WHO WE ARE
The National Center for Women & Information Technology (NCWIT) is a non-profit community that convenes, equips, and unites change leader organizations to increase the meaningful participation of all girls and women — at the intersections of race, ethnicity, class, age, sexual orientation, and disability status — in the influential field of computing, particularly in terms of innovation and development.

Before NCWIT was chartered in 2004 by the National Science Foundation, programs focusing on women and computing existed mostly in isolation — without the benefit of shared best practices, effective resources, communication with others, or national reach. Today, these programs are part of the NCWIT community, creating a far greater impact than if institutions acted alone.

HOW WE WORK
NCWIT uses a three-pronged strategy to improve awareness and knowledge, and motivate change leaders to act.

1. **NCWIT Convenes.** NCWIT brings together men and women change leaders who carry out projects and initiatives in support of NCWIT’s mission. They represent more than 1,240 universities, companies, non-profits, and government organizations that are grouped into five Alliances. These change leaders convene annually at the NCWIT Summit — a three-day event where collaboration leads to action and produces positive results for others to follow.

2. **NCWIT Equips.** NCWIT provides free, online research-based resources for reform at every level to help individuals implement change, raise awareness, and reach out to critical populations. These resources are frequently cited by national media outlets and widely distributed through outreach events and members’ networks.

3. **NCWIT Unites.** NCWIT develops programs for members to achieve goals focused on policy reform, image change, outreach to underrepresented groups, and more. These programs unify change leaders in an action-oriented movement to create national change.
NCWIT PROGRAMS: PROVEN NATIONAL OUTCOMES

• **Aspirations in Computing (AiC)** provides ongoing support and encouragement to more than 10,000 technical women, resulting in long-term impact on women’s participation in computing. For example, 82 percent of past high school Award for AiC recipients persist in computing. // [www.aspirations.org](http://www.aspirations.org)

• **Counselors for Computing (C4C)** educates counselors with national and local data about computing education and careers so that they may advise, encourage, and expose students to options and pathways more effectively. More than 95 percent of C4C participants surveyed report having a better understanding of computing and greater confidence to guide students towards the computing discipline. // [www.ncwit.org/C4C](http://www.ncwit.org/C4C)

• **Extension Services in Undergraduate Programs (ES-UP)** provides customized consultation for increasing women’s participation in undergraduate programs. In only two years, two and a half times as many women applied to clients’ majors after implementing ES-UP recommended recruiting plans. // [www.ncwit.org/extensionservices](http://www.ncwit.org/extensionservices)

All NCWIT programs are backed by NCWIT “Gold Standard” resources, offering coherent, reliable, and actionable practices and information in support of reform. With NCWIT resources, change leaders are less likely to reinvent the wheel, recycle practices that do not work or that exacerbate problems, or move forward based on faulty assumptions. // [www.ncwit.org/resources](http://www.ncwit.org/resources)

PLUGGING INTO NCWIT PROGRAMS

• Host AiC participant visits to computing departments, volunteer as a judge for one or more AiC awards, or recruit college women into the AiC Community.

• Hold a C4C or an AiC event on campus; host an AspireIT coding camp.

• Through ES-UP, create a department-wide plan to increase women’s participation in computing programs.

• Access more than 160 NCWIT research-based resources that are free and easy-to-use.

For more information, contact NCWIT CEO and Co-founder Lucy Sanders at lucinda.sanders@colorado.edu.

PLEASE JOIN US

NCWIT offers opportunities for engagement suited to a variety of goals and activities related to girls and women in computing: recruitment, retention, promotion, outreach, education, brand recognition, company culture, and advocacy. Partnering with NCWIT signals commitment to the national priority of increasing U.S. participation in STEM (science, technology, engineering and math) education and careers. Your participation with NCWIT helps build a national (and increasingly international) infrastructure that results in a broad, immediate impact. Corporate sponsorship and individual donations for NCWIT match financial support from the National Science Foundation, creating a true public-private partnership. Visit [www.ncwit.org](http://www.ncwit.org) to learn more.
The NCWIT Academic Alliance (AA) focuses on changing the local conditions that create barriers to attracting and graduating women in postsecondary computing by adopting and contributing research-based practices. The AA brings together more than 2,000 distinguished representatives from more than 550 colleges and universities nationwide.

“This is the very first time a technological club has been created specifically for computer science females on our campus. Through this club many of our members have voiced that they feel more empowered and confident in themselves and their abilities as women programmers.”

~ NCWIT Student Seed Fund Recipient
KEY RESULTS

• **Higher Graduation Rates:** AA member organizations, particularly those with more than two years of membership, are associated with a higher average female CS graduation rate in comparison to non-members (p<.05).

• **Change Alongside Peers:** In 2017, 64 percent of AA member representatives indicated that they made changes to their own behavior informed by their NCWIT participation.

• **NCWIT AA Seed Fund:** Since 2007, Alliance members reached nearly 14,000 K-12 and postsecondary students, and more than $625,000 has been distributed in support of these members’ outreach efforts. Award recipients reported the Fund increased their credibility and their viability for future funding.

• **NCWIT Student Seed Fund:** More than 4,000 K-12 and postsecondary students have participated in or become aware of technology-related opportunities provided by nearly 160 student organizations who received more than $315,000 in support.

WHY YOU SHOULD PARTICIPATE

• Gain visibility and support through various seed funds and awards, including awards that recognize faculty and departments for creating organizational change and mentoring students.

• **Attend the annual NCWIT Summit,** and learn the latest research-based, promising practices; form valuable relationships with other academics and industry members.

• **Get involved with the NCWIT Aspirations in Computing (AiC) Community of more than 7,000 technical women.** Encourage students to join the AiC Community or to apply for the Collegiate Award; recruit women into degree programs; offer scholarships; or, participate with a local Affiliate Award committee to help honor these women for their computing-related accomplishments and aspirations.

• **Evaluate enrollment and outcome data** by major in the NCWIT Tracking Tool.

• **Develop high-impact strategies and receive expert consultation** through NCWIT Pacesetters or Extension Services for Undergraduate Programs.

Learn more about AA membership, and view a dynamic map of member organizations at [www.ncwit.org/aa](http://www.ncwit.org/aa).

ABOUT NCWIT

The National Center for Women & Information Technology (NCWIT) is a non-profit community of more than 1,100 universities, companies, non-profits, and government organizations nationwide working to increase girls’ and women’s meaningful participation in computing. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K-12 and higher education through industry and entrepreneurial careers. Find out more at [www.ncwit.org](http://www.ncwit.org).
Members of the NCWIT Entrepreneurial Alliance (EA) build inclusive technical cultures, increase gender diversity, and develop research-based strategies for recruiting and advancing technical women. This focus is especially important during a company’s early stages when innovation is critical, executive teams form, and core values are established. The research is clear; startups can benefit from increased contributions of women as founders, collaborators, and creators of new technologies.

COMPANIES WITH INTENTIONAL CULTURE AND GENDER-DIVERSE TEAMS:

- **Checkmark**: perform better financially, particularly when women occupy a significant proportion of top management positions
- **Dollar Sign**: produce work teams that stay on schedule and under budget
- **Light Bulb**: demonstrate improved employee performance
- **People**: demonstrate superior team dynamics and productivity

**RESULTS**

In 2010, NCWIT launched its Entrepreneurial Alliance (EA) for small and growing companies. The EA quickly attracted companies like TechStars, Andreesen Horowitz, Lightbank, SendGrid, Return Path, SpotXchange, Gnip/Twitter, and more. EA member companies have seen positive results. For example, SendGrid was one of the first to publicly release diversity data for technical employees; TechStars has committed to doubling the participation of women in portfolio companies; and Return Path pioneered ReturnShips, a program that brings mid-career technical women back into the workforce. Building on these successes, NCWIT is now reaching even more early stage companies through Channel Partnerships with accelerators and incubators, and a new regional presence in several major cities.

“We rethought the way we were writing job postings, based on NCWIT advice, and the result has been a noticeable increase in responses from female applicants.”

~ NCWIT EA Member
WHO CAN JOIN: TYPES OF MEMBERSHIPS

- **Is your company an accelerator, incubator, or co-sharing organization?** As an EA Channel Partner, you have the opportunity to embed NCWIT research and promising practices into your existing programming, helping early stage companies grow diverse teams and build inclusive cultures from the start. Your organization receives NCWIT expertise, support, and access to national programs in exchange for helping reach 10,000 founders by 2020.

- **Is your company in the seed stage?** Small companies may not be ready or able to join as members, but as EA Associates they still have access to NCWIT’s valuable resources, and their company names are listed on NCWIT’s public website.

- **Is your company in the growth phase?** Growing companies become EA members for an annual $2K contribution. Start capitalizing on the benefits of membership now by learning how to: create an inclusive company culture, build diverse technical teams, and gain visibility through connections with NCWIT’s national community of change leaders. NCWIT makes participation easy; we provide experts, researchers, and project managers to put your ideas into action.

MEMBER BENEFITS

- resources on how to build and sustain diverse teams
- tips for establishing and maintaining positive company culture during rapid growth
- the opportunity to promote job openings to a national talent pipeline of women
- access to established NCWIT programs and campaigns
- access to over 650 NCWIT member organizations including: corporations, universities, and affinity groups
- invitations to the annual NCWIT Summit

Find out more at www.ncwit.org/ea, or contact EA Director Jill Reckie at 303.735.1158 or jill.reckie@ncwit.org.

ABOUT NCWIT

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The NCWIT K-12 Alliance is dedicated to creating access to authentic, inclusive computing education for every girl, everywhere. Made up of national girl-serving organizations, professional educator associations, academic institutions, and businesses, the K-12 Alliance leverages the reach and diversity of its members to create outreach programs and resources that recruit, retain, and advance more girls into computing nationwide. By working together, the distinguished K-12 Alliance members make a larger and more immediate impact than if they acted alone. Find out more at www.ncwit.org/k12a.

The K-12 Alliance is home for several NCWIT flagship programs that serve multiple stakeholders, including girls and an increasing number of boys, as well as adult influencers like counselors, formal and informal educators, and families:

- **Counselors for Computing (C4C)** provides professional school counselors with information and resources they can use to support ALL students as they explore computer science education and careers. (www.ncwit.org/c4c)
- **NCWIT Aspirations in Computing (AiC)** provides technical girls and women with ongoing engagement, visibility, and encouragement for their computing-related interests and achievements from high school through college and into the workforce. AiC reaches all 50 states, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and all U.S. military bases overseas. (www.aspirations.org)
- **TECHNOLOChicas**, co-produced with the Televisa Foundation, is a national initiative designed to raise awareness among young Latinas and their families about opportunities and careers in technology through the stories of “relatable” role models and outreach events. (www.technolochicas.org)

K-12 Alliance members also serve on resource committees and project teams to provide feedback on key NCWIT research and resources, including:

- advocacy materials concerning the critical need for computing education in K-12 schools (www.ncwit.org/schools)
- reports that address the key barriers to increasing girls’ participation in computing, and promising practices for addressing them (www.ncwit.org/thefactsgirls)

"[I’ve received] knowledge about new resources, which I can use in workshops and sessions that I run in my state and elsewhere.”

~ NCWIT K-12 Alliance Representative
RESULTS

• One hundred percent of K-12 Alliance members report presenting or publishing on women in computing.
• More than 95 percent of C4C participants surveyed report having a better understanding of computing, a broader sense of who is right for computing, and greater confidence to guide students toward computing education and careers.
• AiC offers 79 Regional Affiliate Awards for 9th-12th grade women — reaching all 50 states, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and all U.S. military bases overseas.
• Notable public figures have supported TECHNOLOchicas, including Eva Longoria, Juan Felipe Herrera, and representatives from the White House Initiative on Educational Excellence for Hispanics.

WHY YOU SHOULD PARTICIPATE

• Access and share practices with a national network of peer K-12 organizations.
• Connect with NCWIT Academic, Affinity, Entrepreneurial, and Workforce Alliances to promote programs, acquire volunteers, and more.
• Participate in the annual NCWIT Summit.
• Contribute to the national dialogue about the future of U.S. computing education.
• Gain visibility through NCWIT communications channels.

ABOUT NCWIT

The National Center for Women & Information Technology (NCWIT) is a non-profit community of more than 1,100 universities, companies, non-profits, and government organizations nationwide working to increase girls’ and women’s meaningful participation in computing. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K–12 and higher education through industry and entrepreneurial careers. Find out more at www.ncwit.org.

“I realize now that a specific effort targeting girls must be made to get more girls into classes.”
~ C4C Participant

“The networking with other like-minded individuals at the Summit is essential to our efforts in our state to deal with underrepresented minorities, both women and ethnic minorities.”
~ NCWIT K-12 Member Representative
Women today hold 57 percent of all professional occupations in the U.S. workforce, but comprise only 26 percent of computing occupations. Additionally, in the high tech industry, the quit rate is more than twice as high for women (41 percent) than it is for men (17 percent). Evidence suggests that workplace conditions, a lack of access to key creative roles, and a sense of feeling stalled in one’s career are significant contributing factors.

The Workforce Alliance (WA) focuses on internal corporate culture change to promote more inclusive environments, build stronger technical teams, and enhance technical innovation.

WHY YOU SHOULD PARTICIPATE

Membership benefits include:

• support from NCWIT staff and social scientists in utilizing the NCWIT Industry Systemic Change Model to develop a holistic approach to technical cultural reform

• guidance in applying research-based strategies to mitigate bias in systems, such as hiring, task assignment, performance evaluation, and promotion

• opportunities for corporate volunteerism, outreach, and recruitment with the NCWIT Aspirations in Computing Community, the largest network of its kind that includes more than 16,000 high school and college women nationwide

• invitations to the annual NCWIT Summit, the world’s largest annual convening of change leaders focused on significantly improving diversity and inclusion in computing

• continuous access to the latest research, resources, and business-critical data, as well as the opportunity to serve on resource committees and project teams to help NCWIT understand emergent trends and issues most important to change leaders

• membership in a national community of nearly 1,240 organizations, spanning K-12 to industry

WHAT WA MEMBER REPRESENTATIVES SAY

“You changed the thinking of many of the employees here for the better.”

“We implemented Gender Neutral Job Descriptions Guidelines, majorly impacted by NCWIT materials.”
RESULTS
WA members achieve a wide range of outcomes, including a heightened awareness of systemic barriers stemming from unconscious bias, the increased involvement of men in change efforts, and progress towards greater public accountability through the release of diversity data. WA members are also developing innovative new programs, such as alternative pathways to increase mid-career hires and expanding outreach to build a more diverse K-12 computing pipeline.

MEMBERSHIP
A corporation may join by making a $25,000 annual contribution. This is a member-imposed carrying cost used to cover the expenses of running the Alliance. Corporate members identify a core team of employees (women and men) across a range of job functions—top leadership, technical, HR, diversity and inclusion, etc.—to work with NCWIT and drive change efforts across the organization.

Sponsorship opportunities are also available at [www.ncwit.org/wa](http://www.ncwit.org/wa).

ABOUT NCWIT
The National Center for Women & Information Technology (NCWIT) is a non-profit community of more than 1,240 universities, companies, non-profits, and government organizations nationwide working to increase the influential and meaningful participation of girls and women—at the intersections of race, ethnicity, class, age, sexual orientation, and disability status—in the field of computing, particularly in terms of innovation and development. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K-12 and higher education through industry and entrepreneurial careers. Find out more at [www.ncwit.org](http://www.ncwit.org).

“We hired more summer interns than the previous year — all were Aspirations winners/runners-up.”
~ WA Member Representative
NCWIT Aspirations in Computing (AiC) provides technical girls and women with ongoing engagement, visibility, and encouragement for their computing-related interests and achievements from high school through college and into the workforce. AiC reaches all 50 states, the District of Columbia, Puerto Rico, Guam, the U.S. Virgin Islands, and all U.S. military bases overseas.

### AiC Awards: Identifying and Honoring Technical Women and Their Influencers

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<tr>
<th>K-12</th>
<th>HIGH SCHOOL</th>
<th>COLLEGE</th>
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<td>The high school awards include both national and local recognition in 79 regions.</td>
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<td>NCWIT AspireIT</td>
<td>The NCWIT Award for Aspirations in Computing recognizes 9th-12th grade women who are active and interested in computing and encourages them to pursue their passions.</td>
<td>The NCWIT Aspirations in Computing Educator Award publicly celebrates formal and informal educators who encourage 9th-12th grade women’s interest and ability in computing.</td>
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<td>NCWIT AspireIT connects high school and college women with K-12 girls to teach programming and computational thinking fundamentals in fun, creative environments.</td>
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### AiC Community: Encouraging Persistence Into Computing Education and Careers

**9th Grade through College+**

The NCWIT Aspirations in Computing Community provides ongoing support and encouragement to more than 11,500 technical women, resulting in long-term impact on women’s participation in computing. AiC Community members are within an expansive network of peers, volunteers, and NCWIT Alliance member organizations who offer exclusive access to scholarships, internships, and professional work. These computing-related opportunities allow AiC Community members to strengthen their leadership, technical, and entrepreneurial skills, further preparing and motivating them to participate in the computing workforce.
KEY RESULTS

• The AiC Community, the largest network of its kind, includes more than 11,500 technical women.
• Award for AiC winners consistently report greater confidence, awareness of computing fields, motivation to persist, as well as less anxiety and uncertainty about computing skills when asked to describe the impact of the award.
• Ninety percent of past Award for AiC winners report a major or minor in a STEM field while in college — 80 percent in computer science or engineering.
• More than 8,000 girls have received nearly 240,000 instruction hours through 300 AspireIT programs in 40 states.
• Fifty-four percent of 2018 Award for AiC applicants identified as a person of color.
• More than 500 AiC Educator Award winners have received more than $145,000 for professional development.
• NCWIT Collegiate Award winners often receive national media attention for their mobile applications, devices, visualization tools, and more.
• More than 1,500 industry volunteers nationwide are engaged with the AiC program each year.

WHY YOU SHOULD PARTICIPATE

• Encourage and inspire more women and girls in computing.
• Increase the visibility of your organization among technical girls and women.
• Demonstrate your commitment to diversity and inclusion in technology innovation.

WAYS TO GET INVOLVED

• Sponsor the AiC program nationally or locally.
• Volunteer: review award applications, speak at an event, be a mentor, or join a committee.
• Offer opportunities to AiC Community members: internships, scholarships, informational interviews, office and campus tours, professional development activities, or job postings.
• Partner with other NCWIT Alliance member organizations to host a local AiC Affiliate, AspireIT program, or AiC Community networking event.
• Share your engaging computing curriculum with AiC Community members to use in an AspireIT program.

ABOUT NCWIT

The National Center for Women & Information Technology (NCWIT) is a non-profit community of more than 1,100 universities, companies, non-profits, and government organizations nationwide working to increase girls’ and women’s meaningful participation in computing. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K–12 and higher education through industry and entrepreneurial careers. Find out more at www.ncwit.org.
WHAT IS TECHNOLOchicas?
TECHNOLOchicas, co-produced with the Televisa Foundation, is a national initiative designed to raise awareness among young Latinas and their families about opportunities and careers in technology. Powerful stories highlight the lives of Latinas from diverse backgrounds and environments who are in technology fields and recognize the power of innovation to change the world. These stories allow girls to perceive TECHNOLOchicas as “relatable” role models who are similar to themselves and are promoted through several communication channels, including broadcast television, local events, social media, and online videos.

WHY TECHNOLOchicas?
Latinas occupied only 1 percent of jobs in the computing workforce in 2017. Yet, both the number of technology positions and the Hispanic population are growing. The U.S. Department of Labor predicts 3.5 million computing-related job openings by 2026. Latinas represent a vastly untapped computing talent pool that is vital to increasing the bottom line of the U.S. economy and creating diversity in the computing workforce, leading to advanced technical innovation. Their participation in computing disciplines also improves the economic outlook of the Hispanic community.
WAY TO GET INVOLVED

• Join the campaign via social media: follow @TECHNOLOchicas on Twitter and like TECHNOLOchicas on Facebook for daily tips, inspirational quotes, and Latinas in technology news that you can share with friends. Follow @TECHNOLOchicas on Instagram, and see event highlights through their eyes.

• Host an event: ask a TECHNOLOchica to make an appearance, or show a screening of videos for young Latinas at schools or community organizations. (Contact technolochicas@ncwit.org to start planning.)

• Identify more TECHNOLOchicas: know Latinas in technology who could be profiled as a TECHNOLOchica? Share this application form with them: http://bit.ly/1OVS2lw.

Learn more at www.technolochicas.org.

KEY RESULTS

• Notable public figures have supported the TECHNOLOchicas campaign, including Eva Longoria, Juan Felipe Herrera, and representatives from the White House Initiative on Educational Excellence for Hispanics.

• To date, public service announcements have aired more than 6,000 times on Univision stations in more than 20 markets nationwide, reaching millions of Spanish speaking households.

• TECHNOLOchicas was short-listed for the 2017 ITU and UN Women GEM-TECH Awards: Promote Women in the Technology Sector.

• TECHNOLOchicas have participated in more than 120 outreach events nationwide, including appearances at local schools and public housing communities, conference presentations, CSEdWeek events, as well as events hosted by major tech corporations, including Apple, Qualcomm, AT&T, Intel and Microsoft.

• The TECHNOLOchicas campaign leverages NCWIT resources, in both English and Spanish, for engaging young women in computing.

• More than 250 profiles of real-life, diverse Latinas in tech are available at technolochicas.org.

ABOUT NCWIT

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“There are a million and one examples that show that when you have different perspectives collaborating, you build more incredible inventions.”

~ TECHNOLOchica Natalia Rodriguez
NCWIT Pacesetters is the first, fast-track program of its kind, aiming to move the national needle for women’s participation in computing. Company and university leaders work together across corporate and academic boundaries, committed to increasing their organization’s number of technical women at an accelerated pace. NCWIT Pacesetters employ innovative methods and set quantifiable goals to recruit untapped talent pools of “Net New Women” — technical women who would otherwise pursue non-computing careers or would be at risk of leaving.

“Net New Women” include technical women who may have received little or incorrect information about computing occupations and fields of study; may pursue a technical path, if given exposure or encouragement; or may have dropped out or changed careers due to bias, isolation, and other obstacles.

Adding “Net New Women” to the U.S. computing talent pool can yield a larger and more competitive workforce; research shows that groups with greater diversity solve complex problems better and faster than do homogenous groups.

Strategies executed by NCWIT Pacesetters include:

- active recruitment of female college students to computing majors
- changes to curriculum, pedagogy, and culture to improve retention
- development and promotion of mid-career options and workplace policies
- encouragement of women’s contributions to technical innovation

“Change doesn’t just happen. Having goals, a strategic focus, key company stakeholders involved, and a strong NCWIT team leading the way and pushing a bit from behind is crucial and leads to action!”

~ NCWIT Pacesetter
I, personally, have derived significant benefits from my work as a Pacesetter. Pacesetters gave me the motivation to try for a new degree program in which the Department of Computer Science will be offering a degree to students in the College of Arts and Sciences. This ‘holy grail’ has long been thought impossible to achieve and we are now just a few steps away from proving that stance wrong!

~ NCWIT Pacesetter

RESULTS
NCWIT Pacesetters held shared accountability for achieving a goal of recruiting or retaining 1,000 technical women in the U.S. computing work force by 2012. They shattered this goal, reporting 1,685 “Net New Women.” NCWIT Pacesetters demonstrate that innovative strategies can work and pave the way for other organizations to follow.

Although individual organizational goals are held confidential, following are a few examples:

- One corporation doubled its number of female engineer interns.
- Another company piloted a highly successful workshop for over 100 mid-career female technologists to learn how to command presence in executive environments.
- Several universities increased participation of women in computing degree programs by 50-100%.
- A university instituted a new four-year degree program that is attracting double majors in the area of neuroscience, film, and law.

NCWIT Pacesetters also influenced the inception of Sit With Me, a national advocacy campaign that provides a platform to raise the visibility of technical women and acknowledge the valuable contributions of women in computing. Find out more at www.sitwithme.org.

GET INVOLVED
Pacesetter organizations work together in “cohorts” for two years. If you would like to be considered for the next Pacesetters cohort, please contact info@ncwit.org. Find strategies and planning guides to leverage your own efforts, and learn more about the NCWIT Pacesetters program at www.ncwit.org/pacesetters.

ABOUT NCWIT
The National Center for Women & Information Technology is a non-profit community of more than 450 prominent corporations, academic institutions, government agencies, and non-profits working to increase women’s participation in technology and computing. NCWIT helps organizations recruit, retain, and advance women from K-12 and higher education through industry and entrepreneurial careers by providing community, evidence, and action.
NCWIT Extension Services (ES) partners with undergraduate departments of computing to tackle a national crisis. In 2017-18, only 18 percent (or 9,131) of the 50,599 Computer and Information Sciences undergraduate degree recipients were women. NCWIT ES addresses this severe gender imbalance in undergraduate computing by equipping computing departments (“clients”) with evidence-based strategies and resources to attract women to their majors and retain them through graduation. ES and departmental change-leader teams advance sustained organizational change by revising socio-educational systems, not by changing women to fit into existing systems.

ES offers clients two consulting approaches, grounded in the NCWIT Undergraduate Systemic Change Model (pictured below), for developing and implementing high-impact strategic recruitment and retention plans tailored to local needs and conditions:

1. Clients are paired with consultants for one to two years.
2. Clients participate in a year-long Learning Circle — a small group of clients that meet online with ES staff, consultants, and invited speakers.

“When we first began working with Extension Services, we were encouraged to try data-driven action. Although we were skeptical — after all, we really knew our students — we tried it. Wow, were we wrong on a number of decisions! We now ask the students a lot of questions, but more importantly, we listen and implement changes accordingly (within days to weeks). What we didn’t expect were the far-reaching positive results. Now we wonder why we didn’t do this earlier.”

~ ES Client

With both approaches, change-leader teams receive guidance on identifying opportunities and allies, utilizing strategic approaches and resources, and building assessment plans to evaluate progress. The NCWIT Tracking Tool, a unique web-based data and presentation system, allows clients to track their progress and compare results to peers. The Tracking Tool also assists clients in evaluating, visualizing, and communicating admissions, enrollment, and graduation data by gender and race/ethnicity. At present, ES has served more than 100 institutions.
KEY OUTCOMES

• More undergraduate women apply, are accepted, and graduate from ES client departments.
• Commitment and learning leads to steady, long-term growth.
  • Between 2007-2011, ES consulted with 32 departments that together awarded 14 percent of all the 2017 BS computing degrees in the U.S.
  • While the national average of BS degrees awarded to women was 18 percent, 32 early ES clients awarded 21 percent of their BS degrees to women.
• Clients see gains very quickly, setting them up for long-term impacts.
  ES consulted with 37 departments from 2012-2017. After their two-year consulting periods, clients:
  • attracted 2.5 times more women
  • grew women applicants from 14 percent to 18 percent, in total
  • increased women’s share of newly-enrolled majors by 4 percent
  • increased women’s portion of total degrees awarded from 13 percent in 2012 to 18 percent in 2017
  • awarded degrees to 3.1 times as many women in 2017 as in 2012 (compared to 2.2 times as many men in the same period)

WHY YOU SHOULD PARTICIPATE

• Demonstrate your commitment to increasing gender diversity within computing departments.
• Advance systemic change initiatives to increase meaningful participation of women majoring in computing.
• Promote adoption of research-based strategies to create inclusive pathways for women as they progress to graduation with degrees in computing.

WAYS TO GET INVOLVED

• Help NCWIT fund departments committed to systemic culture change.
• Sponsor NCWIT Extension Services Transformation (NEXT) Awards, recognizing clients’ significant positive outcomes in women’s enrollment and graduation rates.
• Connect NCWIT to academic change leaders who are interested in becoming a client.

Find out more at www.ncwit.org/extensionservices or contact es@ncwit.org.

ABOUT NCWIT

The National Center for Women & Information Technology (NCWIT) is a non-profit community of nearly 1,100 universities, companies, non-profits, and government organizations nationwide working to increase girls’ and women’s meaningful participation in computing. NCWIT equips change leaders with resources for taking action in recruiting, retaining, and advancing women from K–12 and higher education through industry and entrepreneurial careers. Find out more at www.ncwit.org.
WHAT IS SIT WITH ME?
Sit With Me (SWM) is a fun, creative national advocacy campaign that uses an iconic red chair to symbolize the critical need for women’s technical contributions. Men and women, both technical and non-technical, hold events to acknowledge and celebrate these valuable contributions, reinforcing that all individuals can sit in support and solidarity for technical women.

WHY SWM?
Increasing the role of women in technology is vital for the U.S. to compete globally and meet the world’s most pressing challenges. Although women hold 57 percent of all professional occupations in the U.S. workforce, they hold only 25 percent of professional computing occupations. Moreover, 56 percent of technical women already employed leave at the “mid-level” point (twice the quit rate for men).

SWM raises awareness about the power of gender diversity. Capitalizing on women’s participation can yield a larger and more competitive workforce and enable the design of technology that is as influential and extensive as the populations it serves.

“The RED CHAIR (it was so wonderful, it gets capital letters!) was the perfect feature to include. The young ladies got the sense that their passion for technology is truly needed in the world.”

~ Senior Corporate Executive
RESULTS

• More than 10,000 people have attended SWM events around the world, where more than 3,000 photos and 160 stories were captured and uploaded to the sitwithme.org.

• Notable public figures have participated, including Chelsea Clinton, Clinton Foundation vice chair; Donna Brazile, author, syndicated columnist, and television political commentator; Mayim Bialik, actress, activist, and neuroscientist; Meryl Streep, actress; Shaquille O’Neal, celebrity and retired NBA player; and Sheryl Sandberg, Facebook COO.

• AT&T, Bloomberg, Eastman Chemical, Expedia, Google, Infosys, Microsoft, Thomson Reuters, and other companies have held SWM events or have produced media, including microsites and videos.

• Higher education institutions, such as the University of Nebraska, Indiana University, Montana State University, Oregon State University, and the University of Buffalo have hosted events and displayed the SWM chair on their campuses.

• SWM participants do not limit themselves to the red chair; they creatively use bow ties, capes, 3D printed chairs, and other items to celebrate International Women’s Day, bring educators together, and more.

WAYS TO GET INVOLVED

• Host an event: download the event kit to get key messaging, sample activities, and templates for creating promotional materials.

• Create a story, using uploaded photos and videos. Then, share it with others.

• Borrow, purchase, or create your own SWM chair.

• Celebrate without the SWM chair, using t-shirts, stickers, and more.

Visit www.sitwithme.org to get involved today.

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“Sit With Me was created by members of NCWIT with creative direction from marketing and branding firm BBMG.

Campaign Sponsor: Emeco

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NCWIT Counselors for Computing (C4C) provides professional school counselors with information and resources they can use to support ALL students as they explore computer science education and careers.

Counselors are influencers. They counsel and encourage students in their education and career aspirations, advise on course selections, and expose students to occupations through career fairs and internships. If young women are to get the exposure and encouragement they need to pursue computing, it is essential that counselors get up to speed on the knowledge and resources necessary to guide effectively.

Through C4C, NCWIT offers professional development, ranging in length from one-hour webinars, to one-day workshops, to two-and-a-half-day institutes that include advanced leadership development.

- Each program is customized for immediate relevance. Presenters share national and local data about CS education and careers, invite technical people to speak about their career paths and work, and have young women share their accomplishments and aspirations in computing.
- Counselors try their hand at computing through interactive experiences, such as Code Studio and “Sorting Networks.”
- Counselors also receive C4C Resource Kits that they can use as they work to increase student access to computing education and careers.

WHAT COUNSELORS SAY
Participating counselors take direct action:

- “I have partnered with our AP Comp Sci teacher to advertise/market/inform more about CS. We’re including information about CS (and STEM in general) in our career and college readiness curriculum lesson to all students.”
- “Our district plans to add computer science in four high schools next year. This year, we started an after school app and programming club for girls to build awareness and readiness for those classes.”
- “I realize now that a specific effort targeting girls must be made to get more girls into classes.”
KEY RESULTS

• In 2018, C4C staff, counselors, consultants, and volunteers produced or presented at 56 events in 23 states, reaching 3,760 counselors and educators, with a potential reach to 1,744,640 students.

• In 2018, 739 C4C Resource Kits were distributed to counselors and other educators across the country.

• More than 95 percent of C4C participants surveyed report having a better understanding of computing and greater confidence to guide students toward computing education and careers.

WAYS TO GET INVOLVED

Colleges and universities, businesses, youth-serving organizations, computer science educators, professional counselor associations, and others can learn more at www.ncwit.org/c4c:

• Receive custom, local professional development around computing education and careers.

• Financially support the national expansion of C4C.

• Host local C4C events and programs, and distribute C4C Resource Kits.

• Help CS educators team up with counselors, using “Counselors as Allies” resources.

• Help to build the capacity of groups that are intent on closing the gap between preparedness for computing careers (low) and opportunities for employment (high).

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Tapestry Workshops (www.tapestryworkshops.org) train high school computer science teachers to attract and retain more and diverse students to computing. Each workshop:

- Explains the importance of diversity in computer science classes
- Describes proven practices for increasing the number and diversity of students in high school Computer Science (CS) classes
- Demonstrates teaching methods that engage students regardless of sex or ethnicity
- Provides high-quality resources and field-tested practices
- Discusses teacher challenges and how to overcome them

By focusing on teachers, Tapestry workshops produce measurable and ongoing improvements in computing diversity. Teaching the teacher ultimately affects many more high school students than direct intervention with students. By applying workshop recommendations, more than 80% of workshop participants report enrolling more CS students in general, and more female and underrepresented minority students in particular.

Teacher feedback on the workshop is uniformly positive. Some example sentiments are:

- "Had to request more computers in my classroom because there weren’t enough for all the students enrolled in computer science!"

- "Success! My one section of CS is packed to capacity, and the students — including all the girls — have reported having a great time doing our first few programming projects."

- "I went from having no computer science classes to a class of 38 with 40% of those being female and 90% being URM and five students on a waiting list. I am so excited!"
RESULTS

- Approximately 560 teachers have received Tapestry Workshop training as of 2014 (360 since 2011).
- At least 4% of the 39,278 Advanced Placement (AP) CS test-takers in 2014 were taught by Tapestry Workshop participants.
- At least 5% of the 7,458 female test-takers in 2014 were taught by Tapestry Workshop participants.
- More than half of Tapestry participants reported an increase in their 2014 AP CS enrollments and attributed it to adopting Tapestry-recommended practices.
- The three inaugural Project Lead the Way professional development workshops for CS high school teachers incorporated Tapestry workshop presentations in 2013.

HELP BRING TAPESTRY TO YOUR LOCAL HIGH SCHOOLS

The National Science Foundation (NSF) provided funding to design and pilot Tapestry. Given its success and the critical nature of Tapestry content, the National Center for Women & Information Technology (NCWIT) seeks scale up funds to enable national coverage. To efficiently reach more of the 12,500 self-identified U.S. high school computer science teachers, we plan both online delivery and one-day face-to-face Tapestry sessions.

“Please continue to find a way to run these workshops. Not only did it help me recruit more CS students, but the strategies I learned help me to become a more effective teacher.”

~ Follow-up Evaluation Respondent

ABOUT NCWIT

The National Center for Women & Information Technology is a non-profit community of more than 575 prominent corporations, academic institutions, government agencies, and non-profits working to increase women’s participation in technology and computing. NCWIT helps organizations recruit, retain, and advance women from K-12 and higher education through industry and entrepreneurial careers by providing community, evidence, and action. Find out more at www.ncwit.org.

“We (myself and several attendees) founded the first local CSTA chapter in our state! Through that, we had organized several activities (sessions, presentations, CS education week activities) this past year.”

~ University Faculty Workshop Host