

# Athena Factor 2.0: Accelerating Female Talent in Science, Engineering & Technology



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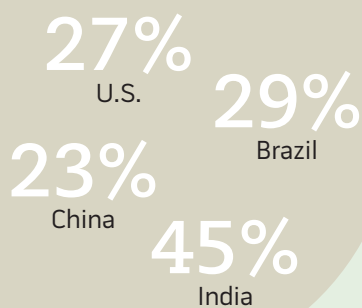
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# Executive Summary

In 2008, when we published *The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology*, our data showed that while the female talent pipeline in SET was surprisingly robust, women were dropping out of the field in droves. Over time, fully 52 percent of highly qualified women working for SET companies quit their jobs, driven out by hostile work environments, isolation, extreme work pressures, and a lack of clarity surrounding career paths.

## WOMEN WHO SAY THEY FEEL STALLED



Five years later, the situation has evolved in ways both promising and frustrating. The demand for SET talent is intensifying at the same time that the supply of scientists, engineers, and technologists is dwindling: post-9/11 security concerns have reduced the number of H-1B visas (which allow foreign nationals to work in the United States), and rapid growth in Asia has created a reverse brain drain of highly qualified Indian and Chinese scientists and engineers who are returning home after completing their education in the United States. This bodes well for women. Yet many of the barriers we documented in our first report continue to daunt and demoralize women as they seek to fill these gaps.

In this report, we revisit the SET landscape—expanded to include Brazil, China, and India as well as the U.S.—to determine what has changed for the better and to offer solutions for what has resisted change. The good news: the pipeline of global female talent in SET remains rich and deep, with women being the majority of SET college graduates in many key geographies. They're ambitious, eager to be promoted, and dedicated to their professions: 80 percent of U.S., 87 percent of Brazilian, 90 percent of Chinese and 93 percent of Indian SET women say they love their work. However, a sizable proportion say they feel stalled and say they are likely to quit their jobs within a year.

The fundamental reasons haven't changed. While no longer subjected to overt bias, women continue to face powerful "antigens" in SET corporate environments. However, our new data identifies newly revealed nuances. These include:

**Hostile macho cultures.** Women in SET are marginalized by lab-coat, hard-hat, and geek workplace cultures that are often exclusionary and promulgate bias.

**Isolation.** SET women no longer find themselves the sole female on a team or at a site. Yet they still feel excluded from "buddy networks" among their peers and lack female role models.

**Scarcity of effective sponsors.** Although SET women have sponsors, they don't reap the benefits to the degree that their male colleagues do. The "sponsor effect" (the differential in satisfaction with career progression for individuals with sponsors vs. those without) is 22 percent for U.S. SET women versus 32 percent

## WOMEN WHO SAY THEY ARE LIKELY TO QUIT WITHIN A YEAR



**30%** of women's ideas get green-lighted for development vs. **37%** of men's

**25%** of women's ideas get realized/implemented vs. **30%** of men's

for men, 19 percent for Brazilian SET women versus 42 percent for men, and 21 percent for Chinese SET women versus 58 percent for men.

**Difficulty with executive presence.** SET women struggle to decipher and embody leadership attributes, and receive little useful feedback to correct this perception.

These antigens contribute to an environment of subtle, unspoken bias that makes it more difficult for SET women to assume leadership roles. They also suppress, as CTI's 2013 *Innovation, Diversity and Market Growth* report makes clear, innovative potential. Only 38 percent of women get their ideas endorsed by leadership, compared to 44 percent of men (in SET companies in the U.S.).

Looking at the barriers to SET women's advancement through a lens refined by our recent studies in sponsorship, executive presence, and innovation, we see promising levers for change. The most obvious solution: sponsorship. Sponsors help their protégés crack the unwritten code of executive presence, improving their chances of being perceived as leadership material. Most important to the companies employing them, sponsors help women get their ideas heard.

This study offers road maps for both ambitious SET women and human resource professionals seeking to correct for some of the inequities that beset this critical talent pool. Five company initiatives—some still in an early experimental stage, some fully developed and delivering solid results—offer templates to ensure that many more women not only stay in SET careers, but also progress to realize their full potential. Our research shows that when SET women are fully engaged, and when leadership creates the speak-up culture wherein their ideas might be heard, companies enjoy a “diversity dividend” that translates into increased market share and entry into altogether new markets. To remain globally competitive, every company needs to harness the innovative potential of its highly qualified female workforce, but nowhere is that imperative greater than in the science, engineering, and technology sectors.

**46%**

of U.S. SET women believe senior management more readily sees men as “leadership material”

**WITH A SPONSOR SET WOMEN ARE:**

**37%**  
more likely to ask for a raise (37% vs. 27%)

and

**22%**  
more likely to be satisfied with their rate of promotion (73% vs. 60%)

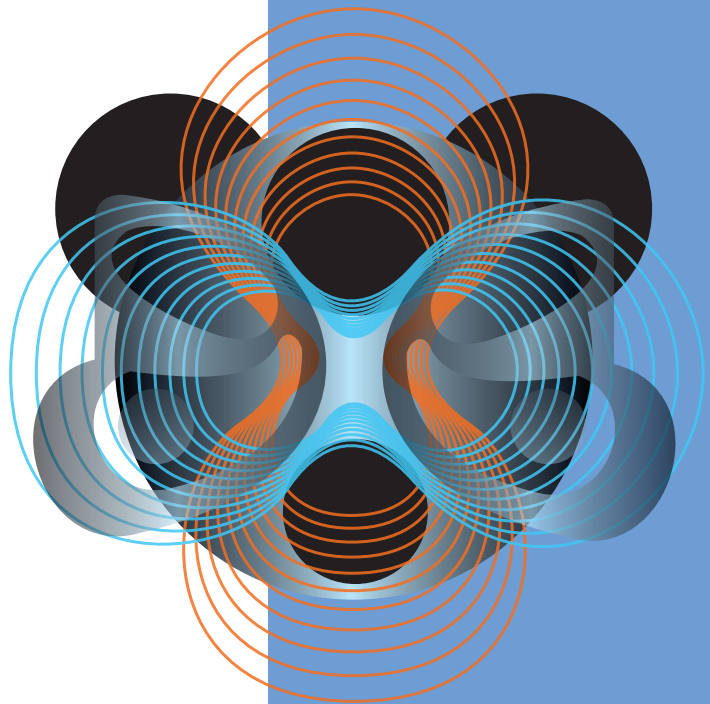
**WITH A SPONSOR SET WOMEN ARE:**

**70 %** (51% vs. 30%) more likely to have their ideas endorsed

**119 %** (46% vs. 21%) more likely to see them developed

**200 %** (39% vs. 13%) more likely to see them implemented

CTI's flagship project is the Task Force for Talent Innovation—a private-sector consortium focused on helping organizations leverage their talent across the divides of gender, generation, geography, and culture. The 80 global corporations and organizations that constitute the Task Force—representing nearly 6 million employees and operating in 192 countries around the world—are united by an understanding that the full utilization of the talent pool is at the heart of competitive advantage and economic success.



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