

# Testing Network and Open Library



# GRID

MODERNIZATION INITIATIVE  
U.S. Department of Energy

PI: Matthew Lave (SNL), +1: Rob Hovsopian (INL)

Project Team: ANL, BNL, INL, LBL, LLNL, NREL, ORNL, SNL, SRNL, PNNL

## Project Description

**Access to testing resources and models at National Labs and beyond is vital to grid modernization.**

We are improving access to testing infrastructure for grid devices and systems, and related models and tools:

- **Testing Network (GMLC-TN):** a federated, lab-based resource for testing and performance validation of grid devices and systems
- **Open Library (GMLC-OL):** a public repository for validated models, simulation tools and testing resources

## Motivation

- Difficult to find complete and up-to-date information
- Access is confusing, complex, time-consuming
- Lack of coordination between Labs

## End of Year Milestones

Stakeholder outreach and coordination

### PY1 – Establish Foundations

- draft GMLC-TN framework documents
- resource databases specifications
- catalog of testing capabilities at National Labs

### PY2 – Deploy GMLC TN/OL

- GMLC-TN formally established through framework adoption by GMLC-TN full members
- first version of GMLC-OL implementation

### PY3 – Ensure Future Sustainability

- GMLC-TN procedures documented
- sustainable mechanism for baseline activities
- GMLC-OL models and test resources available

## Project Team

Sandia National Laboratories	Project lead, responsible for TN task
Idaho National Laboratory	Responsible for OL task
National Renewable Energy Laboratory Savannah River National Laboratory Oak Ridge National Laboratory Berkeley Lab Pacific Northwest National Laboratory Brookhaven National Laboratory Argonne National Laboratory	Support TN and OL tasks, including partnerships & outreach; supply models, simulation tools and testing resources
Utilities, National Labs, Academia, Manufacturers	Stakeholders

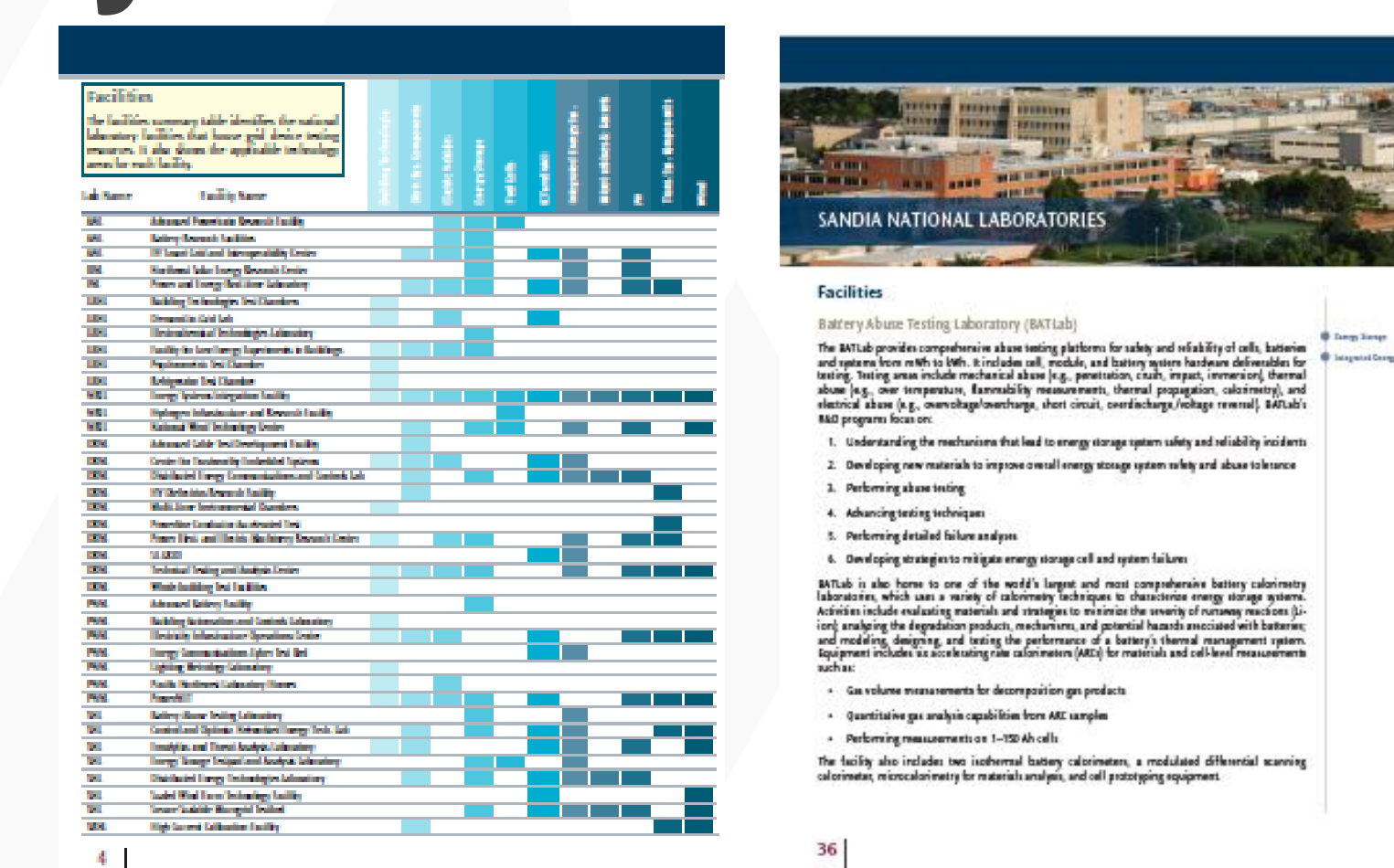
## Progress to Date

### Stakeholder Workshop

- 35 attendees, ~1/2 from industry and academia
- breakout sessions to solicit feedback from stakeholders

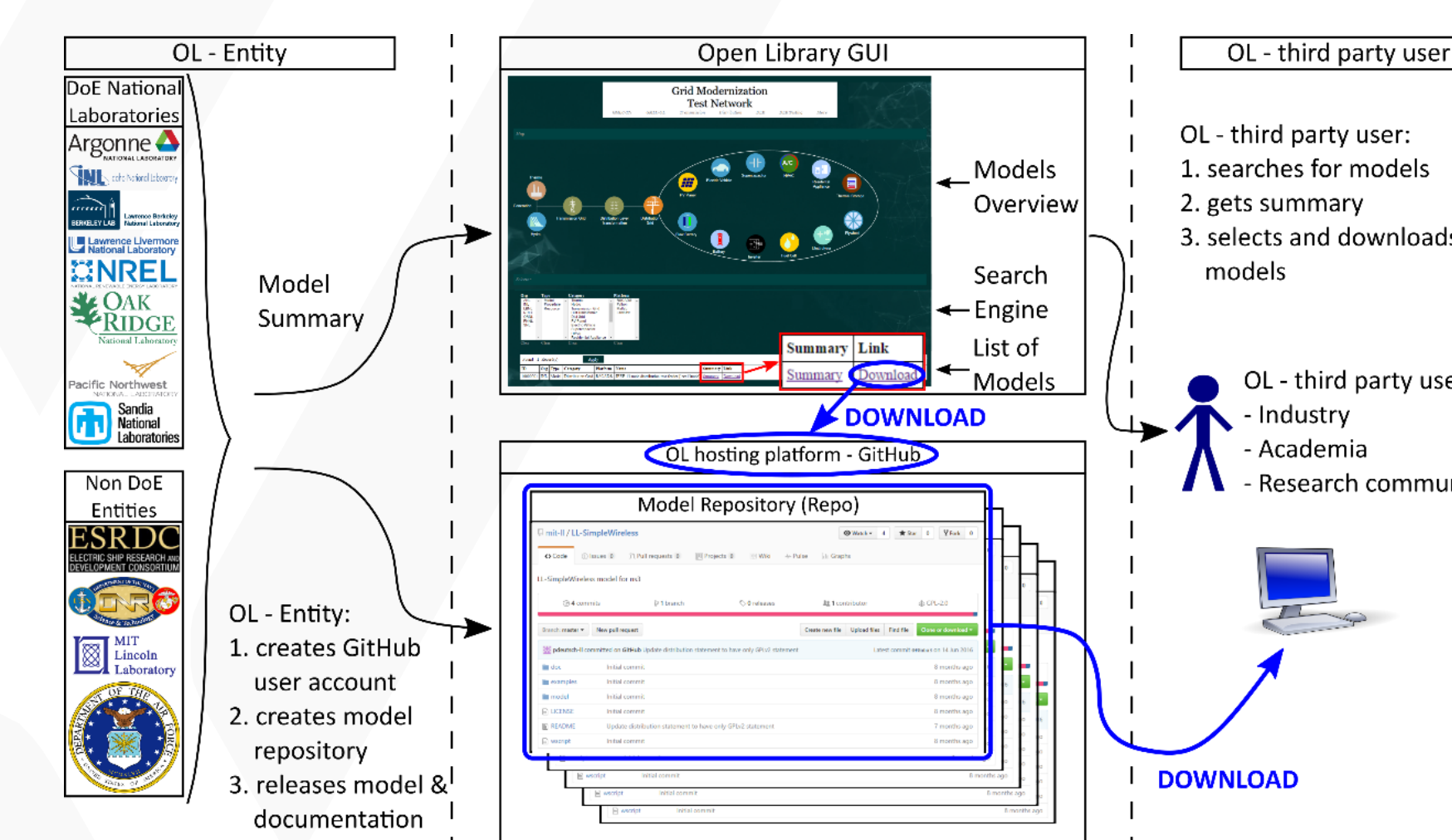
### Catalog of National Laboratory Test Facilities & Capabilities

- Self-assessment – 10 National Labs; 39 distinct facilities
- Searchable online version with periodic updates coming soon



### Open Library Framework

- Model taxonomy
- Web architecture
- Hosting/collection of models



## Expected Outcomes

- Broader awareness of and access to Lab capabilities
- Go-to resource for validated models and test procedures
- Expansion to include other publically accessible facilities
- Improved collaboration and lasting industry impact
- Support adoption and deployment of new grid devices