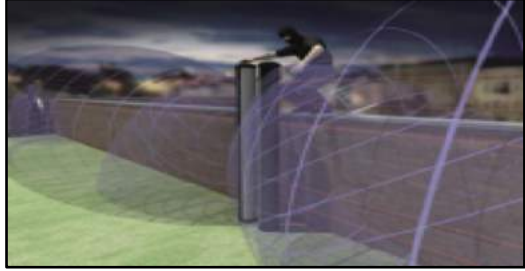




SAFETY OF CRITICALLY IMPORTANT FACILITIES A COMPLEX APPROACH

Main types of threat



EXTERNAL:

- Infiltration
- Intrusion

INTERNAL:

- Disruption
- Sabotage
- Espionage
- Theft
- Fire

Fighting with threats



EXTERNAL:

- Physical protection engineering systems
- Perimeter security systems
- CCTV systems
- Anti UAV and drone systems
- Access control system



INTERNAL:

- Access control system
- Burglar alarm systems
- CCTV systems
- Fire alarm and extinguishing systems

Physical protection engineering systems

External
and internal fencing



Roadblocks
and anti ramming
devices



Full height turnstiles



Main assets of ATRI for organization of perimeter and territory security systems



- **G-Fence** shock detection system for perimeter fences
- **Sicurit Absolut Pro Dual Tech Barriers** for the organization of the main and second line of protection
- **Blighter** ground surveillance radars to protect the facility's territory, perimeter and adjacent areas
- **Advance Guard** radar complex to control large areas and ensure the safety of facilities
- **Solaris IR Barrier** for perimeter protection and temporary areas or individual zones within the facility

G-Fence



G-FENCE 3000 is shock detection system for perimeter fences with precise intrusion location.

QUICK AND EASY INSTALLATION

- Cable resistant to mishandling
- Solar powered
- Alarm information delivered in 1 unique point

QUICK AND EASY SET UP

- No calibration
- No software needed on field
- On board tools for set up

HIGH PERFORMANCE OF DETECTION

- Precise intrusion location within less than 3m
- Sensibility adjustable per fence panel
- No false alarms because of bad weather conditions

EASY MAINTENANCE

- Any sensor fault or cable cut is precisely located within 3m

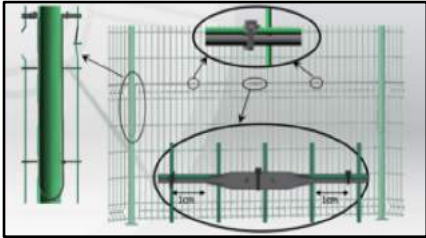


Composition of G-Fence system



CONTROL UNIT

- Solar powered : SOLARIS Technology
- Intrusion location algorithm



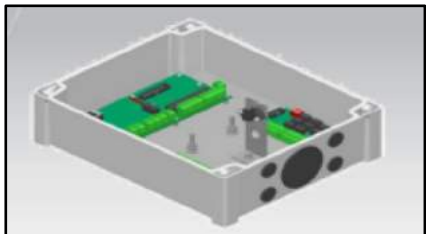
DETECTOR CABLE

- 40 integrated sensor with digital accelerometer technology for 100m detection
- Shock/vibration/cutting detection algorithm



LINK AND TERMINATION UNIT

- Allows to link two detection cable
- Finishes a detection cable

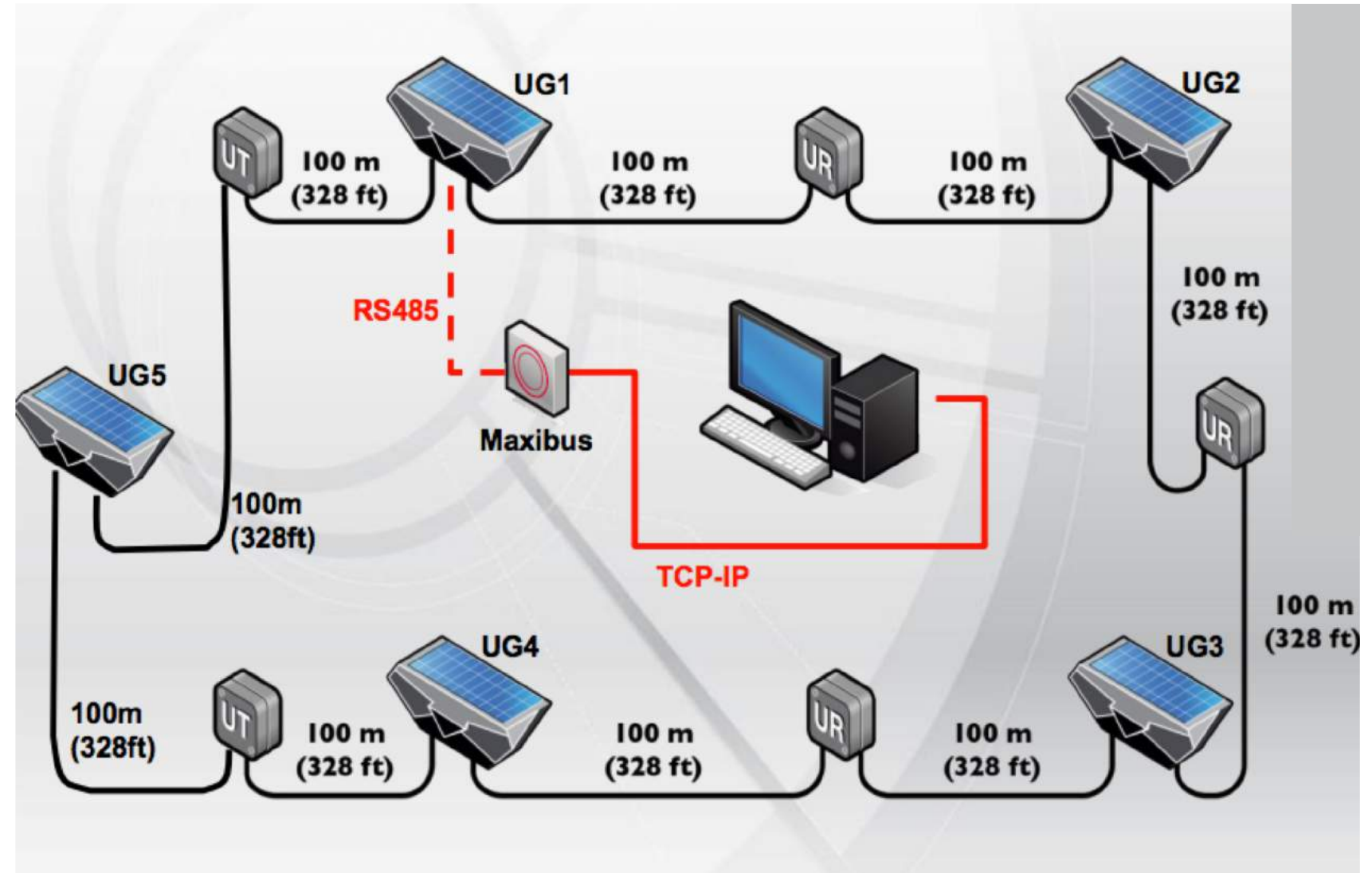


MAXIBUS 3000 - G-FENCE Data Collector

- Alarms centralization
- Detailed 1000 event log

Architecture of G-Fence system

- 16 UG
- 3200m detection
- 128 detection areas
- 136 relays output
- Ethernet connection



Main Competitors of G-FENCE Comparison Chart

Parameter	Intelli-Flex	Intrepid Micropoint	G-FENCE
Intrusion location	No	Yes at 3m	Yes at 3m
Cut localization	No	No	Yes at 3m
Max length per system	600 m	3200 m	3200 m
Zoning capability	no	Yes	Yes
Number of zones	2	50	128
Power supply	1 per 600m	1 per 1600 m	None
TCP/IP Capability	No	No	Integrated
Easy repairing of the cable	No	No	Yes
Input for external contact	No	Yes, 20 max per system	Yes, 32 max per system
Calibration	No	Yes, Manual	Yes, Automatic
Sensitivity adjustment	Global	Yes, per m	Yes, per m

Sicurit Absolute Pro IP Native Dual Tech Barriers



Sicurit Absolute Pro Dual Tech Barrier - is a new generation of IP network, scalable and fully network-controlled active long-range barriers (infrared or dual IR + MV technology) that can be easily applied in medium or large projects where the highest level of security is foremost.

INSTALLATION

- 1-st line of protection
- 2-st line of protection
- Gates
- Sensitive buildings/zones

Characteristics Sicurit Absolute Pro IP Native Dual Tech Barriers



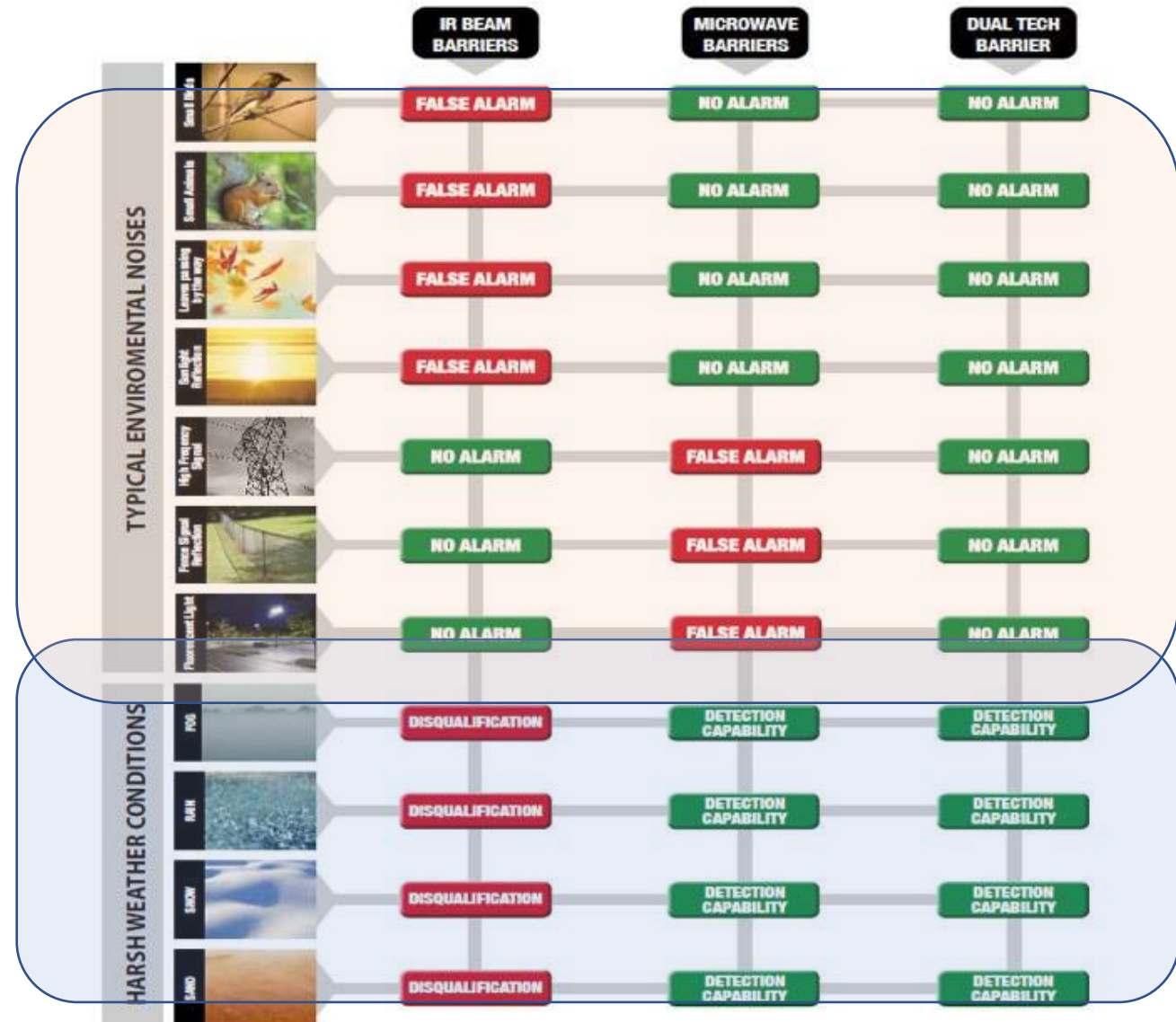
Range	200m
Detection method	Microwave + IR active beams
Height of the columns	2m / 2.5m / 3.0m / 4.0m
Quantity of IR beams	Min 3 / Max 12
Quantity of MV beams	Min 1 / Max 2
Alarm response time	30ms to 1000ms (adjusted)
Operating temperature	-40C° to +75C°
Data transmission	TCP-IP / RS485 / Raw communications
Events memory	1000 in each column
Additional inputs / outputs	2 IN / 2 OUT
Security level	IP55
Consumption (12VDC)	average 550mA
Consumption (24VAC)	average 1000mA



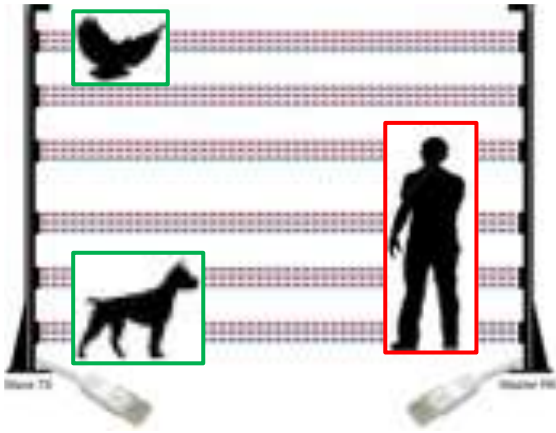
Advantages of Sicurit Absolute Pro IP Native Dual Tech Barriers

Best decision in case:

- The facility is exposed to harsh weather conditions.
- The facility is exposed to the movement of small animals and birds.
- The facility requires a high level of security.



Unique features of Sicurit Absolute Pro IP Native Dual Tech Barriers



- IMT-powered barriers can be easily integrated into existing or new IP backbone networks and in virtually any location
- NO SYNC CABLE REQUIRED
- With IMT Technology there are no more barrier positioning restrictions which could cause last minute installation delays
- IMT Technology can be adjusted to account for changing environmental conditions, such as snowfall, growing grass or sand storms.
- Each IR beam is equipped with a microprocessor allowing individual detection parameters to be set

SOLARIS system



SOLAR ENERGY

- Auto-protected solar panel
- Integrated anti-climbing cap
- Mounting of solar panels with no specific positioning required
- Transportable solar panel for columns shielded from the sun

DYNAMIC RADIONETWORK

Thanks to a proprietary communication protocol, all infrared columns form a secure mesh network.

- Redundancy of information : no loss of alarm information
- Integrity and security of the site : permanent control of the presence of each column
- Coded radio protocol : immunity to interference
- Unique alarm messages : impossible to simulate a column



SOLARIS system



PATENTED DESIGN

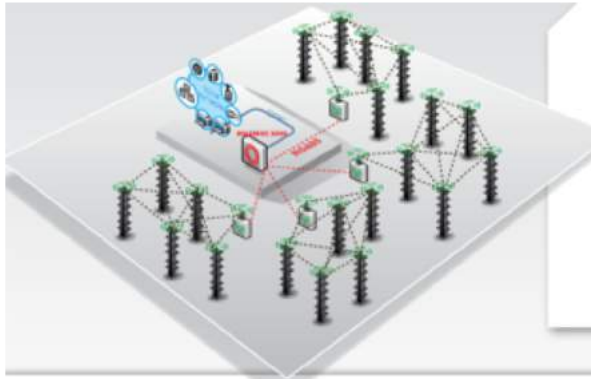
- Anti- condensation and anti-ice caps
- The caps prevent the formation of condensation and ice on the infrared cover allowing for correct functioning in all weathers

MAXIBUS 3000: IP TECHNOLOGY

- The radio coordinator is connected to MAXIBUS III.
- The integrated web server permits the configuration of the network and transmits all the alarm information

4 Ethernet-ports can simultaneously process:

- 4 radio networks
- 96 SOLARIS columns
(4 x 24 columns).



Modern state of-the-art e-scan radar



Provides continuous persistent surveillance at borders, boundaries and perimeters.

Wide area detection of moving air, land or sea targets:

- Cars, vans, lorries, ships, boats, etc.
- Small boats (RIBs, Pangas, Dhows and Sampans)
- Single walking man or groups of men
- UAVs, microlights and hang gliders
- Canoeists and kayakers
- Crawling man (or even a rolling man)
- Micro and mini UAVs ('Group 1')

Key Features and advantages of BLIGHTER radars

Electronic scanning	Doppler processing	FMCW (Frequency Modulated Continuous Wave)	Interchangeable antennas
• Detection of very slow moving targets (0.4 km/h) • Software selectable scan-rate • Zero maintenance (i.e. no drive belts to replace or rotating joints to lubricate/ service) • Acoustically silent and visually covert	• Excellent discrimination of moving targets from stationary background clutter • Instantaneous clutter rejection • Three degrees of target discrimination: azimuth, range and speed. • Target classification through Doppler audio signature	• Simultaneous and continuous coverage of all ranges • Power efficient • Electronically covert – low intercept probability (LPI) • Difficult to jam with electronic counter measures (ECM)	Field interchangeable Antennas • Wide 20° elevation beam (W20S antennas) • Medium 10° elevation beam (M10S antennas)

Other features of BLIGHTER radars



- IP network ready
- Software development kit
- Built-in GPS and compass
- Wide operating temperature range
- Ku-band
- Ingress protection to IP66
- High power transmitter option
- Light weight

Advantages of BLIGHTER radars



- Detection of small and slow objects
- A 16 kg version is available for one person to carry.
- Integration with surveillance cameras
- Easy integration into existing security system
- Low power consumption
- Low requirements for communication channels
- Does not require regular maintenance
- Work around the clock and in all weather conditions
- Simple, cheap and quick installation on existing infrastructure

Advance Guard radar complex



Ground-based radar complex for monitoring large areas of land and water, which can significantly increase the safety and efficiency of critical infrastructure.

- The system consists of rapidly deployable high-resolution radar sensors and software that provides round-the-clock automatic monitoring of the perimeter and the entire territory.
- The software interface is designed for intuitive and easy control of the entire system.
- Detects, tracks and determines the exact location of all moving objects in the protected area (people, cars, boats or wild animals) in automatic mode and notifies the security personnel if activity occurs in areas that are marked as protected.

Main features of Advance Guard radar complex



- Flexible software allows you to organize security in 24x7 mode.
- Easy to install, configure and use.
- Centralized management system.
- Easy to use user interface.
- Authorized user access with different levels of access to manage the system.
- Mapping support.
- Detailed information about all detected violators.
- Displays real-time radar settings and radar data

Main features of Advance Guard radar complex



- Interactive control panel of surveillance cameras with the output of video streams to the screen.
- Support for easily configurable security zones.
- Supports exclusion zones to avoid false alarms.
- Tracking of several targets.
- One radar can track up to 200 targets simultaneously.
- Save the entire history of observations in the database with the ability to search and display on the screen the paths of movement of offenders.
- Supports desktops and servers, as well as full-featured Windows devices



- Developed for long range surveillance in any day/night weather conditions

Uncooled thermal imager

- High temperature sensitivity. NETD <35 mK
- High resolution detector 640x480
- Large selection of lenses (15-100 mm, 25-150 mm, 25-225 mm, 40-300 mm)



High sensitivity video camera

- The minimum illumination is 0.005 Lux (F1.4)
- Highest sensitivity on the market
- High resolution 1920x1080
- Different lenses (14-500 mm, 20-100 mm, 40-2200mm)

Un-cooled thermal imager

ATRI UTI 640/15-100

Technical characteristics

Based on a highly reliable long-wave uncooled detector, which provides good detection at a long distance in all weather conditions.

Detector type	Un-cooled VOx 640 x 480 mm
Detector pixel range	17 um
Spectral range	7,5 to 14 um
Image frequency	30/60 Hz
Focus	Manual (remote) / automatic
Continuous digital zoom	Yes, up to 16x
Consumption	10 W
Operational temperatures	-40°C to +55°C
Focal length	15 to 100 mm
Field of view range	39,8° to 6,2°
Dimensions	400x220x240 mm
Weight	11 kg

Un-cooled thermal imager

ATRI UTI 640/ 25-150

Technical characteristics

Based on a highly reliable long-wave uncooled detector, which provides good detection at a long distance in all weather conditions.

Detector type	Un-cooled VOx 640 x 480 mm
Detector pixel range	17 um
Spectral range	7,5 x 13,5 um
Image frequency	25 Hz
Focus	Manual (remote) / automatic
Continuous digital zoom	Yes, up to 16x
Consumption	10 W
Operational temperatures	-40°C to +60°C
Focal length	25 to 150 mm
Field of view range	25,3° to 4,7°
Dimensions	420 x 220 x 240 mm
Weight	13 kg

Un-cooled thermal imager

ATRI UTI 640/ 25-225

Technical characteristics

Based on a highly reliable long-wave uncooled detector, which provides good detection at a long distance in all weather conditions.

Detector type	Un-cooled VOx 640 x 480 mm
Detector pixel range	17 um
Spectral range	8-14 um
Image frequency	25 Hz
Focus	Manual (remote) / automatic
Continuous digital zoom	Yes, up to 16x
Consumption	> 10 W
Operational temperatures	-40°C to +55°C
Focal length	25 to 225 mm
Field of view range	25,5° to 2,8°
Dimensions	500 x 220 x 240 mm
Weight	15 kg

Un-cooled thermal imager

ATRI UTI 640/40-300

Technical characteristics

Based on a highly reliable long-wave uncooled detector, which provides good detection at a long distance in all weather conditions.

Detector type	Un-cooled VOx 640 x 480 mm
Detector pixel range	17 um
Spectral range	7,5 to 14 um
Image frequency	25 Hz
Focus	Manual (remote) / automatic
Continuous digital zoom	Yes, up to 16x
Consumption	15 W / < 65 W maximum
Operational temperatures	-40°C to +55°C
Focal length	40 to 300 mm
Field of view range	16,6° to 2,1°
Dimensions	500 x 240 x 240 mm
Weight	21 kg

Range of detection and recognition of human target 0.5m x 1.75m

Detection (km) —

Recognition (km) —

ATRI UTI 640/15-100



ATRI UTI 640/25-150



ATRI UTI 640/25-225



ATRI UTI 640/40-300



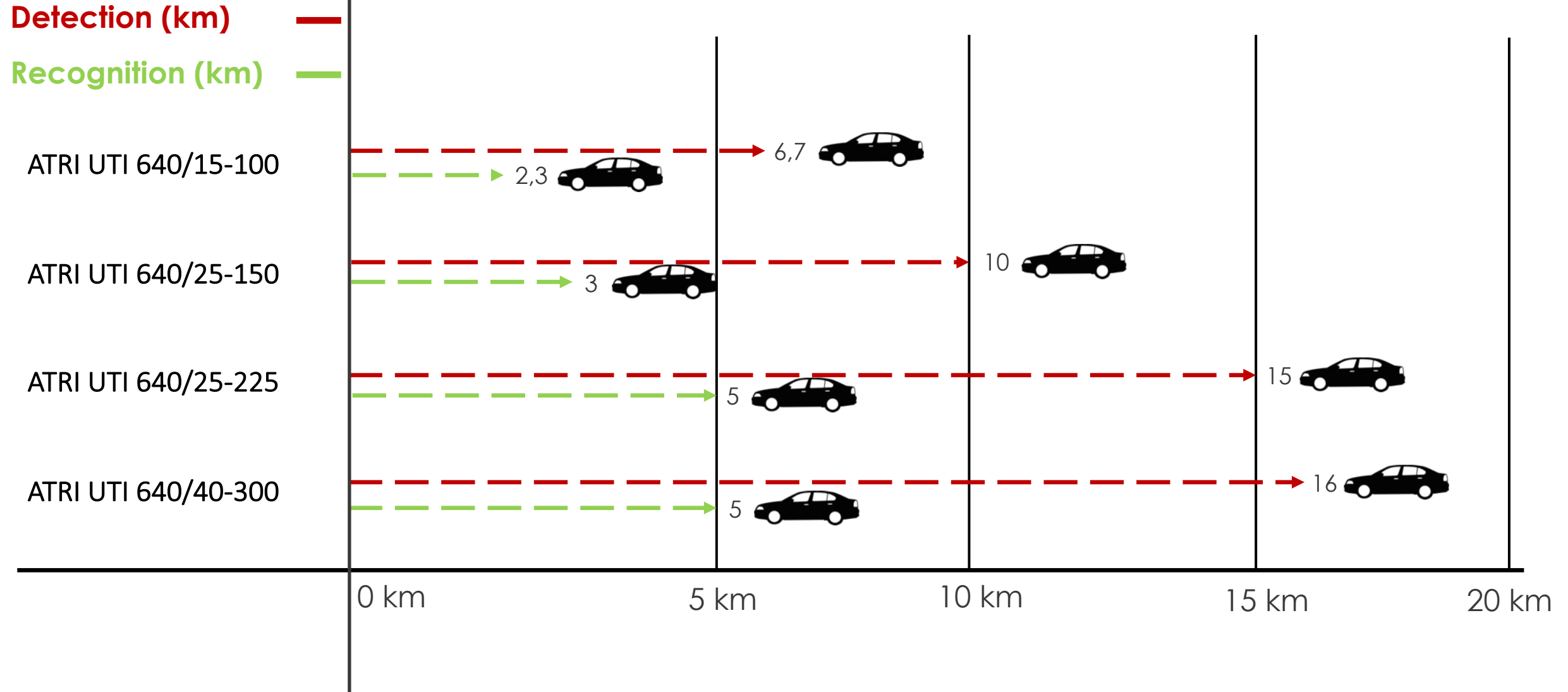
0 km

5 km

10 km

15 km

Range of detection and recognition of NATO target 2.3m x 2.3m



Access control and management system

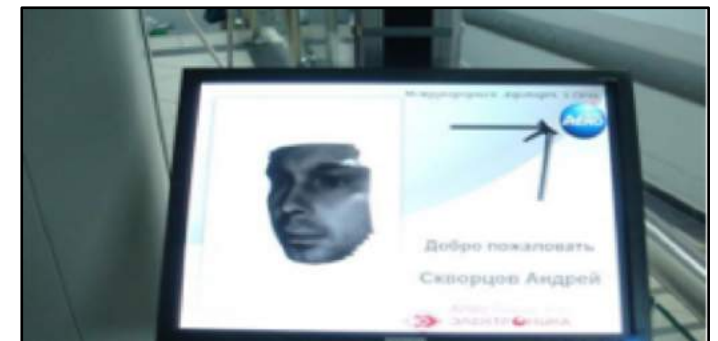
Automobile
checkpoint



Pedestrian
checkpoint



Pass office



AUDS – Anti-UAV Defense System

DETECTION OF TARGET



- The AUDS Radar is a modular non-rotating, electronic-scanning (e-scan) system using power efficient PESA (passive electronically scanned array) and FMCW (frequency modulated continuous wave) technologies to provide reliable, small and slow UAS detection even in complex environments.

TRACKING OF TARGET



- The AUDS EO System is hosted as a removable EO sensor pod that easily attaches to the AUDS positioner, which is based on an in-service two-axis stabilized mount.
- The AUDS positioner has been designed to accommodate a wide range of sensors and payloads and offers excellent stabilization performance, allowing high magnification sensors to be fitted for observation of small and fast moving targets at extreme ranges.
- The azimuth axis has a centrally mounted special signal and coaxial slip-ring assembly to allow continuous rotation at speeds up to 90°/s.

DEFEAT OF TARGET



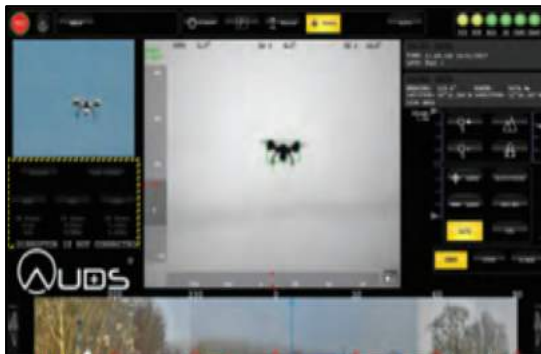
- The AUDS RF Inhibitor is a purpose-designed multi-band system, engineered for maximum effectiveness against UAS command and control (C2) links.
- RF inhibition can be activated either selectively or simultaneously across the 400 MHz to 6 GHz spectrum, targeting five threat 'bands' which are designed to defeat the C2 links commonly deployed throughout the UAS threat landscape (i.e. 433 MHz, 915 MHz, 2.4 GHz, 5.8 GHz and GNSS bands).

AUDS – Anti-UAV Defense System

AUDS radar GUI

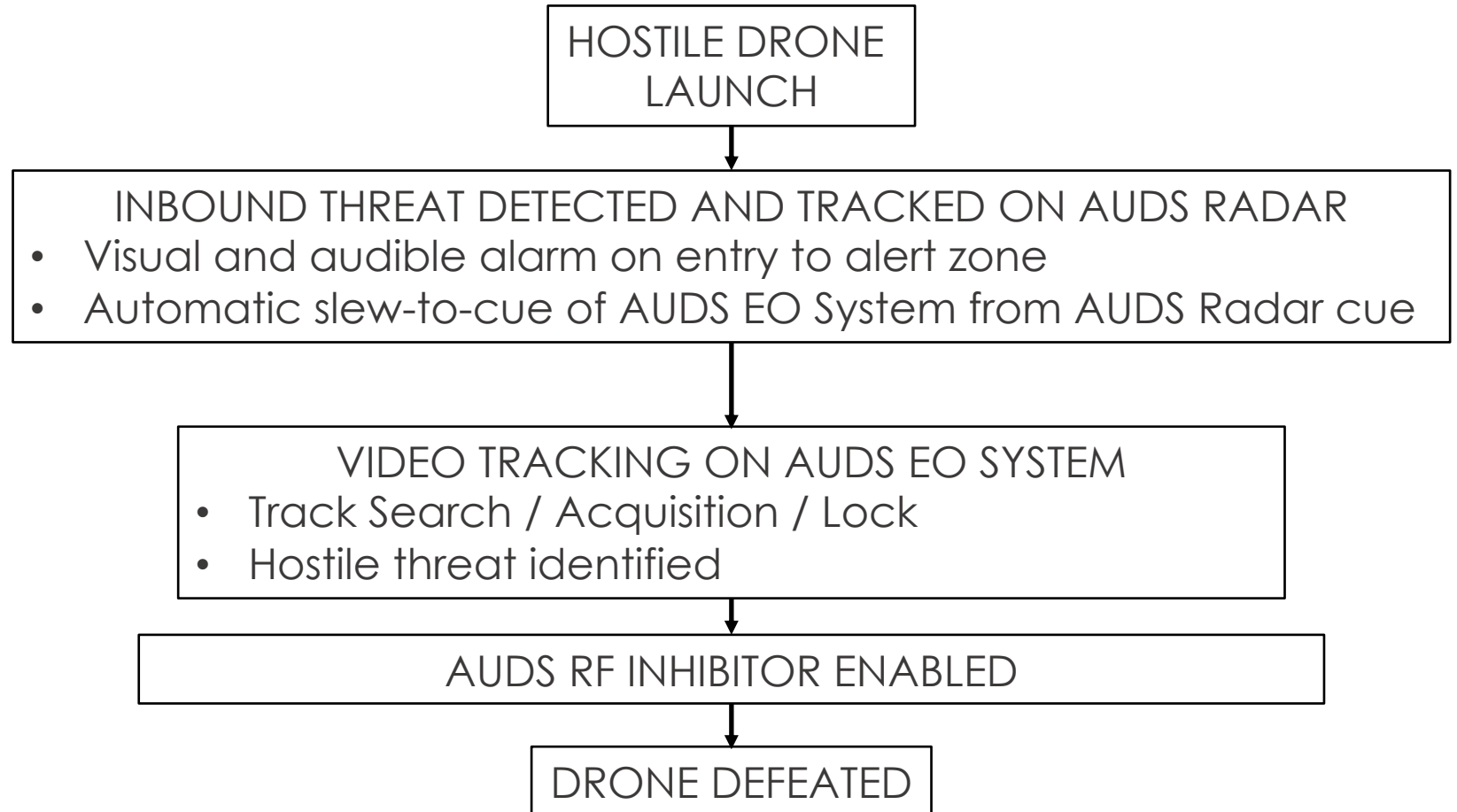


AUDS EO/RF Inhibitor GUI



- The AUDS system detects the drone using state-of-the-art electronic scanning micro-Doppler radar, tracks it using high precision infrared and daylight cameras and advanced video tracking software, before using a non-kinetic radio frequency (RF) inhibitor to defeat the drone.
- Using AUDS, an operator can effectively take control of the drone and force a safe landing.
- AUDS is field proven to detect all types of drones including fixed wing and quadcopters.
- All the system elements of AUDS: Radar, EO System and RF Inhibitor are fully integrated into the operator console. The AUDS Operator Console requires a single operator and comprises two screens.

AUDS operating principle



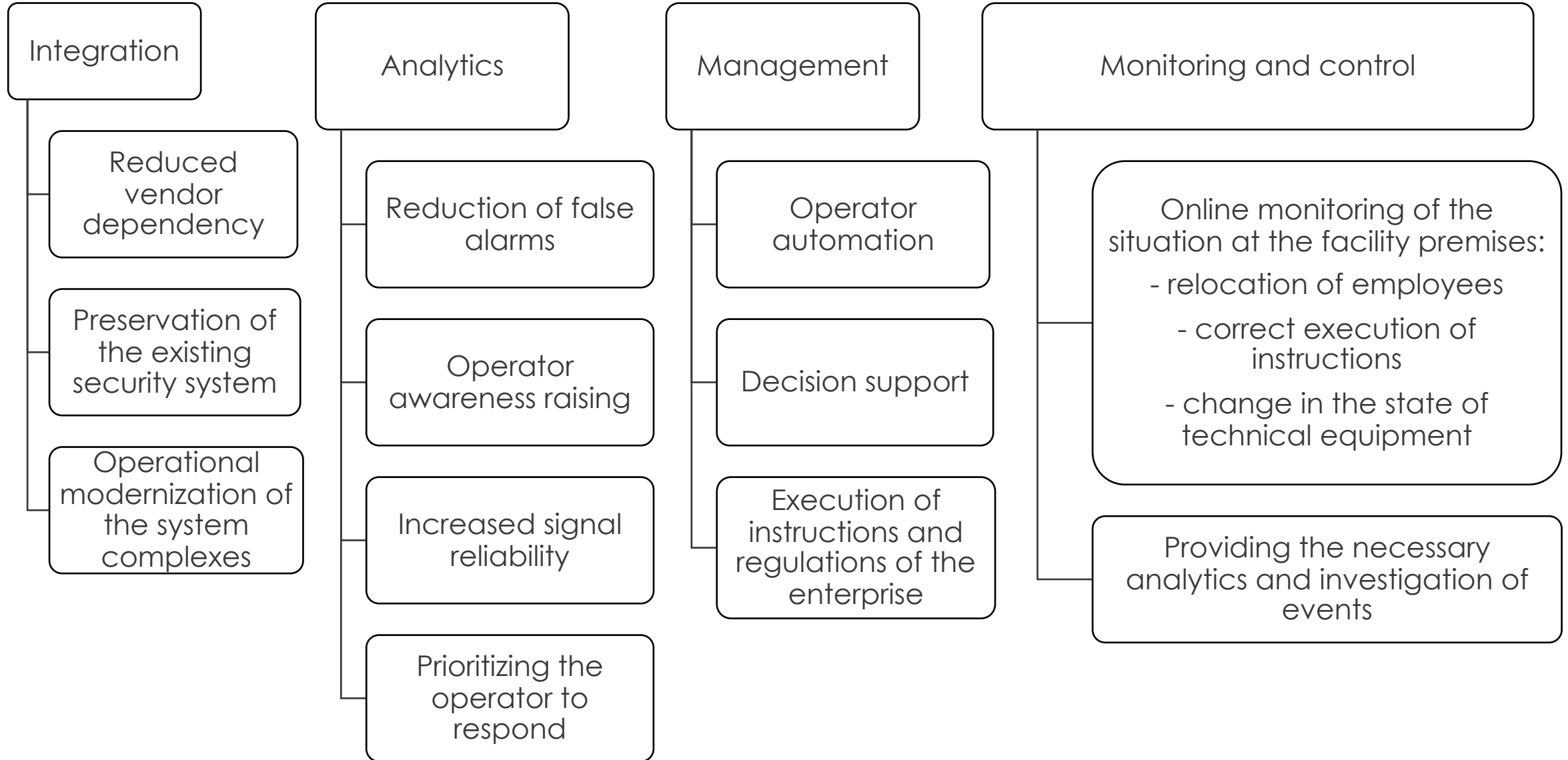
From DETECT to DEFEAT 10 to 15 seconds

Complex safety system



- PSIM – system – EFFECTIVE safety system
- Reducing the impact of the "human factor". Each operator's action is monitored and checked for compliance with accepted safety standards.
- Detection of threats and management of all stages - from detection to liquidation, followed by analysis of the measures taken.
- Protection of the facility in accordance with the current level of threat.

Advantages of PSIM - system



Functional features of PSIM - system

