



**Pacific
Northwest**
NATIONAL LABORATORY

Grid Storage Launchpad (GSL)

U.S. DEPARTMENT OF
ENERGY **BATTELLE**

PNNL is operated by Battelle for the U.S. Department of Energy



Grid Storage Launchpad (GSL) Overview





\$75M
TOTAL
ESTIMATED
FACILITY COST

100 WORKSTATIONS
30+ LAB MODULES

\$35M
NON-FEDERAL
INVESTMENTS

\$15M 
\$8M 

\$7M 
\$5M 

GSL Mission

Validate:

Independent testing of next generation storage materials and systems (<100kW) under realistic grid operating conditions

Accelerate:

Reduce risk and speed development of new technologies by propagating rigorous grid performance requirements to all stages of development

Collaborate:

Link DOE and storage R&D communities in a new collaboration center to solve key crosscutting challenges.

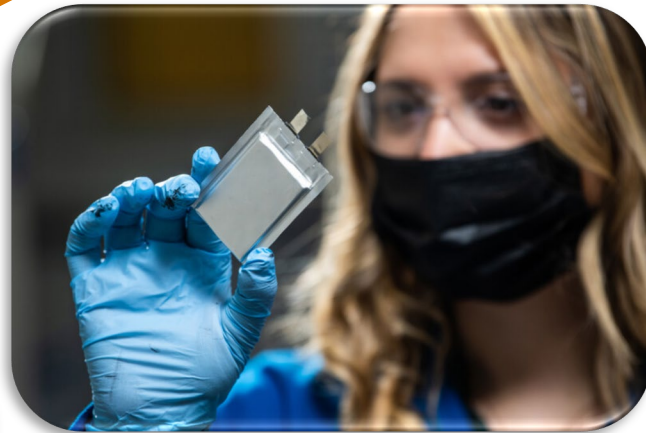
Educate:

Provide standardized training and development of the next generation workforce, from skilled labor to first responders and safety officials, to utility planners and regulators.

GSL: Accelerating Development Cycle

Systematic incorporation of real-world duty cycles & AI/ML tools for performance projections.

Rigorous Performance Testing across scales

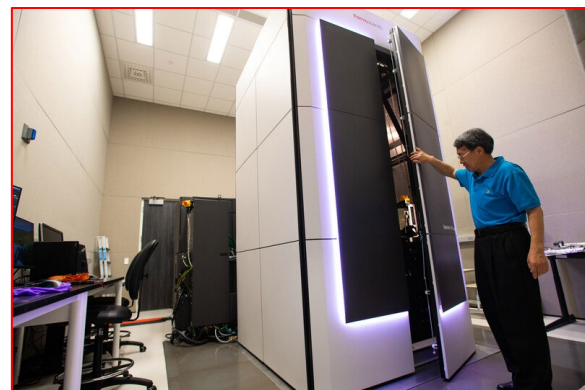


Validated performance and digital twin development

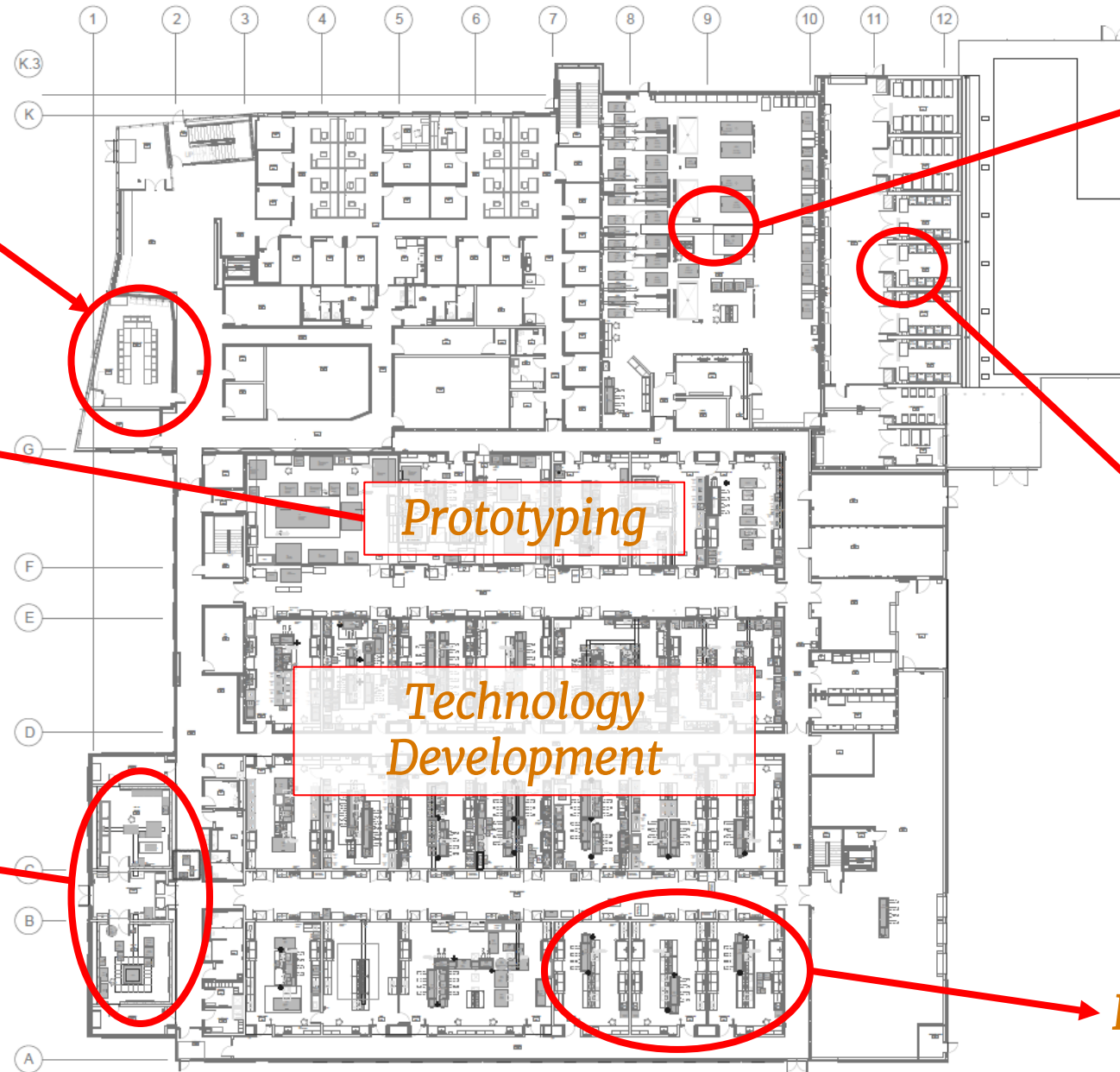
Visualization Lab



Prototyping

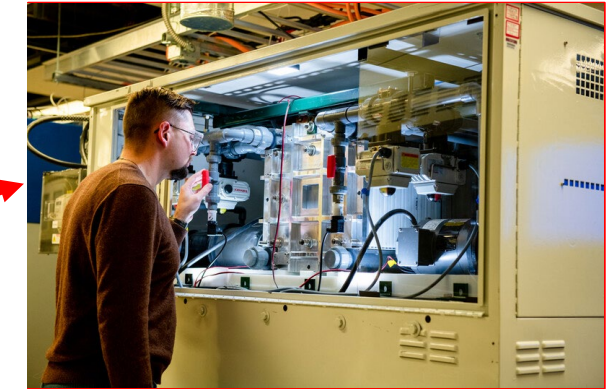


In-Operando
Characterization

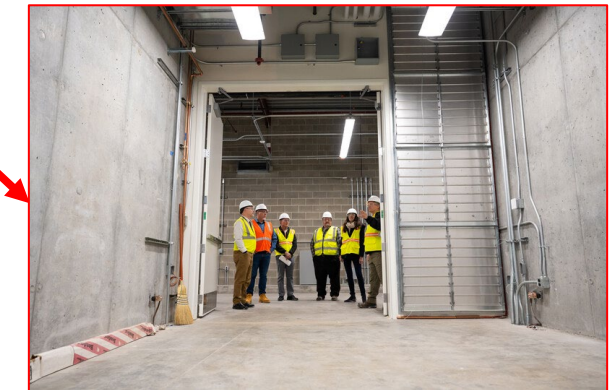


Prototyping

Technology
Development



10kW Reliability Test Lab



100kW Test Chambers

Education Labs

GSL: Opening Summer 2024



Discussion

- GSL Opportunities for the wider storage community