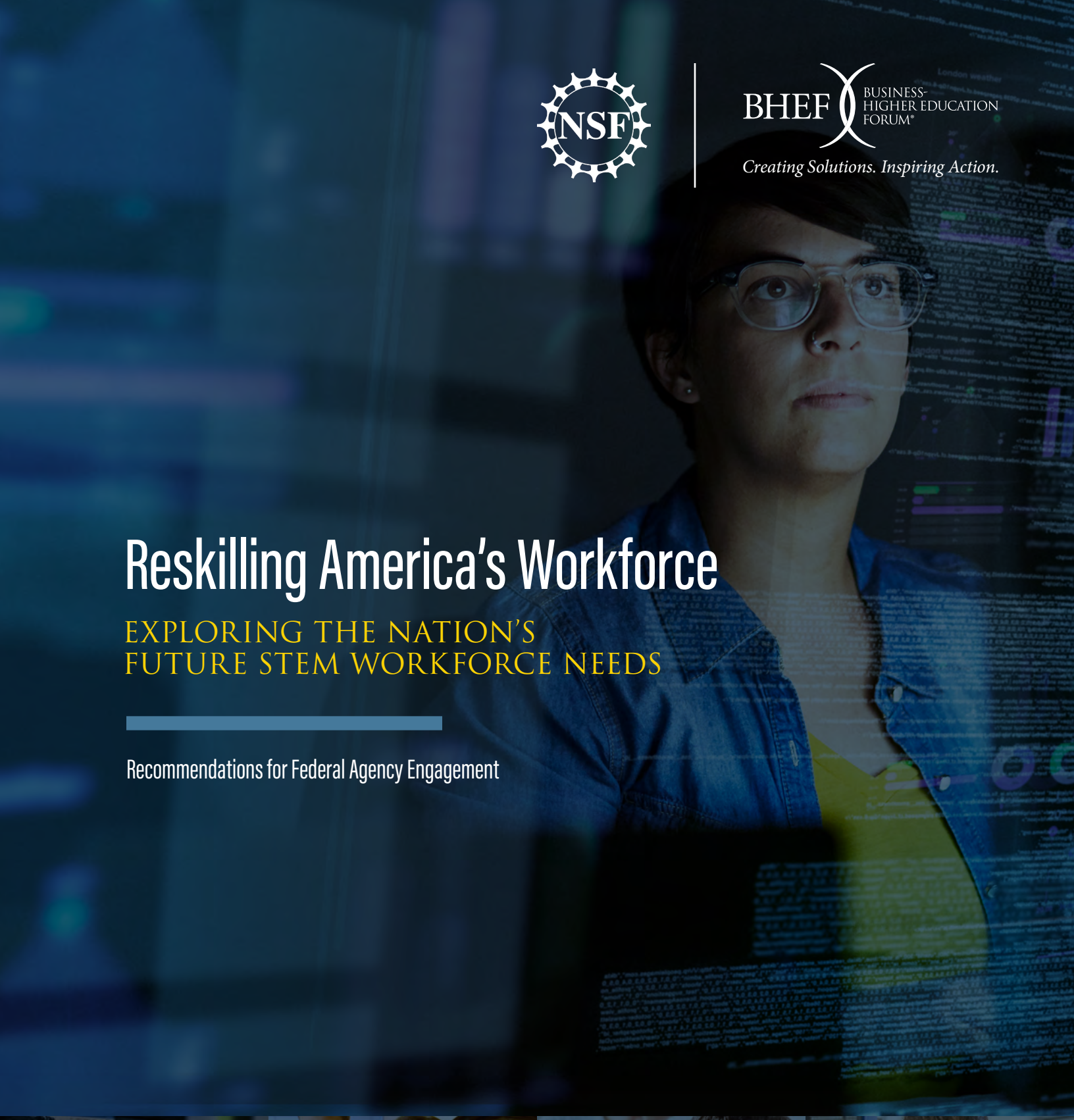


NSF | BHEF BUSINESS-HIGHER EDUCATION FORUM®

Creating Solutions. Inspiring Action.

Reskilling America's Workforce

EXPLORING THE NATION'S FUTURE STEM WORKFORCE NEEDS

Recommendations for Federal Agency Engagement

A REPORT FROM A WORKSHOP FUNDED BY THE NATIONAL SCIENCE FOUNDATION

ABOUT THE BUSINESS-HIGHER EDUCATION FORUM

BHEF is a nonprofit membership organization comprised of the Fortune 500 C-suite executives and leading university presidents dedicated to advancing innovative education and workforce solutions and improving U.S. competitiveness. BHEF utilizes the latest market intelligence to develop industry and higher education partnerships, change models, and innovative talent solutions in high-demand and emerging fields. Through these methods, BHEF creates impactful, long-lasting, and essential pathways that align higher education curriculum with evolving needs of today's workforce.

Learn more at www.bhef.com.

INTRODUCTION

ACCORDING TO THE RECENT NATIONAL SCIENCE BOARD PUBLICATION, *Our Nation's Future Competitiveness Relies on Building a STEM-Capable Workforce: A Policy Companion to Science and Engineering Indicators 2018*, the number of U.S. jobs requiring "substantial science, technology, engineering, and mathematics (STEM) expertise" has increased 34 percent over the past decade.

The report also notes:

> The U.S. can no longer rely on a distinct and relatively small "STEM workforce." Instead, we need a STEM-capable U.S. workforce that leverages the hard work, creativity, and ingenuity of women and men of all ages, all education levels, and all backgrounds. A STEM-capable workforce provides the U.S. with an enduring competitive advantage. Building and sustaining it will require cooperation and commitment from local, state, and federal governments, education institutions at all levels, non-governmental organizations, and businesses large and small.

14M
STUDENTS IN U.S. POSTSECONDARY INSTITUTIONS

42%
OF FULL-TIME COLLEGE STUDENTS HAVE JOBS

80%
OF PART-TIME STUDENTS HAVE JOBS

33%
OF WORKING LEARNERS ARE 30 OR OLDER

Furthermore, over the past two decades, the diffusion of digital technologies to companies in nontechnology sectors has created a hybrid economy. In this economy, companies have become increasingly data and computation-intensive organizations, which changes their business models and their talent needs. According to Burning Glass Technologies,[1] hybrid jobs in a hybrid economy require a mixed set of skills from different fields. In particular, STEM-related skills, such as cybersecurity, computer science, and data science and analytics, are no longer limited to traditional STEM occupations, but instead are essential to many non-STEM occupations.

But even as the nature of work evolves and the need for STEM skills within the non-STEM workforce increases, STEM fields in postsecondary education are taught largely as they have been for generations. Moreover, non-STEM fields have been slow to integrate STEM knowledge, skills, and competencies into their pedagogical frameworks. Companies are reporting widening skills gaps across sectors, particularly in STEM areas.

One potential avenue for students to develop career skills is through jobs. Full or part-time work is a reality for approximately 14 million students in U.S. postsecondary institutions. The Bureau of Labor Statistics reports that over 42 percent of full-time college students and over 80 percent of part-time students have jobs.[2] In addition, 46 percent of students at four-year colleges and 60 percent at two-year colleges are employed. Full-time students who are black or Hispanic work at even higher percentages than the national average. These working learners differ from those who are able to attend school full time without working: about one-third of working learners are 30 or older, and roughly 20 percent have children.

Despite the number of working learners in the U.S., the relevance of most students' current jobs to their academic or career interests is usually minimal. A 2015 report by the Center on Education and the Workforce at Georgetown University titled *Learning While Earning: The New Normal* notes that "working learners need stronger ties between the worlds of work and education. The overlap between postsecondary education and career learning is a huge uncharted territory."[3]

The demand for a STEM-capable workforce in the hybrid economy, combined with the growing number of working learners, creates an opportunity for a new understanding and approach to meeting the nation's evolving workforce needs and the role that federal agencies can play in supporting those needs. This report provides high-level recommendations from a two-day workshop that explored these issues, with a focus on the engineering and advanced manufacturing sectors, including the role federal agencies can take to help stimulate attention to the needs of the future workforce.

1 Burning Glass Technologies. (2015). Blurring Lines: How Business and Technology Skills are Merging to Create High Opportunity Hybrid Jobs. Retrieved from: https://www.burning-glass.com/wpcontent/ uploads/Blurring_Lines_Hybrid_Jobs_Report.pdf

2 U. S. Department of Labor Bureau of Labor Statistics. (2018). College Enrollment and Work Activity of High School Graduates News Release. Retrieved from: https://www.bls.gov/news.release/hsgec.htm

3 Carnevale, A.P., Smith, N., and Melton, M. (2015). Learning While Earning: The New Normal. Retrieved from: https://1gyhoq479ufd3yna29x-7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/Working-Learners-Report.pdf

THE FOUR BROAD RECOMMENDATIONS FROM THE WORKSHOP ARE:

Support the creation of education ecosystems, pathways, and workforce partnership models that result in dissemination and wide-spread take-up of research findings by the broader community;

Plan and implement new federal programs and activities focused on STEM-capable workforce development and reskilling;

Facilitate coordination both internally within each federal agency and externally across all agencies on workforce development; and

Create a clearinghouse of policies, best practices, and recommendations for state and local governments to align and leverage federal legislation related to STEM, STEM-capable, and broader workforce-related topics.

More details on each of these recommendations, particularly the activities of the workshop, as well as additional context and findings are provided in the rest of this report.

Para Jones (left), President of Stark State College, Stephanie Adams (middle), Dean of the Frank Batten College of Engineering and Technology at Old Dominion University, and Timothy Long (right), Engineering Manager at Northrop Grumman Corporation, engage in a roundtable discussion about reskilling the engineering and advanced manufacturing workforce for the digital economy.

INSIGHTS FROM BURNING GLASS TECHNOLOGIES

FOUR TRENDS SHAPING THE FUTURE OF THE WORKFORCE

A research study in partnership with the labor market analytics firm, Burning Glass Technologies, identified four trends shaping the future workforce. Using their data on the engineering and advanced manufacturing workforce, the Burning Glass brief[4] noted that even highly structured STEM fields like engineering and advanced manufacturing have been affected by dynamic shifts in the labor market over the past decade. These shifts contribute to the overall shortage of STEM-capable workers, but also provide new opportunities to create pathways to high-skill jobs.

FOUR TRENDS SHAPING THE FUTURE WORKFORCE ARE:

Hybridization

One of the most significant trends in the job market is the rise of hybrid jobs, roles that mix and match skill sets from different fields. This trend is driven by the rise of disruptive skills that change how entire sectors do business. Previous Burning Glass-BHEF research[5] has shown how coding and data science, for example, are remaking a wide range of occupations. As will be reported in an upcoming publication, Burning Glass and BHEF identified an emerging set of new foundational skills that employers increasingly expect from workers, thus defining a blended digital professional.

Digitization

Software is everywhere, and some of the fastest growing and most demanded skills are linked to the knowledge and use of software, if not also its development. Such software ranges from widely used suites of applications to specialized applications that dominate particular fields. For example, skills in customer relationship management programs, such as Salesforce, have become the price of entry for sales jobs. Data visualization packages like Tableau are widely demanded in business analysis and marketing positions, as well as in data science. Even 8 in 10 middle-skill jobs now require digital skills such as word processing and spreadsheets.

Demand Outstrips Supply

In the current economy, many employers are struggling to find workers. A crucial point is that the skills gap is not a singular chasm faced by all employers. The size of the gap—or even if there is a gap at all—depends on the specific field involved.

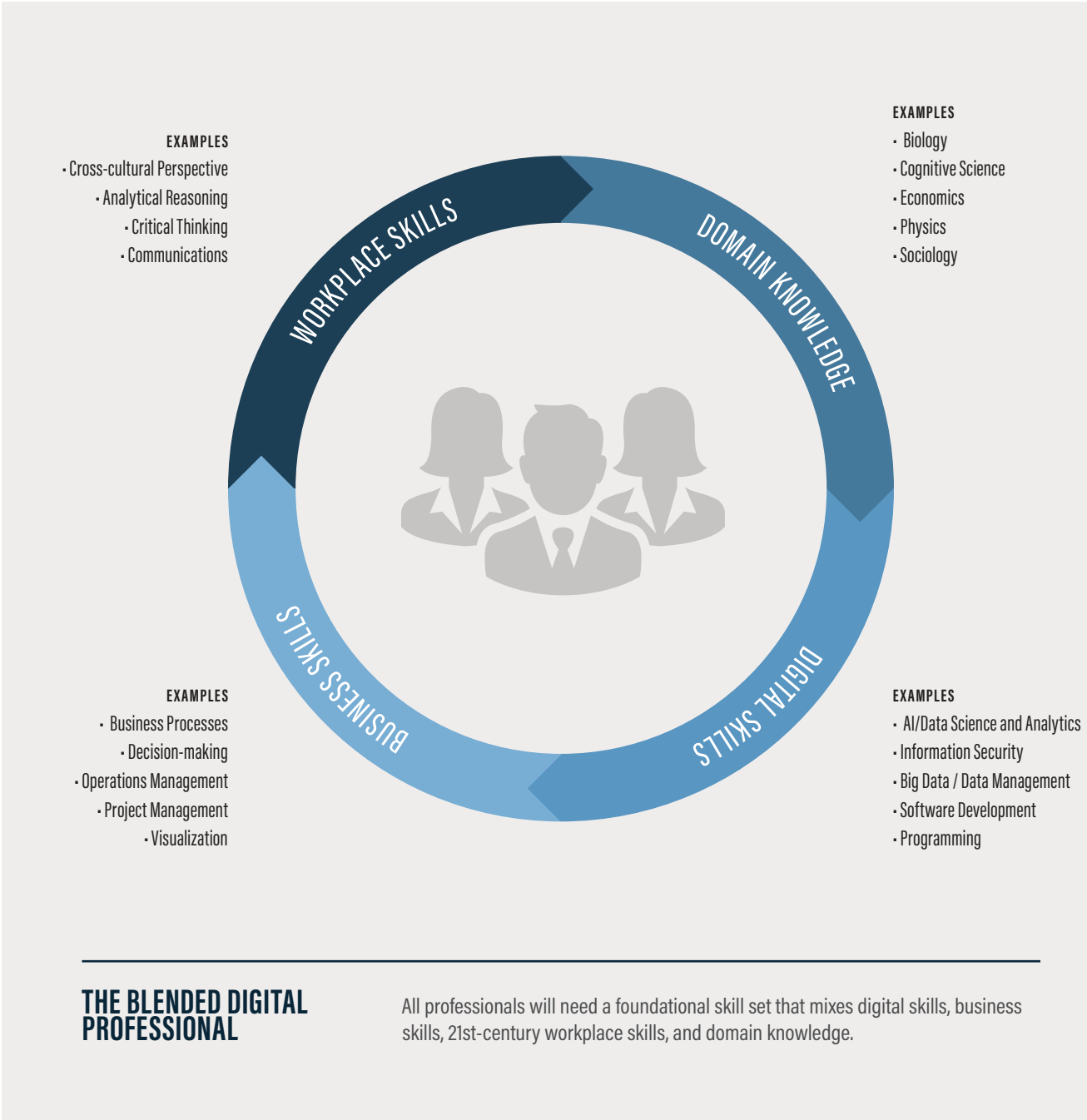
Raising the Bar

The shortage of workers does have some benefits: a bachelor's degree in engineering carries value in the job market. Overall, 4 in 10 recent graduates are underemployed. But of all college majors, engineers were the least likely to be underemployed, at 29 percent, even beating out other STEM fields.

4 Burning Glass Technologies and BHEF. (2018). Four Trends Shaping the Future of the Workforce: Focus on Engineering and Advanced Manufacturing. Retrieved from: https://www.burning-glass.com/blog/engineering-four-trends-shaping-workforce/

5 Burning Glass Technologies, IBM, and BHEF. (2017). The Quant Crunch: How the Demand for Data Science Skills is Disrupting the Job Market. Retrieved from: http://www.bhef.com/sites/default/files/bhef_2017_quant_crunch.pdf

In response to these trends and needs of the hybrid economy, the nation must rethink the definition, training, and education of STEM-capable professionals. The blended digital professional graphic below indicates that all professionals will need a foundational skill set that mixes digital skills, business skills, 21st-century workplace skills, and domain knowledge. Essentially, the STEM-capable professional must embody the blended digital professional to succeed in the digital economy and meet the needs of the future workforce.



THE BLENDED DIGITAL PROFESSIONAL

All professionals will need a foundational skill set that mixes digital skills, business skills, 21st-century workplace skills, and domain knowledge.

RESKILLING AMERICA'S WORKFORCE

EXPLORING THE NATION'S FUTURE STEM WORKFORCE NEEDS

To better address the evolving needs of the nation's workforce, BHEF and NSF hosted Reskilling America's Workforce: Exploring the Nation's Future STEM Workforce Needs. This two-day workshop brought together about 150 leaders from business, academia, government, and nonprofits to explore critical issues related to employers' highest-demand workforce needs and how to build the STEM-capable workforce to meet those needs. In particular, the workshop spotlighted the need for digital skills in the engineering and advanced manufacturing sectors.

A highlight of the workshop was Boeing's announcement of a new investment of $11 million as part of a $21 million partnership with NSF.[6] This investment includes:

1. $10 million for NSF to design, develop, and deploy online curricula at the community college, undergraduate, graduate, and professional levels, which NSF's Directorate for Education and Human Resources will complement with an investment of $10 million in awards focused on reskilling and increasing the skill level of the STEM workforce; and

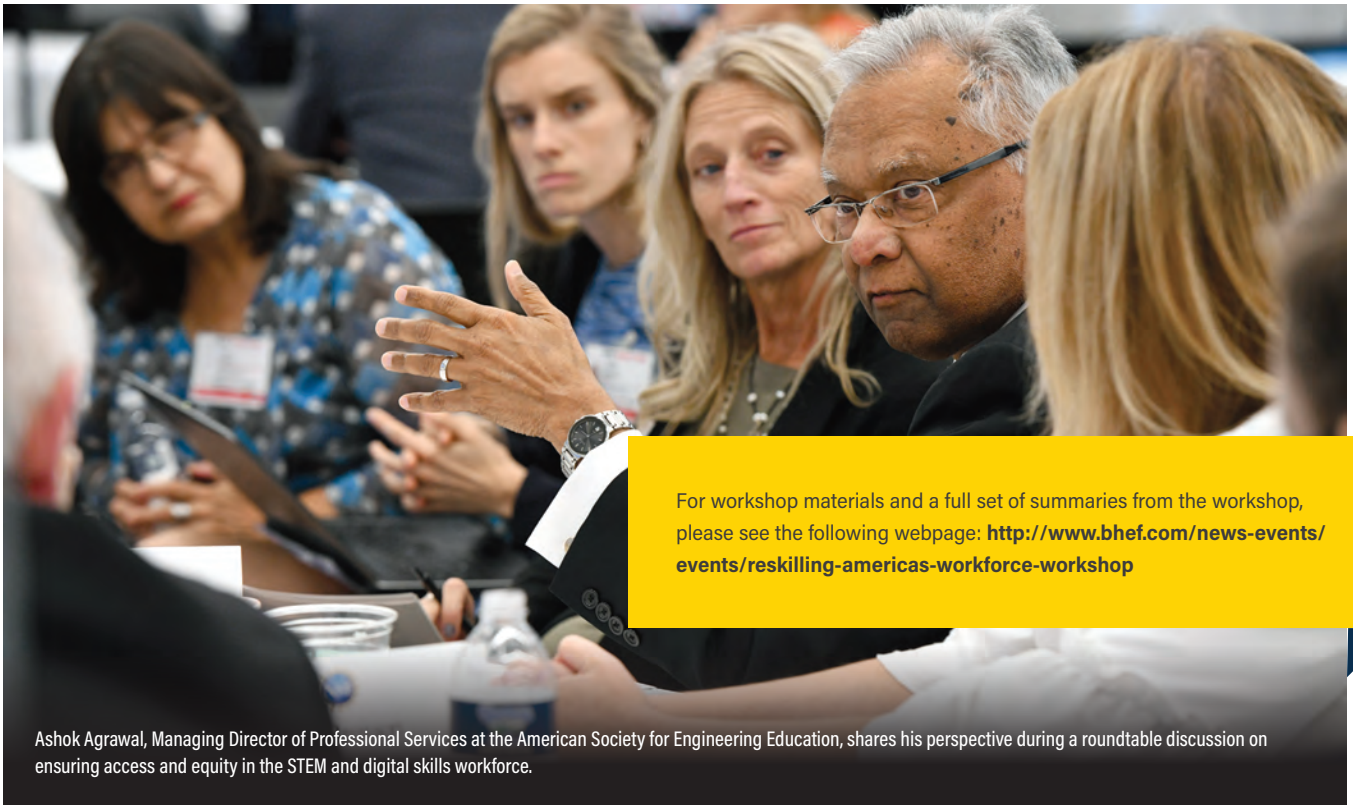
2. a gift of $1 million to support a particular component of the NSF INCLUDES "Big Idea" initiative, namely a focus on increasing the number of women in STEM fields, especially veterans.

The Boeing gift provides NSF with an opportunity to advance a broader workforce strategy and build digital skills for non-STEM jobs as well.

The following recommendations, made with input from workshop participants, can help guide federal agencies in making investments and creating initiatives that leverage, connect, and amplify workforce-related activities across the country. Workshop topics included the policy landscape, business' needs, higher education's response, and workforce investments and partnerships. The workshop also featured a series of roundtables on aligning state, regional, and national talent ecosystems to promote the digital workforce of the future.

The workshop exposed participants to successful initiatives, partnerships, and strategies related to workforce development across the country and was designed to help inform the roles that federal agencies might play in building business-higher education partnerships and shaping the workforce of the future. An integrated federal strategy is critical to promote continuous education and training for job entry and reskilling for long-term career growth in the digital economy.

6 National Science Foundation. (2018). *Boeing, National Science Foundation announce partnership for workforce development and diversity in STEM* [Press release]. Retrieved from https://www.nsf.gov/news/news_summ.jsp?cntn_id=296700



Ashok Agrawal, Managing Director of Professional Services at the American Society for Engineering Education, shares his perspective during a roundtable discussion on ensuring access and equity in the STEM and digital skills workforce.

For workshop materials and a full set of summaries from the workshop, please see the following webpage: **http://www.bhef.com/news-events/events/reskilling-americas-workforce-workshop**

RECOMMENDATIONS

BHEF synthesized four broad recommendations from the Reskilling America's Workforce workshop.

1

SUPPORT CREATION OF EDUCATION ECOSYSTEMS, pathways, and workforce partnership models that result in dissemination and wide-spread take-up of research findings by the broader community, examples of which include:

Examine existing funding opportunities to identify areas where workforce or employer partnerships could be more explicitly leveraged.

Explore opportunities to add required sections related to workforce and community engagement in calls for proposals to funding programs.

Develop a deeper understanding of the cross-section of STEM disciplines and skills, educational research, and basic and applied research, and translate that knowledge into publications and initiatives that can be shared with and deployed by communities across the country.

2

PLAN AND IMPLEMENT new federal programs and activities focused on STEM-capable workforce development, diversification, and reskilling, examples of which include:

Issue new calls for proposals focused on business-higher education partnerships that support pathways in emerging fields.

Create business-higher education partnerships that focus on diversifying the STEM-capable workforce by diversifying faculty, developing student talent, closing equity gaps, and increasing the number of women, people of color, Pell grant recipients, and veterans in high-demand, high-wage fields.

Increase emphasis on innovative STEM work-based learning experiences tied to authentic business environments (e.g. grants to build stronger quality assurance standards around corporate internships).

Fund the creation and activities of a community of effective practice for grantees and others focused on sharing learning and scaling initiatives around STEM-capable workforce/skills development and business-higher education partnerships.

Upskill the existing STEM-capable workforce both in business and in higher education.

3

FACILITATE COORDINATION both internally within each federal agency and externally across all agencies on workforce development, examples of which include:

Inventory all workforce-related activities within each federal agency and encourage development of workforce strategies as well as a streamlined and cross-cutting workforce framework that aligns to each agency's unique mission.

Mobilize all relevant federal agencies (e.g. DOE, ED, DOD, DOL, DHS, NIH, NIST, NSF)[7] around STEM-capable workforce development by hosting periodic cross-agency workforce summits aligned with each agency's internal benchmarks.

Prioritize additional strategic partnerships with industry and private philanthropy to increase employer engagement with federal programs and amplify programs that have demonstrated effectiveness (e.g. NSF INCLUDES).

Consider developing an administrative/programmatic infrastructure focused on workforce at each federal agency, i.e. establish a home at each agency for workforce/skills development and actively recruit staff/rotators from business.

7 Department of Energy, Department of Education, Department of Defense, Department of Labor, Department of Homeland Security, National Institutes of Health, National Institute of Standards and Technology, National Science Foundation

4

CREATE A CLEARINGHOUSE OF POLICIES, best practices, and recommendations for state and local governments to align and leverage federal legislation related to STEM, STEM-capable, and broader workforce-related topics, examples of which include:

Develop a dashboard of effective policies that enables meaningful change to a differentiated group of stakeholders across the U.S.

Collect best practices that can be shared across state and local government agencies, departments, and jurisdictions.

Convene governors and mayors to align federal, state, and local policies and best practices.

CALL TO ACTION

It is clear that we are at a moment of convergence. Business executives and CEOs, college and university presidents, professional associations, state leaders, and heads of federal agencies recognize that developing a STEM-capable workforce is critical for the nation. Innovation is occurring on a daily basis to create and understand the best methods to train, reskill, and educate our nation's workforce, with stakeholders moving rapidly in the same direction. At this critical juncture, there is an even more important role for federal agencies to serve as amplifiers, investors, and leaders in propelling the development of our nation's workforce now and in the future.

As such, we call on leaders in the federal government along with business and academia to build the pathways, partnerships, and programs that will help us reach scale and meet the evolving needs of the future workforce in the digital economy.

We call on leaders in the federal government along with business and academia to build the pathways, partnerships, and programs that will help us reach scale and meet the evolving needs of the future workforce in the digital economy.

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State of Massachusetts

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Roadtrip Nation

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Brian Fitzgerald (left), CEO of BHEF, moderates a discussion with Ken Eisner (second from left), Global Lead of AWS Educate at Amazon Web Services; Ellen Glazerman (second from right), Executive Director of the EY Foundation; and Joseph Aoun (right), President of Northeastern University, on partnerships at the nexus of education, training, workforce, and reform.

MONDAY, SEPTEMBER 24, 2018

8:30 a.m. **Networking Breakfast**

9:15 a.m. OPENING REMARKS
Building the Workforce of the Future

Welcome
William (Jim) Lewis, Assistant Director (Acting), Education and Human Resources Directorate, National Science Foundation

Opening Remarks
France A. Córdova, Director, National Science Foundation

Remarks
Heidi Capozzi, Senior Vice President, Human Resources, The Boeing Company

Partner Remarks
- Stephanie G. Adams, President-Elect, American Society for Engineering Education
- Karen A. Stout, President & CEO, Achieving the Dream
- Carolyn Lee, Executive Director, Manufacturing Institute
- Brian K. Fitzgerald, CEO, Business-Higher Education Forum

10:00 a.m. KEYNOTE REMARKS
Building a Digital Workforce
Wes Bush, Chairman and CEO, Northrop Grumman Corporation

10:30 a.m. **Break**

10:45 a.m. PANEL 1
Visions for Partnerships at the Nexus of Education, Training, Workforce, and Reform

Moderator
Brian K. Fitzgerald, CEO, Business-Higher Education Forum

Panelists
- Joseph Aoun, President, Northeastern University
- Ken Eisner, Global Lead, AWS Educate, Amazon Web Services
- Ellen Glazerman, Executive Director, Foundation, EY

11:45 a.m. PANEL 2
Models for Building a Competitive and Innovative Workforce – Towns, Cities, States, and Regions

Moderator
R. Kirk Jonas, Director, NGA Center for Best Practices, National Governors Association

Panelists
- Rosalin Acosta, Secretary of Labor, State of Massachusetts
- Donna Lynne, Lieutenant Governor, State of Colorado
- Greg J. Stanton, Former Mayor, City of Phoenix

12:45 p.m. **Networking Lunch**

1:45 p.m. KEYNOTE REMARKS
Futurist—Robotics, Automation, and Learning
Ardine Williams, Vice President, People Operations, Amazon Worldwide Operations

2:15 p.m. PANEL 3
Aligning Academic Programs to Meet Workforce Needs

Moderator
Randy Woodson, Chancellor, North Carolina State University

Panelists
- Mary A. Papazian, President, San Jose State University
- Scott Pulsipher, President, Western Governors University
- Scott Ralls, President, Northern Virginia Community College

3:15 p.m. **Break**

3:30 p.m. PANEL 4
Talent of the Future

Moderator
Mike Marriner, Co-Founder, Roadtrip Nation

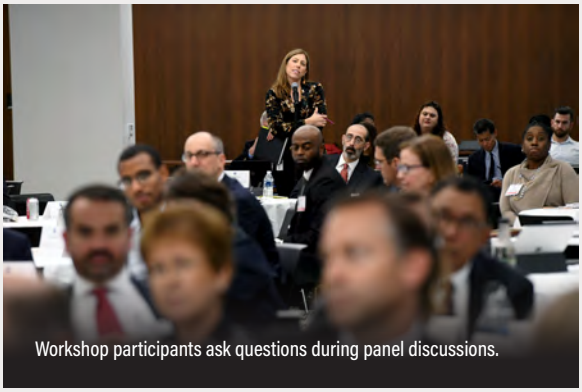
Panelists
- Sophie Jessel, Student, Advanced Cybersecurity Experience for Students, University of Maryland Honors College
- Eric'el Johnson, Electrical Engineer, The Boeing Company
- Antwan King, Risk Management Analyst, Payment Systems Intelligence, Visa
- Chad Robinson, Apprentice, Siemens Energy

4:30 p.m. CLOSING REMARKS
Framing Tomorrow's Workshop
Debbie Hughes, Vice President of Higher Education and Workforce, Business-Higher Education Forum

4:45 p.m. **Networking Reception**
Sponsored by Wiley

5:45 p.m. **Day 1 Concludes**

Heidi Capozzi, Senior Vice President of Human Resources at The Boeing Company, announces Boeing's $11 million investment as part of a $21 million partnership with NSF to accelerate training in critical skill areas and increase diversity in STEM fields.



Workshop participants ask questions during panel discussions.

From left to right: Mike Marriner, Co-Founder, Roadtrip Nation; Brian Fitzgerald, CEO, BHEF; Antwan King, Risk Management Analyst, Payment Systems Intelligence, VISA; Chad Robinson, Apprentice, Siemens Energy; Sophie Jessel, Student, Advanced Cybersecurity Experience for Students, University of Maryland Honors College; Eric'el Johnson, Electrical Engineer, The Boeing Company; William (Jim) Lewis, Assistant Director (Acting), Education and Human Resources Directorate, National Science Foundation

TUESDAY, SEPTEMBER 25, 2018

8:00 a.m. **Networking Breakfast**

8:45 a.m. **Welcome and Framing of the Day**

Welcome
Robin Wright, Division Director, Division of Undergraduate Education, National Science Foundation

Opening Remarks
Jeff Weld, Senior Policy Advisor in STEM Education, White House Office of Science and Technology Policy

Framing Remarks
Brian K. Fitzgerald, CEO, Business-Higher Education Forum

9:00 a.m. PANEL 1
Highlights of NSF Investments in STEM Workforce Development

Moderator
Janet C. Rutledge, Vice Provost and Dean of the Graduate School, University of Maryland, Baltimore County

Panelists
- Thomas Higgins, Program Director, Advanced Technological Education Program, National Science Foundation
- Barry Johnson, Division Director, Division of Industrial Innovations and Partnerships, National Science Foundation
- Nimmi Kannankutty, Division Director (Acting), Division of Graduate Education, National Science Foundation
- Don Millard, Division Director (Acting), Division of Engineering Education and Centers, National Science Foundation

10:00 a.m. **Break**

10:10 a.m. PANEL 2
Investing in the Workforce of the Future

Moderator
L.D. Britt, Member, National Academy of Medicine

Panelists
- Nicholas Armstrong, Senior Director for Research and Evaluation, Institute for Veterans and Military Families, Syracuse University
- Michael Carren, Head of Corporate Social Responsibility, The Guardian Life Insurance Company
- Sameer Gadkaree, Senior Program Officer, Joyce Foundation

11:10 a.m. **Break**

11:20 a.m. PANEL 3
Engineering and Advanced Manufacturing Partnerships to Support Lifelong Learning

Moderator
Kemi Jona, Associate Dean, Digital and Enterprise Learning, Lowell Institute School, College of Professional Studies, Northeastern University

Panelists
- Mark Cousino, Director of Learning Strategy, Design, and Technology, The Boeing Company
- Kenan P. Jarboe, Senior Program Officer, Manufacturing, Design, and Innovation, National Academy of Engineering
- Michael Richey, Chief Learning Scientist, Associate Technical Fellow, The Boeing Company
- Ed Tackett, Director of Educational Programs, University of Louisville, Additive Manufacturing Competency Center

Workshop participants engage in roundtable discussions on the STEM and digital skills workforce of the future.

12:15 p.m. PANEL 4

What Signals are the Market Trying to Send?

Moderator

Stephen Lynch, Vice President, Workforce and Economic Development, Burning Glass Technologies

Panelists

- Andrew R. Hanson, Senior Research Fellow, Strada Education Network
- Stephanie Marken, Executive Director of Higher Education Research, Gallup
- Jeff Wasden, President, Colorado Business Roundtable

1:15 p.m. **Roundtable Framing, Process, and Goals**

Debbie Hughes, Vice President of Higher Education and Workforce, Business-Higher Education Forum

1:30 p.m. **Networking Lunch**

2:15 p.m. ROUND 1

Workshop to Connect and Align State, Regional, and National Talent Ecosystems to Promote the STEM and Digital Skills Workforce of the Future

Workshop participants will choose two of the six available issue areas listed below for the roundtables. Participants will engage in their first-choice issue area for Round 1 of workshops and rotate to their second choice for Round 2 of workshops. Issue areas will be led by a facilitator and include table experts in the area to seed the rest of the discussion.

Issue 1

How Can We Build Talent Pathways through Industry-Recognized Credentials?

Facilitator

Jonathan Finkelstein, Founder & CEO, Credly

Table Experts

- Tracy Ariel, Executive Director, Higher Education, Tunxis Community College
- Gardner Carrick, Vice President, National Association of Manufacturers
- Judy Marwick, Provost, William Rainey Harper College

Issue 2

How Can We Ensure Access and Equity in the STEM and Digital Skills Workforce?

Facilitator

- Stephanie Veck, Project Director for Industry Engagement, Apprenticeship & Work-Based Learning, Maher & Maher an IMPAQ Company
- Nicholas D'Antonio, Senior Analyst, Business Engagement Lead for Advanced Manufacturing, Maher & Maher an IMPAQ Company

Table Experts

- Jamai Blivin, CEO, Innovate+Educate
- Laurie Heacock, Vice President Data, Technology, Analytics, Achieving the Dream

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Issue 3

What are Effective Pathways and Policies for the STEM and Digital Skills Workforce of the Future?

Facilitator

Matt Jordan, Director of Strategic Initiatives, Education Commission of the States

Table Experts

- Diane Bosak, Vice President, Workforce Strategies & Policy, Achieving the Dream
- Andrew R. Hanson, Senior Research Fellow, Strada Education Network

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Issue 4

How Can We Reskill the Engineering and Advanced Manufacturing Workforce for the Digital Economy?

Facilitator

Teri Reed, Assistant Vice President for Research Development, Office of Research, University of Cincinnati

Table Experts

- Ashok Agrawal, Managing Director, American Society for Engineering Education
- Para Jones, President, Stark State College
- Lee Lambert, Chancellor and Chief Executive Officer, Pima Community College

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Issue 5

How Do We Build an Employer-Driven Agenda?

Facilitator

Will Markow, Manager of Client Strategy, Burning Glass Technologies

Table Experts

- Meredith Hatch, Senior Associate Director, Achieving the Dream
- Charles Johnson, President, Vincennes University
- Rodney Petersen, Director, National Initiative for Cybersecurity Education, National Institute of Standards and Technology

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Issue 6

In What Ways are Two- and Four-year Institutions Working Effectively to Build Regional Talent Hubs?

Facilitator

Scott Ralls, President, Northern Virginia Community College

Table Experts

- Antonio Delgado, Dean of Engineering, Technology and Design, Miami Dade College
- Mary Heiss, Senior Vice President, Academic and Student Affairs, American Association of Community Colleges
- Phyllis King, Vice Provost, University of Wisconsin-Milwaukee

3:05 p.m. **Break**

3:15 p.m. ROUND 2

Workshop to Connect and Align State, Regional, and National Talent Ecosystems to Promote the STEM and Digital Skills Workforce of the Future

Workshop participants rotate to their second choice issue area for Round 2 of workshops.

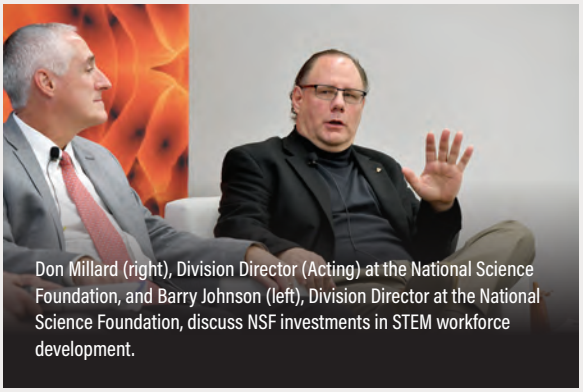
4:05 p.m. **Workshop Reconvene and Report-Outs**

Facilitators from each issue area will share key takeaways.

4:35 p.m. **Closing Remarks and Next Steps**

4:45 p.m. **Adjourn**

Debbie Hughes (left), Vice President of Higher Education and Workforce at BHEF, and L.D. Britt (right), Henry Ford Professor and Edward J. Brickhouse Chairman at the Eastern Virginia Medical School, listen attentively to panelist remarks.



Don Millard (right), Division Director (Acting) at the National Science Foundation, and Barry Johnson (left), Division Director at the National Science Foundation, discuss NSF investments in STEM workforce development.

Andrew Hanson (left), Senior Research Fellow for Strada Education Network, and Stephanie Marken (right), Executive Director of Higher Education Research at Gallup, engage in a panel discussion on market signals.

Gary Bertoline, Dean and Distinguished Professor at Purdue University, shares his perspective during a roundtable discussion.

ACKNOWLEDGEMENTS

BHEF would like to thank its three lead organizational partners, Achieving the Dream, American Society for Engineering Education, and the National Association of Manufacturers, for their input and feedback on the Reskilling America's Workforce workshop as well as all the workshop participants for providing their insights and perspectives which informed this report.

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CONTACT INFORMATION

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