A/E/C TOPICS TRACK

EXPLORING THE CHALLENGES AND BENEFITS OF DIVERSITY IN THE A/E/C WORKFORCE

Karl W. Reid, Ed.D. Executive Director, National Society of Black Engineers (NSBE)

Karen Horting, MBA, CAE, Executive Director, Society of Women Engineers (SWE)

Susan Morris, Principal, Booz Allen Hamilton
DISCUSSION OUTLINE

- How is diversity defined and why is diversity and inclusion (D&I) important in the work force?
- What are the challenges industry and the government face in recruiting and retaining a diverse work force?
- Operational suggestions and successes to increase diversity and inclusion
- How can industry and the government source value from organizations like NSBE and SWE
## DOD AND INDUSTRY DEFINITIONS

<table>
<thead>
<tr>
<th>Department of Defense</th>
<th>Industry Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity is all the different characteristics and attributes of individuals that are consistent with Department of Defense core values, integral to overall readiness and mission accomplishment, and reflective of the Nation we serve.*</td>
<td>Booz Allen defines diversity broadly. Essentially, diversity is a reflection of all of the groupings or categories that can unite or divide a group of people. Booz Allen’s interpretation goes beyond the legally-protected categories and includes dimensions that a workplace is unlikely to count or track.</td>
</tr>
</tbody>
</table>

*Military Leadership Diversity Commission’s (MLDC) final report to Congress, titled “From Representation to Inclusion: Diversity Leadership for the 21st-Century Military
WHY?

**Department of Defense Perspective**

The changing face of the Nation demands that we change. As the demographic make-up of the American population continues to evolve, it is imperative that the Department of Defense focus its efforts on emerging talents to ensure that we successfully attract, recruit, develop and retain a highly-skilled Total Force capable of meeting current and future mission requirements.*

*The Office of the Under Secretary of Defense (Personnel and Readiness) Office of Diversity Management and Equal Opportunity

**Industry Illustrative Perspective**

At Booz Allen, we believe the diversity of our people contributes to innovative ideas, new solutions and greater understanding that drives better results for our clients and the world around us. Our people put this belief into action; respecting and appreciating the differences around them in every interaction with clients and colleagues. Doing so creates an inclusive environment where everyone brings their best selves to the workplace every day.
“Despite our progress today, too many people still suffer from what I call the illusion of inclusion, which is a condition you get when you rest on past laurels.”

– The Honorable Caliborne Houghton, Jr., remarks to the Military Leadership Diversity Commission

“The United States military maintains rigorous eligibility standards because it needs competent, healthy and educated young men and women...many young Americans who want to join cannot. ... The most common barriers for potential recruits are inadequate education, obesity and/or a criminal record.”

– Diverse Magazine, Tough Standards, Diversity are Key Assets for the U.S. Military, August 1, 2013, by Jamie Barnett
DISCUSSION OUTLINE

- How is diversity defined and why is diversity and inclusion (D&I) important in the work force?
- What are the challenges industry and the government face in recruiting and retaining a diverse work force?
  - Pipeline
  - Recruiting
  - Representation
  - Inclusion
  - Career Progression
- Operational suggestions and successes to increase diversity and inclusion
- How can industry and the government source value from organizations like NSBE and SWE
RESOURCES: BOOKS

- Banaji, M. Greenwald, A. *Blindspot: Hidden Biases of Good People*
- Davidson, M. *The End of Diversity As We Know It: Why Diversity Efforts Fail and How Leveraging Difference Can Succeed.* (2011)
RESOURCES: ARTICLES


RESOURCES: TOOLS


- **Implicit Association Test** Participate in an online test to reveal unconscious bias https://implicit.harvard.edu/implicit/selectatest.html

RESOURCES: OTHERS

- Websites:
  - http://diversity.defense.gov/

- Other:
  - Defining Diversity Beyond Race and Gender, National Public Radio, Kevin Whitelaw, January 13, 2010
  - Stemming the Tide: Why Women Leave Engineering
  - Solving the Equation: The Variables for Women’s Success in Engineering and Computing
BACK UP SLIDES
40 YEARS OF EXCELLENCE

Karl W. Reid, Ed.D.
Executive Director
MISSION: TO INCREASE THE NUMBER OF CULTURALLY RESPONSIBLE BLACK ENGINEERS WHO EXCEL ACADEMICALLY, SUCCEED PROFESSIONALLY, AND POSITIVELY IMPACT THE COMMUNITY

Who We Are

• Founded in 1975
• 31,000 pre-collegiate, collegiate, and professional members (1/3 international)
• 15 regional and national conferences
• Student-governed, supported by professional staff
• Programs foster self-efficacy and leadership from 3rd graders to professionals

Why NSBE Works

An Ecosystem of Achievement

Environment (Culture)

Self-Efficacy
“I Can”

Motivation/ Attitude

Identity (Self-concept)

Behavior
Approximately 4 million 9th graders entered high school in 2001… Four years later, 2.8 million of them graduated and 1.9 million then went to either two- or four-year colleges; however, only 1.3 million were actually prepared for college. Less than 300,000 majored in STEM fields, and only about half graduated college with a STEM degree by 2011.

For African-Americans the STEM yield is ~1-2%; we need to increase the yield 10X!
A COLLEGIATE ACHIEVEMENT MODEL

**Sources** (Bandura, 1997; Helms, 1990)

- Mastery experiences
- Vicarious experiences
- Social persuasion
- Physiological states

**Integration Moderators**

- Academic Self-efficacy
- Social Integration (Tinto, 1993)

**Institutional Integration**

- Academic Integration
- Social Integration
- Achievement (Cumulative GPA)

**Racial/Ethnic Identity Attitudes**

- Physical attributes
- Socio-cultural influences (parents, families, peers, schools, media)
- Systemic forces (political, economic, racial discrimination)
- Lived experiences

**Sources**

- Bandura, 1997
- Helms, 1990

**Mastery experiences**

- Vicarious experiences
- Social persuasion
- Physiological states

**Physical attributes**

- Socio-cultural influences (parents, families, peers, schools, media)
- Systemic forces (political, economic, racial discrimination)
- Lived experiences
A CORPORATE INCLUSION MODEL

Sources (Bandura, 1997; Helms, 1990)

- Mastery experiences
- Vicarious experiences
- Social persuasion
- Physiological states

- Physical attributes
- Socio-cultural influences (parents, families, peers, schools, media)
- Systemic forces (political, economic, racial discrimination)
- Lived experiences

Integration Moderators

Career Self-efficacy

Management Integration

Institutional Integration (Tinto, 1993)

Racial/Ethnic Identity Attitudes

Social Integration

Career Success (Advancement)
WHAT MATTERS IN COLLEGE/WORK?

- Academic/Work confidence
- Opportunities to engage encouraging faculty/managers on a personal level
- Greater campus/company involvement
- Positive racial identification/cultural fluency
- Attributions that empower performance-oriented behaviors
- Effective learning/work strategies
  - Groups, getting help, time mgmt, working smarter
  - Arriving early and staying late
Society of Women Engineers

The driving force that establishes engineering as a highly desirable career aspiration for women. SWE empowers women to succeed and advance in those aspirations and receive the recognition and credit for their life-changing contributions and achievements as engineers and leaders.
SWE Structure
A multi-disciplinary educational and scientific 501(c)(3) membership organization representing all engineering and technology disciplines

100 professional sections
300+ collegiate sections

10 regions for the U.S. and Puerto Rico

34,000 total members (Women & Men, International (60 countries), 50% College Students)
CHALLENGES FOR WOMEN IN STEM

- Nearly half said they left because of working conditions, too much travel, lack of advancement or low salary.

- One-in-three women left because they did not like the workplace climate, their boss or the culture.

- One-in-four left to spend time with family.

- Those who left were not different from current engineers in their interests, confidence in their abilities, or the positive outcomes they expected from performing engineering related tasks.

Stemming the Tide, Fouad and Singh, UWI-Milwaukee, 2012
RECOMMENDATIONS FOR EMPLOYERS

- Create clear, visible, and transparent paths toward advancement
- Invest in providing substantial training and professional development
  - Improved skills
  - Improved job satisfaction
- Communicate clear work goals and relevance of individual tasks to the big picture
- It’s the workplace climate!
- Create an organizational culture that values employees’ contributions

Stemming the Tide, Fouad and Singh, UWI-Milwaukee, 2012
PARTNERING WITH DIVERSITY ORGANIZATIONS

- Recognize employees through awards and conference activities
- Recruit highly qualified diverse engineers
- Retain employees by providing cost-effective professional development programs
- Actively manage engineering pipeline and workforce issues
- Gain access to informal networks
- Discover best practices
STEM WORKFORCE REENTRY

- Top priority for employers
- July kick-off in partnership with irelaunch (leader in reentry research and modeling)
- Taking best practices from financial services industry
- Task force of 4-5 SWE corporate partners
- Release model(s) for engineering in July 2016
- Share with broad audience as SWE’s WE16 conference