

Comparative Innovation Strategies and Technology Transfer: U.S. Efforts

*Center for Strategic and International Studies
September 14, 2010*



U.S. DEPARTMENT OF
ENERGY

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NATIONAL PRIORITIES

Innovation for Sustainable Growth and Quality Jobs



Catalyze
Innovation for
National Priorities

- **Unleash a clean energy revolution**
- **Support advanced vehicle technology**
- Drive breakthroughs in health IT
- Address the “Grand Challenges” of the 21st century

Promote Competitive
Markets that Spur
Productive
Entrepreneurship

- **Encourage high-growth and innovation-based entrepreneurship**
- Promote American exports
- Support open capital markets that fund the most promising ideas
- Improve public sector and support community innovation

Invest in the Building Blocks of
American Innovation

- Restore American leadership in basic research
- Modernize education to create a world-class workforce
- Build a leading physical infrastructure
- Develop an advanced IT ecosystem

Adapted from: National Economic Council “A Strategy for American Innovation: Driving Towards Sustainable Growth and Quality Jobs”, August 5, 2009



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FEDERAL LABORATORIES

Capabilities and Facilities

Collaborations...Sponsored Research...Technical Assistance...User Facilities...Licensing



NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

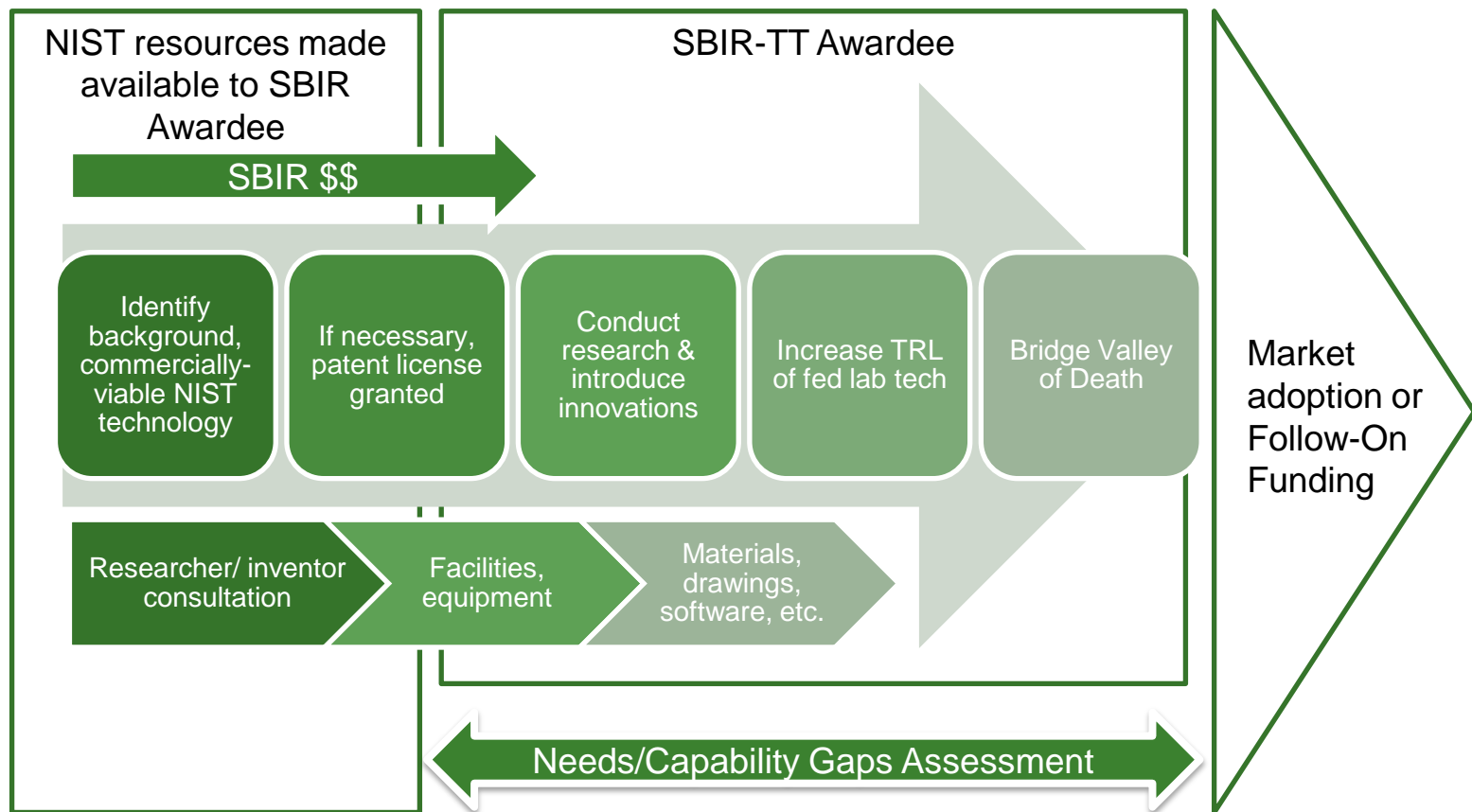


**US Army Corps
of Engineers®**



**U.S. DEPARTMENT OF
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NIST SBIR TT Program



Under consideration at several additional Departments



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- Energy Frontier Research Centers
- Energy Innovation Hubs

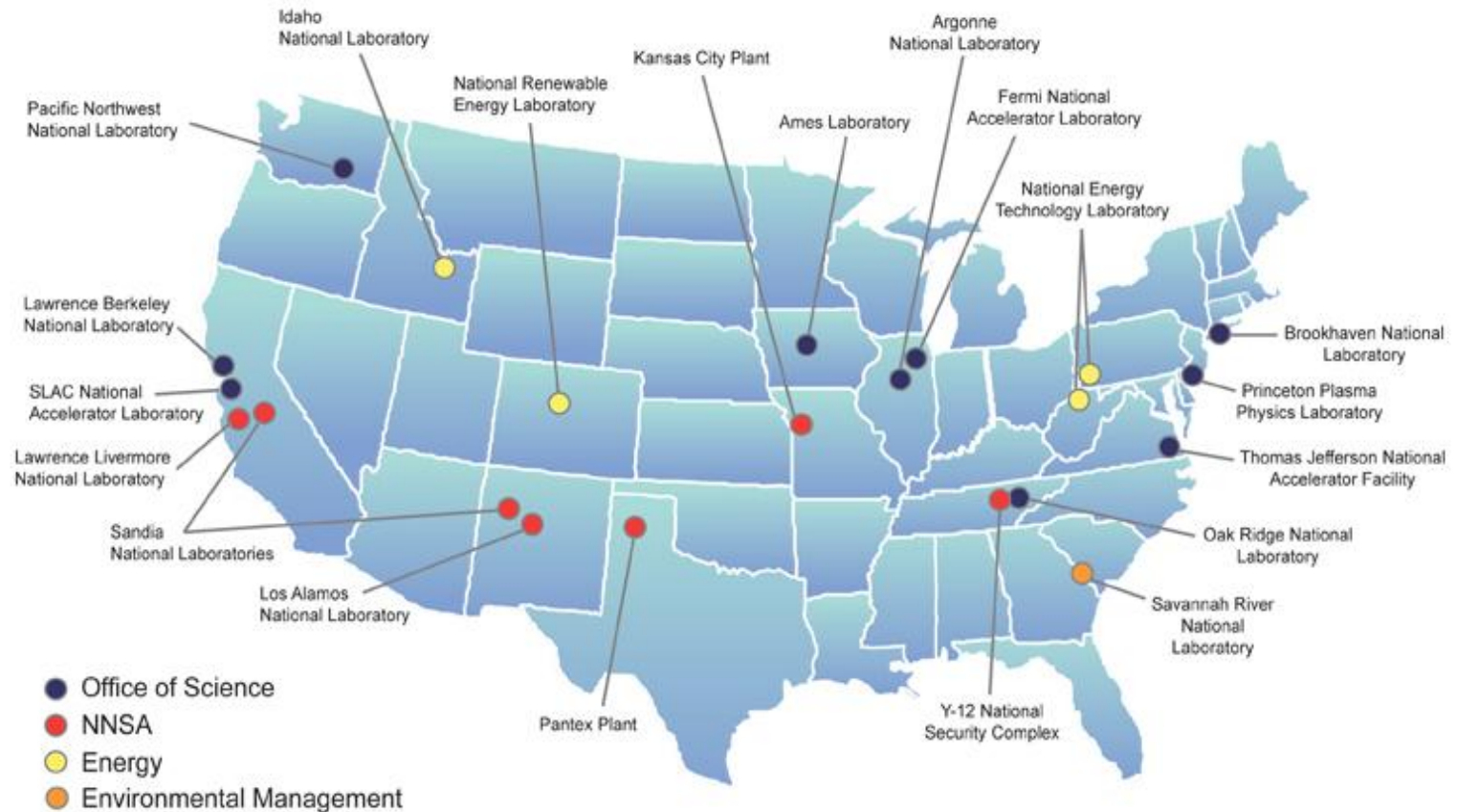


- ARPA-e
- DOE SBIR Phase III Xlerator Program
- Entrepreneurs-in-Residence
- Accelerating Discovery to Deployment



DEPARTMENT OF ENERGY

Laboratories and facilities across the U.S.



All but one of 17 National Labs are Government-Owned Contractor-Operated (GOCO)

Energy Technology Transfer Successes

Ultrathin Film Solar Technology using Nanocrystal Semiconductors

Developed at Lawrence Berkeley National Laboratory - Licensee Solexant is constructing a 100MW manufacturing plant in the US to be the largest nanotechnology manufacturing facility in the world.



Inverted Metamorphic Multijunction (IMM) Solar Cell

developed at the National Renewable Energy Laboratory and licensed to Emcore Corp., established a solar cell efficiency of 37.9% under concentrated light equal to 10 suns in 2005, and in 2008, a modified version of the IMM design set a new record of 40.8% efficiency under 326 suns. Under a cooperative research and development agreement the Laboratory and Emcore Corp are developing a commercial version aimed at the space satellite market and for use on Earth in concentrated photovoltaic arrays,



High-Powered Battery for Hybrid Electric Vehicles (HEVs)

developed at the Argonne National Laboratory with EnerDel, is a highly reliable and extremely safe device that is lighter in weight, more compact, more powerful and longer lasting than the Ni-MH batteries in current HEVs



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