

October 20, 9:00 - 10:00 am

cleantech
SAN DIEGO
CELEBRATING 15 YEARS OF
INDUSTRY GROWTH

The Foundation for Energy Security and Innovation

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ITIF Center for Clean Energy Innovation
October 2022

ITIF | INFORMATION TECHNOLOGY & INNOVATION FOUNDATION

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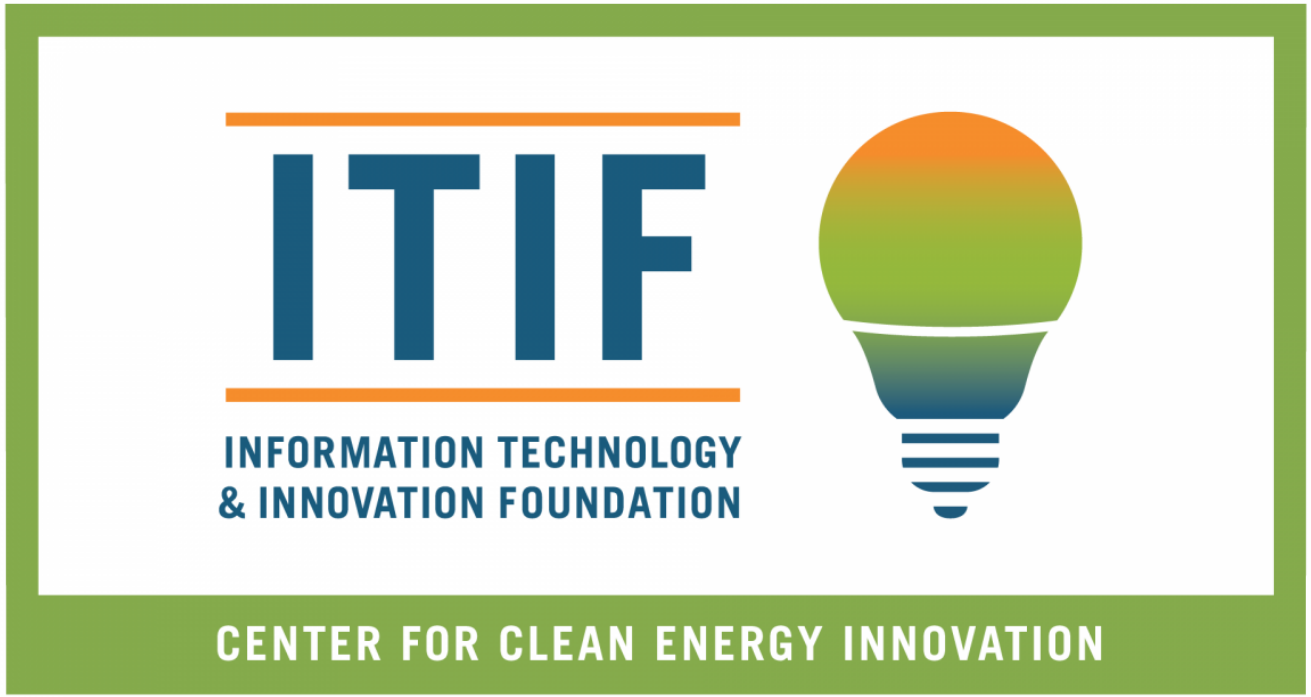
ITIF | INFORMATION TECHNOLOGY & INNOVATION FOUNDATION
CENTER FOR CLEAN ENERGY INNOVATION

About ITIF

- Independent, nonpartisan research and education institute focusing on intersection of technological innovation and public policy, including:
  - Innovation and competitiveness
  - IT and data
  - Telecommunications
  - Trade and globalization
  - Life sciences and agricultural biotech
  - Clean energy innovation
- Formulates and promotes policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress
- World's top think tank for science and technology policy, according to the University of Pennsylvania's authoritative *Global Go To Think Tank* Index

About ITIF's Center for Clean Energy Innovation

- ITIF's Center for Clean Energy Innovation exists to elevate the climate innovation imperative in the policy debate in the United States and around the world. We conduct research, provide nonpartisan analysis, generate policy proposals, and convene members of the analytical and policymaking communities with this mission firmly in focus.



The Origin Story

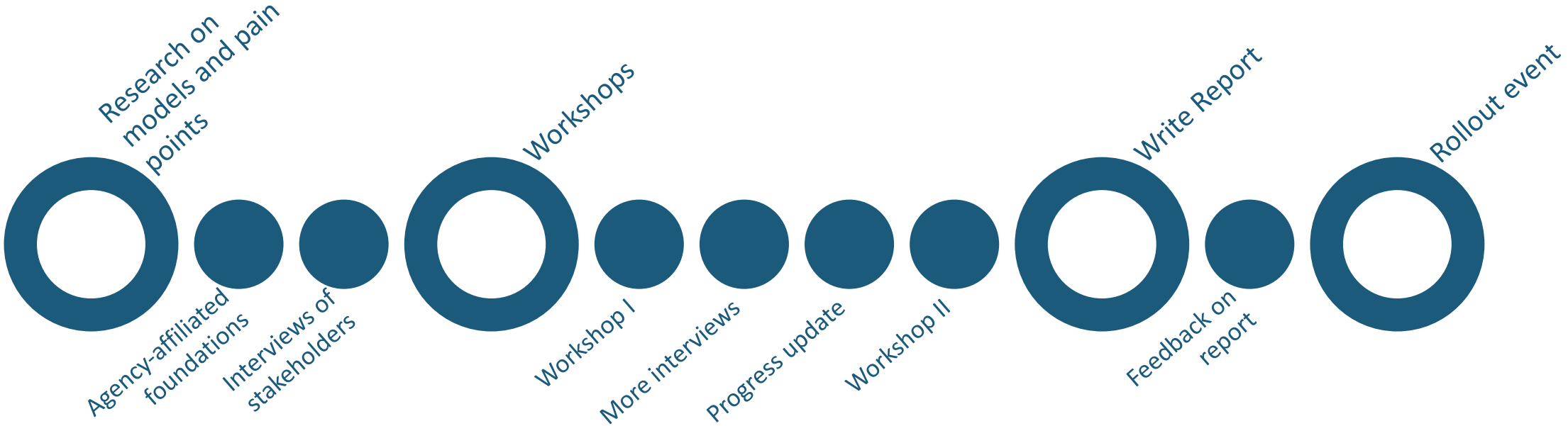


Bolster institutions supporting tech transfer, commercialization, and innovation

16. Establish a core of 20 "manufacturing universities"
17. Complete the buildout of Manufacturing USA to 45 Institutes of Manufacturing Innovation (IMIs)
18. Create a National Engineering and Innovation Foundation
19. Create an Office of Innovation Review within the Office of Management and Budget
20. Create a network of acquisition-oriented DoD labs based in regional technology clusters
21. Establish manufacturing development facilities
22. Establish a foundation for the national energy laboratories

2019-2020 DOE Foundation Project (led by Jetta Wong)

- Understand how a Department of Energy Foundation (DOEF) should be organized and operated.
- Share this understanding with and build support, if appropriate, for it among key stakeholders in a future DOEF.



Precedents from Established Agency-Related Foundations

- National Park Foundation was established in 1935 and works with “friends” groups for individual parks around the country.
- Foundation for the National Institutes of Health has raised over $1 billion and sustains public-private R&D partnerships.
- Foundation for Food and Agriculture works with the USDA and makes creative use of innovation prizes and challenges.
- Many more! All different, reflecting varied missions.

Agency-Related Foundations: What makes them special?

Everyday Implementation of Congressional Authorization

- Direct connection to agency
- Public-private partnerships
- Flexible and fast
- “Official” imprimatur or prestige
- 501(c)3, so non-federal contract mechanisms

FFAR
Foundation for Food and Agriculture Research

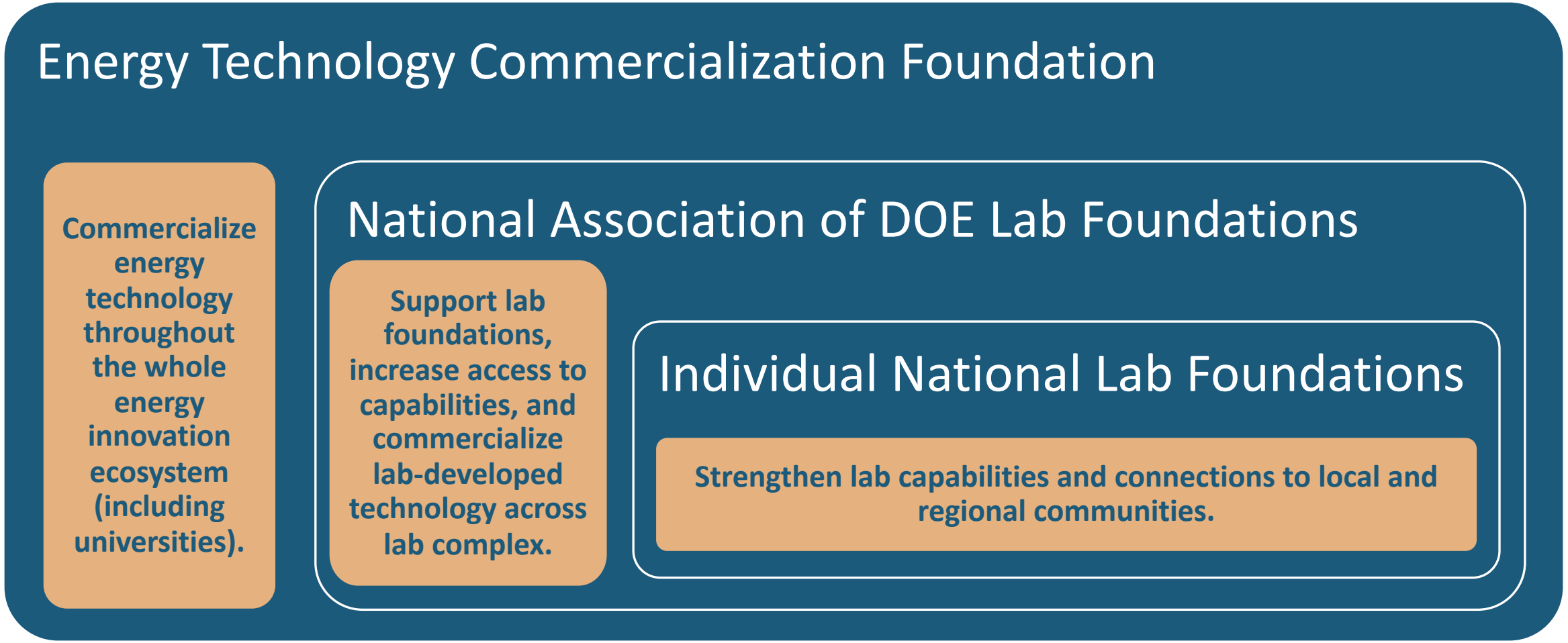
National Park Foundation™

FNIH
Foundation for the National Institutes of Health

Agency-Related Foundations In Action: COVID-19

- **CDC Foundation: Raised over $560 Million for pandemic response**
  - investing in the work of those on the frontlines
  - health campaigns focused on promoting protective behaviors, and
  - research and projects to understand and address health equity issues.
- **Regan-Udall Foundation for FDA**
  - COVID-19 Evidence Accelerator
- **Foundation for the National Institutes for Health**
  - Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV)

Three frameworks discussed during 2019 workshops



ITIF Proposes an Energy Technology Commercialization Foundation (2020)

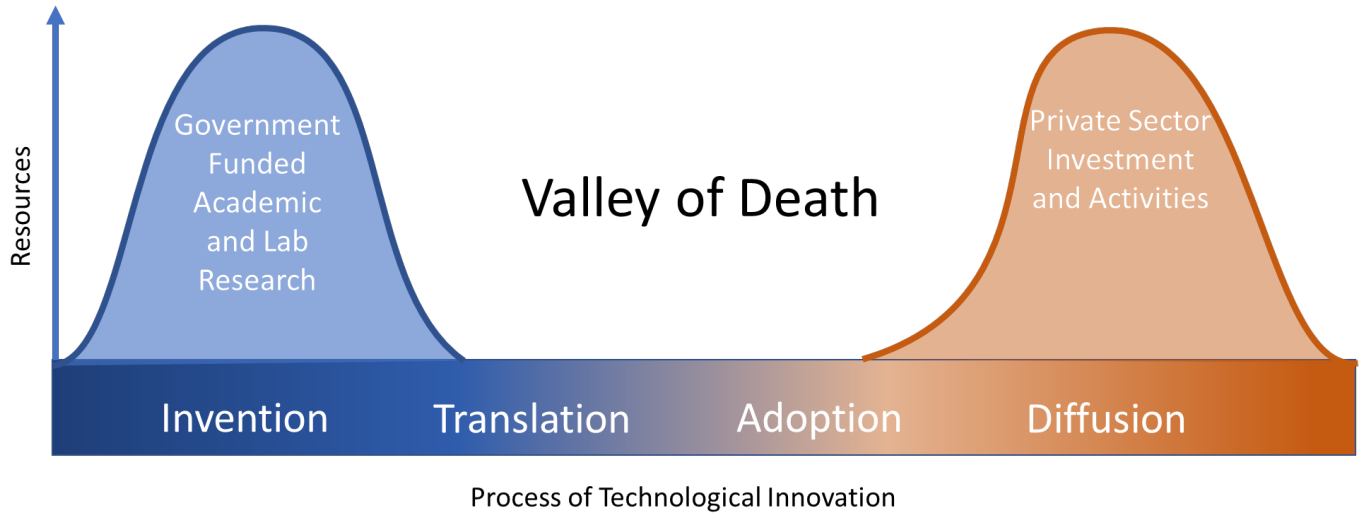
- Sets forth a vision and design for a foundation to work with DOE for Congress to consider
- Diagnoses commercialization gap in U.S. energy innovation system
- Explores structure and functions of existing federal agency-related foundations

"The need for an Energy Technology Commercialization Foundation is urgent. The United States, in spite of its scientific prowess, is not making rapid enough progress toward solving the diverse and difficult decarbonization challenges it faces. ETCF's creation would not solve all that ails the U.S. energy innovation system. But it would help DOE to lower the mortality rate of innovators seeking to cross the valley of death and encourage other actors in the system to take actions that would have that effect as well.

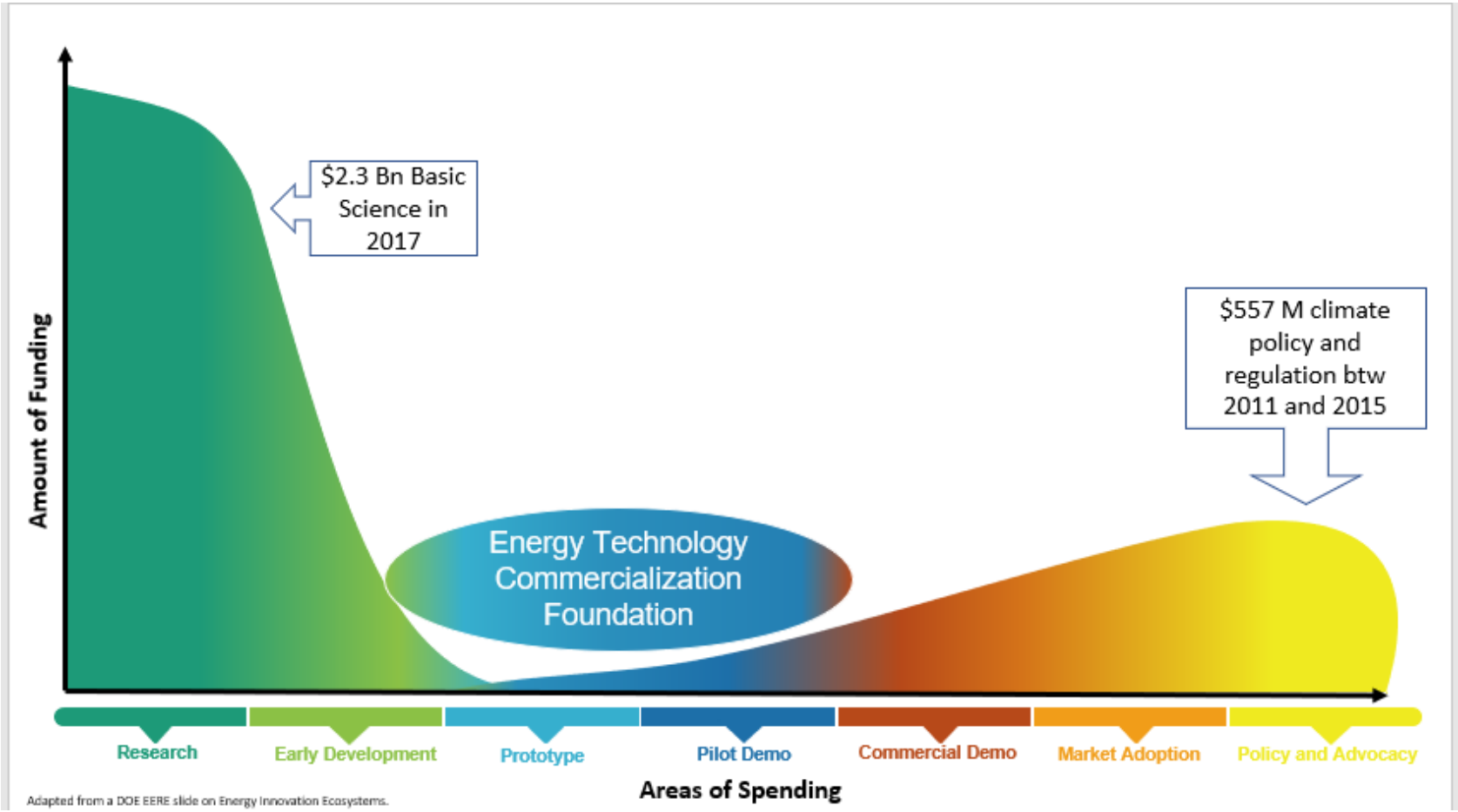
We call on Congress to authorize ETCF, provide it and DOE with the tools and incentives they need to work together harmoniously, and jump-start it with a modest one-time appropriation of $30 million, which would leverage substantially larger contributions from nongovernmental donors."

The Clean Energy Technology Commercialization Gap

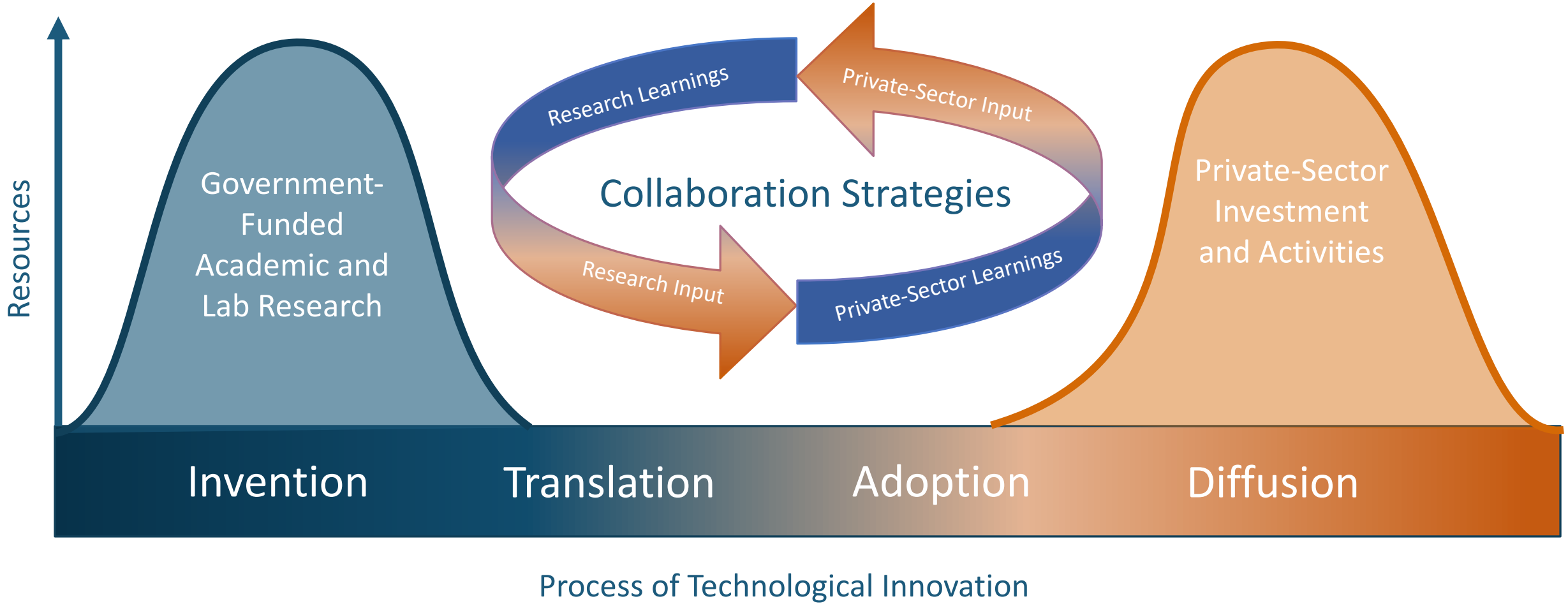
- Nobody in the United States is responsible for the middle phases of the innovation cycle.
- Government and philanthropic funding tends to come too early for innovators to get to market.
- Private funders (with a few exceptions) prefer investments that pay off more quickly and with more certainty.



ETCF Could Fill the Gap



Core Concept: Catalyze Collaboration



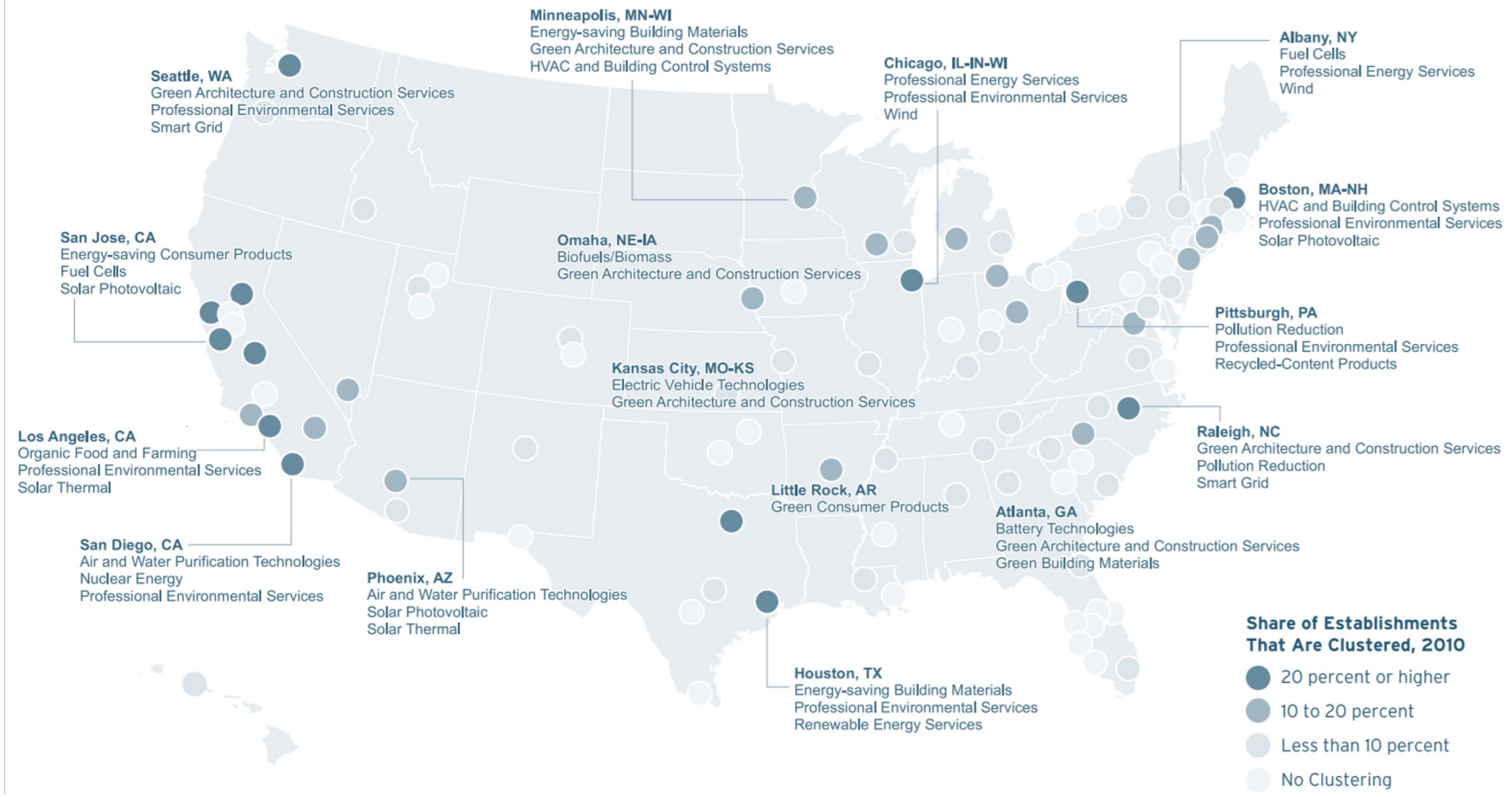
Potential Context: National Energy Innovation Challenges

Example: Decarbonizing Maritime Shipping



Source: https://maritime-executive.com/editorials/the-three-maritime-value-chains-decarbonization-playbook-part-2

Potential Context: Regional Energy Innovation Ecosystems





Source: Brookings-Battelle Clean Economy Database
An establishment in a given segment is defined to be in a cluster if other establishments in the same county comprised at least one percent of all U.S. employment for the given segment.

Some Endorsements and Actions on DOE Foundation

- House Select Committee on the Climate Crisis Report
  - “Congress should establish a DOE foundation to coordinate public-private philanthropic partnerships and fund clean energy innovation and commercialization.”
- Bipartisan Policy Center/American Energy Innovation Council
- National Academy of Public Administration study, recommended the creation of the DOE Foundation
- Confluence Philanthropy
  - "Confluence Philanthropy has been closing following the development of the Foundation for Energy Security and Innovation and whole-heartedly endorses it...to accelerate the commercialization of energy technologies.”
- Support letters to Congress and the White House with 80+ organizations (and growing)

Major Congressional Actions on a DOE Foundation

- 2017: bipartisan, bicameral bills introduced
- 2019: appropriations request for NAPA to conduct a study on a DOE Foundation
- 2020: House Science Committee hearing, House passed authorization
- 2021: Senate passed authorization (83-14 vote).
- January 2022: House passed authorization again.
- July 2022: Bipartisan Partnerships for Energy Security and Innovation Act incorporated into CHIPS Plus Science bill…

…..and is now law!

Changes Since ITIF's March 2020 Report

- New name: **Foundation for Energy Security and Innovation**
- Full scope of DOE mission: Energy, environment, science, and security
- Additional activities: Fellowships, support for basic research, STEM education, etc.
- More interest in diversity, equity, and inclusion

Congressional Authorization for FESI (pp. 865-900 of bill)

- Instructs the Secretary of Energy to establish FESI within 180 days of enactment (February 5, 2023)
- Assigns mission to support DOE and advance collaboration to accelerate commercialization of energy technologies
- Specifies composition of governing board, designates 3 ex officio members from DOE, and gives the Secretary the power to appoint the initial board from a list provided by the National Academies
- Lists activities including (but not strictly limited to): studies, competitions, and projects; fellowships and grants; accessing DOE and lab expertise; training and education; maturation funding; and stakeholder engagement
- Requires collaboration with lab foundations (and authorizes NETL to create one).
- Allows FESI to solicit and accept gifts.

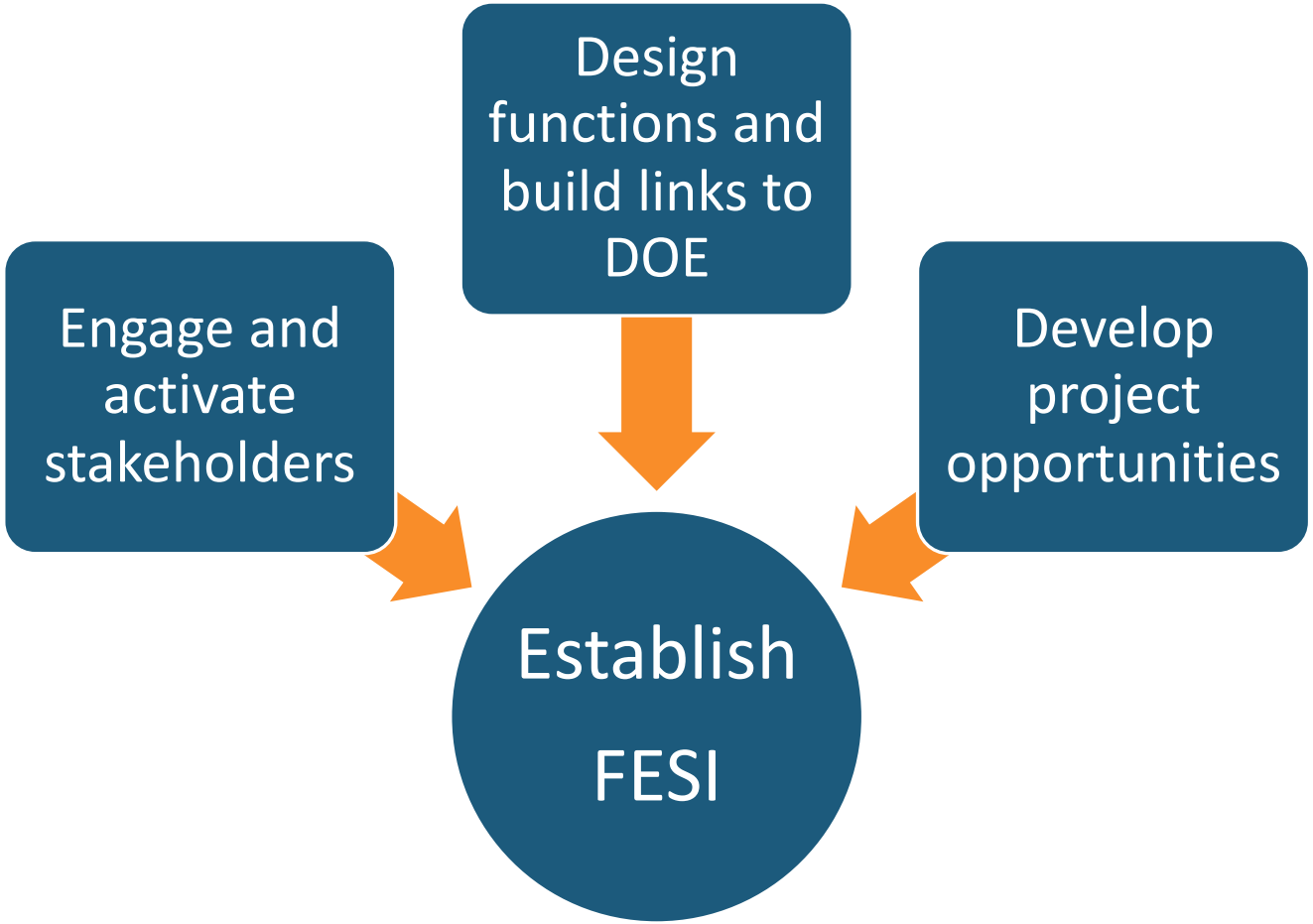
FESI Structure, Governance, and Management

- Self-governing private nonprofit organization (501c3)
- Governed by a diverse board representing key institutions in national energy innovation ecosystem and regions of the country (plus ex officio DOE leadership).
- Board is self-perpetuating after initial appointment and must adhere to strict conflict of interest guidelines
- Run by a staff with exceptional technical and business expertise and a strong understanding of DOE and the philanthropic sector as well.
- Must prepare strategic plan and annual report and be evaluated by GAO

DOE Collaboration with FESI

- FESI should supplement and complement, not duplicate, DOE activities
- National labs should have streamlined contracting with FESI, including transfer of equipment and funds from FESI
- The Secretary shall appoint liaisons from across the Department to collaborate and coordinate with FESI
- Not mentioned in statute, but necessary: internal orders and directives…but trust is ultimately essential

Current ITIF Project with SustainabiliD (Kerry Duggan)



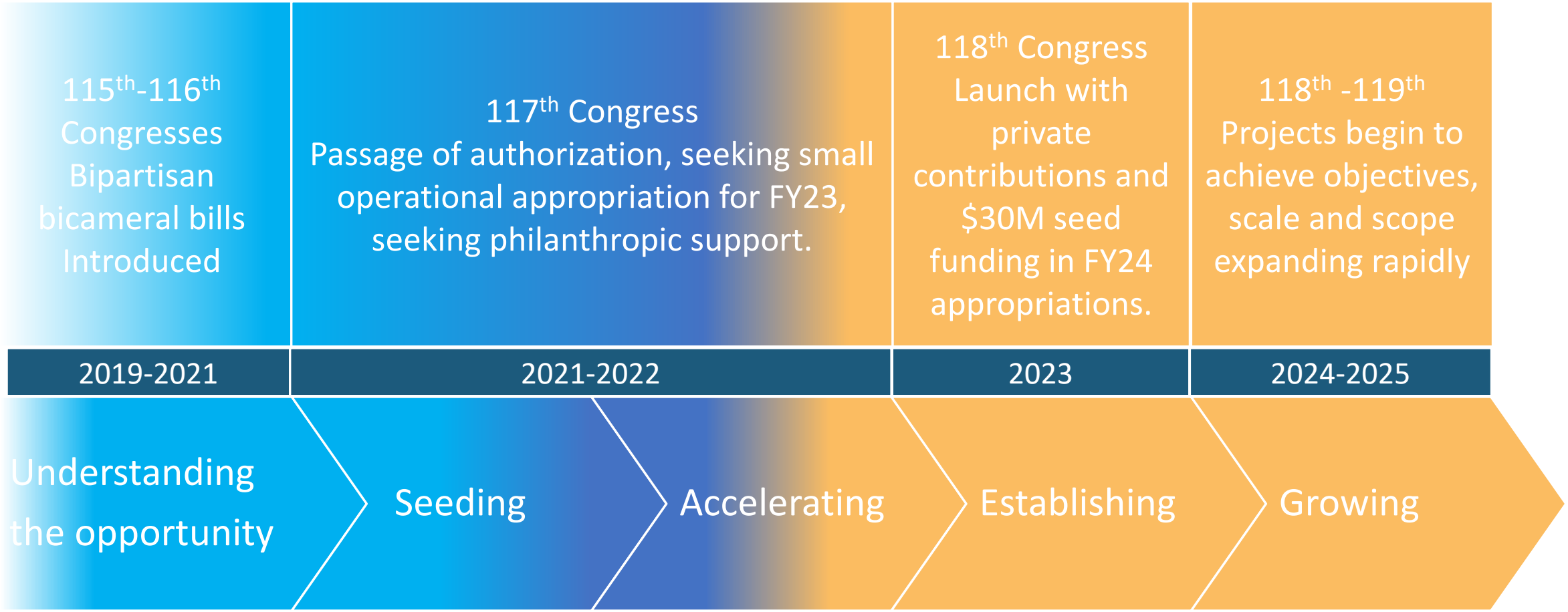
Broader Context: Renaissance of Federal Regional Policy

- Build Back Better Regional Challenge (Commerce)
- Office of Clean Energy Demonstrations & DAC Hubs (DOE)
- Regional Technology and Innovation Hubs (Commerce)
- Regional Innovation Engines and Translation Accelerators (NSF)
- Etc.: Creation of new and reauthorization and possible expansion of existing regional economic development programs, such as MEP, Manufacturing USA, Clean Energy Incubators… (DOC, DOE)

Next Steps

- Work with DOE to lay the cultural, legal, and organizational groundwork for effective collaboration with FESI
- Work with strategic advisors to draft preliminary strategic plan: how FESI will operate and what it will seek to work on
- Work with industrial and philanthropic leaders to build support and visibility among potential supporters, collaborators, and donors
- Work with the broader stakeholder community (including DOE staff) to identify potential project opportunities
- Work with DOE, the White House, and Congress to secure start-up ($30M) and continuing appropriations ($1.5-3M)
- Create FESI!

Timeline



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What I Would Like to Learn from You

- What does DOE need to do well, but doesn't now (or isn't allowed to) that FESI can help with?
- What projects would benefit from public-private collaborations that FESI might broker?
- Which projects might be well-suited to become "early wins" for FESI?
- Who else should we be talking with?

Thank You!

Kerry Duggan | CEO | SustainabiliD

David Hart | dhart@itif.org | @ProfDavidHart

MEMBER WEBINAR



November 2, 9:00 - 10:00 am
Baker Electric Home Energy

ChargeOn Battery Rewards Program



CHARGENET enersion harvest thermal igrenEnergi #IVY KIGT ReJoule SMARTVILLE VECKTA

MEMBER WEBINAR



December 8, 9:00 - 10:00 am
CohnReznick

A Deep Dive into Inflation Reduction Act Renewable Energy Tax Incentives