



NATO

OTAN

NATO
Consultation, Command and Control Agency

**Recent Activities Applicable to
Counter-Piracy Operations**

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Project Manager
Operations Planning and Execution Capability Area Team



NATO UNCLASSIFIED



NC3A: What We Do

Provide the seamless provision of unbiased scientific support and common funded acquisition of **Consultation, Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR)** capabilities.

Our areas of expertise are organized into nine Capability Area Teams:

- Capability Planning and Architectures
- Interoperability
- Exercises and Training
- Operations Planning and Execution (J3/J5)
- Intelligence, Surveillance and Reconnaissance
- Integration Support and VAS
- Core Services
- Information Assurance and Service Control
- Infrastructure Services



NC3A's Roles and Partners in MDA



NC3A Roles

- Technical manager for MAJIC
- Facilitators (level playing field)
- Only interest is NATO success
- Broad Technical know-how
- State-of-the-art facilities
- Knowledge of NATO and NATO initiatives
- Operational understanding
- Information Exchange Enablers
- On-going Cooperation with NURC, COEs, etc.



National systems

Industry

and many more...



Example: Enhanced Maritime Domain Awareness (MDA)

Generation of the Recognized Surface Picture (RSP) through correlation of Radar, **ESM** and AIS data

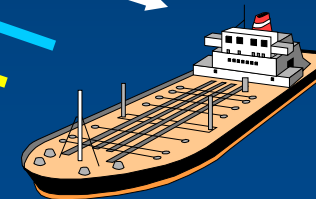
Provide RSP via L16 J 3.3



Radar Track

ESM intercept of Nav. Radar

AIS - Monitoring of Ships data
Position, Course, Speed, etc.



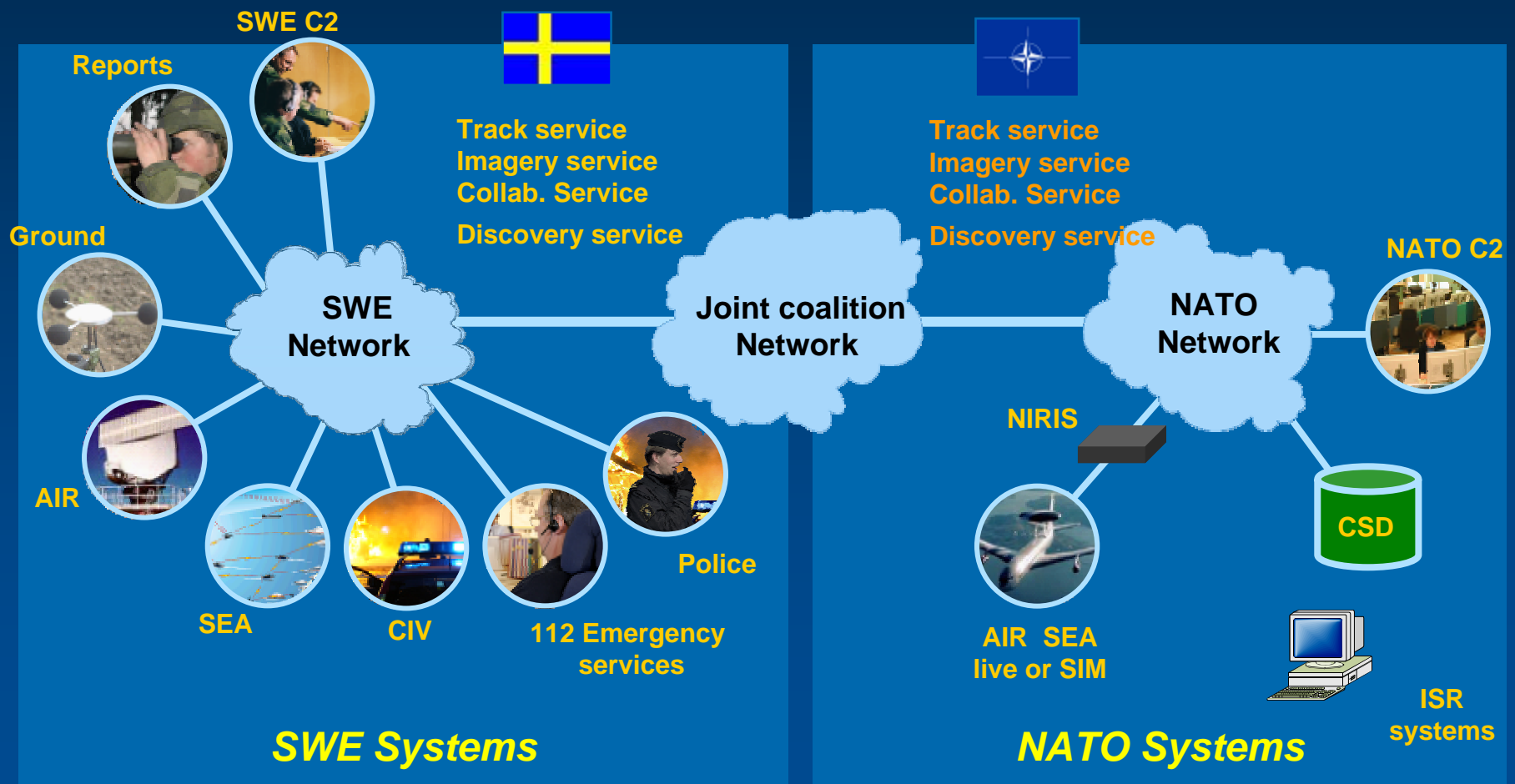
*AIS widely used in ACTIVE ENDEAVOUR
Tested by E3-D Comp.*



Example: NATO – SWEDEN

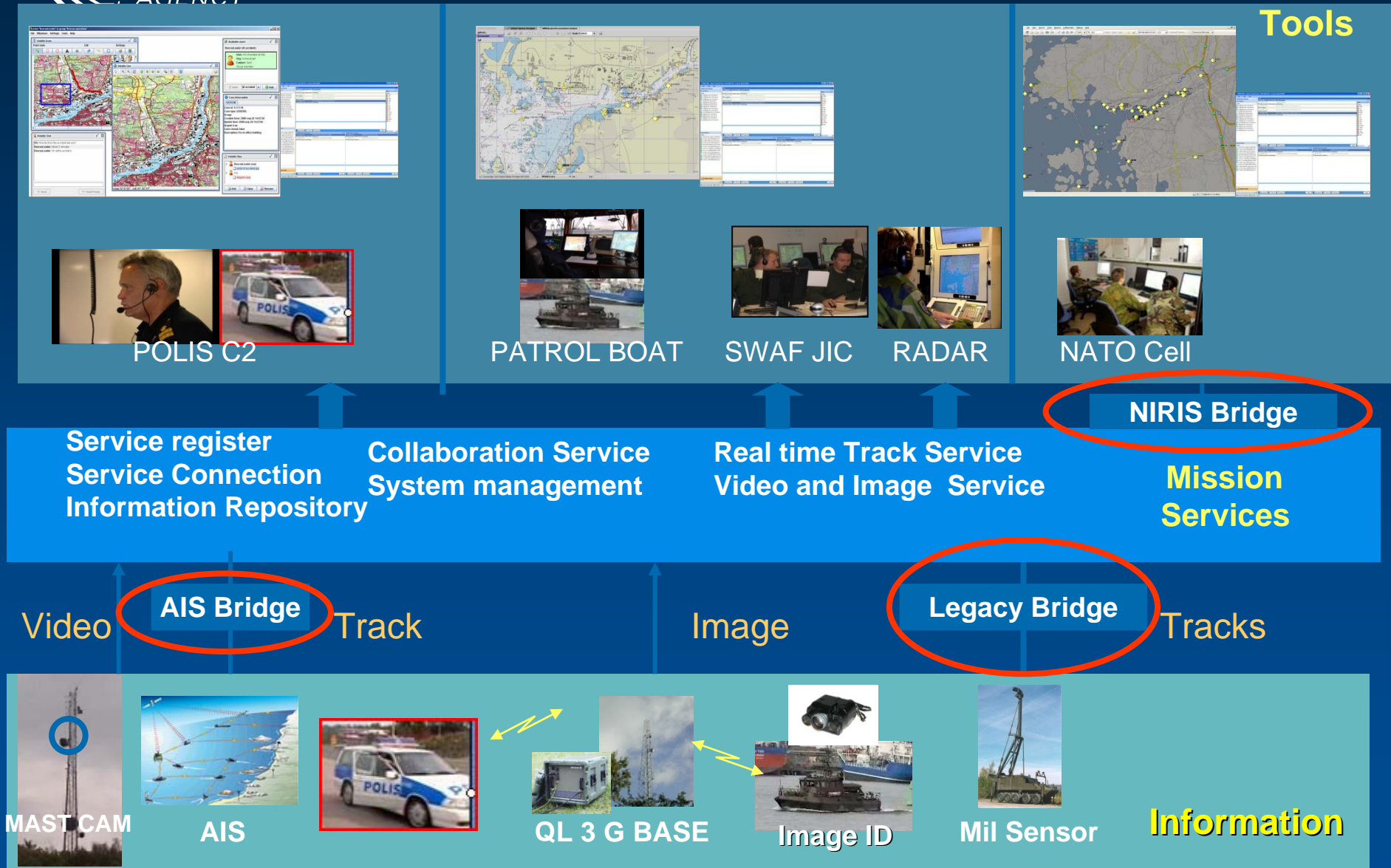
"Intrusion from the Sea"

Joint Live Experiment & Workshop on NEC
24-25 September 2008 at Enköping, Sweden





Example: Sharing Maritime Real Time Information





Example: NC3A Multi-National Maritime Programme Office Initiative

Focus on solutions for participating nations (NATO, and non-NATO) which fall outside the scope of NSIP funding. Provide solutions in parallel to enable coordination with the work being performed on Project Triton to ensure a common architecture with other NATO services.

Through this initiative NC3A will:

- Meet nations' needs for maritime information interoperability
- Provide Tactical and CIMIC features that are not currently eligible for NSIP funding
- Provide additional support to National Maritime C2 services
- Provide Tactical-level capabilities for participating nations
- Facilitate Information exchange of maritime data/products with civilian organizations
- Provide an unbiased broker of Maritime C2 technology for nations.



Aspects of Complex Systems/Problems in the Maritime Domain

- **Almost always multi-disciplinary**
 - No one technology will solve the whole problem
- **Almost Always cross-boundry**
 - “Seams” which cross Military-Civil lines of authority
- **Multiple levels of security**
 - Need-to-know v. need-to share
- **Require knowledge of the underlying processes**
 - New technologies and new processes must develop together
- **Interfaces are as important as the internal**
 - Potential weaknesses and areas of confusion
 - Adversaries will always exploit weaknesses



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