

If all laboratory buildings in the U.S. improved their energy efficiency by 20%, annual energy and cost savings could reach about 40 trillion BTUs and \$1 billion. To address this significant opportunity, Better Buildings launched the Smart Labs Accelerator: a three-year period over which DOE worked with partners to implement their own Smart Labs program, helping them:

- ▶ Optimize safety
- ▶ Reduce costs
- ▶ Improve energy efficiency
- ▶ Maintain high performance laboratories

Starting in 2016, the Smart Labs Accelerator challenged partners to establish a 10-year energy reduction target of at least 20% across their portfolio of laboratory buildings. Accelerator partners included universities, federal agencies, and national laboratories committed to improving the energy efficiency of their laboratories. Based on partner insights and input from other contributors, DOE developed the [Smart Labs Accelerator Toolkit](#), a dynamic repository for Smart Lab resources and best practices.

Smart Lab Partner Results

Over three years, 17 Accelerator partners successfully implemented their own Smart Labs program and performed a series of low- and no-cost energy efficiency measures. Partners are on track to surpass the Accelerator's goal of 20% energy reduction in 10 years.

Case studies highlighting partner best practices learned over the course of the Accelerator are included in the [Smart Labs Accelerator Toolkit](#).

Some highlighted partner innovations include:

- ▶ **Prioritizing Safety Using a Performance-based Alternative Design Process**
 - The University of Minnesota's holistic approach to lab safety requires optimal facilities, standard operating procedures, and involvement of Environmental Health and Safety.
 - [Learn more](#) about their process for optimizing ventilation and new construction.
- ▶ **Developing a Lab Ventilation Management Program Coordinator Position**
 - When Los Alamos National Laboratory (LANL) developed its Laboratory Ventilation Management Plan (LVMP), they also introduced a crucial role, the LVMP coordinator.
 - [Learn more](#) about how this coordinator serves as a liaison between lab stakeholders.
- ▶ **Driving Savings Through Occupant Engagement and Behavior Change**
 - The Colorado School of Mines (CSM) launched an occupant engagement and behavior change program to encourage green practices across all laboratory stakeholders.
 - [Learn more](#) about how CSM got the word out.
- ▶ **Upgrading Ultralow Freezers**
 - The University of New Hampshire (UNH) has purchased 18 new freezers and disposed of nine outdated freezers with an estimated energy savings of 80,000 kWh/year. UNH recognized \$11,000 in savings after the first year.
 - [Learn more](#) about how UNH got buy-in to implement this project.

By the Numbers

Program Results:

- ▶ **17 partners**
- ▶ **Over 9 million square feet**
- ▶ **103 billion BTUs saved**
- ▶ **Average portfolio improvement of 11%**