National Engineering Forum (NEF) Regional Dialogue: Engineering Thought Leadership
Greenville, SC, hosted by Clemson University
February 18, 2016

Overarching Mission

In 2012, Lockheed Martin launched the National Engineering Forum and in partnership with the Council on Competitiveness and the National Academy of Engineering promoted a common vision for transforming the way we perceive, experience, and prioritize engineering in the United States. NEF is identifying solutions for the challenges facing the U.S. engineering enterprise - 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 – the 3C's. A series of regional dialogues is creating a grassroots network of key influencers from academia, business, government, and the media. 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 Greenville regional dialogue

Leaders from industry, academia, and government participated in the NEF regional dialogue at Clemson University's International Center for Automotive Research. Keith Young, Director of Composites Technology for Boeing, provided the evening's keynote remarks, highlighting the critical demographic challenges facing engineering intensive enterprises – with a potential shortfall in the current rate of graduating engineers, coupled with the expected and dramatic number of retiring engineers over the next five years. Following the keynote remarks, a group of leaders – Clark Gillespy, President of Duke Energy, South Carolina; David Stafford, Vice President, Personnel and Chief Human Resources Officer, Michelin North America; and, Kurt Goodwin, General Manager of Advanced Manufacturing Works, General Electric – took a deeper dive into each of the NEF's "3C's" of engineering: capacity, capability, and competitiveness. Addressing a wide range of issues, all reiterated the need to inspire a broad array of students to look toward engineering as a career path, especially those interested and able to collaborate with colleagues outside engineering disciplines. Dialogue participants continued this theme in conversation, noting more must be done to attract students from varied backgrounds into engineering and equip them with the tools to engage in creative professions. Participants emphasized that breaking down traditional silos and driving collaboration with a diverse peer group facilitates learning and innovation. While these changes may take time to implement, participants were confident current and future engineers will have the diversity of thought to address America's engineering challenges.

Recommendations that emerged in the dialogue

- Expose primary and secondary education students to engineering by leveraging local industry and manufacturing centers.
- Break down silos between engineering disciplines to improve collaboration and problem solving.
- Engage the next generation of engineers by communicating the ability of engineers to build the future.
- Connect industry leaders to academia ensuring educators are developing appropriate skills in students.