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U.S. House of Representatives Select Committee on the Chinese Communist Party

"From High Tech to Heavy Steel: Combatting the PRC's Strategy to Dominate Semiconductors, Shipbuilding, and Drones"

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Chairman Moolenaar, Ranking Member Krishnamoorthi, members of the Committee, thank you for the opportunity to appear before you today. I am the co-founder and CEO of Skydio, the largest manufacturer of small drones outside of China, and the world leader in aerial robotics. Skydio drones use artificial intelligence (AI) to understand the environment and to plan and execute complex tasks. Autonomy democratizes aviation much in the same way generative AI democratizes information, breaking down the barriers that have traditionally made aviation difficult to access.

We have shipped more than 40,000 drones to more than 2,000 enterprise and government customers, spanning every branch of the U.S military; 400 public safety agencies in all 50 states; 150 energy utilities; plus hundreds of construction companies, transportation agencies, and more, with customers around the globe. We are building the world's best automated data capture platform--our flying robots are designed to put sensors in the most dangerous and important places to access critical information and make better decisions for better outcomes.

While the last century of aviation was gas powered and largely crewed, the next century will be electric and largely uncrewed. Drones represent the future of flight. But China--not the US--dominated the first decade of small drone development.

When we started Skydio in 2014, few believed that an American company could compete. Chinese companies exerted outsized control, making impressive hardware and running extremely aggressive tactics, such as intimidating distributors out of selling competitive products and undercutting pricing with Chinese state support. In 2024, Skydio is competing--and winning-- on the strength of our products, which lean into America's asymmetric advantage in AI and autonomy. Our flagship product, the Skydio X10, offers industry leading capability, and we now manufacture more dual-use drones than any company outside of China.

But the key to understanding the drone market is recognizing that it's still in its infancy. As important and impactful as drones have become, the technology is still nascent.

The nascency of drone technology presents both a challenge and an opportunity. AI and autonomy will become the defining characteristics of drones, expanding their usage from 1:1 tools where one pilot controls a single drone, to 1:many teammates where one operator controls numerous autonomous drones at massive scale, giving superpowers to their human operators. It would be completely insane to accept a future where we depend on our geopolitical adversaries to supply these drones, but the technology shift towards AI and autonomy presents an opportunity for the U.S. to stage a comeback. And because small drones are the first frontier in a new era of AI-enabled robotics, pursuing American leadership in this sector will benefit other frontier technologies.

To understand why small drones matter for economic and national economic security, look no further than Ukraine, where I recently visited. In many parts of the world, drones are useful; in Ukraine, they are essential. Like the rest of the world, Ukraine has a heavy dependence on Chinese drones, but it is a fragile and dangerous dependency, as I will discuss.

The remainder of my statement shares Skydio's story, explains the significance of American drones supporting Ukraine's defense, and offers recommendations to advance American leadership in a new, AI-driven era of aviation.

Skydio's Story: Seizing America's AI Advantage

My co-founders and I started Skydio in a basement in 2014. The world looked very different. People were just beginning to use hobbyist quadcopters. They were relatively hard to fly, easy to crash, and almost exclusively built by companies based in China. We started Skydio because we believed that autonomy represents the future of flight, and that future begins with small drones.

Now, ten years later, things look very different again. With a team of nearly 800 people, we long ago outgrew our first basement office. Our products are vital parts of critical infrastructure, revolutionizing the way we inspect the power plants, bridges, and roads on which society depends; indispensable to first responders, enabling hundreds of public safety agencies to better protect their communities and officers; and essential to service members, providing life-saving overwatch for American soldiers and those of more than a dozen allied nations.

The defining feature of the drone industry is the immense technological challenge required to build high performing, high reliability drones, at large scale and low cost. In many ways, drones are akin to the Mount Everest of technology, requiring mastery of propulsion, optics, sensors, thermals, aerodynamics, wireless, mobile software, cloud software, supply chain, manufacturing, logistics, and in our case highly sophisticated AI systems. Skydio is thriving today because we got good at all of these things and have been able to deliver major value to a large and growing base of customers, now more than 2,000 organizations strong. Dozens of would-be peers have

not met this challenge or failed altogether. There are 2-3 companies capable of building hardware like our newest product, the Skydio X10--and the other 1-2 companies are based in China.

Nevertheless, I have never been more confident in our ability to meet the needs of the market, our nation and our allies, together with a growing number of companies across America and the West.

a. Skydio's Story

I grew up flying radio-controlled airplanes, the predecessors to the drones of today. My passion for flight was inspired by my grandfather who served as a crew chief in the U.S. Army Air Force during World War II, keeping B-17 bombers in the air over Europe. This passion led me into engineering, and I was fortunate to be starting grad school in the Computer Science and Artificial Intelligence Lab at MIT around the time computers and cameras were getting small enough and cheap enough to put on model aircraft. Building artificially intelligent software that gave these devices the ability to fly themselves better than the best human pilots in the world became my obsession. My co-founders and I met doing this research at MIT where our lab helped to pioneer autonomous flight for drones, well before there was any semblance of a civilian drone industry. While we weren't focused on applications at the time, our research was largely funded by the Office of Naval Research and other U.S. Department of Defense organizations.

We founded Skydio because we saw the potential of drones to transform a wide range of industries and applications. We believed that autonomy--the ability for a drone to fly itself and perform complex tasks on its own--is essential to realizing the promise of drones. Skydio is a software and AI company at heart. Skydio drones use advanced computer vision and AI to build a real-time, 3D map of the environment, plan collision-free paths around obstacles, and automate complex tasks.

The arc of my career traces the evolution of the industry. As a teenager, I focused on building drone hardware and training myself to become an expert pilot. In a sense, I was the software. Skydio does both. We build world-class hardware capable of operating itself using carefully integrated sensors, custom deep neural networks, and operating software that makes piloting effortless and automates complex workflows.

It is fitting that today's hearing covers drones and chips. Chips--the semiconductors that power electronics--are essential to drones. Drones represent the first frontier of embodied AI, the opening act of a future defined by AI-enabled robotics. NVIDIA, one of the most valuable companies in the world and global leader in AI chips, is a strategic partner and investor. Our

close partnership with NVIDIA enables us to be among the first to do chip-down designs on their latest generation AI chips.

Our partnership with NVIDIA exemplifies America's asymmetric advantage in AI. America continues to lead the world in terms of access to capital, software expertise, and advanced semiconductors. Skydio's success rests on that fundamental advantage. When confronting competitors subsidized by the Chinese government, American innovators win by seizing areas of asymmetric advantage, especially AI.

We bet early and big on computer vision and AI, but we also bet early and big on the tight integration of hardware, software, and manufacturing. The miracle of biological systems is a story of tight integration (co-evolution) of hardware (the body) and software (the mind), and that's exactly what it takes to build great robots. The western world, and Silicon Valley in particular, has largely outsourced hardware, but if we want to dominate this next, most important, category of technology we must be great at hardware, software, and their complex integration on the manufacturing line.

Last year we opened a new manufacturing facility in California ten times larger than our last facility. We now build over a thousand drones a month with plans to scale far beyond that. No other company outside of China makes more small, dual-use drones--something we could have only dreamed of when we started the company.

b. Impact

Skydio serves three major markets: state and local governments, enterprise companies, and national militaries and agencies. Each market is experiencing rapid growth.

Nothing motivates me more than hearing stories about the impact our products have in the hands of our customers. I'd like to share some of those stories with the Committee.

Public safety: At Skydio, we're proud to partner with more than 400 public safety agencies across all fifty states. Small drones play increasingly important roles in protecting our communities and officers. Agencies use drones to provide real-time incident overwatch, reconstruct crime and accident scenes, and perform search and rescue missions, among other use cases.

Drones provide better information to drive better decisions. For example, an officer with the Oklahoma City Police Department (OKCPD) responded to a disturbance call, approaching a suspect on foot. While the officer attempted to pat him down, the suspect grabbed a weapon and fired it, hitting the officer, before running into a residential area. Officers quickly deployed two

drones from their police cars, located the suspect in a backyard and confirmed he was unarmed. That information fundamentally altered the nature of the response, enabling officers to swiftly and safely arrest the suspect and render immediate medical care.

While the use of drones by front-line officers is deeply valuable, the next frontier in policing centers on the use of drones to respond to emergency calls, a concept known as Drone as First Responder or DFR. DFR provides targeted situational awareness exactly when and where it's needed. Drones can arrive on the scene in seconds rather than minutes, go into dangerous situations ahead of people, increase transparency by creating a clear aerial perspective, and provide better information for public safety officers to make better decisions and get better outcomes.

DFR is rapidly moving from concept to reality. Another example from Oklahoma is the Oklahoma State Fair, which draws more than 900,000 attendees each year. Tasked with maintaining order and safety across the vast 435-acre grounds, OKCPD is responsible for providing security for the Fair without disrupting policing operations throughout the rest of the city.

To address this challenge at the 2023 State Fair, OKCPD created a DFR program to secure the event in a way that maximized community safety while conserving resources. Officers acted as remote pilots, flying drones from a web browser and providing real-time situational awareness to other officers patrolling the fairground and stationed in command centers. OKCPD conducted 341 flights, totaling 60 hours of flight time, during the 11-day event. The drones played a pivotal role in resolving 84 incidents, including de-escalating a shooting incident, locating missing individuals, and apprehending suspects. This effective use of technology significantly elevated community safety, minimized risks for officers, and expedited incident response and resolution.

Charged with protecting the country's largest metropolitan area, the New York City Police Department is committed to pioneering the future of drones in law enforcement. Over the last year, NYPD drone deployments increased by 480%, sometimes avoiding the need to launch helicopters, which are expensive and more disruptive to the community than drones. In addition to patrol-led deployments, NYPD is beginning to conduct DFR operations to increase response times and better protect officers and community members. We are proud to partner with NYPD as they test dock-based DFR operations.

Critical infrastructure inspection: Small, smart drones are becoming increasingly important to the critical infrastructure on which our society depends. Across the country, thousands of Skydio drones are deployed daily to more efficiently and accurately inspect and maintain America's most valuable infrastructure, including the energy grid, resulting in reduced inspection costs and fewer outages and failures.

The New York Power Authority uses Skydio drones to inspect hydroelectric dams for performance and safety. Workers can inspect a dam in 1.5 days instead of two weeks, and for a fraction of the cost. As inspections take less time and cost less money, infrastructure owners can inspect assets more frequently, and time those inspections on the health of the asset instead of arbitrary time horizons, a concept known as conditions-based maintenance.

Along those lines, American Electric Power (AEP) uses Skydio drones to conduct proactive maintenance based on the condition of an asset. The difference is significant. With drones and the ability to inspect remotely, AEP is able to inspect equipment more frequently, safely, and affordably, gaining information to detect small problems before they become big problems. Using a drone, AEP recently identified a potential issue on a transmission line, which they fixed proactively, resulting in a projected cost savings of roughly $8M from the averted outage.

Defense: Skydio has delivered thousands of drones to every branch of the U.S. military and dozens of allied nations.

Our products are part of two programs of record: the U.S. Army's Short Range Reconnaissance Program and the U.S. Marine Corps' Short Range Short Endurance Program. Both programs aim to integrate small, smart drones at the unit level, providing organic reconnaissance capability previously unavailable to front-line forces. That capability makes a life or death difference. Understanding the battlefield allows Soldiers and Marines to make smart decisions, complete their missions, and return home safely.

Our experience in Ukraine, which I will discuss at length in the next section, has directly benefited our work with the U.S. military. We've shared our findings with colleagues in the Defense Department, and the U.S. military has begun to field new capabilities we developed with feedback from Ukraine and other customers, including resilient communications features.

Although existing U.S. military procurement programs focus on single drones flown by single operators, DOD and Skydio are investing significant resources in breaking that paradigm, enabling a single operator to control multiple systems. Skydio plays a key role in DOD's Artificial Intelligence for Small Unit Maneuver (AISUM) program, focused on developing the technology and tactics necessary for operators to control fleets of robots in the air and on the ground.

Multi-agent operations offer the ultimate asymmetric advantage, massively augmenting the reach and awareness of human teams and providing extraordinary situational awareness. To bring that future forward, Skydio recently hired a world-class team of engineers that developed some of the

fundamental technology critical to human-machine teaming. We will continue to invest in this capability, which will benefit both defense and commercial customers.

Small, smart, survivable, and scalable drones will save lives, deter aggression and, if necessary, help ensure America and its allies come out on top. As the largest supplier of small, dual-use drones to the U.S. military, and a growing partner to our allies, we are honored and motivated by the opportunity to partner with service members at scale.

Pulling the Future Forward: Ukraine as a Case Study on Global Competition and American Leadership

Soon after Russian tanks crossed the Ukrainian border in February 2022, Skydio began fielding requests for drones. Today we are more committed than ever to supporting Ukraine's defense in the face of Russia's brutal invasion. By standing with Ukraine, we can defend democracy while building products and learning lessons that will power American deterrence for decades to come. Following two years of product improvements that benefit our dual-use customer base, Ukraine has requested thousands of Skydio's newest drone, the Skydio X10. I am passionately committed to making our products the most capable small Intelligence, Surveillance and Reconnaissance (ISR) platforms on the battlefields of today and tomorrow. This section tells the story of our work with Ukraine, and closes with commentary on global competitiveness in the drone industry.

a. Standing With Ukraine

Days after Russia's invasion, our manufacturing and customer success teams worked over night to ship our first donation of Skydio drones to Ukraine. Within weeks, we had donated hundreds of systems, calling major enterprise customers to let them know their shipments would be delayed because their drones were going to Kyiv. We developed close ties with Ukrainian units and stood up 24/7 customer support services at no cost. Engineers translated our controller operating software into Ukrainian, becoming the second language we offer outside of English. Our team members have completed 23+ trips to Ukraine, including one I joined earlier this year. At this point, Skydio has deployed more small, dual-use drones to Ukraine than any other company outside of China. The vast majority were purchased and provided by the U.S. government, with many more on the way.

Since Russia's initial invasion in 2014, Ukraine has pioneered the military application of drones of all sizes. Small drones play an especially prominent role. On the battlefield, small, dual-use drones form the cornerstone of the kill chain, gathering real-time information critical to decision making. Almost nothing happens without a drone in the air. In general, soldiers only fire artillery, launch armed first-person-view drones, or maneuver with the benefit of information

gathered by drones, often small, dual-use drones. Commanders monitor dozens--sometimes hundreds--of drone feeds, orchestrating action in real time.

Without a drone in the air, a soldier is a "dead man walking." For American audiences, the role played by small drones in Ukraine is profound and initially hard to grasp. In Ukraine, drones have democratized ISR, enabling everyone--including front-line soldiers--to have their own eye in the sky, without competing for scarce aerial resources controlled by higher headquarters. It is a far cry from tactics the U.S. military developed during the Global War on Terror, where total air superiority enabled commanders to rely on multi-million-dollar, high-flying systems, and front-line soldiers typically did not need to carry their own aerial ISR capabilities. Great power conflict flips the script.

Ukraine loses thousands of drones a month, with some estimates as high as 10,000. Many of those are small, dual-use reconnaissance drones made by DJI and other Chinese companies. Chinese drones are fundamentally hostile to Ukraine's interests. Chinese drone companies use software to prevent their products from taking off in Ukraine, a feature known as geofencing. If a DJI drone manages to take off, surveillance technology produced by DJI enables Russian forces to identify--and target--the operator within seconds. To defeat those measures, Ukrainian operators must jump through a variety of deadly hoops. Ukrainian forces often need to perform surgery on Chinese drones before sending them to the front, installing features that trick the drone into believing it is an allied country without geofencing. Getting it wrong is a death sentence.

But the most serious limitation associated with Chinese drones is supply. China has used trade as a weapon of war. In the early days of the war, Chinese drones were plentiful. DJI and Autel publicized their strong opposition to Ukraine's use of their products, but Ukraine and its supporters managed to buy huge stocks from global resellers.

Things are changing. In September 2023, China issued novel export controls on small drones. Although China framed the controls in broad terms, they were evidently aimed at strangling Ukraine's primary source of supply, illustrating the country's "no limits" partnership with Russia. Based on first-hand accounts, those controls have started to take effect, making it much more difficult and expensive for Ukraine to replenish Chinese systems.

One thing is clear: Ukraine urgently needs alternative sources of capable, secure, dual-use reconnaissance drones. As the CEO of the largest drone company outside of China, I feel a strong responsibility to meet that need and our team is rising to the challenge. Two years of experience in Ukraine has improved our technology in ways that benefit our entire customer base, ranging from front-line military forces, to energy utilities operating in GPS-denied environments, to major public safety agencies flying in urban canyons.

We recently released a new product, the Skydio X10, that embodies these improvements. Small, light, and backpack portable, Skydio X10 features NVIDIA's next-generation AI processor to run deep neural networks necessary to detect and avoid obstacles and process information, coupled with the most advanced thermal camera on a small drone. An external radio antenna we designed increases range and reliability.

Advanced software features make the system more reliable even in the face of the radio frequency and GPS-jamming that characterizes the front lines. In Ukraine, the electronic warfare (EW) environment is never static. It evolves every few weeks, requiring both sides to iterate and adapt. To remain relevant, technology partners must be able to move fast. Hardware changes relatively slowly. But software can change in seconds. We have entered the age of software-defined warfare. When the speed of war is the speed of software, only software-defined technology can stay a step ahead.

AI is an antidote to EW. AI enables robots to operate without communications links to a controller or GPS. Once considered nice to have, those features are now a necessity. I have been working on this problem for more than a decade. At MIT, I designed a drone for my master's thesis capable of autonomously navigating a GPS-denied parking garage. I could only have imagined that the same fundamental technology would one day prove useful to defend a democracy against an authoritarian invader. The same technology increases the resiliency of our products for our commercial customers, many of whom operate in degraded communications environments.

Built on that strong foundation of software-defined technology, Skydio X10 passed demanding operational tests in Ukraine against high-end electronic warfare, leading Ukraine to request thousands of units to replace Chinese-made drones.

Skydio drones in Ukraine are not only used for tactical operations. Increasingly, we are focused on supporting Ukraine's reconstruction, including by addressing Russia's ongoing attacks against civilian sites. Ukraine is investigating a staggering 122,000+ suspected Russian war crimes, many involving strikes on civilians. We partnered with USAID and Ukraine's Office of the Prosecutor General to pioneer a new program using autonomous drones to accelerate those investigations. We trained Ukraine's brave war crimes prosecutors how to create digital models of war crimes sites using Skydio drones we donated. To date, prosecutors have investigated more than 100+ sites of potential Russian war crimes, and contributed to 60+ criminal cases, using Skydio drones. In March 2024, the International Criminal Court issued indictments against two senior Russian officials based in part on evidence gathered by Skydio drones.

Whenever I spend time with Ukrainian officials, they tell me that Ukraine needs something they have never had when it comes to small, dual-use drones: a true technology partner. They need a company willing and able to lock arms with Ukraine, iterate within days and weeks, and manufacture at scale and speed. The company on which they have been forced to rely, DJI, is actively antagonistic, forcing Ukraine to take extraordinary measures to purchase and field its technology. We are committed to being the partner Ukraine deserves.

Although we've made progress in supporting Ukraine, the reality is we have *much* more to do. I turn to that topic in the final section of my statement.

b. Strategic Technology, Strategic Competition

My focus as the CEO and our focus as a company is on our products and our customers. But it's impossible to ignore the fact that drones represent a strategic technology as important to national security as AI and semiconductors. Ukraine's experience proves the point.

Over the last ten years, I've watched dozens of U.S. and allied drone companies go under in a market distorted by foreign subsidies. The Chinese government has tried to control the drone industry, pouring resources into national champions and taking aim at competitors in the U.S. and the West, tilting the playing field in China's favor.

This isn't unique to the drone industry. Earlier this month, the Group of Seven (G7) countries expressed general "concerns about China's persistent industrial targeting and comprehensive non-market policies and practices that are leading to global spillovers, market distortions and harmful overcapacity in a growing range of sectors."

But the impact has been especially severe in the drone industry, where Chinese companies gained far more market share in the U.S. and the West than other technology sectors, such as 5G. When Orville Wright took to the skies in 1903, he and his brother overcame the laws of physics. Today's drone entrepreneurs face not only physics, but geopolitical headwinds.

Entrepreneurs welcome competition. But competition did not exist in the drone industry until very recently. If you needed a drone, you could choose from products made by one or two companies based in China--and that was largely it. Recently, a new crop of companies have dared to challenge the status quo. We're part of a vanguard of innovative companies manufacturing drones of all sizes and types, challenging the notion that American companies cannot compete.

Over the last ten years, America and allied governments have recognized the risks of relying on technology subject to a strategic competitor. It started with 5G technology and has evolved to

include strategic technologies such as shipping cranes, semiconductors, social media, electric vehicles, and AI. The United States and other governments have begun addressing potential threats of over reliance on strategic competitors for critical technology, including drones made by companies beholden to China's national security laws. Drones are a dot on a much larger trendline. Despite that reality, in an effort to protect themselves, Chinese drone companies now falsely claim that American companies are entirely to blame for these restrictions.

As a business leader who is passionate about drones, I think it's critical to carefully calibrate technology restrictions. It's vitally important to give impacted organizations sufficient time to transition. And it's equally important to support the transition by providing grants or other incentives whenever possible, especially for budget-conscious public safety agencies seeking to scale the benefits that advanced, trustworthy drones can provide.

Ultimately, the only stable, long term solution is to have superior products and technology made by U.S. companies or trusted allies. We have raised - and spent - hundreds of millions of dollars of venture capital to accomplish this goal. We've built world-leading AI and autonomy while furiously focusing on the different aspects of hardware it takes to have a great enterprise-grade drone from the camera sensors to the wireless system.

I have never been more confident in our ability to meet the needs of the industry, together with a growing number of exceptional American and allied innovators. Public safety agencies, critical infrastructure owners, and defense agencies using drones deserve choice, competition and trustworthy technology. That is exactly what we and allied peer companies are providing.

Recommendations for American Leadership

To advance American leadership in this critical sector, I recommend three actions: (1) surge American drones to Ukraine; (2) accelerate the integration of drones in the American military; and (3) promote a level playing field by supporting end users.

Surge American Drones to Ukraine: **The United States should surge American drones to Ukraine, in particular the small, dual-use ISR drones critical to Ukraine's ability to defend itself.**

Why? First, scaling our support for small ISR drones would provide a critical capability to Ukraine that is increasingly at risk due to China's export controls and advances in Russian EW. Ukraine has a thriving domestic drone industry, manufacturing the world's most advanced first-person-view attack drones, in addition to heavy lift attack drones, and some larger ISR and strike systems. But Ukraine does not manufacture small, dual-use ISR drones at scale. Small ISR drones look simple, but it's extremely difficult to design and build them at the requisite level of

scale and quality. As a result, surging small ISR drones to Ukraine would not risk displacing Ukraine's domestic ecosystem, which the U.S. must continue to support.

Second, ensuring American drones succeed in Ukraine strengthens our own defense, resulting in battle-tested products produced at extraordinary scale and capable of operating in great power conflict. The sooner we learn and adopt these lessons, the stronger deterrent posture we will develop, and the more likely our enemies will think twice before threatening America and our allies. Third, surging American drones to Ukraine counteracts China's years-long effort to dominate the global drone industry, and redresses China's active support for Russia and aggressive antagonism toward Ukraine's defense.

To date, the State Department has leaned forward in sending American ISR drones to Ukraine. The State Department deserves enormous credit for leading from the front. The Defense Department has sent attack drones, but not the small, dual-use ISR drones Ukraine increasingly needs in light of China's export controls.

Congress deserves enormous credit for continuing to support Ukraine in a bipartisan manner. In that spirit, I respectfully recommend that this Committee, and the Congress, support the State and Defense Departments in surging small American ISR drones to Ukraine.

Accelerate the Integration of Drones in the American Military: **The United States should significantly accelerate the integration of drones at the unit level, while stockpiling systems capable of backstopping the U.S. military and our allies while investing in next-generation wireless links.**

Open source projections suggest that the U.S. military's existing stockpiles of drones would last less than two months at a rate of attrition similar to that faced by Ukraine. That must change. Senior leaders--from Deputy Secretary Kathleen Hicks to Army Chief of Staff General Randy George--recognize the issue and are committed to solving it. Congress--and its power of the purse--are necessary to make that vision a reality.

I have three specific recommendations:

1. *Integrate drones at every level of the military*. Every soldier should have access to attritable, autonomous drones. That will require meaningful increases to existing programs of record such as the Marine Corps Short Range Short Endurance Program and the Army's Short Range Reconnaissance Program.
    a. Ultimately, the ratio of drones per soldier must evolve from one drone per soldier to many--dozens or even hundreds of drones--per soldier. Every person should be augmented by intelligent robots. In Ukraine, drones are effective, but limited by the need for expert pilots who can only control one drone at a time.

b. To win tomorrow's wars, we must break that paradigm, enabling one person to distribute intent across multiple smart systems. We must lead the world in the development--and deployment--of multi-drone capabilities designed to extend the reach and efficacy of individual formations. Skydio plays a key role in DOD's leading multi-agent robotics program, known as AISUM (Artificial Intelligence for Small Unit Maneuver). We have made major investments in the people and technology that allow a single operator to distribute intent across air- and ground-based systems. Congress should strengthen programs like AISUM--across autonomous systems in every domain--to ensure we are ready to fight the next war, not the last one.

2. *Extend the concept of strategic stockpiling to include capabilities, such as small ISR drones, critical to the modern kill chain.* Stockpiling munitions is critical, but no longer sufficient. The Defense Department should extend strategic stockpiling beyond munitions to include capabilities necessary to close the kill chain, beginning with small, unit-level drones and expanding to other attritable, autonomous systems. Congressional leadership could play a key role.
3. *Support funding to develop silicon-based wireless communications solutions for small drones and other forms of robotics.* Chinese-made drones and robotics often rely on advanced wireless solutions based on custom silicon, including silicon developed by companies subject to sanctions like Huawei. Custom-silicon wireless solutions can offer greater range and reliability in a small, light form factor. Congress should ensure that the Defense and Commerce Departments support the development of a silicon-based wireless solution suitable for small drones and other forms of robotics. Those solutions would benefit the entire ecosystem, not just a single company.

Supporting End Users: **The United States should ensure that existing grant programs for drones are adequately funded and consider creating targeted grant programs to support public safety agencies.**

Given the extent of China's control over the drone industry, it may sound reasonable to fight subsidies with subsidies, attempting to pour money into the domestic drone industry. I disagree. We should not try to beat China at their own game. We should let the market pick winners and losers, rather than the government.

For that reason, when it comes to federal policy measures, we generally support *demand*-side measures targeting end users, rather than supply-side measures directly targeting manufacturers. The most effective policy measures let the market make decisions. Two categories of end users deserve particular consideration for support:

a. *State and local agencies and higher education institutions*: Congress should support state and local governments and higher-education institutions by funding the *DIIG (Drone Infrastructure Inspection Grant) Act*, and a corollary provision creating a new grant program for community colleges and universities, the *Drone Education and Workforce Training Grant Program*. Both provisions were enacted last month as part of the FAA Reauthorization Act.
    i. The DIIG Act creates the first grant program to help state and local governments establish and expand drone infrastructure inspection programs. Nearly every American state and hundreds of cities rely on drones to inspect the infrastructure on which our society and economy rely. Last year, the U.S. Department of Transportation concluded that using drones to inspect transportation infrastructure results in benefits on every level, improving worker safety, increasing efficiency and data quality, and cutting the cost and time associated with traditional methods of inspection. The DIIG Act promises to supercharge those efforts while requiring grant recipients to have skin-in-the-game in the form of sharing 50% of the costs. **Congress should fund the DIIG Act's allocation of $48M, over four years, in grants for states and cities, which could be used to hire and train people, build drone programs, and buy equipment.**
    ii. The Drone Education and Workforce Training Grant Program would invest $20M over four years in grants to community colleges and universities supporting drone education programs, including efforts designed to upskill and reskill existing workers interested in contributing to the drone economy. Leading a new era of aviation defined by uncrewed operations requires a highly trained workforce with a diverse set of skills, including maintenance, hardware and software development, program management, and piloting. **Congress should fund the program's allocation of $20M to train the future workforce our nation needs.**
b. *Public safety agencies*: To expand and accelerate the transformative role drones can play in increasing community and officer safety, Congress should (1) ensure existing grant programs for state and local agencies are fully funded and make drones eligible expenditures, and (2) consider new grant programs to support public safety drone programs.
    i. *Existing grant programs*: Some existing grant programs for state and local public safety agencies prohibit the use of grant funds for drones, including the U.S. Justice Department's Edward Byrne Memorial Justice Assistance Grant (JAG) Program and FEMA's Assistance to Firefighters Grants (AFG) Program. Congress should fix that, and ensure those programs and others--such as the U.S. Department of Homeland Security's Urban Areas Security Initiative (UASI) Program, the Federal Emergency Management Agency's (FEMA's) Homeland Security Grant Program--are fully funded.

ii. *New grant programs*: Congress should consider creating new grant programs focused on helping budget-conscious public safety agencies adopt advanced, secure drone technology to meet every use case, from DFR to tactical response. The Drones for First Responders (DFR) Act is an interesting option that proposes a means of paying for the grants. Drones imported from China are already subject to meaningful tariffs. The DFR Act would fund a new grant program for public safety agencies by leveraging the proceeds generated from incremental increases in tariffs. I would recommend that Congress consider using the *existing* tariff proceeds to fund a grant program, perhaps in addition to any proceeds generated by incremental tariff increases.

Conclusion

I believe the best way to predict the future is to invent it. I have never been more confident in America's ability to lead a new era of aviation and a new generation of AI-enabled robotics. Together with our peers across the industry, we will continue to prove that America can compete--and win--even in spaces contested by countries that play by different rules.