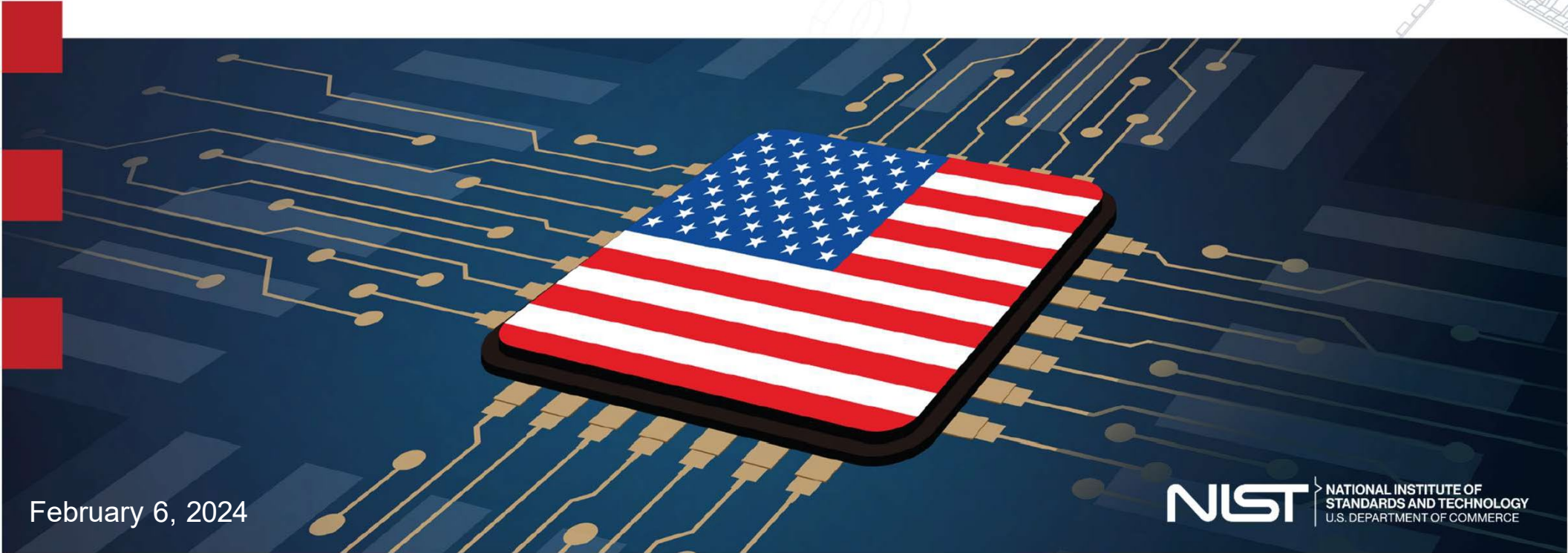


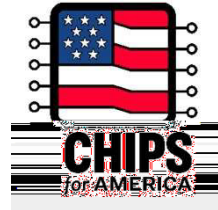
# CHIPS for America Update

Adam Schafer Ph.D. Head of Supply Chain Strategy, CHIPS Strategy Office



February 6, 2024

# 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

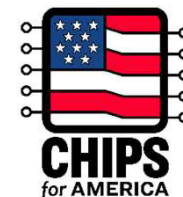
## \$11 billion for R&D

- 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

# CHIPS for America Vision



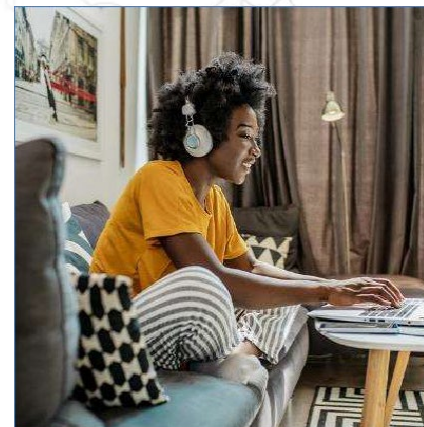
## Economic Security

This act enables us to build more resilient supply chains for important components.



## National Security

This act enables us to bring the most sophisticated technologies back to the U.S.



## Future Innovation

Chips are key to the technologies and industries of the future, so we need to be at the forefront. This act will ensure long-term U.S. leadership in the sector.

# CHIPS has made significant strides in the last year...

## Strong Industry Response

- Large and compelling set of opportunities, with 600+ Statements of Interest
- Corresponding \$200B in private investment catalyzed

## On Track to Make Significant Impact on Leading Edge Capacity

- Anticipating **~20% leading-edge market share** in the U.S. by 2030 (up from 0% today)
- **Surpassing the expectation** of two leading-edge clusters

## Announced PMTs to Date

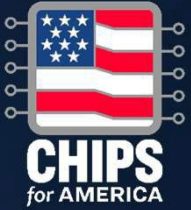


**BAE SYSTEMS**



**With much more to come over the course of this year...**





# CHIPS Manufacturing Incentives

# Vision for Success



## Leading-Edge Logic

- ✓ The U.S. will have at least **two new large-scale clusters of leading-edge logic fabs**
- ✓ **U.S.-based engineers** will develop the process technologies underlying the **next gen of logic chips**



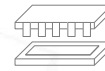
## Memory

- ✓ U.S.-based fabs will **produce high-volume memory chips on economically competitive terms**
- ✓ **R&D for next-generation memory** technologies for critical applications will be **conducted in the U.S.**



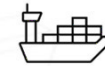
## Current-Generation and Mature

- ✓ The U.S. will have **strategically increased its production capacity** for current-gen and mature chips
- ✓ Chipmakers will also be able to **respond more nimbly** to supply and demand shocks



## Advanced Packaging

- ✓ The U.S. will be home to **multiple high-volume advanced packaging facilities**
- ✓ The U.S. will be a **global leader in commercial-scale advanced packaging technology**



## Supply Chain

- ✓ U.S. government will **reduce chokepoint risks** flowing from **geographic concentration**.
- ✓ U.S. will **advance technology leadership** and **support vibrant fab clusters**, while reducing risk of production disruptions.

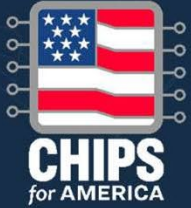


## Manufacturing

- ✓ U.S. semiconductor manufacturing equipment and materials suppliers will **increase their footprints in the U.S.**
- ✓ The **most advanced non-U.S. suppliers** will establish large-scale footprints in the United States **for the first time**.

By the  
end of the  
decade...

# Program Priorities



Economic and  
National  
Security  
Objectives



Commercial  
Viability



Financial  
Strength



Technical  
Feasibility  
and  
Readiness



Workforce  
and  
Community  
Investment



## Slide 7

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**S(0** I think it would be worth expanding on these in additional slides - particularly where they differ from past program priorities we've outlined (that may only be in the 5th bucket?)

Maybe simplified version of slides 15-22 in original NOFO deck?

Stoneman, Jesse (Fed), 2023-09-19T21:53:08.653

**MG1** [@Gaviria, Nelson P. (Ctr)] Update each slide for NOFO 2 details, using same template. Workforce development and broader impacts have been combined for this NOFO 2.

Mason Groff, 2023-09-22T14:37:43.670

**MG1 0** Updated

Mason Groff, 2023-09-22T17:39:19.680

**MG2** May be Nikita

Mason Groff, 2023-09-25T19:49:34.702



# Vision for Success – Supply Chain for Success

## Strengthen Supply Chain Resilience

- ✓ The **U.S. and its allies** will **reduce chokepoint risks** flowing from **geographic concentration**
- ✓ Supply chain participants will improve the **transparency of demand and supply** to **reduce the risks of production disruptions**



## Advance U.S. Technology Leadership

- ✓ The U.S. will have **incentivized major U.S. equipment and materials suppliers** to **increase their footprints** in the U.S.
- ✓ **Non-U.S. suppliers** of the world's most advanced equipment, materials, and subsystems will also **establish large-scale footprints** in the U.S.

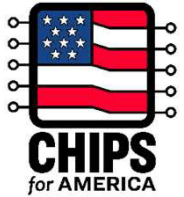
By the  
end of the  
decade...



## Support Vibrant U.S. Fab Clusters

- ✓ Each **CHIPS-funded fab cluster** in the U.S. will be **supported by dozens of suppliers**, including many **investing in the U.S. for the first time**
- ✓ **State and local entities** encouraged to help **facilitate the expansion of these ecosystems**

# Announced Funding Opportunities



**February 28, 2023**

**For commercial leading-edge, current, and mature node fabrication facilities**

**June 23, 2023**

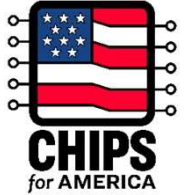
**For large semiconductor materials and equipment facility projects \$300M+**

**September 29, 2023**

**For smaller semiconductor materials and equipment facility projects under \$300M**

*The CHIPS Program Office has received over 600 statements of interest and over 170 pre-applications, full applications, and concept plans from 42 states.*

# Second Funding Opportunity Summary



**Smaller Supply Chain Projects** | tailored towards smaller projects and businesses...



## Eligibility

- Semiconductor Materials Facilities
- Semiconductor Manufacturing Equipment Facilities

*Capital expenditures below \$300 million*



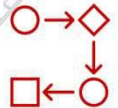
## Funding Instruments

### *Direct Funding*

- Grants
- Cooperative Agreements
- Other Transactions

## Streamlined Application Process

1. Concept Plan
2. Full Application
3. Due Diligence
4. Award Preparation and Issuance



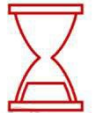
## Submission Deadlines

### *Concept Plan Submissions*

- Dec 1, 2023 – Feb 1, 2024

### *Full Application Submissions*

- Communicated individually upon notice of application advancement



## Slide 10

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**AR0** Spell out - NOFO 2 quite diff from 1 & 2 - important to message that this is less complex and also different - to the stakeholders

Auyon Rahman, 2023-09-19T15:50:01.754

**AR0 0** AL: show that it's easier/complex

Auyon Rahman, 2023-09-19T15:50:56.973

**S(0 1** I would suggest having this be a closing slide that summarizes information - and instead introducing each of these topics one by one instead of trying to summarize it all here.

I would instead suggest a slide here that at a high level highlights the key distinctions between this NOFO and past ones (e.g., diff elig criteria, diff application process, diff funding instruments), including emphasizing how it's streamlined/tailored

then we walk through each element and then we use this slide to summarize the key points.

Stoneman, Jesse (Fed), 2023-09-19T21:47:33.930

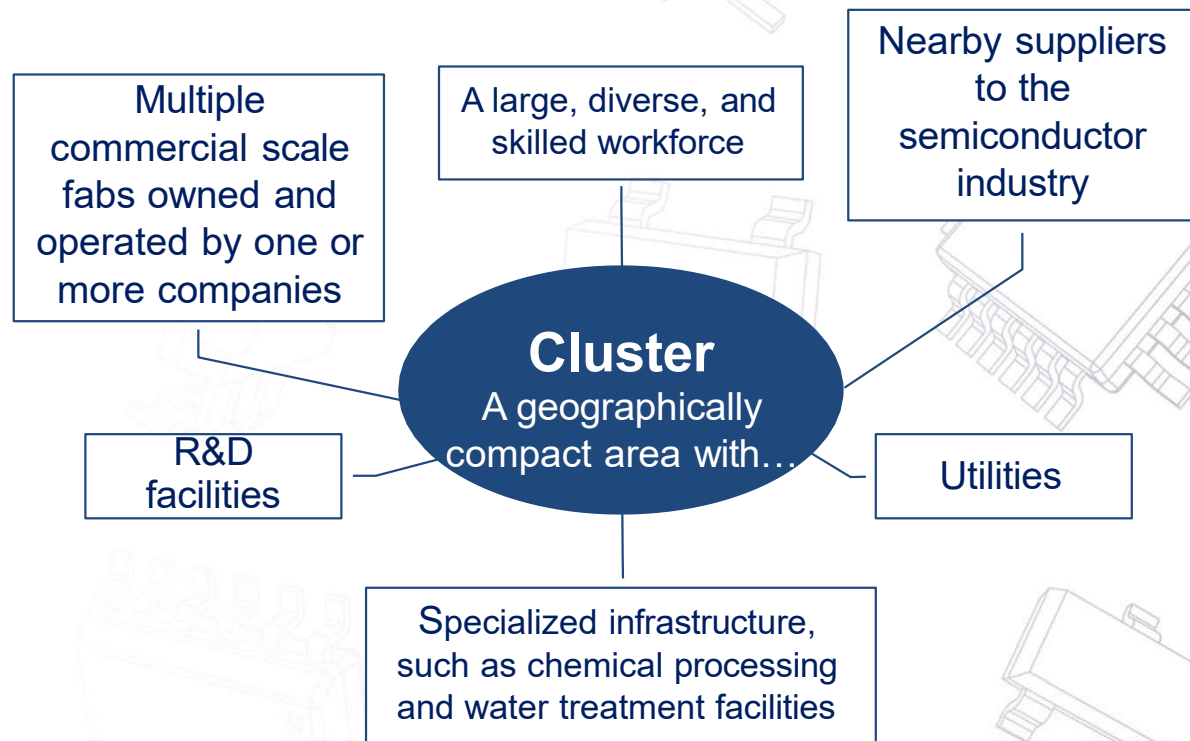
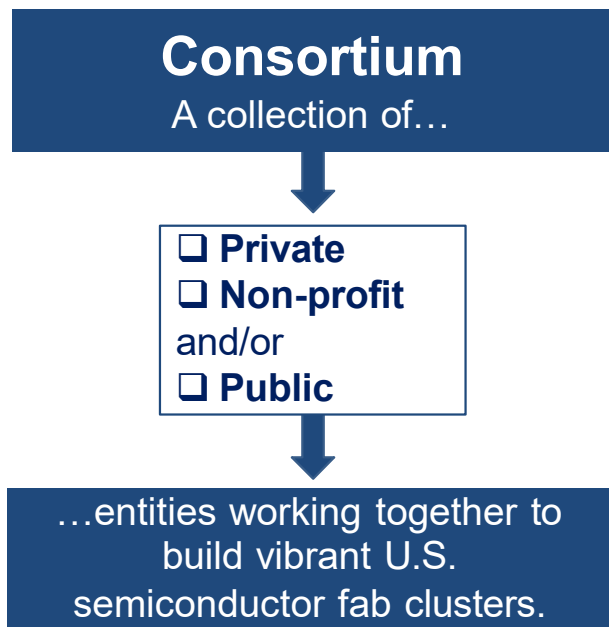
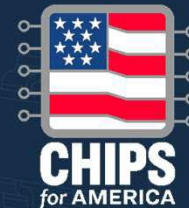
**L(1** can be cut.

Lalwani, Nikita A. (Fed), 2023-09-25T23:11:10.884

**SJ(1 0** Let's discuss

Stoneman, Jesse (Fed), 2023-09-26T01:19:04.138

# Defining Consortia and Clusters

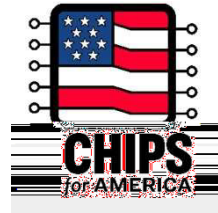
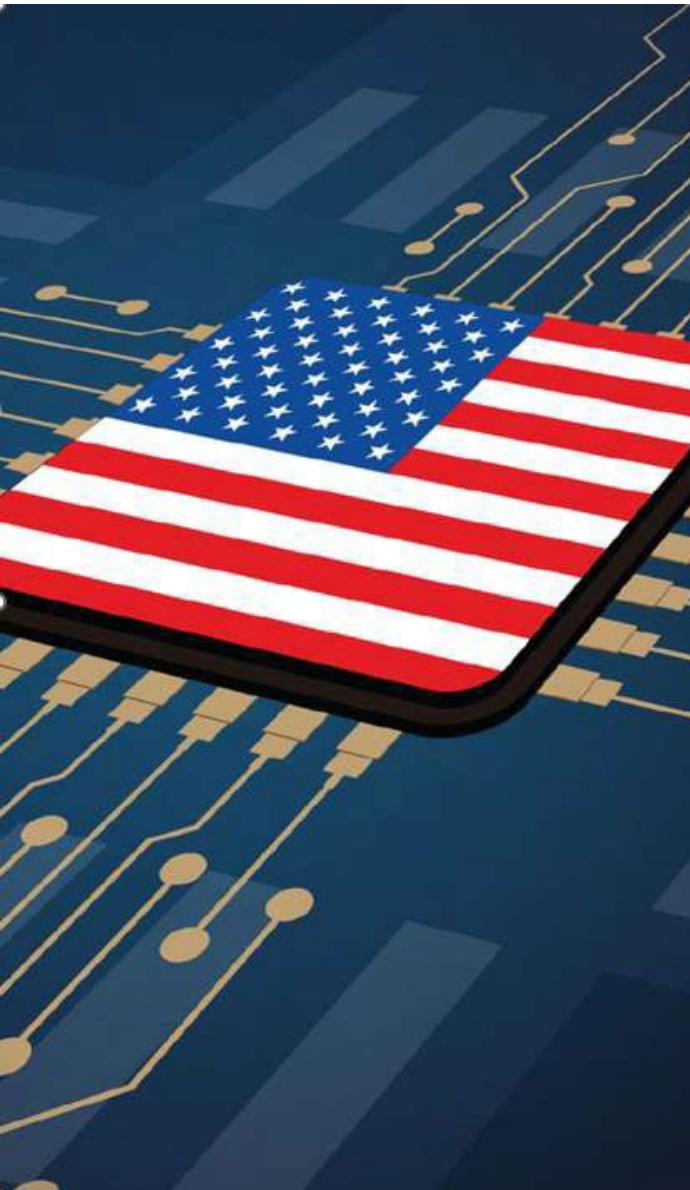




## Slide 11

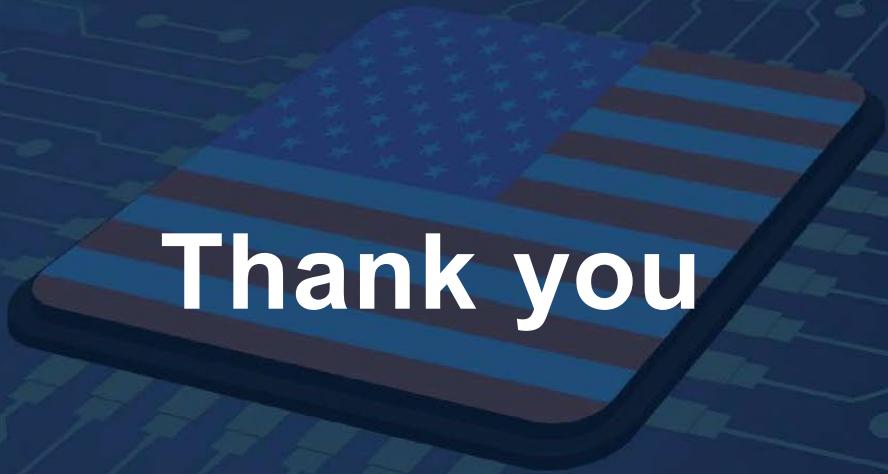
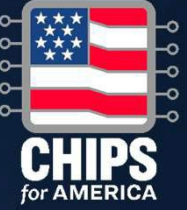
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- MG0** New slide  
Mason Groff, 2023-09-22T14:48:38.745
- S(1** from Tough Q&A: Consortium is a formal partnership that entities can form to file an application with the CHIPS Program Office, working together to demonstrate how their coordination will support vibrant clusters. Clusters are a broad reference frame. Clusters are geographically compact areas with multiple commercial scale fabs owned and operated by one or more companies. Within those regions, there is a large, diverse, and skilled workforce, nearby suppliers and utilities, and specialized infrastructure. Secretary Raimondo has outlined a vision to make the U.S. home to at least two clusters that produce advanced chips. Entities can apply together as a consortium and ultimately support a broader cluster.  
Stoneman, Jesse (Fed), 2023-09-25T14:39:09.658
- MG2** Jesse will update  
Mason Groff, 2023-09-25T19:52:41.209
- SJ(3** Nikita, better phrased as "private, nonprofit, and public entities" or keep as is?  
Stoneman, Jesse (Fed), 2023-09-25T21:15:04.729
- L(3 0** cut this slide.  
Lalwani, Nikita A. (Fed), 2023-09-25T23:08:31.179
- SJ(3 1** Let's discuss - this is a tough Q&A and actually something I think is pretty confusing for people  
Stoneman, Jesse (Fed), 2023-09-26T01:00:12.878
- SJ(3 2** Move definition of cluster into the vision/program priorities talking points  
Stoneman, Jesse (Fed), 2023-09-26T15:33:32.290



## Next Steps

- Visit [CHIPS.gov](https://www.chips.gov) for resources, including:
  - Funding Updates List
  - Funding Opportunities
  - Vision for Success papers
  - Applicant Guides and Templates
  - FAQs and fact sheet
- Join our mailing list
- Contact us
  - [askchips@chips.gov](mailto:askchips@chips.gov) – general inquiries
  - [apply@chips.gov](mailto:apply@chips.gov) – application-related inquiries



Thank you