

# Product Introduction

November 2017

## ZoneGuard

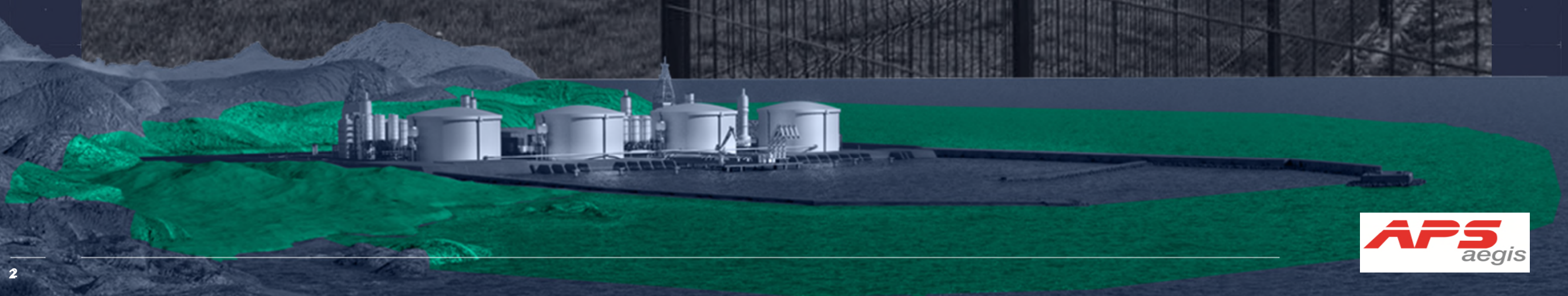
Intelligent Perimeter Surveillance for Critical Infrastructure Protection





# ZoneGuard

## Extrasensory Protection





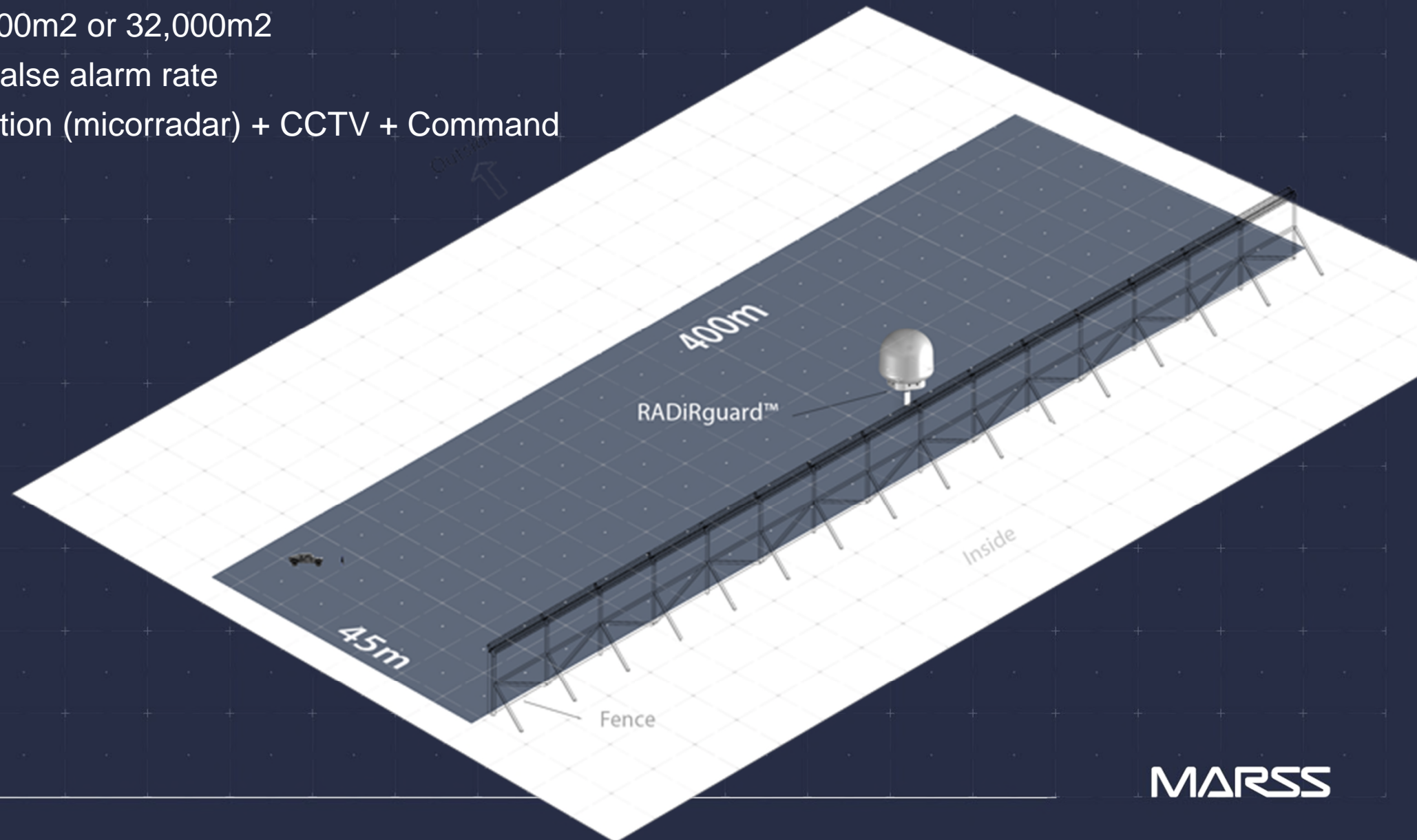
# ZoneGuard

## Overview

**RADiRguard is the first all-in-one perimeter surveillance solution, which reliably detects and classifies objects in advance of reaching the fence thanks to built-in Radar, video and Radio Frequency detection and intelligent threat classification.**

### Key Facts:

1. Area: 400x45m or 400x80m smart surveillance area
2. Coverage: >18,000m<sup>2</sup> or 32,000m<sup>2</sup>
3. Intelligent: Low false alarm rate
4. Multi-function: Detection (microradar) + CCTV + Command



# ZoneGuard

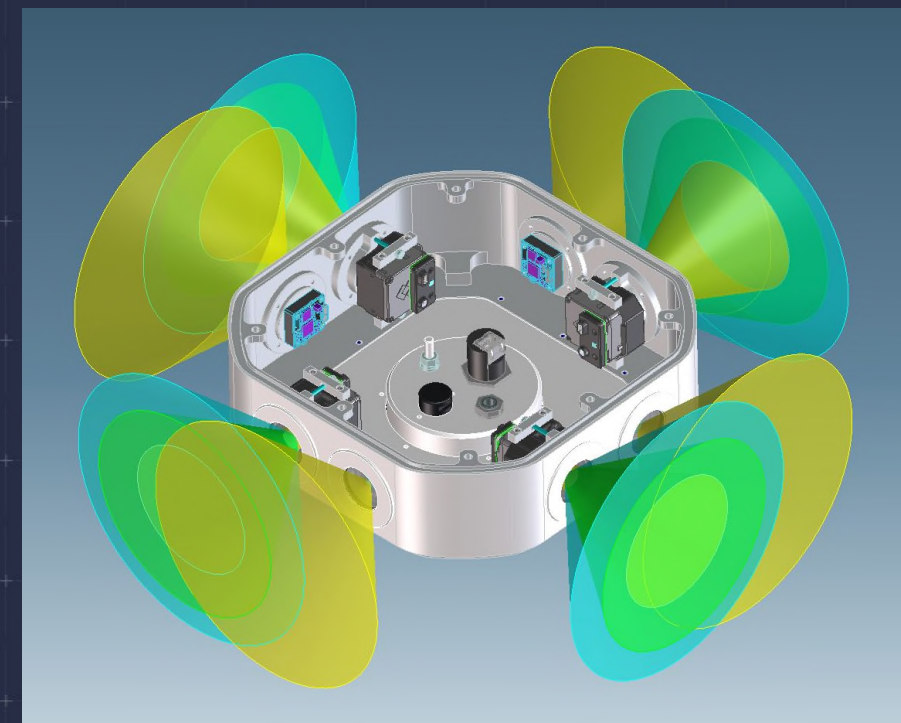
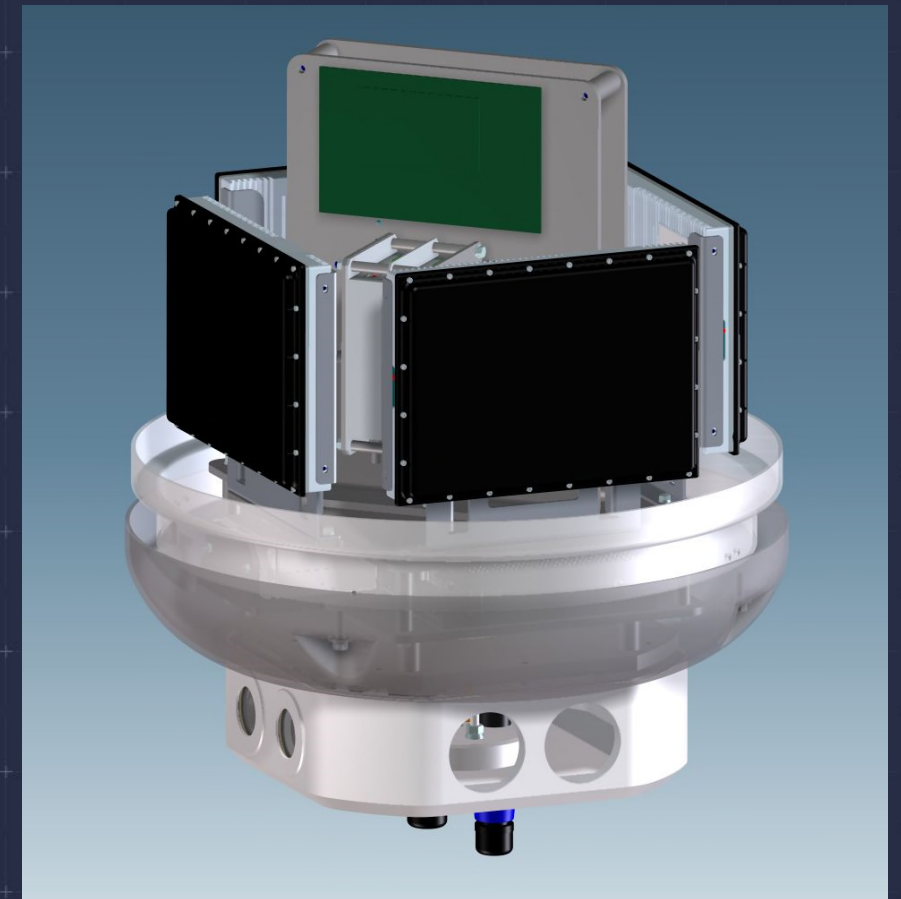
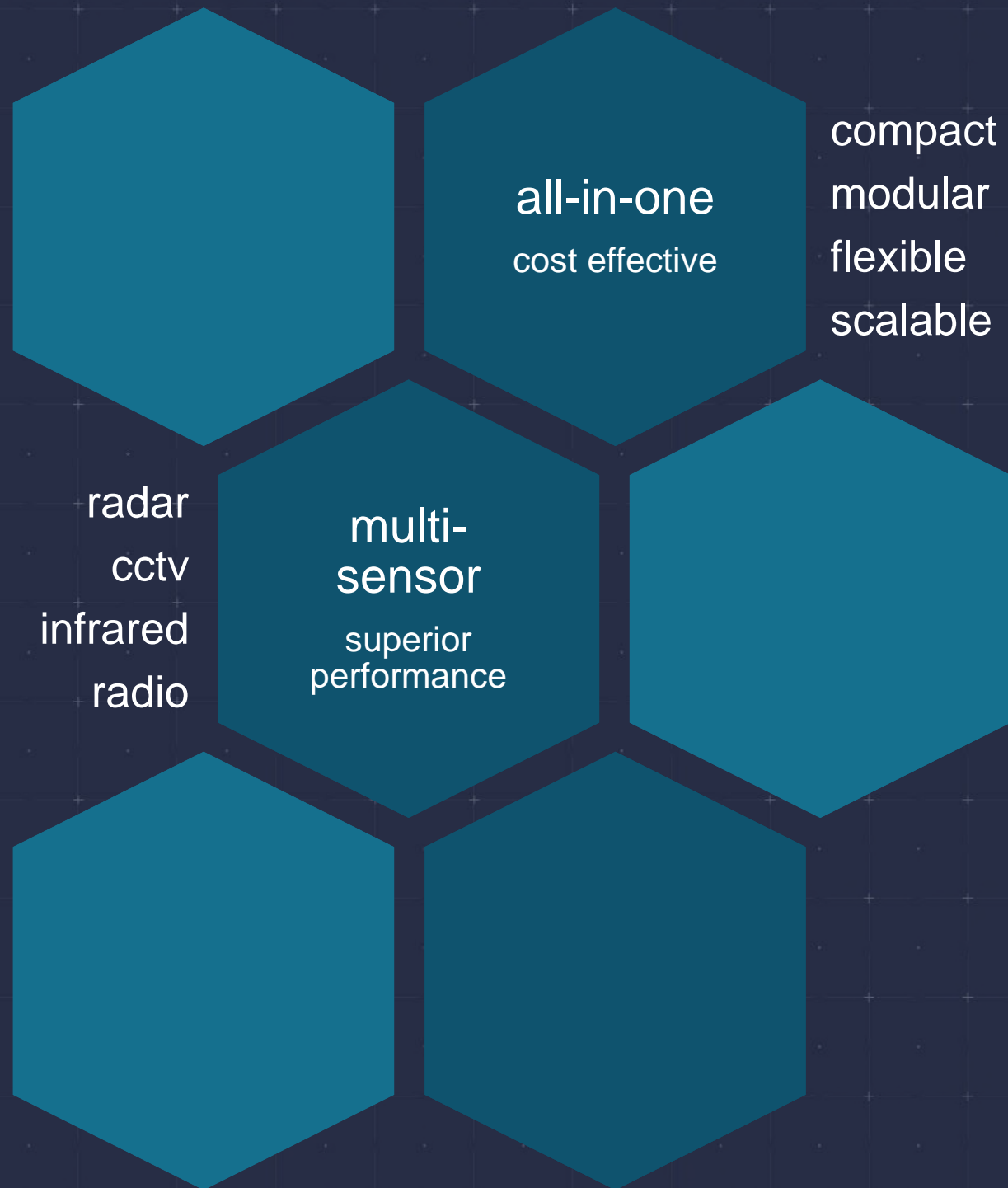
## Overview

all-in-one  
cost effective

compact  
modular  
flexible  
scalable



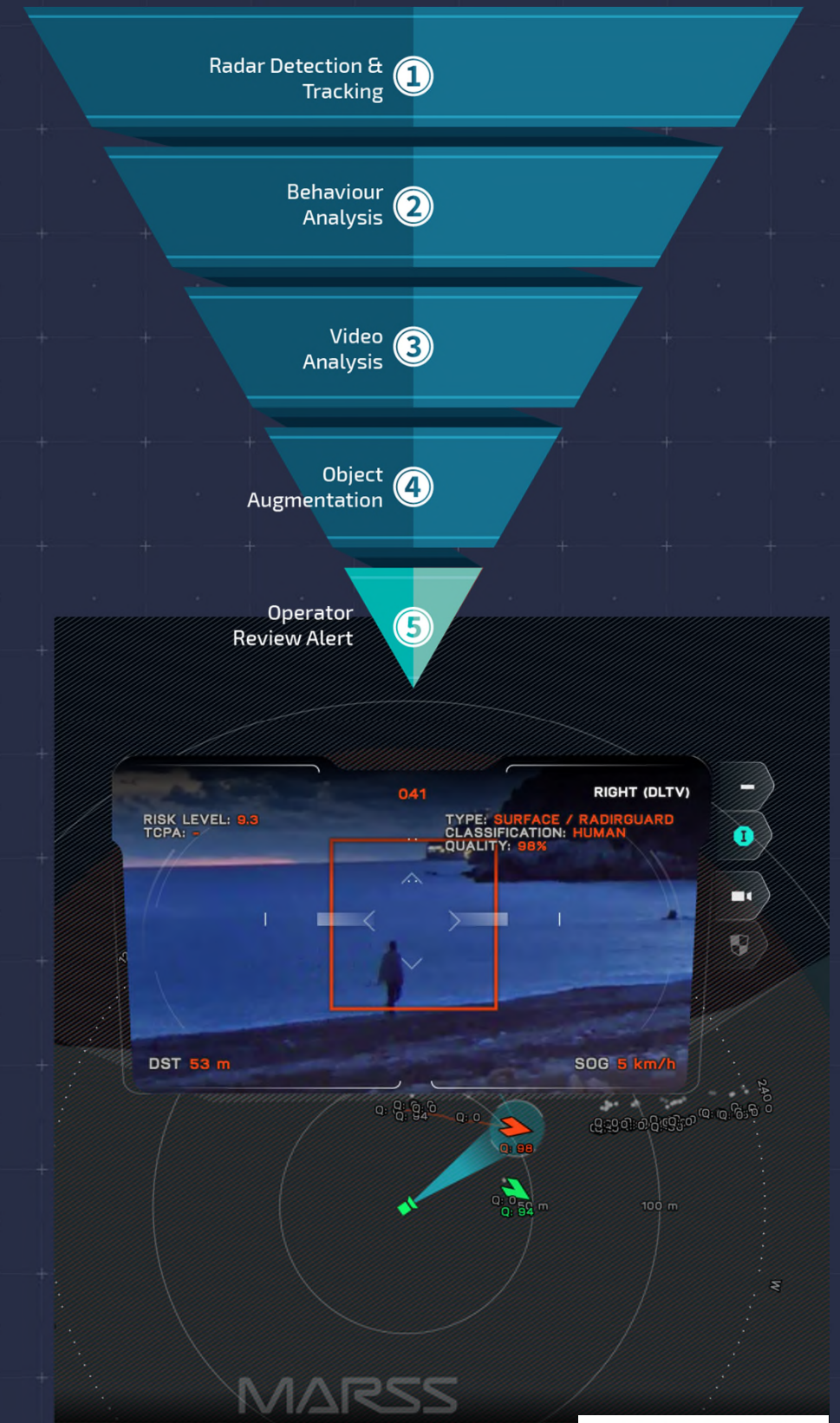
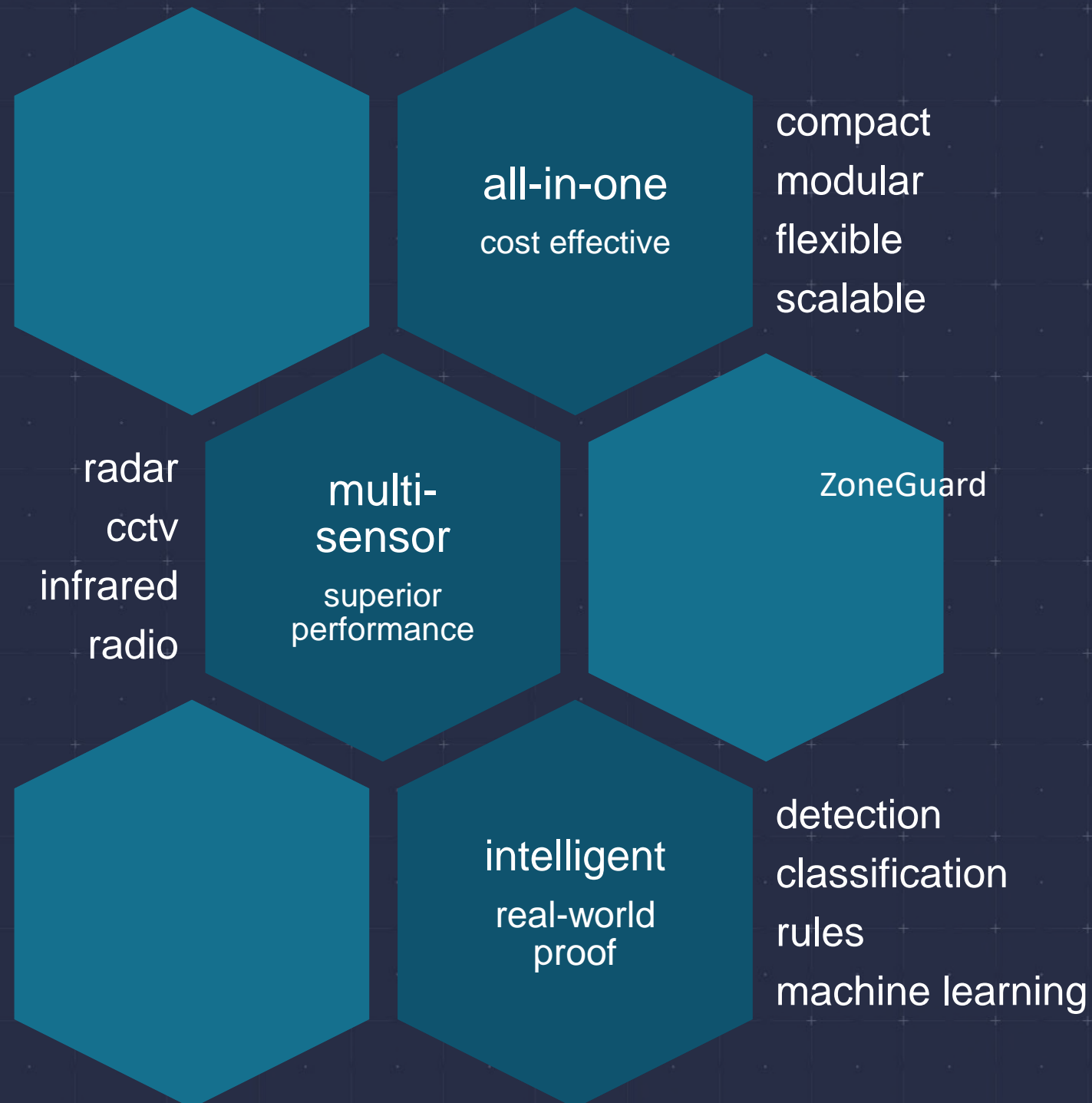
# ZoneGuard





# ZoneGuard

## Overview

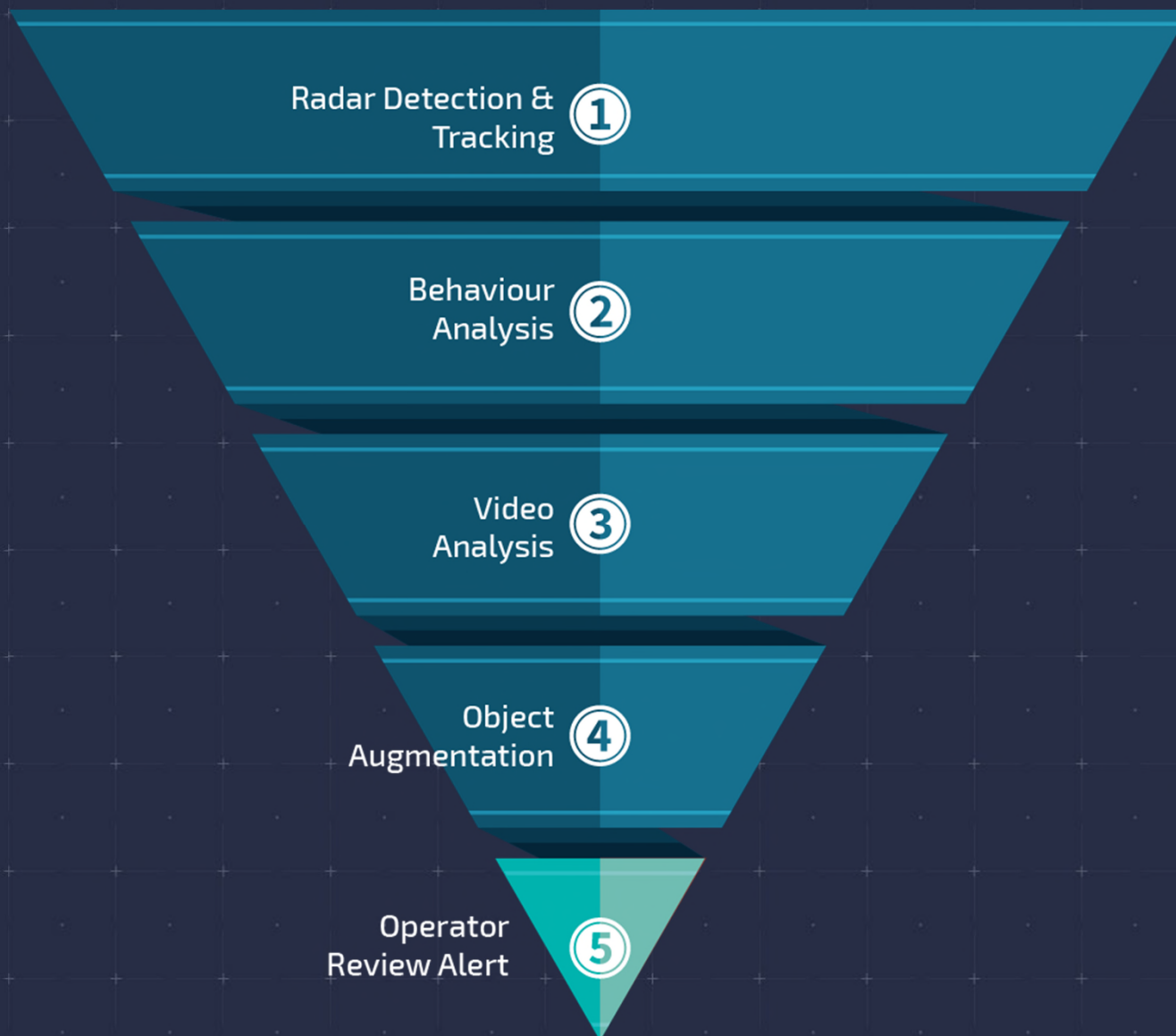


# ZoneGuard

## Intelligent 5 Layer Decision Hierarchy = Low False Alarms

Each ZoneGuard station protects an area of 400x100m along a fence with multiple stations seamless integrated into one intelligent situation awareness picture. Due to its intelligent 5 layer decision hierarchy false alarms are reduced to a minimum.

### How it works step by step:



### Low False Alarms due to Layered Decision Hierarchy

1. Reliable object detection and tracking achieved by compact microwave radars
2. Track behavior algorithms provide first level of classification confirmation (eg animal, human, car, truck)
3. Built-in camera footage is analyzed by Artificial Intelligence for object recognition to provide a secondary more precise classification
4. Classification is augmented by analyzing GSM/Wifi/VHF signals emitted by object and other intelligence data bases and provides a risk level for each tracked object from 1-10.
5. Alarm is raised and operator is asked to visual confirm video of intruder and action on system recommended countermeasures.



# ZoneGuard

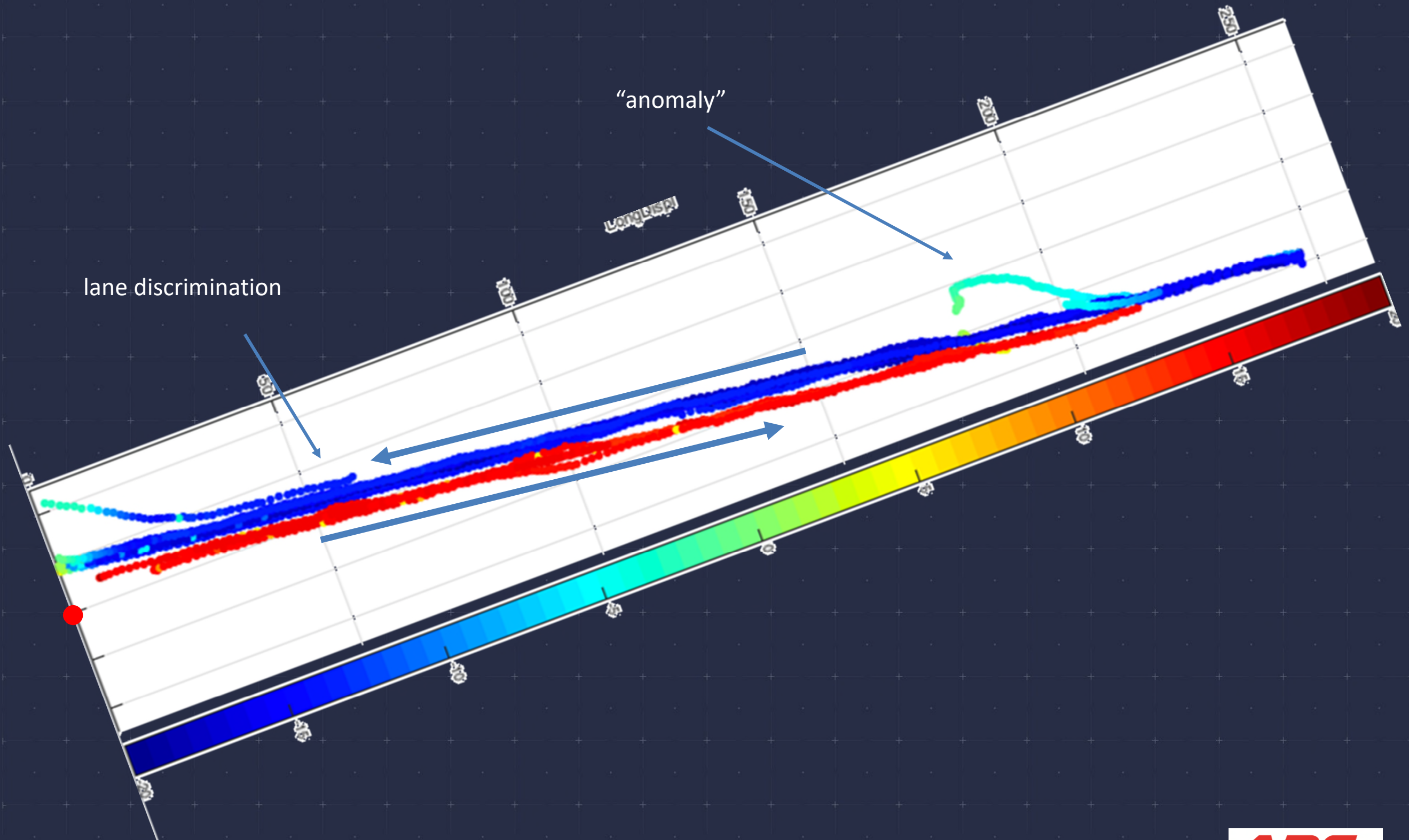
2D detection and tracking



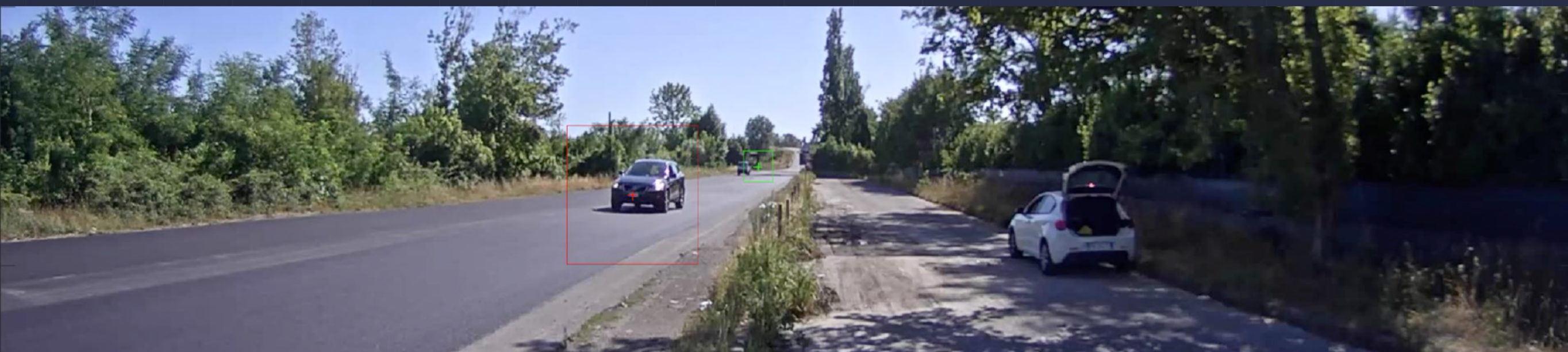


# ZoneGuard

Behaviour analysis



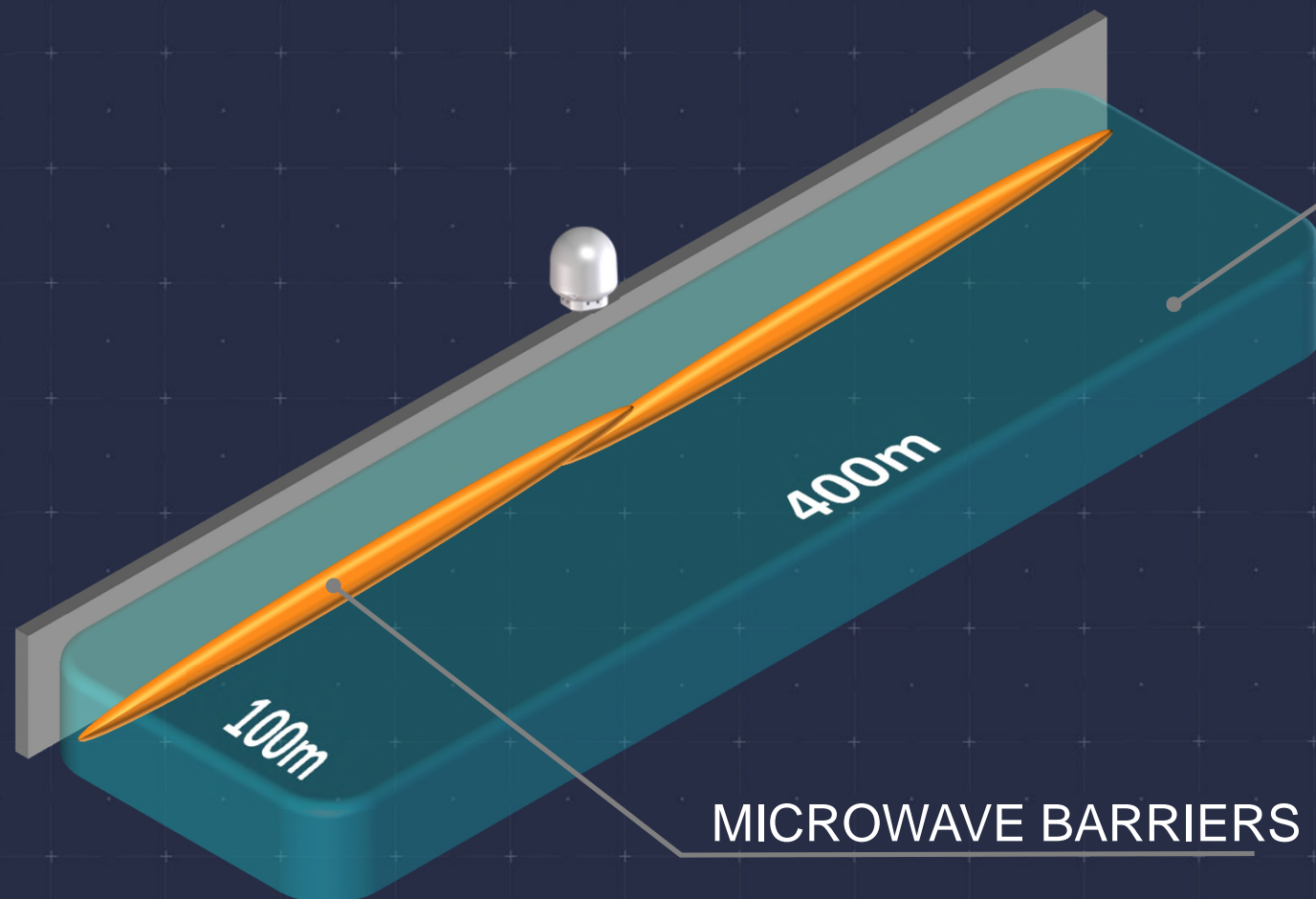






# ZoneGuard

The advantage over microwave barriers



## ZoneGuard

- 1 installation point
- 400m x 100m surveillance area
- tracking & localization
- target classification
- integrated multi-sensor technology

## MICROWAVE BARRIERS

- 4 installation points
- N. 2 200m x 1-5m surveillance area
- no localization
- no tracking
- no classification



# ZoneGuard

## Mission 1: Detect

ZoneGuard provides enhanced situational awareness and increased reaction time as detection takes place in advance of reaching the fence, tracking continuous over the fence and inside the perimeter.

Typical multiple ZoneGuard Pods are interlinked to make up a full perimeter system.



 RADiRguard™



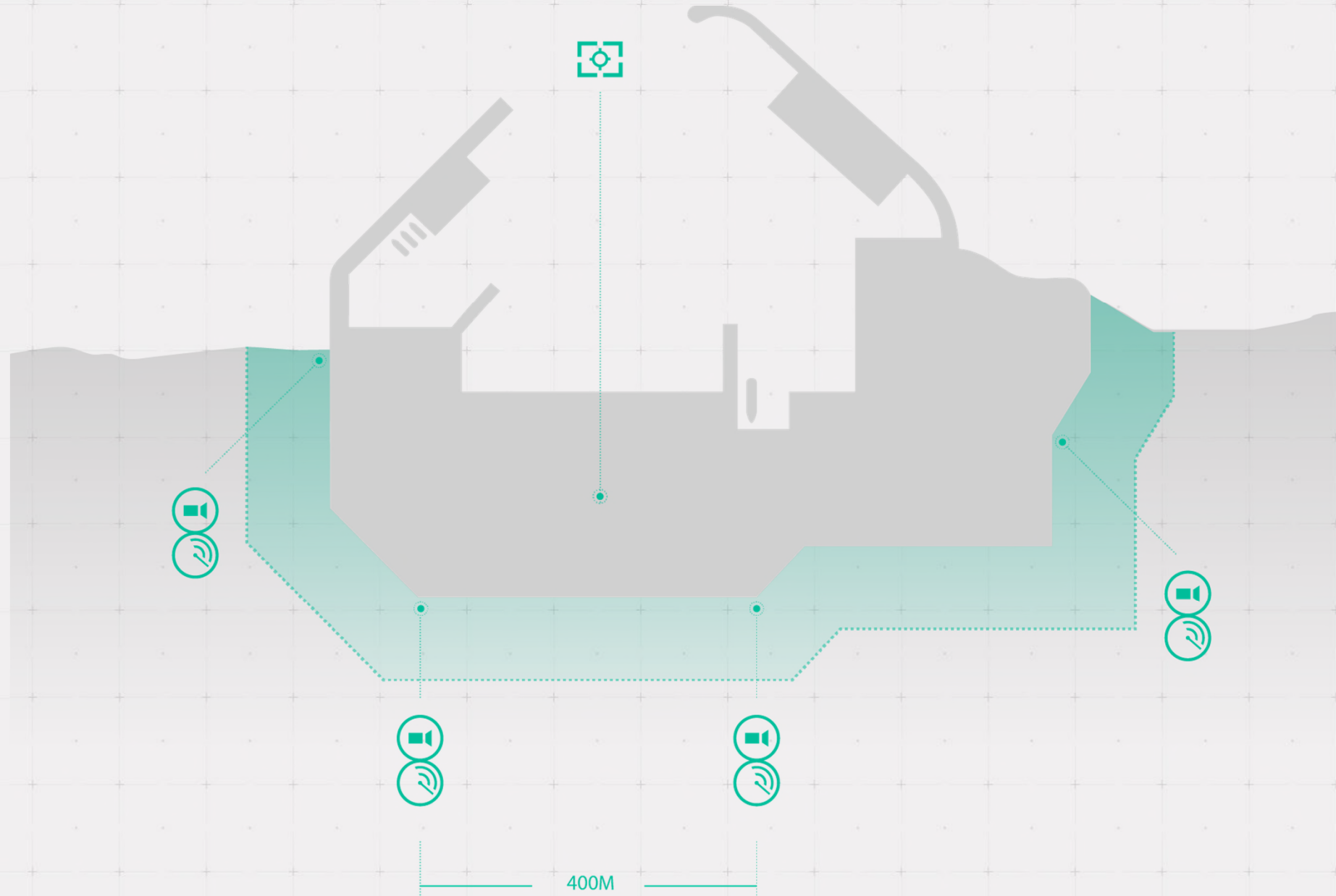
COMMAND  
& CONTROL



CAMERA



RADAR





# ZoneGuard

## Mission 2: Determine

### Presenting a clear situational awareness picture.

Alarms are raised on ZONEGuard's easy to use touchscreen interface located in a local or/and centralized command room and by remote access via smart devices. Simplified presentation allows users to focus on the actual security situation on hand.





# ZoneGuard

## Mission 3: Interception Support with Mobile Situation Awareness

### Interception support with Augmented Security.

Secure access to the situation awareness picture is provided to intercept a threat or simply be aware while on station.

The flexible HTML5 browser based user interface supports numerous smart devices to assist the operator and security team:

- Ruggedised iOS and Android tablets
- Head Mounted Displays (Android)
- Ruggedised smartphones

#### Communication & GPS

Silvus RC4200 digital data radio & GPS/Gyro provides up to 100Mbps data link to HQ.

#### Mobile Command

Head Mounted Display Glasses provide the local operator full situation while on the move.

#### NiDAR Command 10" Display

Fixed installed waterproof display providing simplified tactical picture with target information and interception support.



# ZoneGuard

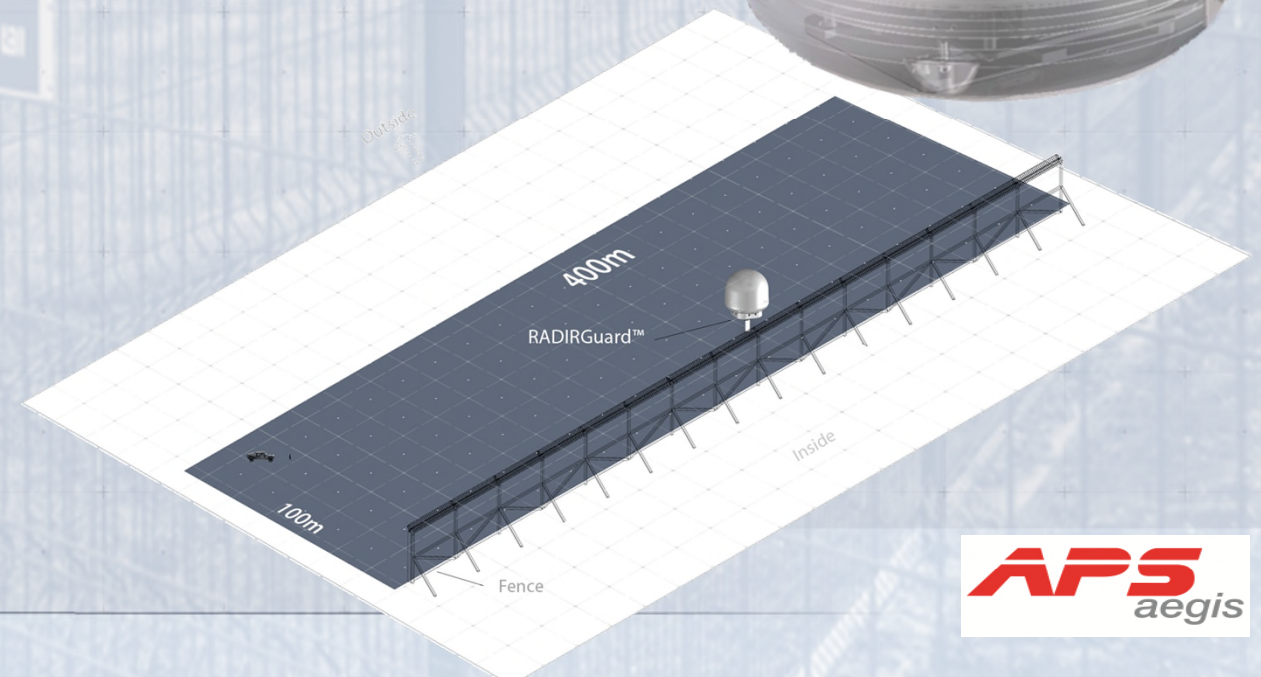
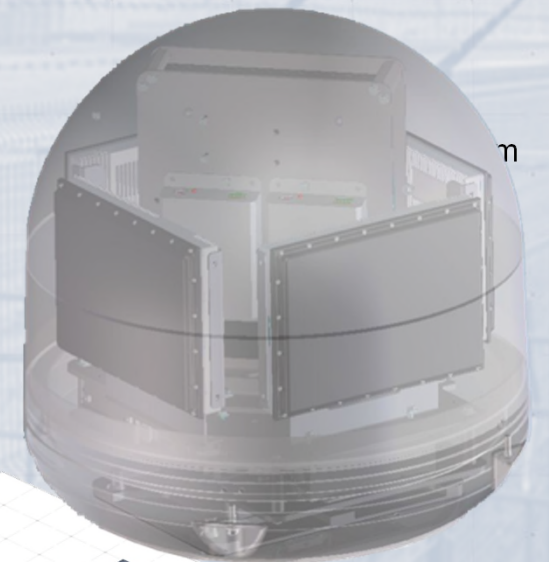
## Technical Specs

### NiDAR Command & Control:

- OS: Linux
- Operator stations: Multi-touch tablet to 78" screens
- Recording storage: 7/30/90/120 day storage available
- Hot swap redundancy: Yes (each pod can be stand alone)
- Hardware: No central server. Only a NVR server required.

### ZONEGuard Pod Specs:

- Typical detection area: 400 x 100m (human detection)
- Modular configurations: 400mx50m,  
20°- 360° radial sectors with 200m radius
- Optical camera: HD or 4K with 90deg field of view (up to 4 units)
- IR camera: 640x480px uncooled (optional)
- OS: Linux
- Connectivity: Ethernet, Wifi, 3/4G optional
- Ingress Protection rating: IP66
- Operation Temperature: -20°C +70°C
- Power consumption: 109W (peak)
- Weight: 12kg max
- Dimension: 333mm x 333mm x 330mm
- Classification: Humans, passenger cars, trucks, animals





# ZoneGuard compact

## Technical Specs

### NiDAR Command & Control:

- OS: Linux
- Operator stations: Multi-touch tablet to 78" screens
- Recording storage: 7/30/90/120 day storage available
- Hot swap redundancy: Yes (each pod can be stand alone)
- Hardware: No central server. Only a NVR server required.

### RADIRGuard K Specs:

- Detection range: 100m (human detection and tracking)
- Horizontal field of view: 90°
- Optical camera: HD with 90deg field of view
- IR camera: 640x480px uncooled (optional)
- OS: Linux
- Connectivity: Ethernet, Wifi, 3/4G optional
- Weight: 2.0kg
- Power consumption: 24W (peak), POE
- Dimension: 200mm x 150mm x 50mm
- Ingress Protection rating: IP66
- Temperature range: -20°C +70°C
- Classification: humans, passenger cars, trucks, animals
- Function: detection and early warning of perimeter intrusion





# ▶ ZoneGuard





## CONTACT

# ZoneGuard

### **APS Aegis Ltd**

Little High Street  
Shoreham by Sea  
BN43 5UD

T: + 44 (0)1273 463775

E: [sales@apsaegis.co.uk](mailto:sales@apsaegis.co.uk)

W: [aps.co.uk](http://aps.co.uk)

Disclaimer: All information is provided in good faith for guidance and reference purposes only, subject to change without notice.