Surveillance Impact Report
Unmanned Aircraft Systems – All SDPD Types/Models
San Diego Police Department

DESCRIPTION

An Unmanned Aircraft Systems (UAS) is defined by Public Law 112-95, Section 331(8) as an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft. The Federal Aviation Administration classifies all UAS that weigh under 55 lbs. as "Small UAS." All of the UAS used by the San Diego Police Department fall under this FAA classification of "Small UAS." Most UAS have a digital camera attached or designed as part of the aircraft.

A UAS is, in essence, a manually controlled video/photography camera that is attached to a small remote-controlled aircraft. The majority of the data collected by UAS is similar to a handheld "point-and-shoot" camera or a Body Worn Camera.

The San Diego Police Department currently uses or intends to use the following UAS makes and models:

> DJI Phantom 4
> DJI Phantom 4 Version 2
> DJI Matrice 210 with Zenmuse Z30 and XT2 camera payloads
> DJI Matrice 30T
> Brinc Lemur-S
> Shield AI Nova
> DJI Mavic 2 Enterprise Dual
> DJI Mavic 2 Enterprise Advanced
> DJI Mavic 3 Enterprise
> DJI Mavic Air
> Parrot Anafi Thermal
> Acecore Zoe with Wiris S-1 Payload
> Hoverfly Spectre HL
> DJI Avata
> Teledyne FLIR Black Hornet PRS
> Fotokite Sigma

All of SDPD's UAS have the below common features:

1. They all range from zero to 25 lbs in weight, including all batteries and payload.
2. They all have a quad-copter design and use 4 electrically motorized propellors to provide lift.
3. They are all equipped with digital cameras capable of taking photographs and videos in the visual spectrum, and the majority of them have some zoom capability.
4. All models are not exclusively sold to military and police agencies, and the majority of the models can be acquired by the general public "off the shelf."

Some of the UAS models that SDPD uses have additional features and capabilities.

The following UAS have an additional camera sensor that can take photographs and video in the Forward Looking Infrared (FLIR) spectrum, commonly known as "thermal imagery":

> DJI Matrice 210 with XT2 camera payload
> DJI Matrice 30T
> DJI Mavic 2 Enterprise Dual

DJI Mavic 2 Enterprise Advanced
DJI Mavic 3 Enterprise
Parrot Anafi Thermal
Acecore Zoe with Wiris S-1 Payload
Hoverfly Spectre HL
Teledyne FLIR Black Hornet PRS
Fotokite Sigma

The following UAS have an additional camera feature that can take photographs and video in the Infrared spectrum commonly known as "IR," "Night Vision," or "Low-Light":

DJI Matrice 210 with Zenmuse Z30 camera payload
DJI Matrice 30T
Brinc Lemur-S
Shield AI Nova

One of the UAS, the Brinc Lemur-S, is equipped with a microphone that can record audio. This feature is only effective when the aircraft is landed within approximately 20 feet of the desired audio source. This feature is used as a de-escalation tool to communicate with individuals remotely to give commands and obtain compliance in high-risk situations.

MANUFACTURER'S PRODUCT DESCRIPTIONS:

1. **DJI Phantom 4**
   i. Manufacturer: DJI
   ii. Manufacturer Description: An uprated camera equipped with a 1-inch 20-megapixel sensor capable of shooting 4K/60fps video and Burst Mode stills at 14 fps. The adoption of titanium alloy and magnesium alloy construction increases the rigidity of the airframe and reduces weight, making the Phantom 4 Pro similar in weight to the Phantom 4. The Flight Autonomy system adds dual rear vision sensors and infrared sensing systems for a total of 5-direction obstacle sensing and 4-direction obstacle avoidance.
   iii. (Description source: https://www.dji.com/phantom-4-pro)

2. **DJI Phantom 4 V2.0**
   i. Manufacturer: DJI
   ii. Manufacturer Description: Featuring a 1-inch CMOS sensor that can shoot 4K/60fps videos and 20MP photos, the Phantom 4 Pro V2.0 grants filmmakers absolute creative freedom. The OcuSync 2.0 HD transmission system ensures stable connectivity and reliability, five directions of obstacle sensing ensures additional safety, and a dedicated remote controller with a built-in screen grants even greater precision and control. A wide array of intelligent features makes flying that much easier. The Phantom 4 Pro V2.0 is a complete aerial imaging solution, designed for the professional creator.
   iii. (Description source: https://www.dji.com/phantom-4-pro-v2)

3. **DJI Matrice 210**
   i. <u>Manufacturer</u>: DJI
   ii. <u>Manufacturer Description</u>: The ultimate platform for aerial productivity combines a rugged design and simple configurability to work as a solution for a variety of industrial applications. Improvements to the M200 Series V2 enhance intelligent control systems, flight performance and add flight safety and data security features.
   iii. (<u>Description source</u>: https://www.dji.com/matrice-200-series-v2)

4. **DJI Avata**
   i. <u>Manufacturer</u>: DJI
   ii. <u>Manufacturer Description</u>: Compact and lightweight, the DJI Avata is nimble in tight spaces. Every aspect of its design was made for you to be bold. The built-in propeller guard means that if Avata comes in contact with an object, it can bounce back, stay in the air, and can keep on flying. When you combine Avata with the goggles and motion controller, flight becomes accessible to all. Equipped with a 1/1.7-inch CMOS sensor, DJI Avata supports 4K ultra-wide angle recording with an f/2.8 aperture. Together with high-grade performance, it delivers exceptional visuals that keep your audience on the edge of their seats.
   iii. (<u>Description source</u>: https://www.dji.com/avata)

5. **DJI Matrice 30**
   i. <u>Manufacturer</u>: DJI
   ii. <u>Manufacturer Description</u>: The DJI M30T drone is equipped with a variety of high-performance sensors, is lightweight and portable, and is resistant to the effects of weather. The DJI RC PLUS enterprise remote control, as well as the newly enhanced DJI Pilot 2 flight app, are included to improve piloting efficiency and flight safety. The Matrice 30 Series (M30 or M30T) comes with a DJI RC Plus, two TB30 Intelligent Flight Batteries, one BS30 Intelligent Battery Station, and an aircraft storage case.
   iii. (<u>Description source</u>: https://www.dji.com/matrice-30)

6. **DJI Mavic Air**
   i. <u>Manufacturer</u>: DJI
   ii. <u>Manufacturer Description</u>: Mavic Air 2 takes power and portability to the next level, offering advanced features in a compact form factor. Intelligent shooting functions and excellent image quality put aerial masterpieces within reach. Safer, smarter flight enables you to up your game while fully enjoying the creative process.
   iii. (<u>Description source</u>: https://www.dji.com/mavic-air-2)

7. **DJI Mavic 2 Enterprise Dual**
    i. Manufacturer: DJI
    ii. Manufacturer Description: Designed to empower a new generation of workers, the Mavic 2 Enterprise is the ultimate expression of a tool that delivers beyond expectation to meet current workplace challenges and future demands. Featuring:
        1. Visible & Thermal Imagery
        2. Integrated Radiometric FLIR Thermal Sensor
        3. Adjustable Parameters For Emissivity & Reflective Surfaces
        4. Multiple Display Modes: FLIR MSX, Infrared & Visible
    iii. (Description source: https://www.dji.com/mavic-2-enterprise)

8. **DJI Mavic 2 Dual Enterprise Advanced**
    i. Manufacturer: DJI
    ii. Manufacturer Description: Capture accurate details in any mission with Mavic 2 Enterprise Advanced – a highly versatile yet compact tool that packs a whole lot of performance upgrades. With high-resolution thermal and visual cameras, the M2EA supports up to 32x digital zoom and is capable of centimeter-level positioning accuracy with the RTK module. Featuring:
        1. Visible & Thermal Imagery
        2. Integrated Radiometric FLIR Thermal Sensor
        3. Adjustable Parameters For Emissivity & Reflective Surfaces
        4. Multiple Display Modes: FLIR MSX, Infrared & Visible
    iii. (Description source: https://www.dji.com/mavic-2-enterprise-advanced)

9. **DJI Mavic 3T Enterprise Advanced**
    i. Manufacturer: DJI
    ii. Manufacturer Description: The DJI Mavic 3 Enterprise drone series has two versions: Mavic 3E and Mavic 3T (the T is for thermal). While the Mavic 3E is designed primarily for mapping and surveying functions, the DJI Mavic 3 T targets firefighting, search and rescue, inspections, and night missions.
    iii. The DJI Mavic 3T has the same telecamera as the Mavic 3E, a 48 MP camera with a 1/2-inch CMOS sensor, as well as a thermal camera with a Display Field of View (DFOV) of 61-degree and an equivalent focal length of 40mm with 640×512 px resolution.
    iv. The drone's thermal camera supports point and area temperature measurement, high-temperature alerts, color palettes, and isotherms to help operators find hot spots and make quick decisions. With a simultaneous split-screen zoom, the Mavic 3T's thermal and zoom cameras support 28x continuous side-by-side digital zoom for easy comparisons.
    v. (Description source: https://www.dji.com/mavic-3-enterprise)

10. **Shield A.I. Nova**
    i. Manufacturer: Shield AI

    ii.   Manufacturer Description: Nothing else like it. Level 5 self-driving autonomy - no GPS, no comms, no pilot. Built for the future fight, Nova 2 packs cutting-edge AI into the most advanced sUAS ever built.

    iii.   (Description source: https://shield.ai/products/nova-class)

11. **Parrot Anafi Thermal**
    i.   Manufacturer: Parrot
    ii.   Manufacturer Description: To balance the resolutions of the thermal image and visible image, and therefore benefit from information not visible in thermal, the displayed image is a fusion of the information from the two cameras.
    iii.   Stabilized on three axes, the optical unit of ANAFI Thermal combines an infra-red sensor to the electro-optics, making it possible to identify temperatures between -10° and +400°. Thanks to the FLIR Lepton 3.5 module, it is possible to set the absolute temperature of each pixel.
    iv.   (Description source: https://www.parrot.com/us/drones/anafi-thermal)

12. **Acecore Zoe**
    i.   Manufacturer: Acecore Technologies
    ii.   Manufacturer Description: Zoe's aerodynamic Dutch-design carbon fiber frame puts it in a class of its own. The way it doesn't hang, but rather stand in the air makes it highly weatherproof. The Acecore Zoe is both wind and rain resistant which means it can operate at continuous wind speeds of 7 Beaufort/ 30 knots with rain up to 9mm/h.
    iii.   The hollow arms generate an active airflow through the entire system and pulls hot air out of the motor mounts, away from the critical components. As a result, Zoe will operate at temperatures up to 50 degrees Celsius.
    iv.   (Description source: https://acecoretechnologies.com/zoe/)

13. **Brinc Lemur**
    i.   Manufacturer: Brinc
    ii.   Manufacturer Description: Designed to enter dangerous situations to keep people safe. The Lemur S can enter structures and effectively locate people inside homes, skyscrapers, and vehicles. It facilitates two-way communication between first responders and people who need help.
    iii.   (Description source: https://brincdrones.com/lemur-drone/)

14. **Hoverfly Livesky Spectre HL 6205**
    i.   Manufacturer: Hoverfly
    ii.   Manufacturer Description: The Livesky is a VTOL multi-rotor sUAS powered from the ground using a highly engineered resilient tether. As a persistent, multi-day aerial platform, it is currently used for ISR and Communication relay.

Deployable in minutes, it can be mounted on and operated from moving vehicles, on the ground, and on buildings to enhance any and enable new missions.

    iii. (Description source: https://hoverflytech.com/tethered-drones-uav-uas/livesky-hl-spectre/)

15. **Teledyne FLIR Black Hornet PRS**

    i. Manufacturer: Teledyne FLIR
    ii. Manufacturer Description: The Black Hornet PRS equips the non-specialist dismounted soldier with immediate covert situational awareness (SA). Game-changing EO and IR technology bridge the gap between aerial and ground-based sensors, with the same SA as a larger UAV and threat location capabilities of UGVs. Extremely light, nearly silent, and with a flight time of up to 25 minutes, the combat-proven, pocket-sized Black Hornet PRS transmits live video and HD still images back to the operator. Sold to qualified purchasers.
    iii. (Description source: (https://www.flir.com/products/black-hornet-prs)

16. **Fotokite Sigma**

    i. Manufacturer: Fotokite
    ii. Manufacturer Description: The Fotokite Sigma. A Situational Awareness System for first responders. Focus on your mission. Drastically improve your team's situational awareness. The Fotokite Sigma allows you to gain an impressive, unobstructed overview of any incident in an instant. Live stream and document mission-critical aerial views with total operational freedom. The Fotokite Sigma consists of the Ground Station and Kite. A tablet or computer runs the Fotokite Live App which shows the real-time thermal and low-light video streams, giving teams actionable information throughout their mission safely and reliably; no piloting necessary.
    iii. (Description source: (https://fotokite.com/situational-awareness-system/)

PURPOSE

Unmanned Aircraft Systems (UAS), in general, are used for the following purposes:

1. To support first responders during critical incidents by providing real-time video imagery via remotely operated aircraft.
2. To support investigations by providing video and photographic evidence collection of crime scenes from an aerial vantage point.

3. To provide enhanced security overwatch and anti-terrorist efforts during Special Events and large gatherings with the intent to identify pre-incident indicators and mitigate terrorist and criminal acts before they happen.

The below-listed aircraft models have additional purposes:

The DJI/Matrice 30T, the DJI/Mavic 2 Enterprise Dual, the DJI/Mavic 2 Enterprise Advanced, and the DJI/Mavic 3 Enterprise are used to conduct blanket area announcements over neighborhoods during special circumstances, to include evacuation announcements and missing person descriptions.

The Brinc Lemur-S provides a 2-way communication system in high-risk incidents to de-escalate hostile and dangerous encounters.

The SDPD UAS Unit is authorized to use UAS to support the following types of operations:

1. Search and Rescue support for lost, missing, missing-at-risk, stranded persons or suspects.
2. Provide aerial observation and imagery for safety and situational awareness in support of fire response and disaster response.
3. Provide photo and video digital media recordings in support of crime scene evidence collection.
4. Provide aerial and remote camera observation and imagery during incidents involving barricaded suspects, hostage incidents, and high-risk tactical operations.
5. Provide aerial imagery and photo/video support for department training.

6. Provide enhanced safety overwatch during large gatherings and special events.
7. Any other missions deemed necessary by the Chief of Police.

LOCATION

SDPD UAS are primarily deployed citywide. SDPD UAS may also be deployed out of city limits and out of the county if requested by an outside agency or if requested by an authorized SDPD unit that is responsible for a law enforcement operation beyond city limits. A primary example of this is when the UAS Unit is requested to collect aerial evidence photos for the SDPD Homicide Unit, which is responsible for conducting the investigation when the San Diego Sheriff's Department has an officer-involved shooting.

In all cases, the UAS can only be requested and used to support the authorized types of operations aforementioned.

All requests for UAS support must be initiated by an incident commander in response to support a specific incident or event with a specific support objective. UAS deployment is based on the equipment and capabilities needed for each specific incident.

City of San Diego crime statistics can be viewed at Crime Statistics & Crime Mapping | Police | City of San Diego Official Website.

IMPACT

All UAS deployments are intentional and must follow strict authorization rules and processes.

The following rules and processes are required prior to each use of a UAS:

1. All requests for UAS support must be initiated by an incident commander in response to support a specific incident or event with a specific support objective.
2. A UAS supervisor must evaluate the request and approve the UAS operation prior to deployment to support each individual incident. This UAS supervisor is specially trained to assess the request and determine if the UAS operation will comply with the SDPD's list of authorized uses for UAS. The UAS supervisor is also specially trained in the use of UAS as it relates to the protection of citizens' privacy, civil rights, and the preservation of citizens' First and Fourth Amendment rights.
3. If UAS deployment is approved by the UAS supervisor, notifications are made to the lieutenant who supervises the UAS Unit and to the Commander of the Operational Support Division.
4. Only authorized members of the UAS Unit shall use or be in possession of Department UAS equipment. All UAS members certified as UAS Pilots must obtain an FAA Remote Pilot's license and must complete the SDPD UAS Academy.

UAS are deployed only to specific incidents with a specific target or specific objective. The UAS Pilot manually controls the UAS camera system and activates either video or photos to be captured based on the objectives and goals of the UAS mission. During a UAS Evidence Collection Operation, the UAS Pilot will manually control the UAS to take photographs or video as requested by the investigative unit that requested UAS support.

When a UAS is deployed, there is a specific target, person, address, building, vehicle, object, or area that is the intended point of interest in which the operator is in charge of observing and potentially collecting photographs or video. During this specifically targeted operation, there may be some unintentional observation or imagery collection of adjacent private property in the background, similar to what may be captured from the background in a normal officer's Body Worn Camera, except from an aerial vantage point.

The SDPD's UAS Surveillance Use Policy safeguards civil liberties and civil rights. The uses and deployments of surveillance technology are not based upon discriminatory or viewpoint-based factors. The Department's use of surveillance technology is intended to support and benefit the communities of San Diego while minimizing and mitigating potential impacts on the civil rights and civil liberties of community members.

MITIGATIONS

During a law enforcement operation or during observation of a crime, or in anticipation of a crime, the UAS Pilot will manually activate the video recording capability of the UAS similarly to how a ground-based officer activates their Body Worn Camera during a contact. This captured video is regarded as

Digital Media Evidence (DME). It is treated as evidence throughout the remainder of the operation until the DME is properly impounded and documented by the UAS staff assigned to the operation.

During observation and overwatch support of High-Risk Tactical Operations, the UAS Pilot will manually control the UAS to take a video of the entire operation to record all police activity during the incident. During UAS safety and enhanced security overwatch operations at special events and other large gatherings, the UAS Pilot generally does not activate video recording unless necessary to record a law enforcement contact, a crime occurring or in anticipation of a crime.

During all operations, the UAS Pilot is trained to make every effort only to capture visual imagery of the law enforcement contact or intended target of observation to protect the privacy of nearby uninvolved citizens and their property.

All UAS Pilots and Supervisors must attend the SDPD UAS Pilot Academy, which includes approximately 80 hours of specialized UAS Flight training and classroom to include procedures on evidence collection, retention, and impounding, and the protection of citizens' privacy, civil rights, and the Fourth Amendment during operations.

The department procedure associated with the use of UAS, D.P. 8.23 – Use of Small Unmanned Aircraft System" Section VIII. D. states the following:

> D. Privacy Considerations
>
> 1. Members of the sUAS shall take reasonable precautions to avoid inadvertently recording or transmitting images of areas where there is a reasonable expectation of privacy.
>
> 2. The collection, use, retention, or dissemination of data shall not be used to violate the Constitutional rights of any person or in any manner that would discriminate against any person based upon their race, color, ethnicity, religion, national origin, age, disability, gender (to include gender identity and gender expression), lifestyle, sexual orientation, or similar personal characteristics.
>
> 3. In all cases of sUAS deployment, reasonableness and respect for the privacy of individuals shall guide the actions of all sUAS personnel.

DATA TYPES AND SOURCES

A UAS is, in essence, a manually controlled video/photography camera that is attached to a small remote-controlled aircraft. The majority of the data collected by UAS is similar to a handheld "point-and-shoot" camera or a Body Worn Camera. The data collected by the UAS is digital photographs and video in either the Visual, Infrared, or Thermal spectrum. The Brinc Lemus-S model may also record audio.

None of the SDPD UAS analyze the collected imagery, produce reports based on imagery, or use any algorithms associated with collected data. The UAS solely captures and stores digital photographs and videos collected by its camera sensors.

DATA SECURITY

San Diego Police Department Procedure 8.23 - Use of Small Unmanned Aircraft System, states in part:

> "Only authorized sUAS Program personnel shall use or be in possession of Department issued sUASs or equipment, unless approved by the sUAS Lieutenant or Commanding Officer."

All DME is retained within the physical UAS until the SD Card is removed from the Aircraft. Only UAS personnel may be in possession of the UAS and thus in possession of UAS collected DME until it is extracted from the SD Card and impounded either physically or digitally.

Once the DME has been impounded physically or electronically, retention, access, possession, and copying of such evidence are controlled and regulated by SDPD Procedure 3.02 – Impound, Release, and Disposal of Property, Evidence and Articles Missing Identification marks and SDPD Procedure 1.49 – AXON Body Worn Cameras.

Only sworn SDPD Police Officers may become part of the SDPD UAS Unit. All SDPD UAS personnel must be approved by the UAS Unit Sergeant, the Lieutenant who supervises the UAS Unit, and the Commanding Officer of the Operational Support Division. All SDPD UAS personnel receive specialized training on the proper handling, possession and impounding of DME recovered by UAS.

All DME is retained within the physical UAS until the SD card is removed from the Aircraft and is therefore not accessible to anyone remotely.

Other non-personal identifying data recorded by the UAS, including the UAS's location, altitude, and flight times, is accessible remotely by the UAS Unit personnel only. Direct access to this information is password protected and can only be accessed by certified SDPD UAS Personnel. This information does not contain critically vulnerable data or information that would violate an individual's civil rights or infringe upon their privacy. This information is included as part of the post-operation documentation report and is considered publicly accessible information and a layer of transparency documenting every SDPD UAS operation.

Once DME has been impounded physically or electronically, data protection becomes the responsibility of the Property Unit or the evidence.com system and all such evidence is controlled and regulated by SDPD Procedure 3.02 – Impound, Release, and Disposal of Property, Evidence and Articles Missing Identification marks and SDPD Procedure 1.49 – AXON Body Worn Cameras.

UAS-collected DME can only be accessed by SDPD UAS Unit personnel prior to evidence impound. Once UAS collected DME is impounded by UAS Personnel into the SDPD Property Room or evidence.com digital repository, access to this DME is controlled and regulated by SDPD Procedure 3.02 – Impound, Release, and Disposal of Property, Evidence and Articles Missing Identification marks and SDPD Procedure 1.49 – AXON Body Worn Cameras.

FISCAL COST

The SDPD UAS equipment is forecasted to cost approximately $60,000.00 per year. These costs are required to procure, maintain, and upgrade the UAS technology to an effective operational state.

Over the past five and half years, the UAS Unit has purchased UAS equipment totaling approximately $263,000.00 and approximately $16,000 of additional non-UAS but related support equipment. The total of $279,000.00 equates to approximately $51,000.00 per year.

Of this $279,000 that has been spent thus far, the current funding sources have been:

>   (All amounts are approximate)

1. $10,300 – SDPD General fund
2. $112,000.00 – Grant funds.
3. $142,000.00 – Special funds to include asset forfeiture funds and other non-general budget special fund sources.
4. $15,000.00 – Donation-based funds.

Below is a fiscal Breakdown of the individual cost of each of the SDPD's UAS, and the specific funding source(s) used to procure them. Funding sources and estimated costs for future procurements are also listed below.

>   DJI Phantom 4 - $1499.00 each. 2 Purchased by SWAT Foundation (Donation)
>   DJI Phantom 4V2 - $1499.00 each. 2 Purchased with Asset Forfeiture funding.
>   DJI Matrice 210 - $8299.00. 1 Purchased with Asset Forfeiture funding.
>   DJI Matrice 30T - $13,999.00 1 Purchased with Seized Asset Special funding.
>   Brinc Lemur-S - $8998.00. 1 Purchased via SWAT General fund.
>   Shield AI Nova – 2 Donated via the Police Foundation. Unknown amount due to gift status.
>
>   DJI Mavic 2 Enterprise Dual - $2949.00. 1 Purchased with Asset Forfeiture funding.
>   DJI Mavic 2 Enterprise Advanced - $6500.00. 1 Purchased with C.O.P.S. Special Funds.
>   DJI Mavic 3 Enterprise - $5498.00 each. 2 Purchased with Seized Asset Special funding.
>   DJI Mavic Air - $799.00 each. 2 Purchased with C.O.P.S. Special Funds.
>   Parrot Anafi Thermal - $1675.00 each. 2 Purchased with SHSGP State Grant.
>   Acecore Zoe - $28,950.00 each. 2 Purchased with SHSGP State Grant.
>   Hoverfly Spectre HL - $109,500.00 Future Procurement – UASI Grant funded, already awarded.
>   DJI Avata – $3323.00 Future Procurement – Unknown Special funding source.
>   Teledyne FLIR Black Hornet - $16,000.00 Future Procurement - SWAT Foundation (Donation)
>   Fotokite Sigma – $30,000.00 Future Procurement – Unknown Special funding source.

The SDPD UAS Unit is postured to be staffed with six police officers and one UAS Unit sergeant. Due to current SDPD staffing limitations, the UAS Unit is currently understaffed. The SDPD UAS Unit's current staffing includes one UAS Unit sergeant and one police officer. To support effective UAS operations, several patrol officers and detectives have received specialized UAS training to help support UAS Operations as a collateral duty in addition to their regular daily assigned duties.

THIRD PARTY DEPENDENCE

UAS Unit personnel do not share UAS-collected DME with third-party vendors. All UAS collected DME is impounded either physically in the SDPD Property Room or digitally into evidence.com.

ALTERNATIVES

The UAS Unit has four primary operations capabilities:

1. Aerial observation from an elevated vantage point.
2. Forward deployed observation into low altitude dangerous environments.
3. Interior building searches in dangerous environments.
4. Sustained aerial observation using a Tethered UAS that provides a constant power supply from a ground station.

For item #1, the only alternative method is to use a standard helicopter or plane operated by a pilot within the aircraft. This alternative is extremely expensive than using a UAS and requires more staffing, including a contracted maintenance staff.

For item #2, there is no viable alternative method to accomplish this capability with anything other than a UAS.

For item #3, There are tracked or ground-based robots that can perform some interior search functions. However, they are usually more expensive than UAS, and they are not as versatile as UAS when used to enter a building from small elevated openings or searching areas a few feet above the ground.

For item #4, The only alternative method would be to deploy multiple standard helicopter aircraft that would take turns observing a target for an extended duration switching off to refuel. This solution would be extremely costly and require additional specialized staffing.

TRACK RECORD

Currently, more than 5000 public safety agencies have implemented drone programs, and an estimated two-thirds are law enforcement agencies.

One of the nation's most prolific law enforcement UAS units is located just south of San Diego in Chula Vista, CA. Below are some statistics taken from the City of Chula Vista Police Department's UAS information webpage from 10/23/2018 to 5/8/2023 to highlight their exceptional program:

- Total calls UAS responded to: 14,809
- UAS Assisted arrests: 1986
- UAS Deployments that allowed a patrol unit to avoid being dispatched: 3634

Chula Vista Police Department Chief Roxana Kennedy has proclaimed that UAS are one of her most essential tools in improving situational awareness, de-escalating dangerous situations, and protecting her officers and community.

Some additional local government entities that use UAS include the Carlsbad Police Department, California State Parks, the Coronado Police Department, the El Cajon Police Department, the Escondido Police Department, the San Diego Sheriff's Department, the La Mesa Police Department, the National City Police Department, the Oceanside Police Department, and the San Diego Harbor Police Department.

PUBLIC ENGAGEMENT AND COMMENTS

On November 8, 2023, at 1800 hours, there was a publicly held meeting in all nine council districts in the City of San Diego. The following surveillance technologies were presented by the San Diego Police Department:

1. Avalex DRV and FLIR-HDc
2. WHOOSTER
3. MSABs Raven Mobile Triage Tool
4. MSABs XRY Mobile Forensic Data Recovery Software
5. National ICAC Data Systems
6. PENLiNK
7. Vigilant
8. Unmanned Aircraft Systems

There were five attendees in District 1. There were zero attendees in District 2. There were zero attendees in District 3. There were zero attendees in District 4. There were zero attendees in District 5. There were zero attendees in District 6. There were two attendees in District 7. There were two attendees in District 8. There were zero attendees in District 9. There was a total of one comment and two questions out of the nine attendees. There was one comment submitted to an online public comment form.

Comment #1:

> These are all technologies that provide advanced safety to each and every citizen of our city. What I am not in favor of is the requirement that these presentations be held in nine locations throughout the City. Staffing so many locations with SDPD and San Diego Fire and Rescue personnel takes these critical First Responders away from their far more important jobs of keeping the City's citizens of San Diego safe. Our police and fire departments are already understaffed. This is a blatant misuse of our resources. Thank you.

Online Comment #1:

> The policy is vague in which instances the deployment of aerial surveillance with no safeguards to prevent misuse of this technology. Without addressing these shortcomings, I cannot support the use of DJI Avata by San Diego PD.

Question #1:

> Is the license plate reader data looking for specific cases and/or are all plates looked at to see if they fit a specific case?

Answer:

> License plate readers can look for specific plates if they are involved in an active investigation. An investigator can upload license plate information into the license plate reader operating system and set an alert to notify the San Diego Police Department when the license plate is read.

Investigators may upload license plate information into the license plate reader because the plate may be associated with a crime, a missing person, or an identified suspect. The SDPD Communications Division may dispatch officers to investigate a hit on a license plate reader entry. Dispatched officers will confirm that the license plate was identified by the reader correctly before any action is initiated.

Question #2:

I think it is very important that San Diego advances in technology but is also aware of some of the issues that come from having so many technologies. The questions that I have are in three phases. One has to do with lobbying from technology companies to government agencies. I sometimes have concerns over technology companies going to conferences and lobbying Fire Chiefs, Police Chiefs and many other officials during those conferences. How does the City protect itself through accountability on that?

The second is data analytics. I worked in data analytics before and one of the things that I do see is sometimes data analytics has missing information. How do we account for that through the data information that we are gathering that way we can make proper information when citizens don't report crimes that don't add up to the statistics?

The third is, what's going to happen next with all this technology?

Answer:

In terms of lobbying, there are a couple of different processes now in place. The Police Department had a process before the Privacy Advisory Board and a process that took place after. Each technology that goes forward is evaluated by Commanding Officers and personnel to see what need it fits or what mission it serves within the Police Department, Fire Department or whichever Department looks to that technology to solve a problem.

As that solution is suggested, there really is a robust process that begins with discussions throughout the various units and continues on. We look toward guidance and have an established technology process. We have significant in-house experts and a STAC Committee, Strategic Technology Alliance Committee, who look at how technology fits into the overarching goals of the City and ask questions like about their alignment. Are they repetitive in nature? How can we create efficiency and effectiveness? Then we move on and look at funding sources, purchasing and contracting, request for proposal, and what contracting needs to take place. An assessment by Risk Management and an evaluation by the City Attorney's office is done. This process is to ensure that the technology serves the Department and ultimately the City as a whole. That then goes to our City Council members for a vote, depending on the dollar amount.

Overlapping that process is our Surveillance Ordinance process. In addition to the already established process we now notify the Privacy Advisory Board, complete community outreach, and complete Use Reports and Impact Reports.

People can lobby but Commanding officers are not making any decisions based on that lobbying group due to the established process.

There is a push being made by law enforcement, and with other City departments, to use data to make informed decisions. The office of the City auditor has stressed the need for the City to use data to make more informed decisions, and that is what we are consistently striving for and implementing.

The next part of this process calls for the Police Department to hear from the community. Each one of the technologies presented has a Use Report to accompany it. After these meetings, we take the Impact Reports along with any community feedback and forward them to the Privacy Advisory Board. The Privacy Advisory Board will assess the technologies, roundtable them, form subcommittees, and make recommendations to the City Council to consider.