

Where Women Lead Tech

STRATEGIC PLAN FOR THE CENTER OF EXCELLENCE FOR WOMEN IN TECHNOLOGY AT INDIANA UNIVERSITY BLOOMINGTON

CORE VALUES:

The Center of Excellence for Women in Technology is committed to:

- **Eliminating barriers** to full participation in a technology-driven society;
- **Empowering women** with the technological agency to benefit their careers, their disciplines, and their local and global communities;
- **Increasing the numbers** of women choosing and leading technology fields, and expanding the pipeline of women entering these fields as students, professionals, faculty, and staff;
- **Leveraging technology to enhance research** quality, efficiency, effectiveness, and influence among IU Bloomington women faculty;
- **Strengthening interdisciplinary academic excellence** through a deeply interconnected network of faculty, staff, and student women technologists;
- **Ensuring inclusivity** in our departments, classrooms, and lab environments;
- **Celebrating excellence** by promoting the scholarly and professional achievements of IU women in technology.

MISSION:

The mission of the Center of Excellence for Women in Technology (CEWiT) is to empower IU Bloomington women faculty, staff, and students to be leaders in technology fields and to fully leverage technology in support of academic and professional excellence. By equipping women with the resources, training, and intellectual network to support their full participation in technology-rich fields and environments, CEWiT will amplify the strength and impact of IU Bloomington teaching, research, and service; attract top women technologists, students, and institutional and corporate partners; facilitate pioneering interdisciplinary collaborations and entrepreneurial innovations; and serve as a national model for increasing women's meaningful engagement with technology.

VISION:

Our vision is to create a state-of-the-art, richly equipped technological "collaboratory" that will serve as a gathering space, classroom, multidisciplinary research lab, and program office. From this central hub or "Techscape," CEWiT will provide a pervasive network of opportunities for professional development, research, scholarship, mentoring, collaboration, and outreach. Building on the momentum CEWiT has established in its first year through its 300+ members and actively engaged faculty, staff, and student alliances, Techscape will become a

nationally recognized beacon for women technologists and an agent of transformation ensuring that women at and beyond IU Bloomington become leaders in technological advancement and innovation.

STRATEGIES FOR ACHIEVING THE VISION:

We will achieve this vision through:

- I. **Leveraging campus resources** through the creation of a dynamic central structure that serves as CEWiT's physical and administrative heart, providing the space, capacity, and coordination to support program delivery, interdisciplinary collaboration, internal and external partnerships, marketing and awareness campaigns, fundraising and development efforts, and ongoing assessments.
- II. **Enhancing research and teaching excellence** by providing faculty members with the physical and intellectual resources to fully integrate technology with all of their academic ventures, including interdisciplinary, multi-institutional, international, and corporate collaborations.
- III. **Enriching student learning and career preparation** through targeted credit and non-credit skill building, mentoring and networking, and high-impact practices including research, internships, service learning, and leadership opportunities.
- IV. **Empowering staff members** through professional development, a supportive community, and enhanced visibility for women in technology.
- V. **Expanding the pipeline** of women entering technology fields through active and energetic partnership with middle schools and high schools.

STRATEGY I: LEVERAGE CAMPUS RESOURCES

Objective 1: We will create a richly equipped technological “collaboratory” to serve as a gathering space, classroom, and locus for program planning and delivery.

Actions:

1. We will work with the Provost, IU Foundation, and other supporters to secure funding to develop a TechScape.
2. We will form a TechScape Planning Council, comprising members of the CEWiT Advisory Council, representatives from CEWiT's faculty, staff, and student alliances, and campus stakeholders from across the schools and units to identify critical technological and space planning needs.
3. We will build and populate a state-of-the-art technology-rich space for teaching, learning, research, and multidisciplinary collaboration that will

- include a technology lending library available to faculty and student researchers.
4. We will unveil the completed space with a major event and publicity campaign that will garner national attention.

Objective 2: We will develop a suite of highly responsive, highly visible program offerings.

Actions:

1. We will leverage our survey data to develop courses, events, services, and resources that address the technological needs and aspirations of IU Bloomington women.
2. We will ensure our effectiveness by following established best practices developed through the National Center for Women & Information Technology (NCWIT), such as cultivating prominent champions for inclusion, leveraging research-based retention practices, and implementing mentoring and networking programs.
3. We will aggressively market and promote CEWiT programs, events, resources and services through traditional and emerging communication platforms, particularly social media.
4. We will rigorously assess our results and improve our programming and outreach to increase participation and outcomes.

Objective 3: We will facilitate vibrant internal and external partnerships.

Actions:

1. We will closely collaborate with UITS to provide skills courses, professional development opportunities, technological support and other ongoing and emerging projects of mutual benefit.
2. We will partner with the IU Foundation to inspire private and corporate support for advancing women in technology through such vehicles as TechScape equipment and software, student scholarships and fellowships, endowed faculty positions, and an endowed lecture series.
3. We will partner with IU Bloomington centers and units including CITL, IU Libraries, the Social Science Research Commons, the Office of Scholarly Publishing, the Johnson Center for Entrepreneurship & Innovation, and each of the forthcoming interdisciplinary centers described in the Provost's strategic plan to align our efforts, share resources, develop joint programming, and enhance each of our partner units' missions.
4. We will enhance IU Bloomington's status as a preferred institutional partner by dramatically increasing researchers' access to and understanding of technology. We will provide programs and services specifically designed to support technologically driven multi-institutional research projects.

5. Leveraging our relationships with fellow NCWIT Pacesetters such as Google, Amazon, Cisco, Intel, and Microsoft, we will develop a robust portfolio of corporate partnerships with technology-driven companies to provide internships and other career resources as well as opportunities for joint research and programming.

Objective 4: We will provide a clearinghouse for technology-related resources for women faculty, staff, and students on the IU Bloomington campus.

Actions:

1. We will leverage the CEWiT website to serve as a portal to IU Bloomington technology-related academic programs, research, professional development opportunities, and internal and external scholarship opportunities.
2. We will maintain and promote an events calendar highlighting opportunities of interest to women involved in technology.
3. We will develop a searchable database of CEWiT members highlighting their areas of expertise and interest.

Objective 5: We will celebrate excellence and increase the visibility of women in technology.

Actions:

1. We will host a Distinguished Speaker Series featuring high-profile women technologists of national and international renown.
2. We will develop multi-platform internally facing communications campaigns and public-facing marketing campaigns spotlighting the achievements of IU Bloomington women faculty, staff, and student technologists.
3. We will host an annual awards ceremony recognizing faculty, staff, and students who have advanced women's meaningful engagement with technology in support of academic and professional excellence.
4. We will host an annual technology conference for women, and will collaborate with UITS on their statewide IT conference.
5. We will promote the nomination of IU women faculty for national awards of recognition that are identified by our community.
6. We will work with the Provost and the IU Foundation to obtain support for endowed CEWiT Chair positions that will attract and retain leading women technologists on the IU Bloomington faculty.

STRATEGY II: ENHANCE RESEARCH AND TEACHING EXCELLENCE

Objective 1: We will empower faculty members with the technological equipment and skills to strengthen and support research excellence.

Actions:

1. We will ensure the availability of technological equipment necessary to support state-of-the-art data collection, storage, analysis, and visualization; digital art, design, and creative activity; and virtual and global research collaboration.
2. We will provide a suite of workshops and symposia, including discipline-specific programming, to connect faculty members to technological resources and develop research-related technological skills.
3. We will work through multiple campus channels including administrative and academic leadership to ensure the visibility of CEWiT's TechScape and its programmatic and equipment resources.

Objective 2: We will promote technology-rich interdisciplinary collaborations.

Actions:

1. We will leverage the momentum of CEWiT Salons and develop structured "Collaboration Summits" to facilitate connections for interdisciplinary research collaborations.
2. We will leverage the CEWiT Circles program to establish mentoring networks that reach across the disciplines.
3. We will expand our informal social gatherings to further promote cross-school conversations and the development of a strong and supportive multidisciplinary intellectual network of women technologists.

Objective 3: We will support faculty members in their multi-institutional, international, and corporate research partnerships.

Actions:

1. We will provide, directly or with our institutional and corporate partners, a suite of programs and services dedicated to mastering the technology necessary for fully engaged virtual collaboration.
2. We will provide a bridge between faculty researchers and leading technology companies seeking research collaborators.

Objective 4: We will enhance teaching excellence by promoting technological innovation in classrooms and curricula.

Actions:

1. We will collaborate with the Center for Innovative Teaching and Learning to provide and promote programming that supports technologically innovative approaches to teaching among women faculty and graduate teaching assistants, including online learning.

2. We will facilitate peer-to-peer mentoring in support of technology-powered teaching innovations.

Objective 5: We will assist in recruiting top women technologists to IU Bloomington.

Actions:

1. We will leverage endowed CEWiT Chair positions to offer additional distinction and financial support to key hires.
2. We will harness the energy of our 140+ faculty members to roll out the welcome mat for prospective hires and showcase the supportive community of women technologists on campus.
3. We will deepen personal and professional connections by providing support for faculty members to attend technology-related academic conferences, and forums for them to share their experiences upon their return to campus.

STRATEGY III: ENRICHING STUDENT LEARNING AND CAREER PREPARATION

Objective 1: We will aggressively recruit women students to technology-focused academic programs.

Actions:

1. Building on the momentum of the “Techie Women have More” campaign, we will assess, improve, and expand our marketing efforts to create excitement, counteract stereotypes, and convey the wealth of opportunities and benefits available to women who study and use tech.
2. We will host an annual academic showcase to introduce women students to tech-related programs and departments.
3. We will leverage the CEWiT website to provide a searchable database of all tech-related IU Bloomington academic courses.
4. We will secure funding to provide tuition discounts for women students enrolling in their first technology course.
5. We will partner with academic advisors to ensure their familiarity with CEWiT and the benefits to women of tech-oriented courses and degrees.
6. Building on the success of the Aspirations in Computing competition, we will expand student scholarships for promising IU Bloomington women technologists in partnership with the IU Foundation.
7. We will promote external scholarships focused on women technologists and assist students with applications.
8. We will leverage the membership our student alliance, Women Empowering Success in Technology (WESiT), to host monthly social events that attract new members.

Objective 2: We will strengthen and enhance academic excellence through mentoring and high-impact practices.

Actions:

1. We will provide opportunities to match our student alliance members with academic mentors from our faculty alliances.
2. Through our faculty alliance, we will provide a wealth of Research Experience for Undergraduate (REU) opportunities and a year-end REU showcase open to parents, community members, and corporate partners.
3. For graduate student members, we will provide mentoring and training to develop a research and teaching portfolio that fully integrates technology.
4. We will provide student leadership opportunities through WESiT.
5. We will partner with living/learning communities, including the STIM Living Learning Community and the Computers and Computing community, to promote student involvement and provide onsite programs.
6. We will expand the Serve IT program to enable more WESiT members to engage in technology-related service learning with local nonprofits.
7. We will create a Computing for Good overseas service learning project as an alternative spring break.

Objective 3: We will create new credit and non-credit learning opportunities tailored to student interests.

Actions:

1. We will leverage our survey data to provide free, short-term non-credit tech skills courses for which students have signaled high demand.
2. We will partner with the School of Informatics and Computing, the Media School, the Kelley School of Business, and other academic partners to create a new suite of eBadges and certificates tailored to student interests, such as Mobile App Development, Gaming, Social Media, and Entrepreneurship Technology.

Objective 4: We will position students for extraordinary success in launching their careers.

Actions:

1. We will provide all student members with opportunities to develop hosted web pages and e-portfolios showcasing their strengths and accomplishments and searchable by potential employers.
2. We will link students to internships and job opportunities through robust corporate partnerships.

3. We will provide students with job shadowing opportunities through our staff alliance.
4. We will organize an on-campus career fair with employers from a wide range of industries including top tech companies.
5. We will provide grants for students to attend tech-related conferences and networking events.
6. We will work with our corporate partners to offer company visits and tours, including network opportunities and panel discussions.
7. We will partner with IUAA to foster alumni relationships that provide students with opportunities for networking, informational interviews, and recruitment possibilities.

STRATEGY IV: EMPOWER STAFF MEMBERS

Objective 1: We will offer abundant opportunities for professional development.

Actions:

1. We will leverage our survey data to design free tech skills courses requested by women staff and offered in supportive and engaging settings (such as women-led courses and women-only classrooms).
2. We will develop a leadership course in concert with the IU WIT staff alliance designed to help women staff technologists advance in their careers.
3. We will assist in obtaining funding to help staff members attend offsite technology conferences.

Objective 2: We will foster a supportive, tech-positive community of staff women.

Actions:

1. We will host technology-themed staff social events each semester, such as brown-bag roundtables on technology topics.
2. We will support online staff communities through social media.
3. We will partner with Healthy IU to shape programs for wellness and community building geared toward women technologists such as walking groups, stress reduction classes, and ergonomic desk setup.

Objective 3: We will increase the visibility of IU women staff technologists.

Actions:

1. We will fully involve staff members in CEWiT leadership and planning.
2. We will align IU WIT activities with those of WESiT and the faculty alliance.

3. We will spotlight staff members in CEWiT marketing and communications campaigns.
4. We will assist staff members in identifying and preparing for presentation opportunities at conferences and other events on and off campus.
5. We will empower technologists to serve as mentors for other staff women and for technology students.

STRATEGY V: EXPAND THE PIPELINE

Objective: We will provide dynamic outreach programming for precollege girls to inspire interest in and excitement about technology.

Actions:

1. We will offer summer camps for middle and high school girls that focus on using technology in fun, interactive, rewarding ways.
2. We will work with WESiT to offer “near-peer” mentoring opportunities for girls with an interest in technology, such as the B-Town Girl-Bots Girl Scout troupe from Clear Creek Elementary School.
3. We will expand the Indiana Aspirations in Computing competition to provide both middle school and high school girls with an opportunity to gain recognition and visibility for their technology-inspired ideas.
4. We will host hands-on technology showcase events geared toward middle and high school girls.
5. We will partner with the Office of Admissions to incorporate tech-positive messages into recruitment tools targeting high school girls.
6. We will connect with high school counselors to ensure their familiarity with CEWiT, WESiT, IU Bloomington’s technology degrees, and the opportunities technology provides for young women.

CONCLUSION:

As the campus looks ahead to its bicentennial in 2020, the U.S. Bureau of Labor Statistics predicts that in that same year nearly 1.4 million technology-sector job openings will be posted, and two-thirds of them will go unfilled due to an insufficient pool of qualified applicants.

Women are a vastly untapped talent pool for meeting these technological needs. At present, women make up only 25% of the technology workforce.¹ Companies with the highest representation of women on their management teams, however,

¹<http://www.esa.doc.gov/sites/default/files/reports/documents/womeninstemagaptoinnovation8311.pdf>

significantly outperform companies without gender diversity, resulting in 34% higher return on investment.²

This pressing national need for a diverse pool of technologists represents a grand challenge that IU Bloomington is perfectly poised to address.

With our firmly established international reputation for technological strength and innovation; our groundbreaking new schools of Informatics and Computing and of Media; our tremendous technology-related expertise across a vast range of disciplines including business, education, law, arts, and the humanities; and our clearly articulated commitments to fully engaging technology, expressed in the New Directions in Teaching and Learning report and the Empowering People strategic plan for information technology, we have laid the groundwork at Indiana University Bloomington for globally influential technological leadership.

This strategic plan for the Center of Excellence of Women in Technology describes how we can leverage that groundwork to build an unparalleled environment for recruiting and supporting women technologists in higher education and launching unprecedented numbers of young women into successful and rewarding technology careers.

Increasing the number of Net New Women in technology is the central objective of the National Center for Women & Information Technology Pacesetters program, an NSF-sponsored initiative with which CEWiT affiliates along with leading technology companies such as Google, Amazon, Microsoft, Cisco, and Intel. Our success in recruiting women students, faculty, and staff to technology areas will boost our visibility among these and other top technology employers and among peer institutions and federal agencies.

While increasing these numbers is a priority in its own right, however, the effects of empowering IU Bloomington women with full technological agency will be immediate, far-reaching, and profound.

Faculty members, departments, and schools will benefit from increased access to and understanding of technology. Innovative approaches to creating, storing, visualizing, and sharing scholarly and creative work will amplify IU Bloomington's research profile and enhance its status as a preferred research partner. These partnerships will in turn be strengthened and enhanced by faculty members' ability to fully deploy technology in support of virtual and global collaboration.

Interdisciplinary connections nurtured through CEWiT will further enhance research excellence and attract grant funding while also contributing to a supportive, inclusive faculty community. Meanwhile, teaching innovations, guided

² <http://www.catalyst.org/knowledge/bottom-line-connecting-corporate-performance-and-gender-diversity>

by evidence-based research, will empower faculty members to improve learning outcomes and engage meaningfully with 21st-century students.

Students and their families will readily embrace the academic and career opportunities CEWiT offers. Our survey data indicate strong interest in technology-focused skills and credentials among women students, and as CEWiT highlights academic pathways and builds communities, student membership is growing exponentially. Women graduating with technology credentials will be extraordinarily well positioned for tomorrow's economy, an appealing prospect for students, parents, and employers alike.

In addition to infusing Indiana's economy with technology-savvy graduates, CEWiT will also strengthen the state through the Serve IT service learning program, research partnerships with local corporations, and start-up ventures established in connection with the Johnson Center for Entrepreneurship. The technological strength CEWiT brings to Indiana will be of great value to state legislators.

Combined with increased staff efficiency and morale resulting from powerful professional development opportunities and a strong intellectual and social support network, these many benefits to the campus will inspire energetic support among Indiana University's trustees.

The many ways in which CEWiT will strengthen IU Bloomington will appeal to a wide range of donors interested in research technology, global connectivity, and innovative teaching approaches. Above all, however, the opportunity to help the young women of Indiana thrive and contribute fully to a technology-rich future is now and will continue to be a priority for our many philanthropically-minded alumni and friends.

Finally, while this plan addresses the needs and opportunities for IU-Bloomington, virtually every element can be applied across all of IU's campuses. Our staff alliance is already IU-wide, and we can see the potential for CEWiT to grow to encompass all IU tech women. How and when this occurs is not the subject of this strategic plan; however, in the coming year it may be worthwhile for us to be exploring models and mechanisms by which the many benefits of CEWiT can empower all women at Indiana University.