

An Intervention Strategy to Re-engage Women Engineers in the Workforce

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CONTENTS

Executive Summary, by Karen Horting	3
Forward, by Jennifer Abman Scott.....	6
Forward, by Carol Fishman Cohen	7
Need Statement: A Talent-Driven Need for Women to Re-enter the STEM Workforce	9
▪ The Hidden Talent Pool: Women with Technical Degrees on Career Breaks	
▪ The Demand for Experienced Technical Leaders within the STEM Workforce	
A Solution to a Sector-Wide Problem: The STEM Re-entry Task Force	12
▪ Task Force Deliverables and Resources for Partner Organizations	
▪ The Value Proposition of the STEM Re-entry Task Force in Creating Re-entry Programs	
▪ Unique Outcomes from Participation in the STEM Re-entry Task Force	
▪ Indicators Your Organization Is Ready for a Re-entry Program	
▪ Best Practices for Managing a Re-entry Program	
Conclusion and Key Recommendations	25
▪ Incorporate re-entry programs within the recruitment practices and culture of your organization to increase the talent pipeline of mid- and senior-level talent	
▪ Partner with the STEM Re-entry Task Force to implement successful re-entry programs	
▪ Leverage the re-entry program concept across functions, business units, and global locations to address a wide variety of talent needs	
Addendums.....	26
▪ About the Society of Women Engineers and iRelaunch	
▪ Formation of the STEM Re-entry Task Force	
▪ About the STEM Re-entry Task Force Co-Leaders and Founding Members	
References	32

EXECUTIVE SUMMARY

By Karen Horting, MBA, CAE
Executive Director and CEO, Society of Women Engineers

Without intervention strategies, the current demand for technical talent combined with the projected increase¹ in the need for engineers will result in a significant shortage of skilled labor throughout the United States engineering industry.

Increasing the persistence of women in engineering at all stages of their careers is imperative to solving this talent shortage. As this white paper illustrates, while more women are graduating with four-year degrees than men, they are underrepresented in the engineering industry – especially within positions at the senior and executive levels. Women are also more likely than men to leave the engineering profession (Corbett & Hill, 2015).

In envisioning an intervention strategy to re-engage female engineers who have left the workforce, the Society of Women Engineers (SWE) and iRelaunch created the STEM Re-entry Task Force (Task Force).

Through the Task Force, engineering and technology organizations can develop cost-effective re-entry programs to attract an underutilized source of talent. (Within this context, re-entry programs are defined as formal internship programs developed by organizations to recruit individuals on a career break of two years or more back into the workforce to fill critical talent shortages. All re-entry programs are equal employment opportunities.)

Without incorporating re-entry programs as part of their overall recruitment strategies, organizations risk ignoring a valuable and largely unexplored source of talent. In addition, diversifying talent pipelines and increasing gender diversity not only addresses labor shortages, but it also fosters innovation (Dezso & Ross, 2012) and increases competitiveness in the global marketplace.

When the Task Force was launched in September 2015, Booz Allen Hamilton, Caterpillar, Cummins, General Motors, IBM, Intel Corporation, and Johnson Controls formally partnered with SWE and iRelaunch as Founding Members.

Through interviews with all active Founding Members of the Task Force, this white paper positions the specific need for re-entry programs within the context of each company while demonstrating the unique advantages received through participation in the program. These interviews also highlight the value proposition of the Task Force, provide key indicators of organizational readiness in starting a re-entry program, and emphasize best practices and lessons learned. The conclusion provides specific recommendations to the engineering and technology sector.

EXECUTIVE SUMMARY

KEY OUTCOMES AND INDICATORS OF SUCCESS

In the 18 months since its official launch, the Task Force has had demonstrated success:

- All of the Founding Members developed re-entry programs that launched or were poised to launch.
- All interviewed Founding Members that launched re-entry programs say involvement on the Task Force enabled effective development of their programs.
- All Founding Members interviewed for this white paper say participation in the Task Force supported their companies' core values and was positively viewed by external and internal partners, stakeholders, and target audiences.
- Over 60 interns participated in Task Force pilot programs in the first year of the program (2016).
- Across all launched re-entry programs, the rate of converting re-entry interns to long-term employees ranged between 60 percent and 100 percent (meaning some companies hired 60 percent of their interns, while other companies hired 100 percent of them).

Conversion rate of interns to employees



- Two companies that launched re-entry programs early in 2016 have already doubled or tripled the number of positions they plan to recruit for in the 2017 iteration of their programs. Another two companies developed re-entry programs for 2017 launch dates. One Founding Member launched a six-month program in 2016 that completed in early 2017, with plans to repeat the program in late 2017. Another one of the Founding Members launched a re-entry program in 2016 and is re-evaluating the future of the program.
- In the fall of 2016, a second cohort of the program began with the following organizations: Ford Motor Company, General Electric, Johnson & Johnson, Medtronic, Northrop Grumman Corporation, and Schneider Electric.

EXECUTIVE SUMMARY

Jennifer Abman Scott, of SWE, and Carol Fishman Cohen, of iRelaunch, have co-led the execution of the Task Force since its inception. During the first year of the cohort, the Founding Members of the Task Force met during monthly conference calls and convened during SWE's Corporate Partnership Council meetings. Companies also sent interns from the re-entry programs to share their experiences at SWE's Annual Conference, WE16, which was held October 26–28, 2016, in Philadelphia, Pennsylvania, and was attended by over 11,700 individuals from all engineering disciplines.

This white paper was authored by Honna Eichler George, who conducted interviews and received content from Margaret Arney, Holly Rollins, and Cheryl Wade of Booz Allen Hamilton; Stacey M. DelVecchio of Caterpillar; Christina Baldwin and Karen M. Ramsey-Idem of Cummins; Silvia Karlsson, Catherine Martin, Kristen Siemen, and Adela Perez Vinot of General Motors; Jennifer P. Howland of IBM; and Catie Anderson, Cheryl Kern, and A. Denise Malloy of Johnson Controls. Jennifer Abman Scott and Carol Fishman Cohen provided both interviews and forwards for this white paper. Finally, SWE's Deputy Executive Director and Chief Learning Officer, Peter Finn, provided editorial guidance during the final stages of this project.

As Executive Director and CEO of SWE, I am pleased to highlight the visionary leadership of the Founding Members of the Task Force in designing and developing re-entry programs that have increased their organizations' access to high-caliber engineering talent. I also commend Jennifer Abman Scott and Carol Fishman Cohen in creating and directing the Task Force, which uniquely addresses a critical need within the engineering industry. In addition, the 2017 Cohort of the Task Force is furthering the impact of this intervention strategy by designing a new set of re-entry programs for their respective organizations. Finally, thank you to SWE's Corporate Partnership Council, which provided seed funding to pilot the first cohort of the Task Force.

FORWARD

Jennifer Abman Scott

Vice President, Fund Development, SWE; Co-lead, STEM Re-entry Task Force

SWE addresses the need to increase the participation and contribution of women in the engineering and technology workforce through innovative programming for women and their employers. The STEM Re-entry Task Force (Task Force) meets the needs of women wanting to return to work after a career break while also addressing the challenge encountered by employers in attaining a diverse workforce at all levels of their organizations.

Through identifying the need for more support of women who wish to return to the technical workforce after a career break, SWE partnered with iRelaunch to execute a program that utilizes internships as a vehicle to engage returning technical women and work closely with employers to pilot, implement, and grow a successful re-entry program. By being grouped into cohorts and working within the Task Force, organizations take advantage of leveraging the diversity of thought to inspire innovation. The Task Force itself models an ideal workplace environment.

The creation and the work of the STEM Reentry Task Force is historic. While to date all Task Force members have been from SWE's Corporate Partnership Council (CPC), the Task Force is an opportunity available to all employers of technical women (and men). The CPC is a network of SWE's most prominent supporters and consists of 75 employers of engineers and technologists. CPC members share insight in industry trends, developments, and best practices in addition to providing financial support for SWE's innovative programs, which focus on the engineering pipeline and the recruitment, retention, and advancement of women in this growing field.

Specifically, the CPC focuses on sharing best practices and addressing pipeline, recruitment, retention, and advancement issues while partnering on diversity initiatives that affect the global economic landscape. To that end, the individuals and teams that represent each organization on the CPC are leading diversity and inclusion efforts across the world. With each conversation that I have with a CPC member, I am continually impressed by the vital and, oftentimes, groundbreaking work they are accomplishing. It is also inspiring to observe their confidence and capacity to participate in the unique programming that SWE delivers to meet their respective goals.

The strength and dedication of SWE's CPC partners, along with the naturally collaborative environment of the group, was key to the success of the Founding Members of the Task Force. Having pioneered the creation of re-entry programs within the engineering field, the Founding Members of the Task Force are re-engaging a hard-to-reach group: mid- and senior-level women with technical degrees who left the workforce but desire to return (some programs did include men). Many of the Founding Member programs have increased the number of internships offered and have expanded geographically, even to other divisions outside engineering and technology.

FORWARD

At SWE, we seek to be leaders by creating programs that advance women engineers and technologists. SWE utilizes its brand, global presence, and reach to improve access to top jobseekers in order to further the work of the past, current, and future members of the Task Force.

Through the Task Force, SWE seeks to establish a framework for success that can be replicated across the sector. We are proud to partner with iRelaunch as champions for re-entry programs that foster diversity within the engineering and technology industry. As many contributors express throughout this white paper, it is tremendously rewarding to have contributed to the transformation of the employment landscape for professional engineers.

Carol Fishman Cohen
CEO, iRelaunch; Co-lead, STEM Re-entry Task Force

#Disrupternship – Disrupting the internship. Reshaping it and repurposing it as a vehicle for employers to engage with educated, experienced, mid- to senior-level professionals who have been out of the workforce and are looking to get back in.

The re-entry internship is similar to an entry-level internship in many ways but also very different. Individuals arrive in a cohort and experience the transition back to work together, with support, updating, and professional development provided by the employer. Some of the participants end up with a long-term role at the internship employer, and others move on to long-term roles at a different employer. Employers evaluate the intern for long-term employment based on an actual work sample instead of a series of interviews and don't need to make that hiring decision until the internship period is over. The assignments are appropriate for mid- to senior-level professionals, and some of the orientation and professional development modules are customized for the experienced professional. Other components are part of a typical onboarding experience for new employees who did not take career breaks or are similar to offerings in the entry-level internship programs.

While creating their respective pilots, the Task Force companies benefited from a structured program of guidance and collaboration co-led by SWE and iRelaunch. In addition to leadership from SWE, Task Force members benefited directly from iRelaunch's subject-matter expertise on all topics related to career re-entry and re-entry internships; iRelaunch's deep experience working with relaunchers and companies to create and develop career re-entry programs of all kinds; and iRelaunch's strong connection with relaunchers all over the U.S. (and beyond) and with a national network of alumni career services directors eager to get word of Task Force re-entry programs out to their alumni on career breaks.

Not only did the Task Force Founding Members achieve the original vision for the inaugural year of the initiative, but they exceeded it. As this white paper illustrates, two company programs piloted in the spring and repeated in the fall of 2016, and over 60 interns participated in Founding Member pilot programs the first year.

The 60 percent to 100 percent "conversion rates" of the Task Force re-entry internship programs completed to date reflected or exceeded conversion rates in the financial services re-entry internship programs (50 percent to 90 percent, depending on the program and the year), underscoring the success of the re-entry internship concept in general. "Conversion rates" are

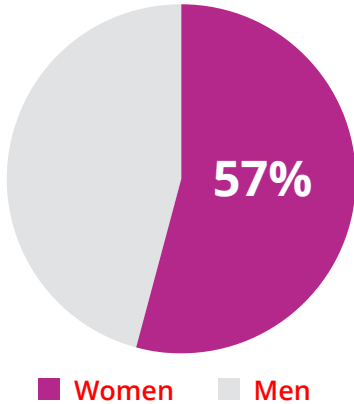
FORWARD

the percentage of each re-entry intern class that converts to long-term employment after the internship program ends. Companies have different philosophies about their conversion rates, with some viewing the program as a professional development experience they are providing returning professionals that may or may not result in an offer for a long-term role. Other companies view the re-entry internship as a trial run for the exact role the intern will assume if successful. Companies with this philosophy aim for a 100 percent conversion rate.

Re-entry internship programs developed by large global companies (that intend to scale programs exponentially once established) are causing an institutional shift in the way employers engage with professionals returning to work after a career break. Internships are being used to evaluate a new, mid-career population. Individuals returning from career breaks are now being considered seriously, whereas before they were viewed with skepticism. Enough companies are running or developing formal re-entry internship programs that standard drop-down menus for job-posting software programs should start to include “re-entry internship” as a category as well as “entry-level internship.” And best of all, in most re-entry internship programs, candidates are not eligible to apply unless they have taken a career break. Look at how far we have come! It is in this spirit we hope you learn and benefit from the results of the inaugural STEM Re-entry Task Force, which are outlined in this white paper.

NEED STATEMENT: A TALENT-DRIVEN NEED FOR WOMEN TO RE-ENTER THE STEM WORKFORCE

Total College Graduates Across All Disciplines

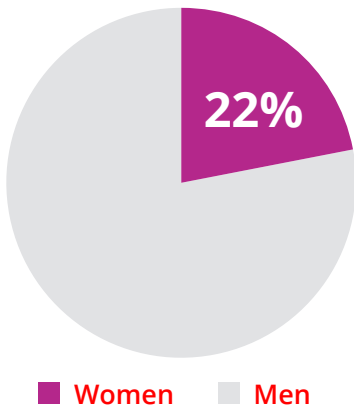


Increasing women in all stages of the engineering profession is necessary to address the industry's growing labor needs. According to the U.S. Department of Labor, Bureau of Labor Statistics, job growth in the engineering industry will yield over 500,000 unfilled positions from 2014 to 2024.

Yet the current pipeline of engineering talent does not include the majority of college graduates: women represent over 57 percent of college graduates but only 22 percent of the engineers entering the workforce (Hughes, 2013). Within the workforce, only 14 percent² of engineers are women. Women also leave the engineering profession in greater numbers than men do (Corbett & Hill, 2015).

Organizations operating globally also report a shortage of engineering talent outside the United States, especially for positions in management and at the executive level.

College Graduates Entering the Field of Engineering

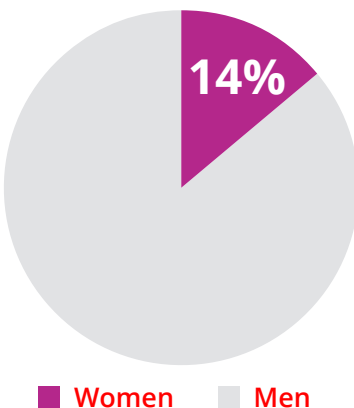


While a variety of solutions are necessary to address the growing labor needs in the engineering industry and to attract and retain women in the profession, one emerging intervention strategy is the re-entry internship program model. Across all industries, re-entry internship programs prioritize the inclusion of workers from a multitude of diverse backgrounds while transforming traditional recruitment practices.

Through participating in the STEM Re-entry Task Force (Task Force), engineering firms hoped to fill critical labor needs in their organizations while also countering the trend of women leaving the workforce and never returning. As is expanded upon throughout this needs analysis, the Task Force responds to two core needs:

1. A significant number of experienced female engineers who have taken career breaks are ready and willing to return to the profession.
2. The engineering industry needs talent for management and executive-level positions.

Women Employed as Engineers

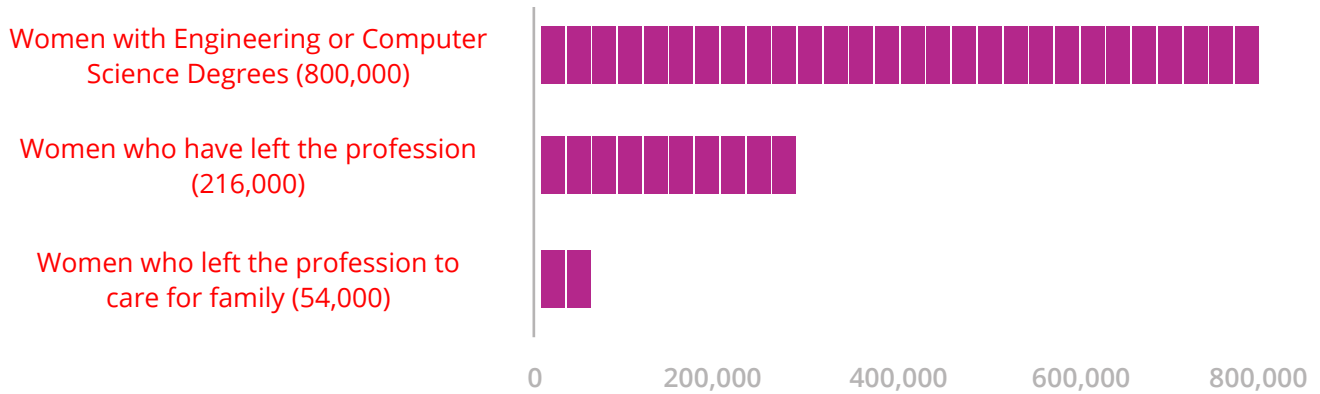


THE HIDDEN TALENT POOL: WOMEN WITH TECHNICAL DEGREES ON CAREER BREAKS

A significant number of women with technical degrees who took career breaks are able and willing to return to their past professions.

NEED STATEMENT: A TALENT-DRIVEN NEED FOR WOMEN TO RE-ENTER THE STEM WORKFORCE

WOMEN IN THE ENGINEERING AND COMPUTER SCIENCE PROFESSION



Between 54,000 and 216,000 women with technical degrees are on career breaks at any time.

Research shows there are about 2.5 million women in the United States with STEM degrees. Of this number, roughly 800,000 women (32%) have engineering and computer science degrees and 216,000 (27%) have left their technical fields. Approximately 54,000 (25%) of the women who left their technical careers did so to care for their families. It is estimated that the pool of technical women who are on career breaks at any given time is between 54,000 and 216,000.³

Founding Members of the Task Force demonstrated a need for talent with experience and a desire to recruit individuals with technical backgrounds who had left the workforce. As Karen M. Ramsey-Idem of Cummins says, “We wanted to increase our pipeline for technical talent, and we realized that we were leaving money on the table to not recruit these engineers. We were missing out on a valuable source of technical talent simply because there was not an on-ramp for individuals who had left their careers.”

Cheryl Kern of Johnson Controls notes that one of their “greatest needs and gaps” is the retention of women in technical positions. Catie Anderson, also of Johnson Controls, agrees while noting the potential to address larger business needs: “Finding experienced talent increases our competitive advantage and helps us solve our most challenging business problems.”

NEED STATEMENT: A TALENT-DRIVEN NEED FOR WOMEN TO RE-ENTER THE STEM WORKFORCE

THE DEMAND FOR EXPERIENCED TECHNICAL LEADERS WITHIN THE STEM WORKFORCE

During the interviews conducted by SWE, all Founding Members recognized they wanted to increase the diversity of their talent pipelines for mid- and senior-level positions. While most companies in the Task Force had traditionally relied on recruiting talent directly from undergraduate and graduate programs, many noted there was a growing need for candidates with more experience.

For example, due to closely monitoring its pipeline for future technical leadership, Stacey M. DelVecchio at Caterpillar had known for a while that they had an issue recruiting diverse talent with experience. “We knew we wanted to have a stronger pathway for experienced talent to come to Caterpillar.”

At Booz Allen Hamilton, Margaret Arney says that as soon as they learned about the Task Force at an SWE CPC Meeting, the team was “very excited about it. We knew it was something we wanted to be involved with and that it would provide a new avenue to recruit qualified, experienced professionals.”

Recruiting and hiring technical leaders with demonstrated work experience also furthers innovation for companies, as Catherin Martin illustrates in her assessment of the value of Take 2 (the name of General Motors’ re-entry program). “Take 2 further promotes an environment that is inclusive and supportive of women in STEM roles. It helps to engage passionate and experienced technical women in careers that need their skills and unique perspectives and experiences to boost innovation and advancement in the automotive industry.”

Through the Task Force, SWE and iRelaunch are uniquely positioned to address these core needs:

- With a history that dates to 1950 and a global membership of over 37,000 individuals from all engineering professions, SWE is the world’s largest advocate for women in engineering and technology. Each year, SWE hosts the world’s largest conference for women in engineering. SWE’s mission is augmented through its collaboration with 75 high-ranking organizations in its Corporate Partnership Council (CPC) and its brand recognition and respect in the industry.
- As the pioneering company in the career re-entry space, iRelaunch is the leader in career re-entry programming of all kinds. iRelaunch works directly with over 14 Fortune 100 companies and over 30 Fortune 500 (or equivalent) companies, in a range of roles, to develop, pilot, source for, present in, and publicize their re-entry internship programs or to similarly support their efforts to hire relaunchers directly into open roles without internships.

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

The Task Force serves as an intervention strategy to propel structural change within the STEM sector by using the internship as the vehicle for engaging with returning technical women. All re-entry programs developed by companies were equal opportunity positions. Each program was customized and unique to the company developing it, and programs differed in size, types of roles, length, time of year, and location.

The Task Force set out with an ambitious mission:

- Increase the pipeline of female STEM sector talent by including women with technical degrees who are returning from career breaks. (All positions available were equal opportunity positions.)
- Create structural change in the STEM sector by introducing the re-entry internship as a vehicle for engaging with returning technical professionals (both women and men).

TASK FORCE DELIVERABLES AND RESOURCES FOR PARTNER ORGANIZATIONS

The past, current, and future partners of the Task Force receive the following benefits from SWE and iRelaunch:

- Recommended timeline and checkpoints for the development and implementation of re-entry programs.
- Monthly calls for all program managers to report updates, share challenges, and solve common problems, in addition to receiving input from SWE and iRelaunch.
- Access to a proprietary archive of career re-entry resources, notes, and recordings of monthly meetings housed on a project management site.
- Ability to publicize internship opportunities on SWE's Career Center and to access its resume database.

Deliverables continued on next page.

Profiles of Re-entry Programs Designed by Task Force Founding Members

Organization Name: Booz Allen Hamilton

Program Name: Return to Work

Pilot Timeframe: June to August 2016

Geographic Area: Washington, DC – Metro, Maryland, Northern Virginia, and Colorado

Functional Area: Business/Systems Analyst, Engineering

Length of Program: 9 weeks

Organization Name: Caterpillar

Program Name: Returning Professional Development Program

Pilot Timeframe: Starting in 2017

Geographic Area: Peoria, IL

Functional Area: Mechanical, Agricultural, Aeronautical, Information Technology, Electrical, and Software

Length of Program: 12 weeks direct to hire

Organization Name: Cummins

Program Name: RePower Return-To-Work Program

Pilot Timeframe: September 2016 to February 2017

Geographic Area: Southern Indiana

Functional Area: Engineering

Length of Program: 6 months

Organization Name: General Motors

Program Name: Take 2

Pilot Timeframe: Cohort 1: April to June 2016; Cohort 2: September to December 2016; and Cohort 3: March to June 2017

Geographic Area: Cohort 1: Warren, MI; Cohort 2: Warren, MI, Pontiac, MI, and Austin, TX; and Cohort 3: Warren, MI, Pontiac, MI, Austin, TX, and Atlanta, GA

Functional Area: Mechanical, Electrical, Aerospace, Manufacturing, and Finance

Length of Program: 12 weeks

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

- Presentations featuring consultation on job descriptions, landing page sites, and compensation practices.
- Promotion of re-entry programs and internship opportunities on the co-branded website (re-entry.swe.org), through the listserv held by SWE of women seeking re-entry positions, and through direct email communications by SWE and iRelaunch to their respective communities.
- Promotion of re-entry programs and opportunities via social media by SWE and iRelaunch.
- Shared press through SWE and iRelaunch marketing efforts.
- In-person Task Force meetings held in conjunction with SWE's Corporate Partnership Council (CPC) meetings.
- Individualized coaching and consultation with iRelaunch and SWE.

Profiles of Re-entry Programs Designed by Task Force Founding Members

Organization Name: IBM

Program Name: IBM Tech Re-entry
Pilot Timeframe: Cohort 1: April to June 2016; Cohort 2: September to December 2016; and Cohort 3: March to June 2017

Geographic Area: Cohort 1: Somers, NY, and Columbus, OH; Cohort 2: Toronto, ON, and Boston, MA; and Cohort 3: New York, NY, Littleton, MA, Halifax, VA, Nova Scotia, Fredericton, New Brunswick, and St. John, New Brunswick

Functional Area: Cohort 1: Analytics; Cohort 2: Security, Watson and Watson Health; and Cohort 3: Security, Analytics, Commerce, Research, Global Technology Services, and Global Business Services

Length of Program: 12 weeks

Organization Name: Intel Corporation

Program Name: Return to Tech

Pilot Timeframe: June to December 2016 and June 2016 to March 2017

Geographic Area: Arizona and Oregon
Functional Area: Engineering

Length of Program: 6 to 9 months

Organization Name: Johnson Controls

Program Name: Next Chapter

Pilot Timeframe: February to April 2017

Geographic Area: New York, New Jersey, Pennsylvania, Kansas, and Oklahoma
Functional Area: Building Solutions & Technologies and Power Solutions

Length of Program: 8 to 12 weeks

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

THE VALUE PROPOSITION OF THE TASK FORCE IN IMPLEMENTING RE-ENTRY PROGRAMS

The value proposition of the STEM Re-entry Task Force (Task Force) is to foster the cost-effective and successful development of re-entry programs to identify, recruit, and retain returning technical talent to the engineering workforce.

Founding Members of the Task Force said the partnership of SWE and iRelaunch was vital in securing buy-in from company executives for re-entry programs. For example, Holly Rollins of Booz Allen Hamilton says, "The whole return-to-work option was desirable. It was our link with SWE that brought the (re-entry program) to the company."

"It was this formalized partnership between SWE and iRelaunch that helped IBM to buy in to the re-entry internship concept," says Jennifer P. Howland of IBM.

Howland's first full-time re-entry program, while successful in attracting and retaining excellent candidates, was not scalable to the size that the company desired. Having run two re-entry cohorts in 2016, and starting a third in 2017, Howland is planning to expand beyond North America for future cohorts.

To Christina Baldwin and Ramsey-Idem of Cummins, joining the Task Force meant laying the groundwork for supporting diversity in every sense of the word.

"For us, diversity is more than just women or underrepresented minorities but also men who had left the workforce, perhaps to care for family – this really embodied our commitment to diversity," Baldwin of Cummins says.

FULFILLING THE CORE VALUES OF TASK FORCE MEMBERS

Through participating in the Task Force, Founding Members supported their companies' core values.

Booz Allen Hamilton: Collective Ingenuity

Cheryl Wade noted that the firm recently refreshed its core values and one in particular that is connected with the work on the Task Force: "Collective Ingenuity, as a value, is our ability to bring people together to harness the power of diversity to solve our clients' challenges. We not only bring people who have very varied backgrounds and help them re-enter the workforce; we also benefit from the fresh perspectives they bring to our thinking."

Caterpillar: Integrity

"Our participation supports all our five core values: Integrity, Commitment, Excellence, Teamwork, and Sustainability," says Stacey M. DelVecchio. She also emphasized the particular importance of Integrity in Caterpillar's hiring process, as the company always seeks to select the best candidate for a position regardless of their identity. The Task Force also supported the three work streams of Pipeline, Culture, and Sponsorship, which are central to the Caterpillar Women in Leadership Initiative.

Cummins: Hire-to-Develop

"We are a Hire-to-Develop company, meaning if you truly embody the values of Cummins and you bring new ways of thinking, then we can train you on the technical stuff. That is easy," says Karen Ramsey-Idem, clarifying, "You cannot train on true spirit. Being on the Task Force has helped us ... we needed individuals who embody the heart and soul of Cummins, and that's what we found."

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

Including those with various life experiences and perspectives, Ramsey-Idem says, is also important, adding, “Even if someone leaves an engineering career, that does not mean they stop learning; that life experience is valuable to us.”

The Task Force also began at a critical juncture for many of the Founding Members. Kern of Johnson Controls explained that joining the Task Force meant they could formalize a process to acquire talent to fill critical roles that “augmented the numbers of incoming engineers sourced from other channels.” In addition, the fact that the re-entry interns could come in with “experience under their belts and an understanding of what it means to be an engineer is a win-win for us,” says Kern, who adds, “We already have a global commitment to SWE, so we saw this as an additional opportunity to extend our value proposition in new and different ways.”

After being introduced in two business units of engineering at General Motors, Kristen Siemen says the re-entry program to bring back diverse candidates was so successful at the company that the re-entry program concept quickly spread across several other functional areas. Silvia Karlsson, also of General Motors, echoes this sentiment in explaining that the company needed to build more “on ramps” for diverse talent. General Motors is now developing re-entry programs for its finance and customer care areas.

As Carol Fishman Cohen of iRelaunch explains, “The Task Force is the only multi-company re-entry initiative in which a group of companies collaborate together while creating their own unique, customized return-to-work programs in the same time frame. Each company determines for itself the size of the program, location, length, time of year, and participating managers and roles or assignments. Once the pilot is established, each company uses it as a blueprint for expanding the program across business lines, domestically and internationally. The pilot is then used to test and troubleshoot the model before the program scales.”

General Motors: Talent-First Philosophy

As Adela Perez Vinot explains, “At General Motors we put talent first. If we find 55 exceptional candidates for 50 positions, we don’t say no to five; we make room for all candidates.” Kristen Siemen agrees with this and explained that if an excellent candidate cannot fit within the budget of one department, then General Motors works to place them in another department in order to retain top talent.

IBM: Innovation That Matters

“With one of our three core values being ‘Innovation that matters – for our company and for the world,’ it’s critical to maximize the innovation from our workforce,” explains Jennifer Howland of IBM. “Fostering a diverse workforce is a critical part of the equation because the best innovation – and the best business results – come when people from all different backgrounds collaborate. The re-entry internship program provides a way to help IBM add to our robust technically diverse pipeline, thus improving our innovation.”

Johnson Controls: Purpose Driven

“One of our new values is Purpose Driven, which is particularly aligned with the Task Force,” explains Cheryl Kern, adding, “We really do have the goal of making the world a better place for our customers and for our employees. We know for that to happen we need the brightest and best minds available. Therefore, we have to use a targeted, purpose-driven approach in our hiring of talent, with experienced female engineers being at the center of those, enabling our future success.”

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

UNIQUE OUTCOMES FROM PARTICIPATION IN THE STEM RE-ENTRY TASK FORCE

While re-entry programs are an emerging trend within talent and acquisition practices, the Task Force is the first collaboration of its kind within the engineering and technology industries. This section briefly overviews the unique outcomes that were experienced by Founding Members.

Direct Competitors Become Collaborators:

Although some of the Founding Member companies are direct competitors, the Task Force was successful not only in supporting the creation of re-entry programs but also in fostering productive cross-sector working relationships between the Founding Members. To that end, a significant contributing factor to the success of the Task Force was the congeniality all Founding Members showed toward one another in striving to accomplish a shared goal.

Setting aside competition allowed for learning and partnership. As Ramsey-Idem of Cummins explains, “We felt like there was value in joining with the cohort ... and being able to learn from other companies. Even though some of them are direct competitors, it was a safe place to work together.” Arney from Booz Allen Hamilton shares a similar experience: “Everyone involved in the Task Force was passionate and motivated. Everyone had an interest in making this successful. ... It was really the best and the brightest from these organizations that came together, along with SWE advocates and iRelaunch, to help us tailor our re-entry program for our company.”

A key benefit from participating in the Task Force for DelVecchio at Caterpillar was hearing how other companies ensured the program was truly an equal employment opportunity. “We wanted to make sure the program wasn’t biased toward women, and that was the single greatest thing I learned from others in the Task Force,” says DelVecchio.

“I think it is your responsibility to put aside your competitive side,” says Baldwin of Cummins, who also says, “As I got to talk to the other partners and share ... it was so empowering and enlightening because we were all helping each other toward this overall goal.” As Karlsson of General Motors explains, “Having SWE as the connecting point between us and other companies was critical. We realized we weren’t going at this by ourselves but together, with other major companies, toward a shared goal.” Howland of IBM also emphasized the value of all partners to share best practices to help solve common challenges.

“The cohort system provided a safe environment that assumed the best of the human spirit,” says A. Denise Malloy of Johnson Controls. “For the months and weeks that we worked together, it was more about conquering the challenge that we each faced and working together to build a sustainable and repeatable model that would benefit women in all disciplines of STEM.”

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

Peer-to-Peer and Company-to-Company Accountability in Changing Company Culture

DelVecchio of Caterpillar noted that being part of the Task Force and making a public statement of support “held us more accountable and was a kick to get us where we are today, to have a conceptualized program, initial promotional materials, and having a line of sight to launch.”

Being a “fast-follower,” as Ramsey-Idem of Cummins explains, was one of the “greatest values” of being on the Task Force, further adding, “We have been able to benefit from the companies who were able to run their programs very early and understand the barriers that they’ve faced and how they got around them. We could modify and tweak our program so that we could mitigate the risks they have already faced. This has been a huge value for us as being part of the Task Force. As with other projects within the SWE CPC, being able to collaborate with individuals external to Cummins is helpful ... because we are able to see ourselves through the lenses that only external partners have.”

“It has been reassuring to know there are other companies also attempting to do the same thing,” says Howland of IBM. Baldwin of Cummins agrees, saying, “It can get a little lonely when you are setting up a program ... that no one else is doing. This group allows me to have someone to talk to; they may not have the answers, but we can collaborate on solutions and commiserate on some of the trials of the program.”

Re-entry Programs Seen as Value-Add by Employees and External Partners

As Siemen of General Motors explains, “One intangible benefit of the program is the message the re-entry program sends to our entire workforce. It sends a strong message to young individuals coming into the company, who may not have their entire career planned out, that even if your individual situation takes you away from the workforce for a period of time, we still value your experience and what you have been trained to do.” Adela Perez Vinot, also of General Motors, agrees, noting that female employees say they now feel more confident in taking a career break because they know there is a path back to the workforce that did not exist before.

Vinot shares she has been pleasantly surprised by how many men have approached her to tell her how great the program is because of what it could do for the women in their lives. “It reminds them of their hardworking mothers who would have benefited from such a program in their childhoods or how nice it is now that their wives will be able to take advantage as they prepare to expand their families in the coming years,” says Vinot.

Task Force members noted the re-entry program encourages intergenerational relationships and support structures. Baldwin explains that since the re-entry interns at Cummins attended orientation together with recent college hires, there was an intergenerational sharing of knowledge and wisdom.

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

Ramsey-Idem of Cummins adds the re-entry interns went out of their way to mentor and guide women who were starting their careers, and the younger women, in return, supported the re-entry interns through helping them get up to speed with the latest technological trends. This did a lot to boost morale across all affected departments.

Potential to Increase Diversity across Different Areas

In creating re-entry programs, Founding Members learned that, in addition to providing pathways for women to re-enter the workforce, these programs improved their overall efforts around diversity and inclusion.

In noting how the re-entry program at Johnson Controls contributes to diversity, Bill Jackson (President, Building Efficiency) explains: “We cultivate excellence through diverse teams that harness the power of diverse experiences and perspectives. We are proud to support Next Chapter and the women seeking to reignite their careers.”

For Kern at Johnson Controls, there is an “obvious business case on a global basis” to participate in the Task Force, noting, “This was more than increasing the pipeline of women to mid-level and senior management or executive positions; this contributes to changing the fiber of the organization.”

“We now take a broad view of return to work ... recognizing the whole notion of people re-entering the workforce,” says Rollins of Booz Allen Hamilton, who adds that this has supported the company’s movement toward “a more formal approach to engage with professional engineers” as opposed to relying on traditional collegiate recruiting.

Booz Allen Hamilton, a company that does a lot of work with the Department of Defense, realized it could also use the re-entry platform to better engage veterans, spouses of active-duty employees, and contractors who may have relocated frequently and encountered challenges in sustaining their own careers.

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

DelVecchio of Caterpillar shared similar thoughts in emphasizing the importance of finding the best candidate and ensuring that re-entry programs don't create new biased trends. "I look at it as a nontraditional way of hiring fantastic, diverse talent. It is nontraditional because no one has done this before in the tech world," says Howland of IBM, who also noted that a major selling point of the program inside the firm was the ability to improve overall workforce diversity, which "fosters innovation."

As Malloy explains, "As Johnson Controls has recently merged with Tyco International, part of our value proposition is 'One Team: Our Time.' This is an exciting time for Johnson Controls as we build upon our commitment to diversity and inclusion. SWE and iRelaunch can play a key role in allowing us to create a culture of inclusion in support of women returning to the STEM discipline and championing their causes to ensure they have every tool available to guide them to sustained success. We are defying the myth that these women have to take a step back to step up and are simply welcoming them to step up."

Engaging a Highly Motivated Talent Pool

While most individuals who were interviewed did not regularly manage re-entry interns, many spoke to the high quality, dedication, and skill of the participants in the program. In speaking about the re-entry interns, Ramsey-Idem of Cummins says, "Their judgment, patience, and problem-solving were second to none."

"I have never seen the passion, enthusiasm, and hard work that I have seen in these interns," says Jennifer P. Howland of IBM, who has hired hundreds of individuals over the span of her career. She further adds, "Developing IBM's Tech Re-Entry program, while working with SWE and iRelaunch, has been the most rewarding part of my career."

"This experience has been so different than anything I've done before," said Karlsson of General Motors. "The program helps give back a professional voice and confidence to women re-entering the engineering profession." Karlsson, who has previously only focused on recruiting talent from universities, also emphasized the high caliber of candidates she found in helping to manage the program.

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

INDICATORS YOUR ORGANIZATION IS READY FOR A RE-ENTRY PROGRAM

Talent shortages within the engineering industry are all too common. While re-entry programs are one intervention strategy to address these recruitment and retention dilemmas, organizations must be prepared and ready in order to ensure the overall success of any re-entry initiative. To that end, Founding Members of the Task Force share indicators that key decision-makers can use to gauge their organizations' readiness for a re-entry program.

Support from the Top

All interviewed Task Force members emphasized the importance of garnering support from the top of talent development and departments overseeing re-entry programs, if not buy-in from the highest executives within the company. "Support from the top of the company is vital," says Howland of IBM. Without the strong commitment from the highest levels of the company, she would have had a difficult time developing and implementing IBM's program. Howland further adds that "One can only get so far with a 'bottom up' approach on its own; you need the 'top down' backing to make it truly successful and enduring."

Similarly, in addition to having support from the CEO of General Motors on down, Siemen explains, "It was easy to make the program a success when we had the entire Engineering Executive leadership team supporting the program and believing this was a great idea." Along the same lines, Rollins of Booz Allen Hamilton explains, "One thing we've been able to do successfully is articulate the value proposition of this program. We fully secured buy-in from the most senior levels of the company and especially in engineering. There was no convincing them – they were completely all in. They wanted us to continue to run hard at this concept."

Capable Program Manager

Founding Members also agree that re-entry programs must have a core program manager who is responsible for the daily execution of the program. "You not only need an executive champion who can drive it from the top down, you also need strong HR partners and program champions. While I got support from top leadership, Vinot was the person who set this up and made it happen," says Siemen of General Motors, Executive Champion for the company's re-entry program.

Presence of Executive Champion

In addition to a program manager and support from the top of the organization, Kern from Johnson Controls emphasized the need for a strong executive champion. This person does not necessarily deal with the day-to-day operations of the re-entry program but is able to bring awareness of the program to different business units and can "serve as the advocate to influence decision-makers to incorporate the program and ensure it is given the recognition it deserves throughout the company. For us, we have VPs in Manufacturing, VPs in Commercial roles and our Business Unit Presidents, Joe Walicki and Bill Jackson, who understand the value of supporting such programs."

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

An Urgent Need to Hire

“First and foremost, you have to have an organization or organizations within the firm that are hiring,” says Howland of IBM. Cohen of iRelaunch agrees, “A sense of urgency around a lack of women in mid- to senior-level roles is important. Not having enough women in these roles can be the impetus for considering a program like this.”

Institutional Commitment to System Change

“The intention of the program is to improve the diversity of your workforce with incredibly talented people who, without this program, might not have the confidence to re-enter on their own. The goal must be to hire for full-time positions, for the long-term gain, if you want sustained impact,” Howland of IBM explains. DelVecchio of Caterpillar highlights this point too, noting that hiring a few individuals will not create long-term impact. To that end, Caterpillar put a lot of effort into developing the outline for an onboarding system.

Knowledge of Data and Ability to Track Impact

“We have an engineering talent dashboard, and it shows us how many people are getting promoted and to what levels. The dashboard allows us to analyze the data for disparities based on gender,” says DelVecchio of Caterpillar in highlighting the importance of organizations being aware of a problem and having systems in place to measure movement.

Onboarding Infrastructure that Can Be Mirrored or Modified

“Creating an entirely new employee onboarding process for the re-entry interns can be overwhelming. You do not need to re-create the wheel,” says Cohen of iRelaunch, further adding that companies with existing university internship or orientation programs can mirror and modify them to fit re-entry needs.

Ability to Incorporate Unconventional Recruitment Efforts

Cheryl Wade from Booz Allen Hamilton emphasized the importance of accepting that recruiting for re-entry talent is not necessarily easy but certainly worth the effort. As she says, “You will need to find talent from nontraditional places. For us, assistance from SWE and iRelaunch was a key to success.” As Anderson of Johnson Controls explains, “More and more, our teams are seeing the value in meeting people where they are in life. Leaders understand that talented people take different paths and that we have to be creative in our talent attraction and acquisition strategies.”

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

BEST PRACTICES FOR MANAGING A RE-ENTRY PROGRAM

When these interviews took place in January and February 2017, all Founding Members of the Task Force were at different stages of implementing their re-entry programs. Some were on the cusp of starting the third cohort of their re-entry programs, some had just concluded, some were in the midst of running, and others were in the process of launching.

In order to evaluate their programs, Founding Members were encouraged to set clearly measurable goals – both in the number of positions they wanted to immediately fill and with regard to the long-term structure of the program. In reflecting on their achieved outcomes to date, those interviewed shared specific best practices and lessons learned for those creating, running, or improving their re-entry programs.

Place Re-entry Interns in Cohorts Together and Conduct an In-Person Orientation

While some Task Force members had multiple locations for internship programs, all re-entry interns were placed with at least one other re-entry intern. It was important to everyone that re-entry interns not be placed on their own and that they had a support system. “We place a high value on the cohort structure for re-entry programs,” explains Cohen, noting, “The re-entry interns are not entry-level interns, and they are not typical lateral hires. They are a hybrid. The only other people at the company who are just like them are the other re-entry interns in their cohort. The cohort structure is very helpful and important to the success of the program on both the personal level and on the professional level.”

The ways in which the Task Force Founding Members kept re-entry interns together in cohorts varied:

- At Booz Allen Hamilton, re-entry interns worked one-on-one with program managers on defined projects but attended orientation and regular professional development events together. Arney of Booz Allen Hamilton explains they also created networking opportunities for the re-entry interns to support each other.
- Since the re-entry interns were placed in cohorts together over several locations, General Motors regularly convened everyone via live-stream and teleconference meetings.
- IBM's interns worked at different places in the United States and Canada but came together for a three-day, in-person orientation. Each placement location had a minimum of two interns so they could easily provide each other with critical day-to-day support.
- Cummins held an in-person orientation for all re-entry interns, and all interns were located in the same geographic area but in different business segments.

Engage Key Stakeholders Early and Often

All Founding Members developed unique strategies to garner support for involvement in the Task Force from key executives. For example, hearing about the opportunity, key advocates in Booz Allen Hamilton's diversity and inclusion group were ready to sign on. Arney explains that, before seeking support from senior leadership, they put together an internal task force (of diversity and inclusion staff and other SWE advocates at the company) to “review the opportunity, highlight benefits, and then present to our senior leadership team.”

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

After learning about the Task Force, Siemen at General Motors consulted with the vice president of Vehicle Engineering, key human resource partners and the head of Global Product Development. “The great thing about it is we had full support every step of the way; everyone was all in from day one,” says Siemen.

Develop a Timeline with Checkpoints and Then Stay Accountable

Kern of Johnson Controls says Diversity and Inclusion partnered with Talent Acquisition and Business Unit Champions (such as A. Denise Malloy) to create a full calendar for the program, with milestones, checkpoints, and accountability measures to evaluate their own performance in implementing the re-entry program. Kern says that determining measures of success allowed them to reflect and troubleshoot when looking at the next iteration of their re-entry program.

Prepare Relevant Managers, Talent Acquisition, and Human Resources Contacts

Founding Members strongly encouraged onboarding those who interact with re-entry interns at key stages in the process. Recruiters must understand the re-entry program to ensure they are not overlooking qualified candidates because the re-entry candidates may not present themselves as traditional candidates might. This is especially important because candidates who have been away from the workforce may be less confident or sure of themselves, but this does not mean they are not excellent candidates.

At Cummins, the internal committee responsible for selecting re-entry interns asked engineering managers to submit project proposals for re-entry intern projects. Baldwin of Cummins noted that they first assumed managers would get the program from the start and propose more complex projects than what might be assigned an entry-level technical employee; however, it took a joint call with an overview of the expectations of the initiative before program managers fully understood the concept. After the orientation, managers were given another opportunity to submit proposals for re-entry interns, and the results were significantly improved.

Plan Ahead and Prepare a Support Structure

Founding Members of the Task Force emphasized the need for a support system for re-entry interns. “Pre-planning is key,” says Ramsey-Idem of Cummins. “We planned to have a lot of support not only for the individuals but the managers, who had a lot of questions because this program differed greatly from university hires. We will always include this support structure.” As Baldwin of Cummins explains, the apprehension felt by interns in transitioning back into the workforce not something they anticipated; many of the interns had to rely on short-term care for families – sometimes from a spouse who was also juggling a job. To address this need, the Cummins team will factor in more socio-emotional support in the next cohort program.

Founding Members also emphasized the need to educate and support managers throughout the process to ensure the experience is successful. In addition to having multiple manager training sessions to provide support to the intern manager, Howland of IBM emphasizes the following: “Have a support structure in place ahead of time for each intern. I recommend assigning one technical and one nontechnical mentor for each intern.”

A SOLUTION TO A SECTOR-WIDE PROBLEM: THE STEM RE-ENTRY TASK FORCE

In order to provide moral support for re-entry interns, Karlsson explained that General Motors identified women at the company who had re-entered the workforce on their own and who were willing to mentor re-entry interns. With two cohorts of re-entry interns having completed the program, the company is able to leverage a group of women who have firsthand experience in career re-entry to support future cohorts of the program.

Refine Budget Structure Early in the Process

The financing for the re-entry programs varied greatly between all the Task Force Founding Members who were interviewed. Some companies developed a re-entry program that required each business unit to fund the re-entry internships. Other companies funded the re-entry programs from a designated fund that existed within an organization's talent acquisition or diversity and inclusion budget.

Carefully Consider Time of Year for Re-entry Cohort

Arney, Rollins, and Wade of Booz Allen Hamilton note they encountered unanticipated consequences in running a re-entry program during the summer. For one, they realized those looking to re-enter the workforce often are responsible for childcare. While arranging for childcare for a permanent position is expected, it was harder for re-entry interns to navigate arranging for long-term childcare on a temporary basis during the summer. Moving forward, the re-entry program for Booz Allen Hamilton will take place in either the spring or the fall so that individuals with children have fewer barriers to re-entry programming and can rely on school programs.

To this end, General Motors intentionally hosts re-entry programs that begin in the fall and the spring. To Karlsson, this is part of the focus on the customer (here defined as the re-entry intern) and emphasizes the need to "think about how the program will enable the re-entry intern to be successful instead of what may be easiest for the company."

CONCLUSION AND KEY RECOMMENDATIONS

SWE and iRelaunch, through the STEM Re-entry Task Force, have introduced an intervention strategy to transform how the private and public sectors address labor shortages within the field of engineering. Through partnering together on the Task Force, the Founding Member companies pioneered the creation of re-entry programs within the engineering industry. To that end, SWE makes the following recommendations to the engineering and technology sectors:

Incorporate re-entry programs within the recruitment practices and culture of your organization to increase the talent pipeline of mid- and senior-level talent.

Re-entry programs that re-engage experienced technical talent in the workforce are effective mechanisms for addressing talent shortages. Organizations that partnered with the Task Force highlighted that they were able to strengthen their overarching talent pathways for mid- and senior-level positions; furthermore, re-entry programs allowed these organizations to engage hard-to-reach groups, including women, veterans, spouses of veterans, individuals historically underrepresented in STEM professions, and individuals from rural areas. Through developing and institutionalizing re-entry programs, private- and public-sector organizations can address talent shortages while also re-engaging excellent talent who seek to resume their technical careers.

Partner with the STEM Re-entry Task Force to implement successful re-entry programs.

Participation in the Task Force was critical to the success of the re-entry programs developed by the Founding Members. Through close collaboration with SWE, organizations had access to SWE's online career center, targeted publicity and communication to SWE's membership and external audience, and exposure at SWE's Annual Conference and Career Fair. Through working with iRelaunch, organizations benefited from subject-matter experts in the growing field of re-entry programming, exposure and publicity to iRelaunch external audiences, and access to personalized coaching and best practices.

In addition to these tangible outcomes, organizations in the Task Force learned from the internal successes and challenges each firm faced in establishing their re-entry programs. Often these lessons proved to be invaluable. As Cohen explains, "The culture of camaraderie and collegiality that developed among the Task Force members not only resulted in effective group troubleshooting of individual company challenges but provided an exhilarating professional experience some described as the highlight of their careers."

Leverage the re-entry program concept across functions, business units, and global locations to address a wide variety of talent needs.

Partnering organizations in the Task Force have found that re-entry programs have the potential to be duplicated and scaled across a variety of fields to re-engage highly skilled individuals who want to re-enter the workforce. In looking to the future, Cohen adds, "As more companies join the Task Force, and as each program scales domestically, internationally, and across business lines, the original vision of seeing every company with a scaled university internship program having a side-by-side re-entry internship program will become a reality."

"What began as an initiative focused on the United States is growing to have an international impact," says Scott of SWE. "The accomplishments of the Founding Members within the Task Force are fueling both innovation and a structural change in the STEM sector. To propel the advancement of women in engineering through working with both the 2016 and 2017 Task Force is nothing short of inspiring."

ADDENDUM 1: ABOUT THE SOCIETY OF WOMEN ENGINEERS AND iRELAUNCH

Society of Women Engineers

The Society of Women Engineers (SWE), founded in 1950, is the world's largest advocate and catalyst for change for women in engineering and technology. SWE is a not-for-profit educational and service organization that empowers women to succeed and advance in the field of engineering and to be recognized for their life-changing contributions as engineers and leaders. SWE is the driving force that establishes engineering as a highly desirable career for women through an exciting array of training and development programs, networking opportunities, scholarships, and outreach and advocacy activities. With a global presence and over 37,000 members, SWE offers unique opportunities to network, provides professional development, shapes public policy, and provides recognition for the life-changing contributions and achievements of women engineers. As a champion of diversity, SWE empowers women to succeed and advance in their personal and professional lives.

iRelaunch

As the pioneering company in the career re-entry space, iRelaunch is the leader in career re-entry programming of all kinds. iRelaunch works directly with over 14 Fortune 100 companies and over 30 Fortune 500 (or equivalent) companies, in a range of roles, to develop, pilot, source for, present in, and publicize their re-entry internship programs or to similarly support their efforts to hire relauncheders directly into open roles without internships. Founded in 2007, iRelaunch has been deeply engaged with its employer partners, a national network of alumni career services directors at leading colleges and universities, professional associations across industry sectors, and a global community of over 30,000 people. iRelaunch's long-time connections with university alumni offices and professional associations expand its reach to millions of relauncheders in the U.S. and beyond.

ADDENDUM 2: FORMATION OF THE STEM RE-ENTRY TASK FORCE

The co-leaders of the Task Force are Jennifer Abman Scott, of SWE, and Carol Fishman Cohen, of iRelaunch. Scott has been with SWE since 2009 and oversees relationships and initiatives within SWE's Corporate Partnership Council (CPC). Cohen, who has a background in finance and is a career relauncher herself, has a successful past in partnering with firms within the U.S. financial industry to create return-to-work programs that attract mid- and senior-level talent.

Scott and Cohen began discussing a formal partnership to support the creation of re-entry programs for the engineering sector in late 2014. This conversation was running parallel to one Jennifer P. Howland of IBM was having with Cohen. Having learned of iRelaunch through its success within the financial industry, Howland advocated both internally and externally for a formal partnership between SWE and iRelaunch to support IBM's goals around re-entry programming. Howland's efforts were also key to promoting the Task Force to SWE's CPC.

In July 2015, the concept and vision for the Task Force were presented at SWE's CPC meeting. After the presentation, seven organizations stepped forward as the Founding Members of the STEM Re-entry Task Force: Booz Allen Hamilton, Caterpillar, Cummins, General Motors Company, IBM, Intel Corporation, and Johnson Controls. The program was officially launched and publicized in early September 2015.

ADDENDUM 3: ABOUT THE STEM RE-ENTRY TASK FORCE CO-LEADERS AND FOUNDING MEMBERS

CO-LEADERS OF STEM RE-ENTRY TASK FORCE:

SOCIETY OF WOMEN ENGINEERS

Jennifer Abman Scott, *Vice President, Fund Development*

Jennifer currently leads all development efforts at SWE, including SWE's Corporate Partnership Council (CPC). With over 20 years of experience in fundraising, Jennifer develops strategic partnerships and integrated fundraising plans to both further SWE's mission and impact the STEM community at large. In addition to the STEM Re-entry Task Force, Jennifer also developed the Gender Corporate Culture Study, which was published by SWE.

iRELAUNCH

Carol Fishman Cohen, *Co-Founder and CEO*

Carol consults for some of the world's largest corporations on developing career re-entry programs to attract and hire experienced professionals returning to work after a career break. Her seminal Harvard Business Review article "The 40-Year-Old Intern" focuses on the use of the internship as a vehicle for employers to engage with this pool. Her TED talk "How to get back to work after a career break" has been viewed nearly 1.5 million times.

FOUNDING MEMBERS OF STEM RE-ENTRY TASK FORCE:

BOOZ ALLEN HAMILTON

Margaret Arney, *Principal*

Arney is a Principal with Booz Allen's Strategic Innovation Group (SIG) Digital team, where she manages a diverse team of software engineers, cloud architects, and business analysts to develop solutions for clients using the latest digital technologies. Arney has 20 years of experience leading and managing multimillion-dollar technology solutions for clients across the Department of Defense and commercial sectors.

Holly Rollins, *Principal*

As a Principal, Rollins has 23 years of experience at Booz Allen Hamilton. In addition to developing Air Force Cyber Systems, she also is involved with Capital Planning, Business Case Analysis, Critical Infrastructure Protection, and Information Assurance.

Cheryl Wade, *Head of Diversity and Inclusion*

Wade brings 15 years of experience at Booz Allen Hamilton alone and manages the portfolio of diversity and inclusion-related partnerships, with SWE being one of the largest. She leads the firm's diversity and inclusion team in driving strategy and is responsible for designing and implementing initiatives to foster an inclusive culture to attract, retain, develop, and advance diverse professionals.

ADDENDUM 3: ABOUT THE STEM RE-ENTRY TASK FORCE CO-LEADERS AND FOUNDING MEMBERS

CATERPILLAR

Stacey M. DelVecchio, *Additive Manufacturing Product Manager*

With a strong technical background and over 28 years of experience in the engineering profession, DelVecchio is critical to the development of engineering leadership at Caterpillar. As a long-time member of SWE, she served as the President of the Society in 2013-14 and was awarded Fellow grade in 2015.

CUMMINS

Christina Baldwin, *Director of Global Talent Management and Corporate Line HR for Engineering Function*

Baldwin has 14 years of experience in the field of human resources. She is a Six Sigma Green Belt Certified Human Resources professional with experience in line human resources, labor relations, and talent management roles with global scope. Baldwin has supported the human resources Engineering Function for eight years.

Karen M. Ramsey-Idem, *Director of Global Technical Operations and Resources, Cummins Components Segment*

Ramsey-Idem has 20 years of work experience in Cummins' Technical Organization. She is a core team member for global technical center projects and leads the formal stage-gate tech center startup process, including defining and deploying a capital assets assessment process and an engineering work management system. She is the program manager for Cummins' initiative to help engineers return to the profession and is Cummins' primary point of contact for the SWE CPC.

GENERAL MOTORS COMPANY

Silvia Karlsson, *Thermal Vehicle Systems Engineer*

With over 20 years of experience in the aerospace and automotive industry, Karlsson leads the Thermal team for the Cadillac CT6. Her team ensures proper cooling of the powertrain, passenger comfort, and overall thermal integration of the vehicle. In addition to her technical assignments, she serves as the SWE-GM Liaison and Lead Talent Scout. As a Fellow member of the SWE, she has been a member since her undergraduate years and has held a variety of SWE leadership positions.

Catherine Martin, *University Relations Talent Strategist*

With over four years of experience in higher education, Martin is responsible for managing a number of General Motors' recruiting teams aimed at identifying and aligning top entry-level, intern and co-op talent from key universities and organizations. She acts as a champion for relationships with university and organization partners to help connect students with opportunities that allow them to follow their passion and reach their potential through finding their fit at General Motors.

ADDENDUM 3: ABOUT THE STEM RE-ENTRY TASK FORCE CO-LEADERS AND FOUNDING MEMBERS

Kristen Siemen, *Executive Director, Global Thermal/HVAC Engineering and Toluca Regional Engineering Center*

With almost 23 years of experience at General Motors, Siemen has held numerous engineering and management positions of increasing responsibility across many different organizations. In her current role, Siemen is responsible for the entire Vehicle Development Process for HVAC/Cabin Comfort, Powertrain Cooling Systems, and Thermal development, from advanced technology work and architecture definition to vehicle launches and field performance worldwide. Siemen's scope also includes direct responsibility for the Toluca Regional Engineering Center in Toluca, Mexico. Siemen's colleagues say she is the reason the re-entry program was successful at the company.

Adela Perez Vinot Program Manager, *Global Talent Acquisition*

With over 10 years of experience in student and employee development, Vinot is responsible for the successful launch and execution of two very diverse corporate programs: EXCEL (Exploring Career through Experiential Learning), GM's university intern and co-op program for over 650 students, as well as Take 2, GM's career re-entry program for experienced technical professionals looking to relaunch their careers after taking an employment break of two or more years.

IBM

Jennifer P. Howland, *Executive, Pathways Program for Experienced Technical Women, IBM Corporate Headquarters*

With almost 32 years of experience at IBM, Howland runs a worldwide program to develop and implement bold actions to increase the representation of diverse talent in IBM's technical executive positions by attracting, recruiting, developing, and retaining experienced mid-career technical talent into these leadership roles. Through her numerous management- and executive-level roles in male-dominated environments, she has always been passionate about helping women advance their careers.

JOHNSON CONTROLS

Catie Anderson, *Sr. Manager, Talent Acquisition Channels*

With 15 years of experience in the public and private sectors, Anderson leads talent attraction at Johnson Controls. She is responsible for talent attraction, employer branding, and university, military, and diversity recruiting initiatives as part of the global Talent Acquisition Center of Excellence. She partners with the industry to develop and recruit for talent programs and ensure the company has a compelling talent brand for all channels.

Cheryl Kern, *Global Director, Diversity & Inclusion*

Cheryl has 15 years of experience in diversity and inclusion, including stints leading Supplier Diversity and Executive Diversity councils for Fortune 200 companies. She is also an experienced P&L leader, having served as general manager of a major minority business enterprise (MBE) joint venture. Kern has worked at Johnson Controls for two years and is responsible for overseeing all diversity efforts globally as part of the organization's commitment to become the industry leader in diversity and inclusion. She also leads strategies for managing partnerships with diversity-serving organizations, such as SWE.

ADDENDUM 3: ABOUT THE STEM RE-ENTRY TASK FORCE CO-LEADERS AND FOUNDING MEMBERS

A. Denise Malloy, *Director, Market Strategy Diversity*

With over 30 years of experience, Malloy has spent over 10 years at Johnson Controls identifying, tracking, and reporting diversity ROI to respective business units. She also develops formal local market-level diversity processes and partnerships necessary to ensure the successful onboarding, development, and promotion of exceptional talent. Partnership efforts include supplier diversity local market councils and local market chapters of SWE, the Society of Hispanic Professional Engineers, and the National Society of Black Engineers.

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¹ In its analysis of employment rates detailed by occupation, the U.S. Department of Labor, Bureau of Labor Statistics projects a steady increase in the demand for engineers through 2024 (which is the current end year of available predictions).

² Estimates of the number of women in engineering often range from 12 percent to 14 percent. Senator Bob Casey provides the figure referenced here, which was documented in a 2012 report for the United States Congressional Joint Economic Committee.

³ These figures were compiled by Carol Fishman Cohen of iRelaunch from the following sources: Beede, D. N., Julian, T. A., Langdon, D., Mckittrick, G., Khan, B., & Doms, M. E. (2011). Women in STEM: A Gender Gap to Innovation. SSRN Electronic Journal. doi:10.2139/ssrn.1964782; Fouad, N. A., & Singh, R. (2012). Stemming the Tide: Why Women Leave Engineering. *University of Wisconsin-Milwaukee*, 1-64; and the U.S. Department of Commerce, Economics & Statistics Administration. (2017). Retrieved from <http://www.esa.doc.gov/>.