Fermi National Accelerator Laboratory July 2020

# Fermilab Partnerships Contribute to the U.S. Economy



Fermilab partners with industry, universities, and other research facilities around the globe to help advance U.S. competitiveness and improve the lives of all our citizens.

#### Building U.S. technical capability

Through R&D, user facility, and STEM educational programs, Fermilab trains and inspires the next generation of professionals.

scientists & engineers

university students

## Transitioning technology to market

Partnership agreements give industry and outside institutions access to Fermilab's unique expertise and technology.

Cooperative R&D Agreements

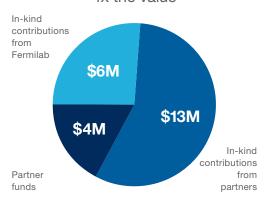
Strategic Partnership Projects



Fermilab contributions vield 4x the value









University Small Business Large Business Non-Profit

All data based on FY2019 numbers



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# Driving innovation, creating opportunities and inspiring new businesses



Compact SRF accelerator This is a portable, energy-efficient, high-power electron beam generator that combines a portfolio of intellectual property in superconducting radio-frequency technology and accelerator science. It is suitable for mobile and industrial applications. IARC at Fermilab has obtained more than \$4 million from other programs and agencies in accelerator technology research.



**Electromagnetic mop for oil spills** During the Deepwater Horizon oil spill, Fermilab scientist Arden Warner began experimenting with removing oil from water. He found that electromagnets and magnetite can be an efficient solution. Warner shared his idea with the Fermilab Office of Partnerships and Technology Transfer, and the first patent was issued in 2014. The technology is in the process of being commercialized.

### Licensing a growing patent portfolio for new business opportunities

A growing portfolio of patents and copyrights creates new opportunities to license Fermilab technology to companies and entrepreneurs.

32

Active Patents

+

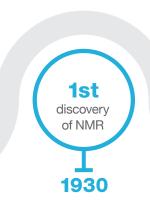
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Patents Pending

2007 2011 2015 2019

### Pushing technologies that drive new industries and markets

Fermilab's pioneering role in accelerating the development of superconducting (SC) wire at an industrial scale made applications such as MRI commercially viable.



95% world's SC wire for Tevatron



Today T 40M million MRI scans



