

The Economics of Entrepreneurship



The National Academies
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Welcome to the National Academies



National Academy of Sciences (NAS)



National Academy of Engineering (NAE)



Institute of Medicine (IOM)

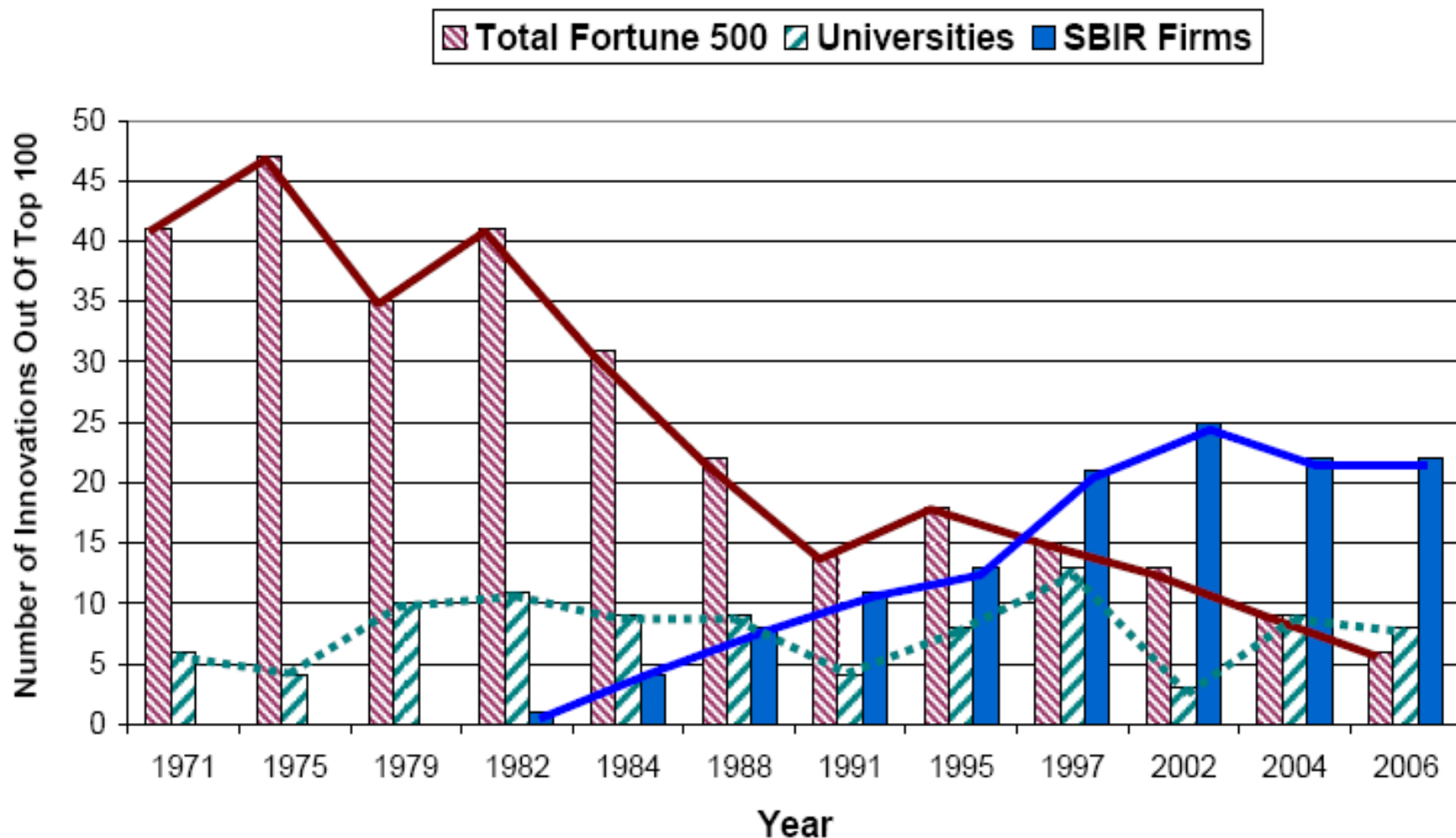


National Research Council (NRC)

Small Companies Drive High-Technology Innovation

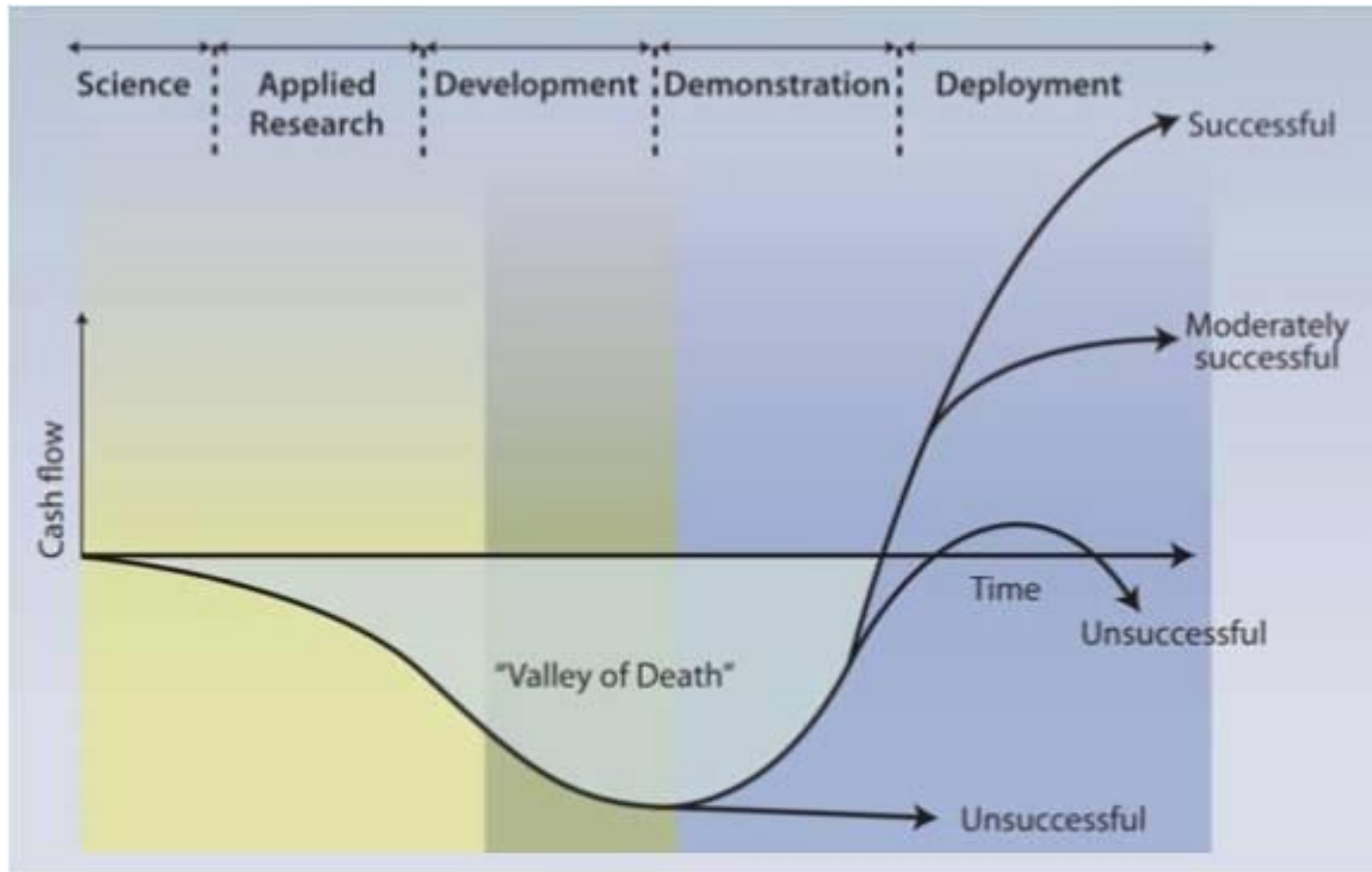
- Small Companies are Key Players in Bringing New Technologies to Market (Audretsch & Acs).
 - Large returns to national economic and strategic capabilities can result from relatively small national investments.
 - Innovations—with the right policy support—can become new products and services for the market and provide support for government missions.

Where Do Key Innovations Come From?

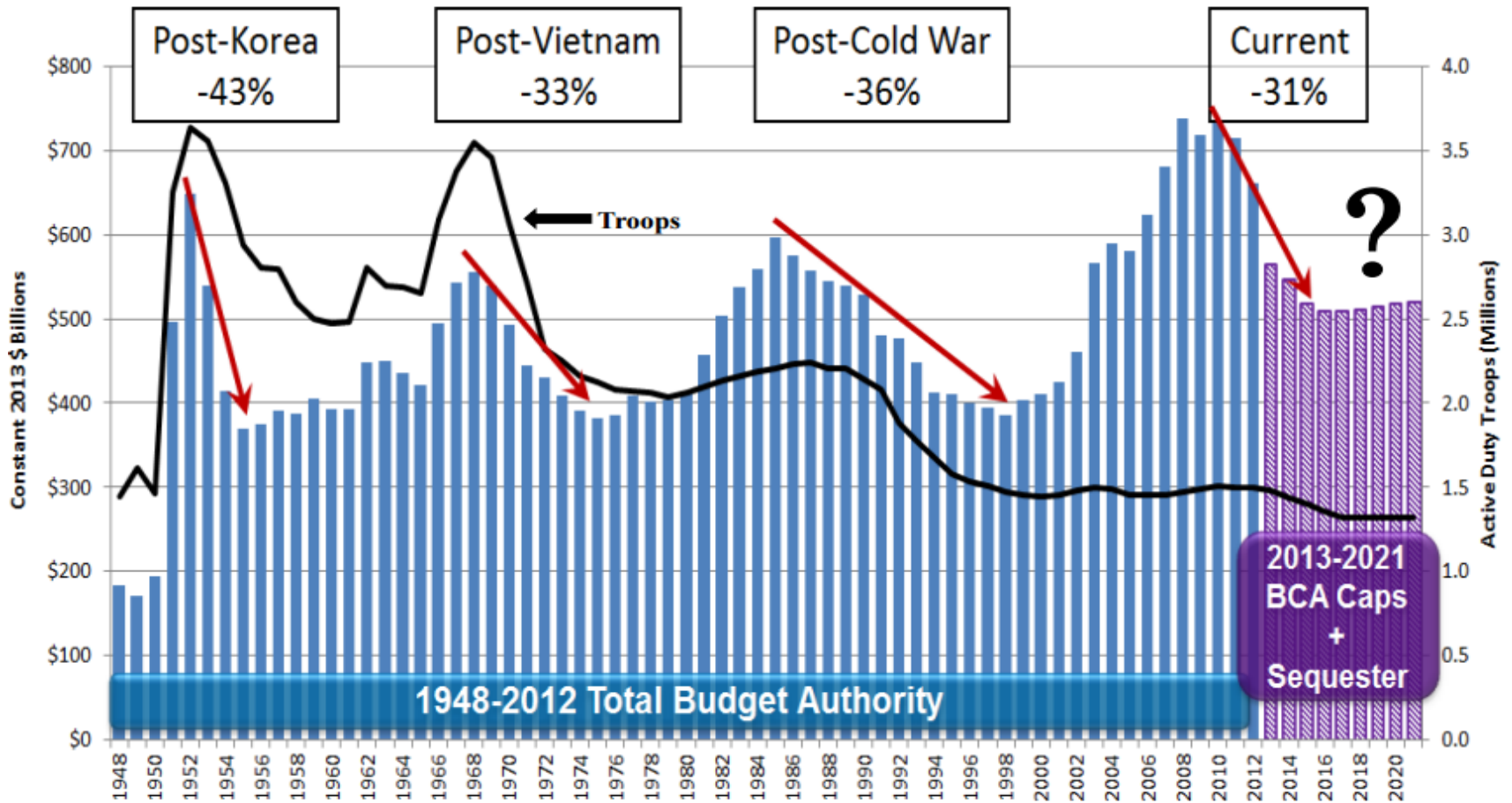


Source: Block and Keller, Where do Innovations Come From, ITIF July 2008.

The Valley of Death: A Major Challenge for Innovators



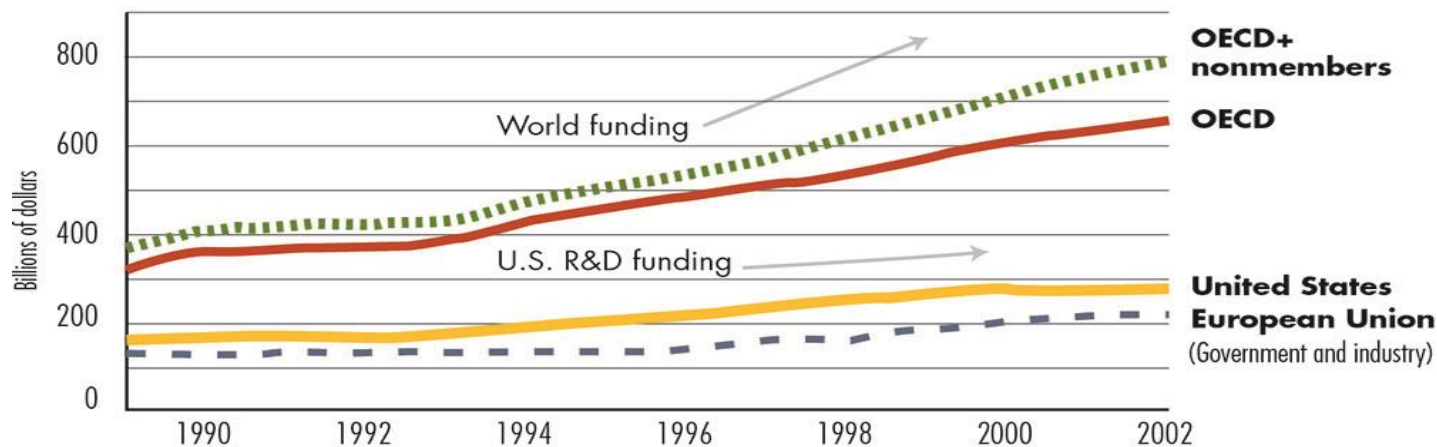
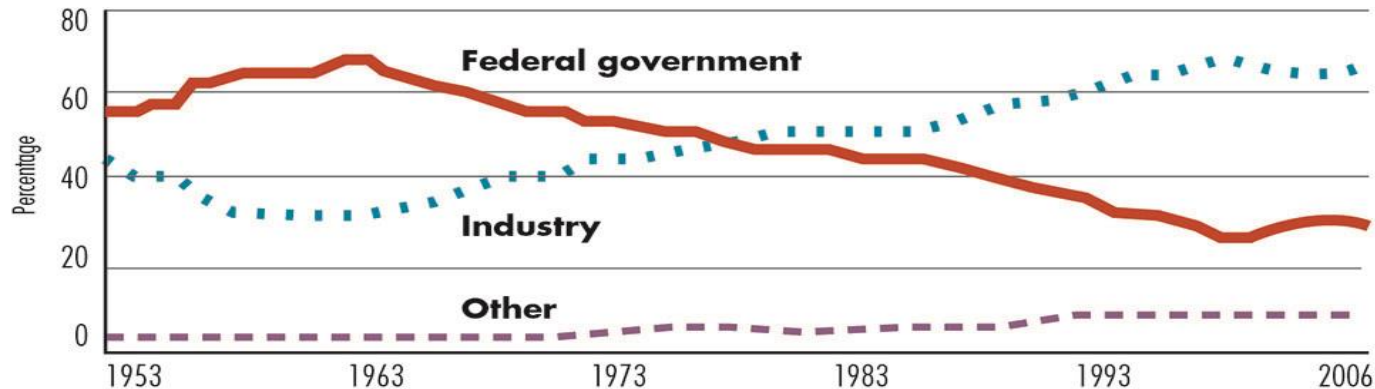
Shrinking & Uncertain Defense Budgets & Declining Force Structures



Source: Center for Strategic and International Studies (CSIS)

Research Funding Trends*

Critical for Economic Competitiveness & Security
Technological Leadership



Top figure, David Mowery, "Military R&D and Innovation" (University of California Press, 2007); bottom figure: National Science Foundation, "Science and Engineering Indicators 2006," and OECD, "Main Science and Technology Indicators" database, November 2004)

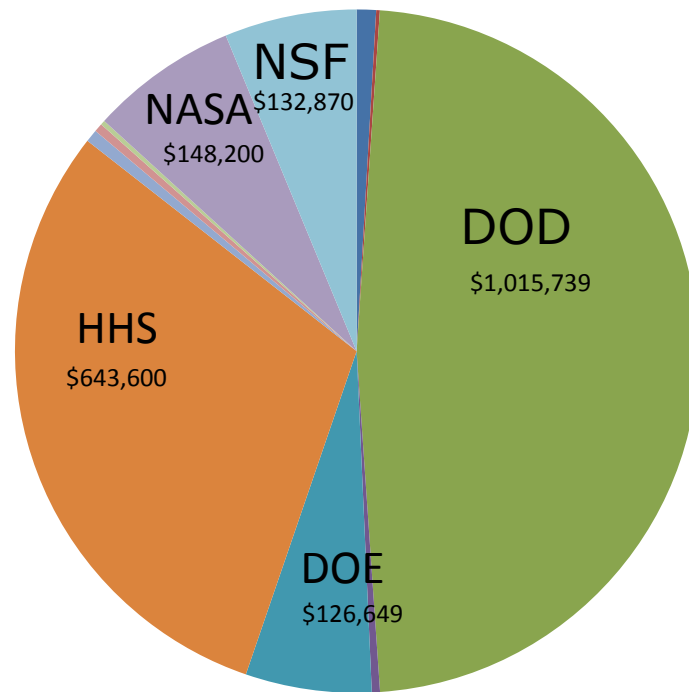
How can Innovative Small Firms Cross the Valley of Death?

One Proven Path is the Small Business
Innovation Research (SBIR) Program

The SBIR Concept

- **Competitively awarded** support for technological innovation
- Uses up to **three-phased awards** from federal research funds to address government mission needs.
- “SBIR provides funding for some of the best early-stage innovation ideas -- ideas that, however promising, are still too high risk for private investors, including venture capital firms.” **Roland Tibbetts**

SBIR remains the single largest innovation program for small businesses.



Total: \$2.12 billion dollars in 2012

Fiscal Year 2012 SBIR Agency Obligations Summary (dollars in thousands)
SOURCE: <http://www.sbir.gov>, accessed April 23, 2015

SBIR's Best Practice Features

- **Focus on Valley of Death:** Funds Proof of Concept and Prototype: "The first money is the hardest"
- **Decentralized & Flexible:** Each Government Department or Agency uses its funds to support research by small companies to meet its unique mission needs
- **Competitive:** 20% success rate
- **No Program Capture:** One-third of participants are new to the program every year



After nearly 20 years of operation,
The Congress asked the National Academies:

How well is SBIR Working Overall?

The Committee's Round One Assessment of SBIR (2003-2008)

- Improved the public's understanding of the challenges of Early Stage Finance
- Documented the diversity and flexibility of the SBIR programs
- Assessed effectiveness of agency SBIR programs
- Highlighted benefits of SBIR to agency missions and to the US innovation system

The Committee's Key Finding



SBIR is sound in concept
and effective in practice.

Academies Research Shows SBIR Impact on Firm Formation and Growth

- **Company Creation:** 20% of responding companies said they were founded as a result of a prospective SBIR award (25% at Defense)
- **Research Initiation:** SBIR awards played a key role in the decision to pursue a research project (70% claimed as cause)
- **Company Growth:** Significant part of firm growth resulted from award
- **Partnering:** SBIR funding is often used to bring in Academic Consultants & to partner with other firms

SBIR/STTR Assessment: Round 2

Now underway...

Focus of the Second Round Assessment:

- How can the Agency SBIR programs work better to address the four Congressional Objectives of the Program:
 - Stimulate technological innovation
 - Use small businesses to meet federal R&D needs
 - Foster participation by women-owned and minority-owned small businesses
 - Increase private sector commercialization of innovation derived from federal R&D

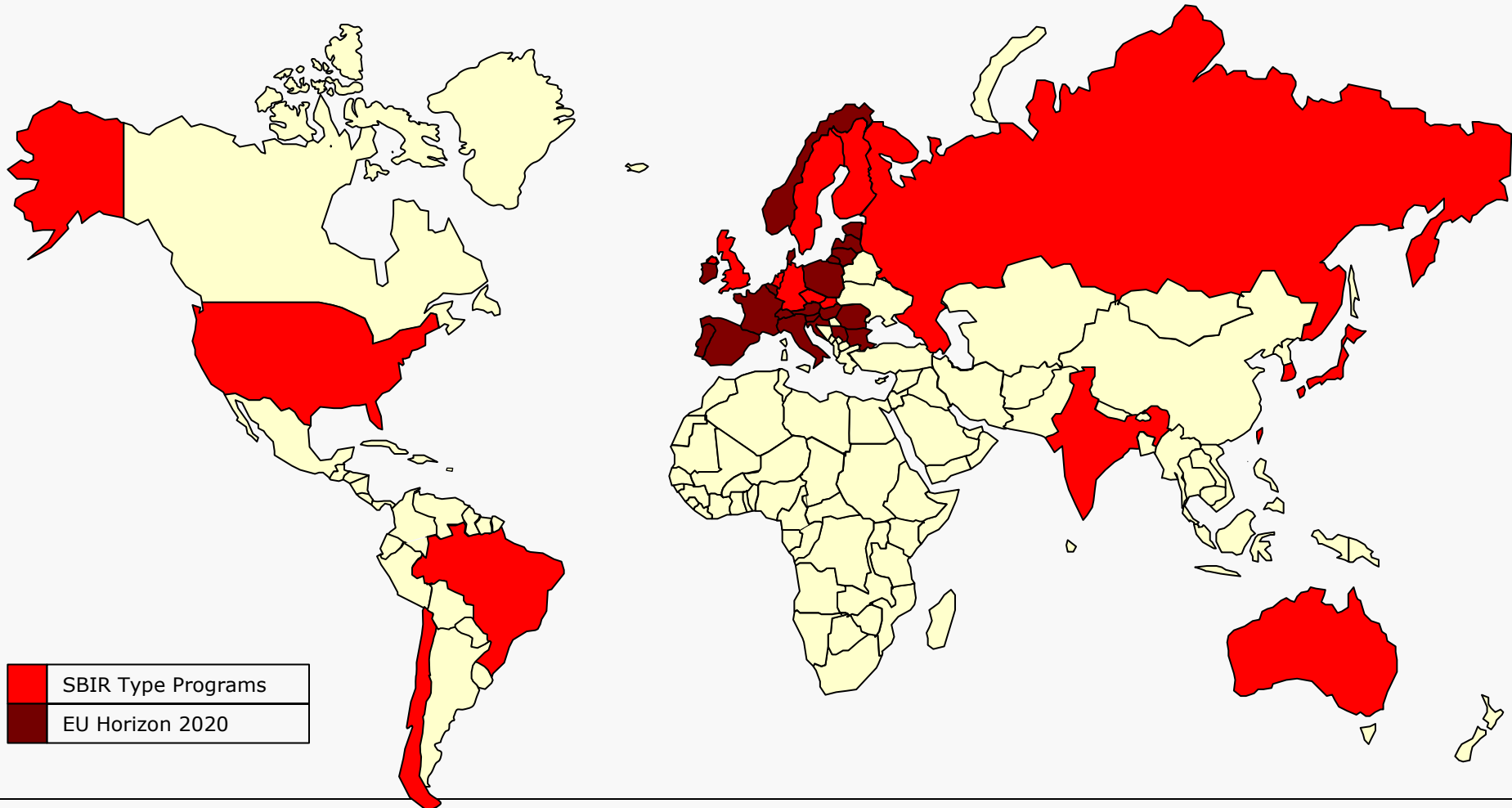
Impact of the National Academies Studies

Reauthorization
Reputation
Research

Our Study had a Major Impact on the 2011 SBIR Reauthorization

- Many contributions to the 2011 Congressional Reauthorization of the SBIR Program including
 - **Extension of the program:** until 2017
 - **Increase in award size:** \$150,000 for Phase I and \$1 million for Phase II.
 - **Increase in set-aside:** From 2.5% to 3.2%
 - **Enhanced Agency Flexibility:** Can use Phase I from another agency for Phase II award
 - **Expanded Management Resources:** Up to 3% of program funds
 - **Commercialization:** Incentives to use SBIR technologies in agency acquisition programs
 - **Evaluation:** Congress requested further NAS assessments

SBIR is Widely Recognized as Global Best Practice



The Academies Analysis of SBIR
is Fostering New Academic
Research on Entrepreneurship and
the Role of Innovation Programs

Today's workshop is proof.

We welcome your
Participation

And look forward to your
continued cooperation



Thank You

The Honorable Jacques S. Gansler

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