



# ***Surveillance Assessment Response***

***Comprehensive Maritime Security Solutions***

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# Maritime Domain Awareness

Performance Watch's **Surveillance Assessment Response (SAR)** approach delivers a comprehensive maritime security solution.

SAR establishes Maritime Domain Awareness (MDA). MDA is defined by the International Maritime Organization (IMO) as “the effective understanding of anything associated with the **maritime domain** that could impact **security, safety, economy**, or the **environment**”. The U.S. Navy enhances the IMO definition with a proactive interpretation: “Effective understanding occurs when a decision-maker’s comprehension of relevant information allows him to take appropriate action.” Performance Watch’s approach is like that of the Navy.

A **SAR** MDA initiative provides the tools and technology required to more effectively address:

- Coastal Security & Defense
- Piracy, Smuggling & Trafficking, discovery & apprehension
- Search and Rescue;
- Security & Vessel Management: Oil & Gas, Ports & Harbors.





# Surveillance Assessment Response

**Surveillance** includes the automated and intelligent detection and tracking of targets, using radar and long-range electro-optical/infrared (EO/IR) camera systems, to obtain real-time surveillance data.



This sensor data is combined with data from the many other data sources in the area, such as LRIT, VPN, GPS, VTS and AIS, to list a few. **Assessment** is the use of advanced technology processors and software to assimilate all of this data, and to accurately identify and classify potential threats.

The intelligence that results from gathering and assimilating data, informs the Command Center of all potential threats, so they can decide the best course of action: the **Response**.



# Surveillance - Vista Research

Vista Research is a highly innovative research & development company with over 30 years of experience in providing analysis and engineering solutions for government and industry customers. Vista's dedicated team of PhDs and Engineers supports highly classified customer programs and commercial turnkey solutions...

Vista specializes in remote sensor data analysis, modeling, signal processing and algorithm design.



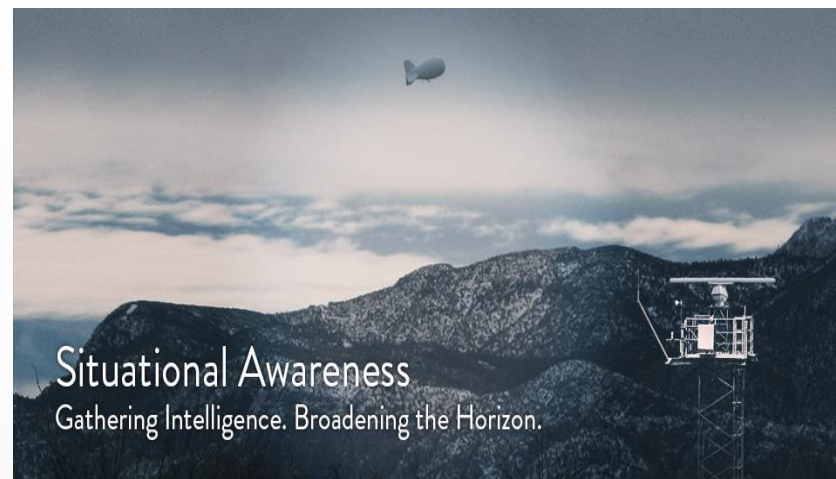
Vista's innovative processors provide low cost Wide Area Search (WAS) solutions for force protection at sea or on land, and these processors are the key components of Vista's SMART SENSOR RADAR SYSTEM (SSRS), a turnkey radar solution.

# Vista Research & Situational Awareness

## About Vista Radar Systems

Automated, intelligent tracking is at the core of Vista's Smart Sensor Radar System (SSRS).

By detecting and tracking targets, the Vista SSRS effectively and efficiently provides Situational Awareness for critical land, air and maritime missions.



The Vista SSRS employs automated, intelligent tracking at its core, so you can focus on your core requirements: Security and Safety.



# Mobile Surveillance Towers

## Detecting criminal activities in remote areas

Smugglers, traffickers and other maritime criminals frequently change the locations where they off-load their cargo. Fixed surveillance sites, therefore, cannot always provide the best surveillance solution.

For remote coastal sites and the numberless rivers and inlets that pirates, smugglers, traffickers and other criminals choose to conceal their illegal activities, Vista has

designed a mobile unit that can be readily moved and quickly set-up.



The trailer/tower platform provides a rugged, lightweight, and consolidated platform for storing and deploying the Sensor Suite into those locations that will no longer provide safe havens for these criminal activities.

# Assessment: Analysis of Data to determine the Level of Response required

Vista's **vStorm** includes integrated radar and video correlation systems that provide Command Centers with a single situational awareness picture, extending across the entire region. Vista systems provide multi-site correlation to enable a single country-wide picture for one or more of the regional Command Centers that are utilizing the Vista Smart Sensor Radar Correlation device.

## COMMAND AND CONTROL SOFTWARE

- Unprecedented range of detection and of tracking performance;
- Automated tracking of small and large targets with very few false alarms;
- Continuous 360° automated wide-area tracking, with all-weather 24/7 operation;
- Digital Video Panels for viewing all connected camera feeds; and
- Automatic and operator-controlled slewing of cameras to detected vessels, enabling a response to actual crimes and security threats.



# Response

While detection is essential, a **Response** that matches or exceeds the severity of the threat is also required. Suspicious vessels that have been identified by the Command Center staff and considered either potential threats or involved in criminal activity, must be confronted.

Coastal Interceptor Vessels (CIVs), designed and manufactured by **Fincantieri Marine Group (FMG)**, meet the stringent operational requirements needed for the interdiction of terrorists, pirates, smugglers or illegal migrants, for search and rescue, and for other demanding missions.

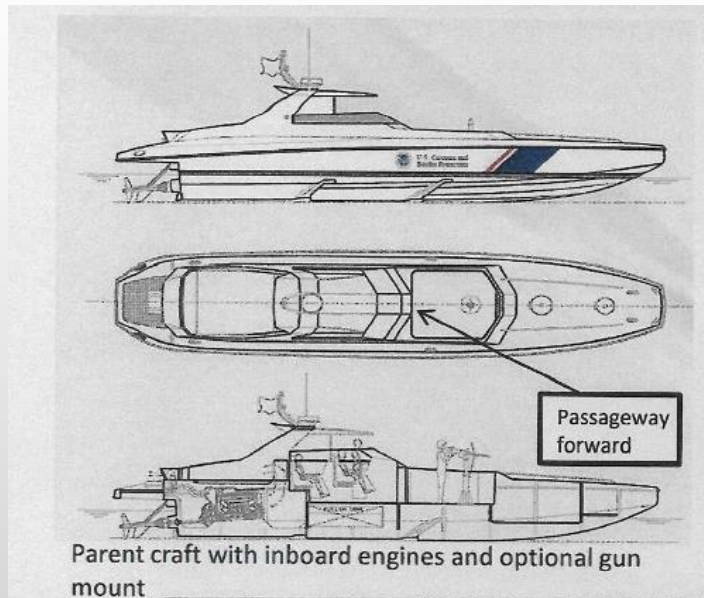
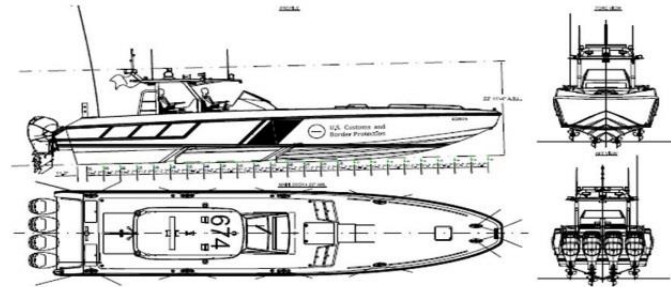


**FMG** has manufactured similar vessels for the U. S. Coast Guard.



# Coastal Interceptor Vessel

By changing the hull material to lightweight aluminum, Fincantieri has been able to guarantee a hull service life of 7 years (which is 2 years beyond the normal threshold expected for this type of CIV).



## Boat Data:

**Overall Length:** 49' (15m)

**Draft:** 2.5' (0.76m)

**Max Speed:** 65 mph or 58 kn

**Cruising Speed:** 55 mph or 49 kn

**Range:** 400 nm @ 28 kn

**Crew:** 4 (four shock absorbing seats)  
plus positions for 6 tactical  
team members

**Power:** 4 Outboard Engines, 1200 hp

# On-site and On-going Training

Training is always an essential for the long-term success of any project. A transfer of technology must take place. The suppliers' specialists and industry experts will work with the local technical staff and officers, to train them on all aspects of the new equipment and technology.



The goal is to ensure that your on-site staff fully understand how to operate and maintain all of the new technology. A training culture must be established, ensuring that training continues long after project is completed.

Selected technicians from the local team, therefore, will receive extensive coaching and mentoring during the installation phase. Then utilizing the “train the trainer” approach, these more highly trained staff will be required to coach and mentor the less experienced instructors, thereby ensuring the long-term success of the initiative.



# Long-term Maintenance

Performance Watch and the key suppliers of the equipment and technology, will develop and implement a comprehensive maintenance program designed specifically to ensure the on-going success of the initiative.

This Maintenance program will include the two types of maintenance: Preventative/Predictive Maintenance (PPM) and Emergency Maintenance (EM).

PPM will be established during the earliest phases. Although EM must be handled when operating problems occur, PPM is the on-going program to address issues before they become problems.

Intensive Maintenance Training is always a key element in a successful maintenance program. On-site and web-based training will be implemented during the project.

