

CHIPS for America: Creating Inclusive Opportunities for Minority Serving Institutions



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Today's Speakers & Key Guests



Kylie Patterson

CHIPS Program Office Chief
Opportunity & Inclusion Officer



Jon Gant, PhD

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Minority Broadband Initiatives



Melody Gonzales

Executive Director, White House Initiative on
Advancing Educational Equity, Excellence and
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Executive Director, White House
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Native Americans and Strengthening Tribal
Colleges and Universities



Lena T. Rodriguez, PhD

Senior Vice President for Policy and
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Ahniwake Rose

American Indian Higher Education
Consortium (AIHEC), Vice President of
Congressional/Federal Relations

CHIPS for America Programs

\$39 billion for manufacturing

Components:

1. Attract large-scale investments in advanced technologies such as leading-edge logic and memory
2. Incentivize expansion of manufacturing capacity for mature and other types of semiconductors

\$11 billion for R&D

- National Semiconductor Technology Center
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institute(s)
- National Institute of Standards and Technology measurement science

Together with CHIPS initiatives from other agencies, including DOD, State, NSF, and Treasury

Workforce development

Funding Eligibility

For organizations
that are...

- private
- non-profit
- consortia

that can
substantially...

- construct
- expand
- modernize

a U.S. facility for...

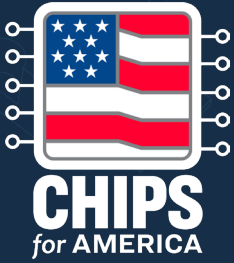
- fabrication
- assembly
- testing
- packaging
- production

of...

- semiconductors

**More details available in the funding opportunity announcement*

Program Priorities



Economic
and national
security
objectives



Commercial
viability



Financial
strength



Technical
feasibility
and
readiness



Workforce
development



Broader
impacts

Opportunity & Inclusion Priorities



Diverse Workforce

Focus on the intentional recruitment, hiring, retention and promotion of economically disadvantaged individuals



Inclusive Business Opportunities

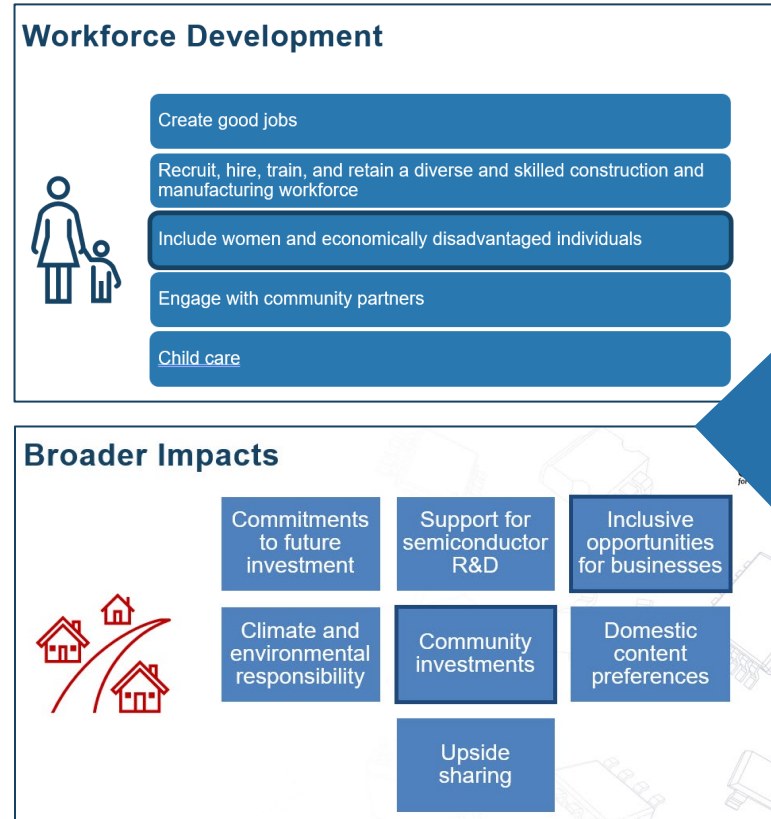
Inclusion of small businesses, minority-owned businesses, veteran-owned businesses, and women-owned businesses



Community Investment

Investments to build strong communities with active participation in the U.S. economy and facilitate job creation

Role of Opportunity & Inclusion



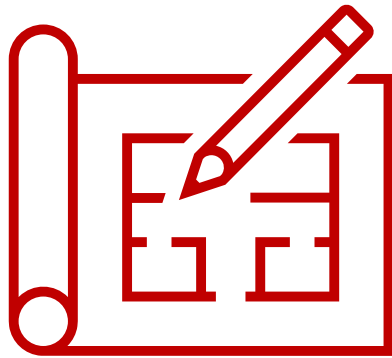
1. Inclusion of women and economically disadvantaged individuals
2. Inclusive opportunities for businesses
3. Community Investment

Commitments to opportunities and inclusion **are critical to the success** of the CHIPS program.

A 3D-rendered chip with a dark blue base and a top surface featuring the stars and stripes of the United States flag. The word "Workforce" is printed in white, bold, sans-serif font across the center of the chip. The background is a dark blue field with a complex, glowing circuit board pattern in a lighter shade of blue.

Workforce

Building the semiconductor ecosystem in the United States requires training and inspiring a new generation of talent.



Construction



Facilities workforce



R&D

Building an innovation ecosystem

We need to attract, train, hire, and retain the best talent in America to ensure the success of the industry

Applicants encouraged to:

Use earn and learn models like Registered Apprenticeships

Provide wraparounds that unlock barriers to economic participation

Build partnerships across multiple partners & employers

Leverage state & local investments in workforce and education

The Department expects applicants to work closely with stakeholders in local communities to develop a set of investments that is responsive to local needs, and, to commit to working to support long-term, cross-cutting initiatives – such as competency development, curriculum design, and credentialing.

The background features a dark blue, isometric-style circuit board pattern with various lines, nodes, and rectangular components. In the center, there is a 3D-rendered American flag with a dark blue field of stars and red and white stripes, appearing to sit on a dark blue rectangular base.

Inclusive Business Opportunities

Inclusive Business Opportunities

Businesses can also help provide:

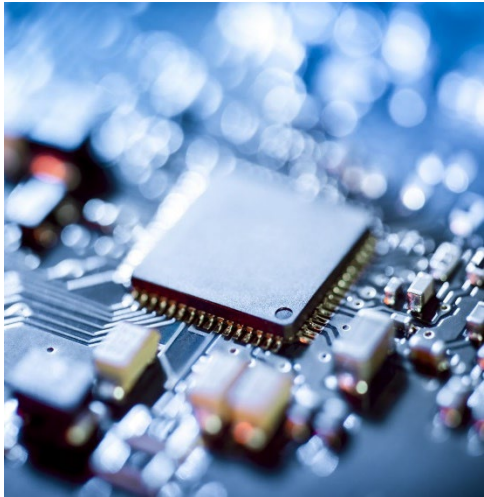
Creating business opportunities that are inclusive for all, including small businesses, veteran-owned, minority-owned, and women-owned businesses

Office and clerical support

On-site or off-site childcare

Maintenance support

Accounting and site planning support



What are Small, Minority, Veteran, and Women-Owned Businesses?



At least **51% owned or 51% of stock is owned** by minorities / veterans / women

Certified by federal government or recognized certifying bodies (not required)

While not required, applicants can also consider LGBTQ+-owned businesses, disability-owned businesses, or businesses located in HUBZones or Opportunity Zones.

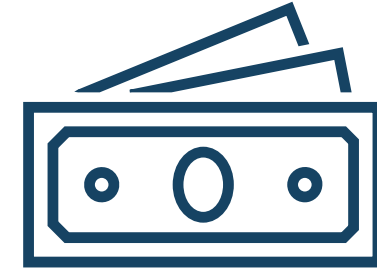


Community Investments

Community Investments

Identify

Identify areas ideal for investment that align with greater regional investment



Address

Address barriers to economic inclusion



Drive

Drive impact and change in communities based on need

Examples of Community Investments

Philanthropic Investments



K-12 Supports



Health and Healthcare
Access



Transportation Access



Affordable Housing

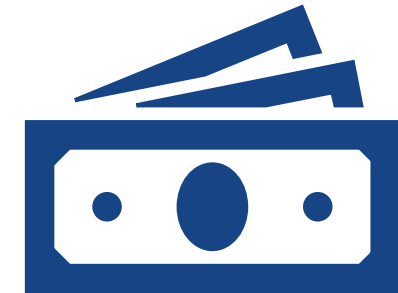
Creative Sources of Capital

Minority Depository
Institutions

Diverse investment
managers/ alternative
investment managers

Community
Development Financial
Institutions (CDFIs)

Credit Unions



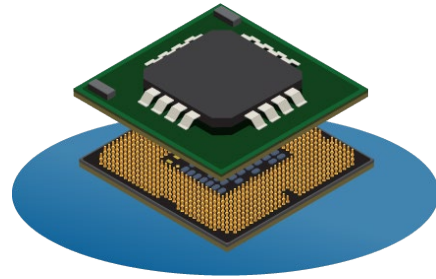
A 3D-rendered chip with a stylized American flag design (stars and stripes) is positioned in the center of the slide. The chip is set against a dark blue background with a subtle, glowing circuit board pattern. The text "CHIPS Research and Development" is overlaid in white, bold, sans-serif font across the middle of the image.

CHIPS Research and Development

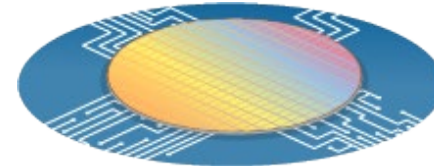
CHIPS R&D Programs



Metrology



**National
Semiconductor
Technology Center**



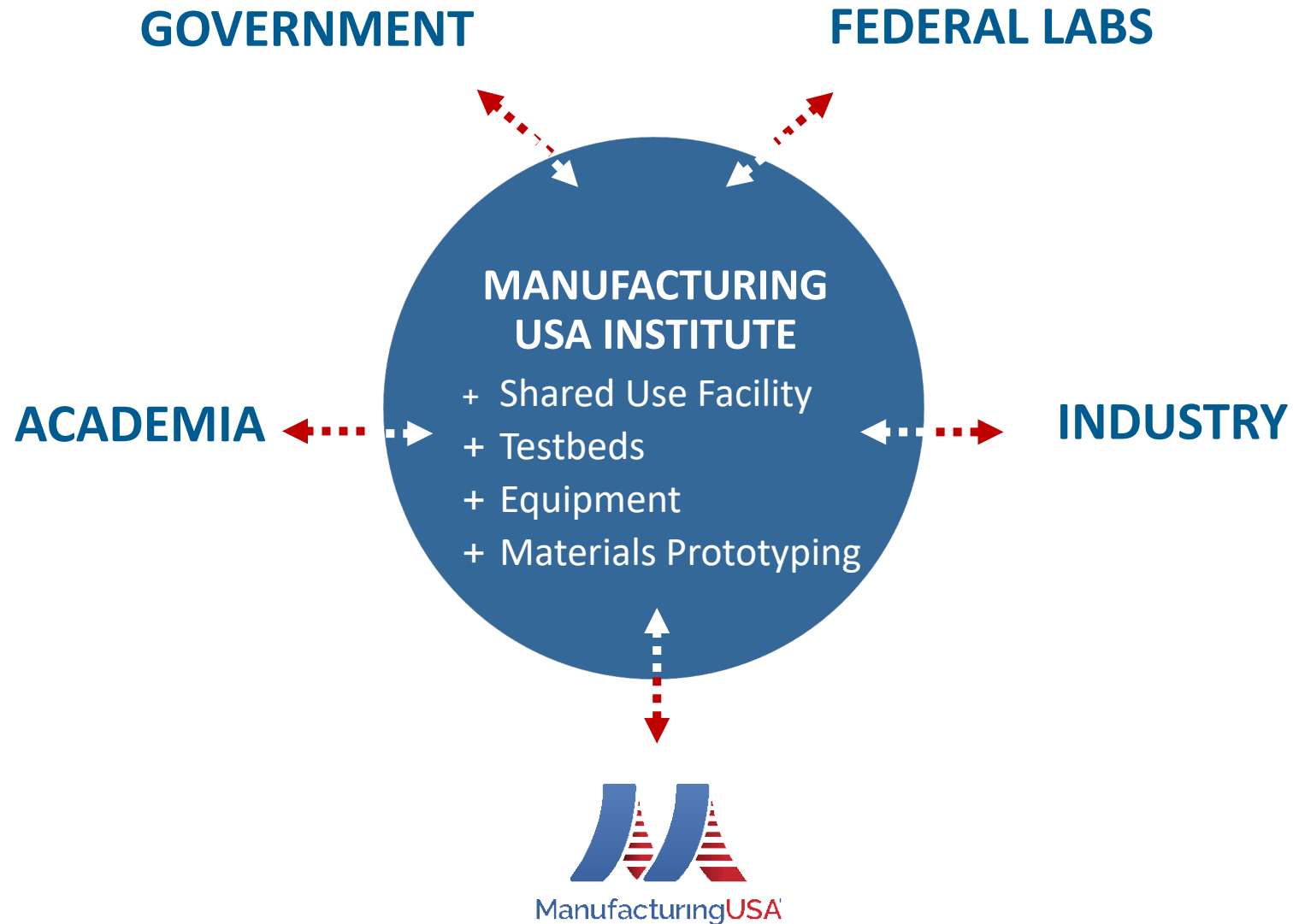
**National Advanced
Packaging
Manufacturing
Program**



**Manufacturing USA
Institute**

Workforce Initiatives

Institute Partnership Model

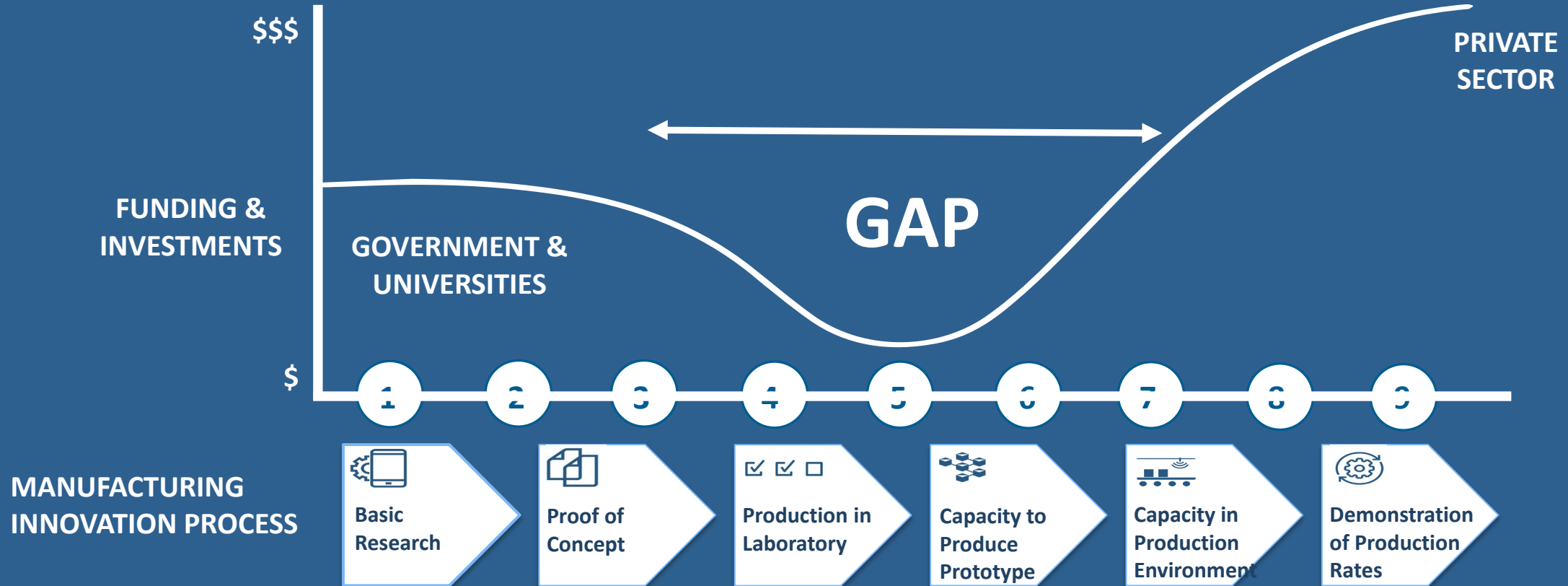


Common Institute Design:

- Industry-led public-private partnership
 - Typically \$70-120M federal investment
 - At least 1:1 match with private funds
 - Neutral convening for collaborations
 - Each institute develops a unique technology
 - Institutes address the education and workforce skills gap for their technologies
-

Manufacturing USA Purpose: Accelerate Discovery to U.S. Production

Create an effective collaboration environment for applied industry research to "bridge the gap" from discovery to production.



Manufacturing USA Network: 17 Institutes and Growing

ELECTRONICS



Integrated Photonics
Albany, NY
Rochester, NY



Flexible Hybrid
Electronics
San Jose, CA



Wide Bandgap Semiconductors
Raleigh, NC

MATERIALS



Advanced Fibers and
Textiles
Cambridge, MA



Advanced Composites
Knoxville, TN
Detroit, MI



Advanced Materials
Detroit, MI

ENERGY/ ENVIRONMENT



Modular Chemical
Process Intensification
New York, NY



Sustainable
Manufacturing
Rochester, NY



Smart Manufacturing
Los Angeles, CA



Industrial Process
Decarbonization
Tempe, AZ

DIGITAL/ AUTOMATION



Additive Manufacturing
Youngstown, OH
El Paso, TX



Advanced Robotics & AI
Pittsburgh, PA



Digital Manufacturing
& Cybersecurity
Chicago, IL



Cybersecurity in
Manufacturing
San Antonio, TX

BIO- MANUFACTURING



Regenerative
Manufacturing
Manchester, NH



Biopharmaceutical
Manufacturing
Newark, DE



Bioindustrial
Manufacturing
St. Paul, MN

+ New CHIPS Manufacturing USA institute
Upcoming NIST competition for another new institute

ManufacturingUSA.com



CHIPS Manufacturing USA Institute Notice of Intent

Establish one institute with the potential for significant impact on semiconductor manufacturing

Topic: Digital twins

Minimum expected NIST commitment ~\$200 million over a five-year period

Anticipate a greater than 1:1 cost share

Analysis of RFI responses, industry feedback, listening sessions across 15+ engagements, and technology opportunities across the CHIPS R&D portfolio

Digital Twin Institute Objectives

Reduce the time and cost for chip development and manufacturing

Accelerate the adoption of semiconductor manufacturing innovations

Increase access to semiconductor manufacturing training through the adoption of digital twin-enabled tools

Expand access to digital twin tools, solutions and frameworks

Digital Twin Institute Links

- Information about Manufacturing USA can be found at [manufacturingusa.com](https://www.manufacturingusa.com).
- Check out our video '[Increasing Diversity in Advanced Manufacturing Careers](#).'



Questions

Frequently Asked Questions



What are the opportunities or pathways for HSIs and TCUs to directly engage with the CHIPS Program?



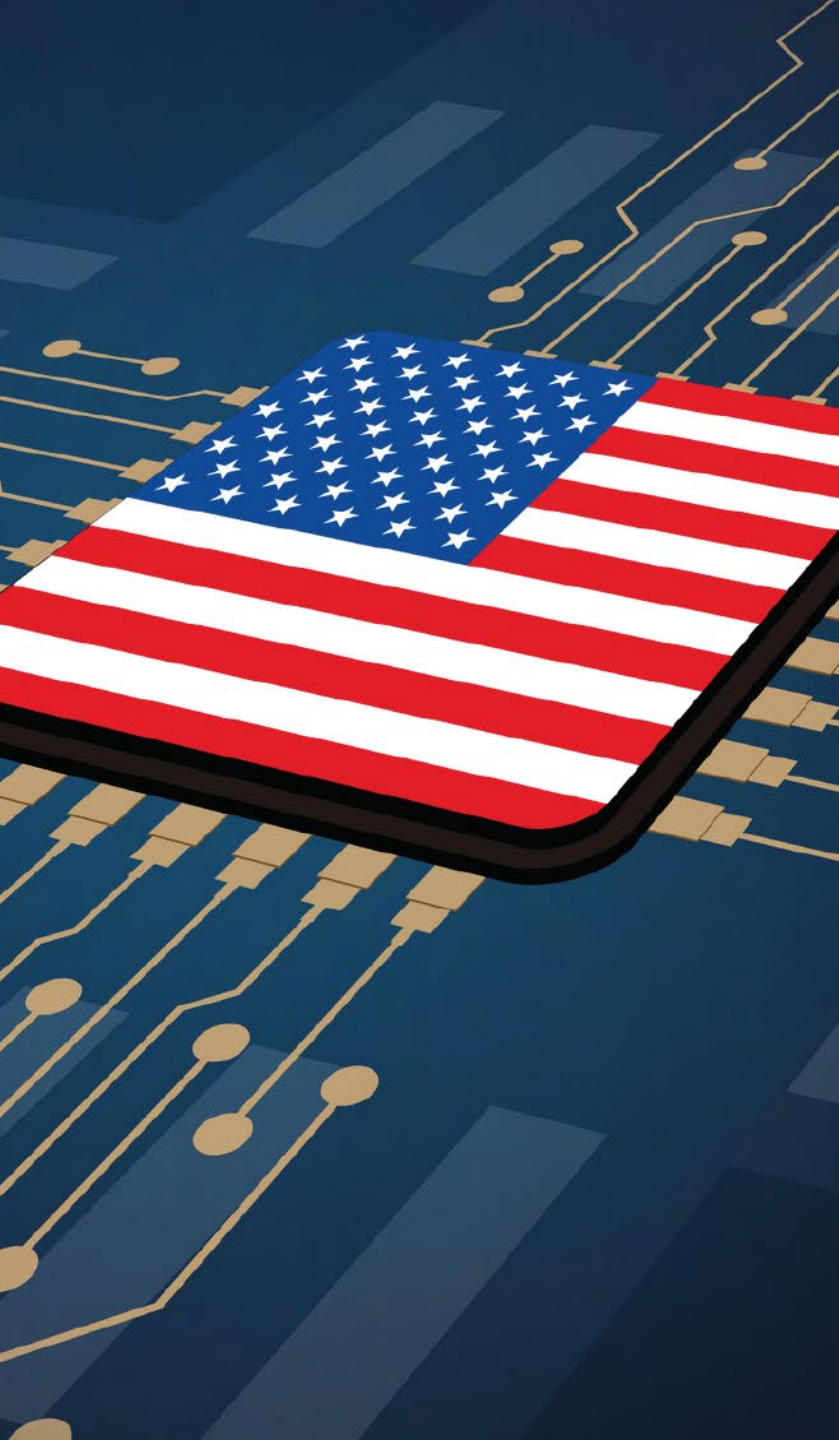
How can HSIs and TCUs get a better sense of what companies are participating in the CHIPS program or looking for partnerships as well as what regions across the country could see the earliest investments?



Are there any other partnerships or activities other MSIs have developed that can serve as a roadmap for HSIs and TCUs on the call today looking to take action now and in the future?



Next Steps



Next Steps

- Visit [CHIPS.gov](https://chips.gov) for resources, including:
 - Notice of Funding Opportunity
 - Vision for Success paper
 - Applicant guides and templates
 - FAQs and fact sheets
 - Webinar schedule (and recordings of prior webinars)
- Join our mailing list
- Contact us
 - apply@chips.gov – application-related inquiries
 - askchips@chips.gov – general inquiries

Teaming Partner List



- The teaming partner list enables entities to share information and foster collaboration
 - Entities that may not be eligible to apply can share contact information and capabilities
 - Potential applicants reach out to entities on the list to facilitate potential partnerships and collaboration

<https://www.nist.gov/chips/chips-america-teaming-partner-list>



Thank you