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.

NCWIT Undergraduate Systemic Change Model

- RECRUITING STRATEGIC PLAN
- PEDAGOGY
- CURRICULUM
- EVALUATION & TRACKING SYSTEM
- STUDENT SUPPORT
- INSTITUTIONAL POLICIES & SUPPORT

"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.