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ALL HANDS ON DECK

A VISION FOR AMERICA'S
S&E ENTERPRISE

THIS ACS WEBINAR WILL BEGIN SHORTLY...

All Hands on Deck: A Vision for America's S&E Enterprise



Victor McCrary

Vice Chair, National Science Board and Vice President for Research and Graduate Programs and Professor of Chemistry
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Barbara Sawrey

Director-at-Large, ACS Board of Directors and
Distinguished Professor Emerita, UC San Diego

Presentation slides are available now! The edited recording will be made available as soon as possible.

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NATIONAL SCIENCE BOARD



ALL HANDS ON DECK: A VISION FOR AMERICA'S S&E ENTERPRISE

Victor McCrary

Vice Chair, NSB

Chair, Vision Implementation Working Group

*Vice President for Research and
Graduate Programs and Professor of
Chemistry*

University of the District of Columbia

VISION 2030

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Where do you see the current status of United States scientific & engineering leadership?

- The U.S. continues to be the clear global S&E leader
- Competition is tight, but the U.S. remains among global S&E leaders
- The U.S. position as a global S&E leader is slipping
- The U.S. no longer a global S&E leader

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

- **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**



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
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?



ELEMENTS OF LEADERSHIP

TALENT

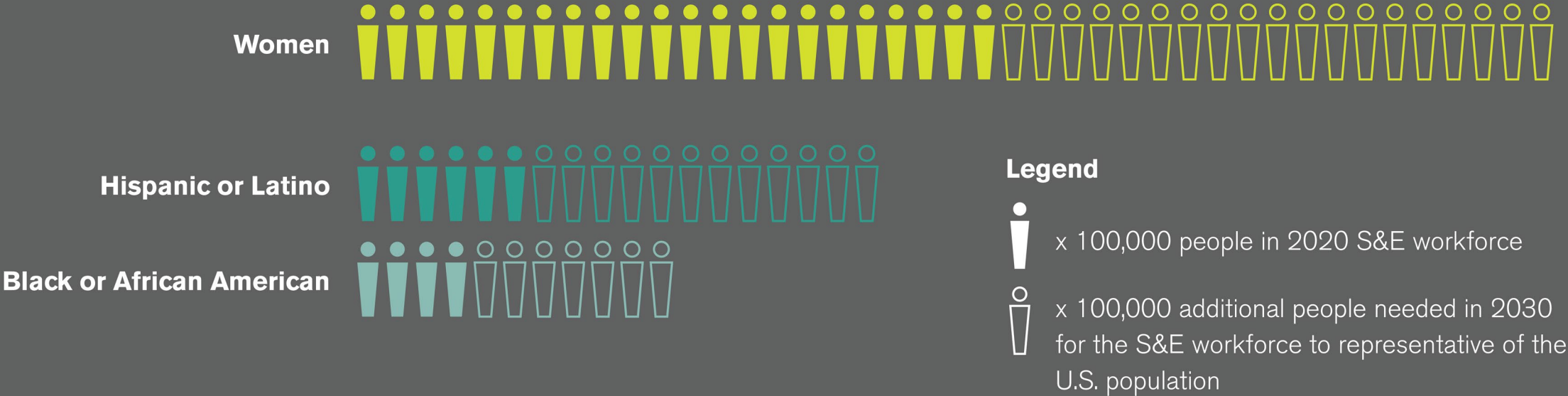
PRACTICE OF SCIENCE

INFRASTRUCTURE

PARTNERSHIPS



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.

CHEMISTRY FACULTY FROM UNDERREPRESENTED RACIAL AND ETHNIC GROUPS AT TOP 50 US SCHOOLS, 2017–18

Show entries Search:

Institution	ASSISTANT PROFESSOR			ASSOCIATE PROFESSOR			FULL PROFESSOR			ALL FACULTY		
	Total	URPOC	% URPOC	Total	URPOC	% URPOC	Total	URPOC	% URPOC	Total	URPOC	% URPOC
California Inst. of Tech.	7	0	0%	0	0	0%	34	1	3%	41	1	2.4%
Columbia Univ.	1	0	0%	4	1	25%	15	1	7%	20	2	10.0%
Cornell Univ., Ithaca	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Emory Univ.	3	0	0%	6	0	0%	13	0	0%	22	0	0.0%
Florida State Univ., Tallahassee	6	1	17%	4	0	0%	19	0	0%	29	1	3.4%
Georgia Inst. of Tech., Atlanta	7	1	14%	7	2	29%	18	3	17%	32	6	18.8%
Harvard Univ.	3	0	0%	1	0	0%	18	2	11%	22	2	9.1%
Indiana Univ., Bloomington	5	0	0%	8	0	0%	23	0	0%	36	0	0.0%
Johns Hopkins Univ. ^a	5	0	0%	2	0	0%	14	1	7%	21	1	4.8%
Massachusetts Inst. of Tech.	7	0	0%	6	0	0%	19	0	0%	32	0	0.0%
Total	301	27	9.0%	245	16	6.5%	1,053	40	3.8%	1,599	83	5.2%

Showing 1 to 10 of 50 entries Previous [1](#) [2](#) [3](#) [4](#) [5](#) Next

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



Which of the following areas is ACS actively engaged in?

(Select all that apply)

- Talent
- Practice of Science
- Infrastructure
- Partnerships
- Chemical Storage and Distribution

FOCUS ON THE FUTURE: NSB ROADMAP



**FOSTER A GLOBAL S&E
COMMUNITY**

**EXPAND THE GEOGRAPHY
OF INNOVATION**

**DELIVER BENEFITS
FROM RESEARCH**

**DEVELOP STEM TALENT FOR
AMERICA**

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

[nsf.gov/nsb/NSBActivities/vision-2030.jsp](https://www.nsf.gov/nsb/NSBActivities/vision-2030.jsp)

NSBVision@nsf.gov

Audience Survey Question

ANSWER THE QUESTION ON BLUE SCREEN IN ONE MOMENT



How many of the NSB report issue areas does ACS currently advocate on and have policy statements towards? (Select all that apply)

- Deliver Benefits for Research
- Develop STEM talent
- Expand the geography of Innovation
- Foster a global S&E community
- None of the above

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