NATIONAL SCIENCE BOARD

SPEAKERS:

Diane Souvaine
Chair, National Science Board (NSB)
Professor of Computer Science and Adjunct
Professor of Mathematics
Tufts University

Roger Beachy
Chair, NSB Vision 2030 Task Force
Professor Emeritus of Biology
Washington University, St. Louis

Ellen Ochoa
Vice Chair, NSB
Director Emerita, Lyndon B. Johnson Space Center

NATIONAL SCIENCE BOARD: TWO ROLES

Policy making body for NSF

- Establishes policies
- Identifies issues critical to NSF's future
- Approves strategic budget direction and major programs and awards

Advisors to the President and Congress

- Publishes *Science and Engineering Indicators*
- Issues policy reports on S&E, STEM education, and workforce

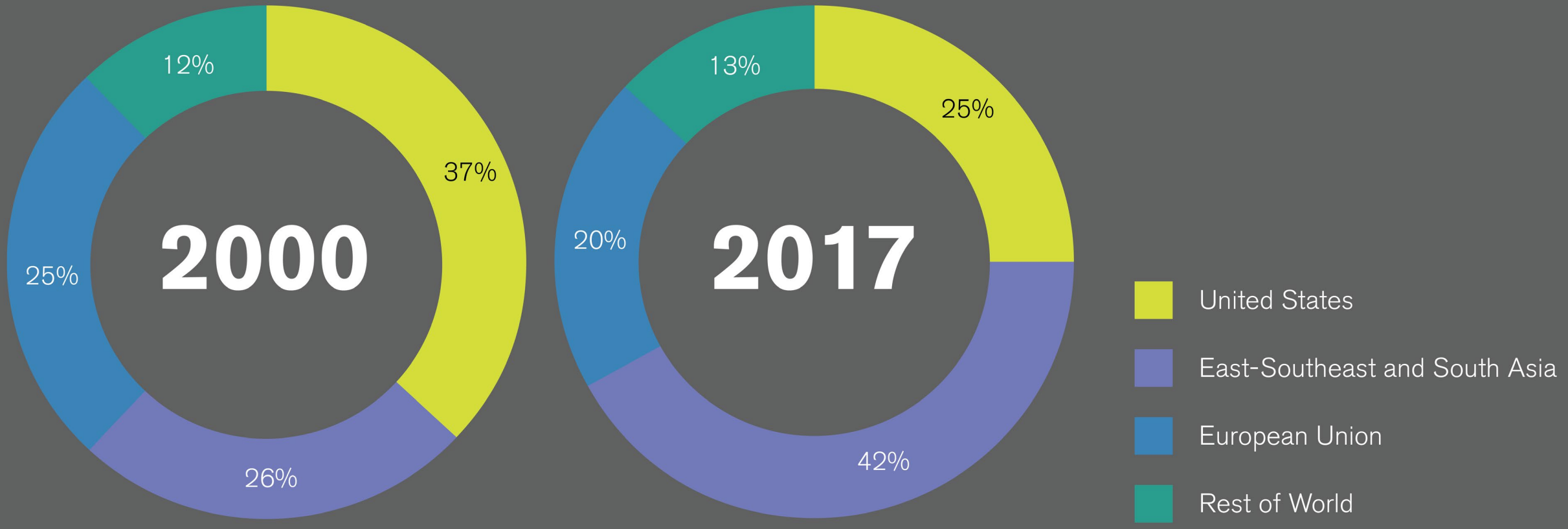
VISION LISTENING SESSIONS

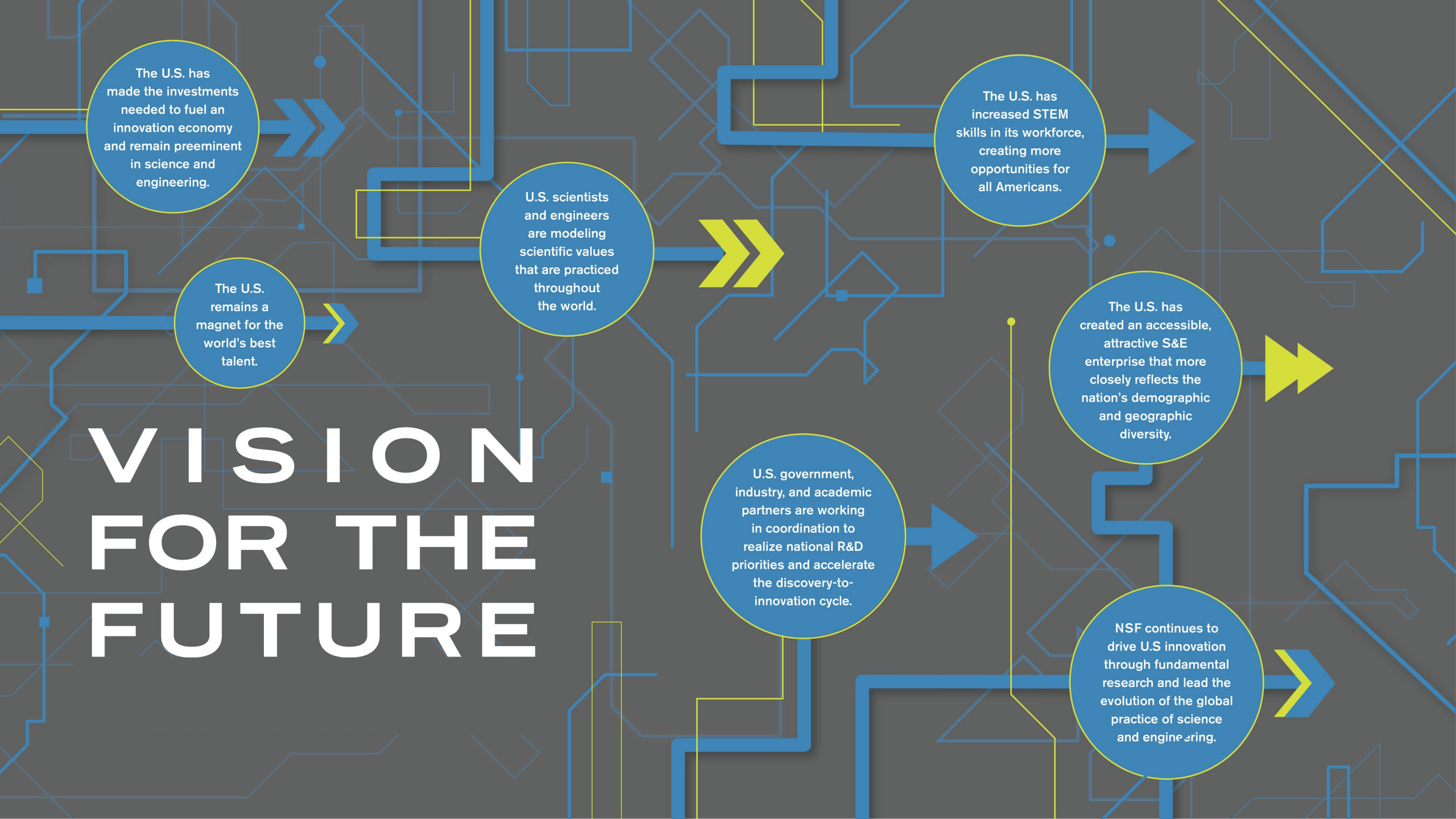
- **Dakota State University:** researchers, faculty and administrators from 11 rural, upper-midwestern institutions
- **National Academy of Inventors:** innovators, educators, researchers and administrators from 18 universities, foundations and government agencies
- **Tufts University:** early career faculty, post-docs and students from 13 New England universities
- **Georgetown University:** reps from 11 academic and scientific societies

VISION LISTENING SESSIONS

- **University of the District of Columbia:** faculty, researchers and administrators from 8 Historically Black Colleges and Universities
- **Washington University in St. Louis:** reps from 6 local universities and foundations
- **Santa Fe Institute**
- **Arizona State University:** reps from minority serving and other institutions in Arizona
- **NSF AC Members, ADs, Division Leaders, Program Officers**

CONTEXT: U.S. SHARE OF R&D DECREASING AS GLOBAL S&E GROWS




The U.S. has made the investments needed to fuel an innovation economy and remain preeminent in science and engineering.
The U.S. remains a magnet for the world's best talent.
U.S. scientists and engineers are modeling scientific values that are practiced throughout the world.
The U.S. has increased STEM skills in its workforce, creating more opportunities for all Americans.
The U.S. has created an accessible, attractive S&E enterprise that more closely reflects the nation's demographic and geographic diversity.
U.S. government, industry, and academic partners are working in coordination to realize national R&D priorities and accelerate the discovery-to-innovation cycle.
NSF continues to drive U.S innovation through fundamental research and lead the evolution of the global practice of science and engineering.
VISION FOR THE FUTURE

KEY QUESTIONS

How can America keep its lead in fundamental research?

How can American discoveries continue to empower U.S. businesses and entrepreneurs to succeed globally?

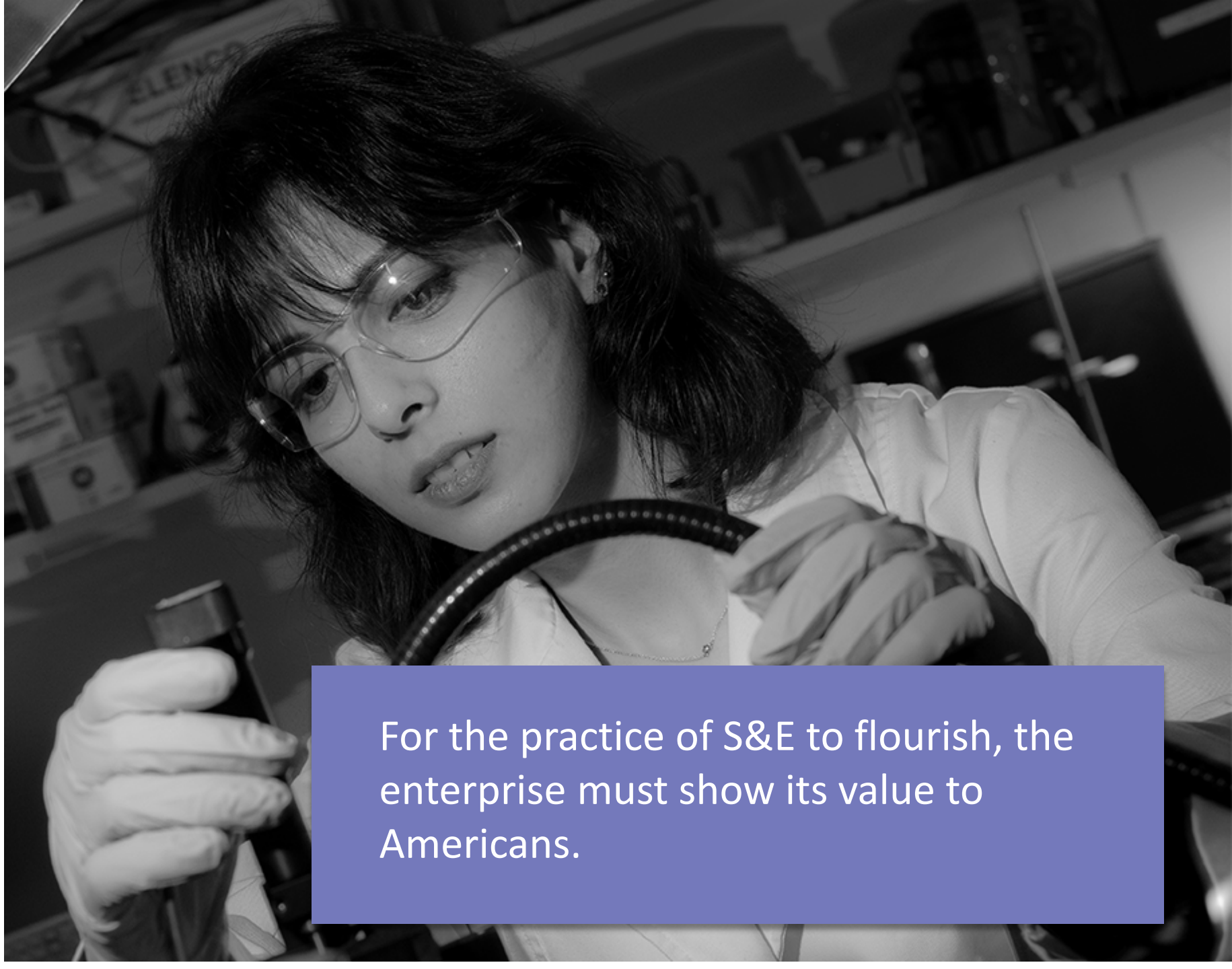
How can the U.S. increase STEM skills and opportunities for all Americans?

GOVERNMENT
State
Local
Federal
National Labs

PRIVATE
Businesses
Associations
Entrepreneurs
Foundations
Nonprofits
Philanthropies

ACADEMIA
Trade Schools
Universities
Colleges
K-12

PRACTICE OF SCIENCE

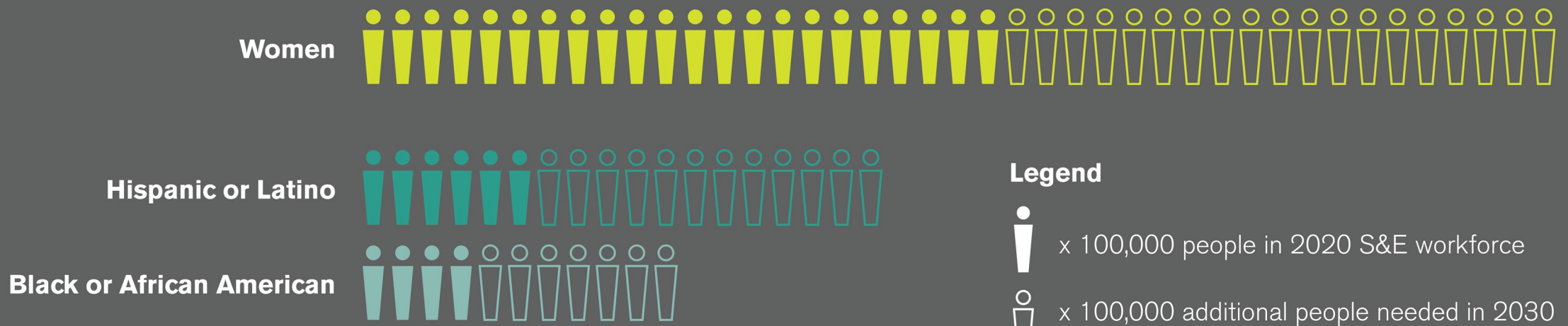


For the practice of S&E to flourish, the enterprise must show its value to Americans.

Our message must be clear: Just as illiteracy is unacceptable, it can no longer be acceptable for anyone to be “bad at math.”

TALENT

MISSING MILLIONS: FASTER PROGRESS IN INCREASING DIVERSITY NEEDED TO REDUCE SIGNIFICANT TALENT GAP



While the number of people from under-represented groups in the S&E workforce has grown over the past decade, faster increases will be needed for the S&E workforce to be representative of the U.S. population in 2030. To achieve that goal, the NSB estimates that the number of women must nearly double, Black or African Americans must more than double, and Hispanic or Latinos must triple the number that are in the 2020 U.S. S&E workforce. These estimates are based on projections from the U.S. Census and Bureau of Labor Statistics, together with data from the National Center for Science and Engineering Statistics, and assume that participation of these groups in the S&E workforce increases at current rates.

INFRASTRUCTURE

As part of a more strategic approach to domestic research infrastructure, America has an opportunity to redress geographic and institutional resource inequities.

PARTNERSHIPS

The U.S. must build partnership capacity at home to respond to a more competitive global S&E landscape and enhance capacity for its researchers to collaborate internationally.

FOCUS ON THE FUTURE: NSB ROADMAP

DELIVER BENEFITS FROM RESEARCH

DEVELOP STEM TALENT FOR AMERICA

EXPAND THE GEOGRAPHY OF INNOVATION

FOSTER A GLOBAL S&E COMMUNITY

DELIVER BENEFITS FROM RESEARCH

To leverage America's lead in basic research, the country must find ways to speed the path from discovery to innovation.

DEVELOP STEM TALENT FOR AMERICA

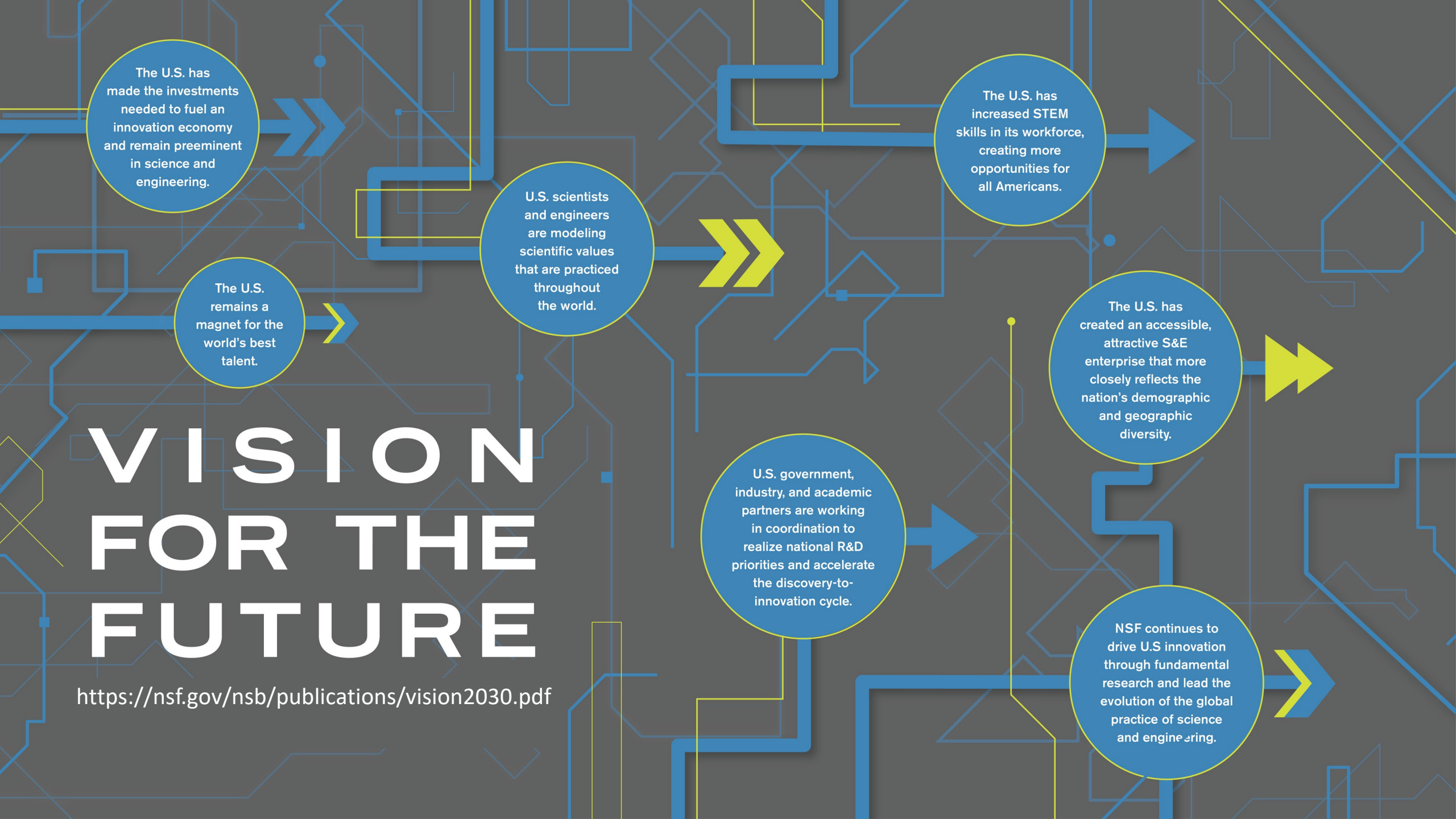
The U.S. must make education a federal, state, and local priority and hold itself accountable with reliable, up-to-date data.

EXPAND THE GEOGRAPHY OF INNOVATION

NSB will examine NSF's investments with an eye toward identifying mechanisms that can best develop capacity and further establish a network of S&E hubs across the country.

FOSTER A GLOBAL S&E COMMUNITY

NSB will work with NSF to develop and expand strategies and partnerships to grow international collaborations, attract global talent, and create international education and training opportunities.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VISION FOR THE FUTURE
https://nsf.gov/nsb/publications/vision2030.pdf