



June 24, 2019

Hon. Roger Wicker
Hon. Maria Cantwell
Hon. Dan Sullivan
Hon. Edward Markey
Committee on Commerce, Science, and Transportation
United States Senate
302 Hart Senate Office Building
Washington, DC 20510

Dear Chairman Wicker, Ranking Member Cantwell, Chairman Sullivan and Ranking Member Markey,

On behalf of DJI Technology Inc., we submit this letter for the record in connection with the June 18, 2019 U.S. Senate Committee on Commerce, Science, and Transportation, Subcommittee on Security hearing entitled "Drone Security: Enhancing Innovation and Mitigating Supply Chain Risks."

Because the drone industry is becoming an increasingly critical engine for small American businesses as well as the entire U.S. economy, it is essential that decisions affecting key components of the industry are based on fact. We are deeply concerned that, left unchecked, the unsubstantiated speculation and inaccurate information presented during your Subcommittee hearing will put the entire U.S. drone industry at risk, causing a ripple effect that will stunt economic growth and handcuff public servants who use DJI drones to protect the public and save lives.

The U.S. drone industry is experiencing rapid growth, helping U.S. workers, entrepreneurs, government agencies, and first responders promote worker safety, spur innovation, support vital operations, and save lives. As a global technology company, and the world's leading civilian drone manufacturer, DJI has played a central role in advancing the societal benefits of drone technology while working collaboratively with government, industry, and research experts to safely integrate drones into our airspace and set industry standards for data security and privacy.

DJI invented the product category of highly capable off-the-shelf quadcopters that can be easily used for commercial applications with the Phantom series over six years ago. It is no surprise that in 2019, DJI leads the market that it invented. Since that time, we have driven rapid innovation to provide the best life-saving tools at attractive price points. Because DJI has pushed technology limits to develop best-in-class hardware quickly, we have enabled American innovation, job creation, and economic growth in drone software and services. As we have made drone



technology accessible and affordable, more than 1 million people have registered their civilian drones in the U.S.,¹ and more than 122,000 FAA-licensed pilots operate commercially.²

We believe industry and government have a shared responsibility to build on this momentum and keep our skies open for safe and secure commerce and innovation. Unfortunately, some witnesses who appeared before the Subcommittee want to limit competition, innovation, and the availability of drone technology based solely on its country of origin. To bolster their desired outcome relating to a product's country of origin, they resorted to offering highly speculative risks and inaccurate information about data transmission functionality.

DJI Customers Have Full Control Of Their Data

This speculation about DJI's technology is simply wrong. To be clear:

- DJI drones do not share flight logs, photos or videos unless the drone pilot deliberately chooses to do so. They do not automatically send flight data to China or anywhere else. They do not automatically transmit photos or videos over the internet. This data stays solely on the drone and on the pilot's mobile device. DJI cannot share customer data it never receives.
- DJI's professional pilot app has a built-in setting to disconnect all internet connection, as an extra precaution for pilots performing sensitive flights. Unlike some technology companies, DJI does not sell or monetize customer data.
- DJI embeds password and data encryption features in the design of our products. This provides customers with secure access to the drone and its onboard data. In cases when U.S. drone users do choose to share their data, it is only uploaded to U.S. cloud servers.
- DJI operates a global Bug Bounty Program so the world's security researchers can identify unforeseen security issues, and we hire independent security experts to test our products. These are just some of the steps we take to assure high-security users they can use our products with confidence.

As the Subcommittee knows, the security of a company's products depends on the safeguards it employs, not where its headquarters is located. To provide our government customers with additional data privacy assurance, this week we are releasing our DJI Government Edition drone system. DJI Government Edition cannot access the internet and only stores information on the device. This means that if a government employee were to make a mistake in data management protocol, or even intentionally try to send drone data to DJI or elsewhere, no data will be transmitted. This is our most secure drone system and is designed to meet the U.S. government's rigorous security expectations. DJI has worked with the U.S. Department of the Interior since 2017 to develop this system, which has passed two

¹ U.S. Department of Transportation (<https://www.transportation.gov/briefing-room/faa-drone-registry-tops-one-million>)

² Federal Aviation Administration Aerospace Forecast FY2019-2039 (https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2019-39_FAA_Aerospace_Forecast.pdf)



phases of testing to “meet Interior’s UAS data management and risk mitigation requirements with respect to encrypted control and payload links, and enterprise level managed data sharing controls.”³

DJI is also pleased with the recent U.S. Department of Homeland Security (DHS) guidance for mitigating data management risk in sensitive missions, which aligns with the security practices DJI has enabled. Our global team of engineers proactively implemented these measures based on our partnerships with public safety agencies, private operators of critical infrastructure, and even the U.S. federal government. We have publicly called on all manufacturers to adopt the measures outlined by DHS and remain open to any further recommendations that will help us continue to empower our end users to better safeguard their data.

DJI Products Help American Businesses And Government Agencies

Leading American businesses trust DJI drones to promote worker safety, protect critical infrastructure, maintain their equipment, and keep their information safe. American Airlines technicians have tested using DJI drones to inspect aircraft. Federal Express is using DJI drones at Memphis International Airport in a variety of aviation safety applications, as part of the UAS Integration Pilot Program. Hensel Phelps crews use DJI drones to survey conditions and improve safety on complex construction sites. Southern Company employees pilot DJI drones to inspect power lines and assess storm damage. These companies and many others built their drone programs on DJI platforms after carefully evaluating drones from multiple manufacturers based on cost, performance, reliability and security.

DJI drones are also the preferred choice of state and local public safety agencies which need the most reliable drones for literal life-or-death situations. For example:

- The New York City Police Department used a DJI drone to monitor a man who barricaded himself in an apartment on a busy Brooklyn corner this spring. When officers talked the man into surrendering, they used the drone to verify he had set his gun down before tactical units approached him.⁴
- In February, police in Fremont, California used a brand-new DJI drone model with an integrated FLIR thermal imaging camera to find an emotionally troubled deaf boy. He had run away from school and was hiding in a dark field at night, but officers saw his body heat with the drone’s camera and were able to rescue him.⁵
- Just last week, game wardens in Coleman County, Texas used a DJI drone with a FLIR thermal imaging camera to find two kayakers missing along a rural river after dark. Searching both sides of a half-mile of river would have

³ U.S Department of the Interior Unmanned Aircraft System (UAS) Program 2018 Use Report (https://www.doi.gov/sites/doi.gov/files/uploads/doi_fy_2018_uas_use_report.pdf)

⁴ New York Daily News (<https://www.nydailynews.com/new-york/nyc-crime/ny-cops-use-drone-to-track-barricaded-subject-20190319-3m6ssrvay5cjrdrvqcthhzxx6wm-story.html>)

⁵ CBS San Francisco (<https://sanfrancisco.cbslocal.com/2019/02/21/fremont-police-drone-helps-find-missing-deaf-teen/>)



taken all night on foot, but the drone found them in 14 minutes.⁶ More than 250 people have been rescued from peril by drones around the world, many of them DJI drones.

DJI Creates Value For The American Economy

As the search-and-rescue incidents above indicate, DJI's partnership with the American sensor company FLIR Systems, Inc. has helped save lives while accelerating FLIR's reach into aerial technology and enabling its growth in this new field. It is one of many examples of how DJI's hardware systems have created opportunity, growth and public benefits for Americans.

DJI's drone platforms are helping entrepreneurs at U.S. companies like Measure, PrecisionHawk, DroneDeploy, and DroneBase build innovative businesses and develop new software applications that spur investment in America and support the creation of thousands of American jobs. DJI estimates together with our U.S. partners we have driven \$1 billion in U.S. economic activity. This evolution is similar to that of other consumer electronics technologies, including smartphones and portable computers, that are manufactured in China but enable American companies to build robust, lucrative software and service ecosystems.

In the coming years, commercial drone use is expected to triple,⁷ the U.S. drone economy is set to surpass \$82 billion, and the drone economy will create more than 100,000 jobs.⁸ That is good news for American drone manufacturers: As Brian Wynne, President and CEO of the Association for Unmanned Vehicle Systems International (AUVSI), told your Subcommittee, "The United States has developed more unique UAS platforms than any other country, and nearly twice as many as the second-largest UAS-producing country. It also has more than triple the number of manufacturers in comparison, with 44 states having at least one UAS manufacturer."⁹

Yet hardware is a smaller part of the drone economy than software, data analysis and drone services – fields that are led by American companies. We count more than 13,000 American companies as developers on DJI's Software Development Kits, including the industry's leading drone mapping solution, San Francisco-based DroneDeploy. The

⁶ KIDY, San Angelo, Texas (<https://www.myfoxzone.com/article/news/game-wardens-use-drone-to-locate-lost-kayakers-on-the-colorado-river/504-6b2c6fc3-4922-4652-b116-3697a88036a1>)

⁷ Federal Aviation Administration Aerospace Forecast FY2019-2039

⁸ AUVSI report The Economic Impact of Unmanned Aircraft Systems Integration in the United States (<https://www.auvsi.org/our-impact/economic-report>)

⁹ U.S. Senate Committee on Commerce, Science, and Transportation Subcommittee on Security Hearing – June 18, 2019 (<https://www.commerce.senate.gov/public/cache/files/3f5296ab-b031-432a-907c-8f74b0319107/8BF2D6B1094D93728DE434609A153527.wynne-6.18.2018.pdf>)



software applications created by those developers are distributed or sold on the iOS and Android mobile platforms developed by Apple and Google, and enable revenue streams to flow directly from the drone users to these developers.

DJI has also invested directly in innovation created in America, with our Silicon Valley research and development facility located in Palo Alto, which employs 14 engineers, some of the more than 150 employees across five offices in the United States, making DJI one of the largest direct employers of Americans in the civilian drone industry.

DJI Innovations Help America Enter The Drone Age Safely

DJI takes our responsibility as the global drone leader very seriously. Over the past several years, we have proactively led the industry in developing drone safety technology such as geofencing, remote identification, collision avoidance and mandatory pilot knowledge testing, even when there is no requirement to do so. We have discussed these many safety features with Commerce Committee members and staff, and in our testimony before the Committee during its drone hearing on March 15, 2017.¹⁰ Just as we have led the industry on safety, we are committed to being the industry leader on data stewardship, by providing the best, safest, and most secure drone technology for our customers. Because our users are in control of their data, the security of their data is firmly in their hands.

DJI believes every individual, enterprise and government agency should have access to the most safe, reliable and secure technology. As you shape the rules that will govern drone technology, we urge Congress to assess the facts and advance policies that will promote innovation, economic growth, security, and public safety.

We are happy to answer any questions the Subcommittee may have.

Respectfully,

A handwritten signature in blue ink that reads 'Mario Rebello'.

Mario Rebello

Vice President and Regional Manager, North America
DJI Technology Inc.

¹⁰ U.S. Senate Committee on Commerce, Science, and Transportation Hearing – March 15, 2017
(<https://www.commerce.senate.gov/public/index.cfm/hearings?ID=FD65111D-3DD5-472B-8C91-AEED13D00AE0>)