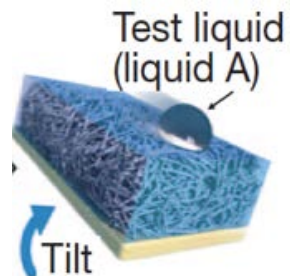




Ellen D. Williams
Director of ARPA-E

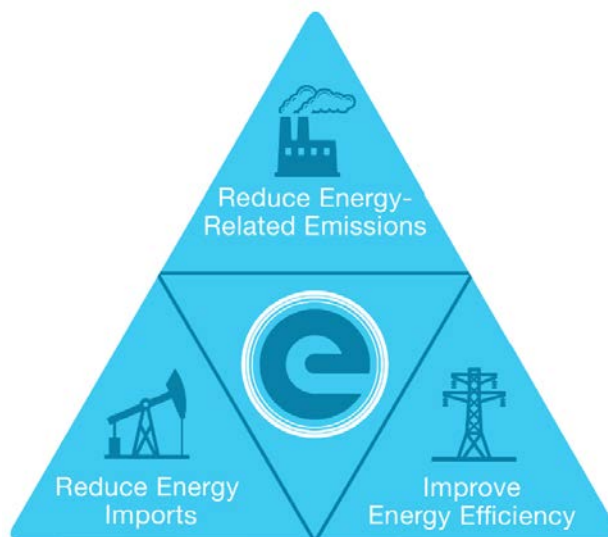
INNOVATION

Revolutionary, Cutting Edge, High Risk Inventions

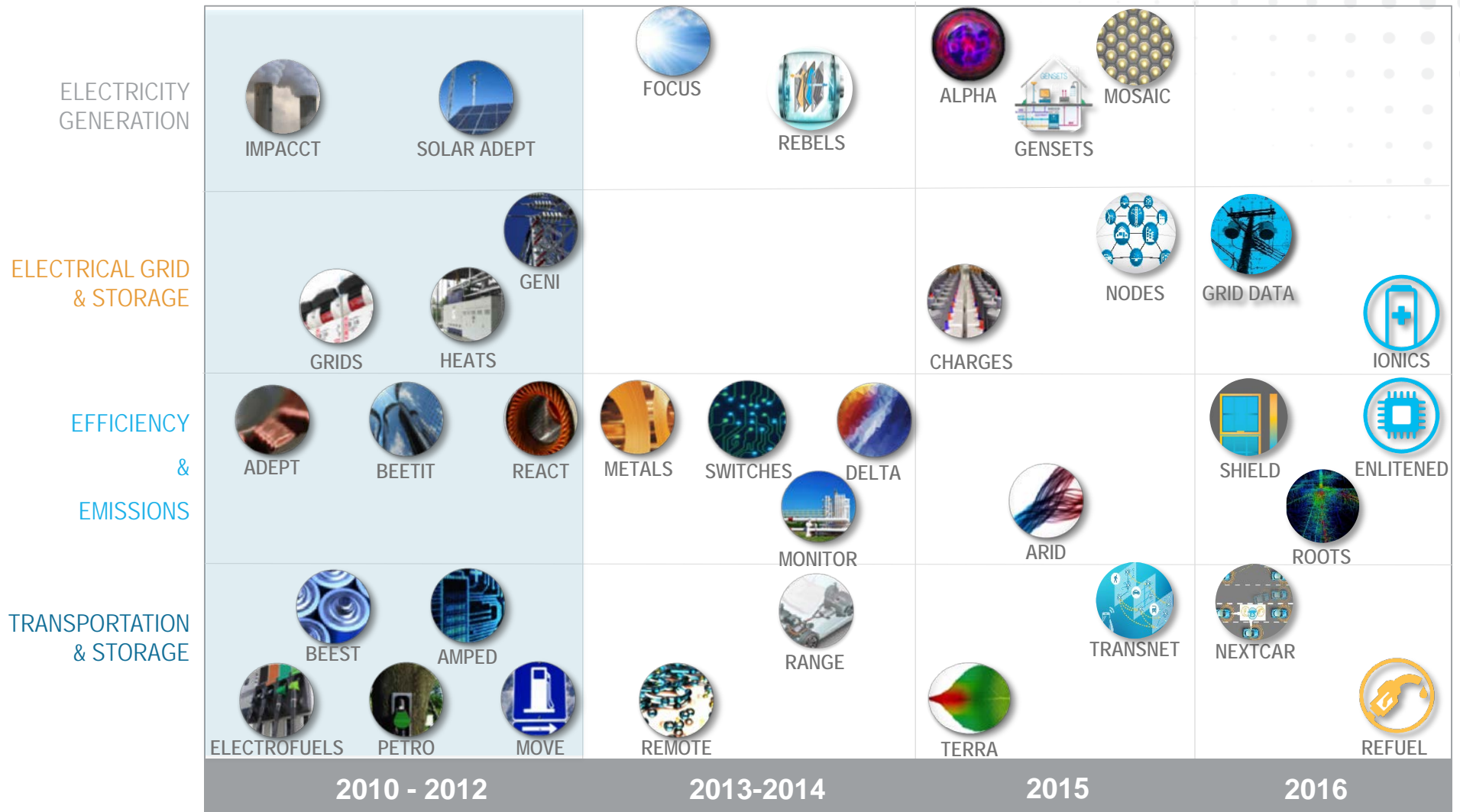


ENERGY APPLICATIONS

Efficiency, Emissions, Imports



Technical Innovation for the Future of Energy



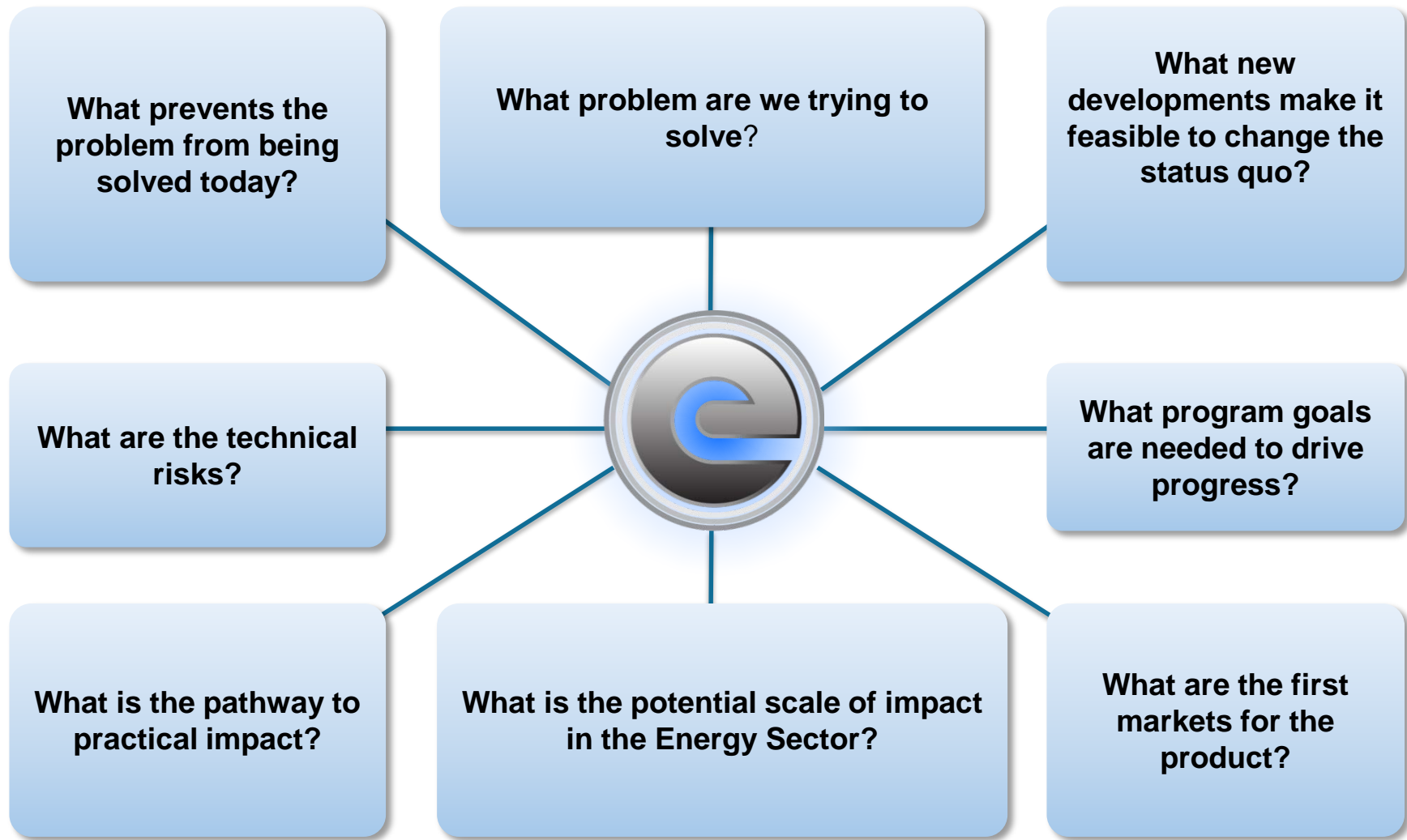
IMPACT

Energy and Economic Security, Technological Lead

If it works...

will it matter?

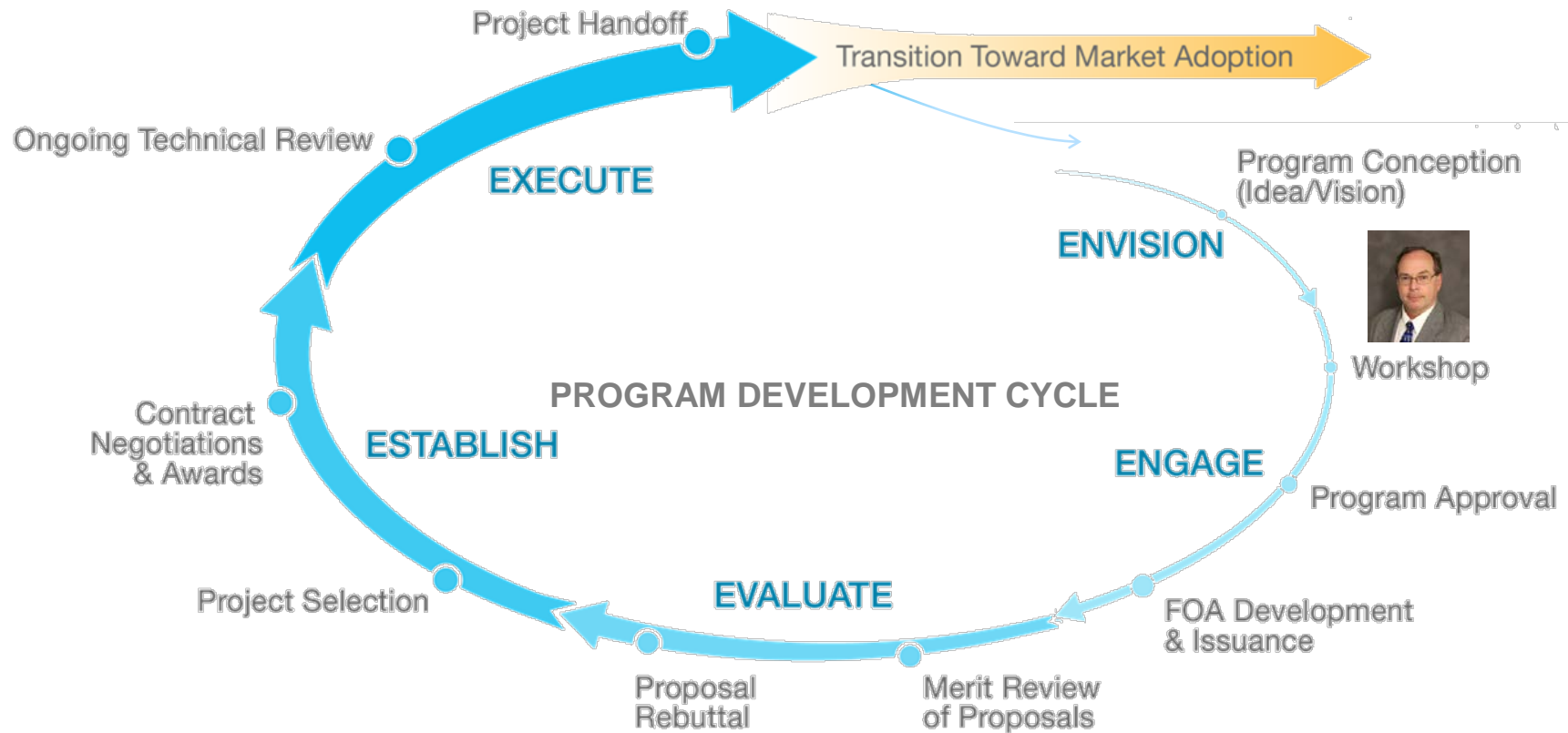
ARPA-E Program Framing Questions



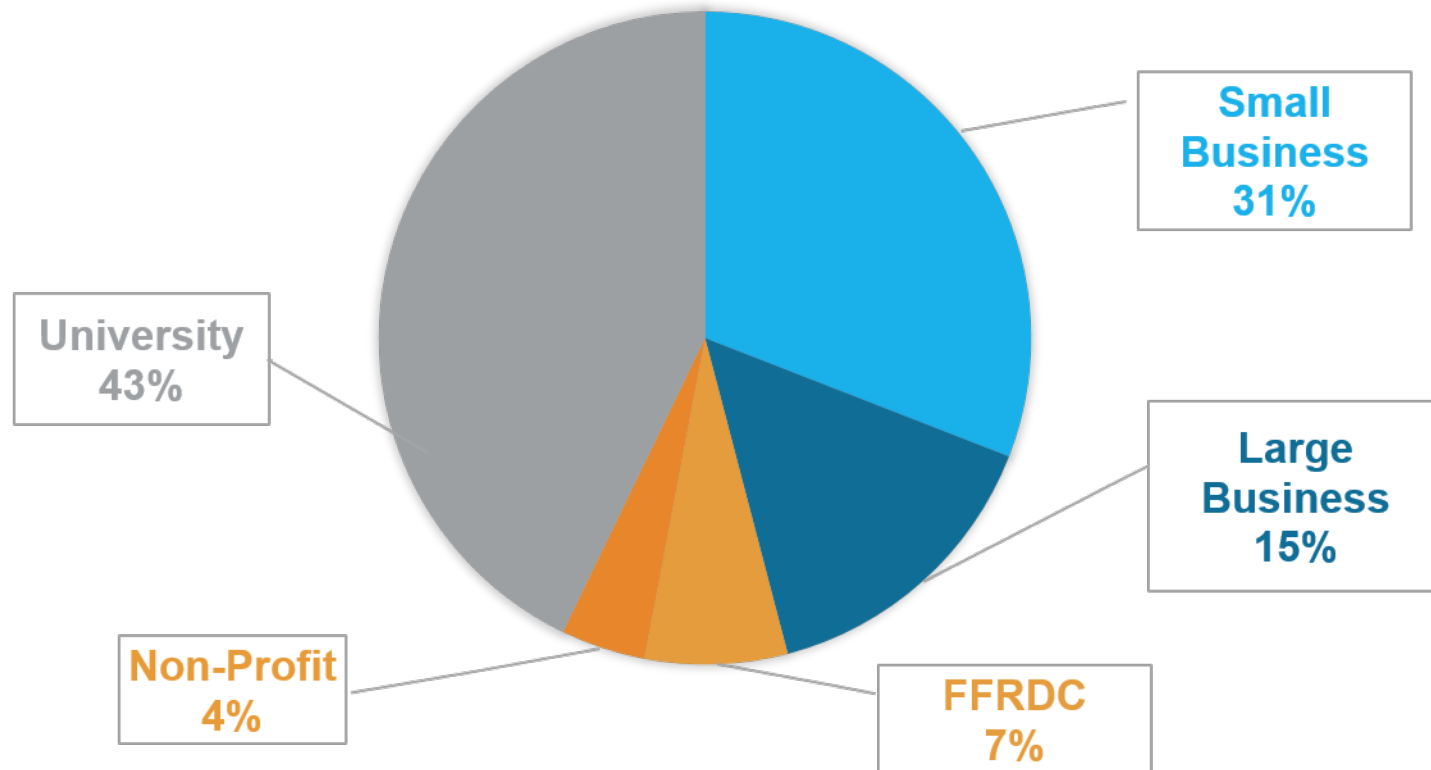
Developing ARPA-E Focused Programs



ARPA-E Program Directors



ARPA-E Project Portfolio by Lead Organization



ARPA-E supports multi-institutional teams with substantial involvement from the private sector:

72% of projects involve more than one institution

84% of projects include the private sector, as leads or partners

Active Program Management

Program Directors

- ▶ Perform technical deep dive soliciting input from multiple stakeholders
- ▶ Present & defend program concept in climate of constructive criticism
- ▶ Actively manage portfolio projects from merit reviews through project completion
- ▶ Develop milestones and work “hands-on” with awardees in value delivery
- ▶ Represent ARPA-E as a thought leader in the program area

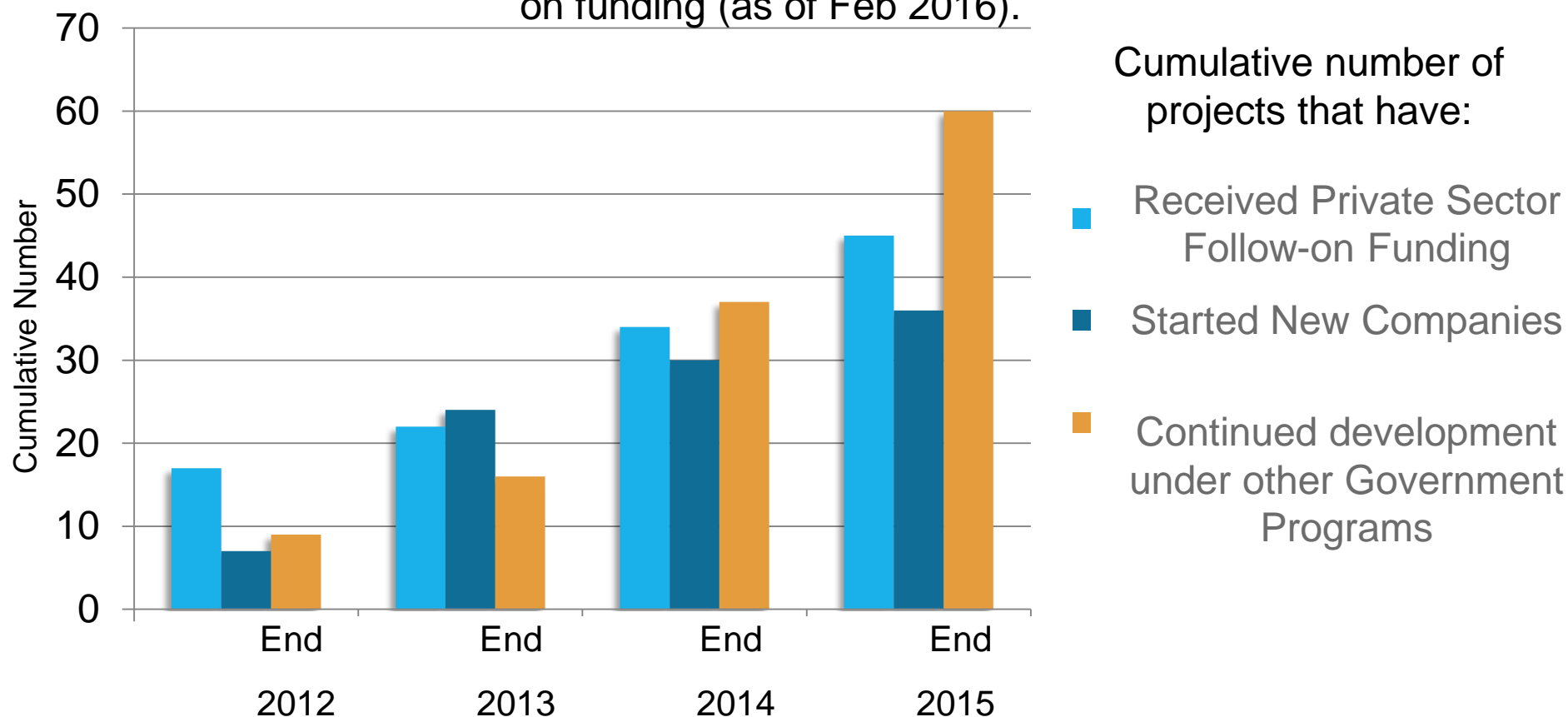
Commercialization Advisors

- ▶ **Manage** the Commercialization progress of project technologies
- ▶ **Advise:** support project teams with skills and knowledge to align technology with market needs
 - IP and competitor management
 - Value Chain and Market analysis
 - Product hypothesis
 - Economic analysis
 - Partner discovery and engagement

Measuring the Transitions Toward Market

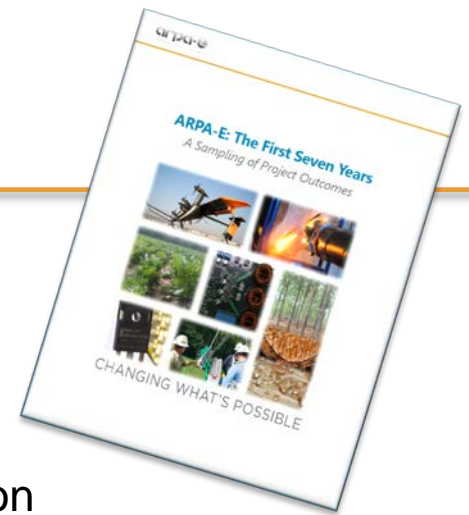
Since 2009 ARPA-E has invested approximately \$1.3 billion across more than 475 projects. Of those, 206 are alumni projects (as of Feb. 2016).

45 ARPA-E projects have attracted more than \$1.25 billion in private-sector follow-on funding (as of Feb 2016).



Assessment criteria

- ▶ Potential impact on Energy Mission and Goals
- ▶ Technical Challenge
 - what are the barriers to creating the desired impacts
- ▶ Technical Opportunity
 - what new approaches provide an opportunity for transformation
- ▶ Innovation Demonstration*
 - what was accomplished, how much has the technology advanced from the start to end of the project
- ▶ Pathway to Economic Impact*
 - Status of project at end of ARPA-E funding (or present status for alumni)
 - Next steps in commercialization pathway, demonstrations underway or planned (or commercialization status, early products for alumni)
 - Partnerships and funding
- ▶ Long Term Impacts
 - Value of the prototype technology
 - Assessment of broader impacts of the new technical approaches
 - Estimates of the scale of potential impacts on Energy Sector goals





Unparalleled
Networking



Highly Selective
Technology Showcase



Inspiring Keynotes

www.arpa-e-summit.com

Feb. 27 - Mar. 1, 2017 | Washington, DC