NATIONAL ENGINEERING FORUM

National Engineering Forum (NEF) Regional Dialogue: Engineering Thought Leadership
Albuquerque, NM at the National Museum of Nuclear Science & History
May 29, 2013

Overarching Mission:

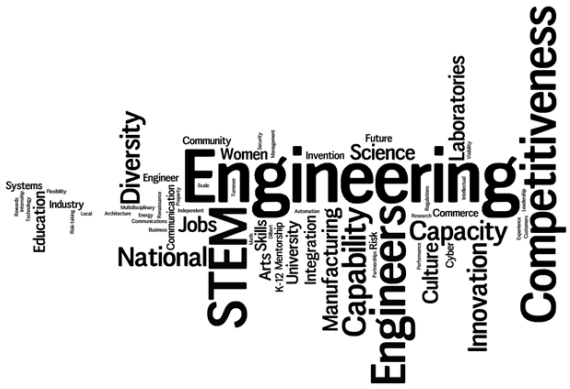
Lockheed Martin, the Council on Competitiveness, and the National Academy of Engineering launched the National Engineering Forum to address three engineering challenges in the United States: the *capacity* of our technical talent to fill current and future jobs, our engineering workforce's *capability* to address 21st century challenges, and our nation's *competitiveness* on the world stage. A series of regional dialogues will create grassroots networks of key influencers from academia, business, government, and the media, as well as students. The regional dialogues provide NEF with a nationwide survey of thought leaders, and enable a dynamic view of both the past and current state of engineering based on the expertise of those best positioned to help address the three engineering challenges. These sessions provide a platform for an engaging narrative that appeal to students and engineering professionals alike.

Key themes from the Sandia National Laboratories Albuquerque Dialogue:

More than fifty leaders from Albuquerque and around the country participated in the third regional dialogue hosted by Sandia National Laboratories at the National Museum of Nuclear Science & History. The dialogue reinforced the role engineers have in underpinning the nation's long-term security, prosperity and competitiveness. Attendees identified challenges to – and opportunities for – drawing attention to the critical importance of U.S. engineering. Particularly, the need for: greater diversity; deeper understanding and appreciation of engineering's role in U.S. growth and living standards; greater visibility and communication of engineers' roles in communities; and building the capacity of engineers to be well-rounded, teamwork-focused, and leaders in solving grand challenges and meeting opportunities for competitive advantage.

Key action items that emerged in the dialogue:

- Create a national PSA campaign around "what is engineering?" Communicate the findings broadly.
- Encourage greater efforts by industry, academia, and national laboratories to reach out to diverse populations at younger ages to cultivate interest in engineering.
- Engage in Washington, DC-based and national efforts to strengthen K-12 STEM-orientation. Help drive strategic focus at land-grant universities to increase engagement in K-12 teaching and STEM education.
- Link STEM and the arts, creating STEAM to attract students and employees who may not immediately gravitate to engineering education and training.
- Develop reward structures tied to balancing individual performance with engagement in mentorships and the development of new internship programs.
- Align mentoring and internship opportunities with engineering's role in solving challenges that interest younger Americans: climate change, sustainability, "big data," biotechnology, cybersecurity, etc.
- Celebrate diversity-driven innovation using existing awards programs, contests, festivals, and competitions.
- Provide and/or leverage regional resources (national labs, manufacturing training facilities, shared research platforms, etc.) to cultivate engineering talent and facilitate small and medium companies' competitiveness.



Word Cloud based on discussions on May 29, 2013 in Albuquerque, NM.