

Building Mutually Reinforcing Partnerships with Industry



Ann Gates

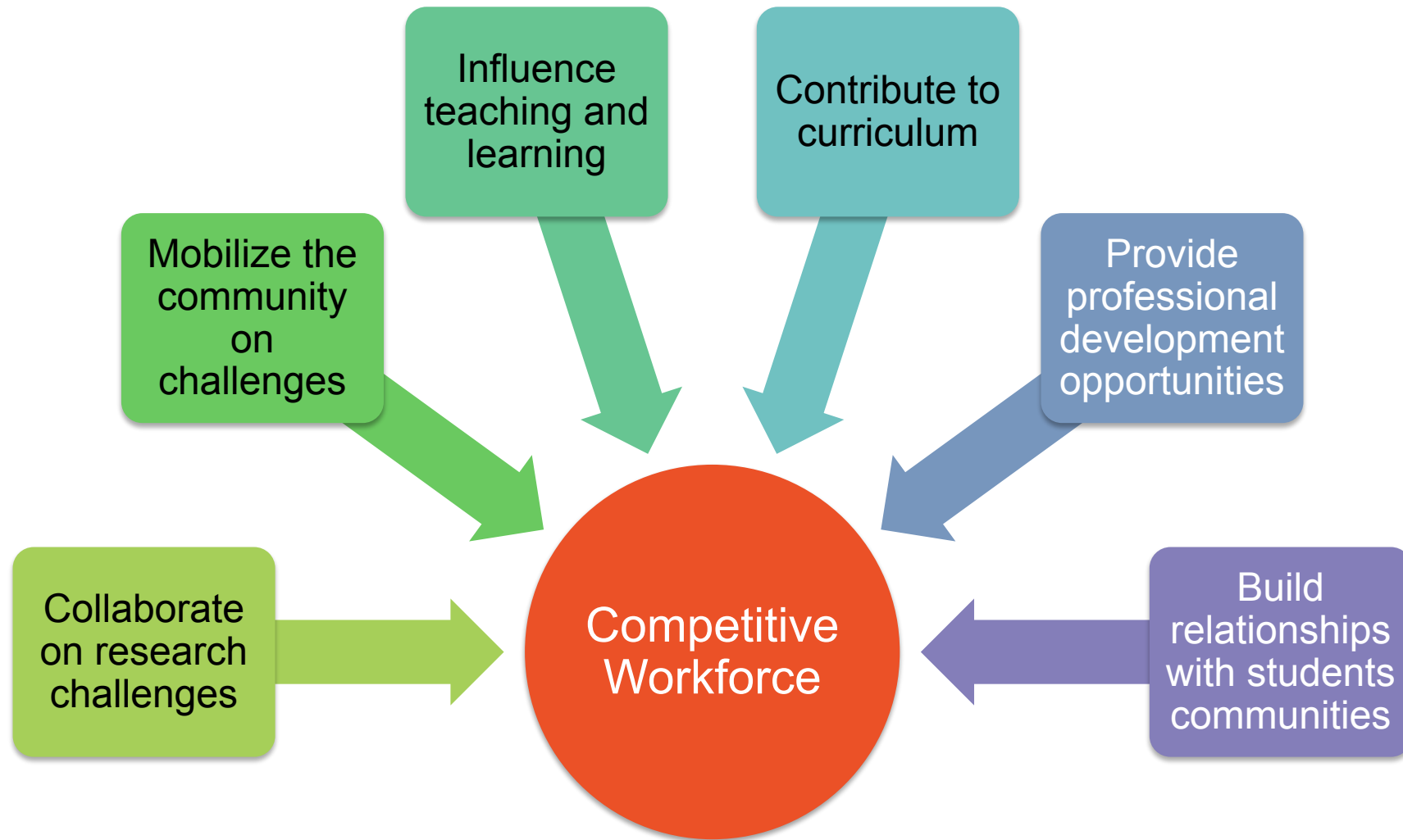
University of Texas at
El Paso



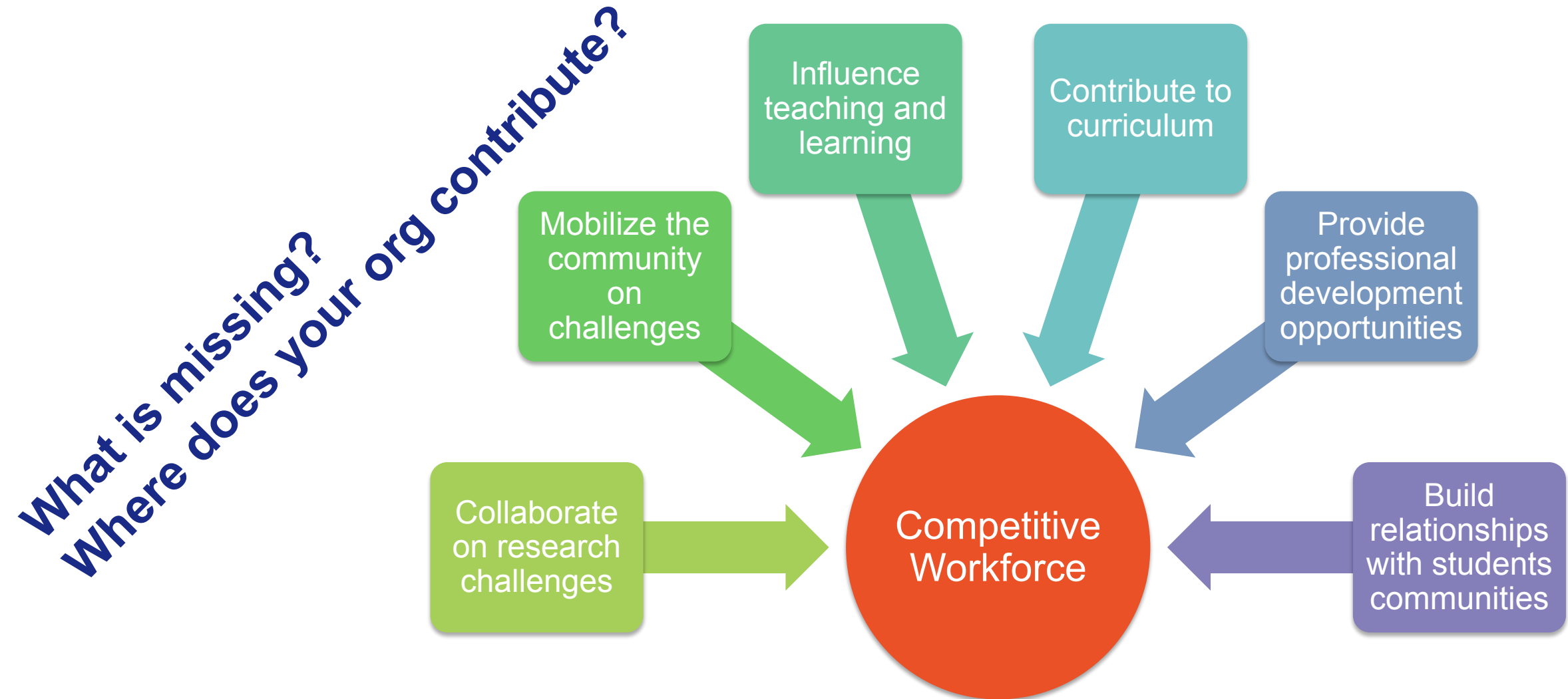
Enrico Pontelli

New Mexico State
University

Types of Industry-Academic Partnerships



Types of Industry-Academic Partnerships



The ACT Report

Action to Catalyze Tech: A Paradigm Shift for DEI



THE CATALYZE TECH WORKING GROUP

2024
CRA CONFERENCE

Criticality of BPC

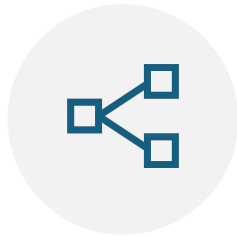
Key to our nation's ability to innovate and compete in a rapidly changing tech-center environment is involvement of individuals with different perspectives, experiences, and disciplinary knowledge.

Actions

- Support collective action at industry levels and across public and private sectors
- Consider systemic, multi-pronged change efforts
- Transform pathways into Tech for under-represented talent

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Components of Successful Partnerships



ENGAGE
PARTNERS:
SHARED
PURPOSE &
MUTUALLY
BENEFICIAL
EFFORTS



DEFINE
COMMUNICATION
MECHANISMS TO
KEEP EVERYONE
INFORMED



STRUCTURE
ACCOUNTABILITY
BY DEFINING
DELIVERABLES
AND MEASURES
OF SUCCESS



BUILD TRUST BY
CREATING
GENUINE
PARTNERSHIPS



**Lessons Learned:
Computing Alliance of Hispanic-Serving
Institutions
(CAHSI)**

The 5 Conditions of Collective Impact

- 1**
Common Agenda
 - **Common understanding** of the problem
 - **Shared vision** for change
- 2**
Shared Measurement
 - **Collecting data** and **measuring results**
 - Focus on **performance management**
 - **Shared accountability**
- 3**
Mutually Reinforcing Activities
 - **Differentiated approaches**
 - **Coordination** through joint plan of action
- 4**
Continuous Communication
 - **Consistent** and **open communication**
 - Focus on **building trust**
- 5**
Backbone Support
 - Separate organization(s) with **staff**
 - Resources and skills to **convene** and **coordinate** participating organizations

COLLABORATION VS. COLLECTIVE IMPACT

COLLABORATION	COLLECTIVE IMPACT
Convene around programs and initiatives	Work together to move outcomes
Prove	Improve
Addition to what you do	What you do
Advocate for ideas	Advocate for what works

Industry-Academia Partnerships Revisited: CAHSI

CRACONFERENCE

Google Tech Exchange
AI4All

Google Faculty in Residence
Googler in Residence
Google Tech Exchange

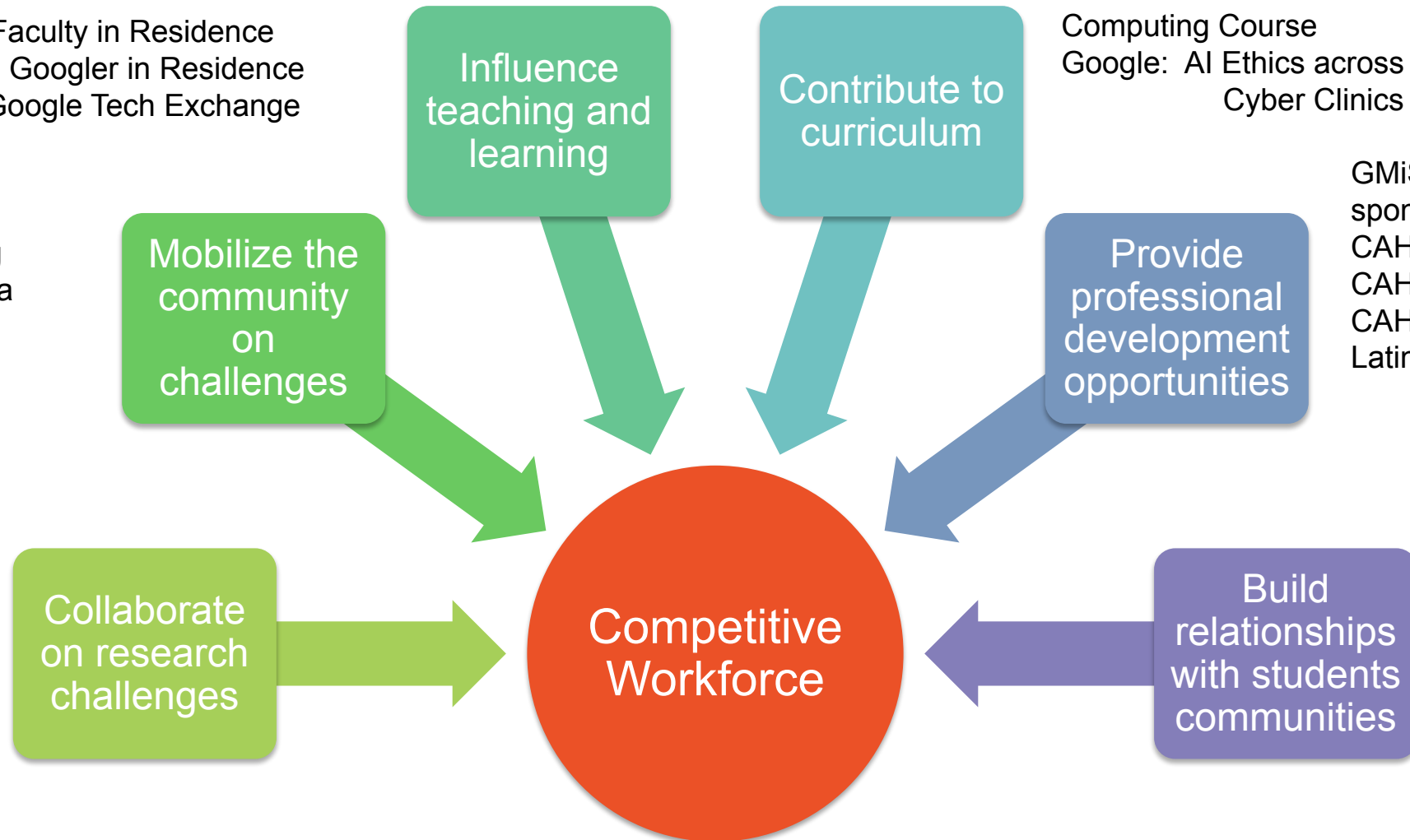
CAHSI-Google Problem Solving Course
CAHSI-Visa Financial Literacy &
Computing Course
Google: AI Ethics across the Curriculum
Cyber Clinics

GMIS industry-
sponsored workshops:
CAHSI Hackathon
CAHSI AI session
CAHSI Data Analytics
Latin@s in Computing

Microsoft-CAHSI
BP AI Convening
Chips for America

Google-CAHSI
IRP Program
Visa—Research
Fellows

CAHSI Advocates
Internships





Exemplar: Google-CAHSI Efforts to Build Research Capacity

CAHSI - Google Research Program

Collaboration Structure

Research Inclusion

Working together to support aspiring researchers from historically marginalized groups in computing research career pathways

Research Collaboration

Deeper research interactions through collaborative projects in forward looking areas of mutual interest

Platform Support

Google Cloud Platform credits and training to help provide faculty & students from HSIs with resources to conduct their research

Local Research Experiences for Undergraduates

STUDENTS

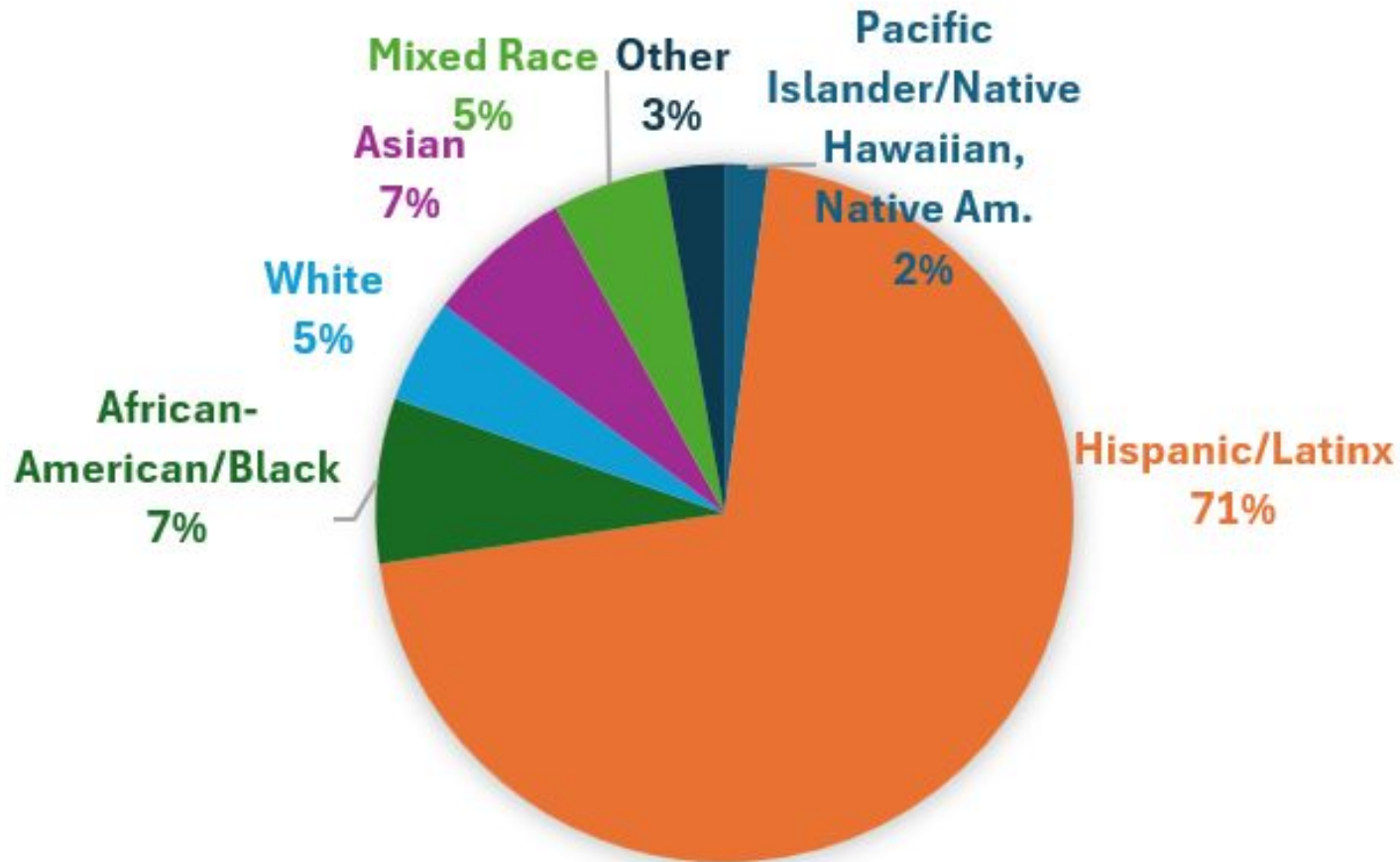
Matched with faculty on shared research
Co-develop research plan with mentor
Weekly journal entries on research progress
Professional development and growth
Poster review and submissions to GMIS

FACULTY MENTOR

Prof. Development on ARG model
Co-develop research plan with mentee
Shared experiences across cohort
Constructive critique and refinement
Application of ARG practices
Identification of potential recruits



Initial Results



Race/ethnicity of Local REU participants
S22-S24

105

Mentors from

35

Different institutions

74%

Applied or Intend to

Apply Graduate

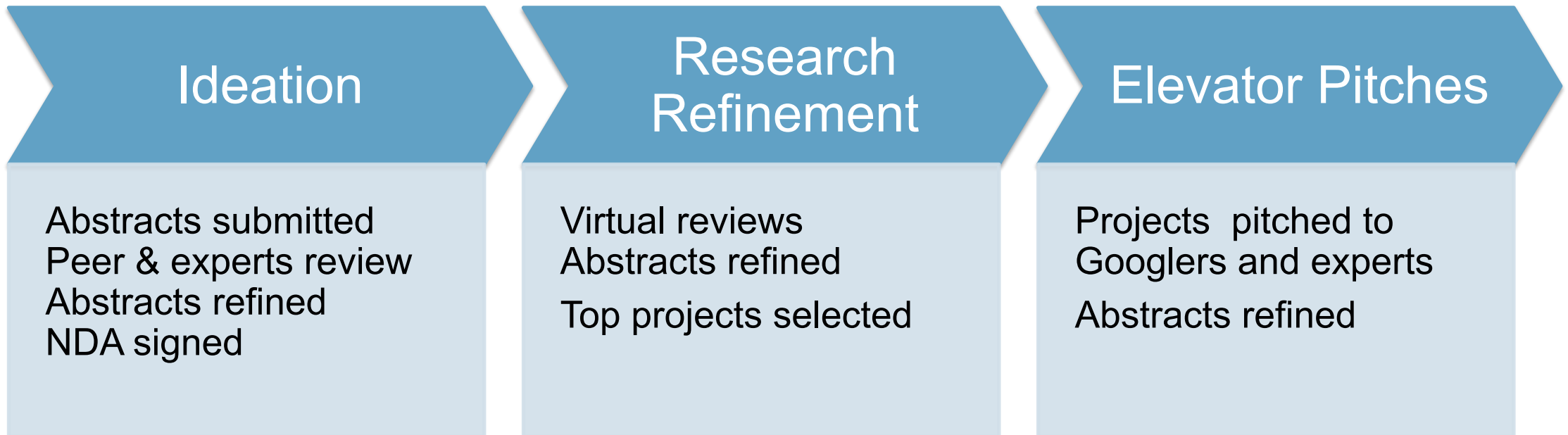
School

Google-CAHSI Institutional Research Program

Brings together academics and Googlers to strengthen research collaborations and build research capacity at HSIs while also cultivating the talent of Hispanic/Latino(a) students at the undergraduate and graduate-level across CAHSI institutions.

CAHSI-Google IRP: The Process

Fund 10 projects per year that include faculty and students from a doctoral-granting institution collaborating with a non-doctoral granting institution.



CAHSI-Google IRP: The Selection

Proposal Review

30 proposals selected to submit a proposal + Collaboration Plan

Review panels established

Blue Ribbon panel makes final recommendations

Final Selection

15 proposals recommended for reviewed by Google researchers

10 proposals funded

Requirements

10 one-year projects funded in 23-24

15 one-year projects and extended projects funded in 24-45

Mid-term and final project reports required

2023-2024 Funding Results



Home Computing Program Level		Student Level		Ethnicity		Gender	
Doctoral	11	Undergraduate	17	Hispanic or Latinx	21	Male	20
Non-Doctoral	15	Master's	5	Hispanic or Latinx, White	3	Female	6
		Doctoral	4	Hispanic or Latinx, Asian	2		
<i>TOTAL</i>	26	<i>TOTAL</i>	26	<i>TOTAL</i>	26	<i>TOTAL</i>	26

“ Together, we share a belief that computer science research has broad implications for billions of people – which is why it’s so important that researchers doing this work represent the experiences, perspectives and concerns of all people. This commitment has deepened our collaboration with CAHSI by building research capacity for faculty and Hispanic students, while fostering research collaborations between CAHSI faculty and researchers at Google. ”

Dr. Sepi Hejazi Moghadam

Global Programs Lead, Research Solutions & University Relations | Google.org

Microsoft- CAHSI Broadening Participation in AI Convening

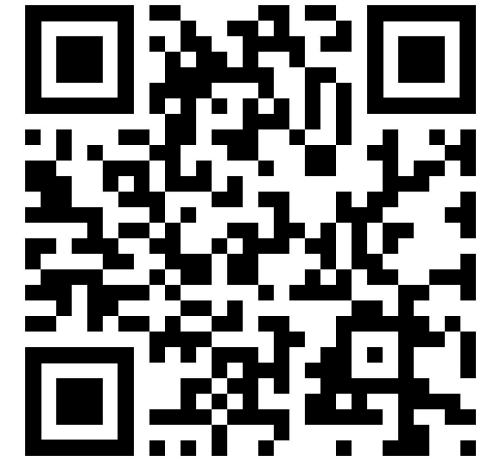


Focus of the Convening was on:

- democratizing access to the cyberinfrastructure, education, and resources needed to conduct AI research;
- providing on-ramps to broaden involvement of diverse researchers and underserved communities in AI research, applications, and education; and
- elevating challenges and assets that are unique to communities served by CAHSI and can be addressed or leveraged through AI.

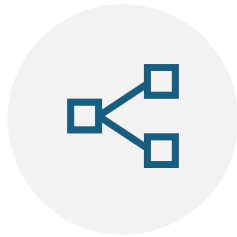
Participants came from:

- industry
- non-profits
- academia
- national labs
- NSF



<https://bit.ly/CAHSI-AI-Report>

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Question

What challenges do you face in developing partnerships that are mutually reinforcing?



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