



June 12, 2012

The Honorable Barack Obama  
The President of the United States  
The White House  
1600 Pennsylvania Avenue, NW  
Washington, D.C. 20500



Dear President Obama:



We, the undersigned organizational leaders, recognize the vital importance of undergraduate science, technology, engineering, and mathematics (STEM) education to maintaining a vibrant, diverse workforce and ensuring a secure and prosperous nation. Of particular concern to us are the first two years of college, when students, especially women and underrepresented minorities, are most likely to switch out of STEM fields into other majors or not complete a degree at all.



Further, we recognize the need for broader alignment and deeper engagement among business, higher education, and government to increase overall STEM literacy and to improve undergraduate success in STEM fields; demonstrate the value of STEM academic study to many rewarding career pathways; and convey to students the skills and competencies required for the 21<sup>st</sup> century STEM workforce.



Over the next five years, we will collaborate among our organizations to address the needs stated above through the following Priorities, Operating Principles, and Action Plan:

**Priorities**

- Increase the number and diversity of undergraduates in STEM disciplines and the rate at which they graduate and enter the STEM workforce or enroll in graduate programs
- Better align undergraduate education (including community college education) with STEM industry workforce needs in key strategic areas
- Identify roles and responsibilities for academic, industry, and government organizations in studying, advancing, and evaluating comprehensive and systemic reform in undergraduate STEM education and workforce development, recruitment, placement, and retention



**Operating Principles**

- Partners will be open to collaboration; taking the lead, as appropriate, on group activities and sharing information about STEM workforce needs, strategies for workforce recruitment, new approaches to undergraduate STEM education, and data on effective practice
- Activities will incorporate the full range of members from academic and industry associations, professional societies, and government agencies in order to leverage their individual efforts to achieve larger-scale implementation and impact
- Partners will seek to engage in joint program activities that are measurable, sustainable, and based on evidence



**Action Plan**

- Work jointly to understand the workforce and training needs of industry in STEM related fields and to develop new and innovative ways, based on research, theory, or expert judgment, to ensure that colleges and universities are meeting those needs
- Work jointly to find or initiate new approaches to recruit, develop, train, and retain the domestic STEM talent necessary to ensure future U.S. global competitiveness



- Ensure that national policies and dialogues include a focus on increasing the recruitment, retention, and graduation rate of students underrepresented in STEM at universities, colleges, and minority serving institutions
- Seek and create opportunities for partners, and potential partners, to connect with and support on-the-ground STEM initiatives at colleges, universities, and minority-serving institutions
- Convene industry, higher education, and government organizations to discuss and share data and research on the skills and competencies needed for the 21<sup>st</sup> century STEM workforce, and develop strategies on how those skills and competencies could be incorporated into undergraduate STEM education
- Support ongoing research in the areas of undergraduate STEM instruction and curriculum, student learning and motivation, retention, STEM literacy, and faculty professional development

Sincerely,



Marion C. Blakey  
President & Chief Executive Officer  
Aerospace Industries Association



Bassam Z. Shakhashiri  
President  
American Chemical Society



Molly Corbett Broad  
President  
American Council on Education



Don P. Giddens  
President  
American Society for Engineering Education



Hunter R. Rawlings III  
President  
Association of American Universities



Peter McPherson  
President  
Association of Public and Land-grant Universities



Brian K. Fitzgerald  
Chief Executive Officer  
Business-Higher Education Forum



Lt. Gen. Lawrence P. Farrell, Jr., USAF (Ret)  
President  
National Defense Industrial Association



Rear Admiral Matthew L. Klunder  
Chief of Naval Research  
Office of Naval Research



Rey Ramsey  
President & Chief Executive Officer  
TechNet