

**NSF ADVANCE Partnership: Kindling Inter-university Networks for Diverse (KIND)
Engineering Faculty Advancement in the California State University System**

Experience Report

Foreign-Born/Foreign-Trained Women in Engineering Academia and the Dilemma of Intersectionality

**Panel discussion by
Lalita Oka, Arezoo Sadrinezhad, Feruza Amirkulova, Jessica Bennett, Sue Rosser**

June 3, 2024, 10:30 am – 11:45 am



Foreign-Born/Foreign-Trained Women in Engineering Academia and the Dilemma of Intersectionality

- **Background – 5 min (Sue and Lalita)**
- **Approach – 15 min (Jessica, Feruza, Arezoo, Lalita)**
- **Data and Experience – 10 min (Jessica, Feruza, Arezoo, Lalita)**
- **Group Activity Session - Participant Roundtable**
 - **Guided Group Discussion - 20 min**
 - **Summarize and share – 10 min**
- **Questions and Answers – 15 minutes**

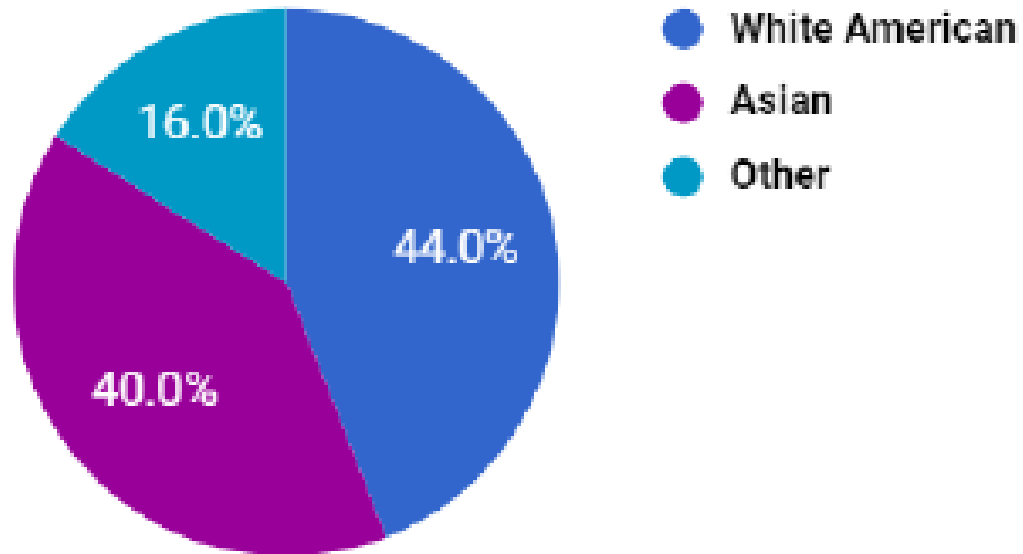
KIND Background



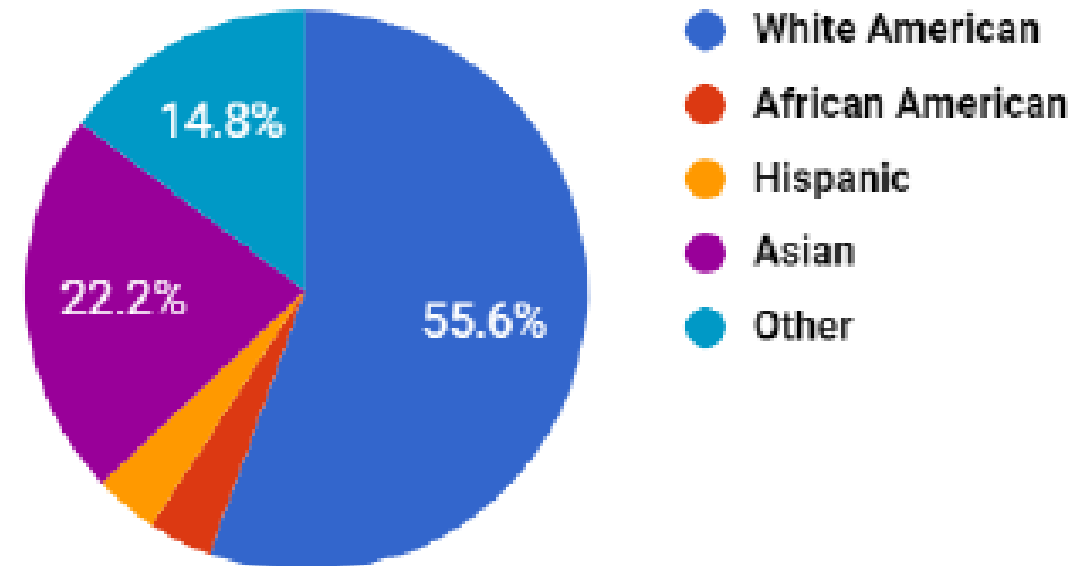
Background

Pilot Study in 2018 (N = 52 from 10 CalState campuses)

Race/Ethnicity of Faculty (Men)



Race/Ethnicity of Faculty (Women)



Ref: Oka et al. 2019

KIND Background



Pilot Study in 2018 (N = 52 from 10 CalState campuses)

Category	All n (%)	Men n (%)	Women n (%)	Tenure- Track n (%)	Tenured n (%)
Teaching Materials	27 (56%)	9 (39%)	18 (72%)	18 (60%)	9 (50%)
Teaching Training	19 (43%)	8 (38%)	11 (48%)	16 (59%)	3 (18%)
Research Equipment	15 (33%)	9 (39%)	6 (27%)	12 (43%)	3 (18%)
Grant Writing	18 (41%)	9 (43%)	9 (39%)	17 (61%)	1 (6%)
Professional Networking	14 (33%)	7 (33%)	7 (33%)	13 (48%)	1 (7%)
Industry Collaboration	12 (29%)	8 (38%)	4 (20%)	10 (40%)	2 (13%)
Professional Development	21 (49%)	10 (48%)	11 (50%)	19 (66%)	2 (14%)
Work Life Balance	16 (35%)	5 (24%)	11 (44%)	10 (34%)	6 (35%)
Overcoming Bias	16 (42%)	7 (44%)	9 (41%)	12 (50%)	4 (29%)

**Satisfaction with
Resources**

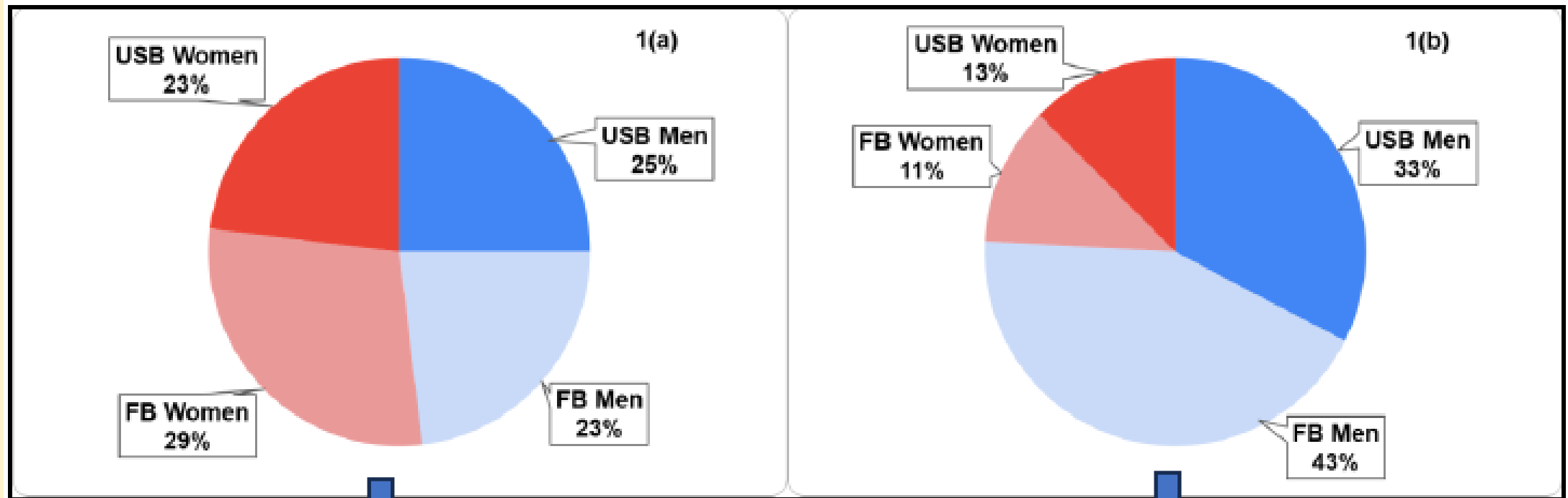
Ref: Oka et al. 2019

Lalita Oka

KIND Background



Pilot Study in 2018 (N = 52 from 10 CalState campuses)



This Study

Ref: Oka et al. 2022

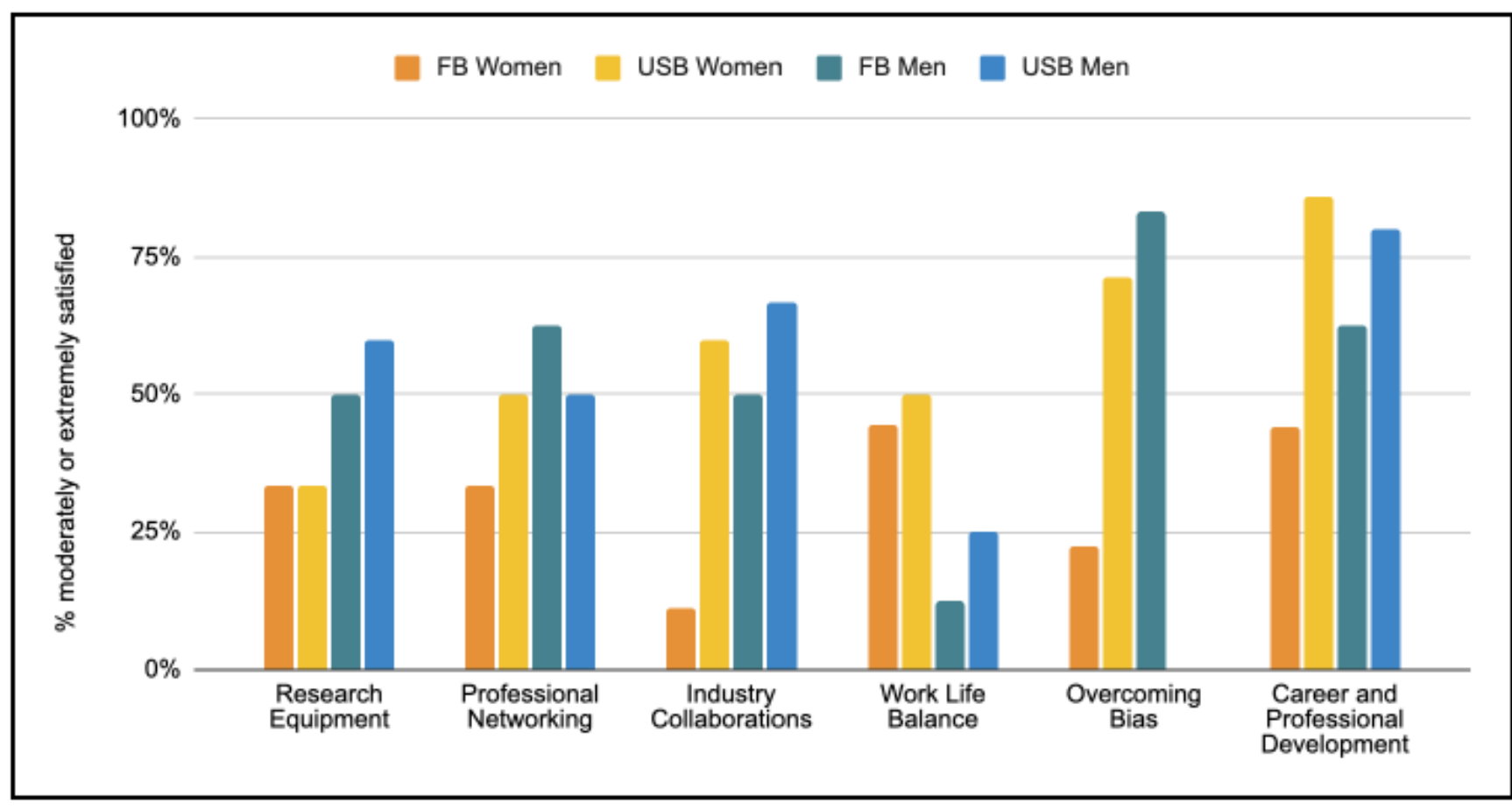
Engineering PhDs - ASEE

Lalita Oka

KIND Background

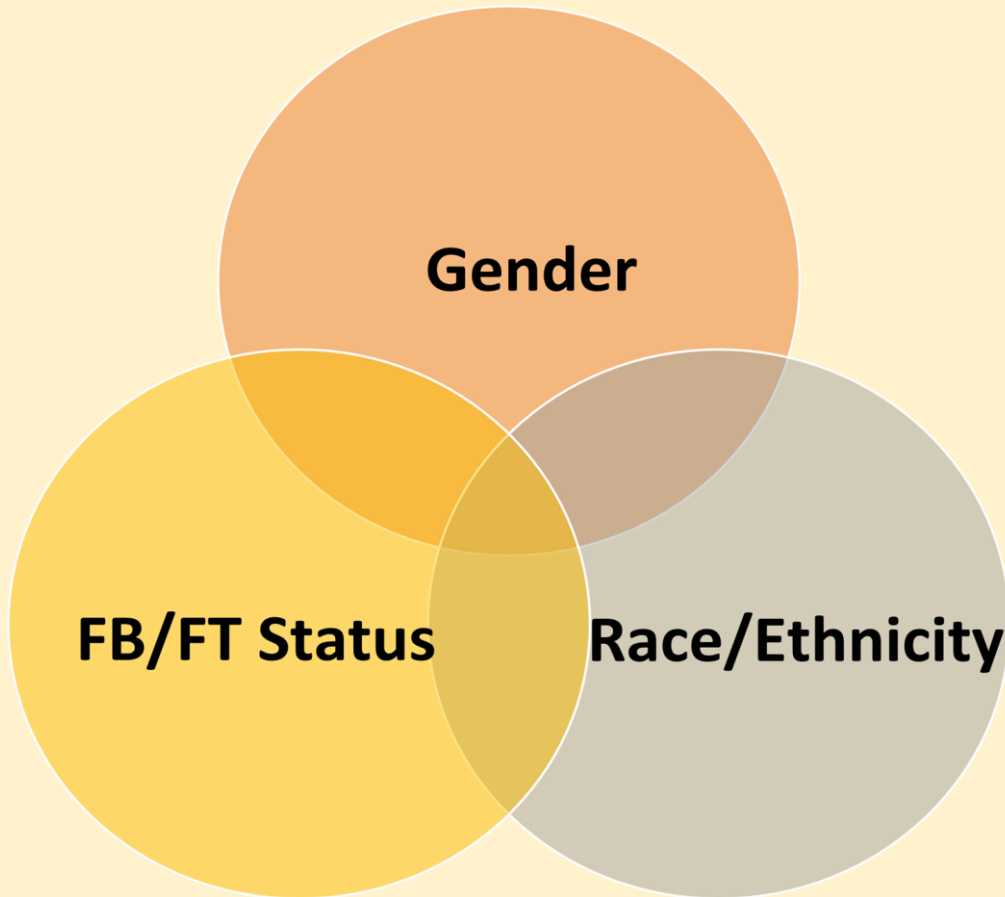


Pilot Study in 2018 (N = 52 from 10 CalState campuses)



Ref: Oka et al. 2022

KIND Background



Research Questions

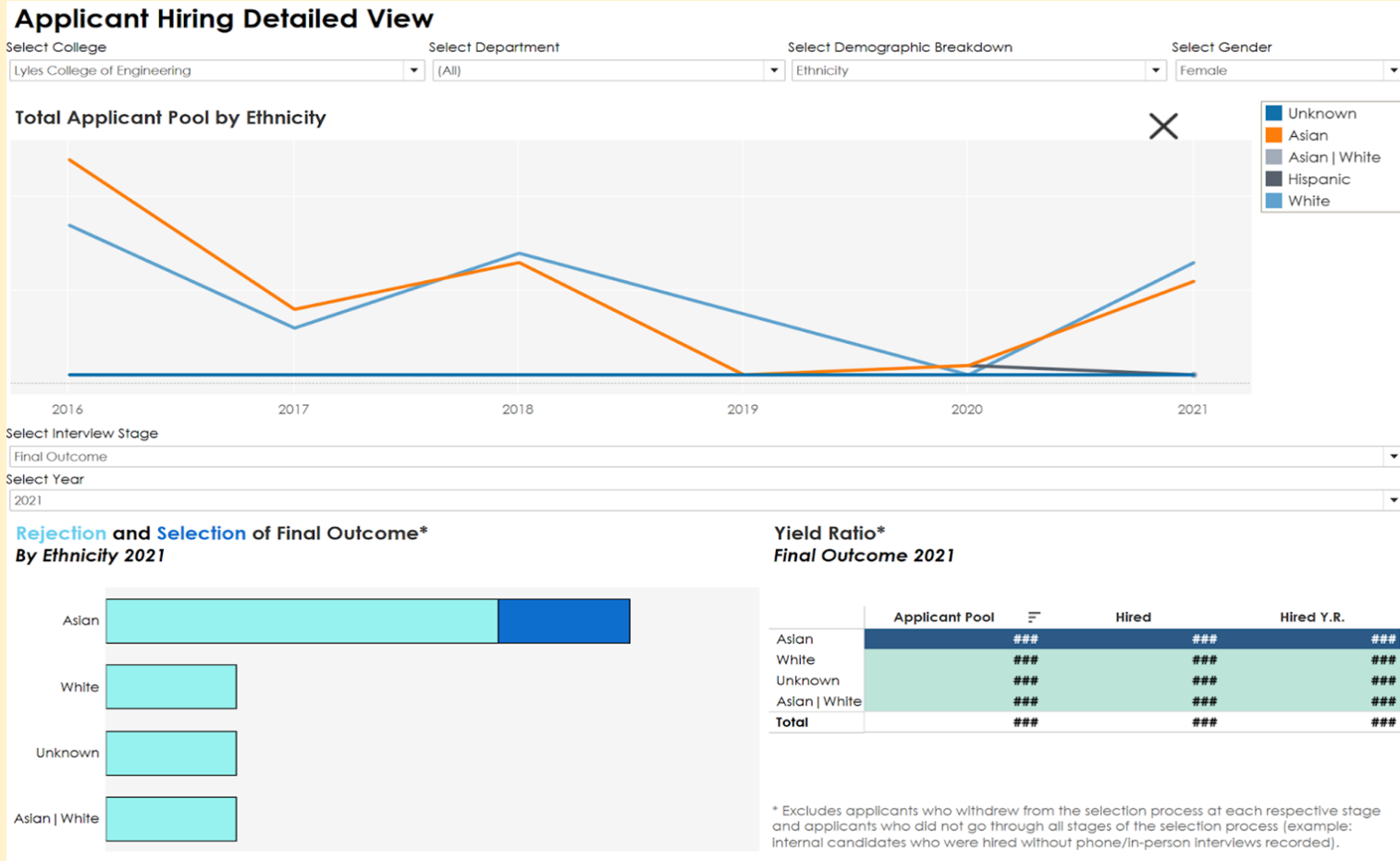
- What are the 'numbers' in the CSU system?
- Impediments – Recruitment and Retention policy review
- Interventions – Research Alliance
- Interventions – Mentoring and Networking

Multi-Pronged Approach for Equity and Inclusion

Dashboards	IChange	Research Alliance	Mentoring and Networking
Recruitment and Hiring Dashboard	Institutional Self Assessment	Formation of Research Alliance Network	Cross-Institutional Speed Mentoring for Current Faculty
Faculty Success and Retention Dashboard	Identifying Priority Areas for Change	Seed Grants for Collaborative Research	Faculty Success Seminars
	Execution of Plans	Creation of Research Directory	Mentoring for Post-Docs, Lecturers and Future Faculty

Evaluations and Lessons Learned

KIND Dashboard Development



Recruitment and Hiring

Retention and Advancement

KIND IChange



Developing a better pool of candidates

Clarity on the distinctiveness of the CSU Faculty role to attract the best RIGHT candidates

Build capacity to support faculty for the CSU mission

Collaborative efforts to strengthen productive conversations and share process and tools across CSU engineering

Leveraging Existing Connections through Deans and Programmatic Partnerships

Coordinated recruitment strategies and collaboration through strengthened partnerships

Ideas from Summer Convening

Enacted Strategy

Jessica Bennett

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IChange Goals



01 IHEs Look Differently

Institutional leaders have assessed and understood the demographic composition of their faculty, students, and staff and developed plans to increase the diversity of their faculty.

As a result of those plans, the diversity of STEM faculty at ICN institutions will increase by 2030.

02 IHEs Act Differently

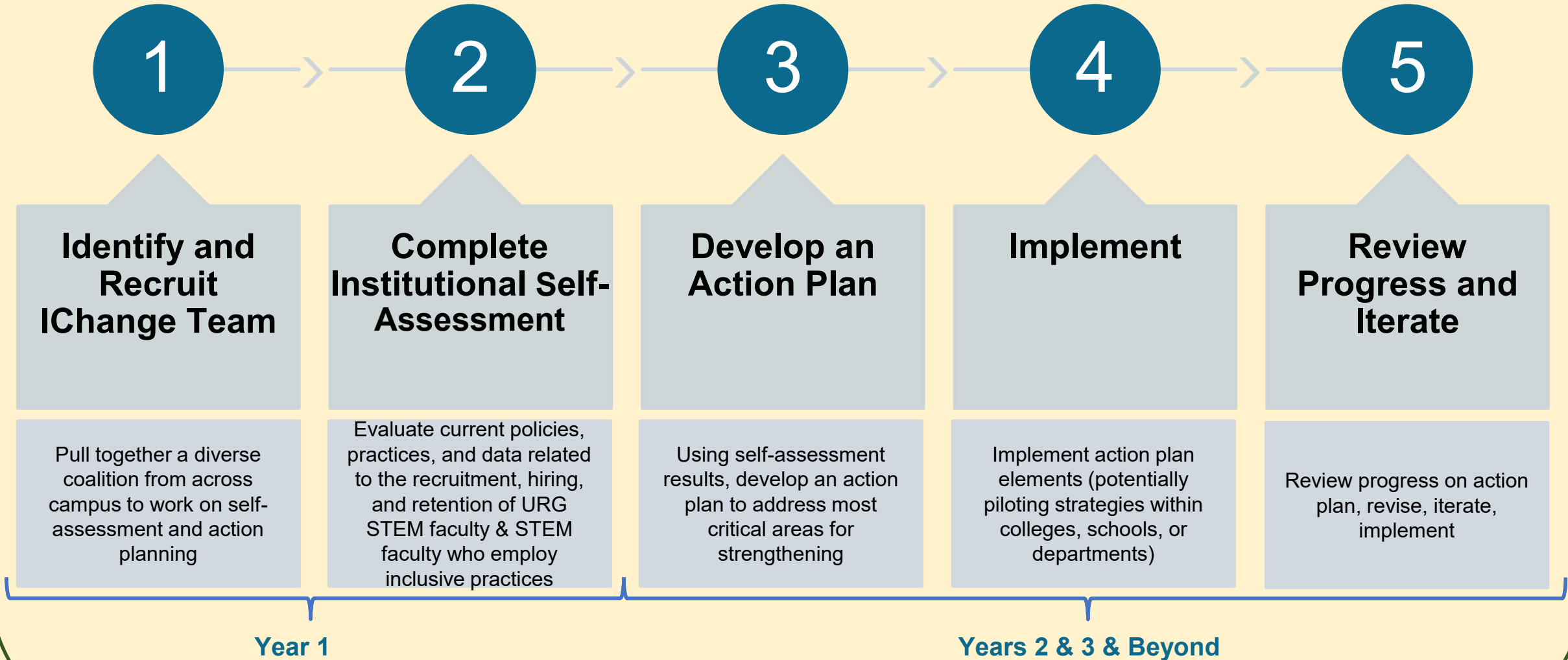
Institutions have examined current and proposed/implemented new or revised equity-oriented policies, practices, and decision-making to: reduce or remove barriers to participation for URG STEM faculty and faculty aspirants through faculty recruitment, hiring, and retention; cultivate, value, and reward inclusivity in all STEM faculty interactions with students and colleagues; and, hire or advance institutional leaders from STEM URG backgrounds.

03 IHEs Feel Different

URG faculty feel welcome, included, supported and valued due to institutional cultures that actively provide support for, appreciate, and reward diversity and inclusivity.

Jessica Bennett

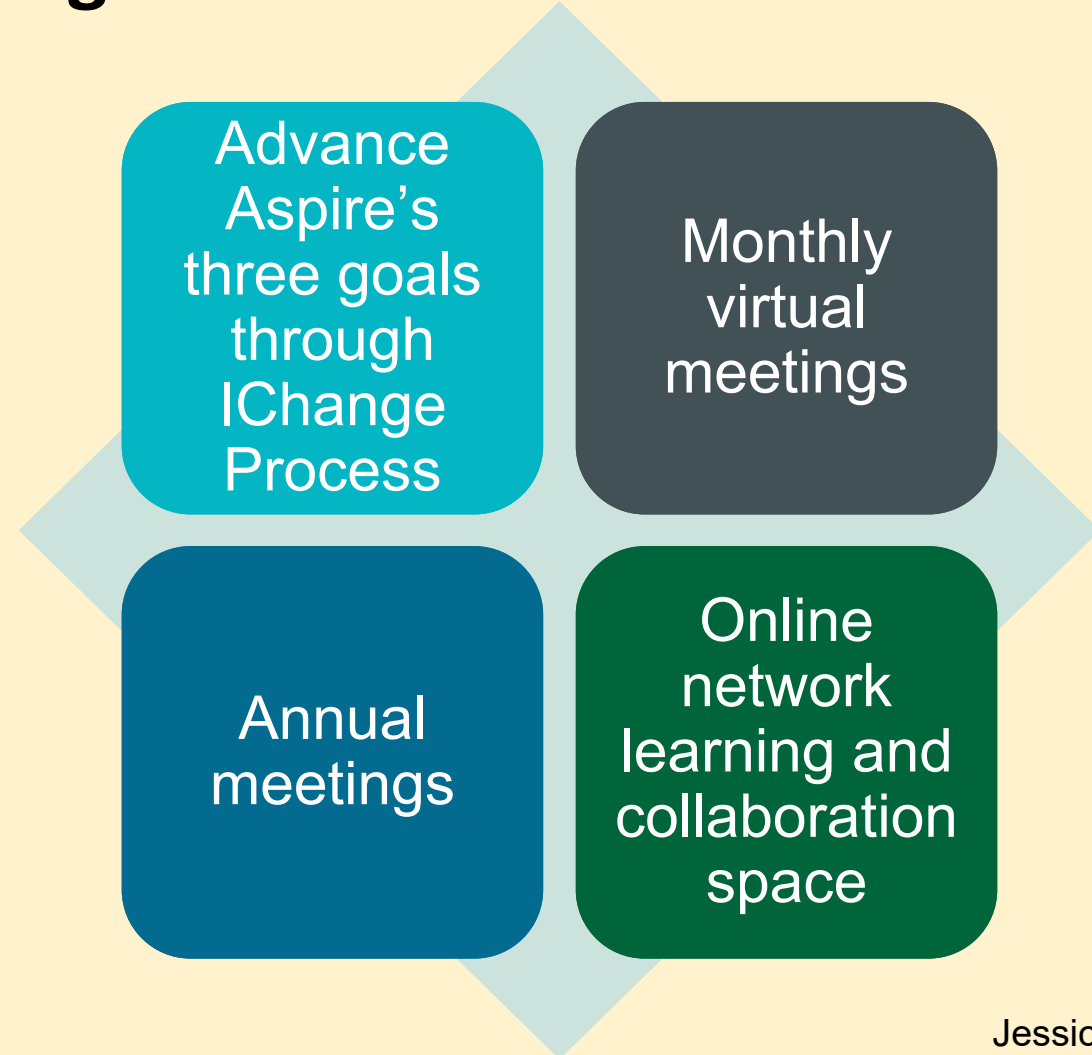
KIND IChange Team Process



Jessica Bennett

KIND IChange Process

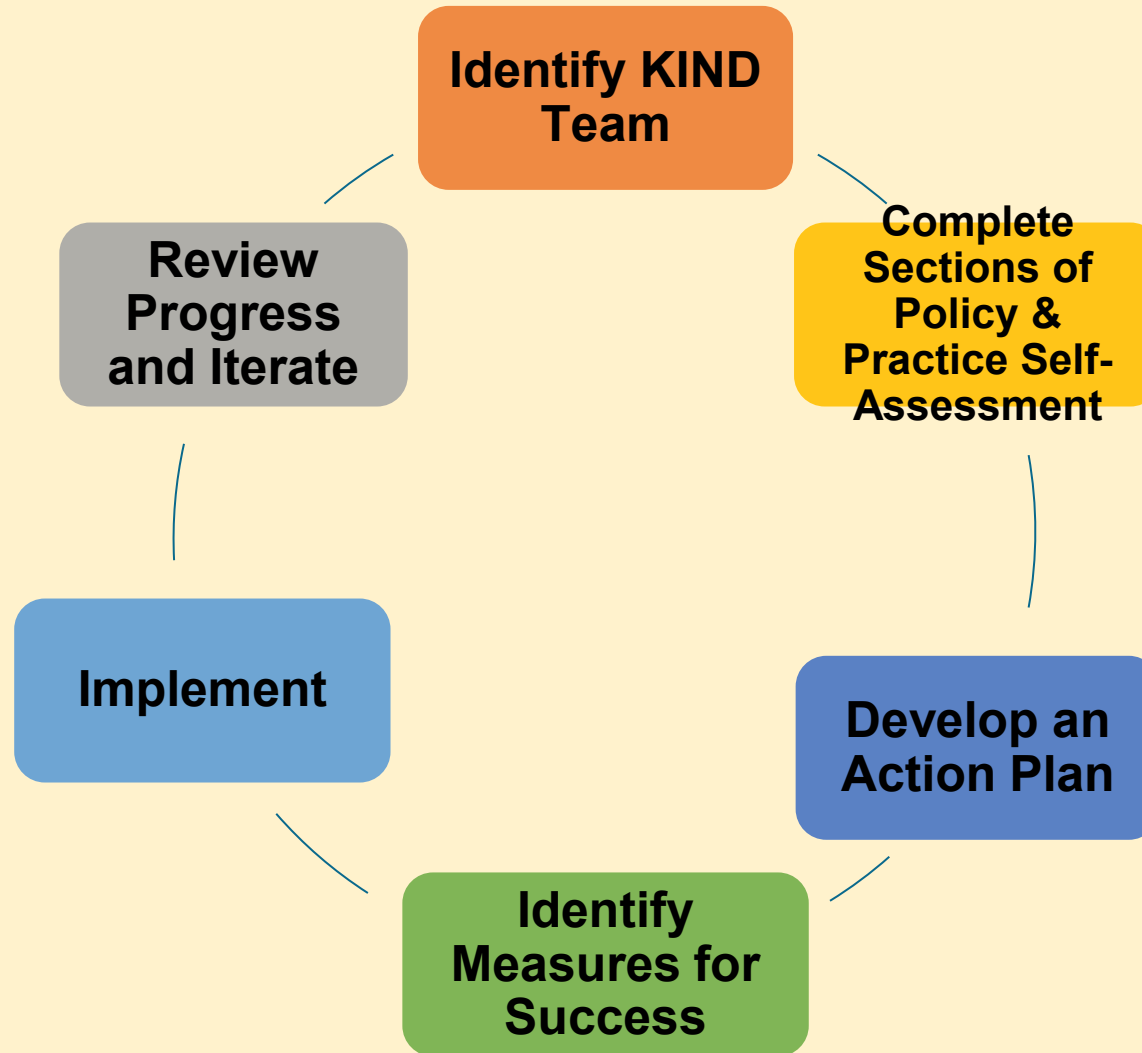
Institution Engagement & Commitments



Jessica Bennett

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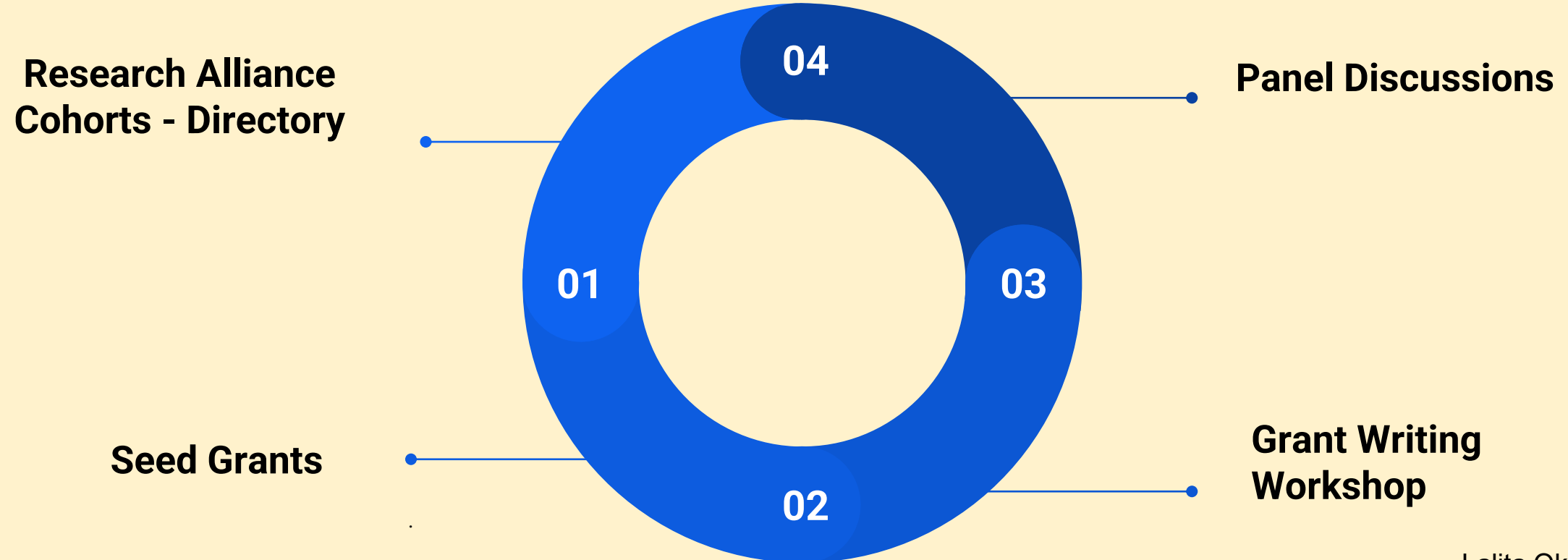
IChange



KIND Research Alliance

Goal

Increase Inter-Institutional Engagement, Participation, and Collaboration

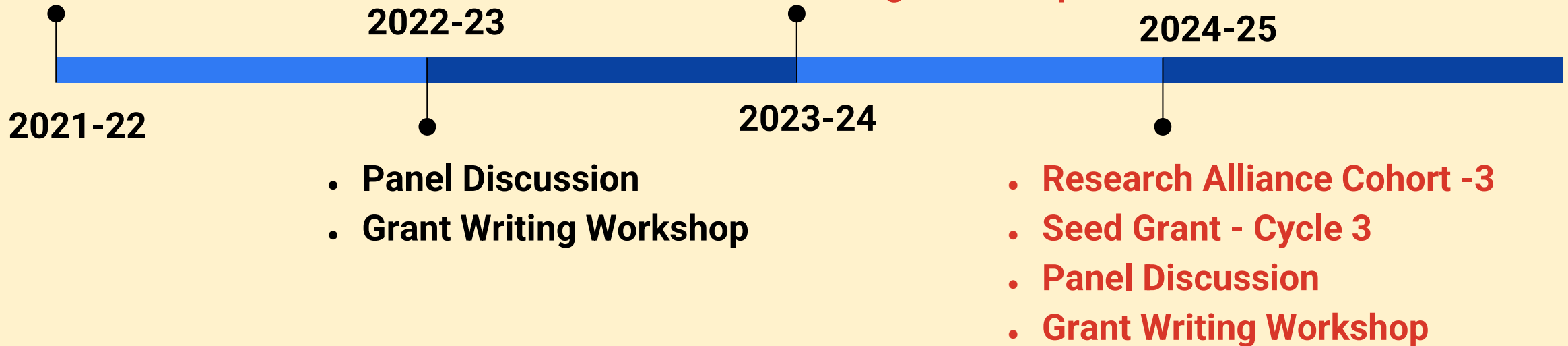


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Research Alliance

- Research Alliance Cohort -1
- Seed Grant - Cycle 1

- Research Alliance Cohort -2
- Seed Grant - Cycle 2
- Panel Discussion
- Grant Writing Workshop





KIND Mentoring Program

- **Establish interinstitutional mentoring for all CSU women engineering faculty**
- **Increase access to women mentors**
- **Improve satisfaction, retention, tenure, and promotion for women, including intersectional subsets**



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Mentoring Program

- Two-hour speed mentoring events three times a year (Spring, Summer, and Fall)
- Events are held virtually via Zoom with breakout rooms (to enable interinstitutional mentoring)
- A small group setting is adopted to facilitate networking (3 to 7 people per breakout room)
- Mentees rotate between breakout rooms on topics of their choice (2 to 3 topics per mentoring event)
- Topics pertaining to career growth & professional development
- Fall and Spring events are open to tenure track/tenured engineering faculty in the CSU system.
- Summer events are open to CSU tenure track/tenured engineering faculty, lecturers, PhD students, and postdocs



KIND Mentoring Program - Activities

- a. Speed mentoring events: So far, 7 events are organized.
- b. Faculty Success seminar: So far, 2 seminars are organized.

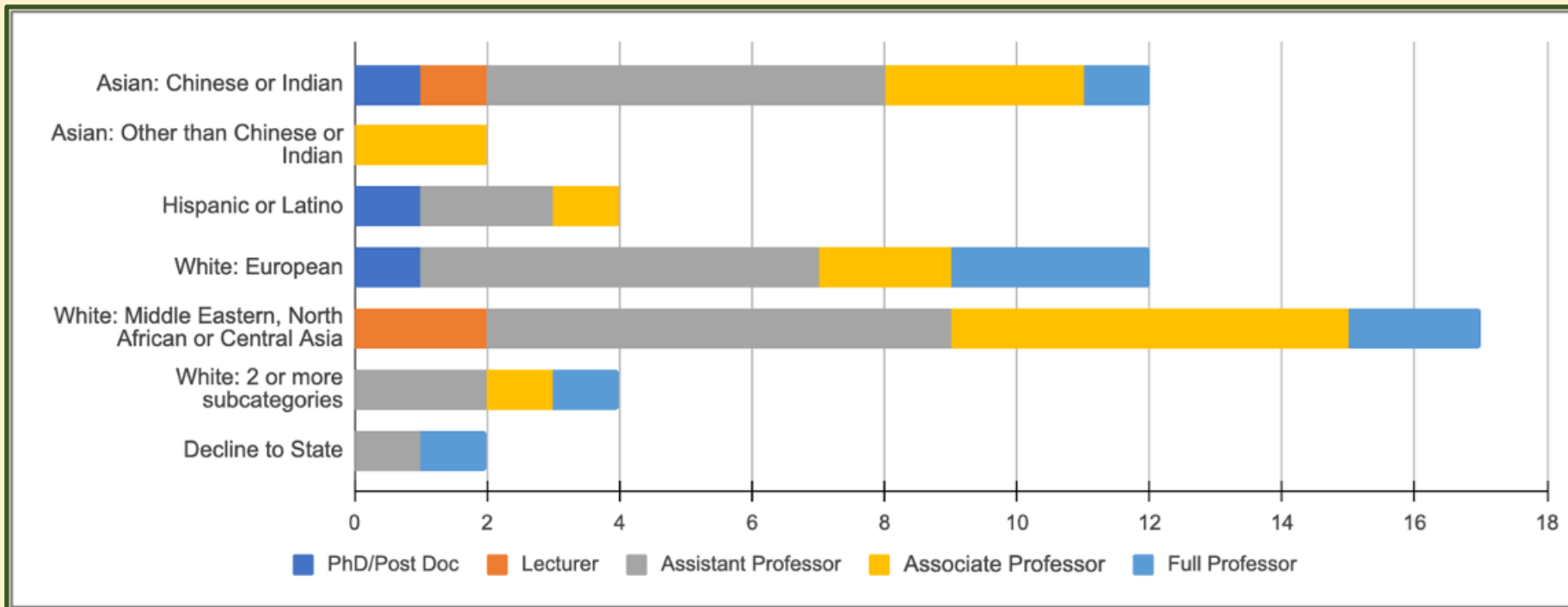
Publication:

“The Power of Cross-Institutional “Speed” Mentoring and Networking Program in Advancement of Women, URM, and Foreign Born/Trained Engineering Faculty.” In 2023 ASEE Annual Conference & Exposition.



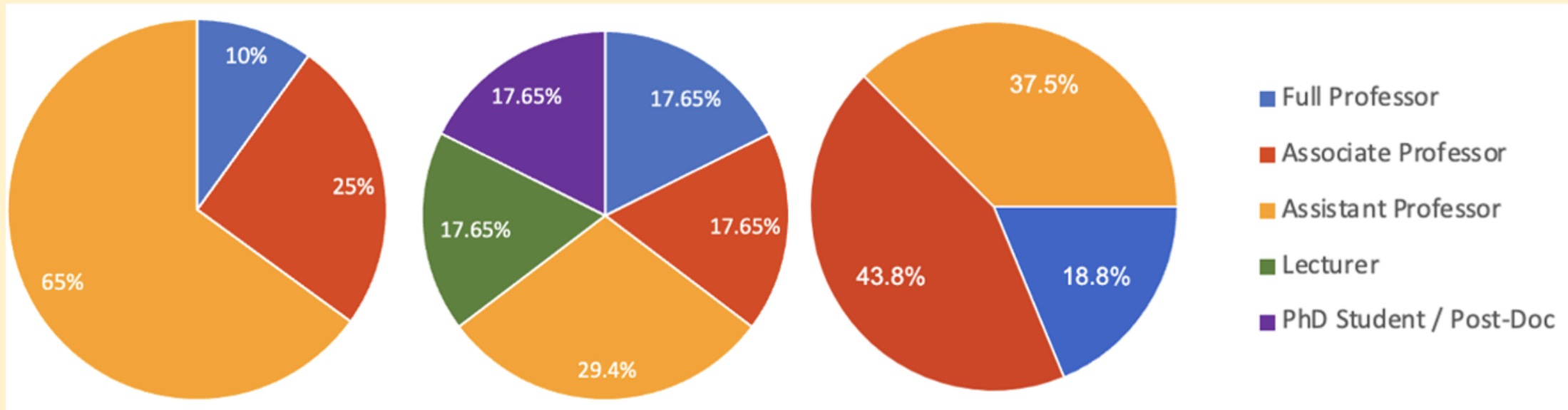
Mentoring Program

Racial distribution and rank of the participating faculty



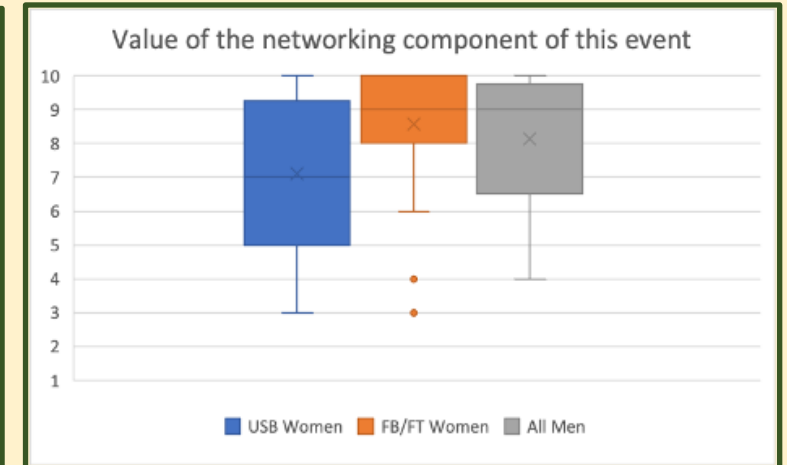
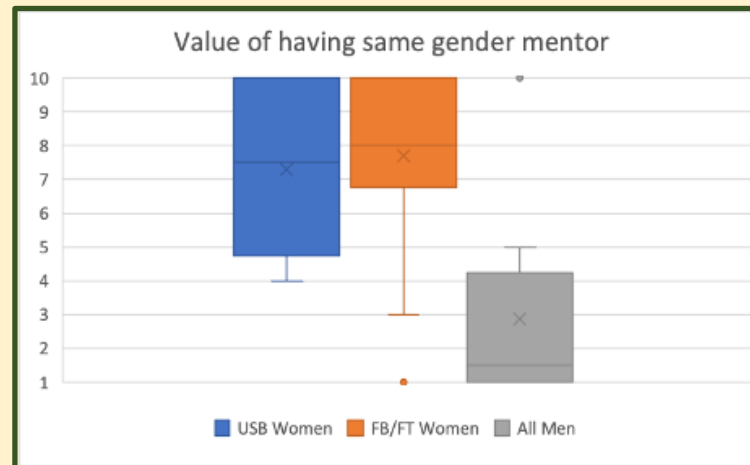
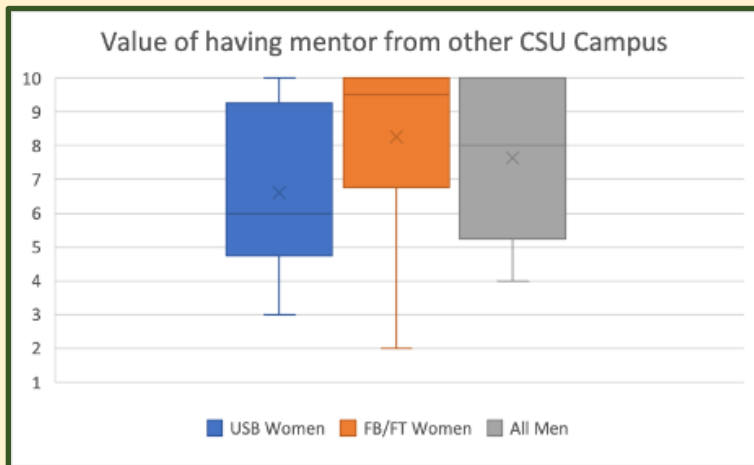


Rank of the participating faculty - Mentee responses on access to mentors and networking





CSU Faculty responses regarding perceived value



KIND Program Evaluations



Activity	Intermediate Outcome	End of Project Outcome	Timing & Evaluation Methods
Secured Dashboard of faculty demographic data	Increase understanding of engineering faculty demographics through access to hitherto unavailable data. Output: Develop dashboard. Output: Campus DEI committees review data and target policies to be changed.	Dashboard will be used by CSU campuses beyond 4 partnering campuses. Dashboard will lead to changes/improvements in hiring policies. Dashboard will be used by Chancellor's Office and industry partners.	Monthly debriefings with leadership team. Dashboard created by end of first semester, with increasing use as project progresses. Campus DEI committees surveyed each semester; annual focus groups. Annual interviews of deans, CO faculty data representative.
Collaborations via new Research Alliance group partnerships	Collaboration among CSU campuses increase via virtual events. Output: Research collaborations increase w/ faculty across CSU. Output: Collaborations increase w/ industrial members.	Collaborations lead to inter-institutional grant applications that result in publication productivity and industrial collaboration, especially for women, URM, FB/FT women.	Numbers of inter-institutional collaborations and grant applications increase. Interviews with selected faculty/deans/industrial stakeholders validate quality of research collaborations.
Inter-institutional and inter-rank networking and mentoring activities	Women, URM women, FB/FT women faculty participate in inter-institutional and inter-rank networking and mentoring. Output: Networking and Mentoring groups established and functioning.	Women, especially URM, FB/FT women, express increased job satisfaction. Women, especially URM, FB/FT women, are retained in higher numbers and percentages.	Numbers of inter-rank and inter-institutional mentoring pairs increase over time. Interviews validate that the mentoring and peer-support networks improve professional knowledge and job satisfaction.
ASPIRE IChange cohort of CSU engineering colleges	Up to 15 engineering colleges participate in the cohort. Output: Cohort established/functioning.	Cohort completes self-assessment (Y1), drafts Action Plans (Y2), and implements (Y3).	Semesterly focus group with cohort participants validates progress toward completing three-stage IChange process.

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Program Evaluations



Findings from Interviews of Leaders

Mentoring Session Leaders

- In general, all felt that the sessions went well, with most participants open and engaged
- Several have had follow-up with one or more session participants
- They suggest that KIND Project Leaders share best topics and practices with mentor leaders
- They believe that CO should take this over, with Provosts and Presidents playing key roles for institutionalization

Research Alliance Team Leaders

- All felt that the team and project were going well, and benefit from the collaboration and inter-disciplinary nature of expertise
- Typical team has 2 faculty from different disciplines and 3 students
- Support and availability of Lalita has been crucial to success
- Time, due to heavy teaching load, and training of UG students for project work present challenges.

Sue Rosser

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Program Evaluations



Findings from Interviews with EAB Members

- Members vary considerably in their involvement with KIND in terms of direct participation in KIND committees/activities, number of EAB meetings attended, and overall knowledge of the KIND project.
- Members have been most directly involved with IChange/Aspire committees and dashboard.
- Members see the dashboard as having great potential and impact, but also as presenting the greatest challenge to project success due to issues of confidentiality and data sharing.
- Members would like EAB meetings to focus more on advice-seeking and discussion, and to include action items, as well as reports from all campuses. Briefs should be provided in advance of meetings.



Participant Group Discussion

Exercise 1: How much do you know about your institution?

Exercise 2: What are practices for hiring, retention, and advancements

Exercise 3: What resources do you have?

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Advancement Program



Questions?