

# Augmented Reality (AR) for Operations and Training

A NEW PARTNERING OPPORTUNITY

**Reference No:** NNJ14ZBH019L

**Potential Commercial Applications:** energy, chemical, medical, emergency operations (first responders, rescue, and police), Department of Defense (DoD), hazardous operations, aerospace sectors, and others

**Keywords:** augmented reality, wearable computing and sensor technology, electronic procedures

## **Purpose:**

NASA JSC seeks to advance Augmented Reality (AR)-based operations and training capabilities within these domains. Successful NASA JSC human spaceflight missions depend on execution of well-defined operational plans. Astronaut and ground control teams receive extensive training in the procedures required to carry out those plans and then execute those procedures during the mission. As electronic procedures replace paper checklists and longer duration missions are considered, there is a need for software technology to lead the way.

## **Technology:**

Specific domain expertise and interest areas include:

- AR technology combined with electronic procedures;
- Electronic procedures and AR authoring tools for training and performance support;
- Just-In-Time Training (JITT);
- Distributed AR team training;
- AR system architecture development for distributed computing paradigms;
- Machine vision for registration;
- Radio Frequency Identification (RFID) localization and logistics management;
- Wearable computing and sensor fusion technology for Automation and Robotics (A&R); and
- A&R interactive control of virtual and real objects with gesture, voice and haptic devices.

For more information please visit our [website](#).

## **R&D Status:**

NASA JSC possesses unique software capabilities for prototyping, design, analysis, testing and integrating electronic procedures and augmented reality technology to assist humans living and working in space.

## **Intellectual Property (IP):**

This Partner relationship may produce new IP that could be jointly owned by NASA and the partner or may become the property of the partner.