



Ensuring America's National Security Through Scientific Advancement

The non-partisan <u>Science and Technology Action Committee (STAC)</u> includes individuals from non-profit, academic, foundation and corporate institutions committed to dramatically increasing U.S. investment in science and technology.

A Strong U.S. Science and Technology (S&T) Enterprise is Critical to Our National Security

Our defense apparatus relies on advancing and leading in key emerging technologies such as Artificial Intelligence (AI), quantum computing, cybersecurity, and more. Investments in research & development in critical technologies will ensure the U.S. leads and sets the rules around their ethical use. Our S&T enterprise also underpins the health of our people and our economy, both of which are essential to a strong national defense.

As a global leader in innovation, the U.S. has strengthened its ability to protect its citizens, defend its allies, articulate its principles, and encourage developing democracies. A strong S&T enterprise ensures that the U.S. has the most innovative national defense system in the world. Policies that forfeit our competitive edge to foreign entities – particularly those that are state-owned or directed – put the safety, privacy, and liberty of free people and governments at risk.

In a <u>survey of experts</u> from various industries, those working in the military and national security ranked foreign powers undermining or stealing our research and technology as the second biggest obstacle to scientific and technological advancement.

 This group also chose stronger enforcement of U.S. intellectual property rights as the policy that would have the largest impact on America's ability to lead in science and technology.

A majority of respondents from all industries see China's S&T capabilities as a significant threat: 63% to national security, 59% to the economy, and 48% to Americans' quality of life.

"China remains the most active and persistent cyber threat to U.S. government, private-sector, and critical infrastructure networks."

The Office of the Director of National Intelligence 2025 Annual Threat Assessment

Bolstering Our National Security Capabilities Must Remain a Priority

Critical technology like cybersecurity encryption, missile defense systems, biometric systems, and satellite imaging safeguard Americans every day. We must continue leading in these fields, but the <u>U.S. is in danger</u> <u>of losing our competitive advantage</u>, with China on our heels.

While China invests heavily in R&D to build its tech capabilities and overtake the U.S., federal support for fundamental discovery research is lagging – stifling American innovation. The chart below shows the top 5 countries ranked by their proportion of high-impact research output across key defense, space, robotics and transportation technologies.

Technology	Top 5 countries				
Advanced aircraft engines (incl. hypersonics)	* 48.49%	11.69%	€.96%	3.93%	3.60%
Drones, swarming and collaborative robots	*: 36.07%	10.30%	6.13%	®	4.53%
Small satellites	24.49%	*) 17.32%	7.82%	4.36%	4.11%
Autonomous systems operation technology	*) 26.20%	21.01%	5.28%	5.11%	3.55%
Advanced robotics	27.89%	24.64%	5.49%	4.81%	3.79%



Australian Strategic Policy Institute. (2023). ASPI's Critical Technology Tracker. <u>https://ad-aspi.s3.ap-southeast-2.amazonaws.com/2023-03/ASPIs%20Critical%20Technology%20Tracker_0.pdf</u> <u>?VersionId=ndm5v4DRMfpLvu.x69Bi_VUdMVLp07jw</u>

The Vision for American Science and Technology (VAST), a project of STAC, includes recommendations to bolster our national security by:

- Investing strategically in fundamental discovery research, applied research, and research infrastructure that is vital to America's national security, competitiveness, and wellbeing.
- Optimizing the tax code to enhance competitiveness, strengthen national security, and create more well-paying jobs.
- Strengthening research security to prevent illegal and improper transfer of U.S. research and development; create policies that are as open and streamlined as possible and as secure as needed.
- Establishing a recurring national priority-setting process to confirm areas of research that are foundational to national competitiveness and security.

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