



WINNING THE FUTURE.

A Blueprint for Sustained U.S. Leadership in Semiconductor Technology

SEMICONDUCTORS ARE VITAL TO AMERICA'S FUTURE

Semiconductors – the tiny chips that enable modern technologies – are critical to America's economy, job creation, technology leadership, and national security. **For 50 years, America has led the world in semiconductor innovation, driving transformative advances in nearly every modern technology, from computers to mobile phones to the Internet itself.** Today, semiconductors underpin the most exciting “must-win” technologies of the future, including artificial intelligence, quantum computing, and advanced wireless networks.

To secure America's leadership in these future technologies for the next 50 years, the United States must continue to lead the world in semiconductor research, design, and manufacturing.

CHALLENGES TO CONTINUED U.S. LEADERSHIP IN SEMICONDUCTOR TECHNOLOGY

Technology challenges and ambitious steps by foreign governments put at risk continued semiconductor innovation and U.S. leadership in this sector. Technology advancements are pushing against barriers of physics, and breakthroughs to move beyond these limits are constrained by massive capital costs. Although U.S. companies still lead the world with nearly half of global market share, state-backed competition from abroad seeks to displace U.S. leadership.

AMBITIOUS POLICY ACTION IS NEEDED TO SUSTAIN AND STRENGTHEN U.S. SEMICONDUCTOR LEADERSHIP

1 Invest in research

- Triple U.S. investments in semiconductor-specific research across federal scientific agencies from approximately \$1.5 billion to \$5 billion annually to advance new materials, designs, and architectures that will exponentially increase chip performance.
- Double U.S. research investments in semiconductor-related fields such as materials science, computer science, engineering, and applied mathematics across federal scientific agencies to spur leap-ahead innovations in semiconductor technology that will drive key technologies of the future, including artificial intelligence, quantum computing, and advanced wireless networks.

2 Incentivize domestic manufacturing

- Establish a manufacturing grant program to spur construction of new onshore advanced semiconductor manufacturing facilities in the U.S., including leading-edge logic foundries, advanced memory, and analog fabs to supply defense, critical infrastructure, and broader essential commercial needs.
- Provide tax incentives for semiconductor manufacturing, such as a refundable investment tax credit for the purchase of new semiconductor manufacturing equipment.

3 Attract and develop a skilled workforce

- Reform the high-skilled immigration system by eliminating counterproductive caps on green cards so qualified STEM graduates from U.S. colleges and universities, as well as STEM graduates from around the world, can contribute to U.S. leadership in the semiconductor industry and boost our economy.
- Increase U.S. investments in STEM education by 50 percent and implement a national STEM education initiative to double the number of American STEM graduates by 2029.

4 Ensure access to global markets and protect intellectual property

- Approve and modernize free trade agreements, including the United States-Mexico-Canada Agreement, that remove market barriers, protect IP, and enable fair competition.
- Increase resources for law enforcement and intelligence agencies to prevent and prosecute semiconductor intellectual property theft, including the misappropriation of trade secrets.

June 2020

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