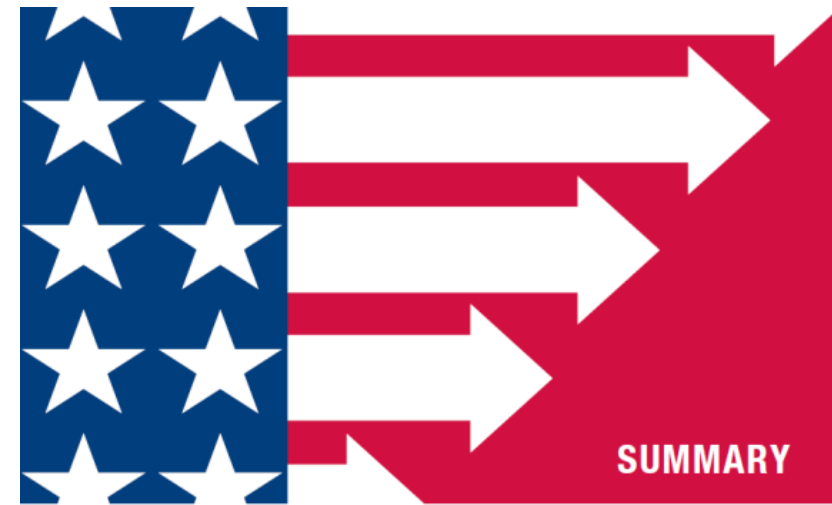


Where New Ideas Come From Today



RESEARCH UNIVERSITIES AND THE FUTURE OF AMERICA

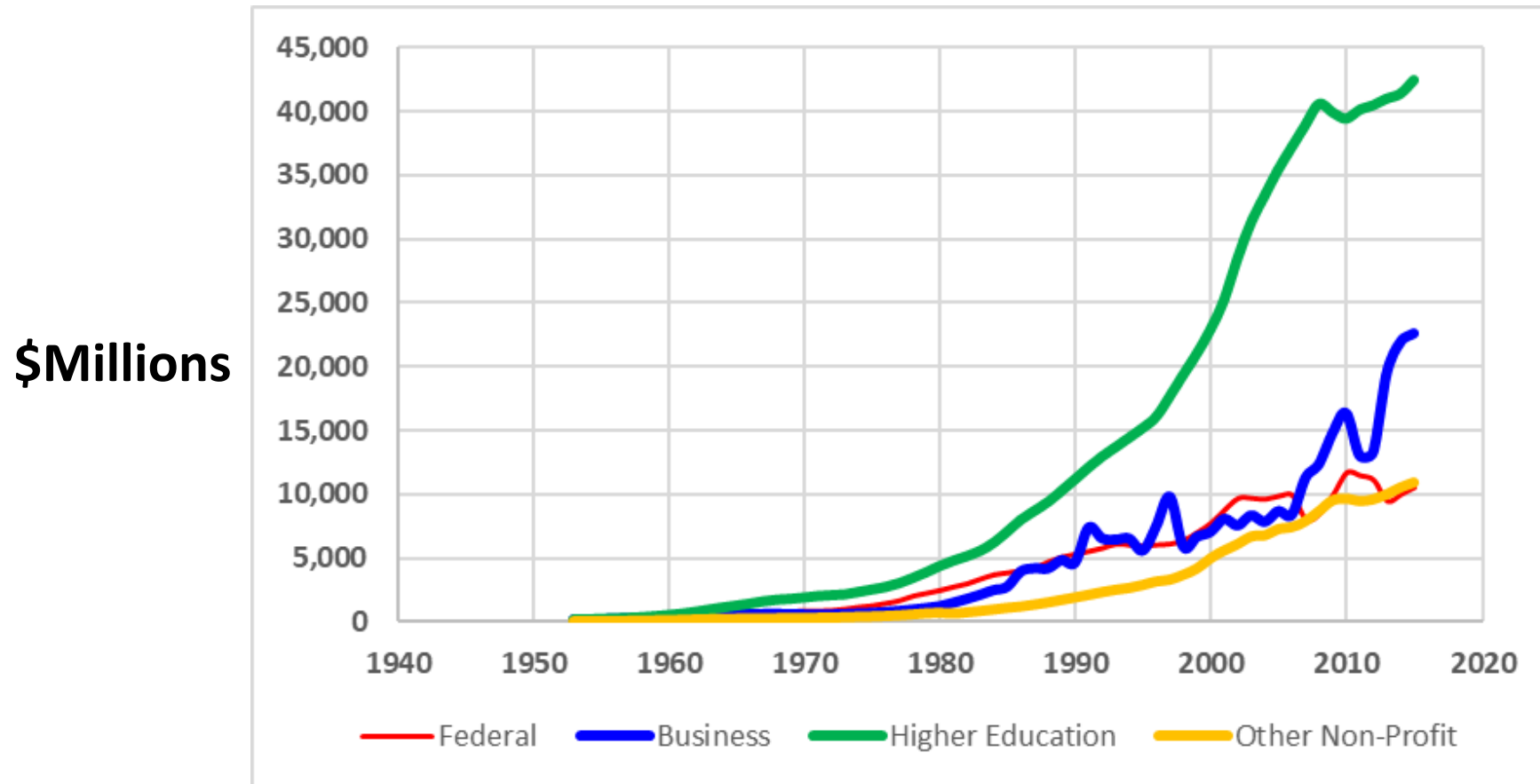
Ten Breakthrough Actions Vital to
Our Nation's Prosperity and Security

NATIONAL RESEARCH COUNCIL
OF THE NATIONAL ACADEMIES

“Our nation’s primary source of both new knowledge and graduates with advanced skills continues to be its research universities.”

“Business and industry have largely dismantled the large corporate research laboratories that drove American industrial leadership in the twentieth century (e.g., Bell Labs), but have not yet fully partnered with our research universities to fill the gap at a time when we need to more effectively translate, disseminate, and transfer into society the new knowledge and ideas that emerge from university research.”

U.S. Basic Research by performing sector



Source: National Patterns of R&D Resources: 2014–15 Data Update, NSF NCSES

TOP 10 ACTIONS



Study on Research Universities and the Future of America

Recommendation 3:

Strengthen the business role in the research partnership, facilitating the transfer of knowledge, ideas, and technology to society and accelerate “time to innovation” in order to achieve our national goals.

The relationship between business and higher education should evolve into more of a peer-to-peer nature, stressing collaboration in areas of joint interest rather than the traditional customer-supplier relationship in which business procures graduates and intellectual property from universities.

How industry and academia can work together

Breakthroughs in materials, devices, circuits, integration and packaging, architectures, and algorithms are needed

- RF to THz Sensor & Communication Systems
- Distributed Computing and Networking
- Cognitive Computing
- Intelligent Memory and Storage

Industry-university partnerships bolster innovation, accelerate commercialization

Industrial membership research program model



Research Retreats

- Interactive talks are “half-baked” works in progress (vs. finished product)
 - Want input to set direction, not just applause
 - ~20 minute talks + 10 minutes for discussion
- Lightning 3-minute previews plus long poster session
- Breakout topics during dinner to focus discussion
- Long breaks to meet and mingle; fun break
- Most important: Industry members give feedback at the end
 - University hosts cannot argue with feedback