Agile ISR Open House Goals

☑ Sensor Fit Check with AgilePod™
  - Allow vendors to send step files and sensor sizes for virtual or real integration

☑ SOSA Information / Plug-in
  - SOSA booth in hangar
  - SOSA compliant stations for vendors to evaluate sensor compatibility

☑ OMS Information / Plug-in
  - OMS booth in hangar
  - AFRL supplied OMS Harvest Reaper service contracts and interface documentation made available to vendors

☑ Future Opportunity
  - Vendors encouraged to bring in sensors and/or processing equipment to evaluate future AgilePod™ integration compatibility

AGILE ISR OPEN HOUSE GOALS

AFRL Hangar 268 Open House
5075 Skeel Ave, Area A
Wright-Patterson AFB, OH 45433

Agile ISR Open House Attendance RSVP

A one-day hangar open house event is planned for 13 July 2017. Attendees that do not possess appropriate credentials to enter WPAFB, please provide name, and driver’s license number / state of issue information to the AFRL event POC below no later than Friday, 16 June 2017. Please indicate if a sensor will be brought for evaluation.

AFRL/RYZT
Advanced Plans and Programs
Sensors Directorate
Wright Patterson AFB, OH 45433

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AFLCMC/WI Agile ISR Problem Statement

The majority of current ISR systems have been designed to meet a specific mission scenario with a distinct set of targets in mind. Little consideration has been given to alternate mission scenarios using a number of different sensor packages going after a more diverse set of targets. Many sensor payloads have been custom designed as a “One Trick Pony” rather than a preferred multi-use platform/payload system. Additionally, vendor-lock and data rights issues have stifled competition, limited innovation and resulted in overall higher life-cycle program costs. What is lacking is an ISR payload system employing a modular architecture and using widely supported and consensus based standards for its interfaces.

OMS Technology Capabilities

Open Mission Systems (OMS) is an industry-led initiative chartered by the Air Force Rapid Capabilities Office (AFRCO) to develop and demonstrate a consensus-based, non-proprietary, open architecture for integrating subsystems and services into airborne platforms. The business cases driving this effort are the need to reduce acquisition and life cycle costs as well as the need to reduce the risks associated with development, sustainment, tech refresh, and capability upgrades of mission system architectures on weapon systems. OMS is defined by key system interfaces between subsystems (i.e., payloads and sensors) and services connected through an Avionics Service Bus (ASB).

SOSA Technology Capabilities

The capability to be developed is an open systems, agile, multi-INT, platform agnostic ISR payload architecture which will serve as an enabler for future ISR systems and associated upgrades. The Sensor Open Systems Architecture (SOSA) will support both hardware and software components. Of particular interest is an architecture that both handles the demanding data requirements of ISR and accommodates future upgrades. Examples of upgrades include adding new sensor modalities, increasing on-board data processing and expanding data archiving. Each component will be designed to be loosely coupled to promote competitive acquisition with minimal re-work.

AFRL/RX AgilePod™ Technology

Consistent with the Air Force’s vision of affordable and flexible ISR, the intent of the AFRL/RX Materials and Manufacturing Directorate AgilePod™ effort was to research, develop, design, and build a prototype multi-intelligence (multi-INT), reconfigurable pod demonstrating benefits of agile manufacturing and a modular open systems architecture (MOSA) to make podded ISR capabilities more affordable, operationally flexible and offer real solutions to close warfighting gaps. An important aspect of the open systems implementation within AgilePod™ is the adherence to the Society of Automotive Engineers (SAE) Electrical (AS6129) and Mechanical (AS6169) Interface Standards for Airborne EO/IR Turret Systems.

AFRL/RX Hangar 268 MQ-9 System Integration Lab (SIL)

AFRL/RX Project Harvest Reaper

The AFRL/RX Sensors Directorate Blue Guardian Harvest Reaper program plans to demonstrate an enhanced MQ-9 multi-INT capability through the use of an open architecture multi-sensor payload, rapid ISR payload re-configurability, and future hardware and software upgrade capability. OMS, SOSA and AgilePod™ integration technologies will be leveraged.