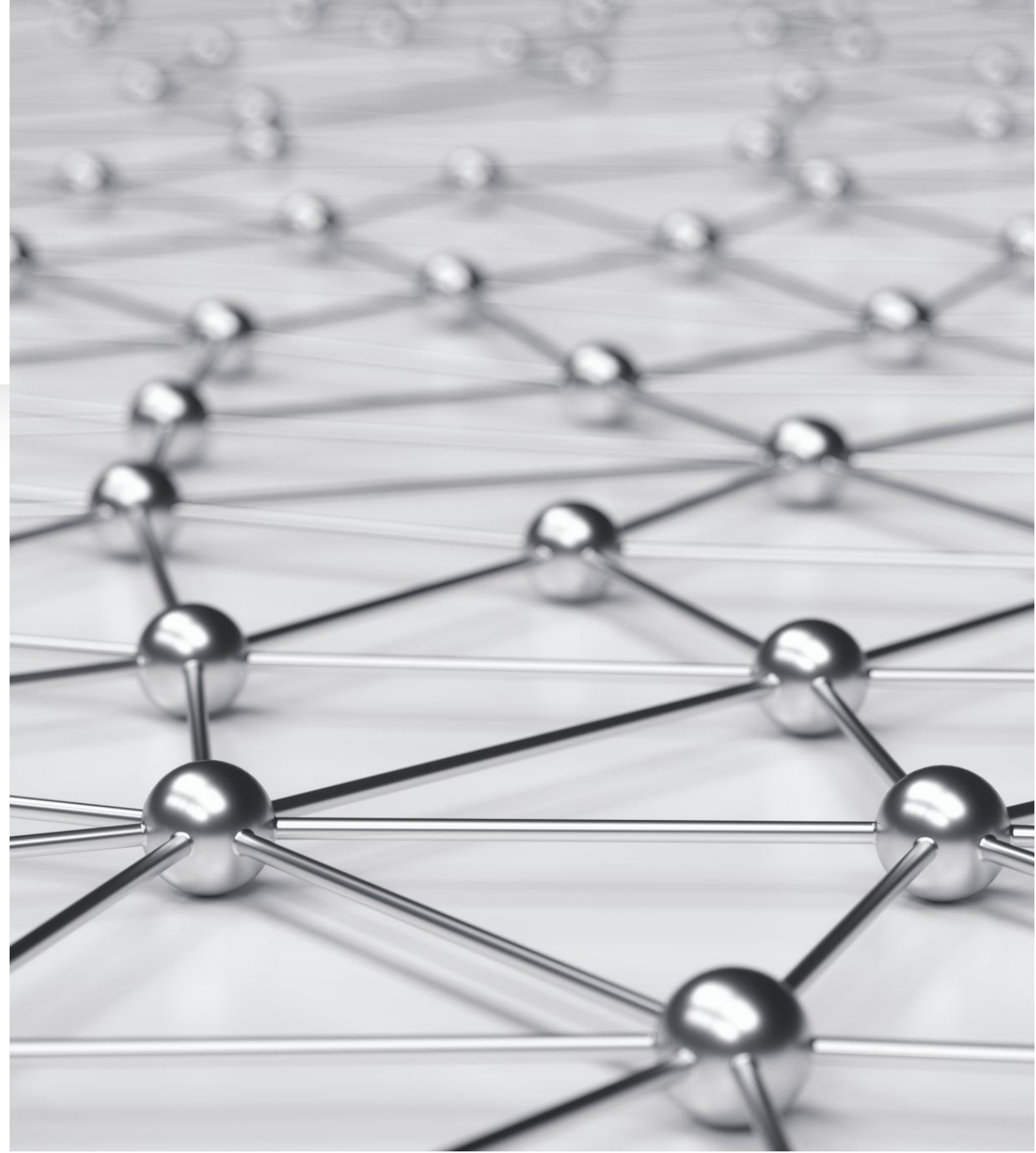




GPN - Quantum

What is GPN-Quantum

GPN-Quantum will be a planning team to research the impact and opportunities of quantum technology for the Great Plains Network and its member institutions. The team will target aspects of quantum networking, quantum sensors, and quantum computing.



Starting up

- Identify existing quantum projects, researchers and initiatives within the GPN footprint.
- Identify quantum-related objectives of the participating institutions
- Identify and survey interests of GPN-affiliated quantum researchers
- Provide GPN sites with the “first steps” for implementing quantum technologies
- Assemble a team to flesh out a planning grant for GPN.

Goals

- Leverage research partnerships across state borders for increased funding and shared outcomes.
- Identify pathways from existing GPN networking and HPC functions into quantum technologies.
- Pilot & implement quantum networks among GPN sponsored sites.
- Increase the regional workforce with quantum researchers, specialists, and technicians

Tasks

- Discuss opportunities for sponsorship with NSF, DOE, NIH
- Integrate GPN participants into national/international quantum discussions.
- Identify existing and potential quantum network sites
- Build a community of practice

Outcomes

- Establish a knowledge base within GPN with a capacity to evaluate quantum technologies and to plan initiatives.
- Establish the viability of piloting a limited quantum network with a 3-year starting timeline of 2027.
- Establish the viability of piloting a broader (150 mile radius) network with a 5-year starting timeline of 2029.
- Acquire a planning grant for quantum networking by 2025.



THE INSTITUTE FOR UNDERGROUND SCIENCE AT SURF Quantum Partnership Workshop at SURF

**The South
Dakota
Quantum
Initiative
Research
Team**

**GPN's
Quantum
Partners**



Discussion