



# Semiconductor Workforce Development Collaborative Kick-off Meeting

Wednesday, September 18<sup>th</sup>

9:00 AM – 10:30 AM



# Welcome

- The breakout sessions will not be recorded
- Slides will be shared after the meeting
- Invite you to join us on camera
- Mute your microphone when not speaking
- Use the chat feature to ask questions

# Agenda

**Welcome**  
**SEMI Foundation team introductions**  
**Foundation and industry overview**  
**Breakout room one**  
**Discussion**  
**Breakout room two**  
**Discussion**  
**Closing**





# Chips enable the modern world



# About SEMI – Over 3,100 member companies

## Establishing common language

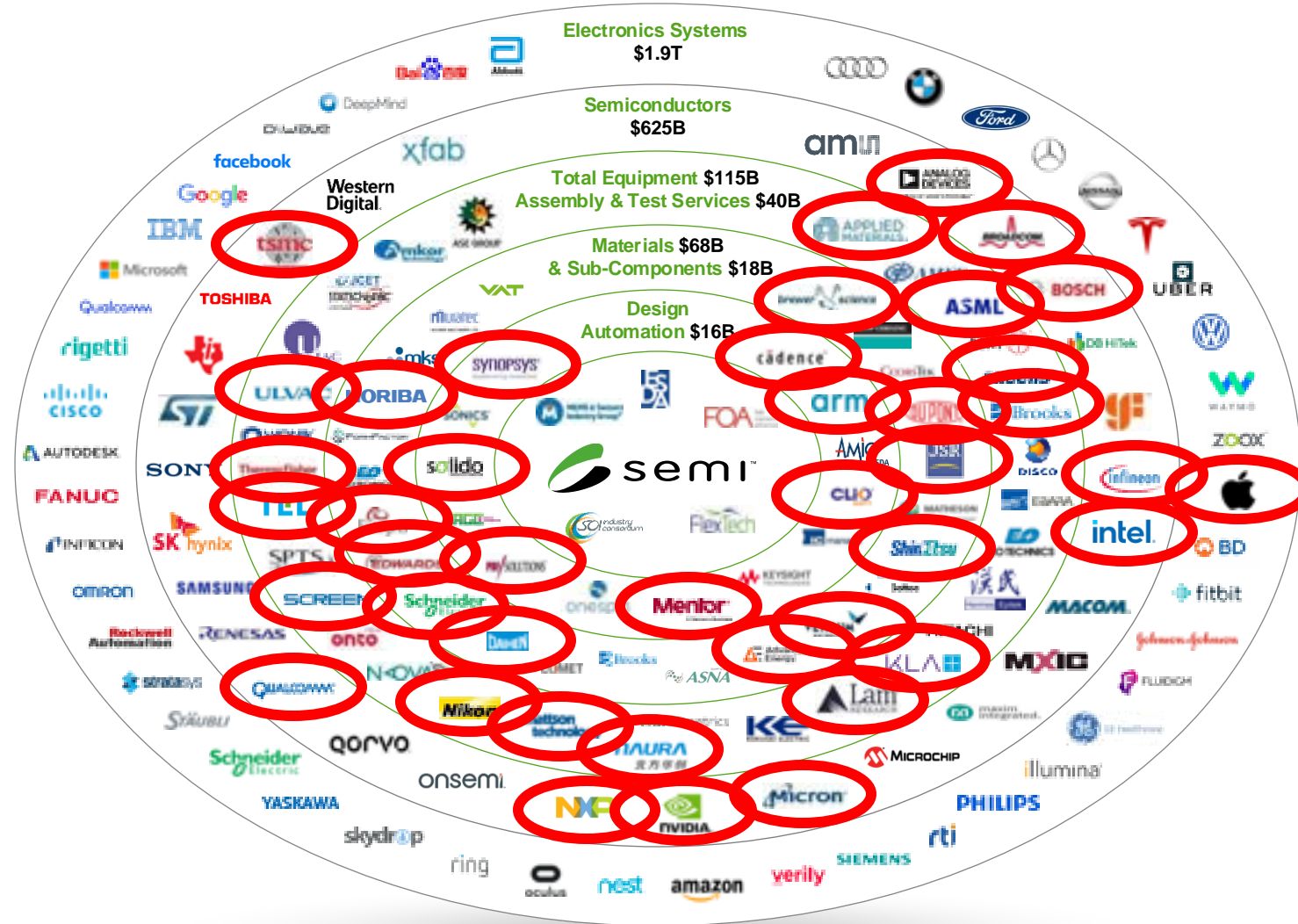
### Microelectronics

Electronics at a small scale (from chips to sensors to LEDs)

### Semiconductor

Term for specific material used in many microelectronics, but now often used as a shortcut for chips/microelectronics

Workforce needs exist across various industry sectors in California (equipment, subcomponent, design, etc.)



# Meet the Team



**Omar Baza**

Sr. Specialist, Workforce  
Training & Operations



**Berton Mahardja**

Director, Global  
Education Initiatives



**Anissa Hamdon-Morison**

Manager, Curriculum  
Developer and Training



**Purvi Rami**

Program Manager,  
Registered  
Apprenticeships



**Robert Sanger**

Program Manager,  
Workforce Training &  
Operations

# Global Talent Shortage: nearing 1 mil by 2030

- Worldwide, an estimated almost 1,000,000 positions will need to be filled by 2030
- Significant talent shortages already exist (impacts of off-shoring and re-shoring)
- Production, Equipment, Subcomponent, R&D, and engineering jobs in California



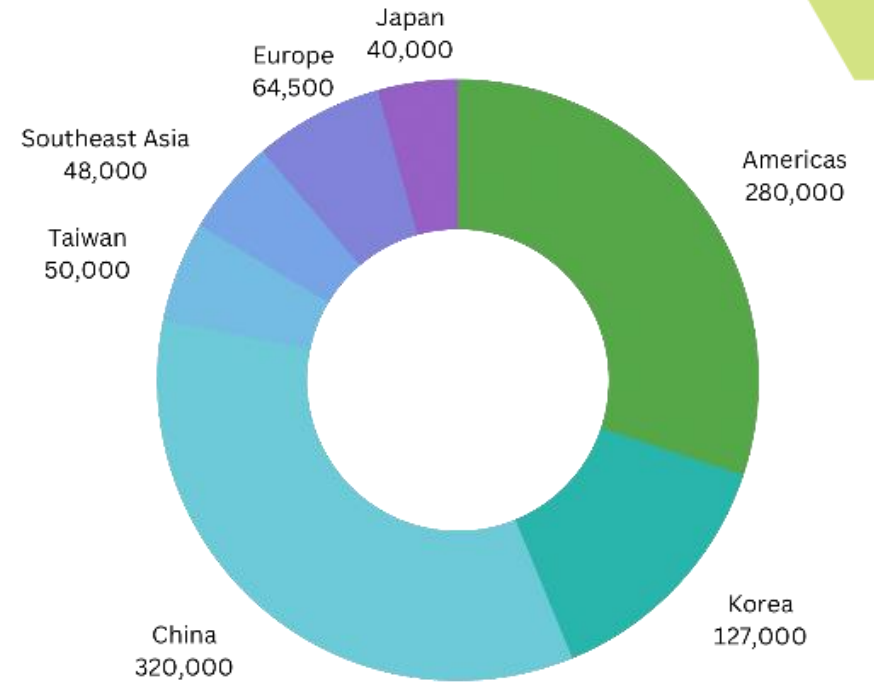
**\$10.2B**

in annual exports<sup>1</sup>

**#1**

in the U.S. with **63,251 semiconductor jobs**<sup>1</sup>

in the U.S. with **627 semiconductor manufacturing establishments**<sup>1</sup>





# Industry Workforce Development Challenges

- Invisible industry
- Image of industry
- Aging infrastructure
- Greying workforce
- Aging faculty & curriculum
- Rising need for STEM talent
- Talent retention
- Lack of alternate training and hiring pathways
- Lack of diversity
- Rapid growth due to CHIPS & Science Act.





# SEMI's Holistic Workforce Development & DEIB Plan

## CHIPS Application Support

Providing application and programmatic support to members

## SEMI K-12 Resources

Creates industry-aligned resources to help educators introduce educational and career paths to middle and high school students

## Industry Image and Awareness Campaign

Attracts talent with CAEL career exploration site and Roadtrip Nation documentary

## ASA Partnership, Mentoring & University Connections

Creates formal partnerships with universities to provide industry access and collaboration opportunities

## Apprenticeship Initiatives - SCAN

Collaborating with federal & state agencies to provide earn-and-learn models that fulfill entry-level workforce needs



Close collaboration with member companies from ideation, prototyping, implementation, and expansion

Career & Beyond

## High Tech U Kits and Curriculum

Provides experiential learning that engages K-12 students and promotes STEM careers

## Community College Program

Aligns industry workforce needs with community college program offerings

## Global Workforce Development Pavilions

Connects employers and talent at all SEMICONs

## SEMI / IEEE Joint Certification Program

Provides access to training to ensure competency

## VetWorks

Supports pathways to recruitment, hiring and retention

SEMI University Online Learning Platform Launched in February 2023

*Excite and inspire early...  
...3<sup>rd</sup> grade onward*



*Attract and motivate ...  
K12-college*



*Pathways to professional careers*



*Continuous learning*

Widening the talent pipeline

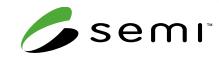
Strengthen the foundation  
(7-15 years)

Mid-term  
(2-6 years)

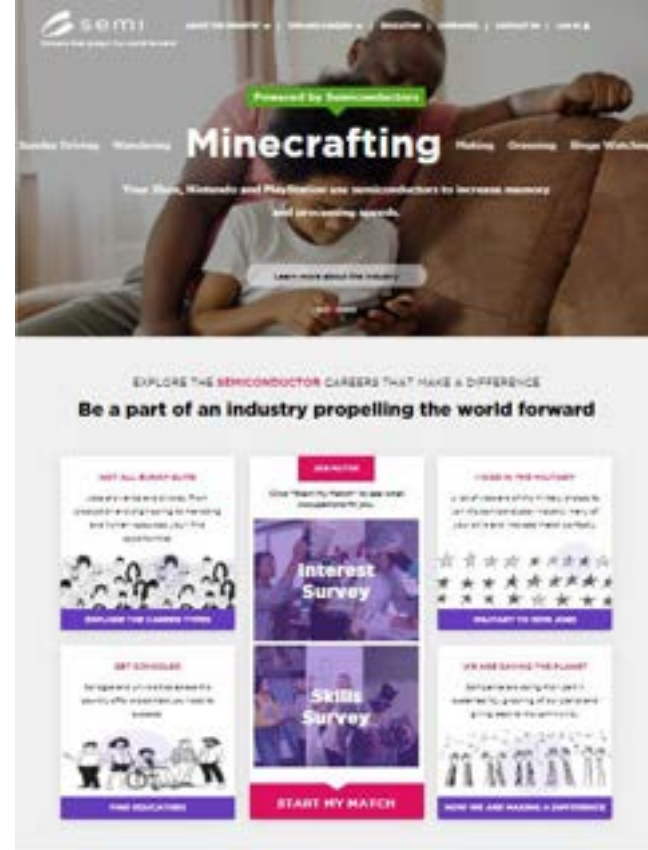
Near-term  
(0-2 years)

D i v e r s i t y , E q u i t y a n d I n c l u s i o n

# Industry Image and Awareness Campaign



**CHIP  
iN**



**LIBRA WHITE**  
Senior Public Relations Manager  
@ Lam Research

**Senior Public Relations  
Manager @ Lam Research**



**MICHAEL FACTOR**  
Facility Maintenance Technician  
@ Tokyo Electron Limited

**Facility Maintenance  
Technician @ TEL**



# SEMI Career and Apprenticeship Network (SCAN)



Registered Apprenticeships for a non-traditional industry

Create proven model to expand industry participation

Recruit more people of color and women into the industry



Apprentice wages start \$22-\$30/hr, plus benefits



No experience necessary to apply



Attend College courses and on the job training



College credit and US Dept of Labor certification at no cost

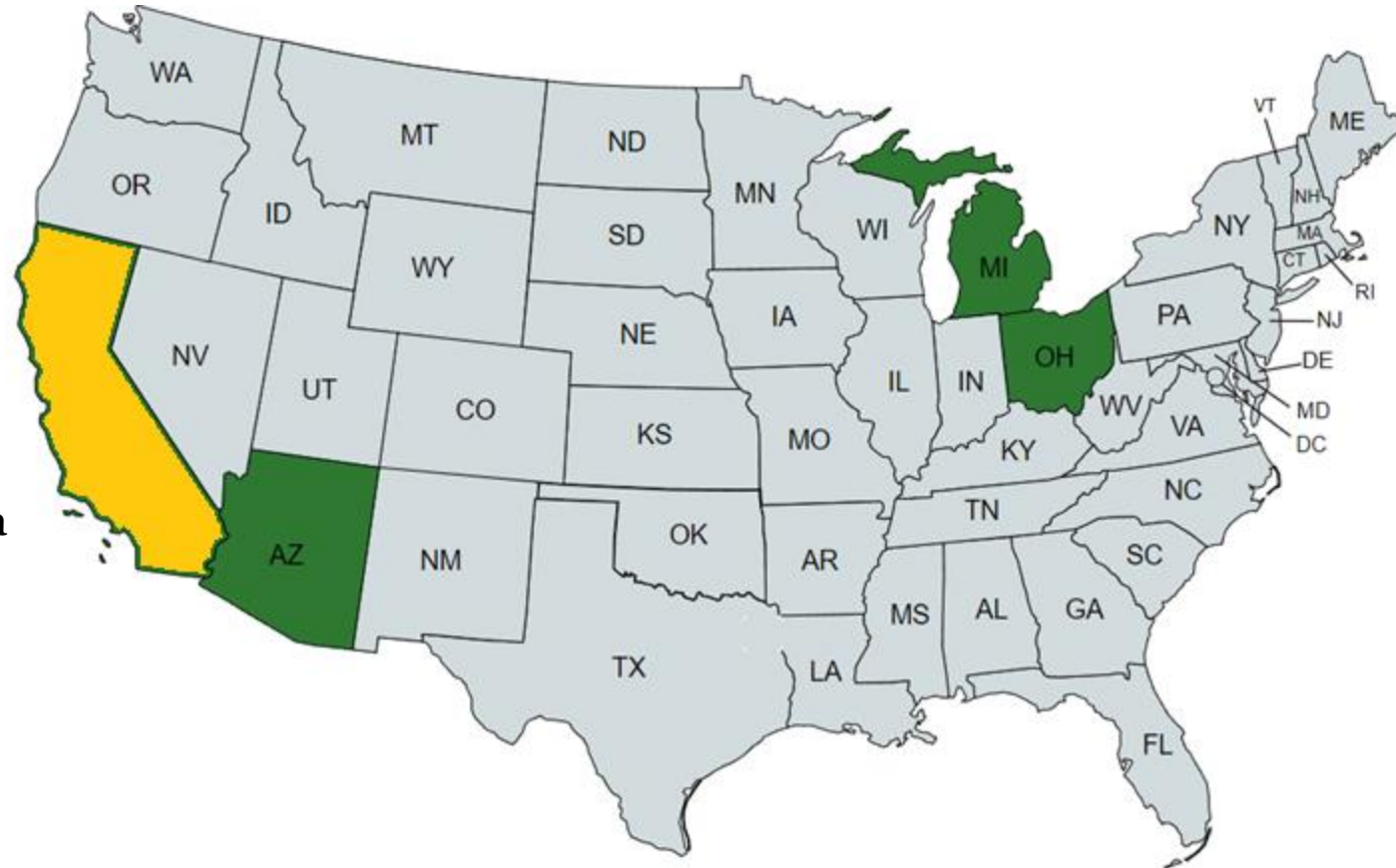


18 months to full-fledged technician



# Growth in California

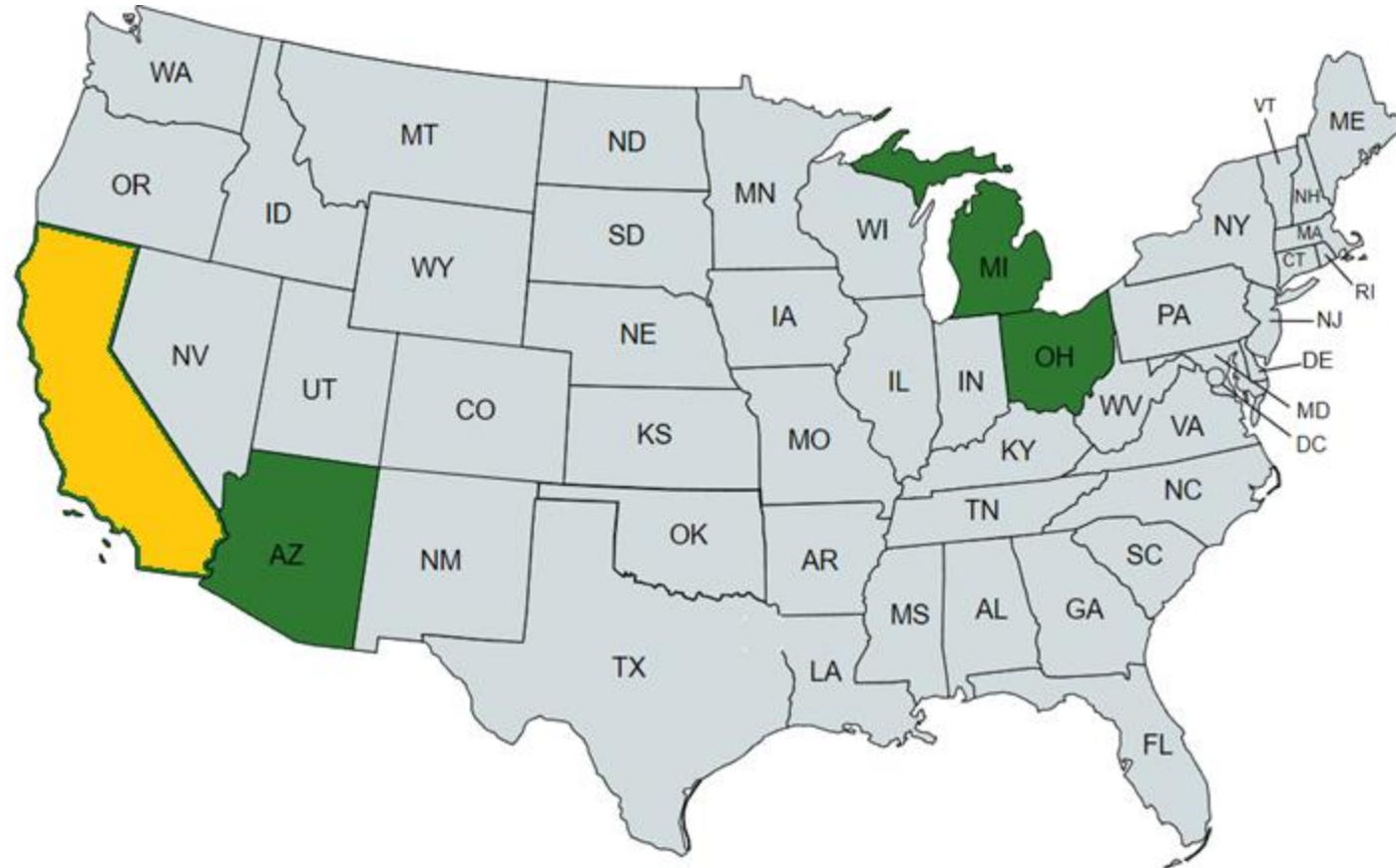
- High Road Training Partnerships Grant through California Workforce Development Board
  1. Expanding introductory training for entry-level roles
  2. Building customized training pathways with member companies & education partners
  3. **Building a microelectronics workforce network in California**
- Expanding Registered Apprenticeship in Microelectronics
  - Connecting companies, WDBs, education institutions, and workers to make apprenticeships more adoptable





# What do we hope to create?

- Access to Talent Pathways
- Collaborative Problem-Solving  
\*Incorporate worker voice into the design
- Enhanced Training Programs
- Funding and Resources
- Networking and Partnerships
- Advocacy and Policy Support



# Breakout Room Overview

## Instructions

Step 1: Navigate to your assigned breakout room

Step 2: Open the Google document and locate your breakout room document

Step 3: Review discussion questions

Step 4: A member of the SEMI Foundation team will provide further instructions

## Best Practices

- Be mindful of airtime
- We encourage you to share what is on your mind
- One microphone, one speaker
- Use the chat and engagement feature



# Breakout Room One

- What has your experience been with the semiconductor industry so far?
- What challenges have you identified in supporting job seekers?
- What are the best practices you have for industry relationships?



## Reflection

**In doing this activity, what really jumped out at you or did you feel most excited about?**

**Type your answer in the chat**





## Breakout Room Two

- What are the most effective ways to collaborate with other organizations, the people we serve, the semiconductor industry?
- What do you wish you knew?
- What types of activities would you like to see in this collaborative?



## Reflection

**What is the most pressing action that you would like to see addressed (here? In the industry? Something else?)**

**Share out from each breakout room**

## Final thoughts

**What is a question that you're going to be thinking about after you leave today?**

Please use the link in the chat to complete a short exit survey where you can answer this question and provide feedback about our first collaborative meeting.

# Thank you!

- Q&A
- For any questions or comments, you can reach us at [scanca@semi.org](mailto:scanca@semi.org)