

Data Management Recommendation

ISTeC Data Management Committee



Colorado
State
University



Scott Novogoratz

REVIEW COMMITTEE CHARGE AND PROCESS





CSU Data Management Charter

Establish strategies and directions for an institutional approach to manage research data





ISTeC Data Management Committee

- Mr. Scott Baily, Academic Computing & Network Services
- Dr. Patrick Burns, Dean of Libraries & CIO
- Dr. Richard Casey, IDRC & HPC
- Ms. Nancy Hunter, Libraries
- Dr. Andrew Jones, Cooperative Institute for Research in the Atmosphere
- Ms. Nicole Kaplan, Natural Resource Ecology Laboratory
- Dr. Rick Lyons, Infectious Disease Research Center
- Mr. Scott Novogoratz, College of Veterinary Medicine & Biomedical Sciences
- Mr. Ed Peyronnin, College of Agricultural Sciences
- Dr. Richard Slayden, College of Veterinary Medicine & Biomedical Sciences
- Mr. Shea Swauger, Libraries





Current State Attitude Survey

- Focus on challenges facing the CSU research community surrounding data management





Attitude Survey Response

- 260 respondents ~ 20% of target audience
- Business & Liberal Arts underrepresented





Less Challenging from Survey

- Providing open access
- Determining what needs to be available to public
- Protecting intellectual property
- Finding appropriate tools
- Moving data
- Protecting data from unauthorized access





Moderately Challenging from Survey

- Facilitating collaboration
- Finding and utilizing safe medium
- Analysis





Most Challenging from Survey

- Preserving data for the long term
- Funding for the data management function
- Organizing, cataloging, documenting & managing data





Themes from Verbatim Responses

- Doing bioinformatics is difficult
- Training needed
- Unstructured data presents new challenges
- Collaboration opportunities wanted
- Interdisciplinary approach needed for data management
- Distinguish data, from information from results and analysis
- Resource availability (hardware, software, storage space, expertise)





Four Recommendations

1. Learn from one another through Affinity groups
2. Spread knowledge broadly about specific research data management challenges and solutions.
3. Build an information technology infrastructure, including both storage and compute capacity, to facilitate research.
4. Merge the research and data curation processes to make data management seamless.



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Dr. Rick Lyons

AFFINITY GROUPS





Affinity Groups Plan

Form Affinity Groups focusing on data management challenges within the University research community.



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Nancy Hunter

EDUCATION





Data Management Education Plan

- 1. Create data management educational opportunities for formal training among data practitioners within the CSU research community.*
- 2. Plan informal data management outreach activities for members of the research community. Bring visibility to the issues, skills and tasks involved in managing research data.*



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Scott Baily

PHYSICAL INFRASTRUCTURE





Build Physical Infrastructure

Build physical IT infrastructure to meet the current and anticipated needs of the University research community





Identified Needs & Concerns

- Individual researchers and funding constraints
- Privacy, Security, and The Cloud
 - Historically a concern, but still considering
- EULAs problematic with Cloud Services
 - Efforts to establish campus policies under way





Infrastructure Recommendation 1

- Expand local cloud storage resources
 - Rolling out “Research Cloud” Service
 - Core and Specialized Facility Grant from VPR
 - Easy to use
 - Will enable inter-institutional collaboration
 - Fast
 - Secure





Infrastructure Recommendation 2

- Enhance Campus Computing Capacities
 - Enables compute-intensive research
 - Greater Economies of Scale Possible
 - Leverages existing data centers
 - Cost-effective alternative, not a mandate
- An HPC subcommittee is being convened by VPR and VPIT

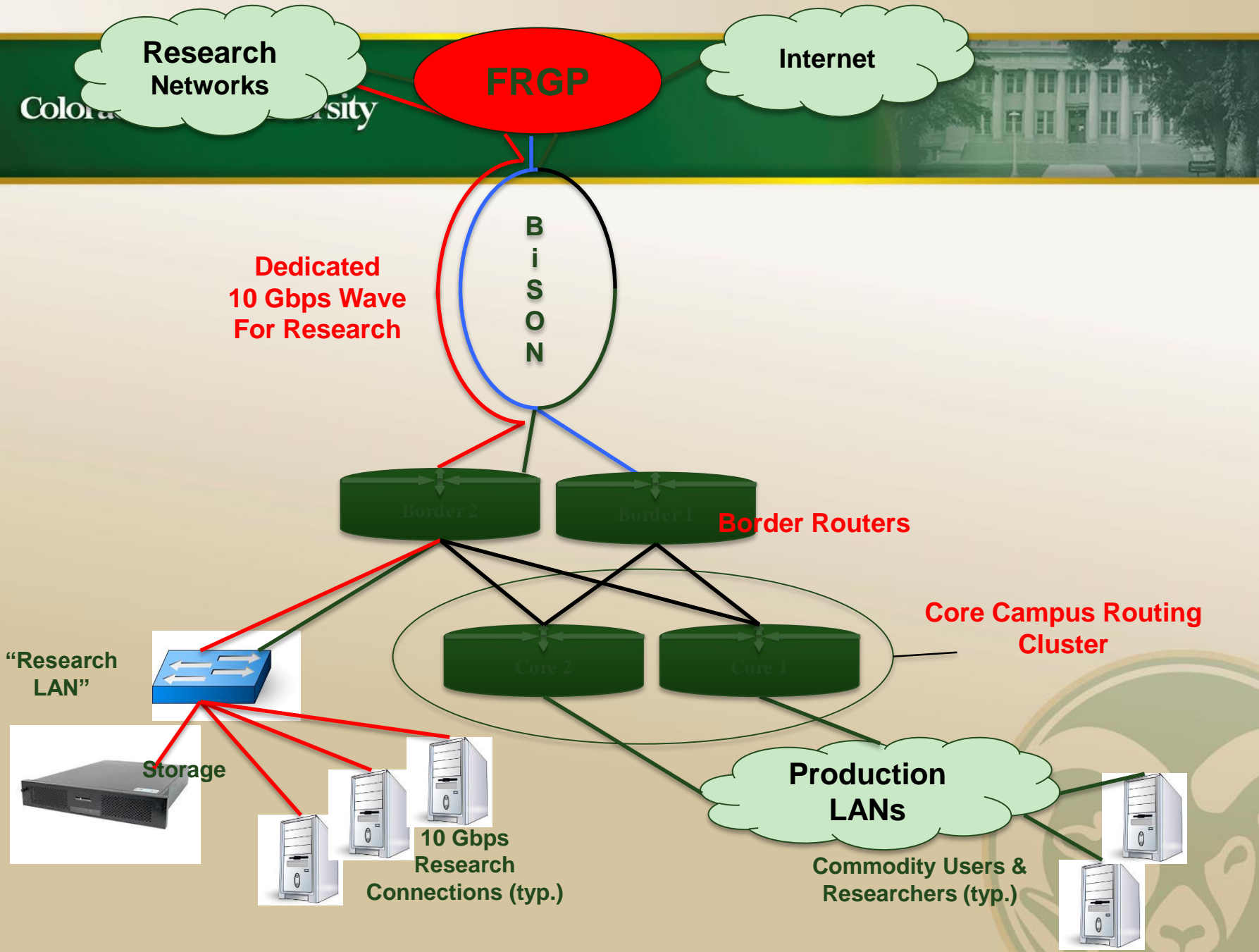




Infrastructure Recommendation 3

- Create “Research DMZ”
- Scalable model to accommodate big data, e.g.
 - Large bulk data transfers
 - Remote experiment control
 - Data Visualization
- Network Design Optimizes Data Transfers





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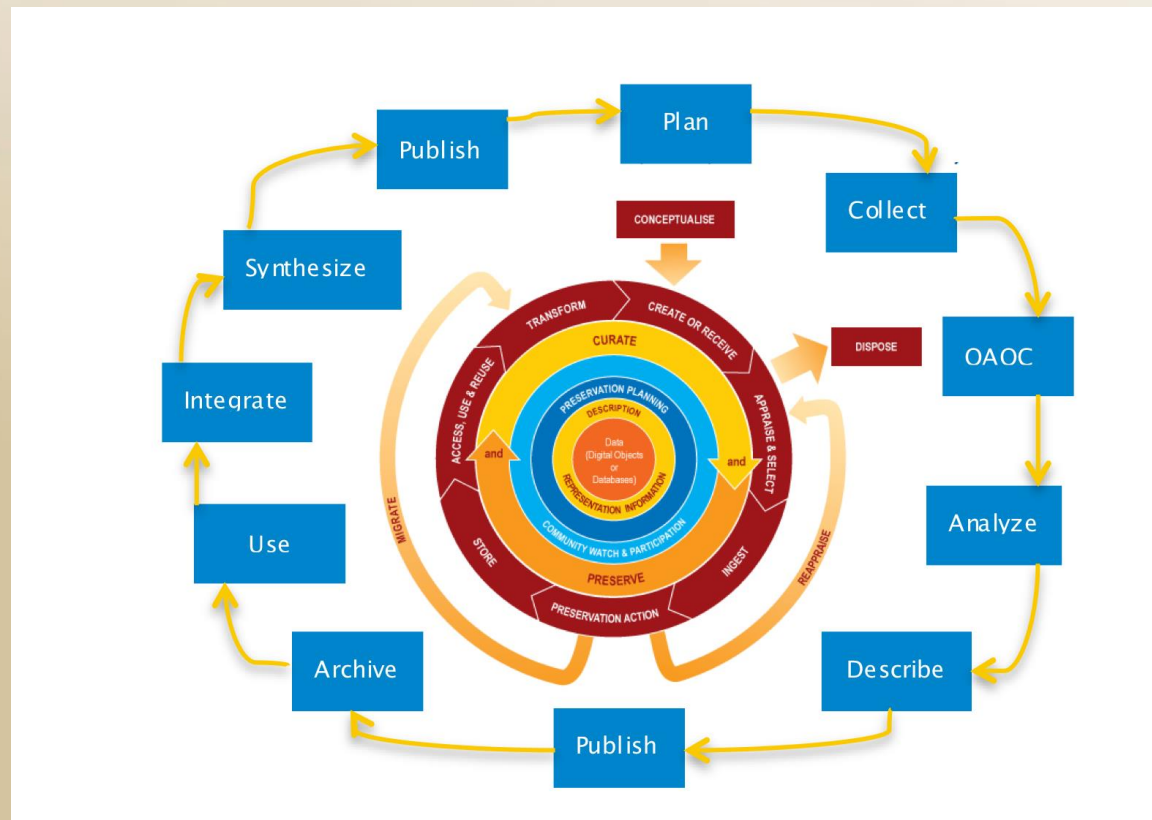


Shea Swauger

CURATION



Merge Research Process & Curation



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Ed Peyronnin

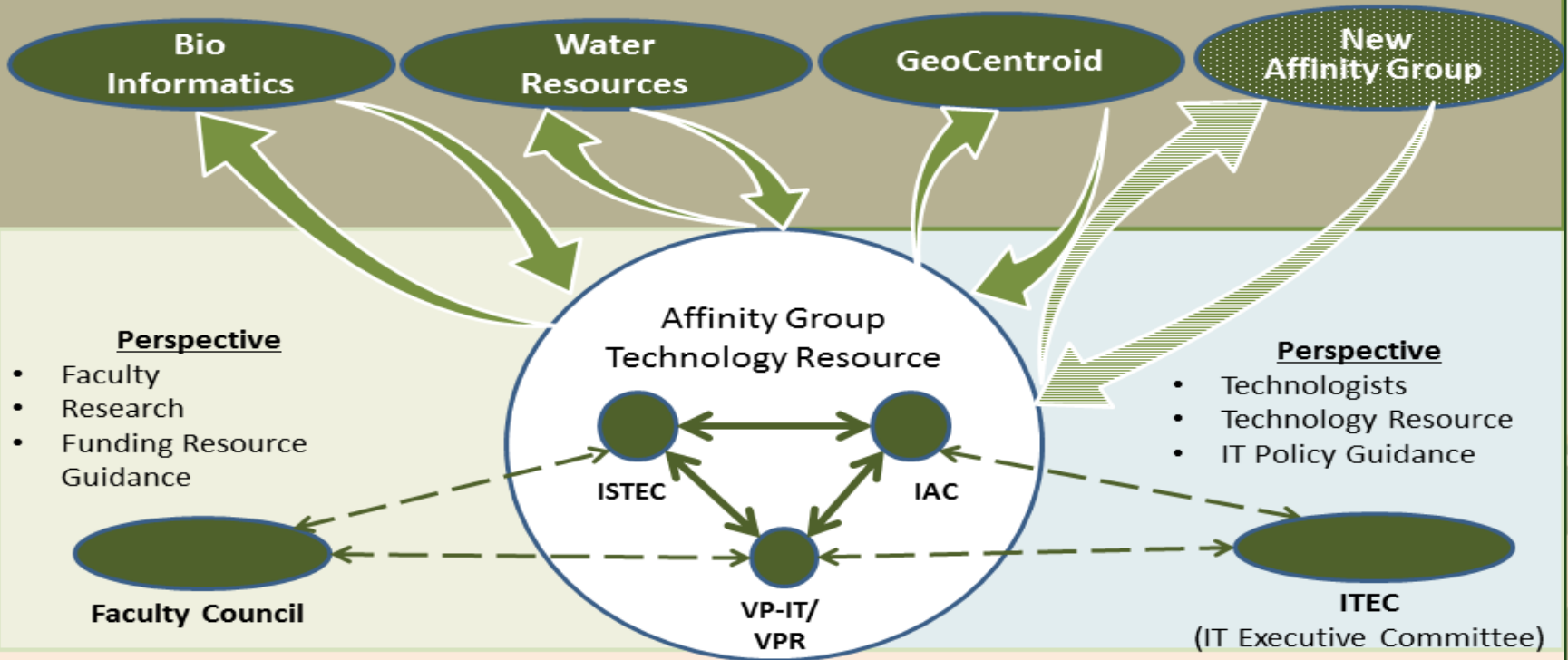
GOVERNANCE





Campus Data Management Infrastructure Development Model

Affinity Group Incubation



Create a subcommittee of IAC and ISTEC whose goals are:

- Provide an authoritative source for data policy, planning and resource
- Facilitate operational objectives with strategic vision
- Give administration an operational model to include with their strategic planning



Questions?

