



TESTIMONY OF

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BEFORE

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Committee on Homeland Security  
Subcommittee on Emergency Management and Technology  
Subcommittee on Counterterrorism, Law Enforcement, and Intelligence

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## **Introduction**

Thank you Chairmen D’Esposito and Pfluger, Ranking Members Carter and Magaziner, and distinguished members of the Committee. My name is Michael Robbins, and I am the President & CEO of the Association for Uncrewed Vehicle Systems International (AUVSI), the world’s largest industry association representing the uncrewed systems, robotics, and autonomy industry. Our members create systems that operate in the air, on the ground, and in the water across the civil, commercial, and defense domains. The use of our industry’s technology in public safety is unquestionably a very positive use case.

Drones are saving lives in emergency response operations. They are being relied on to reduce the risk posed to first responders, every day, in communities across the nation.

As one first responder noted to me last week, “drones help public safety make better decisions on actionable intelligence.” They are often used as tools to de-escalate situations, reduce response times, provide overwatch, and identify missing persons – those that are lost, and those that do not wish to be found. Drones can augment police forces that are shorthanded. They can enter buildings and disaster zones where it would be unsafe to send in a human. Drones can monitor fires and wildfires, enabling more effective decision-making and resource allocation. Drones can deliver life-saving medical supplies to those in need of urgent care.

In emergency response situations, drones have quickly become a critical, effective, lifesaving tool.

And to be clear, while I believe most of this hearing today is focused on aerial drones, everything I just detailed applies to ground and maritime drones too. AUVSI member companies in all operational domains are working with public safety agencies to understand their needs and to develop products that serve the public safety community effectively.

While drones in public safety is absolutely a good news story, there are points of friction.

The Federal Aviation Administration (FAA) deserves tremendous credit for the progress made in recent years towards enabling more Tactical Beyond Visual Line of Sight (BVLOS) waivers and allowances of Drones as First Responder (DFR) programs. That said, the FAA must move forward on the Part 108 BVLOS rulemaking to allow for operations to safely scale and grow. AUVSI sincerely appreciates the leadership the United States Congress has demonstrated with the recent passage of the FAA Reauthorization Bill, which requires the FAA to release a draft BVLOS rule in the next four (4) months and a final rule within sixteen (16) months after the release of the draft. That mandate is certainly welcome, but with that timeline a rule is still twenty (20) months away. Accordingly, while that rulemaking is underway, the FAA should move faster towards a template exemption for BVLOS operations for public safety and DFR. This would enhance the number of operations nationwide, which would increase public safety. Furthermore, the increase in operations would increase the demand for drone systems and components, thereby lowering prices and making the industry more robust and leading to even greater adoptions.

Funding also remains a point of friction. Across the nation, the demands on public safety are increasing while budgets are decreasing. Accordingly, Congress should enact the Drones for First Responders Act, which was just recently introduced, which would establish a new revenue neutral grant program for first responders to purchase secure drones manufactured in the U.S. or manufactured in allied nations. Funds for this grant program will be raised through existing and enhanced tariffs on drones imported from the People’s Republic of China (PRC). Further, Congress should also move forward on broader efforts to support the U.S. drone industry with manufacturing tax incentives, loan guarantees, and other programs to level the playing field for U.S. drone companies against subsidized competition, largely from the PRC.

In short, we need a robust, bipartisan drone competitiveness package – akin to the CHIPS Act or the Solar Energy Manufacturing Act – targeted towards the drone and robotics industry to ensure America doesn’t lose complete control over this critical technology to the PRC and to level the playing field. Further, a drone competitiveness package would leverage federal dollars to drive significantly greater private capital investment domestically, and with our allies.

AUVSI believes that we must move away from being reliant on Chinese companies and intellectual property for our drones, as the U.S. is doing with other critical technologies. A reasonable, common-sense transition is required to ensure that these critical lifesaving tools are available to public safety, while at the same time we move rapidly to diversify manufacturing and technology supply lines outside of China.

AUVSI is advocating for a multi-pronged effort to support policies that would encourage investment, innovation, and ultimately scaled production of drone supply chains within the United States and its allied partners to lead us to a more balanced level of self-sustainment. This is important because multiple U.S. government agencies – including the Departments of Defense<sup>1</sup>, Treasury<sup>2</sup>, Commerce<sup>3</sup>, Homeland Security<sup>4</sup>, and the FBI<sup>5</sup> – have made it quite clear that the continued reliance on PRC drones is a risk to national security. Nevertheless, despite a shift away from PRC-drones by some public safety departments, approximately 90% of public safety agencies nationwide with drone programs are still using at least some Chinese drones as part of their fleets, despite the U.S. government’s warnings about the security threats these drones pose.<sup>6</sup>

AUVSI is firmly in the middle between those that want to preserve the status quo – which isn’t working very well – and those that want to bring about an immediate ban on PRC drones – which would be extremely problematic, as we saw in Florida, which was an action we resolutely opposed.

Our objective is simple: To support a strong and competitive industrial base and to build global leadership in this critical industry that is relied on by so many agencies and enterprise organizations, including public safety.

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<sup>1</sup> <https://www.defense.gov/News/Releases/Release/Article/2706082/department-statement-on-dji-systems/>

<sup>2</sup> <https://home.treasury.gov/news/press-releases/jv0538>

<sup>3</sup> <https://www.federalregister.gov/documents/2020/12/22/2020-28031/addition-of-entities-to-the-entity-list-revision-of-entry-on-the-entity-list-and-removal-of-entities>

<sup>4</sup> <https://www.cisa.gov/resources-tools/resources/cybersecurity-guidance-chinese-manufactured-uas>

<sup>5</sup> Ibid

<sup>6</sup> Airborne International Response Team, 2024 Public Safety UAS Survey, Initial Analysis for Public Release, 11 May 2024

Grant programs for public safety, like the DFR Act would create, will ensure public safety has the tools they need to do their jobs, and demand is generated for platforms produced outside the PRC, which will kickstart the flywheel for innovators and manufacturers. This is vital to reduce risk, and to build the industrial base that is sorely lacking – for all users, including public safety.

### **Drones for Emergency Response**

In preparation for this hearing, I spoke with many AUVSI member companies that work on behalf of public safety agencies, as well as directly with multiple public safety agencies across the nation, about how drones are being used for emergency operations.

The top takeaway is that public safety agencies are using drones in innovative ways to enhance their operations, response times, and overall efficiency and safety. Drones have become indispensable tools that offer a variety of enhanced capabilities.

It is truly remarkable how public safety leaders have put drones to work to protect citizens and save lives nationwide. In Southern California, the Chula Vista Police Department led the way on the Drones as a First Responder program with the FAA. In Texas, the Department of Public Safety has state-wide authorization to use drones to cover everything from the U.S.-Mexico border to protecting the state Capitol in Austin. In New York City and Virginia, city and state police forces are using drones to monitor campus protests.

Here is a snapshot of what AUVSI has heard about how drones (which in this context can apply in most cases to uncrewed aerial systems (UAS) and ground robotics) are being used in public safety missions nationwide:

**Law Enforcement Support:** Police departments across the U.S. utilize drones for surveillance, crowd monitoring, and tactical operations, including Special Weapons and Tactics (SWAT). Drones provide aerial views during crime scene investigations, monitor active incidents, and assist in tracking suspects, enhancing the capabilities of law enforcement agencies. Police departments increasingly use Drones as First Responders (DFR), providing aerial views for situational awareness (overwatch), suspect tracking, two-way communication, and more. When a drone is onsite first, providing real-time high-resolution imagery back to officers responding to an incident, the knowledge the officer has before arriving on scene can be meaningfully enhanced, which will very likely inform how they respond. This is saving lives – blue lives as well as those of the public.

The Chula Vista Police Department (CVPD), under the capable leadership of Chief Roxanne Kennedy and Captain Miriam Foxx, has led the way with demonstrating the incredible utility of DFR programs. CVPD has flown nearly 20,000 DFR missions with zero critical airspace incidents, which has allowed them to avoid dispatching patrol units over 4,200 times and achieve an average response time of approximately 90 seconds.<sup>7</sup>

Today, other departments around the country are also successfully using DFR programs. Pearland, Texas has a fully BVLOS DFR program using ground-based airspace monitoring. New York City and Oklahoma City are using patrol-led DFR programs,

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<sup>7</sup> <https://www.chulavistaca.gov/departments/police-department/programs/uas-drone-program>

where a responding officer on the ground deploys a drone that is piloted by command staff at headquarters.

**Firefighting and Wildfire Monitoring:** Both urban and rural fire departments across the country are using drones for wildfire monitoring and prevention, and even spraying dry powder to extinguish flames. Drones equipped with thermal imaging cameras have become invaluable tools for firefighters in detecting hotspots, monitoring fire spread, and assessing structural damage during firefighting operations. Drones provide critical data to firefighters, enabling more effective decision-making and resource allocation, ultimately enhancing safety and saving lives.

**Search and Rescue Operations:** Drones equipped with high-resolution cameras and thermal imaging can quickly cover large areas and provide real-time visuals to aid in locating missing persons or individuals in distress, especially in rugged or remote terrain. There are numerous well documented instances where lives of people missing in the wilderness have been saved due to the effective deployment of a drone. Urban search and surveillance missions benefit from drones' ability to navigate congested or inaccessible areas, providing aerial views for reconnaissance, monitoring suspicious activities, or assisting in anti-terrorism efforts.

**Disaster Response and Assessment:** Drones are deployed to assess damage, monitor hazards, survey affected areas, and deliver aid following disasters such as tornadoes, hurricanes, earthquakes, wildfires, and infrastructure collapses. They provide valuable situational awareness to emergency responders and help them coordinate relief efforts.

**Traffic Management and Accident Reconstruction:** Drones equipped with high-resolution cameras are employed to monitor traffic flow, identify congestion points, and assist in accident reconstruction. Drones help improve roadway safety and optimize traffic management strategies.

**Threat, Hazmat, and Environmental Monitoring:** Drones are being used to assess active shooter situations, suspicious packages, bomb threats, hostage situations, and other extortionary threats. Drones equipped with specialized sensors can detect hazardous materials, monitor air quality, and assess environmental risks in industrial settings or areas prone to pollution. Drones help safeguard public health and facilitate timely responses to environmental emergencies.

**Public Event Management:** Drones are deployed to monitor large public gatherings, such as protests, parades, concerts, or sporting events, to ensure public safety, manage crowds, and respond swiftly to any emergencies or security threats.

**Delivery and Rescue Operations:** Drones can deliver life-saving medical supplies, including snakebite antivenom, EPIPENS, prescription medications, and defibrillators to those in need of urgent care but out of reach from traditional modes of delivery. Drones equipped with flotation devices or life-saving equipment have been deployed in water rescue missions to deliver aid, conduct swift water searches, or provide assistance to lifeguards and marine rescue teams.

As part of an initiative funded by DoT's Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program, Riverside Health System, Virginia Institute for Spaceflight & Autonomy (VISA) at Old Dominion University, Accomack-Northampton

Planning District Commission (A-NPDC), an AUVSI member company has put together a drone delivery program for medicine and medical supply delivery to the area, including Tangier Island, which is seventeen miles off coast and only accessible by sea or air. Over the last year, the company has delivered hypertension medication to patients in a two-to-three-mile radius of Riverside Health System facilities. The SMART Grant Phase 1 is meant to be a demonstration exercise, and as the team progresses towards a Phase 2 application, it will enable consistent operations with the intent to improve patient outcomes and prescription adherence.

Another AUVSI member company recently announced that they have made more than one million deliveries, many of which have been health care supplies, including blood, vaccines, and prescriptions.

The continued integration and advancement of drone operations hold great promise for further improving public safety and emergency preparedness efforts, and AUVSI's members are motivated to be part of this mission set working with public safety officials to deliver the tools they need with the capabilities, cost, service, and support they require.

### **FAA Airspace Access**

The FAA has made significant progress in recent years towards enabling more Tactical Beyond Visual Line of Sight (BVLOS) waivers and allowances of Drones as First Responder (DFR) programs.<sup>8</sup> The true full potential of drones in public safety, however, awaits the Part 108 BVLOS rule. AUVSI appreciates the support of the U.S. Congress of the BVLOS rule, putting timelines on the FAA for moving forward with that rulemaking progress in the FAA Reauthorization Act of 2024.

AUVSI encourages the FAA to work on an accelerated timeline to complete the rule, which will safely unlock scalability for public safety missions. Our industry stands ready to work with the FAA to ensure a timely rule that enhances safety; we need not take the full twenty months to get this right.

While the BVLOS rulemaking is underway, the FAA should move faster towards a template exemption for BVLOS operations for public safety and DFR. This would enhance the number of operations nationwide, which would thereby increase public safety. The public safety drone use cases, especially DFR use cases, are often consistent across the country, and public safety operators are already a trusted public entity who are accustomed to producer-based operations and concepts like safety management.

By using the exemption process for public safety, the FAA would then gain operational data to inform additional BVLOS rulemaking, such as characterization of low altitude airspace in urban environments, the effectiveness of ADS-B as a primary mitigation for airborne collisions, common practices for remote pilot in command (RPIC) and operational training, mean time to failure for specific components of the system, and more.

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<sup>8</sup> [https://www.faa.gov/sites/faa.gov/files/uas/public\\_safety\\_gov/public\\_safety\\_toolkit/TBVLOS\\_Waiver\\_Final.pdf](https://www.faa.gov/sites/faa.gov/files/uas/public_safety_gov/public_safety_toolkit/TBVLOS_Waiver_Final.pdf)

## **Drone Capabilities and Cost**

A common misconception is that the only viable drone options for public safety departments to employ are from the People's Republic of China (PRC). This is not true, but is a convenient myth propagated by PRC drone companies and their spokespeople. Dozens of the companies that AUVSI represents across operational domains offer leading technology designed for public safety use cases. Further, U.S. technology innovation is dynamic and rapidly evolving. The platforms offered today will most certainly be different from those offered in the years ahead.

Many public safety experts I spoke with stated that, even if they are using PRC drones today, they would like to move away from using them in the future. Many have already transitioned away from PRC drones, are in the process of doing so, or have a strong desire to do so as soon as practicable.

In the past, there have been at least two major hurdles for public safety agencies acquiring non-PRC drones, causing them instead to default to Chinese drones: capabilities and cost.

For many years, the capability gap between drones designed and manufactured in the PRC and drones designed and manufactured anywhere else in the world, including the United States, was real and it was, to varying degrees, quite wide. That is no longer the case. Due to the investments in innovation and advanced manufacturing, in recent years U.S. and other non-PRC drone companies have largely closed the capability gap in most use cases. With continued investment, this gap will disappear entirely.

AUVSI is confident in U.S. and allied innovation. There are now a wide variety of drones available on the market that provide the same level of capability, or in some cases even greater capability, than PRC drones.

Many of the departments that I spoke to that use U.S. or allied nation drones are pleased with their investments. Those with mixed fleets often noted that support from PRC drone companies was often lacking, whereas service and support was often outstanding from U.S. and allied nation drone companies.

This is not to say, "mission accomplished." Much work remains, as the non-PRC drone industry is still fractional in size compared to the state-supported PRC drone industry. Many U.S. drone companies have successfully narrowed or closed the capability gap with Chinese drone companies, but there remains a significant cost gap. This gap is undoubtedly an area of ongoing friction within the public safety community with limited budgets.

PRC subsidies have allowed their drone companies to scale production and flood the U.S. market (a practice known as "dumping"). This monopolistic position created barriers to the development of U.S. and other non-PRC supply chains for the drone industry by effectively excluding them from the largest markets. The results have been devastating to the domestic manufacturing industry, resulting in difficulty attracting the capital investments to scale operations, and thereby drive down costs over time.

The cost gap is one of the reasons why AUVSI is a strong supporter of programs to support the U.S. drone industry to level the playing field, as well as grant programs to help public safety transition away from PRC drones. As the next sections will detail, given very real supply chain risks and national security concerns highlighted by the U.S. government, the transition away from unsecure PRC-drones to non-PRC manufactured secure drones must occur in a common-sense and reasonable timeframe, and that transition should begin immediately.

### **Leveling the Playing Field for U.S. Drone Manufacturing & Ensuring a Robust, Secure Supply Chain of Drones for Public Safety Users**

U.S. drone manufacturers and their component supply chain have struggled to compete against foreign subsidized competition, which hinders the availability of American-made UAS on the market and impedes workforce growth and investment. Accordingly, the U.S. government must foster a more competitive and fair playing field for U.S.-based drone manufacturers. AUVSI is advocating for specific proposals that would generate demand for U.S.-made drones and supply-side measures that level the playing field for U.S. drone and component manufacturers against subsidized competition and dumping practices.

The U.S. government should also coordinate activities with allied and partner nations to create a stronger, more secure supply chain. AUVSI believes it is essential to advance security and competitiveness in a thoughtful way that respects existing investments while building toward a more secure, sustainable future that puts U.S. interests first, including security, the economy, and overarching values. In practice, this means any effort to support the growth of U.S. drone manufacturers and the drone supply chain should account for the large investments, both of time and capital, made by U.S. companies.

Congress has enacted several laws, including the American Security Drone Act, that will strengthen our national security by limiting the purchase and use of certain drones manufactured in the People's Republic of China. Future legislation should focus on creating incentives for U.S. companies directly, and indirectly through demand generation, by providing grants, tax incentives, and loan guarantees.

Congress should enact a new program designed to help public safety agencies acquire more drones to enhance public safety and provide first responders with critical tools. Programs should also be designed to transition public safety agencies away from using Chinese drones to secure, non-PRC options.

AUVSI has been working closely with Members of Congress on these types of efforts, including the Drones for First Responders (DFR) Act, which was recently introduced. The legislation would establish a new revenue neutral grant program for first responders, critical infrastructure providers, and farmers to purchase secure drones manufactured by the U.S. or our allies. Funds for this grant program will be raised through a new tariff on PRC drones. AUVSI urges Congress to support public safety users of drones in their transition away from PRC technology by passing the DFR Act into law in 2024.



Congress should also enhance existing federal grant programs for first responders, ensuring that programs to support first responders are adequately funded to enable state and local agencies to transition to secure drone solutions. This should include the Department of Homeland Security's (DHS) Urban Areas Security Initiative (UASI) Program, the Federal Emergency Management Agency's (FEMA's) Homeland Security Grant Program, and grants administered by the U.S. Department of Justice. Critically, these and other federal grant programs for first responders must allow grant recipients to purchase drones. At present, the Justice Department's Bureau of Justice Assistance flatly prohibits the use of grant funds to purchase UAS, as does FEMA's Assistance to Firefighters Grants (AFG) Program. Enabling these programs to support the purchase of U.S.-made drones would significantly benefit first responders.

Bolstering new drone manufacturing capabilities and the associated workforce will require infrastructure and capital expenditures. Providing tax incentives, loan guarantees, and other mechanisms to spur that spending would accelerate growth and development that would have otherwise been delayed or denied. Manufacturer tax credits for the production and sale of certain UAS equipment and components produced and sold in the U.S. would benefit the industry and its competitiveness and would decrease reliance on subsidized, foreign drones.

This has worked in other industries. According to the *Financial Times*, U.S. manufacturing commitments doubled — to more than \$200 billion, creating 82,000 jobs — based on the success of tax incentive programs for other industries, including solar panels, semiconductors, electric vehicles, and other clean technologies.<sup>9</sup>

In the solar industry alone, since the passage of the Solar Energy Manufacturing Act (SEMA), more than \$100 billion in private sector investment has been made into fifty-one new manufacturing facilities in the United States, ultimately representing more than 20,000 additional U.S. jobs to be created and significant capacity added for domestic solar panel production.<sup>10</sup> During a 2023 hearing on the CHIPS and Science Act, it was stated that since the law was enacted, along with \$39 billion in government appropriations and 25% investment tax credit to spur domestic production of semiconductors, more than \$200 billion in additional private sector funding has flowed into the industry in the U.S.<sup>11</sup> Recently, the U.S. Energy Department made \$15.5 billion in new funding available to spur domestic battery manufacturing through cost-shared grants and loans<sup>12</sup> and an additional \$20 billion is being invested in crane manufacturing to onshore production of secure cranes for U.S. ports.<sup>13</sup>

The time has come for the U.S. Government to act to similarly spur investment into the U.S. drone and component marketplace to level the playing field as it has done for other critical technologies. Congress should act on the following:

**Manufacturing tax credits:** To promote domestic drone manufacturing capacity, Congress needs to develop a tax incentive program for drone manufacturing. This program can leverage

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<sup>9</sup> <https://www.ft.com/content/b1079606-5543-4fc5-acae-2c6c84b3a49f>

<sup>10</sup> <https://www.scia.org/research-resources/impact-inflation-reduction-act>

<sup>11</sup> Senate Committee on Commerce, Science, and Transportation CHIPS and Science Implementation and Oversight, October 4, 2023:

<https://www.commerce.senate.gov/2023/10/chips-and-science-implementation-and-oversight>

<sup>12</sup> <https://www.energy.gov/articles/biden-harris-administration-announces-155-billion-support-strong-and-just-transition>

<sup>13</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2024/02/21/fact-sheet-biden-harris-administration-announces-initiative-to-bolster-cybersecurity-of-u-s-ports/>

the language and model the frameworks of SEMA, CHIPS, the House’s Bioeconomy Research and Development Act of 2021 (America Creating Opportunities for Manufacturing, Pre-Eminence in Technology and Economic Strength (COMPETES) Act of 2022), and the Senate’s United States Innovation and Competition Act (USICA) on semiconductors and other technologies.

**Loan guarantees:** Congress should develop a program of loan guarantees to U.S. drone and component manufacturers modeled around language included in the Advanced Technology Vehicles Manufacturing Direct Loan Program.

**Ensuring critical mineral access:** Access to rare earth driven components is a challenge to U.S. drone and component manufacturers. Congress should enact legislation along the lines of H.R. 8981, the Securing America's Mineral Supply Chains Act, from the 117<sup>th</sup> Congress.

AUVSI does not support policies that would immediately ban the use of PRC drones in the United States, as this would have a negative impact on public safety given the number of safety agencies with PRC drones in their fleets.

When the State of Florida instituted an immediate ban, we witnessed the very real challenge this imposed on public safety, removing a critical, life-saving tool from their operations overnight. Ultimately, Florida authorized a \$25 million program for public safety agencies acquire fleets of non-PRC, secure drones;<sup>14</sup> a move AUVSI applauds. Going forward, Florida should serve as an example to other entities seeking to transition away from PRC drones; immediate bans should be avoided, transition times should allow for a reasonable period of changeover, and funding should be made available to public safety agencies for the transition to new, secure drone fleets.

To ensure a robust, secure supply chain, we need a robust, bipartisan competitiveness package – like the CHIPS Act – targeted towards the drone and robotics industry to ensure America doesn’t lose complete control over this critical technology to the PRC, and which leverages federal dollars to drive private capital investment domestically and with our allies.

The next section of our testimony details the “why” support for the transition away from PRC drones is so critical.

### **PRC National Security Laws & Direct Threats to U.S. National Security**

Public safety agencies, as well as other users of drones, cannot be reliant on the PRC, a strategic competitor and an increasingly hostile foreign adversary, for critical technology such as drones and ground robotics. It is not logical to allow such power over public safety technology in the hands of the Chinese Communist Party (CCP). Should the U.S. enter a conflict with the PRC, a scenario our member companies are actively working to prevent through the success of strategic deterrence, access to PRC technology would end immediately.

*Lawfare* observes, “A foreign adversary dominating the world market could deny the U.S. effective drone support in warfighting or potentially disable U.S. drones in a conflict.”<sup>15</sup> The *Lawfare* article proved prescient, confirming the fear that Chinese companies would in fact use software updates to disable drones to meet CCP policy goals – something that could also happen

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<sup>14</sup> <https://www.fdle.state.fl.us/FDLE-Grants/Open-Funding-Opportunities/Funding-Opportunities/Drone/FY23-24-DRONE>

<sup>15</sup> <https://www.lawfareblog.com/us-reliance-chinese-drones-sector-next-chips-act>

to every Chinese drone in the United States. Just six months ago, in December 2023, a firmware update from Autel Robotics, a PRC drone company, disabled all drones in “conflict zones” as defined by the company.<sup>16</sup> This action, however, presumably came via direct influence from the CPP and the People’s Liberation Army (PLA), as the drone deactivating extended into international conflicts in Ukraine and Israel, but also, aligning with CCP and PLA policy, into the entire island of Taiwan and the disputed the Arunachal Pradesh region on the border of India and the PRC.<sup>17</sup> This is a disturbing example of CCP and PLA policy extending directly into corporate supply chain interdiction as a weapon of war. U.S. users of drones, including public safety users, are vulnerable to these same software updates, that could come at any time and without warning. The U.S. must have a plan to transition away from PRC drones forthwith, as AUVSI has set forth.

Furthermore, the U.S. government has raised multiple security concerns associated with Chinese drone companies, which are obligated to comply with China’s national security laws.<sup>18</sup> In December of 2023, in recognition of the threat PRC drones pose to the United States, the American Security Drone Act was signed into law as part of the 2024 National Defense Authorization Act, prohibiting the U.S. government from purchasing and operating PRC drones, as well as drones from other “covered entities” including Iran, Russia, and North Korea.<sup>19</sup>

In January 2024, the Cybersecurity and Infrastructure Security Agency (CISA), along with the Federal Bureau of Investigation (FBI), released a warning memo noting that, “The use of Chinese-manufactured UAS in critical infrastructure operations risks exposing sensitive information to PRC authorities, jeopardizing U.S. national security, economic security, and public health and safety.”<sup>20</sup> Assistant Director of the FBI’s Cyber Division, Bryan Vorndran stated, “the widespread deployment of Chinese-manufactured UAS in our nation’s key sectors is a national security concern, and it carries the risk of unauthorized access to systems and data.”<sup>21</sup>

In October 2022, the DoD identified Shenzhen-based Da Jiang Innovations, or DJI as it is commonly known, as a “Chinese military company” operating in the U.S. under Section 1260H of the Fiscal Year 2021 NDAA.<sup>22</sup> The Section 1260H list catalogs companies that the DoD believes contribute to the modernization goals of the People’s Liberation Army, ensuring its access to advanced technologies as part of China’s military-civil fusion strategy. The U.S. Department of Commerce placed DJI on the Entity List,<sup>23</sup> and the U.S. Department of the Treasury placed DJI on the Office of Foreign Assets Control’s (OFAC) list of Chinese tech firms that are part of the Chinese military-industrial complex.<sup>24</sup> These lists restrict U.S. investments in DJI based on allegations of support of human rights abuses against the Uyghur people.

It is not good public policy to rely upon the goodwill of a strategic foreign competitor, which is known for using supply chain control as a weapon of war and is beholden to PRC’s military and national security laws, for public safety drones.<sup>25</sup> AUVSI challenges Congress to act

<sup>16</sup> <https://dronexl.co/2023/12/24/autel-robotics-drone-no-fly-zones-conflict/>

<sup>17</sup> *Ibid*

<sup>18</sup> <https://www.wsj.com/articles/china-adopts-sweeping-national-security-law-1435757589/> Article 7 of National Security Law of China states “All organizations and citizens shall support, assist, and cooperate with national intelligence efforts in accordance with law, and shall protect national intelligence work secrets they are aware of.”

<sup>19</sup> <https://www.congress.gov/bills/118th-congress/house-bill/2670/text/s=2&r=2&q=%7B%22search%22%3A%22national+defense+authorization+act+of+2024%22%7D>

<sup>20</sup> [https://www.cisa.gov/sites/default/files/2024-01/Cybersecurity%20Guidance%20Chinese-Manufactured%20UAS\\_final508\\_16JAN2024.pdf](https://www.cisa.gov/sites/default/files/2024-01/Cybersecurity%20Guidance%20Chinese-Manufactured%20UAS_final508_16JAN2024.pdf)

<sup>21</sup> <https://www.cisa.gov/news-events/news/release-cybersecurity-guidance-chinese-manufactured-uas-critical-infrastructure-owners-and-operators>

<sup>22</sup> <https://www.defense.gov/News/Releases/Release/Article/3180636/dod-releases-list-of-peoples-republic-of-china-prc-military-companies-in-accord/>

<sup>23</sup> <https://www.bis.doc.gov/index.php/documents/regulations-docs/2326-supplement-no-4-to-part-744-entity-list-4/file>

<sup>24</sup> <https://sanctionssearch.ofac.treas.gov>

<sup>25</sup> <https://warontherocks.com/2023/05/the-art-of-supply-chain-interdiction-to-win-without-fighting/>

immediately on the policy areas detailed earlier in this testimony to ensure public safety departments continue to have cost-effective, capable, life-saving drone technology, while also safeguarding the U.S. from the very real threat of reliance on PRC drones.

### **Drone Security**

The Defense Innovation Unit's (DIU) Blue UAS program is an effort to curate, maintain, and improve a robust roster of policy-approved commercial drone technology that is compliant with the FY 2020 and FY 2023 National Defense Authorization Acts (NDAA).<sup>26</sup> Blue UAS is intended to meet the needs of Department of Defense (DOD) users and addresses cybersecurity and supply chain requirements. DIU does not assess drones that will not be used to accomplish DOD objectives. Congress has not mandated or provided funding to DIU to take on the responsibility of assessing all commercial sector drones and components that could serve the needs of all government agencies or other users, including public safety.

The limits of the Blue UAS program for non-DOD users left a void in cybersecurity and supply chain validation for much of the industry that was not part of the Blue UAS program. This was a source of significant friction; accordingly, AUVSI moved towards the friction to solve this problem. In close collaboration with DIU, AUVSI provides Green UAS as a solution to fill the gaps between the Blue UAS Cleared List and drones that meet non-DOD needs.<sup>27</sup> AUVSI's goal is to assess and certify additional platforms and components beyond those on the Blue UAS list as secure, widening the offering of secure, vetted drones available for procurement by non-DOD agencies, including public safety. Green UAS was designed to develop a standing application for NDAA-compliant technology and validate them preemptively. Green UAS builds upon DIU's Blue UAS program and brings it into the commercial realm, while still offering any company that obtains Green UAS certification the opportunity to undergo Blue UAS certification if they wish to sell to DOD. Last month, AUVSI and DIU strengthened our partnership with a new data-sharing Memorandum of Understanding.<sup>28</sup>

For public safety agencies seeking drones meeting validated cybersecurity and supply chain requirements, in addition to those cleared on the Blue List, AUVSI offers the Green UAS program. This initiative expands certification beyond the Blue UAS list, providing more options that meet public safety operational needs while continuing to comply with the appropriate cybersecurity and supply chain compliance standards. The Green UAS program mirrors Blue requirements for the certification process and also expands upon it, including a Remote Operations and Connectivity assessment (5G, WiFi, Bluetooth, Remote ID, etc.) that has become increasingly important across use cases, especially for first responders and public safety mission requirements.<sup>29</sup>

AUVSI supports the Drone Evaluation to Eliminate Cyber Threats Act of 2024 (DETECT Act), which directs the National Institute of Standards and Technology (NIST) to develop cybersecurity guidelines for the federal government's use of drones, which could also be extrapolated to public safety and other users.<sup>30</sup> Notably, the legislation specifically notes AUVSI's Green UAS as a best practice for NIST to consider.

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<sup>26</sup> <https://www.diu.mil/blue-uas>

<sup>27</sup> <https://www.diu.mil/latest/auvsi-launches-green-uas-cybersecurity-certification-program-for-commercial>

<sup>28</sup> <https://www.c4isrnet.com/unmanned/2024/04/26/defense-innovation-unit-moves-to-ease-commercial-drone-certifications/>

<sup>29</sup> <https://www.auvsi.org/green-uas-framework>

<sup>30</sup> <https://www.congress.gov/bill/118th-congress/senate-bill/3758/text>

## **PRC Flooding the U.S. Market with Subsidized Drones and “No Limits’ Government Support**

In 2015, the PRC launched “Made in China 2025,” a ten-year whole-of-society effort to invest in key industries, primarily in the technology area, to ensure China’s world leadership and market dominance.<sup>31</sup> In a distinct role reversal with high-tech capitalist economies in the West, China has removed red tape to development while enabling sophisticated market mechanisms to spur rapid growth. While much of the discussion on PRC government involvement in the industry has centered around direct subsidization, the scope of their support is far greater. No Chinese company or investment firm is free of Chinese Communist Party (CCP) involvement.

The U.S. Department of Commerce (DOC) labels “dumping” as an illegal trade practice.<sup>32</sup> In 2019, U.S. Undersecretary for Defense Ellen Lord highlighted this challenge with respect to drones, noting, “We don’t have much of a small UAS industrial base because DJI dumped so many low-price quadcopters on the market, and we then became dependent on them.”<sup>33</sup>

The flood of inexpensive drones into the U.S. has resulted in PRC drones accounting for more than 90% of the first responder market, according to 2024 data from the Airborne International Response Team (AIRT).<sup>34</sup> As a former U.S. Deputy Assistant Secretary of Defense put it, “China’s domination of drone manufacturing has been deliberately cultivated through aggressive government subsidies, direct investment, and strategic regulations to develop a domestic industry and gain a technological edge.”<sup>35</sup>

DJI has been a major beneficiary of the “Made in China 2025” policy and the resulting subsidies.<sup>36</sup> In a February 2022 report, *The Washington Post* found that DJI’s investors included at least four Chinese investment firms with close ties to the government of the People’s Republic of China (PRC).<sup>37</sup> The company’s investors include “China Chengtong Holdings Group, which is directly administered by Beijing’s State-owned Assets Supervision and Administration Commission, a ministerial-level organization tasked by China’s State Council to manage the country’s state-owned enterprises.”<sup>38</sup> According to the *Post* report,

“Other funds that list DJI as an investment include the Shanghai Venture Capital Guidance Fund, which is administered under the Shanghai Municipal Government. Guidance funds in China mix state assets with private funds to advance Beijing’s industrial development goals in emerging industries. A Chinese-language S&P global report released in March 2021 says that state-run Guangdong Hengjian Investment Holding invested in DJI alongside SenseTime, which was also added to a U.S. sanctions list in December 2021 by the Biden administration over alleged human rights abuses in Xinjiang.<sup>39</sup> SDIC Unity Capital, a fund administered by the State Development &

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<sup>31</sup> <https://www.csis.org/analysis/made-china-2025>

<sup>32</sup> <https://www.trade.gov/us-antidumping-and-countervailing-duties>; Unfair foreign pricing and government subsidies distort the free flow of goods and adversely affect American business in the global marketplace. Enforcement and Compliance, within the International Trade Administration of the Department of Commerce, enforces laws and agreements to protect U.S. businesses from unfair competition within the United States, resulting from unfair pricing by foreign companies and unfair subsidies to foreign companies by their governments.

<sup>33</sup> <https://foreignpolicy.com/2019/08/27/pentagon-seeks-to-counter-chinas-drone-edge/>

<sup>34</sup> Airborne International Response Team, 2024 Public Safety UAS Survey, Initial Analysis for Public Release, 11 May 2024

<sup>35</sup> <https://www.thedefensepost.com/2023/10/13/drone-war-chinese-equipment/>

<sup>36</sup> <https://www.csis.org/analysis/made-china-2025>

<sup>37</sup> <https://www.washingtonpost.com/national-security/2022/02/01/china-funding-drones-dji-us-regulators/>

<sup>38</sup> *Ibid*

<sup>39</sup> <https://www.washingtonpost.com/technology/2021/12/10/us-investment-ban-sensetime/>

Investment Corporation, a state-owned investment holding company approved by China's State Council, also lists DJI as an investment on its website.”<sup>40</sup>

The PRC's support for its drone industry, to the detriment of U.S. manufacturing and global competition, was recently reinforced by a Shenzhen visit from high-level government officials who noted “no-limits support” to DJI and the Shenzhen-based drone and component industry.<sup>41</sup> This unequivocal support for the PRC drone industry increasingly extends to another Shenzhen-based drone company, Autel Robotics, which has been growing in market share in recent years.<sup>42</sup> Autel has received similar preferential tax rates and government subsidies as DJI, and as a result is similarly flooding the U.S. market with drones, crowding out U.S. and non-PRC manufacturers who must compete on unequal footing with the government-backed PRC companies.<sup>43</sup> The founder of Autel, Li Hongjing, described the PRC's support for the company as “indispensable oxygen” to the company.<sup>44</sup>

The results of PRC support for the domestic drone industry, and the subsequent PRC drone dumping, have been devastating to the U.S. drone manufacturing industry. Non-PRC companies in the U.S., and across the global, struggle to attract capital to scale operations, and thereby drive down costs. This is an area of friction that Congress can address, and AUVSI challenges Congress to take immediate action on the policy solutions communicated in this testimony to level the playing field for U.S. drone manufacturers, ensuring secure and robust drone supply chains are available to public safety and other enterprise users.

## **Conclusion**

The use of drones in public safety operations is a tremendous boost to the effectiveness, efficiency, and ultimately safety of various missions. Drones are saving lives in public safety across multiple use cases. Points of friction remain – including airspace access, the need for a BVLOS rule for expanded operations, funding for secure drone operations, and transitioning away from unsecure PRC drone technology – but Congress has the playbook, as detailed in this testimony, for action. Thank you again. I am looking forward to answering your questions.

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<sup>40</sup> <https://www.washingtonpost.com/national-security/2022/02/01/china-funding-drones-dji-us-regulators/>

<sup>41</sup> <https://www.scmp.com/economy/china-economy/article/3238118/shenzhen-trip-dji-visit-chinas-vice-premier-offers-no-limits-support-amid-us-tech-curbs>

<sup>42</sup> <https://www.reuters.com/markets/asia/dji-is-more-elusive-us-target-than-huawei-2021-12-17/>

<sup>43</sup> <https://www.defensenews.com/opinion/2023/09/15/dji-isnt-the-only-chinese-drone-threat-to-us-security-meet-autel/>

<sup>44</sup> <https://selectcommitteeontheccp.house.gov/sites/evo-subsites/selectcommitteeontheccp.house.gov/files/evo-media-document/11.29.23-letter-to-austin-yellen-and-raimondo-autel-drones-final-.pdf>