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# Regional Cyberinfrastructure Planning



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## Great Plains Network

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# GPN Milestones

- Initially, funded via EPSCoR award
  - Formed by researchers
  - First regional connector to Internet2
  - First 2x10G connector to I2
  - CPS
  - Research/CI focus continues
    - Annual Conference
    - Communities of Interest (e.g., Collaborative CI)
    - Workshops
    - Facilitate collaborative research (GENI, Middleware)
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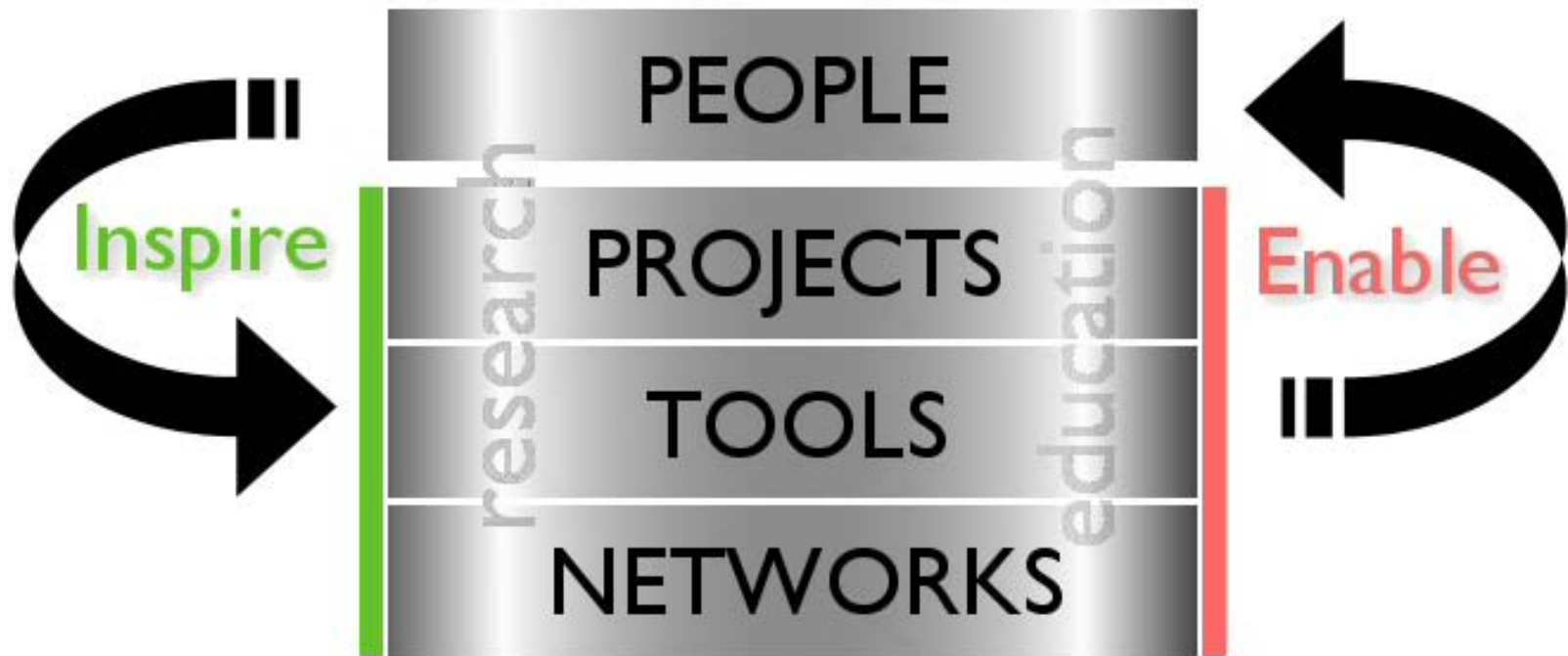
# Great Plains Network



- GPN Member
- Affiliate GPN Member
- ▲ State GPN Connector
- Hub
- Great Plains Network



# GPN Collaborative Framework



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# Mission & Strategic Directions

To support the research and education missions of our members through the use of advanced cyberinfrastructure.

## Strategic Direction 1:

**Provide leadership in advanced networking at the regional and national level on behalf of the membership.**

***(Managed by a Network Program Committee)***

## Strategic Direction 2:

**Actively support the development of and provide support to research and education initiatives among the membership that extend or use cyberinfrastructure in novel or unique ways.**

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# CI Advisory Committee

- Purpose: To *develop a plan to implement GPN goals* in the area of CI
  - Members:
    - Mike Abbiatti, AREON
    - Gary Allen, University of Missouri System, MU, GPN Executive Council
    - Guy Almes, Texas A & M,
    - James Deaton, ONENET & GPN Executive Council
    - Claude Garelik, SD Board of Regents & GPN Executive Council Chair
    - Del Johnson, SDSU & GPN Representative Council
    - Myron Lowe, UMN & GPN Representative Council
    - Rick McMullen, KU (Chair)
    - Henry Neeman, OU
    - James Rice, SDSU, SD EPSCoR Director
    - Ron Roeber, UNL
    - Gordon Springer, MU
    - David Swanson, UNL & Holland Computing Center
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# CI Planning Process

- Two surveys
    - Survey 1 to assess perceived CI needs.
    - Survey 2 to identify CI service priorities that can be met on a regional basis.
    - Participation: Faculty, staff & graduate students at GPN member institutions
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# Survey 1: Respondent Profile

## Grouped by Campus HPC Use

<b>HPC Campus Users*</b>	<b>55%</b>
<b>HPC Campus Aware*</b>	<b>25%</b>
<b>HPC Campus Not Aware</b>	<b>20%</b>
<b>N</b>	<b>410</b>

## Grouped by Regional/National HPC Use

<b>HPC Regional/National Users*</b>	<b>22%</b>
<b>HPC Regional/National Aware*</b>	<b>35%</b>
<b>HPC Regional/National Not Aware</b>	<b>42%</b>
<b>N</b>	<b>410</b>



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# Survey 1: High Priority Needs of CI-Knowledgeable Respondents

- Inventory of CI resources available across my campus/organization.
  - Inventory of CI resources available regionally and nationally.
  - Searchable knowledgebase of CI expertise (people, tools, applications, resources) in my field.
  - Opportunities for collaboration.
  - Help in identifying possible revenue streams for my/my campus/my organization's CI efforts.
  - Help in identifying cost containment/avoidance strategies for my/my campus/my organization's CI efforts.
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# Survey 1: Open-ended Responses

- Security
  - Bandwidth
  - Specialized CI tools for research
  - Specialized software
  - Specialized hardware (e.g., visualization)
  - Shared Data Resources
  - Shared computational resources
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# Survey 2: Highest Priority Services (1)

Service Group	Service
<b>Computation</b>	<ul style="list-style-type: none"><li>▪ <i>HPC facilities</i> for research, education and training at a regional level (2)</li><li>▪ <i>Assistance</i> to access and use HPC at other institutions in the region (22)</li></ul>
<b>Data storage services</b>	<ul style="list-style-type: none"><li>▪ <i>Data storage facilities</i> for research, education and training. (6)</li><li>▪ A way to <i>store and catalogue my datasets</i> (13)</li><li>▪ A way to <i>access and use storage resources</i> at institutions in the region. (20)</li></ul>
<b>Networking services</b>	<ul style="list-style-type: none"><li>▪ High bandwidth connectivity and related services to other universities and other research institutions in the US. (1)</li><li>▪ High bandwidth connectivity and related services to other universities and other research institutions outside the US. (19)</li></ul>

# Survey 2: High Priority Services (2)

<b>Service Group</b>	<b>Service</b>
<b>Education &amp; training</b>	<ul style="list-style-type: none"><li>▪ <i>Workshops</i> to learn about advanced tools for research. (3)</li><li>▪ <i>Online demonstrations</i> of emerging CI-related technologies. (15)</li><li>▪ <i>Workshops</i> to learn to develop and improve campus tools. (16)</li><li>▪ <i>Annual meeting</i> focusing on using advanced tools across the region. (21)</li></ul>
<b>Communication</b>	<ul style="list-style-type: none"><li>▪ <i>Monthly newsletter</i> on technical advances/uses across GPN and nationally (5)</li><li>▪ Providing <i>regular</i> email, blog, twitter, etc. <i>communication</i> on the <i>latest developments</i> in CI. (7)</li></ul>
<b>Collaboration</b>	<ul style="list-style-type: none"><li>▪ <i>Searchable database of opportunities</i> for collaboration. (11)</li><li>▪ Assistance in <i>identifying potential research collaborators</i>. (14)</li><li>▪ <i>Facilitate grant requests</i> across multiple campuses. (17)</li><li>▪ <i>Help to make contacts</i> with individuals with specific CI expertise (24)</li></ul>

# Survey 2: High Priority Services (3)

Service Group	Service
<b>Help</b>	<ul style="list-style-type: none"><li>▪ <i>Online searchable help</i> for CI tools. (4)</li><li>▪ <i>Centralized help desk model</i> of support for <i>locating and using regional and national CI</i> technology in your research. (12)</li></ul>
<b>Expertise &amp; resource referral</b>	<ul style="list-style-type: none"><li>▪ Searchable <i>database of CI resources</i> available across my campus or organization. (8)</li><li>▪ Searchable <i>database of CI expertise</i> (people, tools, applications, resources) in my field at the regional, national and international levels. (23)</li></ul>
<b>Other</b>	<ul style="list-style-type: none"><li>▪ Help in <i>identifying possible revenue streams</i> for my/my campus/my organization's CI efforts. (9)</li><li>▪ Organizing and maintaining a <i>software licensing/purchasing collaborative</i> for GPN member institutions. (10)</li><li>▪ Providing <i>collaborative tools that I can pick up and use</i> (e.g., Adobe Connect, wikis, blogs) (18)</li></ul>

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# Next steps

- Great Plains Network

- Executive Council (Board of Directors)
  - Network Program Committee (responsible for managing issues related to networking)
  - □ Create GPN CI Program Committee to manage regional service development & deployment
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# Thanks!

- Greg Monaco
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