

CHIPS for America Implementation Strategy

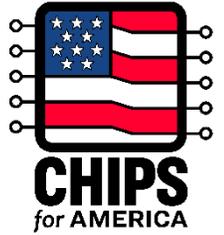
Presented by Donna Dubinsky, Sreenivas Ramaswamy and Eric Lin

September 2022



NIST

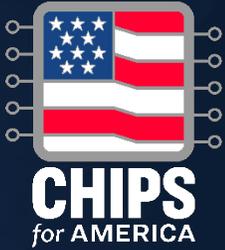




WELCOME

- We look forward to your questions. Click the Q&A button, type your question, and click “Post Question” to submit.
- We will answer as many questions as possible today.
- Visit [CHIPS.gov](https://www.chips.gov)
 - Get the strategy paper
 - Sign up for email updates

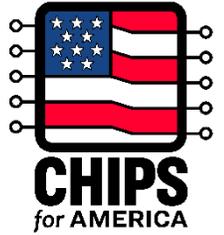




Donna Dubinsky

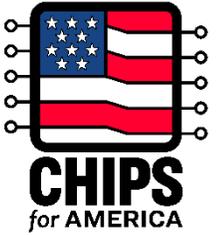
Senior Counselor to the Secretary for CHIPS Implementation

CHIPS for America Vision



Chips are the foundation of the modern world

Chips were invented in America



But most chips are made outside of the U.S.

Logic chip production by country, 2021

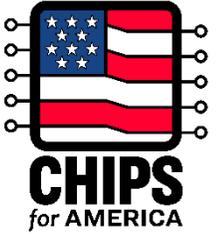


Memory chip production by country, 2021



Supply chain disruptions halt U.S. commerce

- Pandemic, storms and fires paused chip production
- Workers were furloughed
- Prices increased
- Demand outstripped supply
- Geopolitical tensions over Taiwan present even greater supply chain risks going forward



One Hundred Seventeenth Congress
of the
United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Monday,
the third day of January, two thousand and twenty-two*

An Act

Making appropriations for Legislative Branch for the fiscal year ending September 30, 2022, and for other purposes.

*Be it enacted by the Senate and House of Representatives of
the United States of America in Congress assembled,*

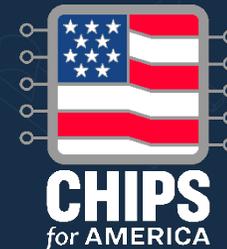
SECTION 1. TABLE OF CONTENTS.

The table of contents for this Act is as follows:

- Sec. 1. Table of contents.
- Sec. 2. References.

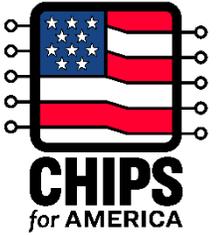
DIVISION A—CHIPS ACT OF 2022

- Sec. 101. Short title.
- Sec. 102. Creating helpful incentives to produce semiconductors (CHIPS) for America fund.
- Sec. 103. Semiconductor incentives.
- Sec. 104. Opportunity and inclusion.
- Sec. 105. Additional GAO reporting requirements.
- Sec. 106. Appropriations for wireless supply chain innovation.
- Sec. 107. Advanced manufacturing investment credit.



The CHIPS and Science Act of 2022

CHIPS for America Vision



Economic Security

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



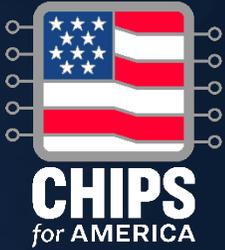
National Security

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.

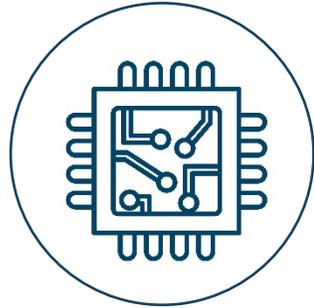
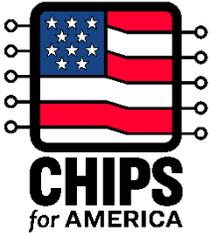


Sreenivas Ramaswamy

Senior Advisor to the Secretary of Commerce

Implementation:
CHIPS for America Fund
Strategy Paper

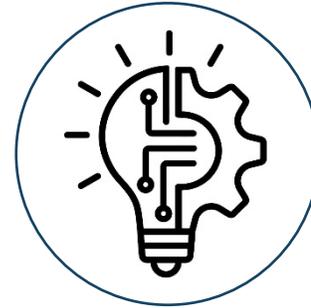
CHIPS for America will:



Return leading-edge chip manufacturing to U.S.



Expand capacity to make current/mature chips and critical supplies



Reinforce U.S. strengths in chip design and equipment



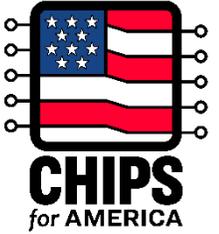
Grow a U.S. workforce and strengthen communities

Create a domestic semiconductor ecosystem for national and economic security

Guiding Principles

- 1 Meet economic and national security needs
- 2 Ensure long-term leadership in the sector
- 3 Strengthen and expand regional clusters
- 4 Catalyze private sector investment
- 5 Generate benefits for a range of stakeholders and communities
- 6 Protect taxpayer dollars

CHIPS for America Incentives



\$39 billion for manufacturing

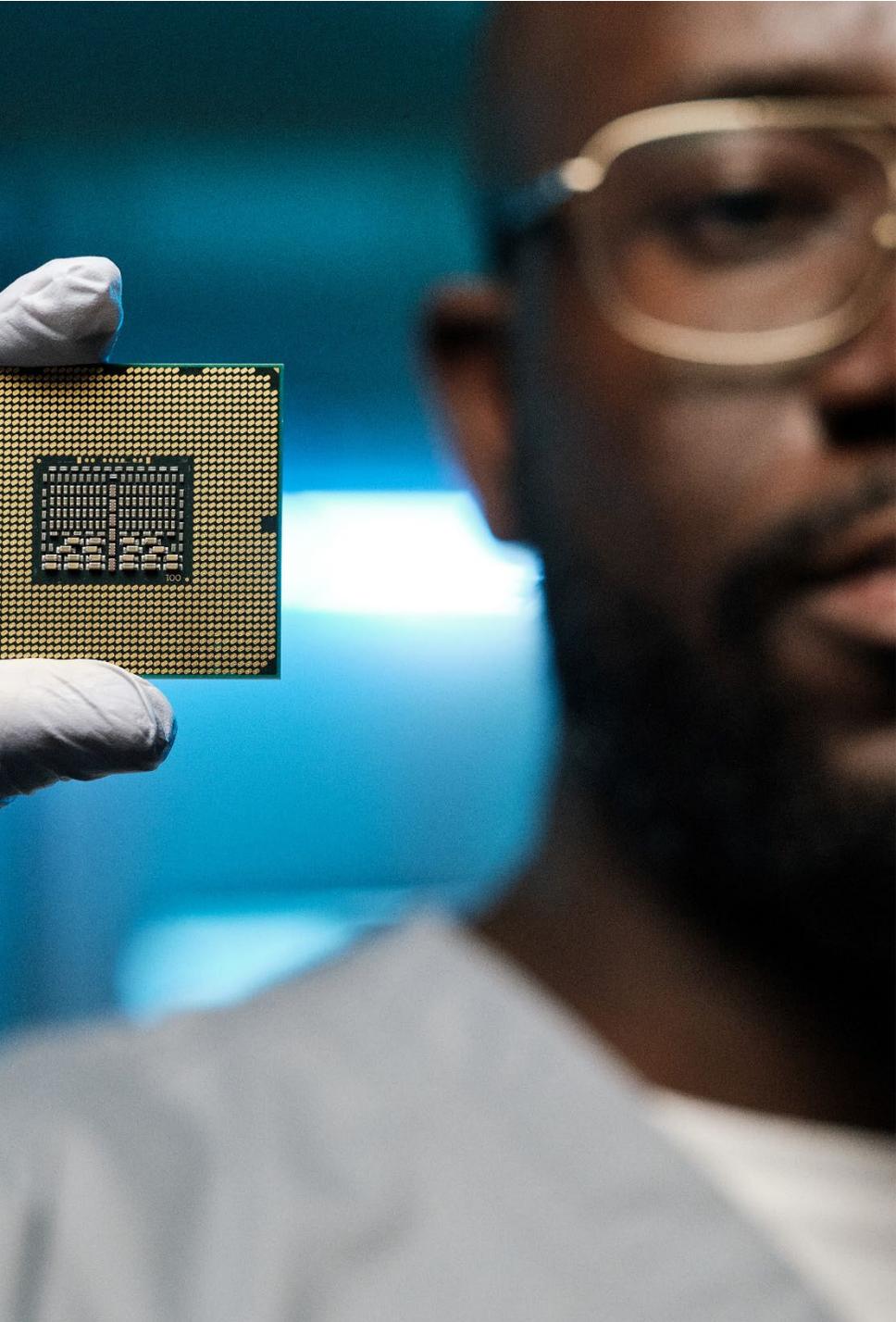
- Incentivize expansion of manufacturing capacity for semiconductors
- Attract large-scale investments in advanced technologies such as leading-edge logic and memory
- Advance U.S. technical leadership
- NDAA Section 9902

\$11 billion for R&D

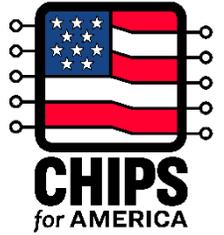
- National Semiconductor Technology Center
- National Advanced Packaging Manufacturing Program
- Manufacturing USA institute(s)
- National Institute of Standards and Technology measurement science
- NDAA Section 9906

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

Workforce development



Manufacturing incentives will spur:

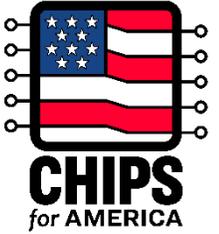


Large-scale investments in
leading-edge logic and memory
manufacturing clusters

Manufacturing capacity for

- Mature and current-gen chips
- New and specialty technologies
- Suppliers to the industry

Eligibility for Manufacturing Incentives



For organizations
that are...

- private
- non-profit
- consortia

that can
substantially...

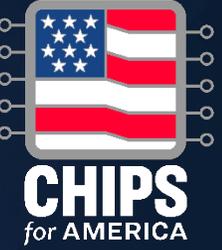
- finance
- construct
- expand
- modernize

a U.S. facility for...

- fabrication
- assembly
- testing
- packaging
- production
- R&D

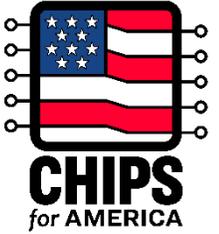
of...

- semiconductors
- materials
- manufacturing
equipment

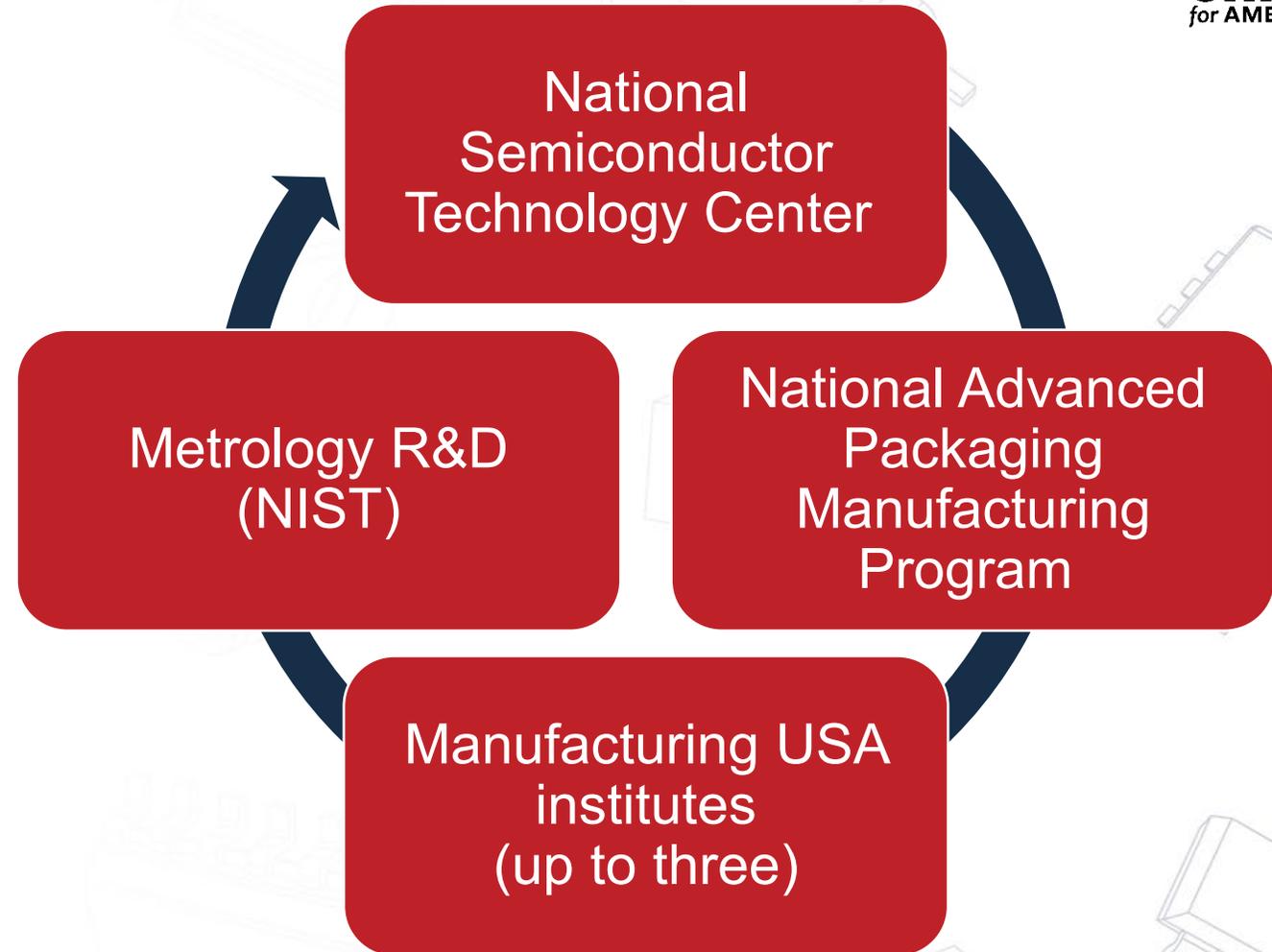


Eric Lin
Interim Director
CHIPS Research and Development Office

Research & Development



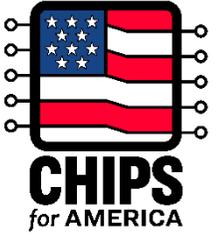
- Strengthen and advance U.S. leadership in R&D
- An integrated ecosystem that drives innovation
- In partnership with industry, academia, government, and allies
- A strategic view of R&D infrastructure, participant value-proposition, and technology focus areas
- Informed by the Industrial Advisory Committee



Industrial Advisory Committee

- Ensures that R&D is meeting the chip industry's needs
- Includes leaders from
 - industry
 - customer base
 - academia and think tanks

Guidance for Incentive Applicants



Increase scale
and attract
private capital

Leverage
collaborations to
build out
ecosystems

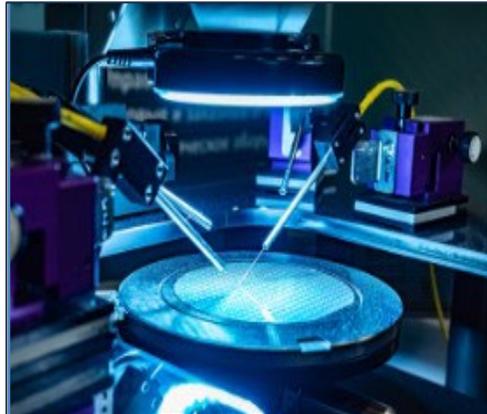
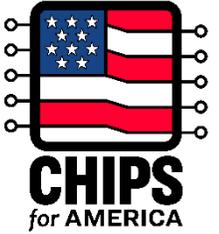
Secure additional
incentives and
support to build
clusters

Establish a
secure and
resilient supply
chain

Expand the
workforce
pipeline

Create inclusive
opportunities for
businesses and
communities

Workforce Development



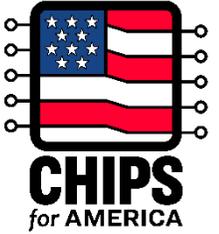
Workforce programs included in applications for manufacturing incentives



NSTC will establish programs in partnership with industry and educational institutions

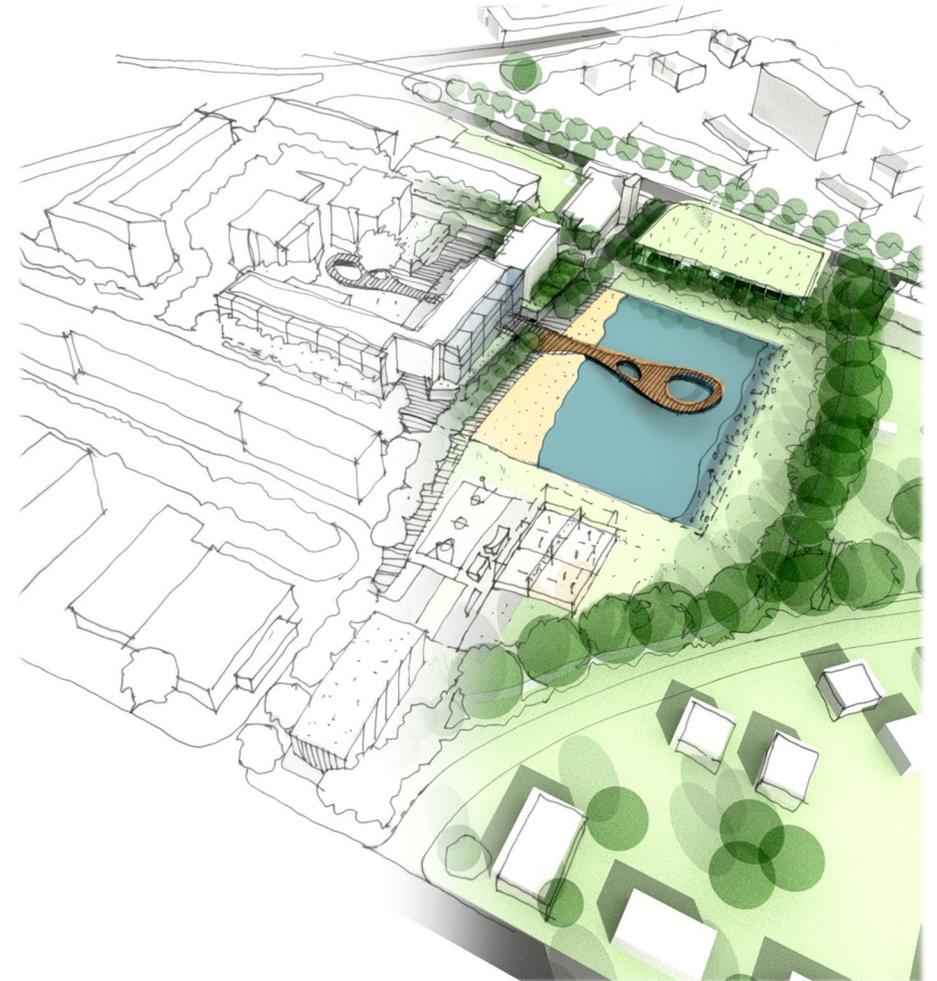
- Scientists and engineers in many fields
- Specialty construction workers:
 - Cleanroom architects
 - High-purity welders
 - Pipefitters
- Equipment technicians:
 - Installation and tooling
 - Maintenance
 - Operations
- Innovators

Economic Development

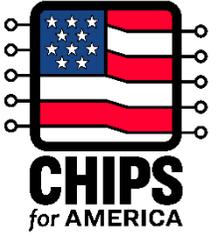


Applicants for incentives must consider:

- Extending access to paid training and jobs to underserved and underrepresented populations
- Working with unions and workforce development organizations to create training and hands-on learning
- Widespread and long-term spillover benefits to the local community and regional ecosystem
- Measurable benefits to small businesses and startups, including those from disadvantaged backgrounds and regions



National Security



CHIPS made in America mean:



Continuity of supply for defense and critical industries and services



The newest and most advanced technology stays in America



Security standards and guidelines for commercial supply chains

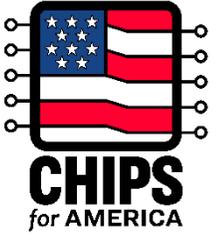


Better visibility into chip supply chain risks and faster mitigation

International Coordination

- Advance the resilience of the supply chain
- Mitigate risk of oversupply and concentration
- Promote investment guardrails
- Limit subsidy race
- Coordinate investments with other programs

Accountability



Projects must be economically viable and compatible with strategy

Beneficiaries must meet performance, reporting, audit, and oversight requirements

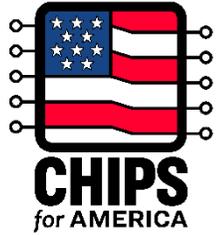
Beneficiaries may not send funded technology abroad or engage with countries of concern

Workers on funded construction projects to earn prevailing wages

Priority to programs that engage a diversity of participants

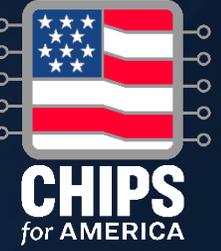
Public funds cannot be used for stock buybacks or dividend payments

Funds to be returned if taxpayer funds are misused



Next Steps

- Funding Application Process
 - Will be announced in February 2023 (6 months from enactment)
 - Proposals considered on a rolling basis
- Learn more
 - Visit [CHIPS.gov](https://www.chips.gov)
 - Read the Implementation Strategy
 - Join our mailing list



Question and Answers

How to ask a question

Attendee View

(David Lee)

Entry banner alerts Attendee that nobody will be able to see or hear them.



Event title → Sales Kickoff

Speaker Volume →

Mute Speaker →

Full Screen →

Exit the event →

Questions & Answers →

Expand side navigation (display Presenter roster) →

Settings (choose which speaker to use) →

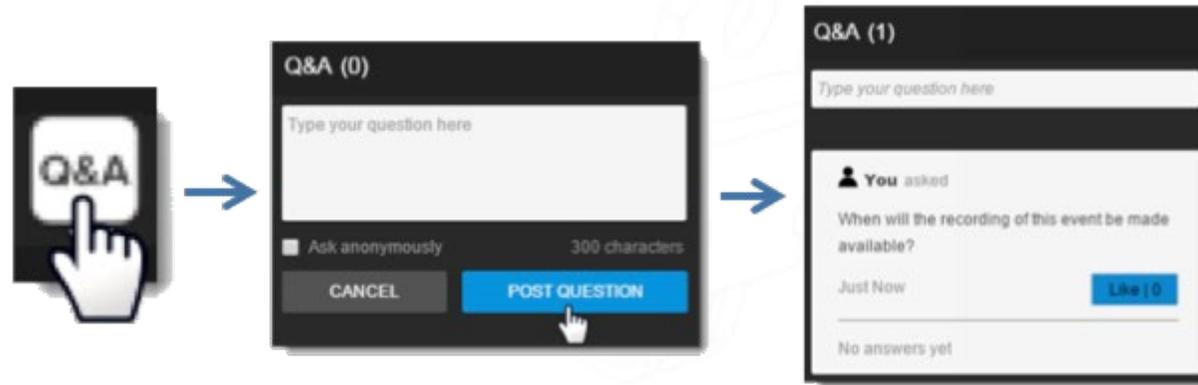
Slider bar – drag to change the size of video and content

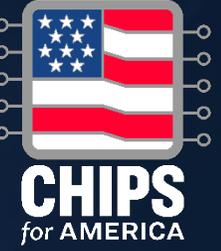
The event is live - You are in a view only role and can not be seen or heard DISMISS

Year	RED	BLUE	GREEN	YELLOW
2004	10%	15%	10%	45%
2005	25%	35%	25%	55%
2006	30%	40%	30%	65%
2007	70%	40%	55%	70%
2008	85%	65%	75%	40%
2009	90%	65%	80%	30%
2010	90%	60%	50%	25%
2011	100%	80%	60%	45%

How to post your question

Click the Q&A button, type out your question, and click “Post Question”.





Thank you for attending