



TESTIMONY OF

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BEFORE

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Subcommittee on Communications and Technology

“Legislative Hearing on Protecting Communications Networks and Improving Connectivity”

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SUMMARY OF TESTIMONY — AUVSI, the world’s largest nonprofit organization dedicated to advancing uncrewed systems, autonomy, and robotics, testifies in strong support of the Guarding the U.S. Against Adversarial Robotics Dominance (GUARD) Act. AUVSI represented the drone industry as the People’s Republic of China (PRC) captured the U.S. drone market. The PRC is now running the same strategy in robotics but has not yet succeeded, so Congress must act while the cost is low.

- **The drone lesson.** By the time national security restrictions arrived, a single subsidized PRC manufacturer accounted for ninety-six percent of the uncrewed aircraft detected in U.S. airspace. The cost of restricting an adversary’s technology scales with its installed base, which only grows. The GUARD Act is the chance to act on time in robotics.
- **The national security stakes.** Connected robots from PRC firms are mobile, sensor-rich platforms with physical agency, and are subject to PRC laws that compel cooperation with state intelligence. The national security risks — data exposure, sensor access, and remote disruption — are documented and demonstrated. And robotics is the physical embodiment of AI; ceding the U.S. deployment base to the PRC surrenders data on which AI leadership will be built.
- **Beijing’s strategy — and the closing window to act.** China treats robotics as a strategic priority and pours in state resources: over \$20 billion in robotics subsidies in 2024–25 alone, and a roughly \$137 billion AI and robotics national fund, plus purchase subsidies and state-directed buyers. That backing is why Chinese firms shipped roughly ninety percent of the world’s humanoid robots in 2025. This is the same subsidize-saturate-export playbook that captured the global drone market. The covered robotic market is still nascent, with global humanoid shipments quintupling but reaching only the low tens of thousands in 2025, so there is a window to act. Yet early capture is already visible in U.S. research institutions and law enforcement, so the time to act is now.
- **What effective legislation must do.** Act early; restrict finished adversary systems now while studying components for potential action later; protect allies in statute; set deadlines with consequences, and impose rigorous oversight; give industry transparency, predictability, and input; and pair risk-based restrictions with investment. The GUARD Act measures well against these principles, and AUVSI offers refinements, including on adjacent uncrewed mobile ground systems.
- **Minimal disruption today, rising costs tomorrow.** The bill’s impact on U.S. commerce is small: China supplies only about four percent of U.S. industrial robotics imports — roughly \$30 million in 2024 — and one leading PRC maker of both covered form factors reported total global revenue of about \$250 million, of which U.S. sales are a fraction. A broader-scope bill would reach more, yet even that impact would be small. And the bill restricts finished systems, not the components. American industry supports action, and because market disruption grows with the PRC’s installed base in the United States, the costs of inaction far exceeds the costs of acting now.
- **Completing the strategy — restrictions and investments.** Risk-based restrictions must be paired with a national robotics commission, a national strategy, and investment in U.S. industry: secure supply chains for critical inputs like rare-earth magnets, domestic financing, procurement demand signals, and workforce development.

AUVSI urges the Committee to advance the GUARD Act, and Congress to pass it.

I. Introduction

Chairman Hudson, Ranking Member Matsui, and distinguished Members of the Subcommittee: thank you for the opportunity to testify today, and thank you for this Committee's leadership in confronting the national security risks posed by robotics systems produced by foreign adversaries. AUVSI appears today in strong support of the Guarding the U.S. Against Adversarial Robotics Dominance (GUARD) Act, and this testimony explains why we believe it is timely, important, and urgently needed.

My name is Michael Robbins, and I serve as President and CEO of the Association for Uncrewed Vehicle Systems International (AUVSI). Founded in 1972, AUVSI is the world's largest nonprofit organization dedicated to advancing uncrewed systems, autonomy, and robotics. Our approximately 500 member organizations and companies include manufacturers, operators, public safety agencies, logistics providers, network and software companies, and academic institutions. Our membership, which operates in both the defense and commercial sectors, spans every domain in which autonomous technologies operate — air, ground, and maritime — and ranges from drone manufacturers and operators to the companies building America's humanoid and ground robotics industry, along with the component suppliers, software developers, integrators, researchers, and end users who make up the broader ecosystem. Through our Partnership for Robotics Competitiveness¹, AUVSI convenes leading American robotics companies to develop the policy agenda for U.S. robotics leadership, and I have had the privilege of testifying on these issues this year before the House Committee on Homeland Security and the

¹AUVSI Partnership for Robotics Competitiveness: Securing U.S. Leadership in Robotics and Physical Artificial Intelligence White Paper, <https://www.auvsi.org/wp-content/uploads/2026/02/AUVSI-PFRC-Whitepaper.pdf>

House Committee on Science, Space, and Technology. Our testimony today continues and builds on that record.

The breadth of AUVSI's work is why we begin our testimony not with robotics, but with drones. AUVSI occupies a distinct vantage point on the question before this Subcommittee: we represented the American drone industry as the People's Republic of China (PRC) captured the U.S. drone market, and we represent the American robotics industry today, as the same strategy is applied again — crucially, before it has succeeded. We watched the first chapter of this story unfold from the front row, and we are watching the second chapter begin. If you act now, Congress has the opportunity to chart a different course for American leadership and national security. The GUARD Act before this Subcommittee is that opportunity, and AUVSI strongly supports it.

II. The Drone Lesson: What Happens When Policy Fails American Industry

The experience of the U.S. drone market is the essential context for the legislation before this Subcommittee, and it merits careful examination, because its central dynamics are now repeating in robotics.

Over roughly a decade, PRC-based manufacturers — above all DJI — came to dominate American skies. By the time meaningful national security-based restrictions arrived, DJI held approximately ninety percent of the global consumer drone market, roughly seventy percent of the overall civilian drone sector, and close to eighty percent of the U.S. commercial segment.² A 2021 survey found that more than ninety percent of U.S. public safety agencies operating drones

flew DJI aircraft.³ Federally funded research analyzing Remote ID telemetry found that DJI-manufactured platforms comprised ninety-six percent of the uncrewed aircraft detected in U.S. airspace through late 2025.⁴ Share on that scale was engineered in Beijing, not earned in the market. By the time national security restrictions arrived, American operators had built their operations around a single foreign supplier, and that strategic dependence made every later policy choice harder, even if in the best interest of U.S. national security.

That concentration carried national security consequences. Drones are flying sensor platforms. At that scale of deployment, aerial imagery and mapping of American cities and critical infrastructure, and detailed patterns of how U.S. public safety agencies operate, accumulated on systems manufactured by companies subject to PRC legal jurisdiction. And because drones are remotely operated flying machines, a compromised or maliciously directed aircraft is not only a collection risk but a potential physical hazard to people and property. The Cybersecurity and Infrastructure Security Agency and the Federal Bureau of Investigation warned in joint guidance that Chinese-manufactured drones present significant risks to critical infrastructure and U.S. national security, given PRC legal authorities that compel companies to provide access to data.⁵

This dominance did not come about because Chinese drones were necessarily superior. It came about because they were cheaper, and they were cheaper because Beijing's industrial policy

² Special Competitive Studies Project, *2025 Gaps Analysis: Commercial Drones*, <https://www.scsdp.ai/reports/2025-gaps-analysis/gaps-analysis/commercial-drones/>.

³ AIRT/DRONERESPONDERS public safety survey (2021), <https://www.droneresponders.org/post/dji-domination-of-public-safety-drone-sector-continues-as-autel-robotics-surges-to-second-position>

⁴ ASSURE, *Drone Traffic Analysis (A11L.UAS.122): 2025 Annual Report*, FAA Center of Excellence for UAS Research (Jan. 15, 2026), https://assureuas.com/wp-content/uploads/2024/07/A83_2025-Annual-Report_v5_web.pdf.

⁵ Cybersecurity and Infrastructure Security Agency and Federal Bureau of Investigation, *Cybersecurity Guidance: Chinese-Manufactured Unmanned Aircraft Systems*, (January 17, 2024), <https://www.cisa.gov/sites/default/files/2024-01/Cybersecurity%20Guidance%20Chinese-Manufactured%20UAS.pdf>.

made them so, to create strategic dependence. This playbook has been used repeatedly by the Chinese Communist Party (CCP) across industry sectors. Sustained state subsidies enabled below-cost pricing that no commercially based manufacturer, American or allied, could match. American buyers, behaving rationally, bought capable products at the lowest price. The installed base compounded year over year, and training pipelines, maintenance ecosystems, software integrations, and procurement habits organized themselves around the dominant platform. No one set out to build a domestic constituency for a foreign national champion; it emerged one purchase at a time, as the installed base grew and the cost of unwinding it grew with it.

The strategic dependence, moreover, ran deeper than the aircraft themselves. Chinese-manufactured platforms and Chinese-manufactured components — flight controllers, navigation systems, sensors and cameras, communications links, batteries, and control software — became, in effect, the default supply chain for the American drone ecosystem. Divesting from that position has proven extraordinarily difficult. Replacing a compromised component means requalifying suppliers, redesigning aircraft, and recertifying systems, often on timelines measured in years. Agencies and operators face real transition costs to replace fleets their missions depend on. And American manufacturers seeking to rebuild capacity must enter a market whose prices were anchored below cost by a subsidized incumbent — competing, in practical terms, not against a company but against a state. That untangling is still underway today, and its difficulty is the clearest measure of what delay costs.

By the time Washington moved decisively, the remaining options were costly ones. Congress began responding with the American Security Drone Act, which restricted federal procurement and operation of covered foreign-made drones — an important start, though focused only on government use. Then Section 1709 of the Fiscal Year 2025 National Defense Authorization Act

required a national security review of the leading PRC drone makers within one year, with placement on the Federal Communications Commission's (FCC) Covered List as the consequence of either an adverse determination or a failure to complete the review. That deadline produced a determination within the statutory year, and in December 2025 the FCC updated the Covered List accordingly.⁶ AUVSI has long supported strong action on foreign adversary drones, and we believe such measures are most effective — and most durable — when they are based on verified national security risk and focused on foreign adversary systems, rather than sweeping in production from allied and partner nations that present no comparable risk. Nonetheless, this action came after a decade of entrenchment. The American drone ecosystem — manufacturers, operators, public agencies, and the retail channels alike — is now bearing transition costs, supply adjustments, and operational disruptions that would have been a small fraction of their present size had the United States acted when the market was nascent. American manufacturers in the drone industry, for their part, are now scaling admirably into the opening — but they are doing so a decade later than necessary, against an incumbent whose dominance formed during the years in which the United States lacked a policy response.

The lesson can be stated precisely: the cost of restricting an adversary's technology is a function of its installed base, and the installed base only grows. Every year of delay converts a relatively inexpensive decision into a more expensive one. That lesson points in two directions at once — toward timely, well-scoped restrictions on adversary systems, and toward sustained investment in domestic production, the industrial base, and allied supply chains. Both directions run throughout this testimony, and the opportunity now before Congress is to apply them in robotics

⁶ Federal Communications Commission, Public Safety and Homeland Security Bureau, *Public Notice DA 25-1086*, <https://docs.fcc.gov/public/attachments/DA-25-1086A1.pdf>.

while doing so remains inexpensive. The GUARD Act is precisely that application: the drone lesson, learned on time.

III. The Stakes: Cyber-Physical Risk and the Future of Physical AI

Before returning to the current state of the robotics market, AUVSI believes it is important to highlight what is at stake — because this is, at its core, a national security issue. The risks that motivated Congress to act on Chinese telecommunications equipment and Chinese drones apply fully to Chinese robotics. Like drones, ground robots are mobile, connected sensor platforms, and each class of mobile system creates its own distinct threat profile. What distinguishes ground robots is where and how they operate: within facilities, workplaces, and homes rather than overhead, and with the ability not only to observe their surroundings but to physically manipulate them — to grasp, carry, open, and actuate. Robots extend the same adversary-access problem into new spaces, and add physical manipulation to it.

Connected robots are networked, sensor-rich platforms with physical agency. The risk they present has three dimensions. First, **data exposure**: these systems continuously collect facility layouts, movement patterns, operational workflows, and records of human-machine interaction. Aggregated across deployments, this data reveals sensitive insight into American manufacturing operations, critical infrastructure, military and government facilities, supply chains, and — as these systems enter homes and care settings — the private lives of American families. Second, **sensor access**: onboard cameras, microphones, LiDAR, and other sensors can be remotely tasked, converting a commercial product into a surveillance instrument inside the perimeter of a factory, a hospital, a warehouse, or a living room. Third, **remote disruption and manipulation**: vulnerabilities in software, firmware, or vendor-managed cloud services translate directly into

physical consequences — halted production lines, safety hazards to workers, or the deliberate misuse of a machine that can move, grasp, and apply force. Because these systems depend on vendor-managed updates, diagnostics, and cloud services for their entire operating life, the access is not a one-time exposure; it is persistent, by design.

Mobility compounds all three dimensions. A compromised laptop exposes data; a compromised robot can expose data and also move, map, surveil, and act. A stationary sensor observes one room; a mobile robot traverses its environment, learns the layout, and carries its sensors wherever its legs, wheels, or tracks can go. These are machines designed to operate across the industrial, public, and domestic spaces of American life.

These concerns are documented, not hypothetical. Security researchers identified an undocumented backdoor in a leading Chinese quadruped platform that enabled remote access to its cameras and controls.⁷ Subsequent research found Chinese humanoid robots transmitting data to servers in China at regular intervals, along with an exploit permitting the takeover of entire fleets of connected robots.⁸ Publicly available footage has shown armed Chinese quadruped robots in People’s Liberation Army training exercises,⁹ and in June of this year the Department of Defense formally designated Unitree among other PRC robotics manufacturers on its Section 1260H list of Chinese Military Companies operating in the United States.¹⁰ Nor is the weaponization potential of these commercial platforms speculative: U.S. Marines have publicly

⁷ Sam Sabin, “Chinese Robotics Manufacturer Left Backdoor in Product,” *Axios*, (April 1, 2025), <https://www.axios.com/2025/04/01/threat-spotlight-backdoor-in-chinese-robots-future-of-cybersecurity>.

⁸ Mayoral-Vilches, V., Makris, A., & Finisterre, K. (2025). *Cybersecurity AI: Humanoid Robots as Attack Vectors*. arXiv:2509.14139. <https://arxiv.org/abs/2509.14139>

⁹ Jane Tang, “‘The Robot Dog’s Time to Kill’: At China’s Star Robotics Firm, the Military Ties Keep Mounting,” *The Brief* (Kharon), (July 16, 2025), <https://www.kharon.com/brief/unitree-robotics-china-pla>.

experimented with firing a rocket from a commercially available Chinese-made quadruped purchased online, underscoring both how readily these systems convert to kinetic use and how easily commercially available PRC platforms can end up in sensitive environments — including U.S. military training settings — through nothing more than an online purchase.¹¹ Congress has recognized the adjacent risks as well: bipartisan legislation has been introduced in both chambers — including the Securing Infrastructure from Foreign Adversaries Act and the SAFE LiDAR Act — to address the mapping and surveillance risks posed by adversary-manufactured LiDAR deployed in the United States.

The risk is structural as well as technical. Under the PRC's National Intelligence Law of 2017 and related data security statutes, Chinese companies are legally obligated to support state intelligence work and prohibited from disclosing that cooperation.¹² No contract, no audit, and no firmware update can amend the legal jurisdiction of the manufacturer. The public record on PRC cyber operations against U.S. critical infrastructure shows that pre-positioning access inside American systems is an observed adversary behavior, not a theoretical one. A mobile, sensor-rich, remotely updatable machine operating inside American facilities, or moving through American communities, extends that pre-positioning risk into physical space — and adds the dimension of onboard manipulation.

¹⁰ U.S. Department of Defense, *Entities Identified as Chinese Military Companies Operating in the United States in Accordance with Section 1260H* (June 8, 2026), <https://media.defense.gov/2026/Jun/08/2003945537/-1/-1/1/ENTITIES-IDENTIFIED-AS-CHINESE-MILITARY-COMPANIES-OPERATING-IN-THE-UNITED-STATES-IN-ACCORDANCE-WITH-SECTION-1260H.PDF>.

¹¹ Konkel, Todd South, "Watch Marines fire rocket from 'creepy' robot goat available on Amazon," *Military Times* (Oct. 27, 2023), <https://www.militarytimes.com/off-duty/military-culture/2023/10/27/watch-marines-fire-rocket-from-creepy-robot-goat-available-on-amazon/>.

¹² U.S. Department of Homeland Security, *Data Security Business Advisory: Risks and Considerations for Businesses Using Data Services and Equipment from Firms Linked to the People's Republic of China* (Dec. 2020), https://www.dhs.gov/sites/default/files/publications/20_1222_data-security-business-advisory.pdf

There is a second dimension to the stakes, and it is inseparable from the first. If PRC-subsidized industry captures the American robotics market, the United States does not merely lose market share and economic competitiveness — it forfeits technology leadership in the physical form of artificial intelligence (AI), in both hardware and software, and it locks in the data, access, and sabotage risks described above at national scale, on a lasting basis.

On the hardware side, manufacturing scale drives the cost curves, the engineering know-how, the component ecosystems, and the supply-chain depth that determine who can build the next generation of these machines at all. The world has already run this experiment once in robotics: none of the world's ten largest industrial robotics companies is headquartered in the United States, and America's industrial robotics sector is a small fraction of China's.¹³ Humanoid and mobile ground robotics is the category where that outcome is not yet locked in — where American companies lead in innovation and can still lead in production, if the market they are scaling into is not ceded to a PRC-subsidized competitor first.

On the software and data side, advanced robots are embodied AI. As AUVSI stated in testimony before the Science Committee this spring, if AI is the brain, robotics is increasingly the body — the means through which artificial intelligence acts in, and creates value in, the physical world.¹⁴ Leadership in physical AI will be decided by real-world deployment data, the millions of hours of operation through which these systems learn to perceive, navigate, and manipulate their

¹³ CSIS ChinaPower Project, *How Are China's Robotics Ambitions Transforming Global Industry?* (February 2026), <https://chinapower.csis.org/china-industrial-robots/>.

¹⁴ Michael Robbins (AUVSI), Testimony Before the House Science, Space, and Technology Committee, Subcommittee on Research and Technology (Apr. 21, 2026), https://republicans-science.house.gov/_cache/files/4/d/4de5c690-938f-4d16-a9bc-077f69b65403/6B2EA35B4358D67F144AC9B48CFCEB5D39E4A7EBF4170430E3D0CB5745B73377.04.21.26-robotics-hearing-testimony---mr.-michael-robbins.pdf

environments. Chinese firms already hold a substantial and widening lead in deployment data.¹⁵ And because these systems learn from use, the dynamic is circular: deployment generates data, data improves the systems, and better systems win more deployment. The longer PRC platforms are permitted to grow their foothold in the American market, the faster that loop compounds for Beijing's industry — every additional year of U.S. deployment accelerates the adversary's improvement. Deployment, in other words, is never neutral. Every PRC robot operating in an American facility is simultaneously revenue for a subsidized competitor, training data for an adversary's AI ecosystem, and product iteration for the next model. America can lead the world in AI software and still lose the AI era if that software has no American-made systems to run on, and no American deployment base generating the data on which physical AI is built. The converse is the danger: if the PRC dominates the deployment base, the data generated in American factories, warehouses, and homes improves the PRC's AI — not ours.

Losing this market would therefore not be an economic setback alone. It would amount to a national security decision — the forfeiture of American leadership in a defining dual-use technology of the coming decades, combined with the lasting embedding of adversary-controlled machines across our economy and our homes. Congress should not let that decision be made by default. The GUARD Act exists to ensure it is made deliberately.

IV. Robotics Today: The Window Is Open — But Closing Fast

With those stakes in view, the single most important fact about the robotics market is this: the PRC's capture effort has begun, but it has not yet succeeded. The window in which Congress can

¹⁵ China Power Team, "Is China Leading the Robotics Revolution?", ChinaPower Project, CSIS (Feb. 12, 2026), <https://chinapower.csis.org/china-industrial-robots/>.

act at minimal cost is open today. We must act now — and the GUARD Act is the vehicle for doing so.

The global market for humanoid robots remains genuinely nascent. Industry analysts estimate that between roughly 13,000 and 16,000 humanoid robots were shipped worldwide in all of 2025 — most of them in the United States are for pilot programs, research, and demonstration rather than production use.¹⁶ For perspective, that is a global total, across every country and every use case. The U.S. installed base of PRC humanoid and quadruped systems is correspondingly small in absolute terms. Even in the broader and far more mature industrial robotics trade, China accounted for just 16.7 percent of global exports in 2024 — and the United States imports most of its industrial robots from allies such as Japan and Germany, not from China.¹⁷

But the market is growing explosively — global humanoid shipments more than quintupled from 2024 to 2025¹⁸ — and the early capture dynamics are no longer theoretical. They are observable, on American soil, in the two segments where adoption tends to begin. The covered categories move together here: quadrupeds are the more commercially mature of the two, and what has already happened in the quadruped market is the leading indicator for what is beginning in humanoids.

¹⁶ Omdia estimates approximately 13,000 units: “Chinese Firms Dominated Global Humanoid Robot Shipments in 2025,” *Bloomberg*, January 8, 2026, <https://www.bloomberg.com/news/articles/2026-01-08/chinese-firms-dominated-global-humanoid-robot-shipments-in-2025>. Counterpoint Research estimates approximately 16,000 units: <https://counterpointresearch.com/en/insights/Global-Humanoid-Robot-Installations-Reach-16%2C000-Units-in-2025-as-Mass-Production-Picks-Pace>.

¹⁷ China Power Team, “Is China Leading the Robotics Revolution?”, ChinaPower Project, CSIS (Feb. 12, 2026), <https://chinapower.csis.org/china-industrial-robots/>.

¹⁸ “Chinese Firms Dominated Global Humanoid Robot Shipments in 2025,” *Bloomberg*, January 8, 2026, <https://www.bloomberg.com/news/articles/2026-01-08/chinese-firms-dominated-global-humanoid-robot-shipments-in-2025>.

The first segment is research. As Boston Dynamics, an American robotics pioneer and AUVSI member, testified before the House Committee on Homeland Security in March, the U.S. academic and research market for quadruped robots — once led by American platforms — shifted to lower-cost Chinese systems in a span of roughly twelve to eighteen months.¹⁹ The research market matters far beyond its size. It is where the next generation of American roboticists is trained, where software ecosystems and tooling form around platforms, and where network effects — the self-reinforcing advantages a platform gains as more people build on it — are born. The platforms our graduate students learn on today are the platforms their companies will buy tomorrow.

The second segment is public safety. American law enforcement agencies have begun adopting Chinese-manufactured robot dogs, in a pattern that industry witnesses have compared explicitly to the early years of Chinese drone adoption by public safety agencies.²⁰ The comparison matters because public safety adoption is precisely how the drone dependency became entrenched: once American first responders depend on a platform, restricting it means imposing costs on the agencies that protect our communities, and the path to restriction becomes far more difficult. That constituency is forming again now, one department at a time. Compounding the challenge, Chinese-manufactured robotic systems have appeared in the U.S. market under other brand

¹⁹ Testimony of Boston Dynamics before the House Committee on Homeland Security, Subcommittee on Cybersecurity and Infrastructure Protection, March 17, 2026, <https://homeland.house.gov/wp-content/uploads/2026/03/Subcommittee-on-Cybersecurity-and-Infrastructure-Protection-Hearing-Testimony.pdf>.

²⁰ Testimony of Boston Dynamics before the House Committee on Homeland Security, Subcommittee on Cybersecurity and Infrastructure Protection, March 17, 2026, <https://homeland.house.gov/wp-content/uploads/2026/03/Subcommittee-on-Cybersecurity-and-Infrastructure-Protection-Hearing-Testimony.pdf>.

names.²¹ This mirrors a broader pattern across Chinese-linked industries, where entity-by-entity restrictions have proven insufficient to catch obscured ownership and rebranded products.²²

AUVSI would ask the Committee to hold these facts together in a particular way. In drones, the statistics we cited in Section II are history — measured, documented, and reversible only at great cost. In robotics, the equivalent statistics are still forecasts. That demonstrates precisely the opportunity: Congress has a chance to legislate while the dependency is a projection rather than a fact, and the growth curve is the measure of how quickly that chance is passing. None of this is happening by accident — which brings us to how it is being engineered by the CCP.

V. The Playbook: How Beijing Builds a Monopoly

What happened in drones — and what is now beginning in robotics — was not an accident of commerce. It was the execution of a documented industrial strategy, one the PRC has carried to completion in multiple sectors. Understanding that strategy matters, because it tells this Committee what the next five years look like absent action.

The playbook has four moves. First, **subsidize supply**: the Chinese government allocated more than \$20 billion in robotics subsidies in late 2024 and early 2025 through grants, loans, tax credits, and state-backed venture capital, while also establishing a one-trillion-yuan (roughly

²¹ "Thermonator, the Flame-Throwing Robot Dog, Can Now Be Yours for \$9,420," Gizmodo (Apr. 23, 2024), <https://gizmodo.com/thermonator-the-flame-throwing-robot-dog-can-now-be-y-1851429292>; Noah Berman, "While Politicians Fret, Unitree is Selling Robots Across America," The Wire China (Nov. 23, 2025), <https://www.thewirechina.com/2025/11/23/while-politicians-fret-unitree-is-selling-robots-across-america-unitree-police-robot/>.

²² Eli Clemens, "How Some Chinese Companies Obscure Ties to China and What Policymakers Should Do About It," ITIF (Nov. 3, 2025), <https://itif.org/publications/2025/11/03/some-chinese-companies-obscure-ties-to-china-what-policy-makers-should-do-about-it/>.

\$137 billion) fund to support AI and robotics startups over the next 20 years.²³ Second, **subsidize demand**: the city of Guangzhou has subsidized twenty percent of the purchase price of locally made robots since 2014; Beijing now operates purchase subsidies specifically for humanoid robots; and state-owned enterprises serve as directed buyers — in 2025, state-owned China Mobile awarded a roughly \$17 million humanoid robot tender to Unitree Robotics and AgiBot, while simultaneously holding a venture investment in Unitree.²⁴ Sell-side subsidy, buy-side subsidy, and state ownership stakes operate simultaneously; these companies are not required to compete on market terms. Third, **saturate the domestic market, then export** — the sequence the world watched in solar panels and again in electric vehicles: state-fueled domestic scale first, then a wave of exports at prices no market-financed competitor can match. Analysts at CSIS observe that Beijing's priority industries have historically followed exactly this pattern, and that Chinese robotics suppliers are already looking to the United States as a growth market.²⁵ Fourth, **convert market share into dependence** — the move the drone experience makes vivid. Once a subsidized incumbent holds a dominant installed base, restrictions become costly and disruptive for the Americans who rely on its products, and new entrants face a market in which nearly all demand is already captured, prices are anchored below cost, and the incumbent's ecosystem of software, service, and training locks customers in. At that point, an American company seeking

²³ Reuters, "China's AI-powered humanoid robots aim to transform manufacturing" (May 13, 2025), <https://www.reuters.com/world/china/chinas-ai-powered-humanoid-robots-aim-transform-manufacturing-2025-05-13/>.

²⁴ "Is China Leading the Robotics Revolution?", ChinaPower Project, CSIS (Feb. 12, 2026), <https://chinapower.csis.org/china-industrial-robots/>.

²⁵ "Is China Leading the Robotics Revolution?", ChinaPower Project, CSIS (Feb. 12, 2026), <https://chinapower.csis.org/china-industrial-robots/>. See also testimony of Rush Doshi, before the House Committee on Homeland Security, Subcommittee on Cybersecurity and Infrastructure Protection, (March 17, 2026), <https://homeland.house.gov/wp-content/uploads/2026/03/Subcommittee-on-Cybersecurity-and-Infrastructure-Protection-Hearing-Testimony.pdf>.

to compete must overcome not a rival firm's advantages but a foreign government's balance sheet.

It is worth pausing to consider why this competition is structurally asymmetric, because the asymmetry is the heart of the problem. The United States allocates capital through private markets: American robotics companies raise financing investor by investor, round by round, against expectations of commercial return, and they answer for losses. That system is a profound strength — it disciplines investment and rewards genuine innovation — but it means no American firm has access to a sector-wide, loss-tolerant funding source. In the PRC's state-directed model, by contrast, firms across a designated priority sector draw on government funds, state-bank lending, and directed procurement simultaneously, and can sustain years of below-cost pricing because the objective is national market capture rather than firm-level profit. When a market-financed company meets a state-financed sector, the outcome is not determined by which builds the better product. Policy — not protectionism, but policy that restores the conditions of fair competition — is the only corrective.

The evidence that this playbook is now aimed at robotics is visible in the shipment data described in Section IV, and in who is doing the shipping. Chinese manufacturers accounted for roughly ninety percent of global humanoid robot shipments in 2025.²⁶ The leading PRC maker of both humanoid and quadruped robots, Unitree Robotics, reports shipping approximately 5,500 humanoid robots in 2025 alone, with more than 30,000 quadruped robots sold between 2022 and September 2025.²⁷ Unitree advertises its entry-level humanoid, the R1, at \$5,900²⁸ and its

²⁶ Omdia, *General-Purpose Embodied Intelligent Robots, 2026* (Jan. 2026), <https://omdia.tech.informa.com/om143809/omdia-market-radar-generalpurpose-embodied-intelligent-robots-2026>.

²⁷ Unitree Robotics IPO prospectus disclosures, as reported by *Rest of World* (2026), <https://restofworld.org/2026/unitree-china-humanoid-robot-shanghai-ipo/>.

average humanoid selling price fell from roughly \$85,000 in 2023 to roughly \$25,000 in 2025 — a price trajectory achieved while reportedly maintaining strong margins, and one that is the signature of subsidized vertical integration rather than market economics.²⁹ At the CES technology show this January, Chinese humanoid exhibitors far outnumbered their American counterparts — by roughly five to one, as Boston Dynamics also observed in its testimony.³⁰

Beijing is not concealing its intentions. Robotics is a named priority of the PRC's industrial planning apparatus, pursued through successive five-year plans and coordinated national programs.³¹ Wall Street's long-run forecasts convey the stakes: Morgan Stanley projects a global humanoid robotics market exceeding five trillion dollars by 2050, with China fielding roughly four times as many humanoid robots as the United States in its base case.³² Even if those projections prove only half right, Beijing's methodology is unchanged: this is a technology that will become foundational across the economy — nascent today, ubiquitous within a generation — and the PRC intends to own the market for it, using the same playbook that worked in solar, worked in drones, and is designed to work again here. That projected gap is not, however, destiny or a *fait accompli*. It can be changed by policy choices and action — the subject of Section VIII.

²⁸ New Atlas, "Affordable humanoid robot R1 launched by Unitree" (July 29, 2025), <https://newatlas.com/ai-humanoids/unitree-r1-humanoid-robot/>.

²⁹ Unitree Robotics IPO prospectus disclosures, as reported by *Rest of World* (2026), <https://restofworld.org/2026/unitree-china-humanoid-robot-shanghai-ipo/>.

³⁰ Testimony of Boston Dynamics before the House Committee on Homeland Security, Subcommittee on Cybersecurity and Infrastructure Protection, March 17, 2026, <https://homeland.house.gov/wp-content/uploads/2026/03/Subcommittee-on-Cybersecurity-and-Infrastructure-Protection-Hearing-Testimony.pdf>.

³¹ Karen M. Sutter, Congressional Research Service, *Made in China 2025 and China's Industrial Policies*, IF10964 (updated), <https://www.congress.gov/crs-product/IF10964>.

³² Morgan Stanley Research, "Humanoids: A \$5 Trillion Market" (May 14, 2025), <https://www.morganstanley.com/insights/articles/humanoid-robot-market-5-trillion-by-2050>.

VI. What Effective Legislation Must Do

AUVSI wants to offer the principles that, in our judgment — informed by our members’ experience across both the drone and robotics domains — should govern legislation addressing foreign adversary robotics and U.S. robotics industry competitiveness. We will then say plainly how the GUARD Act measures against them, and note refinements the Committee may wish to consider.

First, act early — before the installed base exists. The central lesson of the drone experience is that the costs associated with restriction scale with entrenchment, and entrenchment compounds. Legislation that waits until the problem has metastasized — until adversary systems number in the millions — will arrive, as it did in drones, a decade late and at many times the economic and national security cost. The nascency of today’s humanoid and quadruped market is not a reason to wait; it presents the opportunity to act with optimal effect.

Second, restrict finished adversary systems now — and study components carefully.

Restricting complete advanced mobile robotics systems and their control software addresses the threat where it lives: in the integrated, connected, adversary-controlled product with its vendor-managed software and cloud services. Components present a different and more complex question. American manufacturers source components globally, and component-level restrictions implicate supplier requalification, redesign, and recertification on timelines measured in years — burdens that would fall in the first instance on the American companies that smart U.S. policy should aim to protect and promote. The right sequence is therefore to move on finished systems without delay, while directing or conducting a rigorous study of component-level risks. That study should examine not only the security risks but also the impact on American industry and

the timing considerations of any restriction, including whether a phased approach — one that gives U.S. manufacturers a clear signal and sufficient runway to identify, validate, and scale trusted alternative suppliers — would best serve both security and competitiveness. The National Commission on Robotics that AUVSI has championed, and whose House legislation is now pending before this Committee, would be a natural home for exactly this kind of study. But restrictions on finished systems should not wait for the component question to be resolved.

Third, protect allies and partners. Our allies are not the threat; they are essential to the answer. Japan, Germany, and other allied nations supply most of the industrial robots American factories use today,³³ allied supply chains are woven through American robotics products, and the durable long-term counter to Beijing's scale advantage is a trusted robotics market spanning the United States and its allies and partners. Recent experience with drone restrictions showed how implementation can sweep more broadly than Congress may have intended, reaching allied and partner production that poses no significant adversary-related risk and generating avoidable disruption and uncertainty for American industry and trusted allied suppliers alike. Congress should write allied protection into legislative text — expressly and unambiguously — so that it does not depend on the discretion of any future implementation or action. A statute that distinguishes allied from adversary production is not a loophole; it is a feature.

Fourth, set deadlines with consequences — or, at minimum, meaningful oversight.

Washington's default outcome for difficult reviews is too often no outcome. However, one way Congress has averted this fate is by pairing a mandatory national security review with an automatic consequence for inaction. Review mechanisms without action-forcing deadlines risk

becoming open-ended deliberations while the installed base grows. But should Congress choose to adjust or remove the deadline structure, any change should be paired with rigorous oversight — for example, periodic reporting and briefings to the appropriate committees until the review is complete — so that timely completion does not depend on goodwill alone.

Fifth, give industry structure, transparency, predictability, and the opportunity to provide input. American companies can adapt to restrictions; they struggle to adapt to unpredictability.

Two distinct processes deserve this discipline. The first is the review-and-determination process itself. Here, legislation should provide, or direct the Executive Branch to provide, clear assessment criteria so manufacturers and buyers understand what is being evaluated and why; a defined mechanism for industry and stakeholder input to the reviewing agencies, so that determinations are informed by the technical and market realities industry can most effectively supply; and published timelines — all operating within, and never in place of, the statutory clock. The second is any exemption or specific-determination process that operates after a review concludes. The same virtues apply there: published criteria, a well-defined and responsive procedure, and prompt decisions, within any timeline Congress may choose to impose. In both processes, uncertainty is itself a tax — on trusted manufacturers, and on American buyers making multi-year capital decisions.

Sixth, pair restrictions with investment. Restrictions buy time and space; they do not by themselves win the competition. Congress should couple risk-based security measures with an affirmative agenda for American robotics capacity — a subject important enough that we address it separately in Section VIII. AUVSI has consistently advocated this two-pronged approach: risk-

³³ Foundation for Defense of Democracies, "Section 232 National Security Investigation of Imports of Robotics and Industrial Machinery" (Oct. 17, 2025), <https://www.fdd.org/analysis/2025/10/17/section-232-national-security->

based restrictions on adversary systems, and investment in American and allied capability.

Neither prong succeeds alone.

Measured against these principles, the GUARD Act is vital legislation that Congress should pass. It acts while the market is in its early stages. It covers certain finished advanced mobile robotics systems and their control software — not components. Its rule of construction expressly protects NATO allies and Major Non-NATO Allies. And its review mechanism pairs a mandatory national security evaluation with a deadline that has consequences. AUVSI is proud to support the GUARD Act, and we stand ready to work with this Committee on refinements to the bill, as well as future legislation, consistent with these principles.

In that spirit, AUVSI identifies several potential refinements the Committee may wish to consider as the legislation advances.

Scope architecture. AUVSI's judgment is that the bill's category-based approach — requiring review of a defined class of systems rather than only named companies — is the stronger design, because it is more comprehensive and more resistant to under-inclusion and to PRC evasion tactics such as corporate restructuring and white-labeling. Should Congress instead pursue an entity- or list-based approach, AUVSI would still support the legislation but would encourage Congress to consider pairing it with safeguards against evasion: for example, an express requirement that reviews and restrictions reach subsidiaries, affiliates, joint-venture partners, and licensing relationships of designated entities, including their products marketed under other brand names; and a requirement that the Executive Branch conduct periodic reviews, informed

by consultation with the Intelligence Community, to keep covered-entity designations current and thorough as the sector and threat evolve.

Durable allied protection. The Committee may also wish to consider whether allied and partner protection should extend beyond actions taken pursuant to this bill — so that allied production is expressly protected in any robotics-related Covered List action, however initiated.

Agency involvement. The Committee should consider adding the Department of Commerce — specifically the Bureau of Industry and Security, with the expertise of its Office of Information and Communications Technology and Services (ICTS) — as a participant in the review the bill mandates. Commerce brings both national security and industry expertise, including the capacity to evaluate impacts on domestic competitiveness and supply chains alongside the security determination. And it maintains important relationships with industry that could be leveraged as part of the review process.

Process guardrails. Consistent with the fifth principle above, Congress could direct the reviewing agencies to publish assessment criteria and to provide a public consultation process, drawing on the methodology of the connected-vehicles rulemaking under the ICTS program — while requiring that these processes operate within the bill’s statutory timeline. That rulemaking offers a second lesson beyond consultation: it pairs its prohibitions with a system of general and specific authorizations that gives implementation nuance. Whether comparable authorization mechanisms could operate alongside Covered List additions — through the FCC, or through Commerce’s ICTS authorities — is a question worth the Committee’s examination. The reviewing agencies could also be directed to prioritize the order of their work on a risk-informed basis, taking into account factors such as the sensitivity of the environments in which systems are marketed and deployed. Because these systems are mobile and readily redeployed or resold,

deployment context is best treated as a factor in prioritizing review rather than as a basis for categorical carve-outs; if Congress wishes context to bear on outcomes, the sounder route is through conditioned authorizations — mitigation measures, binding agreements, monitoring, and consequences for violations — rather than through exemptions by venue.

Adjacent systems. Finally, the national security risks we have described attach to what a system can do — function over form. Humanoid and quadruped robots do present risks that are heightened by their particular form: limbed locomotion gives them the widest mobility envelope of any ground system — they can climb stairs, jump over obstacles, and traverse unstructured environments built for people — and theirs is the nascent market where early action is least costly. The urgency of covering these systems is clear. But the core risk characteristics are not confined to limbed systems. Autonomous mobile robots — AMRs, which navigate on wheels — are likewise mobile, sensor-rich, network-connected platforms that operate autonomously or by remote direction, map the facilities in which they work, and depend on vendor-managed software throughout their service life. Their mobility envelope is narrower, but it is purpose-built: wheeled bases deliver stability and efficiency in the structured environments where they operate, and a growing number are fitted with manipulator arms that add reach and manipulation capability. Indeed, the categories are converging from both directions: wheeled platforms are gaining arms, while several manufacturers — including in China — now offer humanoid robots on wheeled bases rather than legs. A humanoid on wheels carries the same kinds of sensors, software dependencies, and arms as a humanoid on legs; only the locomotion differs. And the deployed footprint of wheeled systems is today far larger, spanning strategically significant American supply chains, from logistics and manufacturing to electronics and automotive. Similar national security threats therefore exist with these systems as well, and AUVSI urges Congress

to also address this issue — whether within this framework, through companion measures, or by directing an assessment of how best to extend coverage — so that coverage keeps pace with capability across the full spectrum of uncrewed mobile ground systems.

AUVSI offers these refinements in the spirit of strengthening a sound bill, and we would be pleased to collaborate with the Committee and its staff on any of them.

VII. Impact on American Industry and Supply Chains

AUVSI believes it important to address directly a question on the Committee’s mind, because it is the question responsible legislators should ask of any market restriction: what would the GUARD Act mean for American industry and its supply chains? The answer, based on the best available evidence, is minimal disruption today — and market preservation tomorrow.

The disruption is minimal today because the covered market is nascent. As noted above, global humanoid shipments in 2025 numbered in the low tens of thousands worldwide, concentrated in pilot programs, research, and demonstrations; American reliance on humanoid and quadruped systems in production environments is minimal. The dollar value of PRC humanoid and quadruped systems entering the United States annually is, by every available indicator, very small relative to the American automation economy. Even in the far larger industrial robotics category, the trade is small — small in percentage terms and small in absolute dollars: less than 7 percent of China’s industrial robotics exports come to the United States, amounting to roughly one percent of global trade in the category.³⁴ According to an ITIF analysis of trade data, China supplies only about 4.2 percent of U.S. industrial robotics imports —

roughly \$30 million in 2024 — while allies such as Japan, Germany, and South Korea supply about 65 percent.³⁵ And Unitree Robotics, a leading Chinese maker of both covered form factors, reported total global revenue of only about \$250 million in 2025 — of which U.S.-bound sales are a fraction.³⁶ The pattern across every available indicator is consistent: exposure is very small in the covered categories, and small even in the far larger category surrounding them. Notably, precise official statistics on humanoid and quadruped imports do not exist, because no U.S. trade category isolates them — a measurement gap that itself argues for the national strategy and review mechanisms discussed in this testimony, and one Congress can begin closing at low cost, for example by directing the creation of distinct trade-statistics categories for humanoid, quadruped, and other advanced mobile robotics systems. What can be said with confidence is that the window in which restriction is nearly costless is open now. The drone experience shows what it costs to let that window close.

The supply-chain impact is limited by the bill’s design. Because the legislation covers finished systems and control software — not components such as actuators, sensors, magnets, batteries, or semiconductors — American manufacturers who source components globally face no disruption from this bill. No American robot requires redesign; no bill of materials requires recertification; no component supplier loses an American customer. And because allied nations are expressly protected by the rule of construction, the supply base American industry actually uses — anchored in Japan, Europe, and other partners — remains untouched. This design choice is deliberate and important. Component-level dependencies are real, and we address them in the

³⁴ AUVSI calculation based on CSIS ChinaPower Project trade data (February 2026), <https://chinapower.csis.org/china-industrial-robots/>.

³⁵ Analysis based on data from ITIF, "A Time to Act: Policies to Strengthen the US Robotics Industry" (July 18, 2025), <https://itif.org/publications/2025/07/18/time-to-act-policies-to-strengthen-us-robotics-industry/>

next section as an investment opportunity — and, as noted earlier, as the subject for careful study of impacts and timelines. The bill keeps them separate from the restriction on finished systems.

American industry wants action. The two-pronged approach this testimony describes — risk-based restrictions paired with investment in American capacity — reflects the agenda AUVSI developed with the American robotics companies we convene through our Partnership for Robotics Competitiveness. American robotics leaders have made the case for action on adversary robotics directly to Congress this year — including Boston Dynamics, in testimony before the Committee on Homeland Security.³⁷ And when the GUARD Act was introduced, AUVSI endorsed it, as did a leading American humanoid robotics company that is going public, Agility Robotics, which called the legislation “an important market signal.”³⁸ Indeed, within the American robotics community, the active conversation is not whether Congress should restrict adversary robotics, but how far coverage should ultimately extend — a debate about the ceiling, not the floor. An industry that expected this bill to burden its supply chains would not be discussing whether and how to broaden it. The real burden would be inaction: allowing the PRC to continue its relatively unimpeded effort to dominate the U.S. robotics market would threaten the competitiveness — perhaps the very survival — of American robotics companies, as well as national security. The long-term cost of inaction far exceeds any near-term cost of adjustment.

³⁶ Unitree Robotics IPO prospectus disclosures, as reported by *Rest of World* (2026), <https://restofworld.org/2026/unitree-china-humanoid-robot-shanghai-ipo/>.

³⁷ “DeepSeek and Unitree Robotics: Examining the National Security Risks of PRC Artificial Intelligence, Robotics, and Autonomous Technologies and Building a Secure U.S. Technology Base,” House Committee on Homeland Security, Subcommittee on Cybersecurity and Infrastructure Protection (Mar. 17, 2026), <https://homeland.house.gov/hearing/deepseek-and-unitree-robotics-examining-the-national-security-risks-of-prc-artificial-intelligence-robotics-and-autonomous-technologies-and-building-a-secure-u-s-technology-base/>.

³⁸ Press Release: “Moolenaar, Obernolte, McClellan Introduce Legislation to Ban Dangerous Chinese Robots,” Select Committee on the Chinese Communist Party (June 3, 2026), <https://chinaselectcommittee.house.gov/media/press-releases/moolenaar-obernolte-mcclellan-introduce-legislation-to-ban-dangerous-chinese-robots>.

The bill is a demand signal American industry is already scaling to meet. Agility’s phrase — a market signal — captures what this legislation affirmatively does. The American robotics market is small today but growing rapidly, and the growth is ahead of us, not behind us: by one widely cited analysis, only about eight percent of U.S. manufacturing firms currently use robots at all.³⁹ That adoption gap is an enormous domestic opportunity — and the question this Committee’s work will help decide is whether it is filled by trusted systems or captured by subsidized, adversary ones. American manufacturers are investing to meet it: production capacity in the thousands of units per year, committed order books in the hundreds of millions of dollars, and private capital flowing into the sector at scale, including financing rounds approaching a billion dollars for a single American humanoid company.⁴⁰ What these companies need from Washington is certainty that the fast-growing American market will be won on trust and merit — not captured, as the drone market was, by below-cost systems subsidized by an adversary’s treasury. This legislation provides that certainty. It does not close the American market; allied suppliers will compete here freely, and American firms will have to earn every sale against them. It addresses one strategy specifically: below-cost market capture by firms that answer to Beijing rather than to markets.

We also want to be candid about a trade-off. Trusted systems may carry a price premium today, precisely because they are not subsidized by the Chinese state. Some American buyers, in the near term, may pay somewhat more for a trusted robot than they would have paid for a

³⁹ Robert D. Atkinson, Meghan Ostertag, and Trelysa Long, “A Time to Act: Policies to Strengthen the US Robotics Industry,” Information Technology and Innovation Foundation, July 18, 2025, <https://itif.org/publications/2025/07/18/time-to-act-policies-to-strengthen-us-robotics-industry/>.

subsidized one. That premium is a function of scale, not a permanent feature of trusted manufacturing. For years, subsidized PRC drone companies sold below cost and denied American manufacturers the volume they needed to drive prices down. Scale was the one advantage the market would not let them earn. As trusted drone companies win back share, they reach the economies of scale that lower unit costs, and the premium begins to close. We are seeing it now in the drone industry: as domestic volume grows, cost comes down.

That is not an argument against acting — it is the argument for the second prong, investing in and providing incentives for U.S. industry, to which we now turn. It is also worth stating plainly what the lower sticker price conceals: a discounted robot whose manufacturer is subject to an adversary's intelligence laws is not inexpensive. Its full cost is deferred, not avoided — and it carries its own unpredictability, in the reliable availability, support, and security of a system whose supplier answers to an adversary government.

VIII. Completing the Strategy: Investing in American Robotics Capacity

Risk-based national security restrictions are necessary; they are not sufficient. The second prong of the strategy — and the half that determines whether America wins rather than merely defends — is a serious national commitment to American robotics capacity. In addition to protecting, we must also promote. AUVSI, through our Partnership for Robotics Competitiveness, has laid out that agenda in detail, and we want to highlight for the Committee the measures we believe matter most, several of which enjoy bipartisan sponsorship in this Congress.

⁴⁰ Agility Robotics, "Opening RoboFab: World's First Factory for Humanoid Robots" (Sept. 18, 2023), <https://www.agilityrobotics.com/content/opening-robofab-worlds-first-factory-for-humanoid-robots> (production capacity of more than 10,000 robots per year); Appttronik, "Appttronik Closes Over \$935 Million Series A" (Feb. 11,

A national strategy. The United States lacks one. The CCP plans its robotics sector in five-year increments, with named targets and coordinated financing;⁴¹ American robotics policy remains fragmented across agencies, with no central assessment of our position, our gaps, or our plan. The National Commission on Robotics Act — introduced with bipartisan sponsorship in both chambers, with the House bill now pending before this very Committee — would establish an expert commission to evaluate workforce, supply chain, procurement, and regulatory gaps, among other areas, and deliver actionable recommendations to Congress and the Executive Branch. It is the natural companion to the legislation before this Subcommittee: the review mechanism in the GUARD Act addresses the immediate threat; the Commission builds the strategy so that America is never in the position of discovering a dependency after it has formed. The Commission should also be charged with assessing the data the federal government needs to monitor this competition — today, as noted, no U.S. trade category even isolates humanoid or quadruped robots — and with recommending improvements, from distinct statistical categories in the Harmonized Tariff Schedule to better use of existing industrial-base assessment tools. Congress cannot manage a competition it cannot measure. Should Congress prefer to house this work in a national security frame, as some have proposed, AUVSI would welcome that as well; the point is the strategy, not the vehicle.

Supply chain security for critical inputs. The component dependencies we noted earlier are real, and they concentrate in a few chokepoints: rare-earth permanent magnets — where the

2026), <https://apptronik.com/news-collection/apptronik-closes-over-935-million-series-a> (total Series A financing exceeding \$935 million).

⁴¹ Congressional Research Service, “‘Made in China 2025’ Industrial Policies: Issues for Congress,” IF10964 (updated December 12, 2024), <https://www.congress.gov/crs-product/IF10964>; CSIS ChinaPower Project (February 2026), <https://chinapower.csis.org/china-industrial-robots/>.

United States remains almost entirely import-dependent, overwhelmingly on China,⁴² and which sit at the heart of every actuator in every robot — along with advanced sensors (such as LiDAR), batteries, and precision components. The Magnets Value Chain Support Act, introduced with bipartisan sponsorship, would create production incentives across the magnet value chain, with guardrails excluding material associated with foreign entities of concern and provisions supporting defense requirements. Recent public-private partnerships in the rare-earth and magnet sector demonstrate that with the right demand signals and financing, this capacity can be built onshore and with allies. This is how component chokepoints are best addressed: by investing in trusted supply and using incentive mechanisms to help it scale.

Financing for scale. American robotics companies lead the world in innovation; their challenge is scaling production against a state-financed competitor. The Make More in America Act would strengthen the Export-Import Bank’s domestic financing initiative and expressly extend its support to strategic American industries, including robotics, critical sensing technologies, and critical minerals. Paired with targeted production and investment incentives — not only for robotics manufacturing but for the sensors, actuators, magnets, batteries, and tooling capacity beneath it — this is a financing architecture that would help American firms meet the market opportunity that security legislation helps secure.

Government demand signals. Federal procurement is one of the most direct tools and demand signals Washington controls. It can work as a guardrail, and AUVSI has strongly endorsed such risk-based restrictions, including the American Security Robotics Act, which would keep foreign adversary uncrewed ground systems out of federal procurement and operations, and the

⁴² U.S. Department of Commerce, Bureau of Industry and Security, *The Effect of Imports of Neodymium-Iron-Boron (NdFeB) Permanent Magnets on the National Security* (June 2022), <https://www.bis.gov/media/documents/section->

Humanoid ROBOT Act. These measures would protect government missions while directing federal demand toward trusted platforms. But procurement can also work primarily as an incentive. Congress can use procurement policy and spending affirmatively — through advance commitments, program funding, and domestic-content preferences — to reward trusted platforms and give American manufacturers the demand certainty that justifies capacity investment.⁴³ Every trusted robot bought with federal dollars — by agencies or by grantees — helps pull the entire trusted ecosystem down the cost curve, which is, over time, the answer to the price premium we acknowledged earlier.

Workforce and adoption. Finally, the deployment gap is as much a human-capital challenge as a hardware challenge. Winning in robotics requires the engineers, technicians, and integrators to build and field these systems, and support for the small and mid-sized American manufacturers — the vast majority of whom have yet to deploy their first robot — to adopt trusted automation. A national robotics strategy should treat workforce development and adoption assistance as core infrastructure.

Taken together with risk-based restrictions on adversary systems, this agenda is the two-pronged approach in full: address the adversary’s subsidized strategy directly, and build the American and allied capacity to win the market on the merits. The GUARD Act is an essential element of the first prong. AUVSI urges the Committee to advance this legislation and Congress to pass it.

232-ndfeb-magnets-report-appendices-combined.pdf.

⁴³ AUVSI Partnership for Robotics Competitiveness: Securing U.S. Leadership in Robotics and Physical Artificial Intelligence White Paper, <https://www.auvsi.org/wp-content/uploads/2026/02/AUVSI-PFRC-Whitepaper.pdf>

IX. Conclusion

When Chinese drones first entered the American market, few if any witnesses warned Congress that a subsidized manufacturer would come to account for ninety-six percent of the uncrewed aircraft detected in American skies — because it had not happened yet. By the time it had, the remaining choices were all difficult ones. Today, the equivalent moment for robotics is unfolding in plain view: the pattern documented, the playbook operating in the open, the subsidies flowing, and the early evidence already visible in American research laboratories and police departments. We can see it coming — and Congress has an opportunity to act on time.

AUVSI, with the benefit of members across the air and ground domains — the industries that lived the last chapter of this story and are shaping the next one — supports the GUARD Act, urges its advancement alongside the investment measures for the U.S. robotics industry, and stands ready to serve as a partner and resource to this Congress in any way that is useful.

Thank you, and I look forward to your questions.