

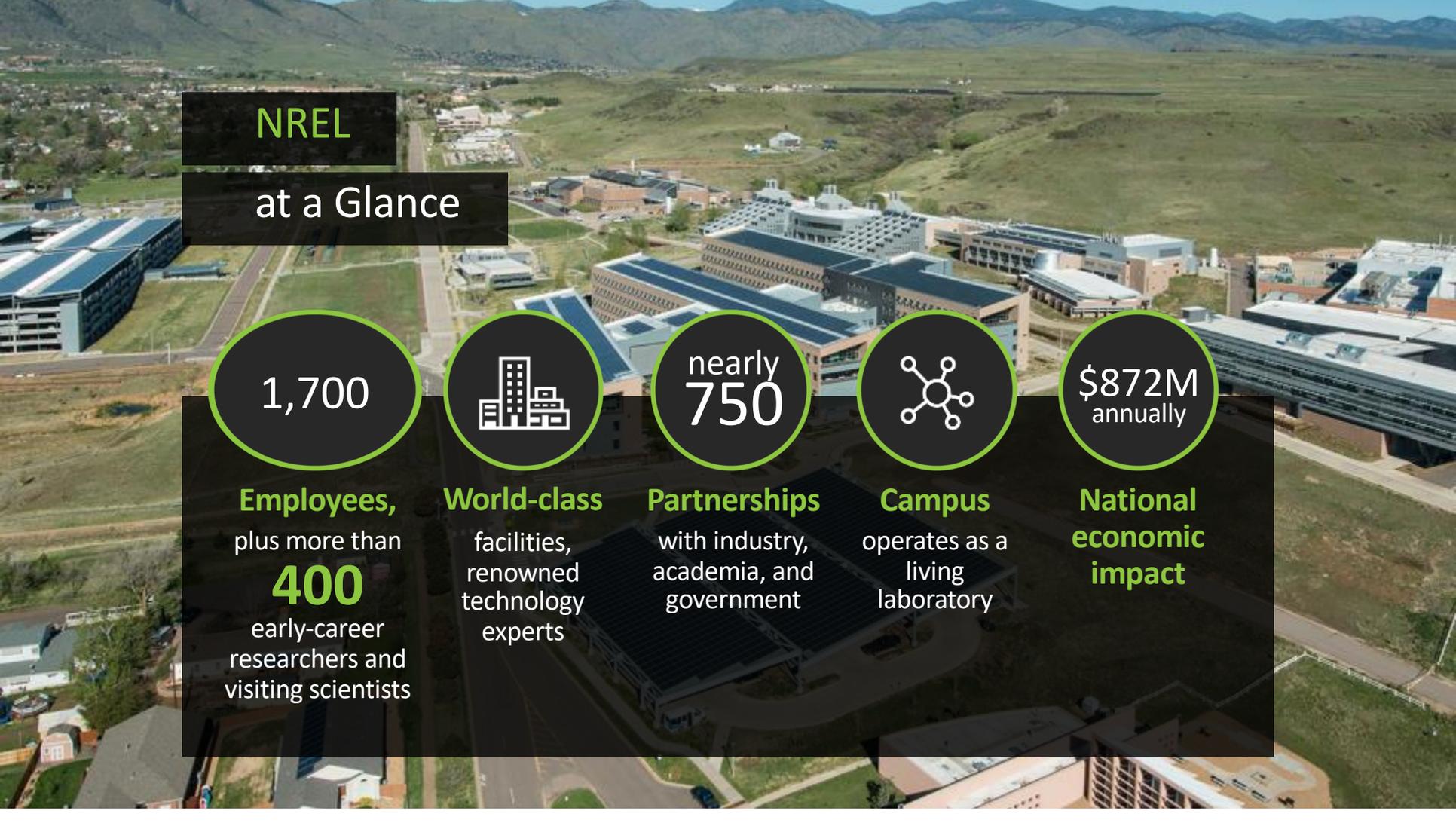


NREL: Water, Resiliency and Innovation

Matt Ringer

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Presented at InnovateH2O



NREL

at a Glance

1,700

Employees,
plus more than
400
early-career
researchers and
visiting scientists



World-class
facilities,
renowned
technology
experts

nearly
750

Partnerships
with industry,
academia, and
government



Campus
operates as a
living
laboratory

\$872M
annually

**National
economic
impact**



Energy – Water Analysis

Analysis Impacts

- Improved energy management and energy reductions for water treatment infrastructure
- Co-optimized distributed energy and water systems for islands, remote regions, Native American lands, and developing countries
- An examination of the economic benefits of using renewable energy-powered (wind and wave) desalination systems to produce clean water for coastal and remote island communities



Water – Grid Integration

Capabilities
Impacts

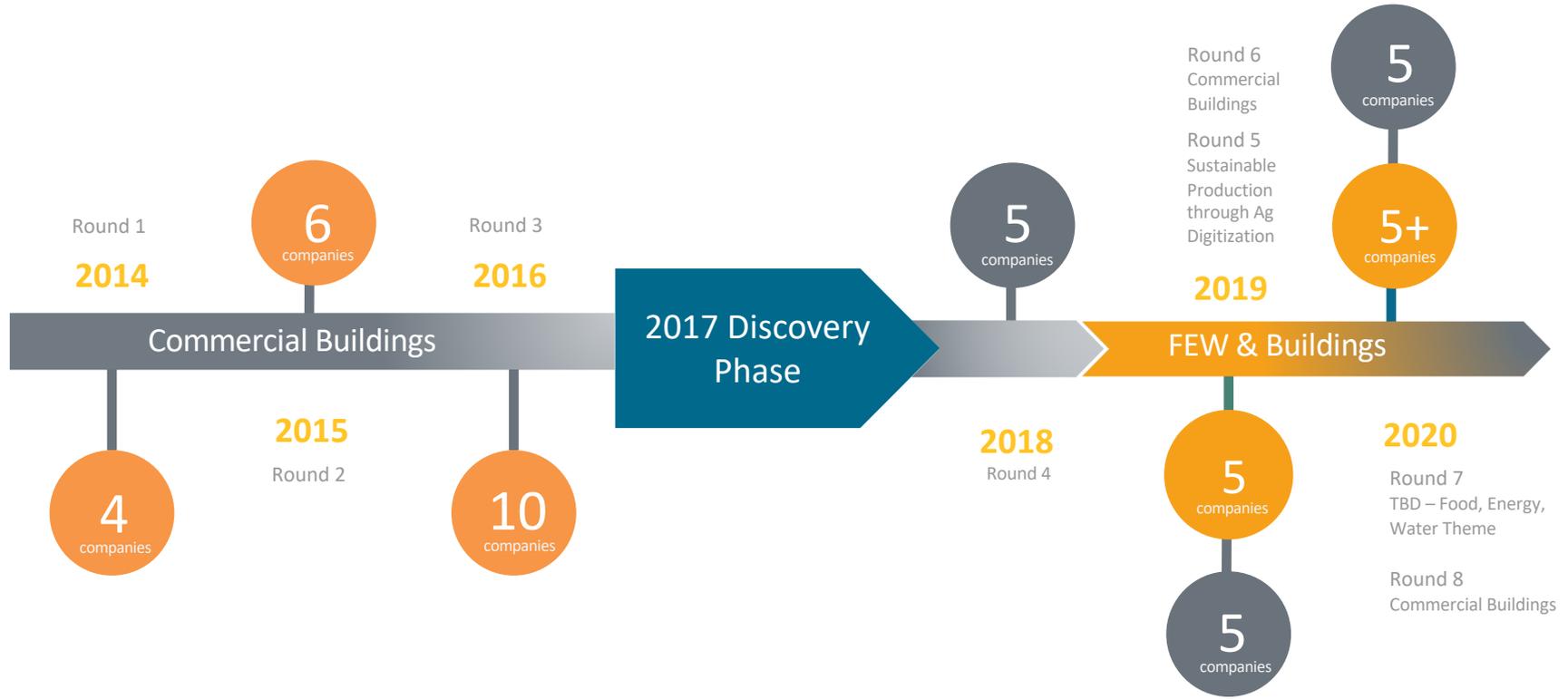
- Utilization of water infrastructure and operations to provide electric grid services
- Advanced microgrid designs and operations to manage energy and water loads
- Simulation and testing of water and energy system hardware under actual physical conditions, market structures, and at scale
- Advanced communications and control testing opportunities for smart water and energy systems

What is IN²?



- Launched in 2014 with an initial \$10 million commitment by the Wells Fargo Foundation, and expanded in 2017, the Wells Fargo Innovation Incubator (IN²) is now a **\$30 million program** supporting innovative technologies and innovators
- IN² provides technical assistance that leverages the capabilities, facilities, equipment and the deep expertise that exists at NREL and the Donald Danforth Plant Science Center to help companies **derisk technologies and ease their path to market adoption and deployment**
- IN² is designed to support technologies and startups at various stages of development, including:
 - Tier I: Lab Bench Scale
 - Tier II: Prototype
 - Tier III: Commercially-ready
- Up to \$250,000 initial award, with follow on funding available for successful projects
- Companies whose completed projects are commercially ready may have the option to do beta testing within a real-world environment, and conduct a pilot within the Wells Fargo buildings portfolio or with another strategic program partner

IN² Expansion Plan



Thank you

www.nrel.gov

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