A Three-Step Strategy for Advancing Technical Women *and* Your Business

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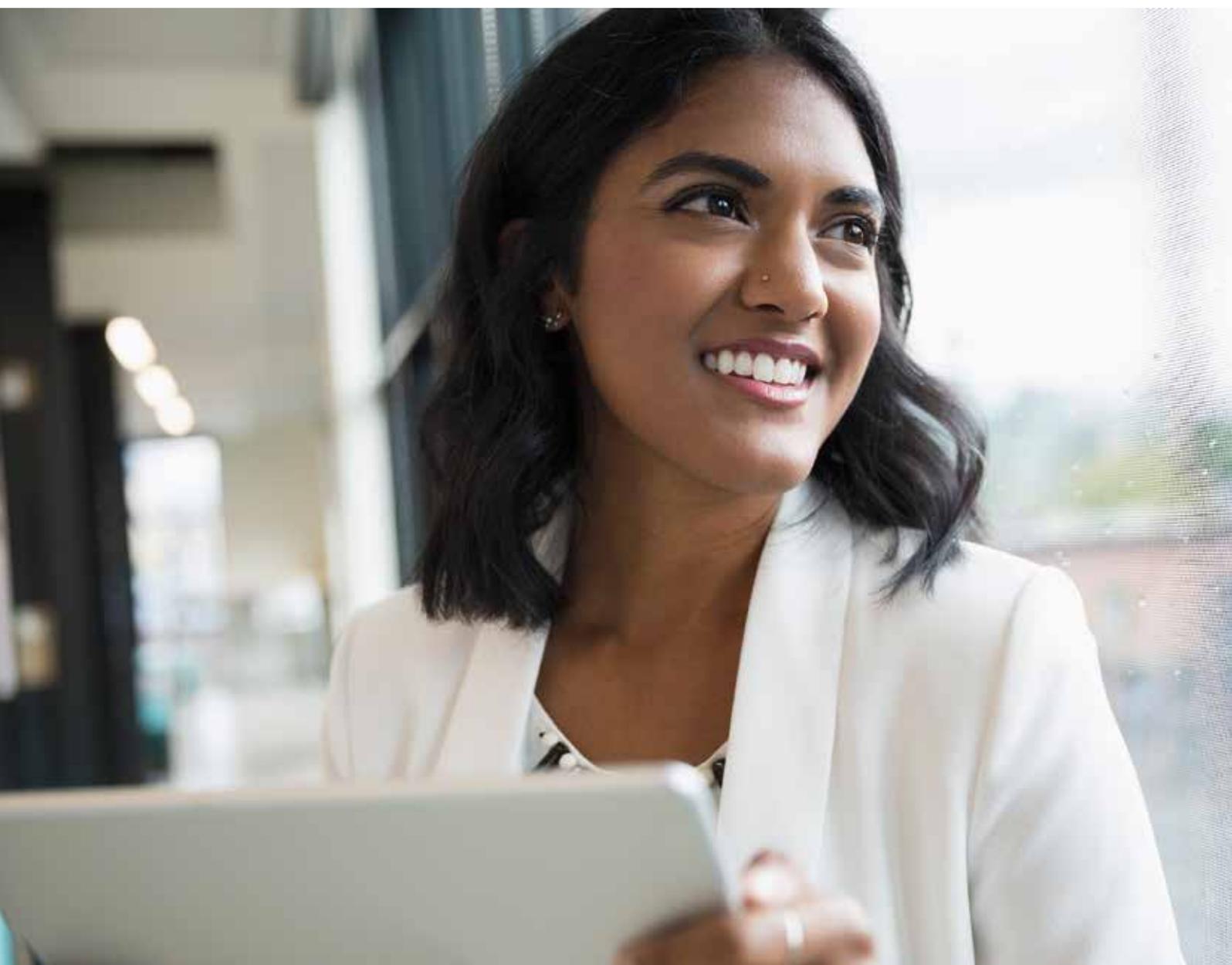
Contents

Why Women are Dropping Out of Science and Technology Careers . . .

In today's technology-dependent world, workers pursuing careers in science, technology, engineering, and math (STEM) are in high demand. They've become critical to innovation, to operational efficiencies, and to establishing a marketplace advantage. As a result, competition for top talent is fierce—and getting fiercer.

Several sobering trends, though, are narrowing the resource pool and making it harder for HR teams to hire and retain the STEM talent their companies need:

- Women who receive STEM degrees are less likely than their male counterparts to work in STEM jobs.[1]

- More than half the women working in STEM fields leave for other careers—and almost a third leave within their first year on the job.[2] Often work experiences impact the decision to leave—including a feeling of isolation, hostile work environments, and a lack of supportive sponsors.

- Those who stay typically peak about 10 years into their career—failing to move into senior management or the executive suite.[3]

The bottom line: Though women continue to make gains across the broader economy, they remain dramatically underrepresented in STEM positions.

Female Retention in STEM Fields
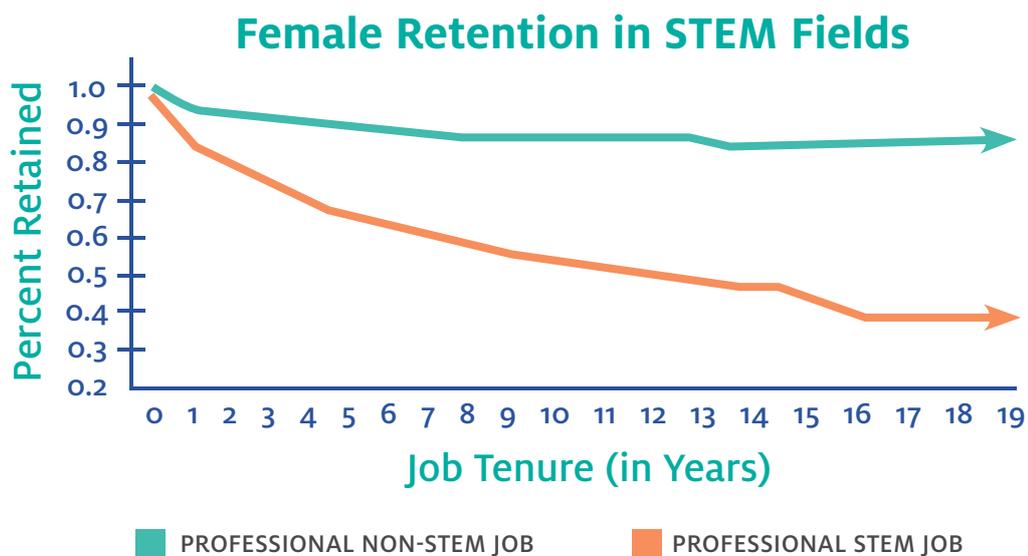
Source: A 2016 study from the National Center for Women & Information Technology.

. . . and Why You Should Care

When women drop out of STEM careers, companies can lose critical talent and face a costly recruitment challenge. But that's just the beginning. Multiple studies show that when women leave, it can trigger a much broader ripple effect—impacting work environments and important business outcomes. A few examples:

- Research from CCL and Watermark shows that having a higher percentage of female talent in an organization predicts less burnout and higher levels of job satisfaction, dedication, engagement, and meaningful work.[4]

- Gender-diverse teams and business units have higher revenues and profits compared to male-dominated teams.

- Tech companies and departments with gender diversity are more likely to stay on schedule, under budget, and have improved employee performance.[5]

- Since more women than men actually use technology like social media and smartphones—losing women in STEM careers means your business loses the important end-user perspectives they can bring to their work.[6]

How to Retain and Promote Women with STEM Talent

So, how do you retain women with the science and technology skills your business needs to succeed? And how do you promote them and help them advance into executive positions rather than stalling in mid-career?

CCL research shows there are three important steps your company can take to improve retention and help women in STEM roles thrive:

- **Offer challenging assignments** that let them spread their wings and practice new skills in the workplace.[7]

- **Help them build relationships** with bosses, trusted colleagues, mentors, and sponsors who can provide feedback and support and open the door to critical opportunities and roles.

- **Offer learning and development opportunities** focused on building the leadership competencies needed to thrive in your organization.

In the pages that follow, we'll dive into each of these success strategies and show you how to bring them to life.

3 Ways Companies Can Retain Women in STEM Careers
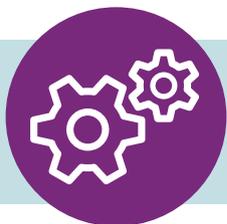
Offer them challenging assignments and new skills practice.

Help them build relationships with mentors and sponsors.

Provide opportunities for them to learn and build competencies.

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STEP 1
Challenging Assignments

Multiple studies show that challenging assignments are the number one source of important learning experiences. But it's clear women are missing out.

According to research by Catalyst, men get more of the kinds of assignments that can help them advance in their careers than their female colleagues.[8] And those projects have far bigger budgets, far more team members, and far more C-suite attention than those assigned to women.

To help women prepare for bigger leadership roles, it's important to be deliberate about helping them widen their range of professional experience and build new leadership skills. Our CCL colleague Nick Petrie refers to these as "heat experiences"—assignments that are new, uncomfortable, high-profile, and carry the risk of failure.

Developmental opportunities can include temporary projects, task force membership, rotational assignments, or job restructuring to broaden roles and responsibilities. They can even include challenges outside the workplace, such as leading a professional organization.

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- Make challenging assignments for women in STEM roles a part of your organizational culture and corporate talent management initiatives.

- Begin at the top and build senior leadership support for stretch and rotational assignments for women.

- Require that plans and practices for development and performance management include on-the-job experiences.

- Make certain that highly-valued women in STEM roles aren't kept in silos or "hoarded." Routinely export them to other parts of the organization to broaden their experience, their visibility, and their impact.

- Encourage managers to consider developmental opportunities for women when making decisions about how to staff key projects.

- Make learning from challenging assignments more effective by focusing on regular feedback, support, and recognition.
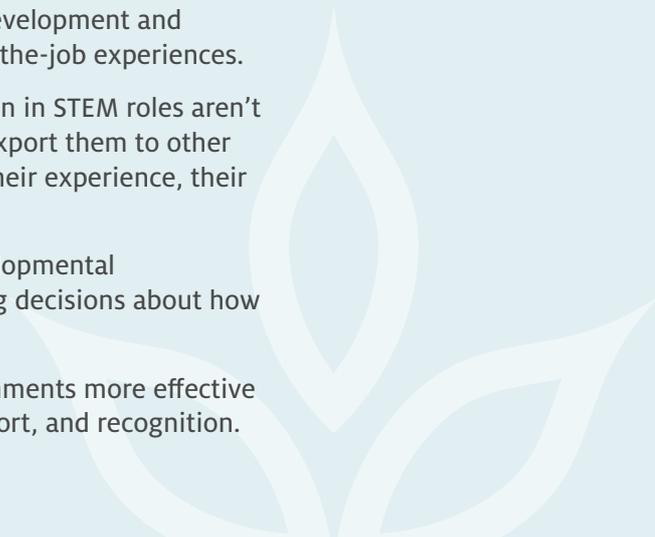
STEP 2
Networking, Mentoring, and Sponsorships

High-performing leaders rely on the right networks and the right relationships to help them lead effectively, get results, and develop in their careers. These important people connections help them access information, gain new opportunities, and earn promotions. In fact, research shows networking is the number one predictor of career success.[9]

Many women, though, have a hard time building networks or even understanding their importance. This is particularly true of technical women, who tend to believe their work speaks for itself. They may not buy into the important role other people can play in helping them navigate organizational politics and move up the ladder.

A 2017 global survey by ISACA (Information Systems Audit and Control Association) shows that in addition to networking challenges, women in STEM careers also lack mentors, female role models, and senior-level sponsors.[10] CCL research shows these types of relationships result in a five-times increased likelihood of promotion and an improvement in retention. The right relationships can help women accelerate their careers, feel more fulfilled, and make a broader impact on the business.

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- Establish mentoring and sponsorship initiatives that help STEM women develop their skills and move up. And use your rewards program to incent involvement.

- Encourage the development of learning communities that give technical women the opportunity to network, develop new skills, and share their experiences with others.

- Offer women the opportunity to attend and speak at high-profile forums and industry conferences where they can see and be seen—building their experience and confidence.

STEP 3
Opportunities for Training and Development

Research shows that women—especially women in STEM careers—are looking for opportunities to develop their leadership skills. And giving them the training they want can pay off. The Anita Borg Institute's ranking of top US companies for women technologists shows that organizations offering more formal leadership development training are the most successful at attracting and retaining women employees.[11]

Unfortunately, though, most women aren't getting the training they want and need. Research conducted across 32 countries shows organizations are more likely to sponsor training for male than female employees.[12] Those results are echoed by a National Center for Women & Technology (NCWIT) study that shows most technical women aren't receiving the training they need to advance in their careers.[13]

Part of the dilemma may be traditional beliefs about gender roles and the assumption that women are more interested in raising a family than in developing their capabilities and moving up. CCL research shows, though, that women are just as ambitious as men—if not more so.[14]

- 81.4% of women (and 81.8% of men) say they are interested to extremely interested in leadership development training.

- 74.1% of women (and 60.1% of men) say they are interested to extremely interested in a promotion.

- 88.2% of women (and 78.3% of men) say they are interested to extremely interested in a salary increase.

What does effective training and development look like? CCL experts say programs tailored for the needs of STEM women will help them navigate workplace issues that otherwise might cause them to drop out. They can focus on communication and leadership skills, building strategic networks, boosting their visibility, and becoming their own best advocates.

Effective development also involves practical action plans that help learning "stick" when women return to the workplace. They should feel supported before, during, and after development as they bring what they've learned back to the job.

Remember that context is critical. Make certain women understand that the developmental opportunities you offer are an investment in their potential and a reflection of how much you value their contribution—not an attempt to "fix" them.

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- Custom-tailor leadership development initiatives for mid-level technical women who are most likely to leave the business.

- Make individual learning and growth for women in STEM roles an integral part of your performance management plans and practices.

- Provide easy-to-use tools and methodologies so participants can immediately apply and practice new concepts.

- Consider "women-only" development programs that offer a safe space to share common challenges and experiences and practice new leadership skills.

- Use a continuous, integrated approach to development that focuses on learning networks, bite-sized lessons, appropriate tools, challenging on-the-job experiences, peer support, and opportunities to practice new skills.

- Measure outcomes so you can document the impact you are having on retention and advancement and can fine-tune your program to produce optimal results.

Grow Your Investment in STEM Women

Research shows that women who are able to rise to the top in STEM careers have a strong sense of self-efficacy. They are passionate about what they do and are loyal to their team and others. They have positive support at work and cultivate strong personal and professional networks.[15]

But success is not a guarantee. Like most important business assets, talented women with STEM expertise require proactive attention. They need challenging assignments, relationships with individuals who can offer feedback and support, and opportunities to develop leadership competencies that will help them thrive in your organization. When they get what they need, the payoff for your business can be significant—impacting your organizational culture and driving better business outcomes.

CCL has created *Advancing Technical Women*—a one-of-a-kind, research-based leadership-journey experience for high-potential, mid-level women in technical careers.

To find out more, visit http://www.ccl.org/atw.

References

1 Noonan, R. (2017). *Women in STEM: 2017 Update*. US Department of Commerce, Economics and Statistics Administration, Office of the Chief Economist.

2 Beninger, A. (2014). *High Potentials in Tech-Intensive Industries: The Gender Divide in Business Roles*. Catalyst.

3 Hewlett, S. A., Luce, C. B., Servon, L. J., Sherbin, L., Shiller, P., Sosnovich, E., & Sumber, K. (2008). *The Athena Factor: Reversing the Brain Drain in Science, Engineering, and Technology*. Center for Work-Life Policy.

4 Clerkin, C. (July, 2017). Research Report: What Women Want—And Why You Want Women—In the Workplace. Greensboro, NC: Center for Creative Leadership. Retrieved from https://www.ccl.org/articles/white-papers/7-reasons-want-women-workplace/.

5 NCWIT Research Summary (2014). What is the Impact of Gender Diversity on Technology and Business Performance? National Center for Women & Information Technology. https://www.ncwit.org/resources/what-impact-gender-diversity-technology-business-performance-research-summary.

6 UKOM Report (June 2016). *Women spend more time using their smartphones than men*. Summary accessed at http://ukom.uk.net/digital-market-overview/12-q1-2016-uk-digital-market-overview-report.php.

7 McCauley, C.D. (2006). *Developmental Assignments: Creating Learning Experiences without Changing Jobs*. CCL Press.

8 Silva, C., Carter, N.M., & Beninger, A. (2012). "Good Intentions, Imperfect Execution? Women Get Fewer of the 'Hot Jobs' Needed to Advance." Catalyst.

9 Burt, R.S. (2005) *Brokerage and closure: An introduction to social capital*. Oxford University Press.

10 ISACA (2017). T*he Future Tech Workforce: Breaking Gender Barriers*. Accessed at http://www.isaca.org/SiteCollectionDocuments/Breaking-Gender-Barriers_res_eng_0317.PDF

11 Anita Borg Institute (2016). Measure What Matters: Key Findings & Insights. Top Companies for Women Technologists.

12 Companies are more likely to offer men workplace training than women, study reveals (October, 2017). Accessed at https://anitab.org/wp-content/uploads/2016/10/topco-16-insights-report-web.pdf.

13 Ashcraft, C., McLain, B., & Eger, E. (2016). Women in Tech: The Facts. National Center for Women & Technology.

14 Clerkin, C. (July, 2017). Research Report: What Women Want—And Why You Want Women—In the Workplace. Greensboro, NC: Center for Creative Leadership. Retrieved from https://www.ccl.org/articles/white-papers/7-reasons-want-women-workplace/.

15 Buse, K., Bilimoria, D., & Perelli, S. (2013),"Why they stay: women persisting in US engineering careers." Career Development International, Vol. 18 Issue 2, pp. 139–154. Permanent link to this document: http://dx.doi.org/10.1108/CDI-11-2012-0108.

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Kelly Simmons is senior faculty and solution architect for the Center for Creative Leadership (CCL®). She is the originator and developer of the *Advancing Technical Women* program. She has identified and propelled innovation at CCL in the micro-learning, blended learning, and women's leadership space, bringing a keen awareness of market need, agility with learning methodologies combined with leadership and organizational development expertise. Kelly began her career as an engineer at Hewlett Packard Company, working extensively in Asia, Europe, and the Americas. She has led the setup and operation of the consulting and training departments of two start-up boutique consulting firms in Spain. She has been on the faculty at EADA business school in Barcelona, Spain for 10 years, and has designed and delivered leadership and organizational development programs across Europe and the Americas. In addition to her work in technical women's leadership, Kelly is a specialist in helping teams and individuals think about their organizations like systems and build the skills to lead more effectively in their environments. She has spoken and written on the topic, including coauthoring the book chapter, "Seeing teams as Human Systems" in the 2011 publication of "Do you Work or Collaborate?" (*¿Trabajas o colaboras?*) by Profit Editorial, 2011.

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