHARE Project: <http://www.arl.org/focus-areas/public-access-policies/shared-access-research-ecosystem-share#.Uz6IuccgylY>

2. Identify grant opportunities for funding infrastructure.

The steering committee, working with a grant specialist from the University of Missouri, has collected potential funding resources for data and infrastructure-related initiatives. The draft list is available at: <http://tinyurl.com/lql4txn>

3. Develop a grant application for 2014-15 funding to develop some level of shared infrastructure and/or improved interoperability of existing member infrastructure.

Action Needed: Discussion by members' institution leaders and the grant advisory council is necessary to determine which opportunities are of the greatest interest for pursuit of grant funding.

Specific Opportunities Identified by Members to Strengthen Infrastructure

- **Build a technically oriented community of professionals from different types of organizations (library, technology, research) who support research data management and long-term curation.**

The partnership between GPN and GWLA offers opportunity, particularly (but not exclusively) in the Midwest, to gather people together from the technical, library, and research communities for engagement. Events, webinars on common topics of interest, and opportunities to create working groups around projects of common interest have all been mentioned as valuable outcomes from community building that would ultimately strengthen both knowledge and the infrastructure and tools available to institutions, researchers, and data professionals.

- **Create opportunity for technical training and education**

Logically, this could be included in strategy 1, but this arose out of the working group for strategy 2 and so we include it here alongside other opportunities for strengthening infrastructure. Webinars and on-site events were both mentioned. Specific opportunities noted were:

- Software carpentry workshops (<http://software-carpentry.org/> teaching lab skills for scientific computing)
- Metadata formats and best practices
- Identifier systems: ORCID, EZID, DOIs
- Repository development (Hydra/Fedora, methods for dealing with large data sets)
- Preservation practices and workflows.
- SHARE Notification system

- **Developers' Sandbox for Testing Software Tools**

Closely connected to building community, is the opportunity expressed for a GWLA / GPN "sandbox" as shared space where professionals could install and test various tools. Potentially, it might also serve as an environment for tool development.

Interviewees noted that institutions replicate the process of setting up “sandbox” space for installing software for testing. It would also be helpful to know who else was working with specific tools since many of us are experimenting with the same software and the same tools. Lightweight profiles of institutional staff and interests might be useful to couple with this service to help professionals make connections.

- **Memorandum of Understanding for Shared Infrastructure**

The suggestion was made to develop a model memorandum of agreement to cover partnerships between member institutions wishing to share infrastructure. It was noted that GPN has had some experience in this work and something could be developed to cover agreements between institutions wishing to share storage or repository services as examples. GWLA, too, has experience with developed shared licenses and agreements.

- **Multi-Institutional Repository and/or Discovery Systems**

Several institutions are engaged in shared repository initiatives within state boundaries. In Oklahoma, the new *SHAREOK* repository is under development to serve researchers at the University of Oklahoma and Oklahoma State University. In Arizona, the University of Arizona, Arizona State University, and the University of Northern Arizona are working to federated metadata across repositories to improve discovery of research and data. In Missouri, *MOSpace* serves campuses that are part of the University of Missouri system.

More work would be needed to identify and “match make” repository development opportunities, but in general some members have talked about the collective benefits of sharing the workload of repository development for both larger and smaller institutions with perhaps potential for repository boundaries to cross state lines.

- **Shared Infrastructure & Storage**

This is by far the most difficult area to in which to nail down specific opportunities. Costs in this area represent large investments for universities, but no specific needs rose clearly to the top. Here are ideas and needs that have been put forward by members with potential for collaboration.

- Institutions might offer shared **rack space** and/or server hosting agreements for servers within their data centers.
- **Storage** for research data, both in the active and post-funding phases of research was noted as a need by some institutions.
- **Easy file sharing services** was noted to enable researchers to store, access, and share data during the active stages of research with partners inside and outside of the local institutions. (Specific strategies or components of strategies mentioned “The Box” “Globus” and iRODS.)
- **Storage replication** for local data or the data associated with repositories was noted as a need related to improved backup and recovery measures or for preservation purposes.

- **Preservation services, possibly:**
 - **Tools and practices in preparation** for ingest is an emerging opportunity noted by a few members. Some universities are members of the Digital Preservation Network (DPN). There may be a need to develop services that automate the gathering and pre-formatting packages of data for ingest into DPN, including research data, for preservation.
 - **LOCKSS network** for data preservation was another suggested services for research data replication. (LOCKSS stands for Lots of Copies Keep Stuff Safe)

Strategy 2 Outcomes

- a. All GWLA and GPN institutions have options for archiving and sharing research data.
- b. All GWLA and GPN institutions have options for making data more readily discoverable for interpretation and reuse.
- c. Staff at GWLA and GPN have opportunities to test new tools and for education about research data management
- d. GWLA and GPN institutions have options for consolidating infrastructure through regional efforts to share resources.
- e. Researchers at GWLA and GPN institutions have resources for complying with funder mandates for data management and sharing.

Strategy #3 – Communication & Advocacy

Develop and execute a strategic communications plan and program of advocacy to advance member initiatives in data management and to advocate for data sharing as part of a greater ecology of scholarship.

Strategy #3: Initiatives

1. **Develop a name and branding for this project.**

The steering committee decided on the name on DataFOUR (Data Federation of University Research) or D4 for short.

2. **Develop communication plan and tools for various audiences about this project and about general news and opportunities in data management.**

The D4 project employs various modes of communication including a project website (imls.gwla.org), a general email list, data-announce (data@gwla.org) and working group email lists, data-announce, as well as a social media presence through Twitter (DataFOUR) and Facebook (D4).

In 2013 DataFOUR sponsored an afternoon data summit in conjunction with the annual GPN meeting where researchers and information specialists participated in learning about and discussing current trends. That event will be repeated in 2014.

3. **Identify national and international partnerships for advocacy. Develop a platform and participants for advocacy efforts.**

GWLA and GPN directors have done this work, making contacts with ARL and ACRL and taking part in advocacy efforts. This is an area of ongoing effort in partnership with GWLA and GPN member institutions. While a general platform of advocacy has not been articulated, GWLA and GPN responded to the Office of Science and Technology Policy memo of 2/22/2013 and subsequent call for comment.

4. **Explore advancing models for open data where appropriate.**

The steering committee continues to keep updated through webinars, social media, conferences, blogs, interviews, and listserv on models for open data. This represents ongoing work closely connected to strategy 1, outreach, education and training.

Strategy #3 Outcomes:

- a. Communications tools such as project website, listserv, FAQ, blog(s), newsletter, and institutional reports are available to all members.
- b. All member institutions will have access to the most current information related to research data management and preservation, including national policy issues, best practices, institutional policy development, toolkits, training opportunities, etc.
- c. All member institutions will have the ability to share information about research data management and preservation issues at one central site.
- d. A platform of advocacy will advance member institutions' needs and concerns to national and international levels.
- e. A fully developed web site is available for the project along with social media and email channels for communication and participant engagement.
- f. An annual event focused on research data is held in conjunction with the Great Plains Network Annual Meeting to bring together practitioners and leaders interested in research data stewardship and curation.

APPENDIX A. PROPOSED IMPLEMENTATION OF STRATEGIES:

Business and Governance Model:

The May 29, 2013 advisory council meeting captured both the importance as well as the challenge of establishing business and governance models.

We see development of governance and business models for specific initiatives as a critical component for success that will need to emerge from members of the community, as priorities are determined.

For the overarching D4 initiative, we anticipated dis-banding the grant steering committee at the completion of the grant and creating a new steering committee lead by Joni Blake and Greg Monaco respectively of GWLA and GPN. This new steering committee will ideally consist of individuals from various institutions and specialists from research, libraries, and IT representing a federation able to undertake issues and plan successful initiatives related to topics of research data management.

Plan Overview as of August 2013

Based on our sample activities & outcomes, we anticipate the need for two kinds of teams to implement the plan: 1) strategy teams responsible for the developing the activities and outcomes and 2) operational teams support teams for the project as a whole. The chart below maps teams and activities.

Strategy Teams			Operational Teams		
Strategy #1	Strategy #2	Strategy #3	Business & Governance	Grant Development	Communications Team
<i>Offer a collaborative program of outreach, education, and training for member universities</i>	<i>Strengthen networked repository and storage infrastructure for data</i>	<i>Develop and execute a strategic communications plan and program of advocacy</i>	<i>Establish the basis for membership and governance with provision for cost allocations, and processes for leadership & decision-making</i>	<i>Work with strategy teams 1 & 2 to identify grant funding & prepare grant applications for submission.</i>	<i>Develop website, social media, and messaging strategies to keep members apprised of efforts & opportunities.</i>
Actions	Actions	Actions	Actions	Actions	Actions
Review existing models of education and training & develop curriculum (1,2)	Identify needs for new platforms & prioritize (1,2)	Develop name & branding (1 with communications team).	Review business / governance models for relevant types of consortia	Begin review of potential grant opportunities for education & infrastructure strategies	Develop web presence & social media channels for communication
Apply for grant funding to develop curriculum & offer training (3)	Identify collaborative model(s) for shared infrastructure (3)	Develop a communications plan and tools (2 with communications team)	Flesh out prospective models for stakeholders	Create shortlist of funding sources.	Interact with teams to update member institutions and assess needs.
Develop tools to assess institutions readiness & develop roadmap (4)	Identify grant source and apply for grant funding to develop infrastructure (4,5)	Identify national and international partnerships for advocacy & develop platform (3,4)	Solicit input on models & finalize model with member institutions	Work with strategy teams to develop grants for submission	
Develop model policy language as tool for member institutions (5)		Explore open data models (5)			

APPENDIX B. SUPPORTING EVIDENCE FOR STRATEGIES

Based on GPN and GWLA member input through May 2013

(Additional external supporting evidence is now available in the new ARL SPEC KIT, *Research Data Management Services* found at <http://publications.arl.org/Research-Data-Management-Services-SPEC-Kit-334/>)

Evidence for Strategy #1 – Outreach, Education, Training

Advisory Council May 29th & 30th meetings:

Institutions do not have clear outlines of who owns the data. “Gap between clearly-written and clearly-understood.” There is a need to develop policy that can be adaptable for local needs, yet, compatible enough for cross-institution collaboration (breakout session on the 30th)

Researchers worry that they will not get the credit for the data. May 30th meeting breakout sessions emphasized need for faculty incentives and for developing policy and business requirements for data management.

Clicker results indicate that most advisory member thought that “regional groups should provide services to collaborating campuses, with each campus implementing the services they see as important”

Comment that researchers’ advisors trained them how to manage their data. There is a need for people trained in data management (mentioned multiple times). There is a need to get several people onboard, archivists, data management librarians, IT, Provost, records managers. Templates are needed for creating data management plan (breakout session on the 30th)

“Policy/Business Requirements ” ranked 3rd in dot voting regarding most critical and feasible areas for collaborative action. Some of those ideas are directly related to strategy #2. This included issues such as policy development, ownership/intellectual property, private versus public [data sharing], access and use, [data] retention, conflicting legal and/or funder requirements, differing/divergent needs [of researchers], stakeholders and by disciplines. Tenure status, process, business requirements, research grant processes (identify opportunities/need in proposal process) were also mentioned.

Institutional Survey Findings:

Few institutions have taken localized approaches to providing some support and policies for research data management.

70% of institution report adopting a general policy of ownership of data, but fewer have policies about the long term management of data post-award.

GWLA/GPN libraries currently provide general consulting in data management, but perhaps do not offer formal training services in data management.

May 30th Data Summit Group Activity, 180 comments received on yellow sheets.

26% of 180 comments received on the yellow sheets were about needs related to service or policy definition and best practices or procedures for data management. Another 11% related to needs for education, professional development, and training.

Birds of a Feather Session, Thursday PM (May 30, 2013) at GPN meeting

Discussion of models for training – ACRL Roadshow model mentioned along with the successful enrollment in the Colorado data management “bootcamp” and use of IMLS funding by Purdue for their data profiles training events.

Comment made that getting universities to tackle their policies and recognize the value of the assets and to clarify the position of the university, would be a huge victory.

Evidence for Strategy #2 – Strengthen Infrastructure

Advisory Council May 29th & 30th meetings:

Brainstorming on poster paper collected “All about discovery and access,” “some researchers have enough links outside of institution system,” “some researchers have enough links outside of institution system.”

Several European and Australian models for collaboration and federation of data management and sharing were mentioned, including Zenode and ANDS.

May 30th meeting focuses comment on collaboration and what we can do to be successful - Develop common strategies - Create faculty incentives to share data.

Funding is an issue according with the advisory council noting strategies to include developing common recommended models and building shared ownership of the issue.

Institutional Survey Results:

Repository services for data were most commonly reported as “not offered” while storage was more commonly offered, particularly for shorter term use by researchers.

May 30th Group Activity, 180 comments received on yellow sheets.

19% of 180 comments received on the yellow sheets were about needs related to tools and/or infrastructure for data management.

Birds of a Feather Session, Thursday PM (May 30, 2013) at GPN meeting comments:

Secure data “dropbox” desired by faculty.

Big data people don’t care about our solutions; it is the small data researchers that need solutions.

Evidence for Strategy #3 – Communications & Advocacy

Advisory Council Meetings, May 29th & 30th:

“The Argument” ranked 1st in “dot” voting regarding most critical and feasible areas for collaborative action. Critical issues included administrative awareness, ability to address “big issues” via multidisciplinary access, compliance, faculty productivity, cost savings/potential for income/financial incentives for monetizing, prestige, competitive edge, being part of/not behind issues, managing complexity and university assets, issues of campus leadership, getting librarians and IT staff “on the same page,” lack of national standards.

Discussion of OSTP memorandum resulted in a call for action. It was suggested that GPN/GWLA proceed to send a statement even though formal call is past.

Discussion focused on idea of collaboration and what successful collaboration looks like. Communication essential.

May 29th meeting clicker results most institutions where either “Aware of the importance of these issues and interested in hearing about solutions” or “Barely aware of the issues.”

During the afternoon large group session at the Big Data Summit, 18% of 180 comments provided on the yellow sheets were about collaborative involvement, partnership, connection, and communication.

Birds of a Feather Session, Thursday PM (May 30, 2013) at GPN meeting:

Need for collaboration with Libraries, IT and VP for research.

APPENDIX C: STEERING COMMITTEE MEMBERS

Joni Blake, Executive Director, Greater Western Library Alliance

Paul Farran, Chief of Staff, Information Technology Division, University of Kansas

Judy Ganson, Director of Collection Management Services & Systems, University of Arkansas
Libraries

Deborah Ludwig, Principal Investigator & Assistant Dean, University of Kansas Libraries

Scott McEathron, Head of Data Initiatives, University of Kansas Libraries

Rick McMullen, Director, Arkansas High Performance Computing Center

Greg Monaco, Director of Research & Cyberinfrastructure, Great Plains Network

Nikki Potter, Project Coordinator, Librarian & Archivist, Kansas Geological Survey

Ann Campion Riley, Associate Director, University of Missouri Libraries

APPENDIX D: WORKING GROUP TEAMS & CONTRIBUTORS

Research Team A, Literature Review

Judy Ganson, Director of Collection Management Services & Systems, University of Arkansas
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Research Team B, Key Projects & Technologies Review, Survey Development

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Jeff Perry, Deputy Technology Officer, University of Kansas
Nicole Potter, Librarian & Archivist, University of Kansas Geological Survey
Jason Stirnaman, Biomedical & Digital Projects Librarian, University of Kansas Medical Center
Jon Wheeler, Lecturer III: University Libraries, University of New Mexico

Strategy #1 Working Group Members as of October 2013

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Sarah Potvin, Texas A&M
Ann Campion Riley, University of Missouri
Jennifer Roach, University of Kansas
Brian Westra, University of Oregon
Mary Whelan, Arizona State University
Amanda Whitmire, Oregon State University
Stephanie Wright, University of Washington

Strategy #2 Working Group Members as of October 2013

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Dan Andresen, Kansas State University
Toby Axelsson, University of Kansas
Michael Bolton, Texas A&M University
Michael Boock, Oregon State University
Dennis Brewer, University of Arkansas
Marie Concannon, University of Missouri
Karen Estlund, University of Oregon
Paul Farran, University of Kansas*
Don Gilstrap, Wichita State University
Scott Hanrath, University of Kansas
Larry Hoyle, University of Kansas
Jun (Luke) Huan, University of Kansas
Phil Konomos, Arizona State University
Mark Laufersweiler, University of Oklahoma
Susan Matveyeva, Wichita State University
Rick McMullen, University of Arkansas*
Greg Monaco, Great Plains Network*
Jon Wheeler, University of New Mexico

*** Group Faciliator**

APPENDIX E: DATA SUMMIT ATTENDEES, MAY 2013

Mike Abbiatii, University of Arkansas
Alie Abele, Missouri S&T
Carolyn Henderson Allen, University of Arkansas
Gary K. Allen, University of Missouri
Roberta Ambur, University of South Dakota
Kate Anderson, Great Plains Network
Daniel Andresen, Kansas State University
Alex Barclay, Oklahoma Innovation Institute
Jeff Bartig, University of Wisconsin
Martha Bedard, University of New Mexico
Joni Blake, Greater Western Library Alliance
Mark Bookout, Missouri Science & Technology
Kay Bradt, Baker University
Dennis Brewer, University of Arkansas
Dana Brunson, Oklahoma State University
Andrew Buker, University of Nebraska - Omaha
David Carlson, Texas A&M University
Dorothy Carner, University of Missouri
Keri Cascio, Linda Hall Library
Egemen Cetinkaya, University of Kansas
Daniel Chaney, Oklahoma State University
Yufei Cheng, University of Kansas
P.J. Clayton, GPN NOC/Morenet
Karen Cole, University of Kansas Medical Center
Shane Corder, Children's Mercy Hospital
Greg Davis, Iowa State University
Jim Davis, Iowa State University
Lu Dayrit, Librarian, Federal Reserve Bank of Kansas City
James Deaton, OneNet
Kaustubh Dhondge, University of Missouri Kansas City
Erika Dickey, University of Kansas Libraries
Brenda Dingley, University of Missouri Kansas City
Marijo Dixon, University of Missouri
Kevin Drees, Patrick Oklahoma State University
Meagan Duever, K-State Libraries
Janice Dysart, University of Missouri
Loretta Early, University of Oklahoma

Nicholas Eggleston, Missouri S&T
Christine Elsik, University of Missouri
Judith Emde, University of Kansas
Paul Farran, University of Kansas
Brad Fleming, KanREN Inc.
Barbara Fullerton, University of Kansas
Judy Ganson, University of Arkansas
Claude Garelik, SD Board of Regents
Jodi Gilpin, University of Missouri
Don Gilstrap, Wichita State University
Jon Giullian, University of Kansas
Kim Glover, University of Kansas
Lori Goetsch, K-State Libraries
Santosh Gondi, University of Kansas
Carl Grant, University of Oklahoma Libraries
Kyle Gruhn, The University of South Dakota
Xinjie Guan, University of Missouri -- Kansas City
Lars Hagelin, Greater Western Library Alliance
Darren Hagen, University of Missouri
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Lorraine Haricombe, University of Kansas
Anoop Haridas, University of Missouri
James Harr, University of Nebraska-Omaha
Kristine Helbling, Wichita State Univeristy
Robert Higgins, Missouri S&T
Mary Lou Hines, University of Missouri Kansas City
Neal Hodges, South Dakota School of Mines & Technol
Bobby Holleman, University of Arkansas
Cynthia Hudson, Washington University in St Louis
Doug Jennewein, University of South Dakota
Sheila Johnson, Oklahoma State University
Paul Kern, South Dakota Board of Regents
L. Kevil, Hunter University of Missouri
Daehee Kim, University of Missouri-Kansas City
Darren King, SpectraLogic
Quinton King, Yellow Dog Networks
Phil Konomos, Arizona State University
Olga Koz, Colorado Technical University
Robin Kruse, University of Missouri

Christina Kulp, University of Oklahoma
Leon Lars, University of Kansas Libraries
Chris LeBeau, University of Missouri & UMKC
Robin Leech, Oklahoma State University
Dalton Lobosky, Missouri S&T
George K. Loftus, Internet2
Keith Loveless, Missouri S&T
Deborah Ludwig, University of Kansas Libraries
Carl Lundstedt, University of Nebraska, Lincoln
Paul Lustgraaf, Iowa State University
Alan Marshall, University of Missouri
Judy Maseles, Siebert University of Missouri
Karla Massia, University of Central Missouri
Scott McEathron, University of Kansas Libraries
Donald McMullen, University of Arkansas
David Merrifield, Arkansas Research & Ed Optical Networ
Greg Monaco, Great Plains Network
Brian Moore, South Dakota State University
Heather Lea Moulaison,
Peggy Mullaly-Quijas, UMKC
Henry Neeman, University of Oklahoma
Truc Anh Ngoc Nguyen, University of Kansas
Hank Niederhelm, University of Missouri
Jennifer Nixon, Missouri Science & Technology
Diane Oerly, University of Missouri
Dawn Paschal, Colorado State University
Rex W. Peterson, University of Missouri
Nate Poell
Bonnie Postlethwaite, University of Missouri Kansas City
Nikki Potter, University of Kansas
Sarah Potvin, Texas A&M University Libraries
Jeff Pummill, University of Arkansas
Ann Campion Riley, University of Missouri
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Gordon K, Springer, University of Missouri
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David Swanson, University of Nebraska-Lincoln
Russ Taddiken, Cambridge Computer
Diwakar Timilsina, University of Arkansas
Johann Van Reenen, University of New Mexico
Dan Voss, University of Kansas
Rachel Vukas, University of Kansas Medical Center
Wainscott, Susan University Nevada Las Vegas
Laurel Wamsley, Globus Online
Mike Watson, University of Missouri
Monte Wedel, Brocade Communications
Derek Weitzel, University of Nebraska - Lincoln
Brian Westra, University of Oregon
Jonathan Wheeler, University of New Mexico
Jim Williams, University of Colorado
Ron Williams, Optelian
Betsy Wilson, University of Washington
Collin Winans, Missouri S&T
Dongsheng Zhang, University of Kansas

APPENDIX F. ADVISORY COUNCIL MEMBERS: (MAY 30, 2013)

Adrian Alexander, Dean of Libraries, University of Tulsa

Carolyn Henderson Allen, Dean of Libraries, University of Arkansas

Gary Allen, Chief Information Officer, University of Missouri

Martha Bedard, Dean of Libraries, University of New Mexico

Dennis Brewer, Chief Information Officer, University of Arkansas

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Deborah Carver, Dean of Libraries, University of Oregon

Jim Cogswell, Director of Libraries, University of Missouri

Karen Cole, Director of Dykes Library, University of Kansas Medical Center

Jim Davis, Chief Information Officer, Iowa State University

Loretta Early, Chief of Information, University of Oklahoma

Mary Lou Hines Fritts, Chief Information Officer, University of Missouri-Kansas City

Don Gilstrap, Dean of Libraries, Wichita State University

Lori Goetsch, Dean of Libraries, Kansas State University

Lorraine Haricombe, Dean of Libraries, University of Kansas

Shelia Johnson, Dean of Libraries, Oklahoma State University

Phil Konomos, Associate University Librarian & Chief Technology Officer for ASU Libraries

Bob Lim, Chief Technology Officer, University of Kansas

Bonnie Postlethwaite, Dean of Libraries, University of Missouri-Kansas City

Ken Stafford, Chief of Information, Kansas State University

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Johann Van Reenen, Associate Vice President for Research, University of New Mexico

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Betsy Wilson, Dean of Libraries, University of Washington

Melissa Woo, Chief Information Officer and Vice-Provost for Information Services, University
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