

## **Using Strategic Planning Processes to Promote Success for Undergraduate CS Students at a Systemic Level**

### **Dr. Jamie Huber Ward, NCWIT**

Jamie Huber Ward is a social scientist and Associate Director of Higher Ed for NCWIT at the University of Colorado Boulder. Her research focuses on organizational change in higher education; collaborative pedagogy; curriculum reform; post-secondary student experiences; and the experiences of faculty and staff in academic computing workplaces. Jamie's work includes implementing and analyzing research projects designed to enhance all students' success and sense of belonging post-secondary computing programs, and creating resources based on findings that are accessible to post-secondary computing programs nationwide.

### **S. Kiersten Ferguson**

S. Kiersten Ferguson is a faculty research associate at NCWIT and the College of Engineering & Applied Science at the University of Colorado Boulder. Her scholarly and teaching interests include strategic planning and implementation with a focus on systemic organizational change; recruitment and retention of faculty and students; mixed reality simulations; and pedagogical and curricular choices in higher education. Prior to joining NCWIT in 2023, Kiersten was a clinical associate professor in the Annette Caldwell Simmons School of Education and Human Development at Southern Methodist University teaching graduate-level courses and leading the M.Ed. in Higher Education program.

### **Dr. Sherri L Sanders,**

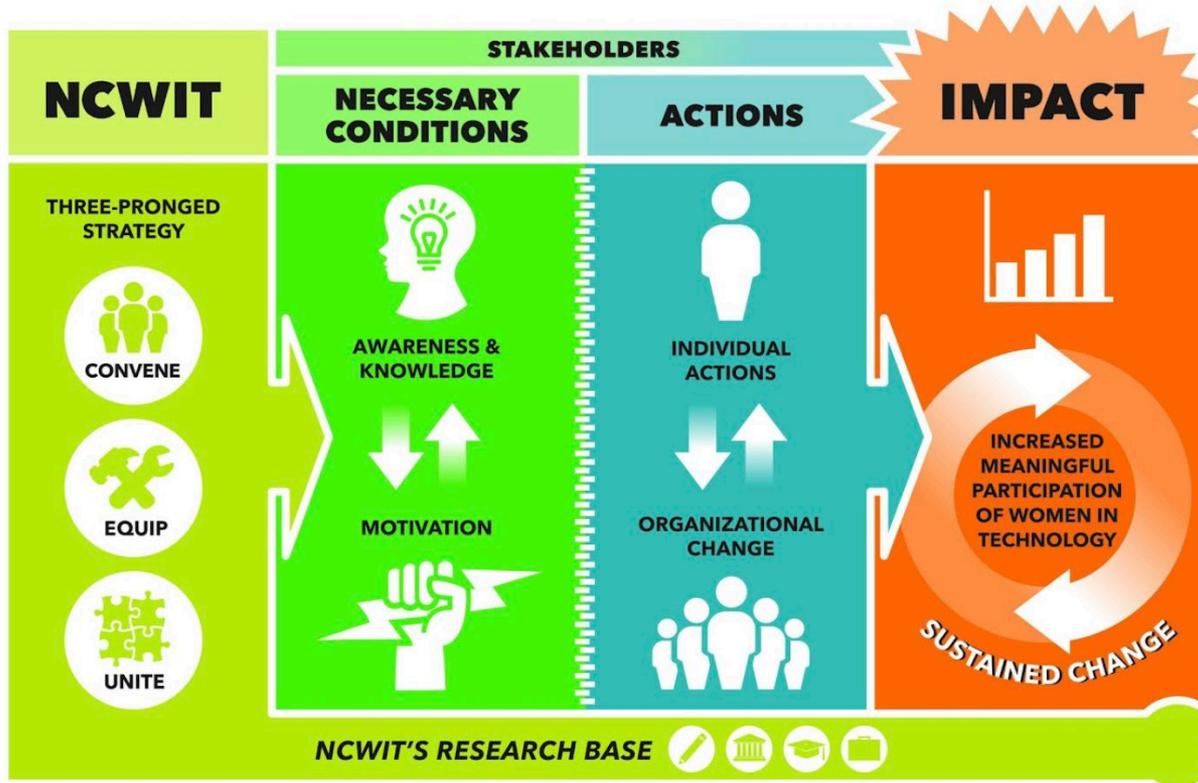
Sherri Sanders serves as the Director of Higher Education and BridgeUP STEM as well as a Senior Research Associate with NCWIT at the University of Colorado Boulder. She leads a team of social scientists who partner with computing faculty, staff, and administrators to develop and implement strategies which lead to the creation of sustainable environments where all students can succeed and gain the skills and literacy needed for the 21st century tech-driven workforce. Before joining NCWIT in 2017, Dr. Sanders served as a senior administrator at The University of Texas at Austin for twenty-nine years, most recently as the associate vice president for inclusion and equity. While at UT-Austin, Dr. Sanders also served as a clinical associate professor in the Department of Educational Leadership and Policy and taught graduate-level classes on college student development theory. She earned her Ph.D. in Higher Education Administration from The University of Texas at Austin; her M.A. in College Student Personnel from Bowling Green State University; and her B.S. in Psychology from Louisiana State University.

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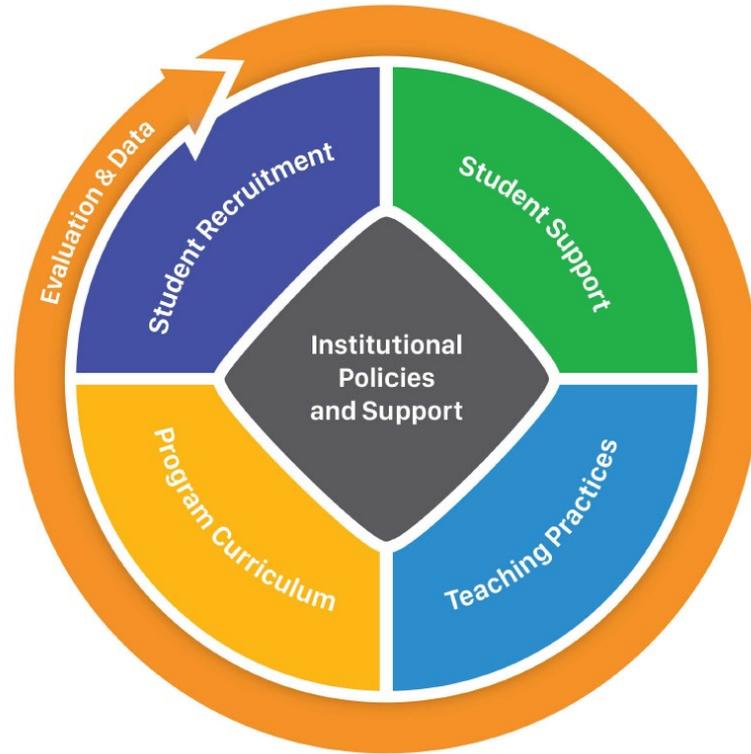


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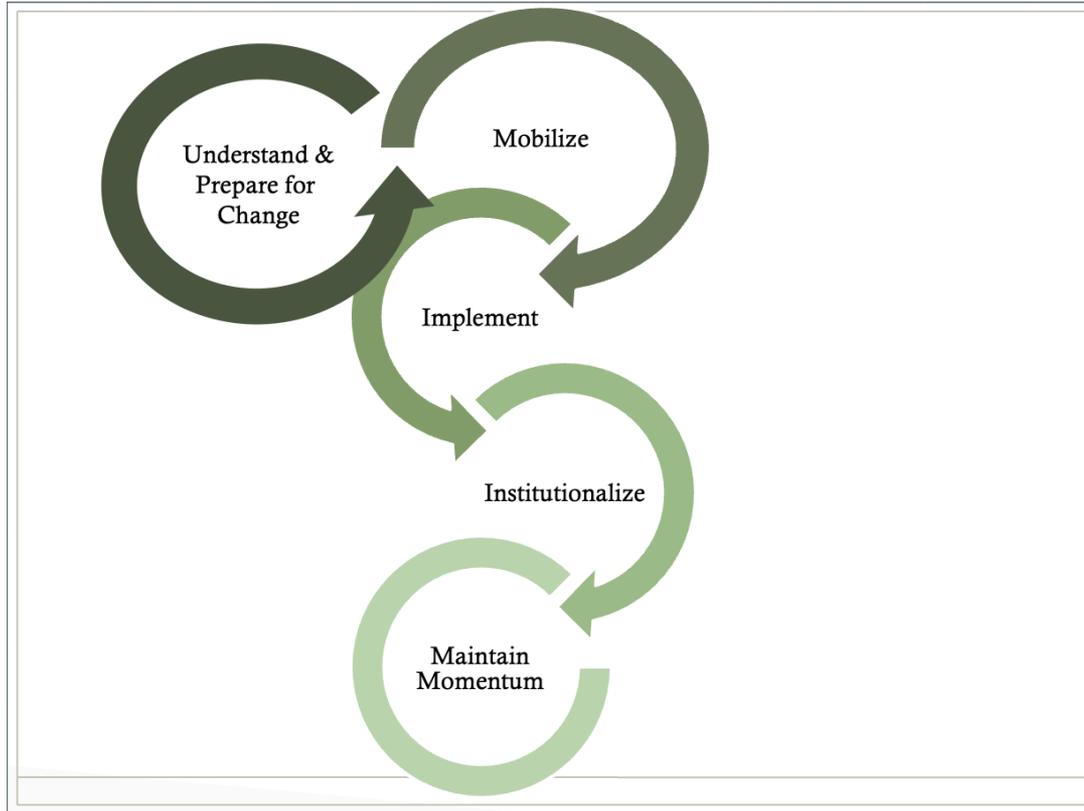
# Overview of NCWIT's Philosophy



# NCWIT Undergraduate System Model



# Organizational Change Process



# Communicating for Change

Evidence-based tools help establish credibility by explaining a vision of change and how it is grounded in theories, best practices, and resources.



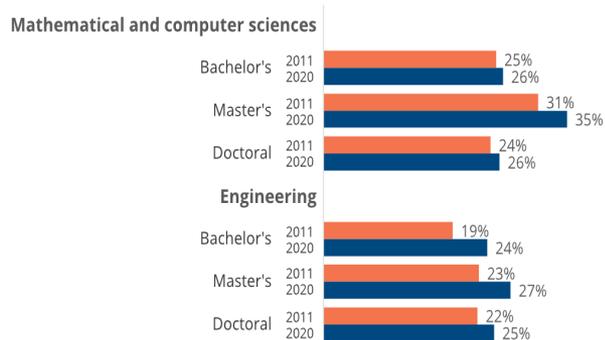
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# Use Compelling Evidence

National Center for Science and Engineering Statistics | NSF 23-315

Figure 7-3

S&E degrees awarded to women, by field and degree level: 2011 and 2020



S&E = science and engineering.

**Note(s):**

Data are based on degree-granting, primarily postsecondary institutions eligible to participate in Title IV federal financial aid programs.

**Source(s):**

National Center for Science and Engineering Statistics, special tabulations (2022, Table Builder) of the National Center for Education Statistics, Integrated Postsecondary Education Data System, Completions Survey, provisional release data.

“[I have met] an incredible group of similarly driven young women who are always there to support me with opportunities, resources, and just general affirmations.”

--NCWIT Aspirations in Computing Award Winner

# Communicating throughout the Change Process

Tailor communication strategies as you move through the organizational change process

For example:

- In the **initial stages** of the process, the communication focus might be on building buy-in and conveying the shared vision with the department.
- When **institutionalizing** the changes, the communication might shift to center around impact and data.



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# Stakeholder Activity: Communicate for Change across Audiences

Audiences/Stakeholders	Communication Messages	Communication Medium

# Making Change Happen

NCWIT provides evidence-based resources, strategic planning and action guides, and overall support as you lay the foundation for your vision of change & establish a clear roadmap for how to get there.

 HIGHER ED ALLIANCE

NCWIT Tech Inclusion Journey® for Undergraduate Programs (TIJ-UP)

## ACTION PLANNING TEMPLATE

This template is intended for use after your team has completed the TIJ-UP's Assessment, Consensus Conversations, and in conjunction with the TIJ-UP Action Planning Guide. Refer to the section of the TIJ-UP tool and NCWIT.org for ideas and information on promising practices for participation in computing. In using this template, you will answer these key questions:

- What focus areas do we want to prioritize to tackle?
- What assets do we have in place that we can leverage?
- What is our timeline for specific goals and initiatives?
- Who is responsible for what?
- How will we know if we are successful?

By working through the entire TIJ-UP process—including completing this template—you'll have an actionable strategic plan for broadening participation in your undergraduate computing program.

### Definitions:

**TIJ-UP:** NCWIT's Tech Inclusion Journey® is an online tool designed to help undergraduate degree programs strategically plan for broadening participation by improving their procedures, and support structures for students.

**Focus Area:** NCWIT has identified six core areas, depicted in the System Model for Programs (shown on the next page), as key elements of computing degree programs necessary to support broadening participation in computing.

**Goal:** In the language of strategic planning, goals are ideal states that are written to be well things look like when we get where we want to go?

**Objective:** These are your expected outcomes. The best way to write an objective is to make it Specific, Measurable, Attainable, Relevant, Time-Based. Evaluation metrics will come from that.

**Initiative:** An initiative is a specific project, event, or deliverable that contributes to the achievement of an objective.

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### ACTION PLANNING TEMPLATE

FOCUS AREA	
GOAL	
<i>To build out multiple objectives with several initiatives, simply copy/paste the following rows for each objective. To add Focus Areas, copy/paste the relevant tables.</i>	
OBJECTIVE #1	A measurable outcome needed to reach your ideal state (Specific, Measurable, Attainable, Relevant, Time-Based).
OBJECTIVE #1 INITIATIVES	Specific projects, events, or deliverables that contribute to the achievement of the objective
INITIATIVE 1.1 NAME	
INITIATIVE 1.1 DESCRIPTION	
WHO'S RESPONSIBLE	
TIMELINE	
OUTCOMES & INDICATORS	
OBJECTIVE #2	A measurable outcome needed to reach your ideal state (Specific, Measurable, Attainable, Relevant, Time-Based).
OBJECTIVE #2 INITIATIVES	Specific projects, events, or deliverables that contribute to the achievement of the objective
INITIATIVE 2.1 NAME	
INITIATIVE 2.1 DESCRIPTION	
WHO'S RESPONSIBLE	
TIMELINE	
OUTCOMES & INDICATORS	

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# Supporting Systemic, Sustainable Change Efforts



*Thank*

*You*

**for attending**