



# BRINGING STRATEGIC WAMI TO THE TACTICAL UAS THROUGH AUSTRALIAN INNOVATION





# AN AUSTRALIAN REQUIREMENT

## DETERMINING CAPABILITY TO SUPPORT THE NEXT GENERATION WAR FIGHTER

- Flexible to support a wide ranging of aircraft systems – manned and unmanned
- Capable of operate in a wide range of conditions and environments
  - Land and Sea
- Capable of supporting a wide range of mission sets and profiles
- Interoperable and support Land Combat Capability and Land Data Model
  - Generic Soldier Architecture: Bi Directional Communications
  - Generic Vehicle Architecture

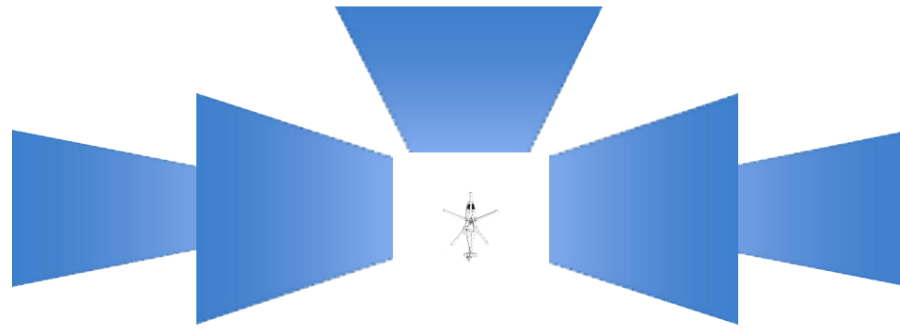


# VIDAR – WORLDS FIRST OPTICAL RADAR





# VIDAR OVER WATER



**ViDAR autonomously finds objects within each of the 5 x 9mp sensors in real time**



**Each object found is sent to the mission system as a still image with a location coordinate on the map**

**Mission operator can then select any image of interest**

**Upon selecting an image, the on-board turret is automatically cued to the location to investigate**





# INNOVATION HUB CONTRACT

## **Sentient Innovation Hub Contract Award**

- PROJECT – Future ISR Sensing -ViDAR Multi -Domain Optical Radar
- Prototype full system demonstration: 2020





# VIDAR MULTI -DOMAIN OPTICAL RADAR

## **ViDAR (Visual Detection and Ranging) over Land**

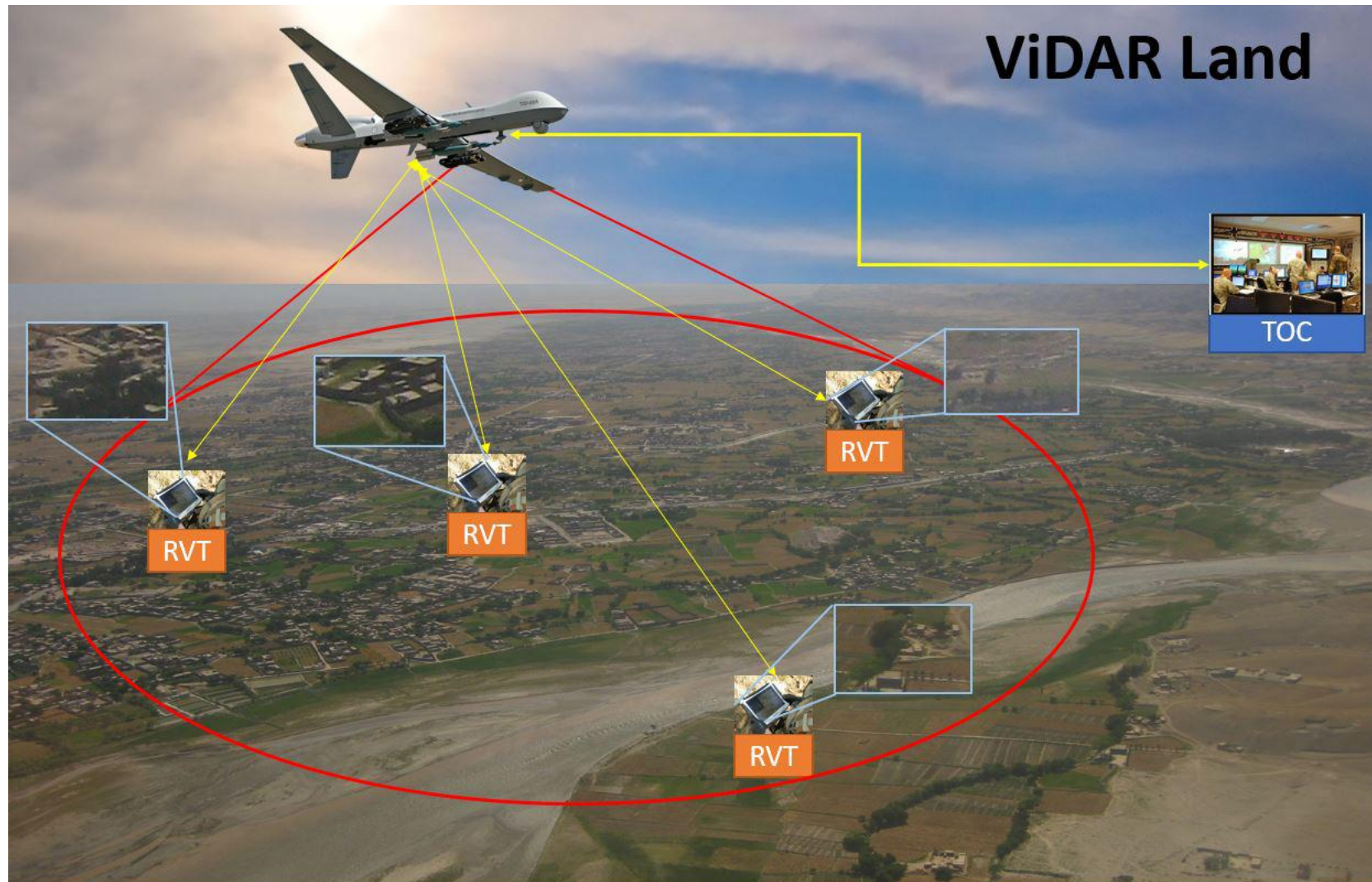
ViDAR is a WAMI system that is designed to autonomously detect, track and classify objects over vast areas beneath an aircraft or UAV. ViDAR provides an optional payload for Defence UAS and manned platforms

- All environment
- Detect and Classify
- Real time and Forensic
- Passive
- Scalable





# KEY ELEMENTS OF CONOP





# VIDAR MULTI -DOMAIN OPTICAL RADAR

## **ViDAR (Visual Detection and Ranging)**

- Complete view of the battlespace in real time, with autonomous detection and tracking of all objects within the expanded field of view
- Extension of the ViDAR map based interface.
- Custom search requests
- The operator will be able to cross-cue the inspection turret to zoom in on the location of a detected target.
- Attach tags/label objects within the field of view to monitor pattern of life
- Tailored independent information dissemination: to many independent users





# VIDAR MULTI -DOMAIN OPTICAL RADAR

## Collaboration Opportunities

- SEA129/5: Deployed on ScanEagle
- AIR7003: Team Reaper Australia



- LAND 129/3
  - Sentient keen to talk with other Australian companies who might provide technology that fits within the scope of the innovation hub contract
  - Sentient would like to engage with collaboration opportunities for providers of UAS systems also interested in exploring opportunities for providing solutions for Land 129/3

