



AMERICAN ASSOCIATION OF PORT AUTHORITIES

Leveraging Technology for Maritime Surveillance

July 22, 2015





Terma solutions and capabilities



Avionics

Advanced and combat proven airborne electronic warfare and 3D-Audio solutions.





Electronics Manufacturing

Complex electronics solutions for aircraft, satellites, and radars.

Command and Control

Scalable command and control systems for naval and air defense and protection of critical infrastructure.





Aerostructures

Advanced composite aeronautical structures for commercial and military aircraft.

Radar Systems

Radar sensors for small target detection in extreme weather conditions.





Space Systems

All phases of a space mission's lifecycle: from feasibility studies, realization, operation, to the exploitation of results.



SCANTER Radar applications

- Airport Surface Movement
- Vessel Traffic Service
- Coastal Surveillance
- Airborne Environmental Surveillance
- Naval Surveillance
- Ship Self-protection
- Critical Infrastructure
 Protection
- Wind Farm Surveillance
- Air Traffic Control
- Surface Environmental Surveillance







International References





SCANTER 5000 References



Ras Laffan Port Expansion Project, CSS Qatar Hong Kong Kai Tak Cruise Terminal, VTS South Africa Transnet National Ports Authority, VTS Otopeni Int. Airport, Bucharest, SMR Romania **Bilbao Airport, SMR** Spain Guardia Civil, CSS Spain UK Port of London, VTS Norway Norwegian Coastal Administration, V Port of Oslo, VTS Norway Gardermoen Airport, Olso, SMR Norway **Riffgat Windpark, VTS** Germany Libyan VTS Libya Estonia Estonian Border Guard, CSS Conoco Phillips, Ekofisk, VTS Norway Maritime Safety Department VTMIS Montenegro Ireland Dublin Airport, SMR King Abdullah Port, VTS Saudi Arabia UAE Jebel Ali, DP World, VTS USA Miami-Dade Police Dept., CSS

INFRARERO, Rio de Janeiro and Curitiba, SMR

8 SC5000 1 SC5000 7 SC5000 2 SC5000 2 SC5000 7 SC5000 4 SC5000 26 SC5000 2 SC5000 2 SC5000 2 SC5000 23 SC5000 6 SC5000 1 SC5000 3 SC5000 6 SC5000 2 SC5000 VTS & Coastal Surveilance 2.SC5000 Airport Surface Movemen Radar 1 SC5000

3 SC5000

Brazil

<u>Challenges to Implementing Maritime</u> <u>Surveillance</u>

- Acquisition
 - Grant Funding Process
 - Federal Acquisition System
 - Long Procurement Cycles
- Quality Surveillance Sensors
 - Expensive, Requiring Upfront Acquisition Funding
 - Maintenance & Emergency Repairs
 - Training
- Existing Sensor Issues
 - Obsolescence
 - Inadequate Performance
 - Improperly Located (< Optimal Coverage)
 - Difficult To Integrate Into A Modern Network
- O&M Budget & Staffing
 - Commitment To Maintenance & Supportability







Development of a Different Concept

Mariner

- US Market leader for Maritime Domain Awareness & Response
- Developers of CommandBridge
- Focus on Effective combination of security, operations, and regional collaboration
- Rapid deployment

Application of Software as a Service (SaaS) Concept to Maritime Industry

- SaaS delivery model in which software is licensed on a subscription basis and centrally hosted
- Examples
 - NetFlix
 - DropBox
 - Travel Industry
 - Project Management
 - Satellite Data
 - Cell Phones

Maritime Surveillance Data as a Service

- Customer Acquires the Data Vice the Equipment & Infrastructure
- Shared Strategic Planning Versus Ad Hoc Equipment Acquisition
- Appropriate Sensors Provided for Defined Area & Mission Profile
- Surveillance Data (I.E., Tracks, Image, Video) Provided on a Subscription Basis
- Data Provider Owns and Maintains the Equipment & Infrastructure
- Service Level Agreement Guarantees Availability









Advantages

- Shared Strategic Planning
- Rapid Deployment (Less time to benefit)
- Scalable Configurations
- Lower cost of adoption
- Potential Cost-sharing
- O&M Rather than Acquisition Funds
- Guaranteed Data Availability
- Flexible Support Plans
- Equipment Maintained at OEM Factory Standards
- Minimizes Risk to the Stakeholder









Next Steps

- Timeframe in Next 8-12 Months
- Invitation to Interested Port Partners
- Propose Pilot Project
- Identify Suitable Location & Mission Profile
- Proof of Concept 6-12 Months
 - Verify Business Model
 - Low Risk Entry
 - Guaranteed Data Availability









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