

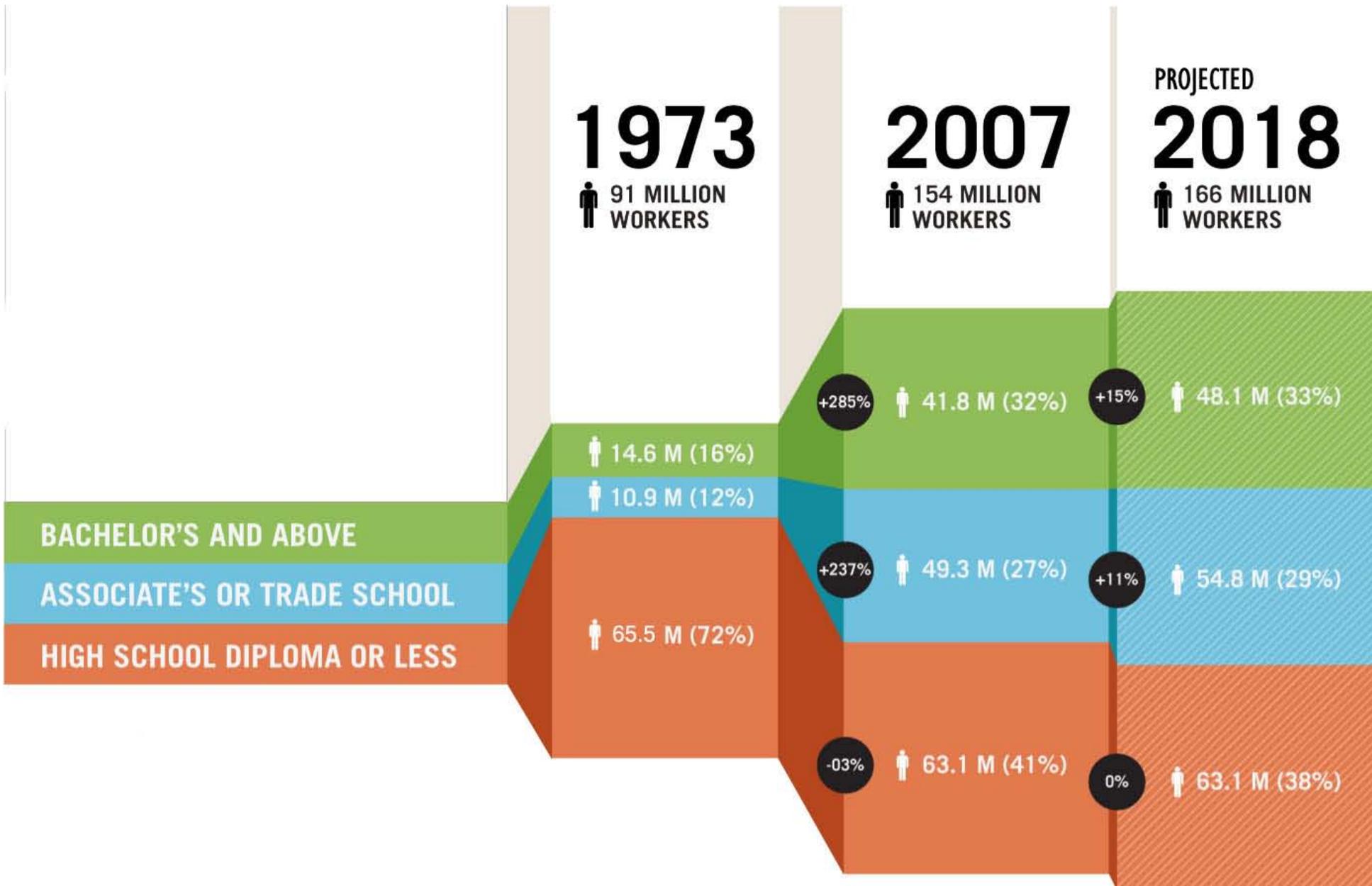


# **Solving America's Innovation Problem**

**The Naval STEM Forum**

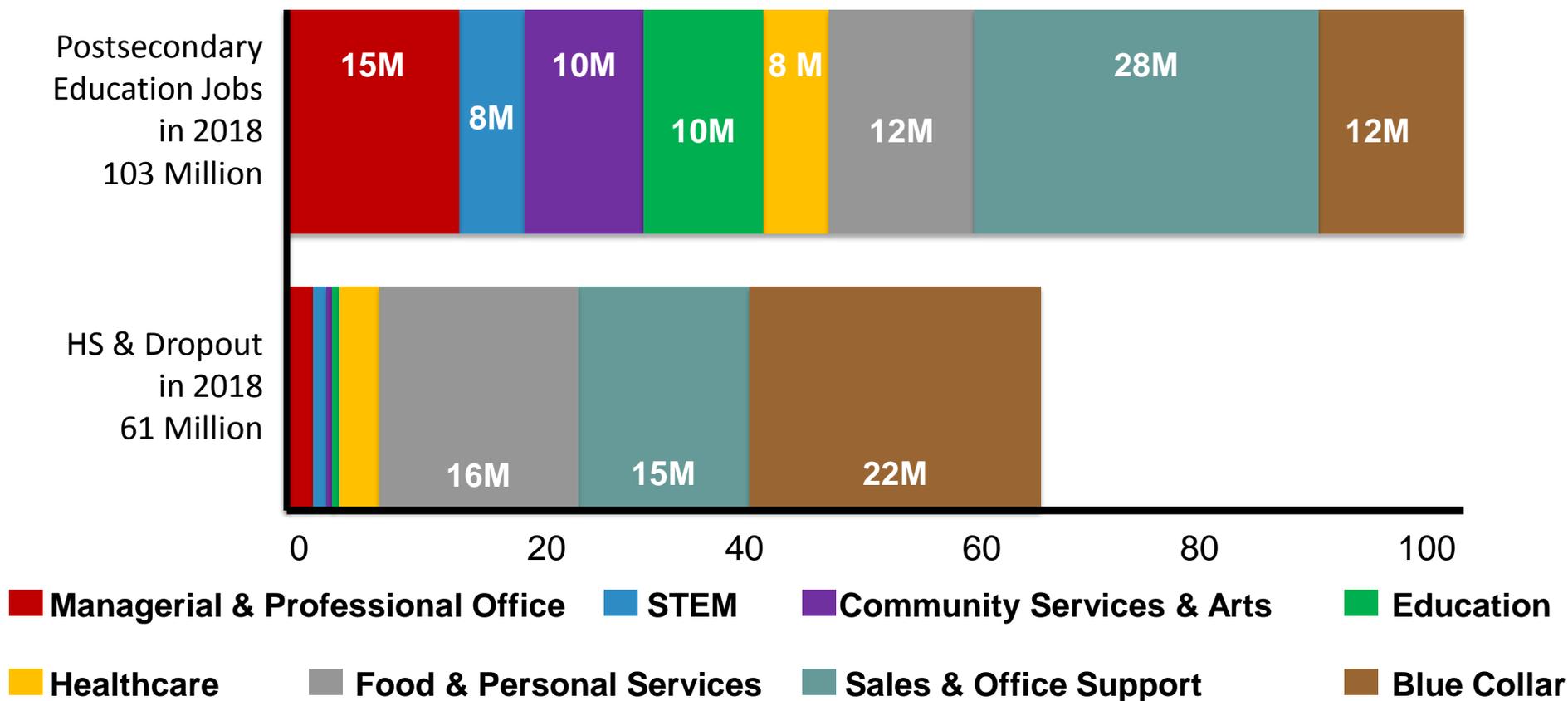
**June 15, 2011**

# Educating the Workforce of the Future



# Education by Job Sector

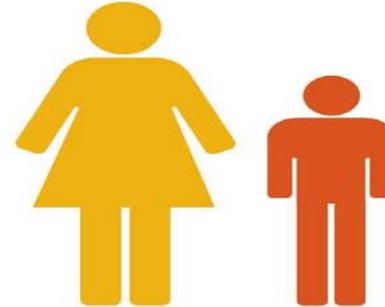
Postsecondary education provides access to occupations across the economy, while workers with a high school diploma or less are largely limited to three occupational clusters that are either declining or pay low wages.



# Gender Gap in US Colleges



Women account for 57%  
of college students



Women earn 57% of college  
degrees; men 43%



Women account for 60% of graduate students

# College Majors and Gender

Men dominate bachelor's degrees in some fields (2007)

- 81% in engineering
- 81% in computer science
- 79% in physics

Women are stronger in other fields (2007)

- 77% in psychology
- 60% in biological sciences
- 50% in agricultural sciences
- 50% in chemistry

***Women comprise almost half of the US workforce but only 27% of the science and engineering workforce***

# What Talent Wants

Lifelong Learning Opportunities

Virtual Mobility

Positive Country Brand

High Level of Freedom of Mind

Skill Recognition Institutions

The “Perfect Employer Inc.”

Accessible Talent Borders

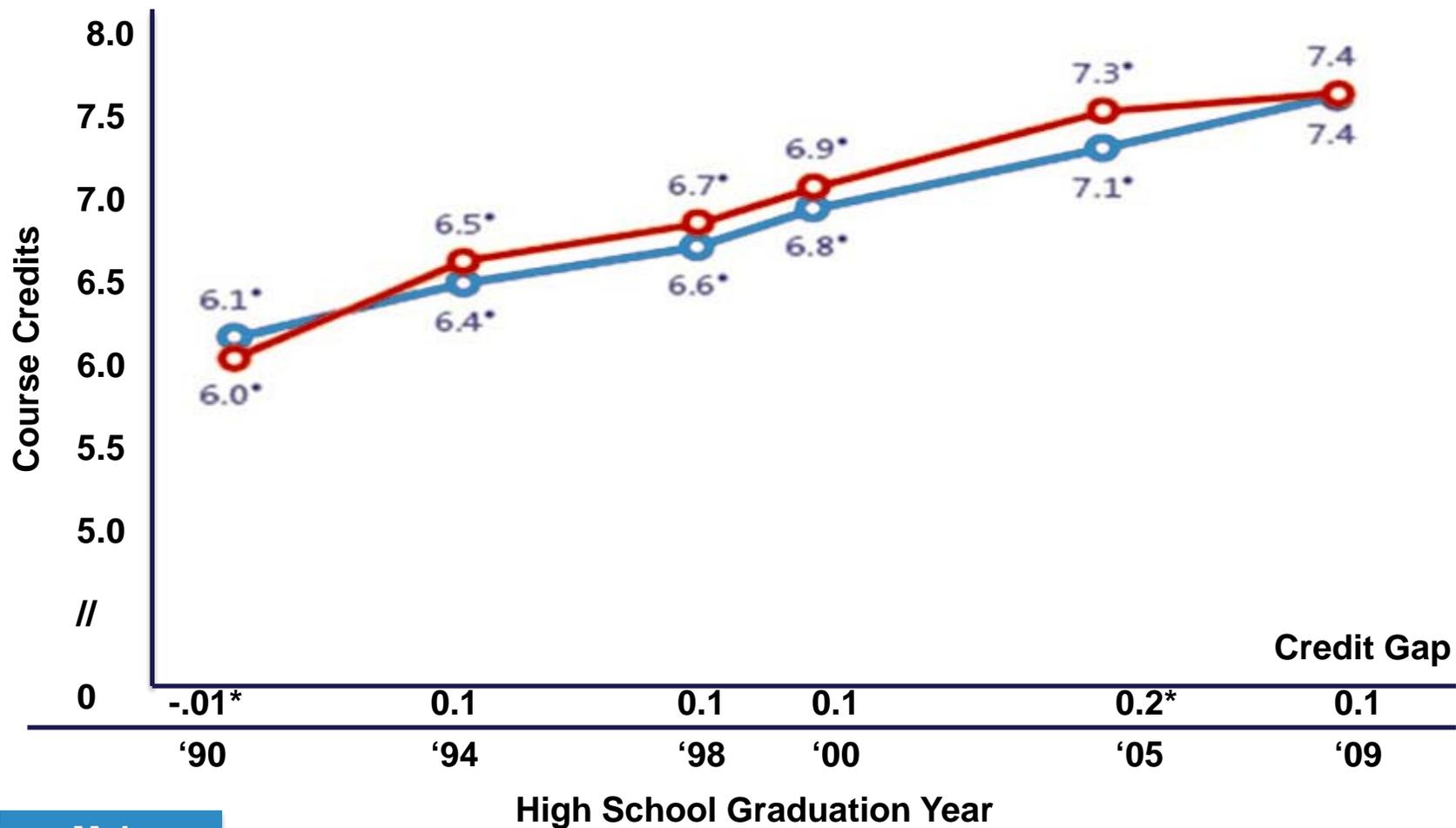
Diversity

Inspiring Working Environment



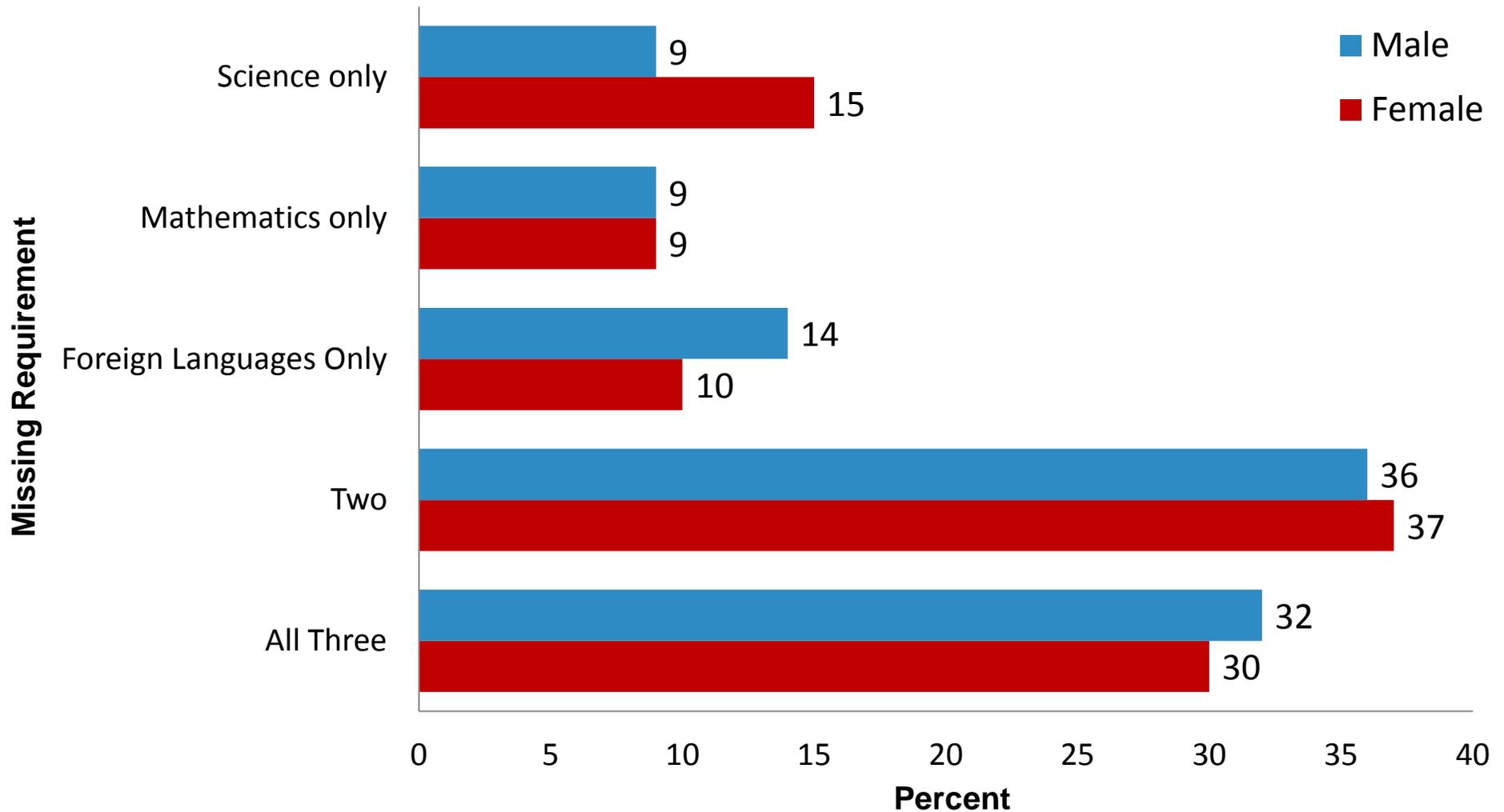
**{ CHANGE THE EQUATION }**<sup>TM</sup>

# Average Math & Science Credits by Gender 1999-2009



Male  
Female

# Not Ready for Rigorous Curriculum: 2009



# Educate to Innovate

- Improve participation and performance of America's students in STEM
- Mobilize the business community to improve the quality of STEM learning in the US

## **Craig Barrett**

*Former CEO/Chair, Intel*

## **Glenn Britt**

*CEO, Time Warner Cable*

## **Ursula Burns**

*CEO, Xerox*

## **William Green**

*Chairman, Accenture*

## **Antonio Perez**

*CEO, Kodak*

## **Sally Ride**

*CEO, Sally Ride Science*

## **Rex Tillerson**

*CEO, Exxon Mobil*

# Organizational Characteristics

- Focus on preK-12 STEM learning
- Peer-to-peer network of CEOs
- Pledge to serve as the nation's conscience on progress in STEM learning
- Involve the White House, State Houses nationwide, foundations, the corporate community, school districts, IHEs, and out-of-school providers

# Organizational Goals

- Improving STEM teaching at all grade levels, with a larger & more diverse cadre of highly-capable and inspirational STEM teachers
- Inspiring student appreciation & excitement for STEM programs & careers to increase success & achievement in school & opportunities for a collegiate education, especially among females & students of color
- Achieving a sustained commitment to improving STEM education from business leaders, government officials, STEM educators & other stakeholders through innovation, communication, collaboration & data-based decision making

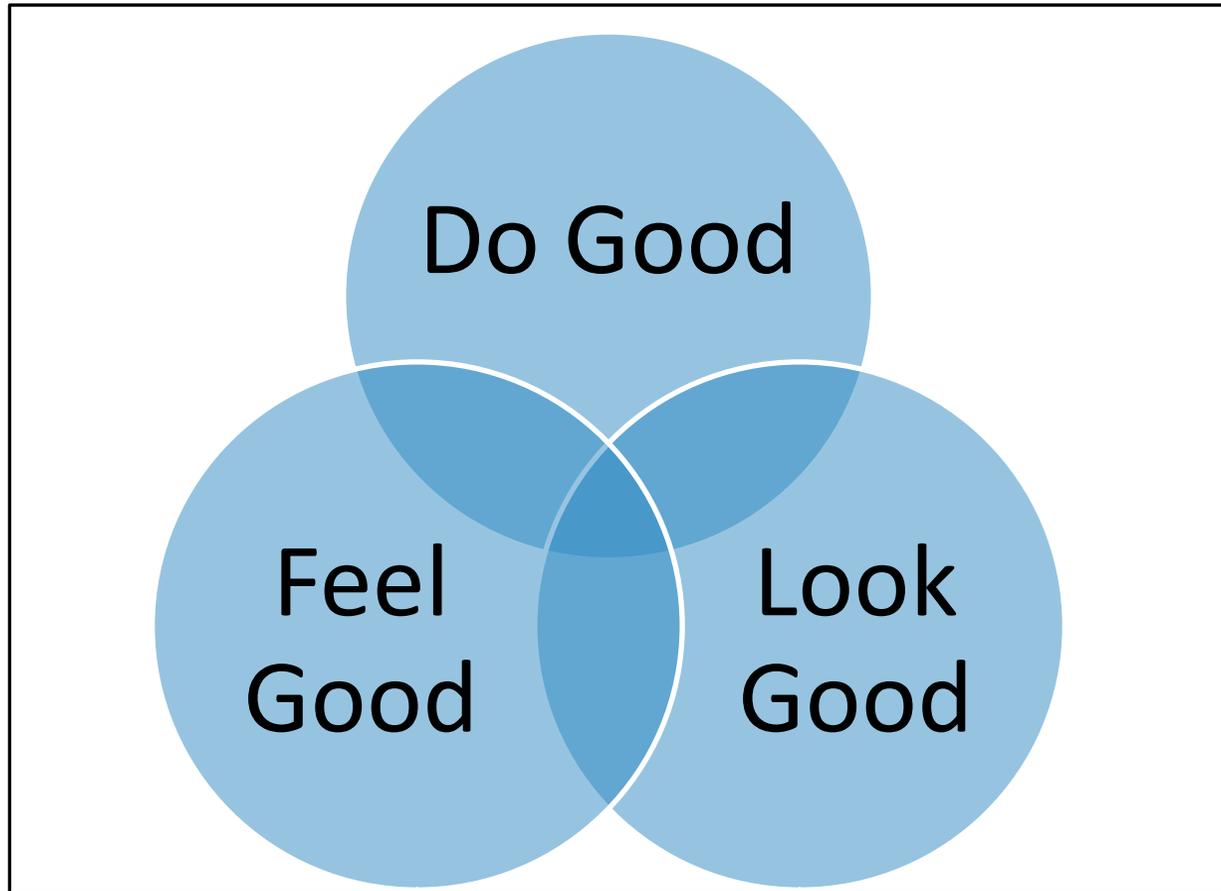
# What defines Success?

- Corporate members strengthen philanthropy in STEM learning for youngsters in grades preK-12
  - Independent, non-partisan, non-profit voice engaged in public/private partnerships
- Help corporate members strengthen their advocacy, especially at the state and local level
  - Connect with like-minded leaders and create a significantly greater impact than would be possible for individual corporations in isolation
- Ensure accountability for results

# First Year Activities

- Snapshot of the STEM investments
- Design Principles for effective philanthropy
  - Mentoring and collaboration
  - Searchable database
  - Characteristics and rubrics
- 100 new sites for handful of effective programs
- State-by-state STEM Vital Signs
- Well-conceived communication strategy

# Philanthropy for Many Companies



# Refocus With Help of STEM Design Principles

**Do Good**

Look Good

Feel Good

# Featured Programs

- Advanced Placement Training and Incentive
- Career Ladders
- Engineering is Elementary
- FIRST
- K-8 Math Progressions
- National Academy Foundation
- UTeach

# Corporate Members

1. A123 Systems
2. Accenture\*
3. Activision Publishing
4. The Aerospace Corporation
5. Agilent Technologies
6. Alcoa
7. AMD Foundation
8. Amgen
9. Applied Materials
10. Archer Daniels Midland
11. AT & T
12. Aurora Flight Sciences
13. Autodesk
14. BAE Systems
15. Ball Aerospace & Technologies
16. Battelle
17. Baxter International
18. Bayer
19. Bechtel
20. Boeing
21. Cardinal Health
22. Carolina Biological
23. Caterpillar
24. Causecast
25. Celgene
26. Chevron
27. Cisco
28. Cognizant
29. Comcast
30. Corning
31. Dell
32. Deloitte
33. Dreamworks
34. Discovery Communications
35. Dow Chemical
36. DuPont
37. Eaton
38. E-line Media
39. Eli Lilly and Company
40. EMC2
41. Epic Games
42. Ernst & Young
43. ExxonMobil \*
44. Facebook
45. Fluor
46. Ford Motor
47. GE
48. GlaxoSmithKline
49. Google
50. Hitachi, Ltd
51. HP
52. Honeywell
53. IBM
54. Intel \*
55. JP Morgan Chase
56. Knowledge Universe
57. Eastman Kodak \*
58. LMI Aerospace
59. Lockheed Martin
60. McKinsey & Company
61. McKinstry
62. Medtronic
63. Merck
64. Microsoft
65. MITRE
66. Motorola
67. Nature Publishing Group
68. The Nielsen Company
69. Northrop Grumman
70. Ogilvy Public Relations
71. Oracle
72. PASCO Scientific
73. Prescription Solutions
74. PricewaterhouseCoopers
75. Procter & Gamble
76. Promethean
77. Qualcomm
78. RAND
79. Raytheon
80. Rockwell Collins
81. SAS
82. Sally Ride Science \*
83. Sambra Energy
84. Samsung
85. Schlumberger Limited
86. Sempra Energy
87. Siemens
88. SMART Tech
89. Sony Pictures
90. Space Systems / Loral
91. SpaceX
92. State Farm Insurance
93. Stellar Solutions
94. Symantec
95. Synopsys
96. Teradata
97. Tesla Motors
98. Texas Instruments
99. ThermoFisher Scientific
100. Time Warner Cable \*
101. United Launch Alliance
102. United Space Alliance
103. United Technologies
104. Univision Communications
105. Verizon
106. Vernier Software & Technology
107. Viacom
108. Virgin Galactic
109. Wireless Generation
110. Xerox \*

\* **Founding/Board Member**



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