

# Superconductivity Global Alliance

Steve Gourlay, Magnet Technology Division

Superconductivity  
Global Alliance  
**ScGA**

For a greener, healthier, more prosperous, and sustainable future

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With the promise of lossless energy transmission and revolutionary technology breakthroughs, superconductivity stands as a beacon for a sustainable future.

The Superconductivity Global Alliance (ScGA) is a collective initiative dedicated to advancing the understanding and application of superconductivity.

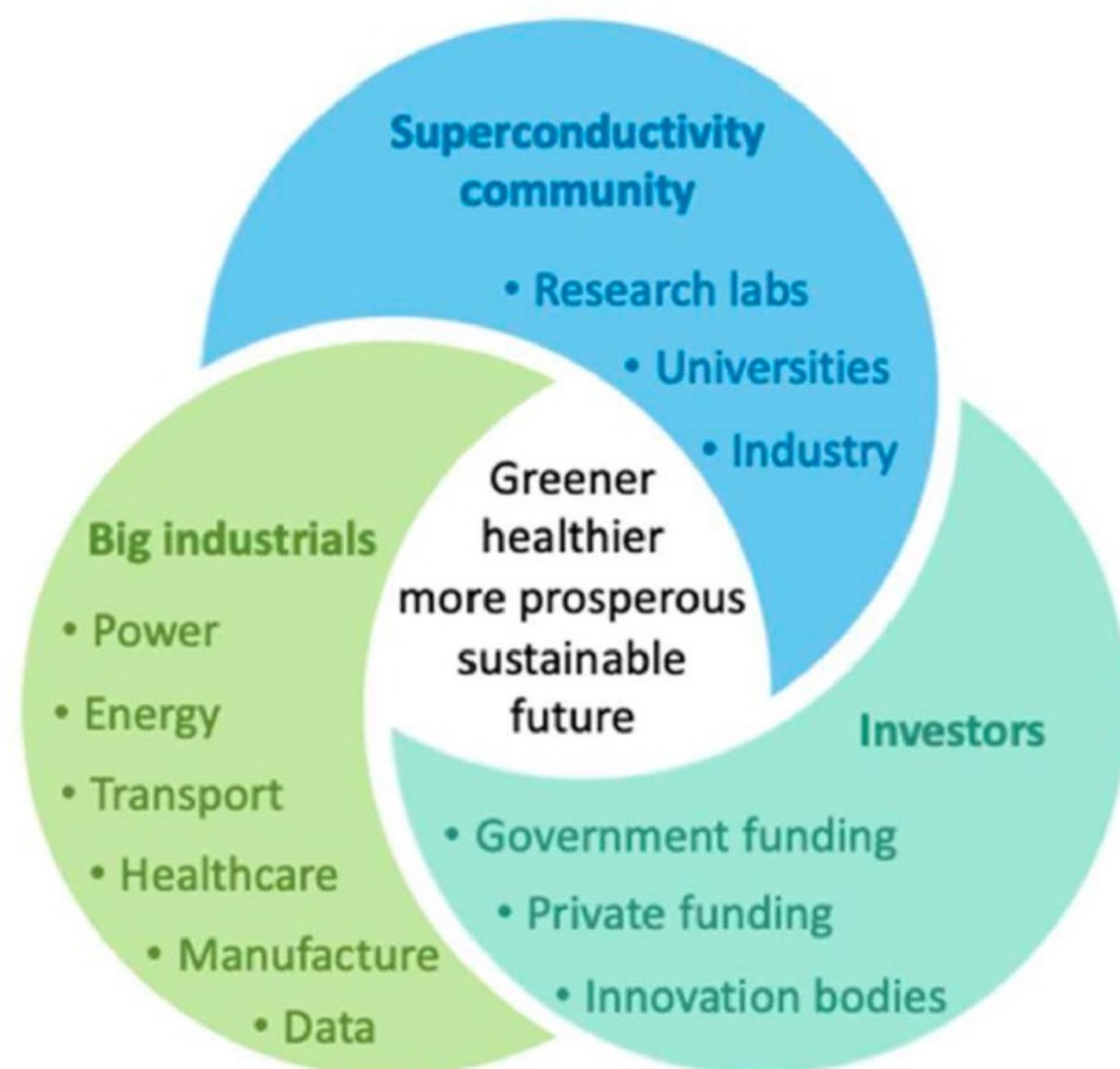
**To harness the enormous potential of superconductors in addressing our societal future needs, new thinking and new innovations are needed to translate demonstrator devices into successful market applications. At the heart of this process, we propose to establish a three-way partnership.**

**ScGA Vision:** Superconductivity provides a pathway to achieving zero-emission targets by enabling fusion power, expanding usage of wind power, facilitating zero-emission transportation, as well as enabling innovative technologies such as low energy superconducting classical and quantum computing, water purification, new medical diagnostic and therapy tools, and new scientific breakthroughs.

**ScGA Mission:** To harness the potential of superconductivity, promote its integration into various sectors, and pave the way for a greener, healthier, and more prosperous global community as set by the UN sustainable development goals.

**Overview:** Superconductivity has already enabled transformational technologies and promises future technology breakthroughs that will have a significant impact on our lives. Superconductivity has enabled major advances and capabilities in MRI, NMR, high magnetic field research, and high energy physics accelerators which otherwise would not be possible.

**The Proposal:** We propose the establishment of public and private partnerships leading to national initiatives to accelerate the development of superconducting solutions that can make a step-change towards addressing the 17 UN's Sustainability Development Goals and the net zero carbon emission targets by 2050.



## Fermilab Technology Applications and Spin-offs

- HEP Applications
  - Future Facilities – Muon Collider, FCC, Dark Matter
- Fusion Magnet Technology
- Superconducting RF
- Quantum Information Systems
- Transportation
- Environment
- Medical
- Industry

