



# City of San Antonio

## Agenda Memorandum

**File Number:**19-3592

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**Agenda Item Number:** 2.

**Agenda Date:** 4/23/2019

**In Control:** Innovation and Technology Committee

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**DEPARTMENT:** Office of Innovation

**DEPARTMENT HEAD:** Brian Dillard, Chief Innovation Officer

**COUNCIL DISTRICTS IMPACTED:** City-wide

### **SUBJECT:**

Briefing on the Unmanned Drone Program

### **SUMMARY:**

The purpose of this item is to provide the Innovation and Technology Committee with an overview of the University of the Incarnate Word (UIW) and CPS Energy partnership, progress with Autonomous Vehicle Systems (AVS) and Unmanned Aerial System (UAS) drones and view the drones in a construction type environment.

### **BACKGROUND INFORMATION:**

The University of the Incarnate Word (UIW) has been developing a program of Autonomous Vehicle Systems (AVS) Laboratory focusing on Drone research capabilities especially in the area of artificial intelligence for autonomous Drone operations. The AVS Lab is currently in Phase III of its research plan and is focusing on creating greater capabilities in indoor collaborative formation control and expanding outdoor flight testing. The long-term research goal for the AVS Lab is to investigate techniques for decentralized autonomous collaborative decision-making and control of vehicles in uncertain complex environments.

CPS Energy has worked with UIW on semi-autonomous vehicle inspections systems. The benchmarking of drone types and models to make recommendations for system purchasing and research on federal, state and local regulations regarding the regulation of drone operations.

The Unmanned Aerial System (UAS) provides CPS Energy high resolution images of various equipment,

transmission and distribution lines, substations, and power plants, through the use of advanced technology, which reduces the impact to customers and enhances customer privacy.

**ISSUE:**

The purpose of this item is to provide the Innovation and Technology Committee with an overview of the UIW and CPS Energy partnership, progress with AVS and UAS drones and view drones in a real-world work environment.

The purpose of this presentation is to provide the Innovation and Technology Committee with an overview of UIW and CPS Energy progress in innovation partnerships within the community.

**ALTERNATIVES:**

This item is for briefing purposes only.

**FISCAL IMPACT:**

This item is for briefing purposes only.

**RECOMMENDATION:**

This item is for briefing purposes only.