



Drones as First Responders: A Community Forum
February 7, 2019

Tonight's agenda

- 6:05 – 6:35: Introductions and remarks by city officials
 - Mayor **Mary Salas**
 - Police Chief **Roxana Kennedy**
 - Police Capt. **Vern Sallee**
 - Police Lt. **Chris Kelley**
 - CAPE representative **Fritz Reber**
- 6:35 – 7:30: Questions and answers



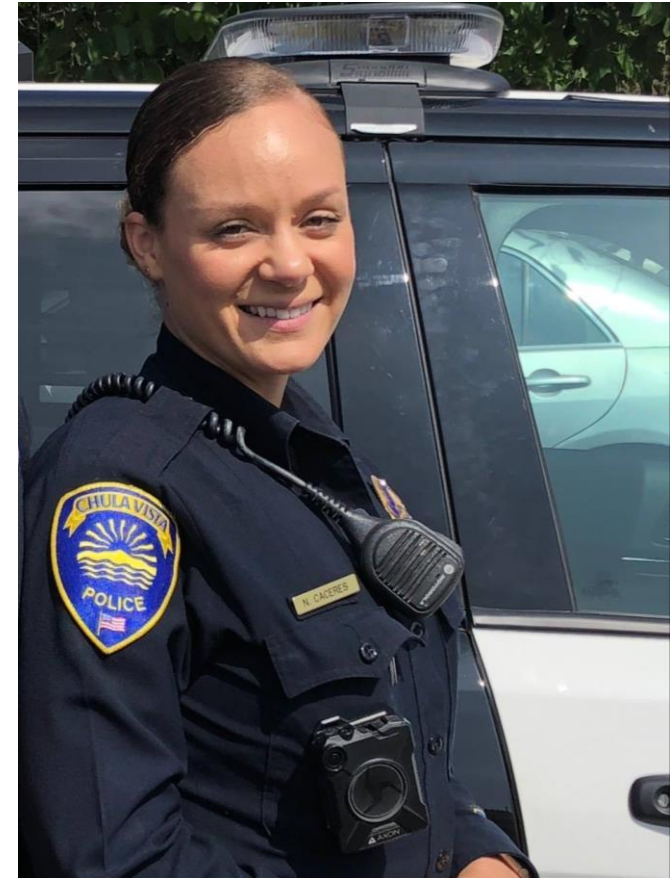
Chula Vista's Smart City Strategy

- **Smart City Strategic Action Plan – 2017**
 - A roadmap of the city's technology and data work to improve:
 - Public safety
 - Economic development
 - Community and civic engagement
 - Quality of life
- **Measure P (2016) and Measure A (2018)**
 - Half-cent sales taxes to support police, fire and infrastructure upgrades



Chula Vista Police technology

- **Body-worn cameras** - *Testing began 2010, fully implemented 2015*
- **Computer-aided dispatch (CAD)** - *Upgraded 2017*
- **Traffic signal camera access** - *Enabled 2018*
- **UAS/Drones** - *Planning began 2016, testing began 2017*
- **Traffic signal pre-emption** - *GPS-based testing begins 2019*





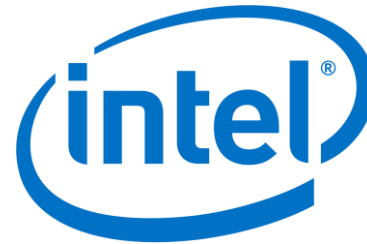
UAS Integration Pilot Program

- **Federal Aviation Administration (FAA)** chose 10 pilot program sites in 2018
- **Goal:** Help FAA craft new national rules for integrating drones into civilian life



San Diego Regional UAS Integration Pilot Program

- City of San Diego Office of Homeland Security
 - City of Chula Vista
 - UC San Diego Health System
 - Palomar College
 - Port of San Diego
 - Cape
 - Uber
 - Qualcomm
 - (and many more)



San Diego Regional UAS Integration Pilot Program

Concepts of Operations (ConOps)

1. Smart City, International Commerce and Public Safety
2. Medical and Package Delivery

FAA Authorizations

- Part 107 Night Operations
- Part 107 Airspace Waiver
- Certificate of Authorization (COA)

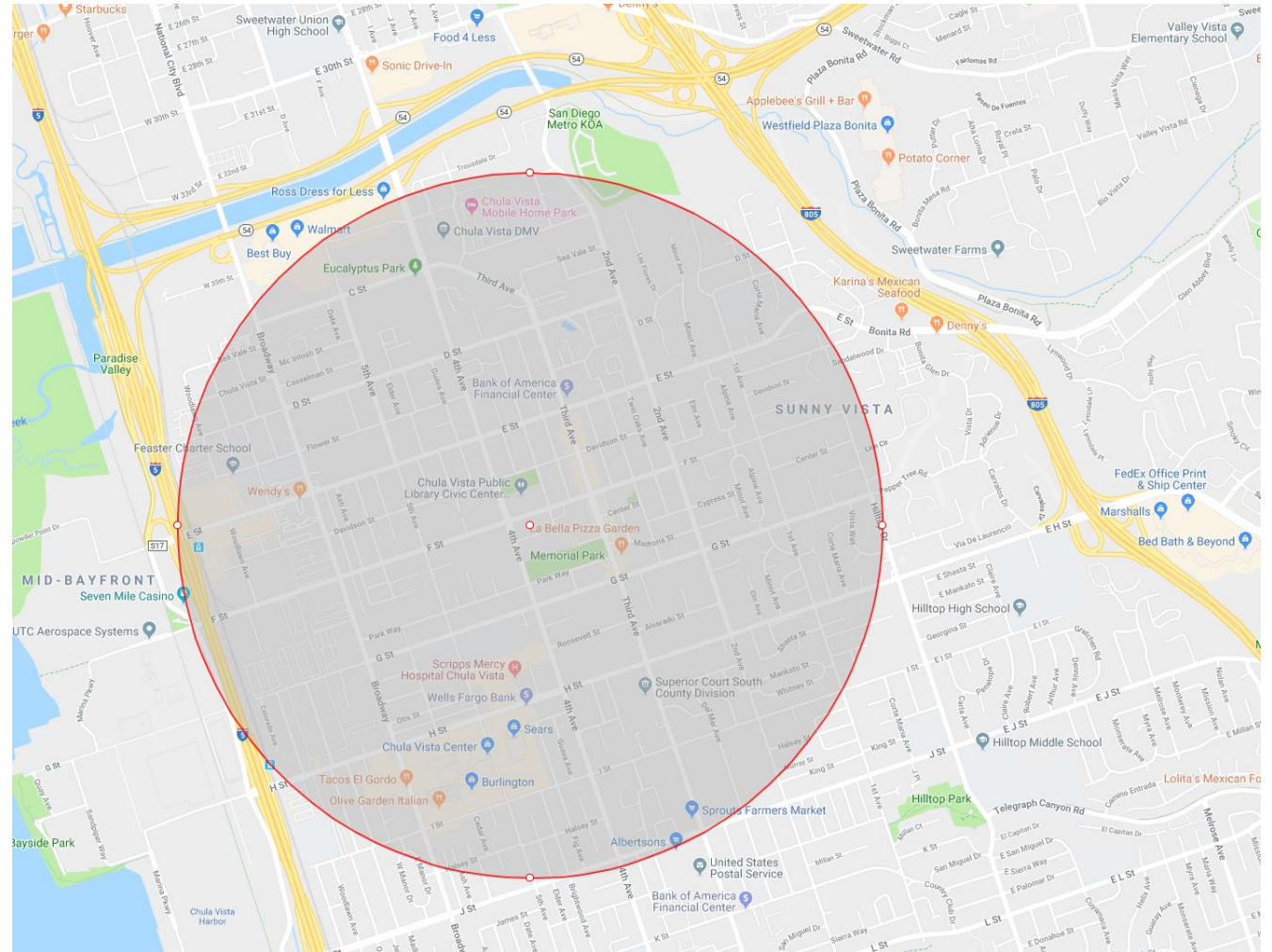
Fleet and personnel

- Two DJI Matrice 200 drones
- One DJI Mavic Pro
- Two DJI Mavic 2 Zooms
- Nine FAA-certified pilots
 - Part 107 Remote Pilot Certificate



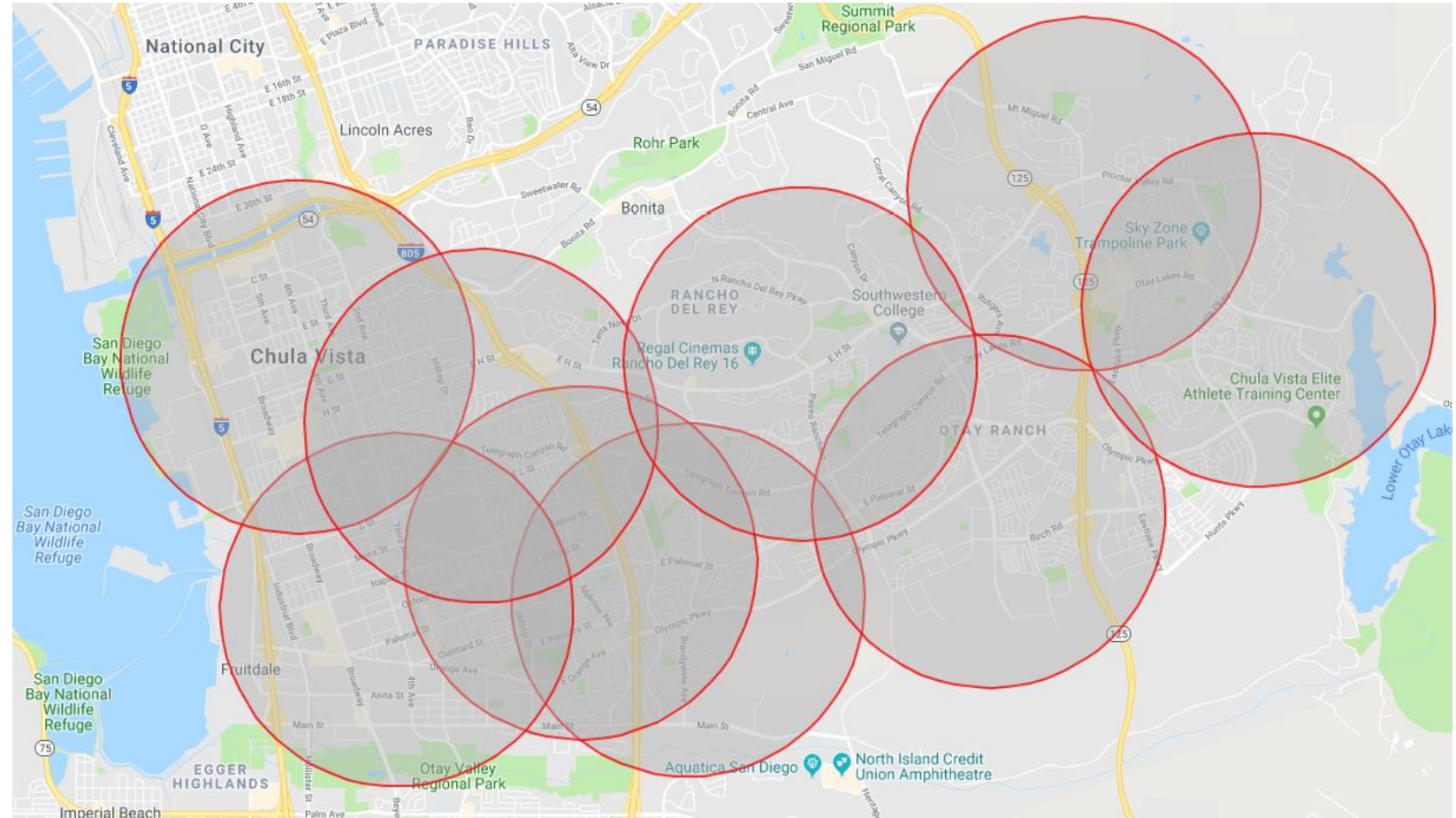
Current deployment area

- One-mile radius from CVPD headquarters



Future deployment area

- Nine fire stations provide citywide coverage at 1.5-mile radius



Use cases

- Verifying complaint of vicious dog at public park
- Identifying size and behavior of brushfire
- Capturing crime scene photos
- Locating homeless encampments in difficult terrain



Metrics

From 10/22/18 to 2/5/19:

- 312 flights
- 231 calls for service
- 75 flight hours
- Contributed to 20 arrests



Chula Vista PD Policy on UAS

- No intentional observation of locations where a person has a reasonable expectation of privacy
 - Residential backyards, inside of homes or private buildings
- No random surveillance activities
 - Only deployed in response to calls or active incidents
- No discrimination or harassment
- No personal use of police drones
- Any recordings are stored in same database as body-worn cameras and deleted after one year unless part of an ongoing investigation

Other Limits

Technical limitations

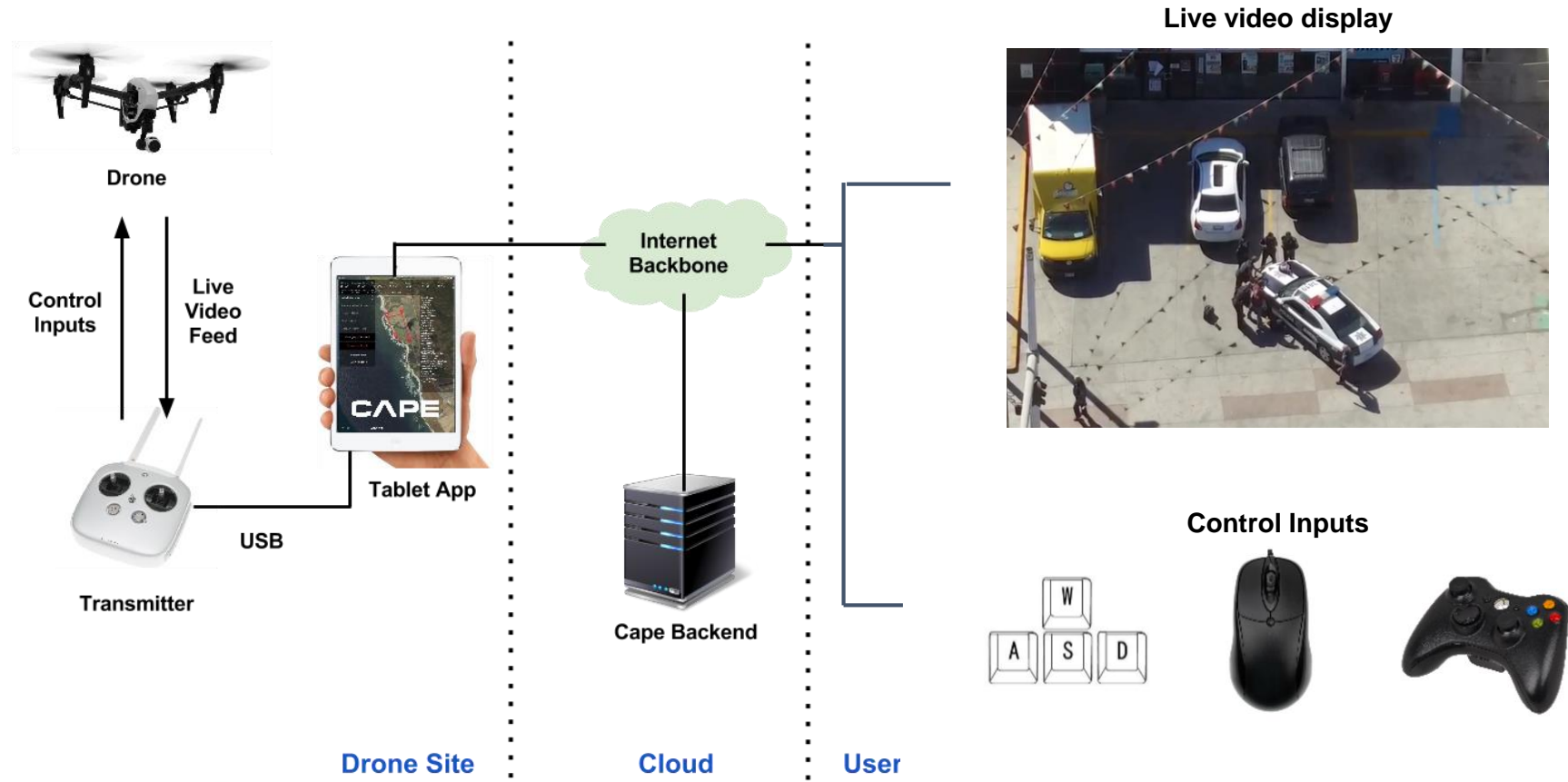
- Battery life
- Magnetic interference
- Software / firmware

FAA restrictions

- Must remain within line-of-sight
- Must fly below 400 feet above ground level
- Cannot fly a drone over people
- Cannot fly from a moving vehicle
- May only fly during daylight or twilight hours

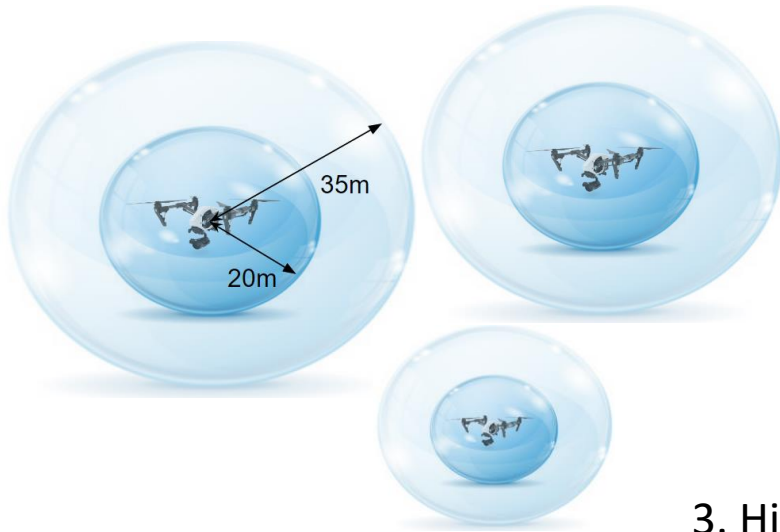


How it works

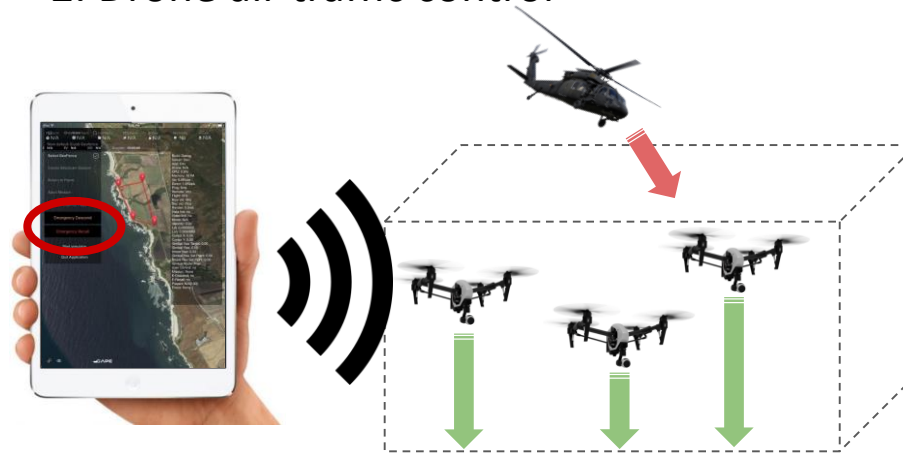


How it works

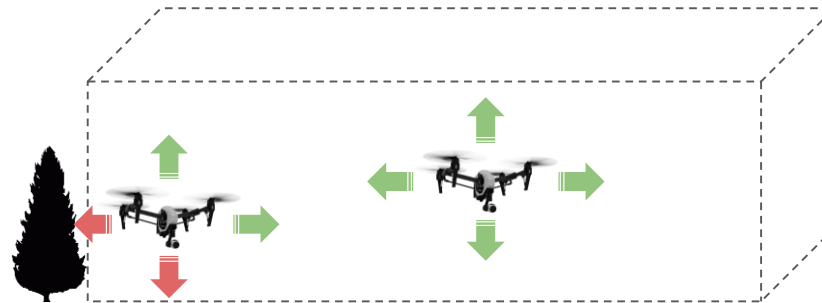
1. Collision avoidance between drones



2. Drone air traffic control



3. Highly customizable 3D geofencing and interactive obstacle creation



How it works



Photo credit: Eduardo Contreras / San Diego Union-Tribune



Get involved

- Provide your comments tonight
- Send additional comments or questions to: UASTeam@ChulaVistaPD.org
- Sign up for email updates: ChulaVistaCA.gov/residents/enotification
- Join an advisory group
- Read about other smart city efforts at ChulaVistaCA.gov/SmartCity



Your questions and comments

Send additional questions or comments to:
UASTeam@ChulaVistaPD.org

