
6TH Asset Leadership Week 2019
September 23 - 26, 2019 | Washington, DC
Innovations in Federal Asset Management
William Garrett, Assistant Deputy, Mobile Assets and Personal Property Office, Department of Homeland Security
Russ Weniger, Chief, Engineering Division, Air Force Global Strike Command
Jeff Orner, President, Arlington Ridge Consulting, LLC
Brad Morgart, Infrastructure Analytics Lead, Booz Allen Hamilton
Moderator: Katharine Day, Principal/Director, Booz Allen Hamilton
Asset Leadership Network

# SMART ECOSYSTEM


## PHYSICAL

- **Embed** smart technologies to capture real-time data
- **Capture** real-time imagery in multi-spectrum to capture reality in context
- **Digitize** the physical world so that data and the physical world can live together

## DIGITAL

- **Create** realistic, three-dimensional, engineering-grade models of built and natural infrastructure
- **Connect** data with digital objects that represent the real objects in the physical world
- **Simulate** the physical worlds to assist people and computers to better understand the context, and scale

## AUGMENTED

- **Super-impose** digital objects and data into the physical environment through field of view and tactile immersion
- **Augment** environment to enhance your understanding of the physical world
- **Interact** with the augmented environment to change the digital and the physical environment

## SMART

- **Integrate** the three worlds and enhanced the experience and decision making capability
- **Unveil** possible outcomes by providing hindsight, insight, and Foresight
- **Speed** of light decision making through automation adversarial simulations to harden decision process

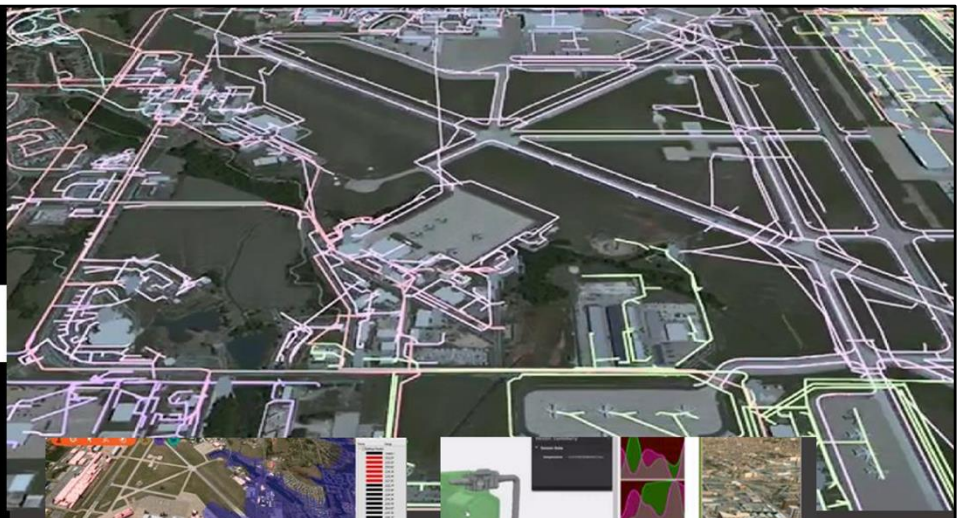
# CASE STUDY

USE CASE: AIR FORCE ENERGY ASSURANCE MODELING AND SIMULATION (DEMAND, SUPPLY, AND RESILIENCE)

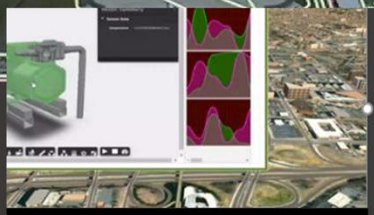
SOLUTION: APPLIED A DIGITAL TWIN APPROACH TO ENHANCE ENERGY MANAGEMENT, PROJECT DEVELOPMENT, AND AUTOMATED REPORTING

## ADVANCED RAPID ENERGY MODEL

- An Installation Digital Twin integrates geospatial data, drone imagery, engineering data to create 3D or virtual reality simulation engine
- The Advanced Rapid Energy Model (AREM) provides an automated workflow to select energy projects to optimize demand requirments based on investment and performance
- Recognized by ADC IIF and Awarded the 2018 Innovation of the Year



Climate Event Supply Impact



Smart Sensors

# NEW CAPABILITIES

| New | Progressing | Future |
|---|---|---|
| Automated Component ID | BIM to Unity | Immersive AI Training |
|  |  |  |
| Digital Twin for Resilience | Hyperspectral Inspection | UAS Swarm w/ Edge Processing |
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